

A NUMERICAL TAXONOMIC STUDY OF THE BRACHYLAENA
DISCOLOR - UNIFLORA SPECIES COMPLEX (COMPOSITAE).

David William Haines

A Dissertation Submitted to the Faculty of Science
University of the Witwatersrand, Johannesburg
for the Degree of Master of Science

Johannesburg 1988

taxonomy appeared valid from the numerical study. This study has been criticised by Burt, et. al. (1970) but Sneath and Sokal (1973) contend that the numerical results yielded new and more convincing phenons which are better related to the geographic distribution and several additional characters. An even more drastic reassessment of current views is posed by the study of Young and Watson (1970) on the families of the dicotyledons.

The results of some numerical studies have resulted in an increase in the number of rank categories within a group but Sneath and Sokal (1973) do not feel that numerical methods have resulted in a marked tendency toward either "lumping" or "splitting" of taxa when all groups of organisms are considered. They suggest that for the most part the results have greatly improved our knowledge of the finer points of the relationships that have been studied. Sneath and Sokal (1973) contend that the results of studies using numerical methods have often been confirmed by subsequent work and this has been true of studies such as those by Drury and Randal (1969) and McNeill, et. al. (1969). Although the number of studies where confirmatory evidence has resulted is small, it is interesting to note that cases where clear and apparently acceptable results have been contradicted by later work seem to be uncommon (Sneath and Sokal, 1973). In most cases the discrepancies appear to be due to inadequate techniques or methods which have been used inappropriately for the problem under consideration.

Other details obtainable from numerical studies include patterns of phenetic variation. Hyperspherical or elongated phenons may be revealed, and these may show trends or clines in ordination studies, as well as revealing chains of intermediate forms (Sneath and Sokal, 1973). Phenetics also gives abundant information on the pattern of geographical variation, the reality (or otherwise) of subspecies and races, and the occurrence of temporal phenetic changes (for example see, Mason, et. al., 1968).

According to Sneath and Sokal (1973) numerical taxonomy has a very important part to play in scientific methodology. It appears to have given deeper insight into the nature of the taxonomic process and the nature of

ABSTRACT

The *Brachylaena discolor* - *uniflora* species complex (comprising *B. discolor* subsp. *discolor*; *B. discolor* subsp. *transvaalensis*; and *B. uniflora*) is endemic to south-eastern Africa. The currently recognised taxa of this complex are all large dioecious shrubs or trees. Previous workers analysed different sections of the complex on a regional basis but each treatment omitted a different section of the complex. The objective of this study was to use phenetic methods to analyse the morphological diversity of the complex throughout its range of distribution. A total of 150 female and 138 male specimens were collected and 48 (15 vegetative, 33 reproductive) and 50 characters (15 vegetative, 35 reproductive) were measured for each of the sexes respectively. The data were standardised and subjected to various analyses including Cluster (UPGMA, WPGMA, Complete Linkage), PCA, and Canonical Discriminant Analysis. Results for female and male data sets suggest that the complex consists of a coastal group (*B. discolor* subsp. *discolor*) and an inland group (*B. discolor* subsp. *transvaalensis*). As morphological differences between the resulting groups were small it was considered appropriate to separate them at the subspecific level.

taxonomic judgement concepts, such as size and shape, have been more effectively studied as a result of numerical methods. In addition many questions which taxonomists find difficult or awkward have been raised: what is a taxon?; what is a character?; what is resemblance? Sneath and Sokal (1973) contend that even if the results of numerical taxonomy have not always been useful, the questions raised by the use of these methods certainly has been.

Based on the current trends in taxonomic work it would appear that the use of numerical methods is becoming much more common. Numerical taxonomy has certainly not become the "miracle cure of taxonomic ills" as many of its early proponents claimed that it would but it has certainly earned a place as a useful taxonomic method. It is in this capacity, as a taxonomic method, that the future of numerical phenetics lies. The primary value of numerical methods is exploratory, heuristic or communicatory (Neff and Marcus, 1980) and this approach is being used more frequently in biosystematics, particularly in studies which have adopted a synthetic approach where data from several different areas is assimilated and used to solve a particular taxonomic problem (for example see, Paris and Windham, 1988). Given all of the above, numerical phenetics is certainly a useful and valid approach to adopt when dealing with a complex taxonomic problem. The future proponents of numerical phenetics must avoid the mistakes of the past and should not attempt to overstate the case for numerical taxonomy but should rather, allow it to take its place as one of the many available tools which can be used to study the diversity of living organisms.

DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the degree of Master of Science in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

D. Haines
.....
(Name of Candidate)

...16th... day of October, 1958

3.0 MATERIALS AND METHODS

3.1 Field Collection

The distribution and locality information for the *Brachylaena discolor* - *uniflora* species complex was obtained from the National Herbarium Computer Information System (PRECIS) and from specimens in the holdings of PRE, PRF, and J. Using this information extensive field collections were made during the flowering period of the *B. discolor* - *uniflora* species complex (July 9 - October 9) in 1985. The area covered ranged along the entire south-eastern coast of South Africa from Port Elizabeth in the south to Kosi Bay in the north as well as several inland areas of Natal (Fig. 2). In the Transvaal region the area covered extended from the Swaziland border in the Baberton - Komatipoort district in the south to the Soutpansberg - Messina district in the north (Fig. 2). Several of the areas visited were nature reserves or wilderness areas where general plant collecting has not been regularly undertaken. Due to political tensions in the southern African region it was not possible to collect material from Mozambique and the required permission to collect material in Swaziland was not obtained.

The map of collection sites (Fig. 2) has been drawn up and is based upon the degree reference system of Edwards and Leistner (1971). Each symbol on the map represents single, or all, gatherings made inside the quarter degree square in which the symbol appears. A total of 150 female and 138 male plants were sampled. Specimens were pressed and dried and then used as the material from which measurements were made and upon which this study is based. Herbarium specimens in the holdings of various herbaria were also initially considered for inclusion in the data analysis. Due to the large differences in age (i.e. only buds present - full seed set) and the low number

ACKNOWLEDGMENTS

The author would like to thank the following authorities for granting permission to collect *Brachylaena* in the areas under their jurisdiction:-

- (1) The Director, Natal Parks, Game and Fish Preservation Board;
- (2) The Secretary for Agriculture and Forestry, Department of Agriculture and Forestry, KwaZulu Government Service;
- (3) The Director, Bureau of Natural Resources, Department of Economic Affairs, KwaZulu Government Service;
- (4) The Director General, Department of Environment Affairs, Republic of South Africa;
- (5) The Director of Nature Conservation, Transvaal Provincial Administration;
- (6) The Director, Bernard Price Institute for Palaeontological Research, University of the Witwatersrand;
- (7) The Director General, Department of Agriculture and Forestry, Republic of Venda;
- (8) The Director General, Department of Agriculture and Forestry, Republic of Ciskei;
- (9) The Secretary General, Department of Agriculture and Forestry,

FIGURE 2:- Map of southern Africa showing collection sites of the *Brachylaena discolor* - *uniflora* species complex.

Republic of Transkei;

- (10) The Secretary, Department of Agriculture and Environmental Conservation, Lebowa Government Service;
- (11) The Secretary, Department of the Chief Minister and Economic Affairs, Division of Nature Conservation and Tourism, Gazankulu Government Service.

The Director of the Botanical Research Institute is thanked for the use of data produced by the Pretoria National Herbarium Computerized Information System (PRECIS) from which distributional data was obtained.

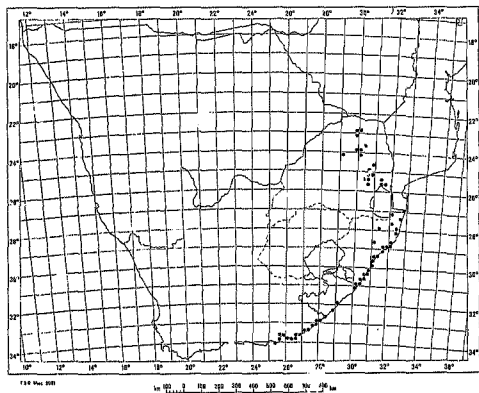
The author is indebted to the curators of the following herbaria from which type material was obtained on loan:-

- (1) K
- (2) COI
- (3) G

The herbarium acronyms used here and throughout this treatment are those recommended by Index Herbariorum (Holmgren, et al., 1981).

The following people are to be thanked for providing accommodation and assistance in the field during the author's field trip conducted during 1985:-

- (1) Mr. & Mrs. J. Stannard, Port Edward;
- (2) Mr. H. Nicholson, St Michaels-on-Sea;
- (3) Prof. & Mrs. B. Rycroft, Uvongo;
- (4) Mr. & Mrs. D. Freeman, Mtunzini;
- (5) Mr. & Mrs. J. Garland, Mtunzini;
- (6) Mr. & Mrs. I. Thomson, Jozini;
- (7) Mr. J. Mngomezulu, Kwa Ngwanase;
- (8) Dr. & Mrs. W. van Sehlakwyk, Grahamstown;
- (9) Mr. & Mrs. W. Eckersley, Umzim;
- (10) Mr. & Mrs. P. Ruel, Lydenburg;



- (11) Mr. E. N. Netshungani, Sibasa;
- (12) Mr. & Mrs. E. Hodgkinson, Nelspruit;
- (13) Mr. & Mrs. D. Hodgkinson, Barberton.

Thanks are also due to all of the people at the University of the Witwatersrand who provided valuable assistance. These include Walter Piel, Susan Attwood and Ingrid Turton of the Computer Centre, and Prof. Paul Fatti of the Department of Mathematical Statistics.

Mrs. Irma Hartley and Mrs. Clare Swanson of the C. E. Moss Herbarium at the University have helped in many ways, and Dr. Patricia Forbes is to be particularly thanked for her many helpful comments and ideas, as well as the excellent drawings which are presented in the materials and methods section.

Thanks are also due to the members of the author's research committee, but particularly to Mr. E. R. (Robbie) Robinson who often went beyond the bounds of duty to encourage, assist and provide useful comments.

Finally, a very special word of thanks is due to Dr. Timothy K. Lewrey of the Department of Botany, National University of Singapore. It was he who first aroused the author's interest in systematics research and in the family Compositae and without whom none of this would have been possible. Since then, he has continued to provide extensive guidance and enthusiastic encouragement for this research.

of male specimens in most collections it was decided to exclude the herbarium material from the analysis. Voucher specimens of all 288 individuals used in the analysis are deposited in the C. E. Moss Herbarium, Johannesburg (J).

3.2 Laboratory Analysis

3.2.1 Selection and Measurement of Characters

Characters were selected to include both vegetative and reproductive characters and to include characters which are reliable and consistent, and which could be assessed with relative ease. Characters selected fell into four main categories, these included: 1. vegetative characters (principally leaf characters), 2. characters of the compound inflorescence, 3. capitulum characters, and 4. floret characters. A further category which consisted of various ratios was added later (Table 2). Initially a total of 63 characters (18 vegetative, 45 reproductive) on 150 female operational taxonomic units (OTUs) and 62 characters (18 vegetative, 44 reproductive) on 138 male OTUs were selected and measured (Table 2).

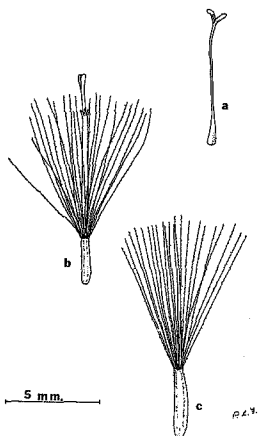
Several characters require some explanation, for example, character 19 (Table 2), the inflorescence ratio (INFRAT), was calculated by multiplying character 21, the number of capitula per raceme or panicle (NOFHEAT) by character 22, the internode length within the raceme (INTNDLN). The resulting value was then divided by character 20, the length of the raceme or panicle (RACMLEN) (Table 2). Other examples include the base of the style which was found to be expanded or swollen in the female specimens (Fig. 3a) and both the length (character 49) and the width (character 50) of this region were measured (Table 2). The total floret length (character 56) was measured from the end of the achene to the tip of the exerted style (Fig. 3b). The number of veins per achene (character 54) were determined by dissecting the achene and counting the number of vascular strands in the fruit wall. The length of the pappus (character 44) and the length and width

TABLE OF CONTENTS

Abstract	ii
Declaration	iii
Acknowledgements	iv
List of Appendices	ix
List of Figures	x
List of Tables	xiv
1.0 Introduction	1
1.1 General Background	1
1.2 General Description of Plants and Distribution	3
1.3 Taxonomic and Nomenclatural History	4
1.4 Objectives	9
2.0 Phenetics: A Brief Overview	10
3.0 Materials and Methods	19
3.1 Field Collection	19
3.2 Laboratory Analysis	22
3.2.1 Selection and Measurement of Characters	22
3.2.2 Cluster Analysis	33
3.2.3 Principal Components Analysis	35
3.2.4 Discriminant Analysis	36
(i) Canonical Variates Analysis	
(ii) Stepwise Discriminant Analysis	37
4.0 Results	38
4.1 Cluster Analysis	38

FIGURE 3:- Florets of a female specimen of the *Brachylaena discolor - uniflora* species complex (Drawn from DWH 47). (a). Style of female showing bilobed stigma and swollen basal region.; (b). Entire female floret showing corolla tube, exerted style, pappus, and achene.; (c). Female floret with corolla tube and style removed.

4.2 Principal Components Analysis	53
4.3 Discriminant Analysis	109
(i) Canonical Variates Analysis	109
(ii) Stepwise Discriminant Analysis	110
5.0 Discussion and Taxonomic Conclusions	125
5.1 Discussion	125
5.2 Taxonomy	128
References	139
Appendices I - V (Inside Back Cover).	



LIST OF APPENDICES

IA	Pearsons and Spearman's Correlations for the Female Data Set	1/14
IB	Pearsons and Spearman's Correlations for the Male Data Set	2/14
IIA	Matrix of Distance Values for 150 Female OTUs	3/14
IIB	Matrix of Correlation Values for 150 Female OTUs	4/14
IIC	Matrix of Euclidean Distance Values for 150 Female OTUs	5/14
IID	Matrix of Distance Values for 138 Male OTUs	6/14
IIE	Matrix of Correlation Values for 138 Male OTUs	7/14
IIF	Matrix of Euclidean Distance Values for 138 Male OTUs	8/14
IIIA	Summary of Stepwise Discriminant Analysis for 150 Female OTUs	9/14
IIIB	Summary of Stepwise Discriminant Analysis for 138 Male OTUs	10/14
IVA	Summary of Canonical Discriminant Analysis for 150 Female OTUs	11/14
IVB	Summary of Canonical Discriminant Analysis for 138 Male OTUs	12/14
VA	Summary of Principal Components Analysis for 150 Female OTUs	13/14
VB	Summary of Principal Components Analysis for 138 Male OTUs	14/14

of the achene (characters 50 and 51 respectively) (Table 2) were determined after the removal of the corolla and style (Fig. 3c).

Five measurements per character were made for all characters, except the leaf characters, and the means of these values were used in the data analysis. The leaf characters were analysed according to the method outlined by Hill (1980). A single measurement per character per specimen was made, as only the sixth leaf below the raceme or panicle was used in an attempt to make these measurements more comparable. All measurements were made from the dried herbarium material except for the floret characters. In this case the florets were first softened by boiling, to facilitate easier dissection and handling.

The measurements from each character variable were then tested for normality using the UNIVARIATE procedure on Statistical Analysis Systems (SAS) (SAS Institute Inc., 1985). This resulted in the $\log_{10}$ transformation of two characters; inflorescence ratio (INFRAT) and number of capitula per raceme or panicle (NOFHEAD) as they were both skewed extensively to the right. The resulting variables (NWINFRAT and NWNOFHD respectively) replaced the original characters in both data sets (Table 2). No other characters required adjustment at this stage. Those characters which showed no, or little, variation ($< 10\%$) throughout the data sets, were removed. Their status has been recorded in Table 2 as R/inv. At this stage character 54, achene hairiness, was also removed, as this character was found to vary extensively even within a single plant specimen.

LIST OF FIGURES

1. Map of southern Africa showing known distribution of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex	5
2. Map of southern Africa showing collection sites of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex.	20
3. Details of a female specimen of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex (Drawn from DWH 47).	23
4. Phenogram of 150 female OTUs - clustering technique used was UPGMA with DISTANCE coefficient. (Phenon level used = -1.4), (COPH. = 0.722).	55
5. Phenogram of 150 female OTUs - clustering technique used was UPGMA with CORRELATION coefficient. (Phenon level used = -1.0), (COPH. = 0.733).	57
6. Phenogram of 150 female OTUs - clustering technique used was UPGMA with EUCLIDEAN DISTANCE coefficient. (Phenon level used = 17.5), (COPH. = 0.722).	59
7. Phenogram of 150 female OTUs - clustering technique used was UPGMA with DISTANCE coefficient. (Phenon level used = 2.0), (COPH. = 0.678).	61

Table 2:- List of Characters Measured for Both Male and Female Data Sets

Key:-	1. Data Set -	BS = Both Sexes; MO = Males Only; FO = Females Only.
	2. Status -	AB = Accepted for Both Data Sets; AM = Accepted for Male Data Set Only; AF = Accepted for Female Data Set Only; R/inv = Rejected due to insufficient variation; R/var = Rejected due to excessive variation; R/cor = Rejected due to Correlation; (F = Female, M = Male); R/nrm = Rejected due to non-normality.

Character	Code	Data Set	Status
1. Habit (tree or shrub)		BS	R/inv
2. No. of Stems - (one or many)		BS	R/inv
Leaves			
3. Max. Leaf Length (mm)	MXLNL	BS	AB
4. Max. Leaf Width (mm)	MXWDL	BS	AB

8. Phenogram of 150 female OTUs - clustering
technique used was WPGMA with CORRELATION
coefficient. (Phenon level used = -7.0),
(COPH. = 0.652).63
9. Phenogram of 150 female OTUs - clustering
technique used was WPGMA with EUCLIDEAN
DISTANCE coefficient. (Phenon level used
= 13.0), (COPH. = 0.678).65
10. Phenogram of 150 female OTUs - clustering
technique used was COMPLETE with DISTANCE
coefficient. (Phenon level = 2.25),
(COPH. = 0.631).67
11. Phenogram of 150 female OTUs - clustering
technique used was COMPLETE with
CORRELATION coefficient. (Phenon level used
= -5.0), (COPH. = 0.654).69
12. Phenogram of 150 female OTUs - clustering
technique used was COMPLETE with EUCLIDEAN
DISTANCE coefficient. (Phenon level used
= 14.5), (COPH. = 0.631).71
13. Phenogram of 138 male OTUs - clustering
technique used was UPGMA with DISTANCE
coefficient. (Phenon level used = 1.55),
(COPH. = 0.774).73
14. Phenogram of 138 male OTUs - clustering
technique used was UPGMA with CORRELATION
coefficient. (Phenon level used = -2.5),
(COPH. = 0.739).75
15. Phenogram of 138 male OTUs - clustering
technique used was UPGMA with EUCLIDEAN
DISTANCE coefficient. (Phenon level used
= 11.0), (COPH. = 0.773).77

Character	Code	Data Set	Status
5. Leaf Length to Width Ratio	LNWDRL	BS	AB
6. Leaf Shape Index	SHINL	BS	AB
7. Mean Half Width - Leaf (from SHINL)	MHWDL	BS	R/cor
8. Secondary Vein Angle - 6th vein	VANGS	BS	AB
9. Secondary Vein Angle - basal vein	VANGB	BS	AB
10. Apex Angle (deg.)	APXAN	BS	AB
11. Position of 20% Max. Width Apically (%)	APXPS	BS	AB
12. Basal Angle (deg.)	BSAN	BS	AB
13. Position of 20% Max. Width Basally (%)	BSPS	BS	AB
14. Secondary Vein Intercostal Shape	SVINS	BS	AB
15. No. of Secondary Veins	NSECV	BS	AB
16. Percentage of Inter- secondary Veins	PINSV	BS	AB
17. Petiole Length (mm)	PILLN	BS	AB
18. Internode Length - between leaves 6&7 (mm)	INTLN	BS	AB
Compound Inflorescence			
19. Inflorescence Ratio	INFRAT	BS	R/nrm
19a. Log ₁₀ Inflorescence Ratio	NWINFRAT	BS	R/cor
20. Length of Raceme or Panicle (mm)	RACMLN	BS	AB

16.	Phenogram of 138 male OTUs - clustering technique used was WPGMA with DISTANCE coefficient. (Phenon level used = 1.8), (COPH. = 0.736).	79
17.	Phenogram of 138 male OTUs - clustering technique used was WPGMA with CORRELA FIG. 1 coefficient. (Phenon level = -5.0), (COPH. = 0.625).	81
18.	Phenogram of 138 male OTUs - clustering technique used was WPGMA with EUCLIDEAN DISTANCE coefficient. (Phenon level used = 12.5), (COPH. = 0.734).	83
19.	Phenogram of 138 male OTUs - clustering technique used was COMPLETE with DISTANCE coefficient. (Phenon level used = 2.25), (COPH. = 0.685).	85
20.	Phenogram of 138 male OTUs - clustering technique used was COMPLETE with CORRELATION coefficient. (Phenon level used = -70.0), (COPH. = 0.623).	87
21.	Phenogram of 138 male OTUs - clustering technique used was COMPLETE with EUCLIDEAN DISTANCE coefficient. (Phenon level used = 16.0), (COPH. = 0.684).	89
22.	PCA plot of factor 2 vs. factor 1 for 150 female OTUs of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex. (Percent of trace = 28.08%).	97
23.	PCA plot of factor 3 vs. factor 1 for 150 female OTUs of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex. (Percent of trace = 7.38%).	99

Character	Code	Data Set	Status
21. No. of Capitula per Raceme or Panicle	NOFHEAD	BS	R/arm
21a. Log ₁₀ No. of Capitula per Raceme	NWNOFHD	BS	AB
22. Internode Length within Raceme (mm)	INTNDLN	BS	AB
Inflorescence			
23. No. of Rows of Bracts	NBR	BS	AD
24. Inner-most Bract Max. Length (mm)	IBRL	BS	AM R/corF
25. Outer-most Bract Max. Length (mm)	OBRL	BS	AM R/corF
26. Inner-most Bract Max. Width (mm)	IBRW	BS	AB
27. Outer-most Bract Max. Width (mm)	OBRW	BS	AB
28. Bracts Extending Down Peduncle (yes or no)	BREP	BS	R/inv
29. Involucre Max. Length (mm)	INMXL	BS	R/cor
30. Involucre Max. Width (mm)	INMXW	BS	AF R/corM
31. Peduncle Max. Length (mm)	PMXL	BS	AB
32. Length of Bract Subtending Peduncle(mm)	LBRP	BS	AB
33. Inflorescence Max. Length (mm)	INFL	BS	AB

24. PCA plot of factor 2 vs. factor 3 for 150 female OTUs of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex. (Percent of trace = 6.48%).	101
25. PCA plot of factor 2 vs. factor 1 for 138 male OTUs of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex. (Percent of trace = 32.11%).	103
26. PCA plot of factor 3 vs. factor 1 for 138 male OTUs of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex. (Percent of trace = 8.31%).	105
27. PCA plot of factor 2 vs. factor 3 for 138 male OTUs of the <i>Brachylaena discolor</i> - <i>uniflora</i> species complex. (Percent of trace = 7.02%).	107
28. Plots of individual OTUs of Groups 1 (<i>B. uniflora</i>); 2 (<i>B. discolor</i> subsp. <i>discolor</i>); 3 (<i>B. discolor</i> subsp. <i>transvaalensis</i>); on the first two canonical axes, for female data.	111
29. Plots of individual OTUs of Groups 1 (<i>B. uniflora</i>); 2 (<i>B. discolor</i> subsp. <i>discolor</i>); 3 (<i>B. discolor</i> subsp. <i>transvaalensis</i>); on the first two canonical axes, for male data.	113

Character	Code	Data Set	Status
34. Inflorescence Max. Width (mm)	INFW	BS	AB
35. No. of Florets per Inflorescence	NFLOR	BS	AB
Florets			
36. Corolla Max. Length(mm)	CRMXLN	BS	R/cor
37. Corolla Max. Width (mm)	CRMXWD	BS	AB
38. Corolla Min. Width (mm)	CRMNWD	BS	AB
39. Corolla Lobe Max. Length (mm)	CORLLN	BS	AB
40. Corolla Lobe Max. Width (mm)	CORLWD	BS	AB
41. Corolla Tube Opening Max. Width (mm)	CORTWD	BS	AB
42. No. of Veins per Corolla	NVPCOR	BS	R/inv
43. Length of Corolla to Point of Filament Attachment (mm)	LCTPFA	MO	AM
44. Pappus Max. Length (mm)	PAPMXLN	BS	R/cor
45. Filament Max. Length (mm)	FMXLN	MO	AM
46. Anther Max. Length (mm)	AMXLN	MO	AM
47. Style Max. Length (mm)	STMXLN	BS	R/cor
48. Style Lobe Max. Length (mm)	STMXLLOL	BS	AB
49. Style Base Max. Length (mm)	STBLN	FO	AF
50. Style Base Max. Width (mm)	STBWD	FO	AF
51. Achene Max. Length (mm)	ACMXLN	FO	AF

LIST OF TABLES

1. Currently recognised taxa of the <i>Brachylaena</i> <i>discolor</i> - <i>uniflora</i> species complex for southern Africa (Gibbs-Russell, 1984).	8
2. List of characters measured for both male and female data sets.	26
3. Listing of OTUs and their group allocation based on the results of the different clustering techniques and coefficients used (Both Data Sets).	39
4. Listing of cophenetic correlation values for the different clustering techniques and coefficients used.	50
5. List of the first 15 factors and their corresponding eigenvalues for the female data set.	91
6. List of the first 15 factors and their corresponding eigenvalues for the male data set.	92
7. Relative contributions of the character variables to the PCA (Female Data Set).	93
8. Relative contributions of the character variables to the PCA (Male Data Set).	95
9. Mahalanobis distances between groups from canonical discriminant analysis (Female Data Set).	115
10. Mahalanobis distances between groups from canonical discriminant analysis (Male Data Set).	116

Character	Code	Data Set	Status
52. Achene Max. Width (mm)	ACMXWD	FO	AF
53. Vestigial Achene Max. Length (mm)	VACMXLN	MO	AM
54. No. of Veins per Achene	NVPAC	FO	AF
55. Achene Hairiness; (1 = glabrous; 2 = sparsely hairy; 3 = densely hairy)		FO	R/var
56. Total Floret Length(mm)	TFLLN	BS	R/cor

Ratios

57. Raceme Length to No. of Heads per Raceme	LRNFHR	BS	AB
58. Inner-most Bract Max. Length to Max. Width	IBLWR	BS	AB
59. Outer-most Bract Max. Length to Max. Width	OBLWR	BS	AB
60. Involucre Max. Length to Max. Width	INVLWR	BS	AB
61. Inflorescence Max. Length to Max. Width	INFLWR	BS	AB
62. Corolla Lobe Max. Length to Max. Width	CRLLWR	BS	AB
63. Corolla Max. Length to Max. Width	CORLWR	BS	AB
64. Corolla Max. Length to Min. Width	CORLMWR	BS	AM R/cor
65. Style Max. Length to Style Lobe Max. Width	STLLBR	BS	AB
66. Total Floret Length to Pappus Max. Length	TFLPLR	BS	AB

11.	F-values of group centroids from canonical discriminant analysis (Female Data Set).	117
12.	F-values of group centroids from canonical discriminant analysis (Male Data Set).	118
13.	Relative contributions of the character variables to the CVA (Female Data Set).	119
14.	Relative contributions of the character variables to the CVA (Male Data Set).	121
15.	Results of the stepwise discriminant procedure for female data.	123
16.	Results of the stepwise discriminant procedure for male data.	124

Character	Code	Data Set	Status
57. Achene Max. Length to Max. Width	ACLWR	FO	AF
68. Anther Max. Length to Filament Max. Length	ALFMLR	MO	AM
69. Length of Corolla to Point of Filament Attachment to Corolla Max. Length	LCPFCLR	MO	AM

1.0 INTRODUCTION

1.1 General Background

The Composite genus *Brachylaena* Linn. is mainly tropical to sub-tropical in distribution and native to Africa, Madagascar and the Mascarene Islands (Palmer & Pitman, 1973). The 13 taxa which are currently recognised (Humbert, 1962; Gibbs Russell, 1984) are, with the exception of *B. ilicifolia*, all large, dioecious shrubs or trees with simple alternate leathery leaves, smooth above but paler and hairy below; the flowering heads are discoid, with few to many white or yellow florets, and are arranged in racemes or panicles. The floral disc is surrounded by involueral bracts which are shorter than the flowers. The generic name, which is based on the Greek words meaning "short" and "cloak" (Palmer & Pitman, 1973), refers to these short bracts.

Brachylaena is recognised as being difficult taxonomically (Palmer & Pitman, 1973) and has not been satisfactorily placed within any of the tribes of the Compositae (Skvarla, et. al., 1977). One area of confusion involves the *Brachylaena discolor* - *uniflora* species complex which is composed of three southern African taxa - *Brachylaena discolor* DC. subspecies *discolor*, *B. discolor* DC. subspecies *transvaalensis* (Phill. et Schweick.) J. Paiva and *B. uniflora* Harv. - all of which can grow into tall trees which resemble one another vegetatively. The confusion between these taxa is largely due to the high degree of variation within the complex and could be interpreted in several ways. Hilliard (1977) has suggested that there may be a single species showing variation in the number of flowers in a head which could be loosely linked to an ecological cline, or that there may be two species that have met and are hybridizing.

Phillips and Schweickhardt (1937), who were the last to revise the South African members of the genus, separated the taxa largely by the number of

The remaining characters were then assessed on their degree of redundancy in comparison with each of the other characters. This was achieved by calculating Pearson's product-moment correlation (Appendix I) and Spearman's rank order correlation (Appendix I) using the CORR Procedure on SAS (SAS Institute Inc., 1985). The resulting covariance matrix (Appendix I), obtained from both correlation measures, was then used to determine the degree of redundancy of each of the character variables. It was decided to exclude one character from any highly correlated (i.e. with $r > 0.9$) pair, since inclusion of both of these characters would contribute little additional information. It has been argued that the inclusion of highly correlated characters in some multivariate analyses, such as cluster analysis, can lead to a distortion of the results by introducing a weighting factor. There is still dispute over whether such distortions are biologically significant or not (Rohlf, 1971; Sokal and Sneath, 1973).

Those character variables whose status in Table 2 are recorded as R/cor were removed at this stage, while those recorded as AB, AF or AM were retained in both data sets, the female data set or the male data set, respectively. A number of characters rejected in this way were then added back into the character set in the form of ratios (Table 2). The ratios were then subjected to the same type of tests as the other character variables to assess their degree of redundancy, and the results recorded in the same way (Table 2). This resulted in 48 characters (15 vegetative, 33 reproductive) being retained in the basic female data matrix and 50 characters (15 vegetative, 35 reproductive) being retained in the basic male data matrix.

In spite of the confidence that has been placed in ratios by many systematists, Phillips (1983) points out that there are several serious statistical problems associated with their usage. Atchley, et. al. (1976), following a review of the literature and an examination of sample data concluded that "... not only have biologists been misled as to what ratios actually show but ratios greatly confuse, and in many cases, invalidate critical statistical or biological analyses of the original data." Atchley, et. al.

florets per inflorescence. They listed, among others, *B. discolor* DC., *B. uniflora* Harv. and *B. transvaalensis* Phill. et Schweick. The number of flowers in the head in each species according to these authors was as follows:

	Male Heads	Female Heads
<i>B. discolor</i>	11 - 50	11 - 26
<i>B. uniflora</i>	1 - 3	4
<i>B. transvaalensis</i>	11 - 16	8

Hilliard (1977) points out that the names *B. discolor* and *B. uniflora* may have been given to the extremes of variation in a range of head size as there is a strong tendency for the largest number of flowers in a head to occur on specimens growing on coastal dunes. The big headed plant (*B. discolor* subsp. *discolor* sensu stricto) is confined to, and very common in dune scrub and forest from Uitenhage in the southern Cape to Inhambane (Bazaruto Island) in Mozambique. The small headed plants (*B. uniflora* sensu stricto) are confined to Natal forests from near sea level up to c. 1200m. Away from the beach there is rapid and continuous gradation from large heads to small. Plants with medium sized heads (*B. discolor* subsp. *transvaalensis* sensu stricto) are confined to the mountainous regions of the north-eastern Transvaal.

Hilliard and Burt (1971) have shown that the number of florets per head is not a reliable character to differentiate between the above taxa as several intermediates are known to occur. This observation has been supported by Palmer and Pitman (1973). This has led to confusion in the field as the foliage of all three taxa is indistinguishable and they all flower in June, July and August. A reevaluation of this complex, using a "new" approach was clearly necessary. After careful consideration it was decided that a numerical approach would probably be most meaningful at this stage as the

(1976) also indicate that there are two basic statistical difficulties with ratios. Firstly, the distribution of ratios is not normal, being more skewed to the right and leptokurtic than the original variables making the determination of confidence limits difficult. Secondly, ratios do not standardise for size, there being a relatively high correlation between the ratio variable and the size variable. Several authors, including Blackith and Reyment (1971), Schuessler and Hills (1978) have advocated the use of a logarithmic transformation to determine a value for the ratio but according to Atchley and Anderson (1978) this procedure is also subject to many of the same difficulties. Despite the problems reported with the use of ratios in numerical analyses it was decided to retain all of the ratios that were not highly correlated as several of the individual characters, which contributed to these ratios, had been excluded from the original data sets.

3.2.2 Cluster Analysis

Cluster analysis is used for analysing a single data array to obtain an explicit separation of OTUs or variables into groups or clusters that are more similar within groups than between groups (Sneath and Sokal, 1973; Neff and Marcus, 1980; Dunn and Everitt, 1982). The techniques can be broadly classified into two types, namely hierarchical and non-hierarchical. The hierarchical techniques are particularly popular in biological studies and have been used extensively in taxonomy (Sneath and Sokal, 1973; Neff and Marcus, 1980; Dunn and Everitt, 1982). Hierarchical clustering may result in the forming of a coarser partition from a finer one, or it may involve the break-up of an entire set of OTUs into increasingly finer partitions (Sneath and Sokal, 1973). These are referred to as agglomerative and divisive clustering techniques respectively. Agglomerative hierarchical techniques operate on an inter-OTU proximity matrix with each OTU initially being considered a separate cluster (Dunn and Everitt, 1982). The two OTUs having the highest similarity (or smallest distance) are then grouped together and the proximities between each of the remaining OTUs and this two member cluster calculated using one of the methods outlined

primary value of numerical methods is exploratory, heuristic, or communicatory (Neff & Marcus, 1960). That is, these analyses would serve as a means of summarising morphological variation and searching for relationships. Furthermore, it would enable a critical review of the morphological features and might elucidate certain characters which could be useful in field identification. It is also relatively inexpensive, compared to other methods, and may serve to indicate the approach that would best resolve any of the other problems within the complex. The numerical approach has been used successfully to deal with complex problems of a similar nature in several other groups (Zandee & Gias, 1982; Bayer, 1985; Decker & Wilson, 1986; Giles & Lefkovich, 1986; Moret, et. al., 1986; Randall & Hill, 1986; Zaharof, 1986) and was considered an adequate method for dealing with the *B. discolor* - *uniflora* species complex at this stage.

1.2 General description of plants and distribution

The currently recognised taxa of this group are all large dioecious shrubs or trees usually up to c.15m high but individuals up to 30m have been reported in the Transvaal (Paiva, 1972). The leaves are alternate with or without short petioles, obovate-oblong, obovate-lanceolate or oblong-elliptic, obtuse or slightly acute at the apex, cuneate at the base, with the margins entire or toothed. Venation is pinnate with 6 to 10 pairs of lateral nerves which are grooved on the upper surface but prominent below. The flowering heads contain creamy-white to yellow flowers and are arranged in axillary or terminal racemes. The floral disc is surrounded by the involueral bracts, arranged in 4 - 6 series; bracts are ovate to lanceolate or elliptic-lanceolate in shape, and variously tomentose. The male florets have linear anthers, tailed at the base, and a cylindrical style which has ovate to lanceolate style arms exerted from the anther tube. There is only a minute rudimentary ovary. The pappus is less copious and shorter than in female florets, length 4 - 5mm. The female florets have a cylindrical, grooved or angled ovary with varying degrees of hair cover. The style is cylindrical, but swollen at

below. This process continues with, at each stage, the number of groups being reduced by one, until the final point where all the OTUs are combined into a single cluster (Sneath and Sokal, 1973; Dunn and Everitt, 1982).

Cluster analysis and the resulting phenograms were generated using the NT-SYS package of Rohlf, et al. (1974). The basic data matrices (both male and female data sets) were standardized by the STAND sub-routine of NT-SYS. This routine transforms variables so that they have a mean of zero and a standard deviation of one. It is commonly used in numerical taxonomic studies in order to place all characters or variables on an equally weighted basis before the computation of correlation or distance coefficients. The correlation, distance, and euclidean distance matrices (Appendix II) were then computed using the SIMGNT sub-routine. Cluster analysis was carried out by the TAXON sub-routine and the following types of cluster analysis were used:

1. Unweighted pair-group method using arithmetic averages (UPGMA),
2. Weighted pair-group method using arithmetic averages (WPGMA),
3. Complete linkage cluster analysis (COMPLETENESS),
4. Single linkage cluster analysis (SINGLE),
5. Unweighted pair-group method using centroid averaging (UPGMC),
6. Weighted pair-group method using centroid averaging (WPGMC).

The cophenetic correlation coefficient is the most common method for evaluating the match between the original proximity matrix and the resulting phenogram (Dunn and Everitt, 1982). Cophenetic values were generated for each resulting phenogram using the COPENETIC sub-routine. Those forms of cluster analysis which showed a low cophenetic correlation (coph. < 0.6) and showed evidence of "chaining" were excluded. Chaining refers to the tendency of the technique to cluster together, at a relatively low level in the phenogram, distinct groups of OTUs linked by a "chain" of OTUs lying between the groups (Dunn and Everitt, 1982). Due to this property the single linkage method may fail to resolve relatively

the base, with the style arms ovate to linear and exerted from the corolla tube. The achene is ellipsoid, 5 - 6 ribbed with varying degrees of hair cover. The pappus is 6 - 8 mm long.

The *Brachylaena discolor* - *uniflora* species complex is clearly distinguishable from other species of *Brachylaena*. They are distinguished from *B. nerifolia* and *B. glabra* by the under surface of the leaves which in *B. nerifolia* and *B. glabra* are smooth or covered in reddish hairs, while in the *B. discolor* group the under surface is hairy and white, grey or silver in colour. *B. ilicifolia* and *B. elliptica* are most easily distinguished from the *B. discolor* complex by the shapes of their leaves which are distinctive. The most distinctive feature of *B. hillebrandii* which separates it from all other members of *Brachylaena* are the densely velvety-white involueral bracts. In all of the other species of *Brachylaena* the involueral bracts are often tomentose and tinged with white but they do not have the white-velvety appearance of *B. hillebrandii*. These and several other features clearly distinguish the *Brachylaena discolor* - *uniflora* species complex from other members of the genus *Brachylaena* in southern Africa.

The plants of this complex are distributed along the south-eastern coast of southern Africa from Uitenhage northwards along the Natal coast and into Mozambique as far north as Inhambane (Bazaruto Island). The distribution also continues inland in the northern part of its range, from northern Natal, across Swaziland and into the north-eastern Transvaal as far north as Messina and as far west as Rustenburg (Figure 1).

1.3 Taxonomic and nomenclatural history

De Candolle described *B. discolor* in 1836. In 1843 C. H. Schultz 'Bipontinus' described *B. natalensis* which was incorporated into *B. discolor* by Harvey in 1865. In the same treatment Harvey described *B. uniflora* which he listed under "imperfectly known species". The confusion in the classification of these species is largely due to the high degree of variation within the complex, which probably makes it the most difficult portion of the genus to

distinct groups if a number of intermediate OTUs are present (Blackith and Reyment, 1971). This resulted in the retention of the first three methods listed above (namely UPGMA, WPGMA and COMPLETE) while the last three methods (SINGLE, UPGMC, and WPGMC) were discarded. The resulting phenograms (Section 4.1), nine per data set, were then analysed.

3.2.3 Principal Components Analysis

Principal components analysis (PCA) is widely used as a dimension reducing technique. It results in a summary of as much of the variation in the data as possible in a few dimensions with a minimum loss of information (Blackith and Reyment, 1971; Sneath and Sokal, 1973; Neff and Marcus, 1980; Dunn and Everitt, 1982). The aim of PCA is to describe the dispersion of n -objects in p -dimensional space by introducing a new set of orthogonal linear coordinates (i.e. linear in the original coordinates), so that the sample variances of the given objects with respect to these derived coordinates are in decreasing order of magnitude (Chalton, 1982). Thus, the first principal component is such that the projections of the given points onto it have maximum variance among all possible linear coordinates, the second principal component has maximum variance subject to being orthogonal to the first, and so on (Blackith and Reyment, 1971; Sneath and Sokal, 1973; Neff and Marcus, 1980; Chalton, 1982; Dunn and Everitt, 1982).

Principal components analysis and the resulting projections were produced using the NT-SYS package of Rohlf et al. (1974). The basic data matrices (both male and female) were standardised in the same way as for the cluster analysis (Section 3.2.2) and the correlation matrices were computed using the SIMINT sub-routine. The PCA was generated by the FACTOR sub-routine and the first three components plotted (Section 4.2).

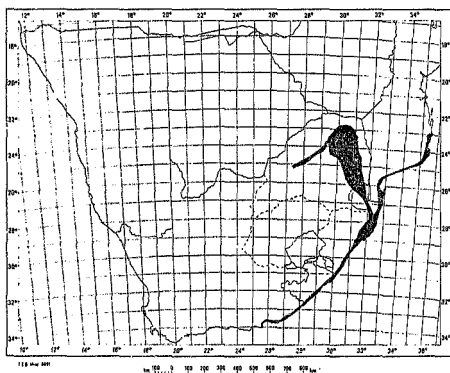
Figure 1:- Map of southern Africa: Showing known distribution of the *Brachylaena discolor* - *uniflora* species complex.

3.2.4 Discriminant Analysis

(1) Canonical Variates Analysis

Canonical variates analysis (CVA) is the term widely used to refer to a classical discriminant analysis done with the goal of dimension reduction, usually with the results expressed as a histogram or in bivariate plots (Neff and Markus, 1980). CVA operates on data which is assigned *a priori* into groups and the method can be used to identify ordering of the groups rather than an ordering of the objects (Klecka, 1980; Neff and Marcus, 1980; Chalton, 1982). The calculations for canonical variates are similar to those for principal components analysis and in both cases transformed axes are produced. The first axis is inclined in the direction of the *n*-objects. The second axis is perpendicular to the first and inclined in the direction of the next greatest variability, and so on for the subsequent axes. In principal components analysis, the latent vectors are orthogonal to each other while in canonical variates analysis this is not generally so (Blackith and Reyment, 1971). Canonical variates analysis can be used as a method of discriminant analysis where the aim is to use the linear function or functions, to assign an object, whose group is unknown, to one of the known groups (Klecka, 1980; Chalton, 1982). CVA was used here to obtain a measure of distance between the groups in low-dimensional space.

A canonical variates analysis was carried out using the CANDISC sub-routine on SAS (SAS Institute Inc., 1985). The OTUs were identified and grouped according to the currently accepted taxonomy (Gibbs Russell, 1984). Thus, three groups resulted namely a group consisting of *B. discolor* subsp. *discolor* individuals, a group consisting of *B. discolor* subsp. *transvaalensis* individuals, and a group of individuals identified as *B. uniflora*. The resulting canonical coefficients were then plotted against one another (Section 4.2). This plot was used to test the coherence or "tightness" of the preselected groups and was used to verify the previous division into groups which was based on the cluster analysis and the existing taxonomy. The complete output from this routine is presented as Appendix IV.



(II) Stepwise Discriminant Analysis

Stepwise discriminant analysis is a method which can be used to select the most useful discriminating variables (Klecka, 1980). A forward stepwise procedure selects the individual variable which provides the greatest discrimination. The procedure then pairs this first variable with each of the remaining variables, one at a time, to locate the combination which produces the greatest discrimination. The variable which contributed to the best pair is selected. The procedure goes on to combine the first two with each of the remaining variables to form triplets. This procedure continues until all possible variables have been selected or the remaining variables do not contribute a sufficient increment (Klecka, 1980). The procedure could also operate in the backward direction in which all variables are initially considered to be "in" and the worst one is cast out at each step. Forward and backward selection can also be combined (Klecka, 1980). This involves a forward selection procedure with each step starting with a review of the variables previously selected. If any of these variables no longer makes a sufficient contribution to the discrimination, it is rejected although it remains eligible for reselection at a future step.

The SAS (SAS Institute Inc., 1985) sub-routine STEPDISC, with combined forward and backward stepwise selection was used to determine the order of importance of the characters giving the best separation for the groups selected. The stepwise selection criterion used in the analysis was Wilk's Lambda, which is a measure of group discrimination. The complete output from this routine is presented as Appendix III. Male and female data sets were run separately for both discriminant analyses and the standardised values used in both cases.

deal with taxonomically. During the latter part of the 19th century and first quarter of the 20th century several general floras were published, which included treatments of *Brachylaena*, (Engler & Prantl, 1890; Wood & Evans, 1898; Wood, 1908; Sims, 1909; Bews, 1921; Henkel, 1934) these provided syntheses of the previous literature on this taxon as well as keys and descriptions to aid in identification but little new information was added.

Phillips and Schweickardt (1937) described a new species, *B. transvaalensis*, related to *B. discolor* and *B. uniflora*, in their revision of the South African species of *Brachylaena*. Hilliard and Burtt (1971) questioned the validity of the taxonomy employed by Phillips and Schweickardt with regard to the Natal region and concluded that there were not three independent species present in Natal.

They indicated that the name could be valid in the type locality (Soutpansberg, N. Transvaal) but that in Natal the name merely referred to plants that were intermediate between the extremes recognised as *B. uniflora* and *B. discolor*.

Paiva (1972) revised what he called "the *B. discolor*-complex" and created several subspecies and varieties. He argued that the group was very variable and that the components have overlapping geographical distributions and intergrade morphologically. Two subspecies, *discolor* and *transvaalensis*, were described. The former was further divided into two varieties based largely on differences in the number of rows of bracts and the dimensions of the involucre. Paiva did not include *B. uniflora* Harv. in this work as it fell outside the Flora Zambesiaca area. He wrote: "We don't include *Brachylaena uniflora* Harv., because it doesn't belong to our area and, so, we avoid further problems." This revision by Paiva forms the basis of the taxa currently recognised by Gibbs Russell (1984) (Table I).

The most recent contribution has come from Hilliard (1977) who has included all subspecies and varieties as well as *B. uniflora* under *B. discolor* for the Natal region. Both this work and that of Paiva (1972) are inadequate for solving this particular species-complex problem as they were conducted

4.0 RESULTS

4.1 Cluster Analysis

Clustering was used to determine what clusters could be revealed in the absence of prior assignment of OTUs to particular groups. In this way, the groups of plants were determined solely on the basis of their phenetic similarity. Cluster relationships between members of the complex are illustrated in Figures 4 - 12 (for the female data) and Figures 13 - 21 (for the male data). Initial clustering in both data sets occurs between OTUs from the same or neighbouring localities. This feature is common to each of the techniques employed. At the highest level of clustering a similarly consistent result is obtained for both groups of data and these groupings concur with those apparent from Principal Components Analysis (Section 4.2) and from Canonical Discriminant analysis (Section 4.3).

The relationship between clusters at the highest level is remarkably consistent for both groups of data and results in the same OTUs being placed in the same or similar groups regardless of the clustering algorithm or coefficient employed (Table 3). The cophenetic correlation coefficients of all of the methods presented are reasonably high, ranging from 0.722 - 0.631 for the female data set and from 0.774 - 0.523 for the male data set (Table 4), which indicates that the resulting phenograms are an adequate representation of the original resemblance matrices.

The results obtained from using single linkage (SINGLE), weighted pair group method using centroid averaging (WPGMC), and unweighted pair group method using centroid averaging (UPGMC) with the distance coefficient, were rejected and are not included as the cophenetic correlation coefficients obtained were 0.506, 0.522 and 0.636 respectively and all

Table 1 :- Currently recognised taxa of the *Brachylaena discolor* - *uniflora* species complex for southern Africa (Gibbs Russell, 1984)

B. discolor DC. subsp. *discolor*
var *discolor*

B. discolor DC. subsp. *discolor*
var. *massambicensis* J. Paiva

B. discolor DC. subsp. *transvaalensis*
(Phill. et Schweick.) J. Paiva

B. uniflora Harv.

Table 3:- Listing of OTUs and their Group Allocation Based on the Results of the Different Clustering Techniques and Coefficients Used. (Both Data Sets).

Key:-

1. Data Set - M = Male; F = Female.

2. Clustering Algorithm -

UPG = UPGMA; WPG = WPGMA;

COM = COMPLETE.

3. Coefficient - DIS = DISTANCE;

COR = CORRELATION;

EUC = EUCLIDEAN DISTANCE.

OTU	DATA	UPG	UPG	UPG	WPG	WPG	WPG	COM	COM	COM
	SET	DIS	COR	EUC	DIS	COR	EUC	DIS	COR	EUC
039	F	1	1	1	1	1	1	1	1	1
040	M	2	2	2	2	2	2	2	1	2
041	M	2	2	2	2	2	2	2	1	2
042	F	2	2	2	2	2	2	2	2	2
043	F	1	1	1	1	1	1	2	1	2
044	M	2	2	2	2	2	2	2	1	2
045	F	2	2	2	2	2	2	2	2	2
047	F	2	2	2	2	2	2	2	1	2
048	M	2	2	2	2	2	2	2	1	2
049	F	2	2	2	2	2	2	2	1	2
050	F	2	2	2	2	2	2	2	2	2
053	F	2	2	2	2	2	2	2	1	2
054	F	2	2	2	2	2	2	2	2	2
055	M	2	2	2	2	2	2	2	1	2
056	M	2	2	2	2	2	2	2	1	2

on a regional basis and each treatment omits a different section of the complex. Thus, a study conducted throughout the range of distribution of each of the elements of the complex was clearly necessary.

1.4 Objectives

The objectives of this study were to use phenetic methods to analyse the large morphological variation within the *Brachylaena discolor* - *uniflora* species complex. The results of this analysis would then be used to determine whether the observed variation could be attributed to clinal variation, hybridization or simple unorganised variation without any clear trend. A further objective was to use these findings to evaluate the presently accepted taxonomic treatment. In order to base the investigation on a sample large enough to reflect variability throughout the range of distribution extensive field collections were necessary.

[illegible]

2.0 PHENETICS: A BRIEF OVERVIEW

The field of phenetics has been described as the use of patterns of similarity among organisms which are based on the overall similarity or differences in all available characters without, (a) considering the evolutionary events that produced the observed similarity and, (b) *a priori* weighting of the characters for the estimation of relationships and the formulation of classifications (Cain and Harrison, 1960; Sneath and Sokal, 1973; Mayr, 1978; Duncan and Baum, 1981). Classifications published before or soon after the appearance of Charles Darwin's *Origin of Species* in 1859 were obviously phenetic in nature since taxonomists were not thinking then in evolutionary terms. With the introduction of numerical methods as operational approaches to this process, phenetics is now considered part of what has been termed "numerical taxonomy" (Sneath and Sokal, 1973), the broader field of which includes both numerical phenetics and numerical evolutionary (cladistic) methods (Duncan and Baum, 1981).

According to Duncan and Baum (1981), numerical phenetics consists of four stages: (a) selection of organisms, groups of organisms, or operational taxonomic units (OTUs); (b) description of the characters that are the bases for comparison including the estimation of similarity among and between OTUs; (c) the summary and examination of taxonomic structure; and (d) the comparison and choice of classifications. Chosen characters are considered initially as possessing equal weight (Sneath and Sokal, 1973; McNeill, 1975). Weighting is therefore considered as a *posteriori* activity utilizing the characters that most effectively summarise the taxonomic structure in the data. No initial evolutionary interpretation is attached to the characters used. Observed similarity is examined without consideration of the

OTU	DATA	UPG	UPG	UPG	WPG	WPG	WPG	COM	COM	COM
SET	DIS	COR	EUC	DIS	COR	EUC	DIS	COR	EUC	
088	F	1	1	1	1	1	1	1	1	1
089	M	2	2	2	2	2	2	2	1	2
090	F	1	1	1	1	1	1	1	1	1
091	F	1	1	1	1	1	1	1	1	1
092	M	2	2	2	2	2	2	2	2	2
093	F	2	2	2	2	2	2	2	2	2
094	F	1	1	1	1	1	1	1	1	1
095	M	1	1	1	1	1	1	1	1	1
096	M	1	1	1	1	1	1	1	1	1
097	F	1	1	1	1	1	1	1	1	1
098	M	1	1	1	1	1	1	1	1	1
099	M	2	2	2	2	2	2	2	2	2
100	F	2	2	2	2	2	2	2	2	2
101	M	1	1	1	1	1	1	1	1	1
102	F	1	1	1	1	1	1	1	1	1
103	M	2	2	2	2	2	2	2	2	2
104	F	2	2	2	2	2	2	2	2	2
105	M	2	2	2	2	2	2	2	2	2
106	F	2	2	2	2	2	2	2	2	2
107	M	2	2	2	2	2	2	2	2	2
108	F	2	2	2	2	2	2	2	2	2
109	M	2	2	2	2	2	2	2	2	2
110	F	2	2	2	2	2	2	2	2	2
111	M	2	2	2	2	1	2	2	2	2
112	F	2	2	2	2	2	2	2	2	2
113	M	2	2	2	2	2	2	2	2	2
114	F	2	2	2	2	2	2	2	2	2
115	F	2	2	2	2	2	2	2	2	2
116	F	3	2	3	1	2	1	1	2	1

evolutionary events that caused that similarity. These patterns of observed similarity among organisms are used to group and rank organisms in a hierarchical classification (Duncan and Baum, 1981).

Numerical taxonomy was first advocated in the mid-1930s at a time when a well developed and relatively stable theory of systematics was held by most biologists around the world (Sneath and Sokal, 1973). The views held at that time were a result of the maturation of the important conceptual contributions that had been made during the 1930s and 1940s by eminent scientists such as J.S. Huxley, E. Mayr, T. Dobzhansky, G.G. Simpson, G.L. Stebbins, B. Rensch and E. Anderson.

Numerical and phenetic taxonomy did not develop suddenly but rather developed as a consequence of increased questioning of some of the established assumptions and techniques (Sneath and Sokal, 1973). Many criticisms have been levelled at numerical taxonomy since its inception but, as Fosberg (1967) points out, a lot of objections were generated by overselling of numerical taxonomy by some of its early proponents and their insistence that now we had the final solution to all taxonomic problems and that all else was outmoded.

Numerical taxonomy appears to be considered by its proponents as both a technique and a philosophy. It is the philosophy of numerical taxonomy that is most often criticized by the conventional taxonomists (Gilmartin, 1967). As a technique, it enables the biologist to tackle many problems in a manner that was not possible prior to the development of the computer. This has enabled taxonomists to use larger and more representative samples of taxa and of characters in their analyses (Sneath and Sokal, 1973). More importantly the numerical approach tends to elucidate and clarify some of the methods and mental processes that taxonomists usually use. This has the effect of making the classical methods more precise and effective (Fosberg, 1967). The philosophy of numerical taxonomy demands equal weighting of many characters in order to achieve a degree of objectivity, as well as the

[illegible]

exclusion of any preconceived notions about the phylogeny of the group being examined (Sneath and Sokal, 1973). These two concepts, equal weighting and the rejection of phylogeny are in direct opposition to the background of nearly all biologists (Gilmartin, 1967).

The controversy surrounding numerical taxonomy is reflected in the records of many symposia held during the first half of the 1960s (Sneath and Sokal, 1973). Many of the criticisms were presented by Mayr (1965) in an important article, most of which were countered by Sokal, et. al. (1965). In 1969, Mayr again criticised the philosophical basis of numerical taxonomy but this too has been countered by Sneath and Sokal (1973) who wrote:-

"...the basic difficulty between our philosophy and the evolutionary classification of Mayr is that we try to distinguish between the process of classifying and the subsequent process of generating hypotheses about evolution, and Mayr wishes to combine these two. Yet in his entire volume he fails to tell us how to make such a combination. Our dissatisfaction with vague philosophies and methods has led to the principles and procedures propounded in our book."

Another aspect of numerical taxonomy that has been severely criticised has been the claim by its proponents that numerical taxonomy is more objective. Most numerical taxonomists feel that numerical taxonomic work does approach objectivity to a greater degree than classical methods but few numerical taxonomists at the present time claim complete objectivity in their operational classifications. Heiser, et. al. (1965) claim that there is equal subjectivity in numerical and classical methods before characters are chosen but that after the initial character selection, numerical taxonomy tends to be less subjective. However, the taxonomist, whatever techniques are chosen, be they classical, numerical, or both, must always decide on the best classification and must present the goals and assumptions used when such a classification is produced. The taxonomic decisions, therefore, remain in the hands of the practising taxonomist, and numerical taxonomists do not

[illegible]

claim to be able to "ask the computer what the best classification is" as has been incorrectly reported by certain critics of numerical taxonomy (Kalkman, 1966).

According to Duncan and Baum (1981) most studies fail to adequately discuss the connection between the examination of taxonomic structure in a data set and the taxonomic conclusions reached. *Similar criticisms have been levelled at numerical taxonomy by several conventional taxonomists.* Burtt, et. al. (1970) contend that the numerical taxonomic studies published "exert something of a tyranny" over other workers even though, in certain cases, the resulting classifications appear weaker and less natural than the original classifications. If numerical phenetics is to have a significant impact on the practice of taxonomy, the connections between the results of the data analysis and the conversion of these results into taxonomic decisions must be clearly stated. Several ways of evaluating classifications have been proposed but these have seldom been applied to real data sets (Duncan and Baum, 1981). Sneath and Sokal (1973) point out that the explicit procedures of numerical taxonomy make it possible to engage in criticism of this sort, which is something which is not usually possible in orthodox taxonomy. Many of the criticisms of methodology and results of phenetic studies apply to conventional classifications as well but these cannot be stated as clearly in that branch of taxonomy.

Johnson (1970) is of the opinion that the effort expended in numerical phenetics is not worthwhile in view of the results that have been published. *Sneath and Sokal (1973) suggest that he has underrated the significance and wide applicability of the numerical taxonomic method.* Their opinion is supported by the large number of studies already published and those that are continually appearing in an increasing number of fields. There are at present three major bibliographies of numerical phenetic studies in systematic botany (Sneath and Sokal, 1973; Duncan and Baum, 1981; Baum et. al., 1984) which include papers published up to 1982 and which between

OTU	DATA	UPG	UPG	UPG	WPG	WPG	WPG	COM	COM	COM
SET	DIS	COR	EUC	DIS	COR	EUC	DIS	COR	EUC	

176	M	2	1	2	2	1	2	1	1	1
177	F	2	1	2	2	2	2	2	2	2
178	M	2	2	2	2	1	2	2	2	2
179	M	2	2	2	2	2	2	2	2	2
180	M	2	2	2	2	2	2	2	1	2
181	F	1	2	2	2	2	2	2	2	2
183	F	2	2	2	2	2	2	2	2	2
184	M	2	2	2	2	2	2	2	2	2
185	M	2	2	2	2	1	2	2	2	2
186	F	2	2	2	2	2	2	2	1	2
187	F	2	2	2	2	2	2	2	2	2
188	M	2	2	2	2	1	2	2	2	2
189	F	2	2	2	2	2	2	2	2	2
190	M	2	2	2	2	2	2	2	1	2
191	F	2	2	2	2	2	2	2	2	2
192	M	2	2	2	2	2	2	2	2	2
193	M	2	2	2	2	1	2	2	2	2
194	F	2	2	2	2	2	2	2	2	2
195	M	2	2	2	2	1	2	2	2	2
196	F	1	2	2	2	2	2	2	2	2
197	F	2	2	2	2	2	2	2	2	2
198	M	1	2	2	2	1	2	2	2	2
199	F	2	2	2	2	2	2	2	2	2
200	F	2	2	2	2	2	2	2	2	2
201	M	2	2	2	2	1	2	2	2	2
202	F	2	2	2	2	2	2	2	1	2
203	M	1	2	2	2	1	2	2	2	2
204	M	2	2	2	2	1	2	2	2	2
205	M	2	2	2	2	1	2	2	2	2

them list approximately 800 publications. This review is largely limited to botanical applications since the number of publications in all of biological systematics is too large for a single review of this nature.

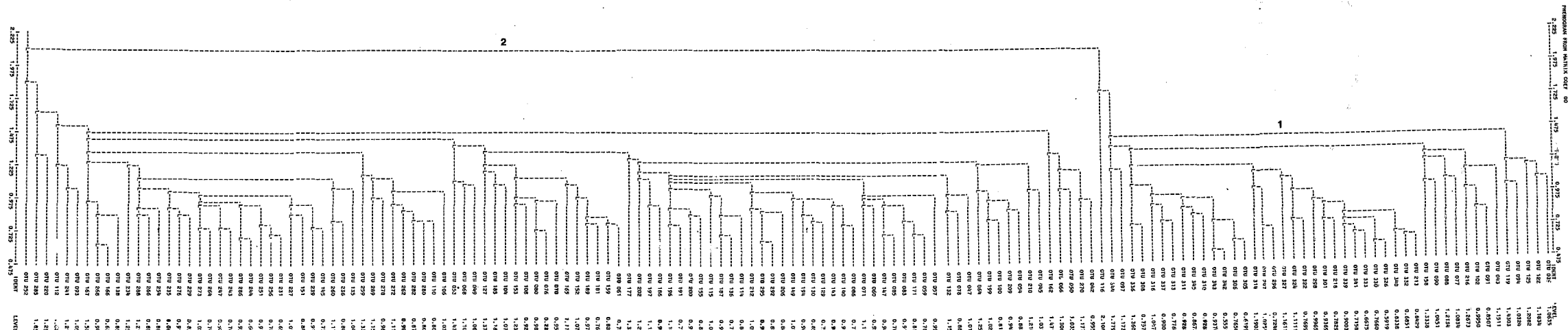
Numerical phenetics has been applied more often to flowering plants than to other major plant groups (Duncan and Baum, 1981). Within flowering plants, studies at the species level (for example, Mooney and Emboden, 1968; Arroyo-Kalin, 1973; Zaharof, 1986), species complex (for example, Parups, et. al., 1966; Drury and Randal, 1969; Giles, 1986), or genus level (for example, Heiser, et. al., 1965; Jensen and Eshbaugh, 1976a; 1976b; Crisci, et. al., 1979) predominate. In recent years several systematic studies have analysed patterns of population variation and species circumscription (for example, Gilmartin, et. al., 1986; Ringius and Chmielewski, 1987; Wolf and Whitkus, 1987) and numerical taxonomy has served as a useful approach in such studies.

By far the majority of phenetic studies within flowering plants have made use of morphological data (examples include, Heiser, et. al., 1965; McNeill, 1974; Barrett and Rhodes, 1976; Jensen and Eshbaugh, 1976a; 1976b; Lavareck, 1976; Schilling and Heiser, 1976; Bisby and Nicholls, 1977; Jensen, 1977; Schilling and Heiser, 1981; Zandee and Glas, 1982; Shaw, et. al., 1984; West and Noble, 1984; Whitkus and Packer, 1984; Bayer, 1985; Decker and Wilson, 1986; Giles and Lefkovich, 1986; Lammers, et. al., 1986; Moret, et. al., 1986; Nicholls, 1986; Randall and Hilu, 1986; Zaharof, 1986; Bayer, 1987; Diggs, 1987; Gilmartin and Brown, 1987; Pehu, et. al., 1987; Ringius and Chmielewski, 1987; Wyse Jackson and Parnell, 1987) to analyse relationships between different groups. Some studies have incorporated both morphology and anatomy (for example, Pridgson, 1982), morphology and cytology (for example, Baker and Pinkava, 1987), morphology and chemical characters (for example, Adams and Turner, 1970), and morphology and electrophoretic characters (for example, Les, 1986). In addition, a large number of studies have utilised numerical phenetics to analyse chemical (particularly phenolic) differences between OTUs (examples include, Ellison, et. al., 1962; Lorenz

and Schulz-Shaeffer, 1964; Matthews, 1966; Dass and Nybom, 1967; Jaworska and Nybom, 1967; Grant and Zandstra, 1968; Olden and Nybom, 1968; Ising and Frost, 1969; Dedio, et. al., 1969a; 1969b; Kalsikes and Dodio, 1970a; 1970b; Ilyama and Grant, 1972; Dass, et. al., 1974; Natarella and Sink, 1974; Dass, et. al., 1975; Wolf and Whitkus, 1987). More recently numerical methods have been employed to analyze electrophoretic and DNA data (for example, Fournier and Adams, 1986; Nickrent, 1986; Bayer, et. al., 1987; Bretting, et. al., 1987; Riesberg, et. al., 1987; Ellsens and Crawford, 1988).

Numerical phenetic applications in botany have been dominated by cluster analysis (Duncan and Baum, 1981). This technique has been used on its own (for example, Adams and Turner, 1970; Nickrent, 1986; Bayer, et. al., 1987; Gilmartin and Brown, 1987; Pehu, et. al., 1987; Riesberg, et. al., 1987; Ellsens and Crawford, 1988), and in combination with other techniques such as principle components analysis (PCA) (examples include, McNeill, 1974; Schilling and Heiser, 1976; Pridgeon, 1982; Whitkus and Packer, 1984; Lea, 1986; Bayer, 1987; Bretting, et. al., 1987; Wolf and Whitkus, 1987), principle co-ordinate analysis (for example, Lavarack, 1976; Nicholls, 1986; Randall and Hill, 1986), canonical discriminant analysis (West and Noble, 1984; Barker and Pinkava, 1987; Diggs, 1987), as well as with PCA and canonical discriminant analysis together (for example, Moret, et. al., 1986).

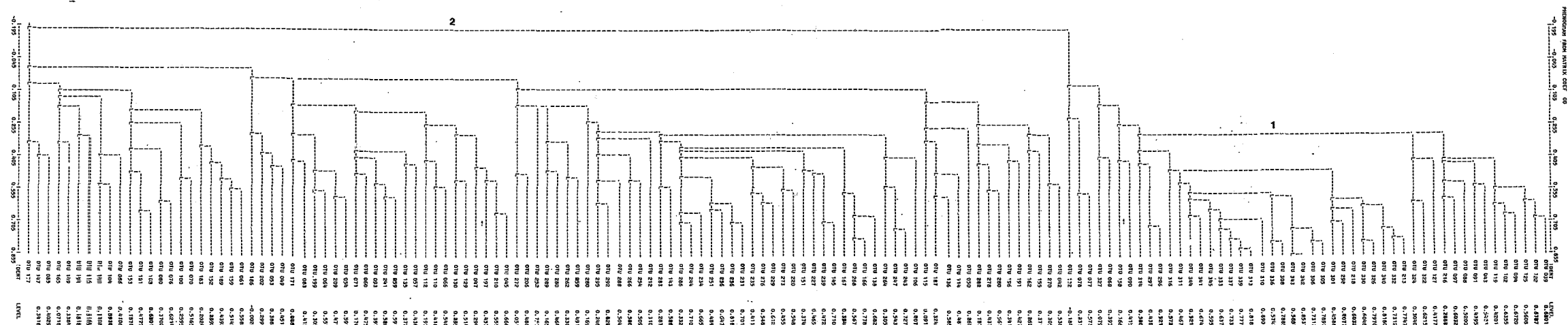
Duncan and Baum (1981) have shown that cluster analysis has been used at least three times as frequently as any other phenetic method. Principal components analysis has been used fairly frequently both on its own (for example, Jensen, 1977; Wyse Jackson and Parnell, 1987), and in combination with cluster analysis (see under cluster analysis for examples), canonical discriminant analysis (examples include, Decker and Wilson, 1986; Ringius and Chmielewski, 1986), as well as cladistic analysis (for example, Schilling and Heiser, 1981; Lemmers, et. al., 1986). Discriminant analysis has also been used, although less frequently than both cluster analysis and PCA (for example, Giles and Lefkovich, 1986; Zaharof, 1986).

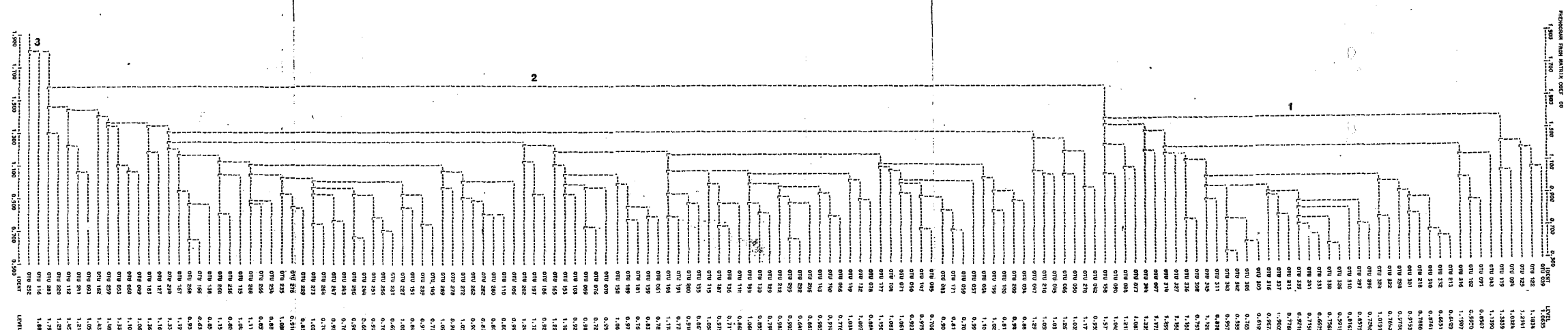


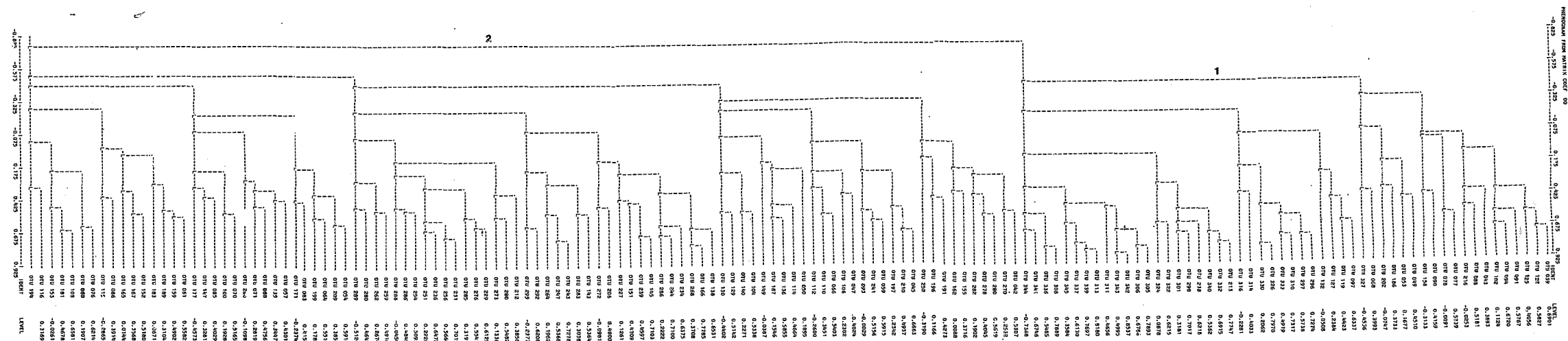
The least frequently explored step in numerical phenetics is the comparison of competing classifications (Duncan and Baum, 1981). This step seems to be one of the most important and would serve to win the support of conventional taxonomists who are sceptical about the results generated by numerical taxonomy. It is important to demonstrate, by using a set of standard criteria, that the resulting classifications are an improvement over previous more or less intuitively derived classifications.

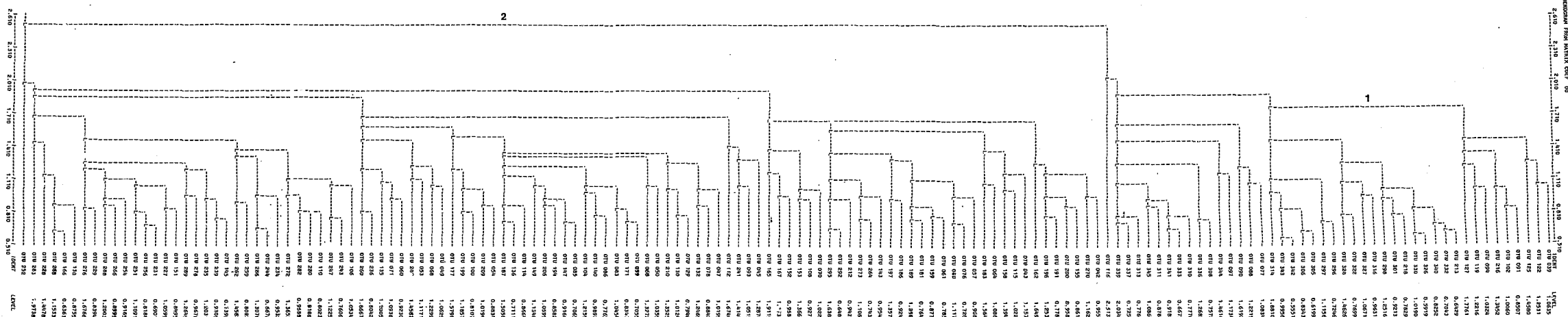
One successful application of numerical phenetics has been the confirmation of the broad outlines of existing orthodox taxonomies (Sneath and Sokal, 1973). The results of these types of studies increase the general credibility of the taxonomy of the group in question as well as the numerical techniques used (Sneath and Sokal, 1973). Examples of such studies include work by Watson, et. al. (1966); Rhodes, et. al. (1968); Stearn (1968); Ivimey - Cook (1969a; 1969b); France, et. al. (1969); Rowley, (1969); and Stearn (1969) amongst others. In many cases there have been several conflicting conventional taxonomies and the numerical analyses often help resolve these problems by providing strong support for one of them, or by presenting a more acceptable alternative system (Sneath and Sokal, 1973). It is also common to find minor points of confusion in the previous taxonomy of a group where only a few of the smaller taxa or groups of taxa are affected and numerical methods have also played a role in resolving some of these problems (see Rowley, 1967; McNeill, et. al., 1969, for examples).

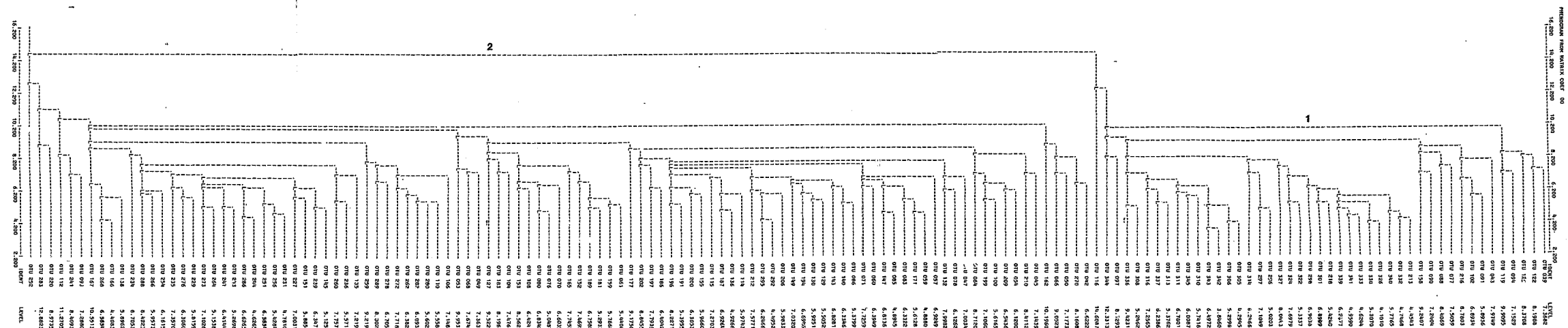
There are also a few examples where the resulting taxonomic relationships generated by numerical phenetics have been vastly different to those proposed by conventional taxonomic methods. This has been particularly evident in groups whose current taxonomy is confused or where the relationships between the taxa are difficult to discern by orthodox methods. For example, Duckert, et. al. (1965) worked on the Chlorophyte genus *Chlorodesmia*, and El-Gazzar and Watson (1970a; 1970b) and El-Gazzar, et. al. (1968) worked on the genus *Salvia*. In the last study only one of five subgenera and only one of twelve sections proposed by conventional

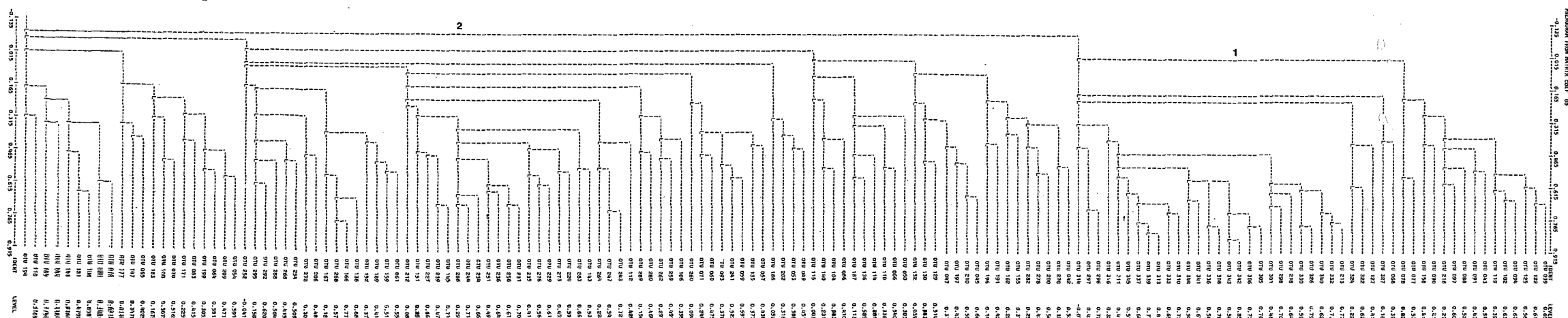


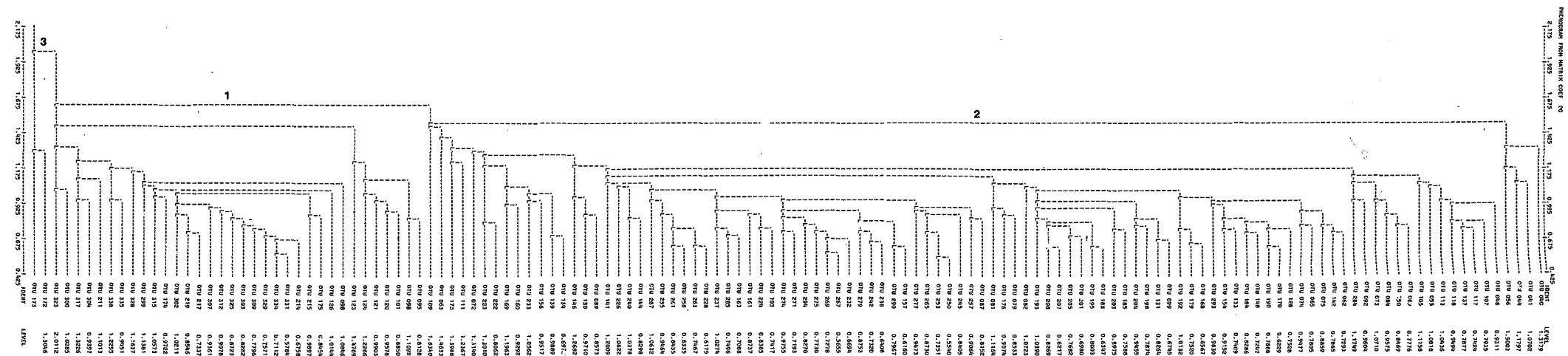


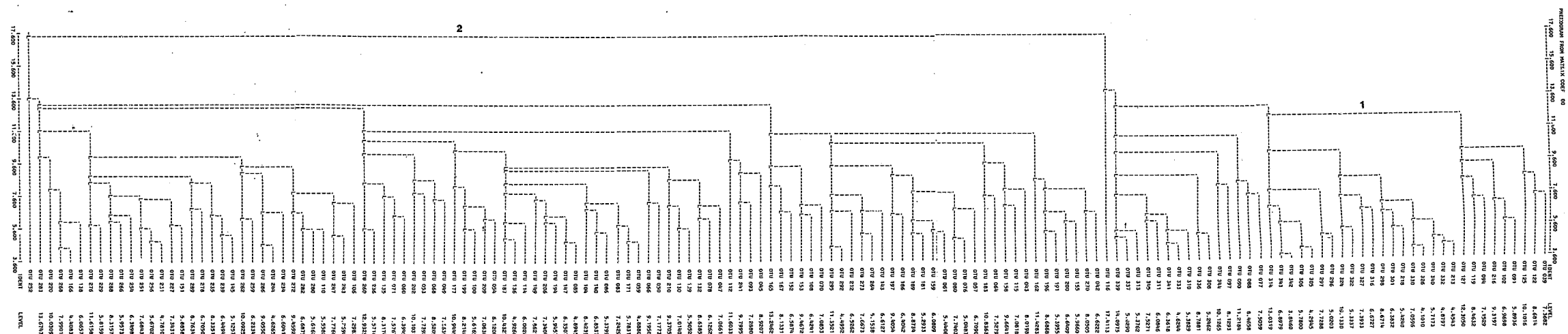


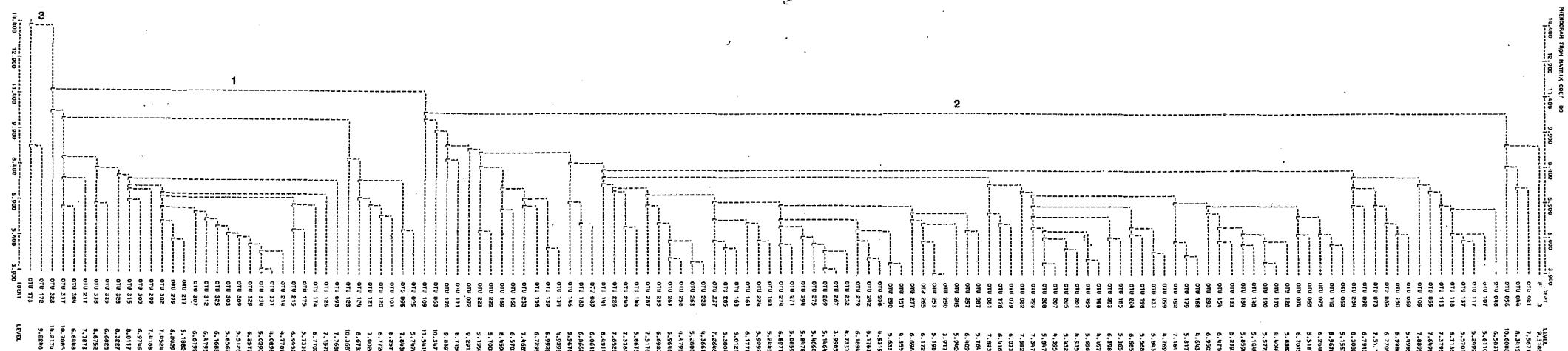


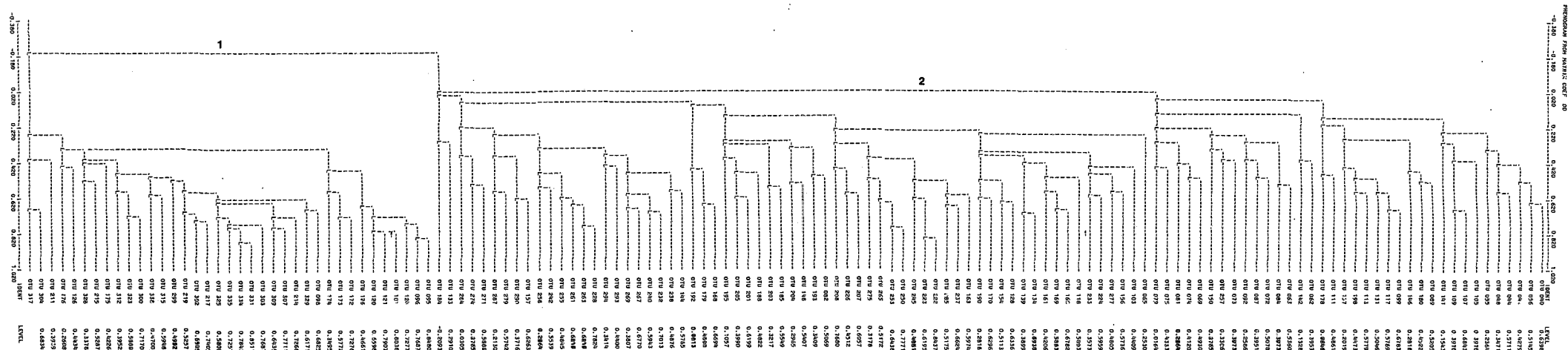


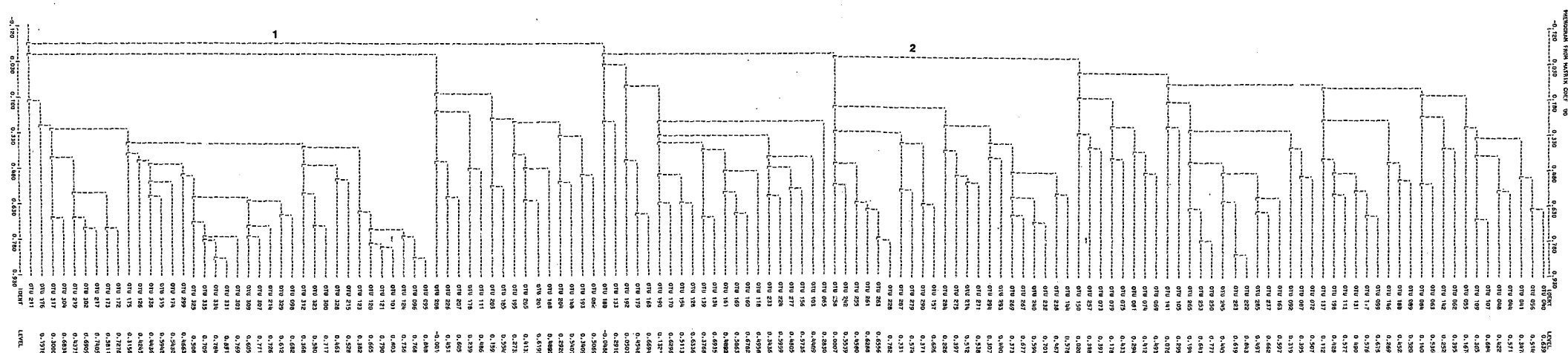


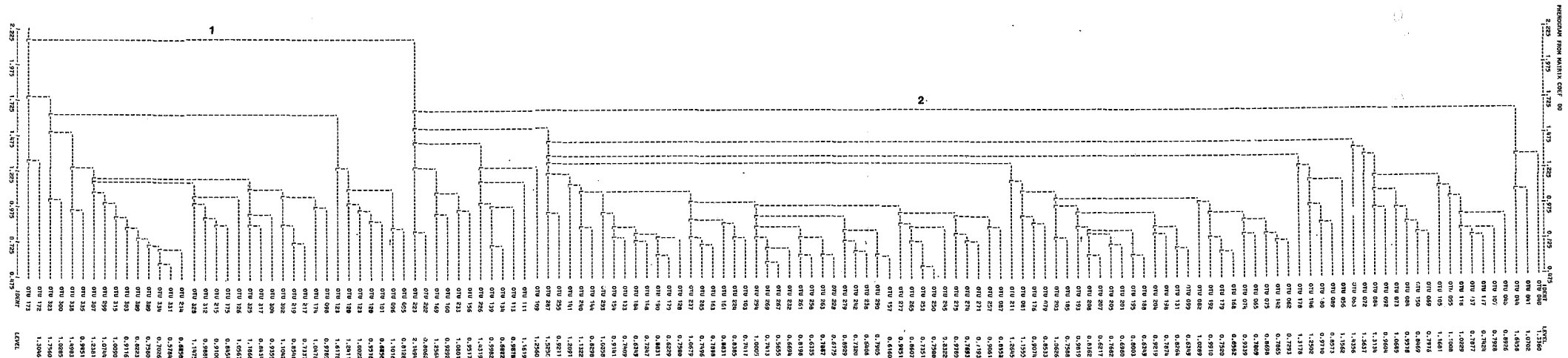


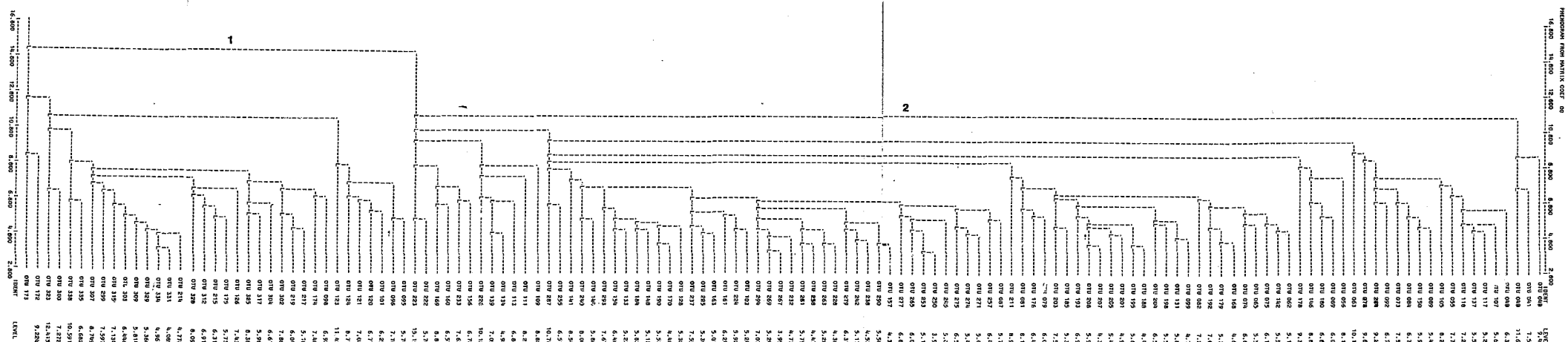


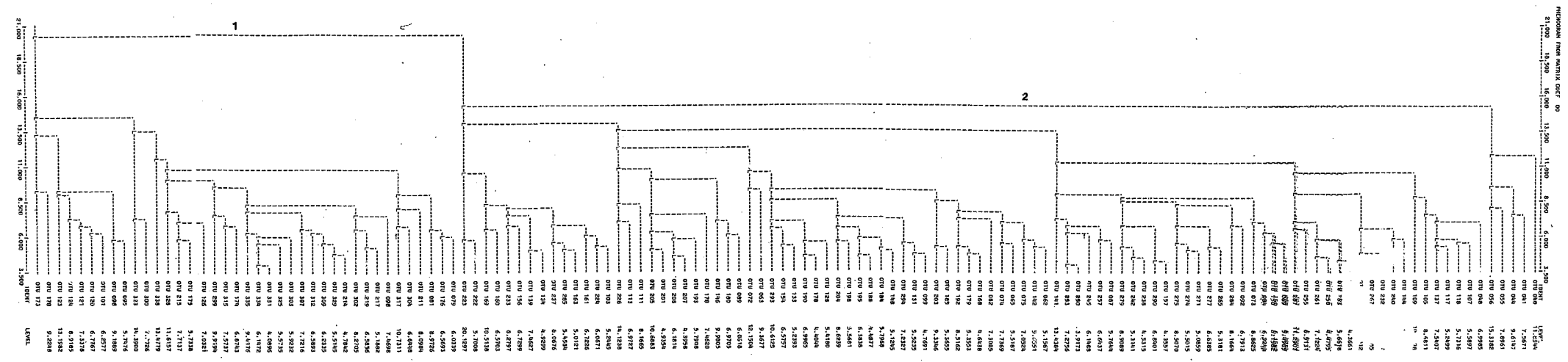


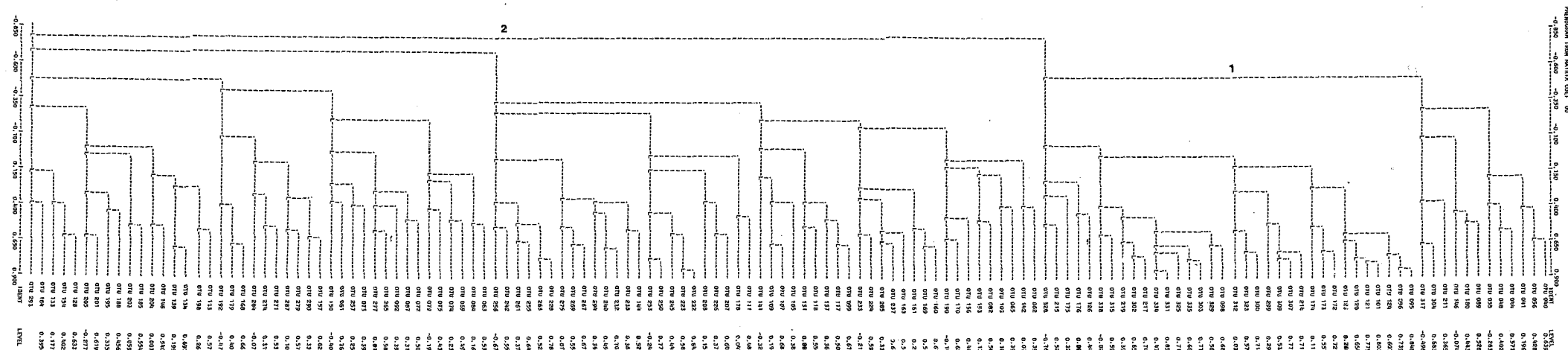












OTU	DATA	UPG	UPG	UPG	WPG	WPG	WPG	COM	COM	COM
	SET	DIS	COR	EUC	DIS	COR	EUC	DIS	COR	EUC
232	M	2	2	2	2	2	2	2	2	2
239	F	2	2	2	2	2	2	2	2	2
240	M	2	2	2	2	2	2	2	2	2
241	F	2	2	2	2	2	2	2	2	2
242	M	2	2	2	2	2	2	2	2	2
243	F	2	2	2	2	2	2	2	2	2
244	F	2	2	2	2	2	2	2	2	2
245	M	2	2	2	2	2	2	2	2	2
247	F	2	2	2	2	2	2	2	2	2
250	M	2	2	2	2	2	2	2	2	2
251	F	2	2	2	2	2	2	2	2	2
252	F	2	2	2	2	2	2	2	2	2
253	M	2	2	2	2	2	2	2	2	2
254	F	2	2	2	2	2	2	2	2	2
255	M	2	2	2	2	2	2	2	2	2
256	F	2	2	2	2	2	2	2	2	2
257	M	2	2	2	2	2	2	2	2	2
258	M	2	2	2	2	2	2	2	2	2
259	F	2	2	2	2	2	2	2	2	2
260	F	2	2	2	2	2	2	2	2	2
261	M	2	2	2	2	2	2	2	2	2
262	F	2	2	2	2	2	2	2	2	2
263	M	2	2	2	2	2	2	2	2	2
264	F	2	2	2	2	2	2	2	2	2
265	M	2	2	2	2	2	2	2	2	2
266	F	2	2	2	2	2	2	2	2	2
267	M	2	2	2	2	2	2	2	2	2
268	F	2	2	2	2	2	2	2	2	2
269	M	2	2	2	2	2	2	2	2	2

[illegible]

[illegible]

[illegible]

Table 4:- Listing of Cophenetic Correlation Values for the Different Clustering Techniques and Coefficients Used.

Key:- 1. Data Set - M = Male; F = Female.
 2. Clustering Algorithm -
 UPG = UPGMA; WPG = WPGMA;
 COM = COMPLETE.
 3. Coefficient - DIS = DISTANCE;
 COR = CORRELATION; EUC = EUCLIDEAN
 DISTANCE.

DATA SET	UPG DIS	UPG COR	UPG EUC	WPG DIS	WPG COR	WPG EUC	COM DIS	COM COR	COM EUC
M	0.77	0.74	0.77	0.74	0.63	0.73	0.69	0.62	0.68
F	0.72	0.73	0.72	0.68	0.65	0.68	0.63	0.65	0.63

three methods displayed evidence of "chaining" (see section 3.2.2 for an explanation of chaining).

In the female data set the UPGMA clustering technique using the distance and euclidean distance coefficients (Figs. 4; 6) give more major clusters (i.e. 3) than any of the other techniques. However, the two principal clusters designated by these techniques remain consistent with those designated by the other clustering techniques (Table 3). The COMPLETE clustering technique (Figs. 10; 11; & 12) (phenon levels 2.25; .5; and 14.5 respectively) and the WPGMA technique using both the distance and euclidean distance coefficients (Figs. 7 & 9) (phenon levels 2.0; & 13 respectively) show the clearest separation into two major clusters.

OTUs 116 and 252 form a third cluster at the 1.5 phenon level (Fig. 4) and the 1' phenon level (Fig. 6) when the UPGMA clustering technique is used with the distance and euclidean distance coefficients respectively. This pattern is not prevalent when the other clustering techniques are used, but OTU 116 is included in group one (Table 3) when the WPGMA and COMPLETE clustering techniques are used in conjunction with both distance coefficients (Figs. 7; 9; 10 & 12 respectively). In these cases, OTU 116 is placed at the boundary of group one and acts as a link between the two major clusters, but is placed within group two when the correlation coefficient is used (Figs. 8; & 11).

OTU 252 is always placed on the boundary of group two when distance and euclidean distance coefficients are used with the various clustering techniques (Figs. 4; 6; 7; 9; 10; & 12) but is more centrally positioned when the correlation coefficient is used with the various clustering techniques (Figs. 5; 8; & 11). Closer examination of the actual specimens (OTUs 116 & 252) and the measurements obtained for the various characters shows the OTUs to be neither extreme nor unusual in any way. Thus, it would appear as if the positioning of these two OTUs is a result of the clustering procedure rather than of the specimens themselves.

three methods displayed evidence of "chaining" (see section 3.2.2 for an explanation of chaining).

In the female data set the UPGMA clustering technique using the distance and euclidean distance coefficients (Figs. 4; 6) give more major clusters (i.e. 3) than any of the other techniques. However, the two principal clusters designated by these techniques remain consistent with those designated by the other clustering techniques (Table 3). The COMPLETE clustering technique (Figs. 10; 11; & 12) (phenon levels 2.25; .5; and .145 respectively) and the WPGMA technique using both the distance and euclidean distance coefficients (Figs. 7 & 9) (phenon levels 2.0; & 13 respectively) show the clearest separation into two major clusters.

OTUs 116 and 252 form a third cluster at the 1.5 phenon level (Fig. 4) and the 10.5 phenon level (Fig. 6) when the UPGMA clustering technique is used with the distance and euclidean distance coefficients respectively. This pattern is not prevalent when the other clustering techniques are used, but OTU 116 is included in group one (Table 3) when the WPGMA and COMPLETE clustering techniques are used in conjunction with both distance coefficients (Figs. 7; 9; 10 & 12 respectively). In these cases, OTU 116 is placed at the boundary of group one and acts as a link between the two major clusters, but is placed within group two when the correlation coefficient is used (Figs. 8; & 11).

OTU 252 is always placed on the boundary of group two when distance and euclidean distance coefficients are used with the various clustering techniques (Figs. 4; 6; 7; 9; 10; & 12) but is more centrally positioned when the correlation coefficient is used with the various clustering techniques (Figs. 5; 8; & 11). Closer examination of the actual specimens (OTUs 116 & 252) and the measurements obtained for the various characters shows the OTUs to be neither extreme nor unusual in any way. Thus, it would appear as if the positioning of these two OTUs is a result of the clustering procedure rather than of the specimens themselves.

In the male data set the UPGMA clustering technique using the distance and euclidean distance coefficients (Figs. 13 & 15) give more clusters (i.e. 3) than any of the other techniques. OTUs 172 and 173 form a third cluster at the 1.55 phenon level (Fig. 13) and the 1.0 phenon level (Fig. 15) when the UPGMA clustering technique is used with the distance and euclidean distance techniques respectively. This pattern is still prevalent when any of the other clustering techniques are used in conjunction with either the distance or euclidean distance coefficients. In these cases, though, the two OTUs are incorporated into group one (Figs. 16; 18; 19; & 21). Closer examination of the actual specimens revealed that the plants sampled were less mature than the average OTUs used in this study. This implies that the size of certain floral characters would be strongly affected. This may account for the positioning of these OTUs at the extreme boundary of group one when the distance and euclidean distance coefficients are used (Figs. 13; 15; 16; 18; 19; & 21).

In the case of the complete linkage technique using the correlation coefficient (Fig. 20) the position of group one has been shifted from the extreme left to the far right of the phenogram. Several of the OTUs (namely numbers 40; 41; 44; 48; 55; 56; 89; & 180) which in all other cases are allocated to group two (Table 3), have been added to group one in this instance. A similar situation is evident when WPGMA is used with the correlation coefficient (Fig. 17) where group one, at the .5 phenon level, has a number of OTUs present which in all other cases are allocated to group two (Table 3). These OTUs (namely numbers 82; 111; 148; 178; 185; 188; 193; 195; 198; 201; 203; 204; 205; 207; 208; 209; & 226) are not the same set of OTUs that were added to group one when COMPLETE linkage clustering was used with the correlation coefficient. From this it appears evident that these anomalies are probably due to the methodology used rather than to some inherent factor in the data.

The UPGMA clustering technique using the correlation coefficient (Fig. 14) (Phenon level = -2.5), the WPGMA technique using both the distance (Fig. 16) and euclidean distance (Fig. 18) coefficients (phenon levels = 1.8 & 12.5 respectively) as well as the complete linkage technique using both the distance (Fig. 19) and euclidean distance (Fig. 21) coefficients (phenon levels = 2.25 & 16.0 respectively) show the clearest separation of the OTUs into two major clusters.

4.2 Principal Components Analysis

Both sets of data (male and female) were subjected to a PCA and the first three principal components extracted (Figs. 22 - 27). The first three principal components extracted account for 42.0 and 47.4 percent of the variation for the female and male data respectively. The first fourteen components of the female data set (Table 5) and the first twelve of the male data set (Table 6) have eigenvalues greater than one, indicating that the characters used are not highly correlated. The relatively low percentage of the variation accounted for by the first three components in each data set (42.0 & 47.4 respectively) also indicates that the character variables used are not highly correlated. Component one emphasizes the inflorescence characters, while component two accentuates the floret characters for both data sets (Tables 7 & 8). The third component, of both data sets, has high loadings for leaf characters.

Inspection of the first two PCA plots for the female data (Fig. 22 & 23) reveals that individuals from groups one and three (corresponding to *Brachylaena uniflora* and *B. discolor* subsp. *transvaalensis* respectively) are separated from the individuals of group two (corresponding to *B. discolor* subsp. *discolor*). OTUs from groups one and three show a large degree of overlap and are drawn fairly close together, while group two remains fairly distinct. There is a degree of overlap between certain individuals of groups one and two, but individuals from group three do not overlap with any of the OTUs from group two. In the case of factor 3 vs. factor 2 (Fig. 24)

individuals from all three groups are interspersed with one another and no groups are clearly separated from any others. This is as expected as factors two and three account for only fourteen percent of the variation.

Closer examination of the first two PCA plots for the male data (Figs. 25 & 26) reveals a similar pattern to that of the female data; OTUs from groups one and three (corresponding to *Brachylaena uniflora* and *B. discolor* subsp. *transvaalensis* respectively) are separated from the individuals of group two (corresponding to *B. discolor* subsp. *discolor*). In this case, though, one of the OTUs had missing values and so was excluded from the analysis. When considering factor 3 vs. factor 2 (Fig. 27) a similar pattern to that of the female data set is again evident with OTUs from all three groups interspersed with one another and no groups clearly separated.

The overall impression given by the PCA plots is of two groups. These results serve to substantiate the results of the canonical discriminant analysis (Section 4.1) and the canonical discriminant analysis (Section 4.1) revealed similar groupings of the OTUs. These results are further supported by the fact that similar groupings were obtained in each case with both the female and male data sets.

Figure 4. Phenogram of 150 female OTUs - clustering technique used was UPGMA with DISTANCE coefficient. (Phenon level used = -1.4), (COPH. = 0.722).

Figure 5. Phenogram of 150 female OTUs - clustering technique used was UPGMA with CORRELATION coefficient. (Phenon level used = -1.0), (COPH. = 0.733).

Figure 6. Phenogram of 150 female OTUs - clustering technique used was UPGMA with EUCLIDEAN DISTANCE coefficient. (Phenon level used = 10.5), (COPH. = 0.722).

Figure 7. Phenogram of 150 female OTUs - clustering technique used was WPGMA with DISTANCE coefficient, (Phonon level used = 2.0), (COPH. = 0.678).

Figure 8. Phenogram of 150 female OTUs - clustering technique used was WPGMA with CORRELATION coefficient. (Phenon level used = -7.0), (COPH. = 0.652).

Figure 9. Phenogram of 150 female OTUs - clustering technique used was WPGMA with EUCLIDEAN DISTANCE coefficient. (Phenon level used = 13), (COPH. = 0.678).

Figure 10. Phenogram of 150 female *O. Us* - clustering technique used was COMPLETE with DISTANCE coefficient. (Phenon level used = 2.25), (COPH. = 0.631).

Figure 11. Phenogram of 150 female OTUs - clustering technique used was COMPLETE with CORRELATION coefficient. (Phenon level used = -5.0), (COPH. ≈ 0.654).

Figure 12. Phenogram of 150 female OTUs - clustering technique used was COMPLETE with EUCLIDEAN DISTANCE coefficient. (Phenon level used = 14.5), (COPH. = 0.631).

Figure 13. Phenogram of 138 Male OTUs - clustering technique used was UPGMA with DISTANCE coefficient. (Phenon level = 1.55), (COPH. = 0.774).

Figure 14. Phenogram of 138 male OTUs - clustering technique used was UPGMA with CORRELATION coefficient. (Phenon level = -2.5), (COPH. = 0.739).

Figure 15. Phenogram of 138 male OTUs - clustering technique used was UPGMA with EUCLIDEAN DISTANCE coefficient. (Phenon level = 11.0), (COPH. = 0.773).

Figure 16. Phenogram of 138 male OTUs - clustering technique used was WPGMA with DISTANCE coefficient. (Phenon level = 1.8), (COPH. = 0.736).

Figure 17. Phenogram of 138 male OTUs - clustering technique used was WPGMA with CORRELATION coefficient, (Pheuson level) = -5.0, (COPH. = 0.625).

Figure 18. Phonogram of 138 male OTUs - clustering technique used was WPGMA with EUCLIDEAN DISTANCE coefficient. (Phenon level = 12.5), (COPH. = 0.734).

Figure 19, Phenogram of 138 male OTUs - clustering technique used was COMPLETE with DISTANCE coefficient. (Phenon level = 2.25), (COPH. = 0.685).

Figure 20. Phenogram of 138 male OTUs - clustering technique used was COMPLETE with CORRELATION coefficient. (Phenon level = -70.0), (COPH. = 0.623).

Figure 21. Phenogram of 138 male OTUs - clustering technique used was COMPLETE with EUCLIDEAN DISTANCE coefficient. (Phenon level = 16.0), (COPH. = 0.684).

Table 5:- List of the first 15 factors and their corresponding eigenvalues for the female data set. (For the complete set of 48 see Appendix IV).

FACTOR	EIGENVAL	% OF TOTAL VARIANCE	ACCUM. PERCENTAGE
FACT0001	13.477	28.08	28.08
FACT0002	3.541	7.38	35.45
FACT0003	3.112	6.48	41.94
FACT0004	2.648	5.52	47.46
FACT0005	2.303	4.80	52.26
FACT0006	2.147	4.47	56.73
FACT0007	1.915	3.99	60.72
FACT0008	1.650	3.44	64.16
FACT0009	1.358	2.83	66.99
FACT0010	1.318	2.75	69.74
FACT0011	1.186	2.47	72.21
FACT0012	1.148	2.39	74.60
FACT0013	1.042	2.17	76.77
FACT0014	1.052	2.19	78.96
FACT0015	0.876	1.83	80.79

Table 6:- List of the first 15 factors and their corresponding eigenvalues for the male data set. (For the complete set of 50 factors see Appendix IV).

FACTOR	EIGENVAL	% OF TOTAL VARIANCE	ACCUM. PERCENTAGE
FACT0001	16.055	32.11	32.11
FACT0002	4.153	8.31	40.42
FACT0003	3.511	7.02	47.44
FACT0004	2.789	5.58	53.02
FACT0005	2.611	5.22	57.29
FACT0006	2.410	4.82	62.11
FACT0007	1.860	3.72	65.83
FACT0008	1.620	3.24	69.07
FACT0009	1.473	2.95	72.02
FACT0010	1.268	2.54	74.56
FACT0011	1.155	2.31	76.86
FACT0012	1.084	2.17	79.03
FACT0013	0.949	1.90	80.93
FACT0014	0.844	1.69	82.62
FACT0015	0.740	1.48	84.10

Table 7:- Relative contributions of the character variables to the PCA.
(Female data set).

VAR.	FACT.1 CORR. VALUE	(%)	FACT.2 CORR. VALUE	(%)	FACT.3 CORR. VALUE	(%)
RACH	0.028	(0.13)	-0.283	(2.72)	0.177	(1.76)
INNDLN	-0.045	(0.21)	-0.405	(3.89)	0.229	(2.28)
NBR	-0.825	(3.83)	0.040	(0.38)	0.014	(0.14)
IBRW	-0.391	(1.82)	-0.417	(4.00)	-0.340	(3.39)
OBRW	-0.722	(3.35)	-0.074	(0.71)	-0.291	(2.90)
INMXW	-0.899	(4.17)	-0.136	(1.31)	-0.148	(1.47)
PMXL	-0.704	(3.27)	0.119	(1.14)	-0.081	(0.81)
LBRP	-0.643	(2.99)	0.211	(2.03)	-0.001	(0.01)
INFL	-0.955	(4.43)	0.085	(0.82)	-0.024	(0.24)
INFW	-0.850	(3.95)	-0.072	(0.69)	-0.094	(0.09)
VANGS	-0.054	(0.25)	-0.084	(0.81)	0.263	(2.62)
VANGB	-0.340	(1.58)	0.041	(0.39)	0.328	(3.27)
SHJNL	0.291	(1.35)	0.264	(2.53)	-0.491	(4.89)
LNWDRL	0.492	(2.28)	0.391	(3.75)	-0.457	(4.55)
MXLNL	0.621	(2.88)	-0.058	(0.56)	0.148	(1.47)
MXWDL	0.112	(0.52)	-0.452	(4.34)	0.606	(6.04)
APXAN	-0.395	(1.83)	-0.316	(3.03)	0.149	(1.48)
APXPS	0.334	(1.55)	0.047	(0.45)	0.180	(1.79)
BSAN	-0.487	(2.26)	-0.289	(2.77)	0.398	(3.97)
BSPS	-0.343	(1.59)	-0.095	(0.91)	0.101	(1.01)
SVINS	-0.125	(0.58)	-0.078	(0.75)	0.383	(3.82)
NSECV	0.365	(1.69)	0.040	(0.38)	0.309	(3.08)
PINSV	0.276	(1.20)	-0.323	(3.10)	0.125	(1.25)
PTLLN	-0.208	(0.97)	0.102	(0.98)	0.086	(0.86)
INTLN	0.027	(0.13)	-0.136	(1.31)	0.244	(2.43)

VAR.	FACT.1 CORR. VALUE	(%)	FACT.2 CORR. VALUE	(%)	FACT.3 CORR. VALUE	(%)
NFLOR	-0.819	(3.80)	0.033	(0.32)	-0.105	(1.05)
CORLLN	-0.386	(1.79)	-0.231	(2.22)	0.399	(3.98)
CORLWD	-0.209	(0.97)	-0.461	(4.43)	-0.230	(2.29)
CORTWD	-0.133	(0.62)	-0.405	(3.89)	-0.124	(1.24)
STMXLL	-0.384	(1.78)	-0.181	(1.74)	0.190	(1.189)
STBLN	-0.786	(3.65)	0.050	(0.48)	0.017	(0.17)
STBWD	-0.315	(1.46)	-0.433	(4.16)	-0.159	(1.58)
ACMXLN	-0.574	(2.65)	0.158	(1.52)	-0.124	(1.24)
ACMXWD	-0.138	(0.64)	-0.225	(2.16)	-0.316	(3.15)
NYPAC	-0.679	(3.15)	-0.099	(0.95)	-0.119	(1.19)
CRMXWD	-0.290	(1.35)	-0.690	(6.63)	-0.192	(1.91)
CRMNWD	0.105	(0.49)	-0.574	(5.51)	-0.097	(0.97)
NWNOHD	0.783	(3.63)	-0.043	(0.41)	0.202	(2.00)
IBLWR	-0.798	(3.70)	0.323	(3.10)	0.199	(1.98)
OBLWR	-0.368	(1.71)	0.324	(3.11)	0.329	(3.28)
INVLWR	-0.094	(0.44)	0.480	(4.61)	0.442	(4.41)
CRLLWR	-0.278	(1.29)	0.042	(0.40)	0.548	(5.46)
ACLWR	-0.547	(2.54)	0.293	(2.81)	0.015	(0.15)
CORLWR	-0.862	(4.00)	0.259	(2.49)	0.114	(1.14)
STLLBR	-0.796	(3.70)	0.172	(1.69)	-0.121	(1.21)
TFLPLR	0.710	(3.70)	-0.047	(0.45)	-0.099	(0.99)
INFLWR	-0.106	(0.49)	0.276	(0.27)	0.150	(1.49)
LRFIIR	-0.849	(3.94)	-0.058	(0.56)	-0.076	(0.76)

Table 8:- Relative contributions of the character variables to the PCA. (Male data set).

VAR.	FACT.1 CORR. VALUE	(%)	FACT.2 CORR. VALUE	(%)	FACT.3 CORR. VALUE	(%)
RACMLN	0.093	(0.39)	-0.048	(0.43)	0.212	(1.97)
INTNDLN	-0.131	(0.54)	-0.120	(1.08)	0.162	(1.51)
LNWDRL	0.260	(1.08)	0.241	(2.18)	0.682	(6.35)
MXLNL	0.394	(1.63)	-0.133	(1.20)	0.276	(2.57)
MXWDL	0.170	(0.70)	-0.368	(3.32)	-0.342	(3.18)
APXAN	-0.150	(0.62)	0.046	(0.42)	-0.475	(4.42)
APXPS	-0.096	(0.40)	-0.059	(0.53)	0.218	(2.03)
BSAN	-0.259	(1.07)	-0.302	(2.73)	-0.128	(1.19)
BSPS	-0.224	(0.93)	-0.130	(1.17)	0.222	(2.07)
SVINS	0.143	(0.59)	-0.175	(1.58)	-0.447	(4.16)
NSECV	0.200	(0.83)	-0.199	(1.80)	0.026	(0.24)
PINSV	0.353	(1.46)	-0.106	(0.96)	0.048	(0.45)
PTLLN	-0.214	(0.89)	-0.173	(1.56)	0.326	(3.04)
INTLN	-0.041	(0.17)	-0.217	(1.96)	0.081	(0.75)
NBR	-0.889	(3.69)	-0.111	(1.00)	-0.126	(1.17)
IBRL	-0.922	(3.82)	-0.125	(1.13)	0.095	(0.88)
OBRL	-0.925	(3.83)	-0.042	(0.38)	0.114	(1.06)
IBRW	-0.626	(2.60)	-0.386	(3.49)	0.077	(0.72)
OBRW	-0.843	(3.49)	-0.074	(0.67)	0.162	(1.51)
PMXL	-0.876	(3.63)	-0.109	(0.98)	-0.107	(1.00)
LBRP	-0.755	(3.13)	-0.219	(1.98)	0.070	(0.65)
NFLOR	-0.867	(3.59)	0.016	(0.14)	0.186	(1.73)
CORLLN	-0.706	(2.93)	0.046	(0.42)	-0.280	(2.60)
CORLWD	-0.219	(0.91)	-0.471	(4.26)	-0.021	(0.20)
CORTWD	-0.687	(2.85)	-0.457	(4.13)	0.133	(1.24)

VAR.	FACT.1 CORR. VALUE	(%)	FACT.2 CORR. VALUE	(%)	FACT.3 CORR. VALUE	(%)
LCTPFA	-0.853	(3.54)	0.271	(1.96)	-0.122	(1.14)
INFW	-0.869	(3.60)	0.214	(1.93)	0.172	(1.60)
INFL	-0.934	(3.87)	0.002	(0.02)	-0.009	(0.08)
FMXLN	-0.768	(3.18)	0.186	(1.68)	-0.212	(1.97)
AMXLN	-0.820	(3.40)	-0.003	(0.03)	-0.099	(0.92)
STMXL0L	-0.273	(1.13)	-0.438	(3.96)	-0.324	(3.02)
VCMXLN	-0.227	(0.94)	0.172	(1.55)	0.343	(3.19)
CRMXWD	-0.637	(2.64)	-0.621	(5.61)	0.175	(1.63)
CRMNWD	-0.235	(0.97)	-0.730	(6.59)	0.180	(1.68)
VANGS	0.070	(0.29)	-0.122	(1.10)	-0.415	(3.86)
VANGB	-0.281	(1.16)	-0.170	(1.54)	-0.348	(3.24)
SHINL	0.183	(0.76)	0.188	(1.70)	0.673	(6.27)
NWNFHD	0.891	(3.69)	-0.033	(0.30)	-0.051	(0.47)
IBLWR	-0.759	(3.15)	0.116	(1.05)	0.059	(0.55)
OBLWR	-0.228	(0.95)	0.039	(0.35)	-0.196	(1.82)
INVLWR	0.290	(1.20)	-0.087	(0.79)	-0.472	(4.39)
CRLLWR	0.548	(2.27)	0.282	(2.55)	-0.244	(2.27)
CORLWR	-0.329	(1.36)	0.707	(6.39)	-0.306	(2.85)
CRLMWR	-0.658	(2.73)	0.565	(5.10)	-0.229	(2.13)
STLLBR	-0.367	(1.52)	0.454	(4.10)	0.274	(2.55)
TFLPLR	0.809	(3.35)	0.181	(1.64)	-0.129	(1.20)
INFLWR	0.445	(1.84)	-0.258	(2.33)	-0.414	(3.85)
LRNFHR	-0.875	(3.63)	0.016	(0.14)	0.037	(0.34)
ALFMLR	0.404	(1.61)	-0.313	(2.83)	0.201	(1.87)
LCPFCLR	-0.329	(1.36)	0.528	(4.77)	-0.035	(0.03)

Figure 22. PCA plot of factor 2 vs. factor 1 for 150 female OTUs of the *Brachylaena discolor* - *uniflora* species complex. Percent of trace = 28.08%. (▲ Group 1; ● Group 2; ■ Group 3). Where Group 1 = *B. uniflora*; Group 2 = *B. discolor* subsp. *discolor*; Group 3 = *B. discolor* subsp. *transvaalensis*.

FACT0002 VS. FACT0001

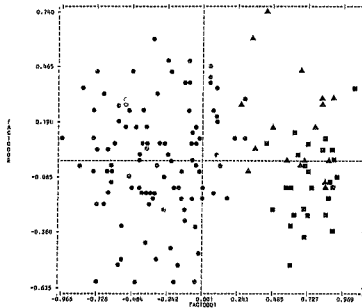


Figure 23. PCA plot of factor 3 vs. factor 1 for 150 female OTUs of the *Brachylaena discolor - uniflora* species complex. Percent of trace = 7.38%. (▲ Group1; ■ Group2; ■ Group 3). Where Group 1 = *B. uniflora*; Group 2 = *B. discolor* subsp. *discolor*; Group 3 = *B. discolor* subsp. *transvaal*.

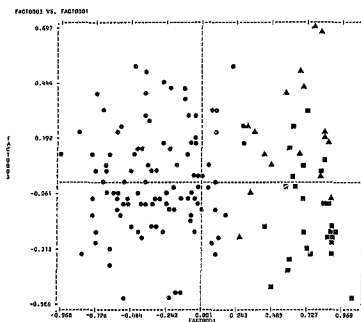


Figure 24. PCA plot of factor 2 vs. factor 3 for 150 sample OTUs of the *Brachyana discolor* - *uniflora* species complex. Percent of trace = 6.48%. (▲ Group 1; ● Group 2; ■ Group 3). Where Group 1 = *B. uniflora*; Group 2 = *B. discolor* subsp. *discolor*; Group 3 = *B. discolor* subsp. *transvaalensis*.

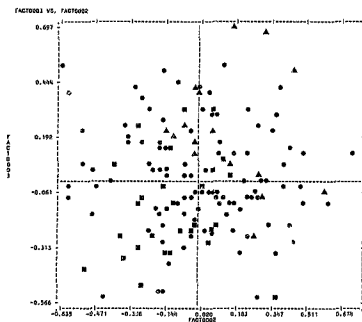


Figure 25. PCA plot of factor 2 vs. factor 1 for 138 male OTUs of the *Bruchina discolor - uniflora* species complex. Percent of trace = 32.11%. (▲ Group 1; ● Group 2; ■ Group 3). Where Group 1 = *B. uniflora*; Group 2 = *B. discolor* subsp. *discolor*; Group 3 = *B. discolor* subsp. *transvaalensis*.

FACT0002 VS. FACT0001

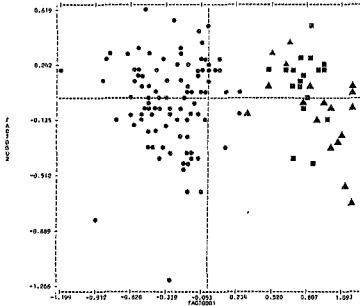


Figure 26. PCA plot of factor 3 vs. factor 1 for 138 male OTUs of the *Brachylaena discolor* - *uniflora* complex. Percent of trace = 8.31%. (▲ Group 1; ● Group 2; ■ Group 3). Where Group 1 = *B. uniflora*; Group 2 = *B. discolor* subsp. *discolor*; Group 3 = *B. discolor* subsp. *transvaalensis*.

FACID005 VS. FACID001

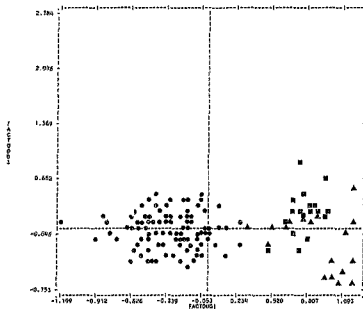
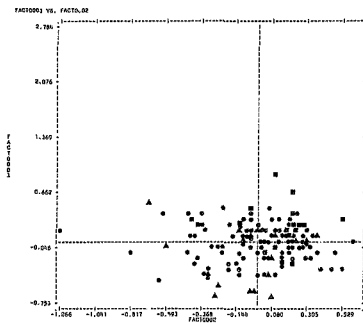


Figure 27. PCA plot of factor 3 vs. factor 2 for 138 male OTUs of the *Brachylaena discolor* - *uniflora* species complex. Percent of trace = 7.02%. (▲ Group 1; ● Group 2; ■ Group 3). Where Group 1 = *B. uniflora*; Group 2 = *B. discolor* subsp. *discolor*; Group 3 = *B. discolor* subsp. *transvaalensis*.



4.3 Discriminant Analysis

(1) Canonical variates analysis

The relationships of OTUs of the three predefined groups, for both sets of data, based on the canonical variates are shown in Figures 28 and 29 respectively. Clustering of the individuals of the three groups around their respective centroids is evident, for both sets of data (Figs. 28 & 29). However, the overall impression of these plots is of two major clusters, one predominantly comprised of group two individuals (corresponding to *B. discolor* subsp. *discolor*) and the other a more dispersed cluster of individuals belonging to groups one and three (corresponding to *B. uniflora* and *B. discolor* subsp. *transvaalensis*).

The Mahalanobis distances between the centroids of groups three and two and of groups one and two is larger than that of the distance between the centroids of groups one and three for both data sets (Tables 9 & 10). This supports the findings of the cluster analyses (Section 4.1) which divides the OTUs into two principal clusters. However, the *F* values from the centroids (Table 11 & 12) give a different impression as they show that the differences between the centroids of each of the groups are significant ($p = 0.001$ & $p = 0.005$). This does not contradict the results of the Mahalanobis distances (Table 9 & 10) but is largely due to the spread of the OTUs in discriminant space and to the discrepancy in the sample sizes of each group.

If one considers the relative contributions of the character variables to each of the canonical variates (Tables 13 & 14) it is evident that most of the variation is accounted for by the first canonical axis, while far less variation is accounted for by the second canonical axis. This could account for the reversal in positions of groups one and three that is observed in figures 28 and 29. Given all of the above, the results of the CVA also suggest the presence of two groups, one of which (comprising groups 1 & 3) is more dispersed than the other group (comprising group 2). These results also serve to substantiate the results of the cluster analysis (Section 4.1) and

the principal components analysis (Section 4.2) which revealed similar groupings of the OTUs for both data sets.

(ii) Stepwise discriminant analysis

The characters with the greatest discriminatory power were involucres maximum width (INMXW) for the female data (Table 15) and the number of rows of bracts (NBR) for the male data set (Table 16). The R^2 statistic showed that the ratio, total floret length to pappus maximum length (TFLPLR), the leaf shape (SHINL), and the peduncle maximum length (PMXL) (Table 15) were also good discriminators of the female data while the ratio $\log_{10}$ number of capitula per raceme (NWNOFHD), filament maximum length (FMXLN), and the ratio total floret length to pappus maximum length (TFLPLR) (Table 16) were good discriminators of the male data.

Figure 28. Plots of individual OTHs of Group 1 (*B. uniflora*); 2 (*B. discolor*, subsp. *discolor*); and 3 (*B. discolor* subsp. *transvaicensis*) on the first two canonical axes, for female data. Test-tubes of groups marked as (a)

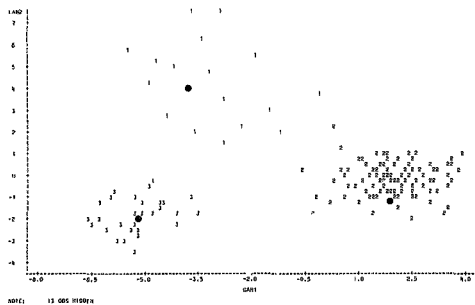


Figure 29. Plots of individual OTUs of Groups 1 (*B. sulflora*); 2 (*B. discolor* subsp. *discolor*); and 3 (*B. discolor* subsp. *transvaalensis*); on the first two canonical axes, for male data. (centroids of groups marked as •)

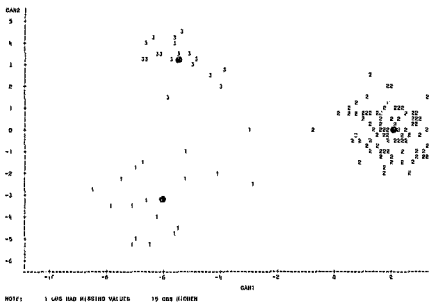


Table 9:- Mahalanobis distances between groups from canonical discriminant analysis. (Female data set).

GROUP NO.	GROUP 1	GROUP 2	GROUP 3
GROUP 1		6.695	6.235
GROUP 2	6.695		7.407
GROUP 3	6.235	7.407	
SAMPLE SIZE	18	104	28

Table 10:- Mahalanobis distances between groups from canonical discriminant analysis. (Male data set).

GROUP NO.	GROUP 1	GROUP 2	GROUP 3
GROUP 1		8.709	6.391
GROUP 2	8.709		8.296
GROUP 3	6.391	8.296	
SAMPLE SIZE	18	101	18

Table 11:- F values of group centroids from cano. anal discriminant analysis.
(Female data set).

* = significant at $P = 0.001$

** = significant at $P = 0.005$

GROUP NO.	GROUP 1	GROUP 2	GROUP 3
GROUP 1		1.687**	3.881*
GROUP 2	1.687**		4.618*
GROUP 3	3.881*	4.618*	
SAMPLE SIZE	18	104	28

Table 12:- F values of group centroids from canonical discriminant analysis.
(bale data set).

* = significant at $P = 0.001$

GROUP NO.	GROUP 1	GROUP 2	GROUP 3
GROUP 1		2.620*	4.663*
GROUP 2	2.620*		2.377*
GROUP 3	4.663*	2.377*	
SAMPLE SIZE	18	101	18

Table 13:- Relative contributions of the character variables to the CVA
(female data set).

CHARACTER	CAN. 1.		CAN. 2.	
	CORR. VALUE	(%)	CORR. VALUE	(%)
RACMLEN	-0.0898	(0.45)	0.0199	(0.30)
INTDLN	0.0572	(0.29)	-0.0613	(0.91)
NBR	0.8120	(4.11)	0.0156	(0.23)
OBWW	0.6591	(3.33)	-0.3798	(5.67)
IBRW	0.3769	(1.91)	0.4422	(6.60)
INMXW	0.8373	(4.23)	-0.3271	(4.88)
PMXL	0.6879	(3.48)	0.0959	(1.43)
LBRP	0.6341	(3.21)	0.0753	(1.12)
INFL	0.8235	(4.16)	-0.0648	(0.97)
INFW	0.7530	(3.81)	-0.0228	(0.34)
YANGS	0.0080	(0.04)	-0.0314	(0.47)
YANGB	0.3221	(1.63)	0.0260	(0.39)
SHINL	-0.3690	(1.87)	-0.0306	(0.46)
LNWORDL	-0.5150	(2.60)	0.1064	(1.59)
MXLNL	-0.5744	(2.90)	0.0881	(1.31)
MXWDL	-0.0352	(0.18)	-0.0003	(0.01)
APXAN	0.4240	(2.14)	0.0423	(0.63)
APXPS	-0.3736	(1.89)	0.0494	(0.74)
BSAN	0.3847	(1.95)	-0.1199	(1.79)
BSPS	0.2116	(1.07)	-0.1492	(2.23)
SVINS	0.1157	(0.59)	0.0330	(0.49)
NSECV	-0.3326	(1.68)	0.3378	(5.04)
PINSV	-0.2422	(1.22)	-0.1382	(2.06)
PTLLN	0.2757	(1.39)	0.1806	(2.69)
INTLN	0.0435	(0.22)	0.0085	(0.13)
NFLOR	0.7503	(3.79)	-0.3144	(4.69)

CHARACTER	CAN. 1. CORR. VALUE	(%)	CAN. 2. CORR. VALUE	(%)
CORRLN	0.2838	(1.45)	0.2860	(4.27)
CORLWD	0.0946	(0.48)	-0.0816	(1.22)
CORTWD	0.0302	(0.15)	-0.0747	(1.11)
STMXLOL	0.4220	(2.10)	0.1003	(1.50)
STBLN	0.7059	(3.57)	-0.0315	(0.47)
STBWD	0.2139	(1.08)	-0.1011	(1.51)
ACMXLN	0.3363	(1.70)	0.0929	(1.39)
ACMXWD	-0.0178	(0.09)	0.0044	(0.07)
NVPAC	0.7103	(3.59)	-0.0181	(0.27)
CRMXWD	0.1775	(0.90)	-0.2352	(3.51)
CRMNWD	-0.0703	(0.36)	-0.1378	(2.06)
NWNOFHD	-0.7623	(3.85)	0.3514	(5.24)
IBLWR	0.7550	(3.82)	0.1067	(1.59)
OBLWR	0.4457	(2.25)	0.2849	(4.25)
INVLWR	0.1341	(0.68)	0.7574	(11.30)
CRLLWR	0.2489	(1.26)	0.3334	(5.27)
ACLWR	0.3671	(1.86)	-0.0115	(0.17)
CORLWR	0.8838	(4.47)	-0.0115	(0.17)
STLLBR	0.7002	(3.54)	-0.1355	(2.02)
TFLPLR	-0.8424	(4.26)	0.0555	(0.83)
INFLWR	0.0855	(0.43)	-0.0932	(1.39)
LRNFR	0.7780	(3.93)	-0.2185	(3.26)

Table 14: Relative contributions of the character variables to the CV²
(male data set).

CHARACTER	CAN. 1. CORR. VALUE	(%)	CAN. 2. CORR. VALUE	(%)
RACMLN	-0.1341	(0.59)	0.2854	(3.78)
INTNDLN	0.1491	(0.66)	0.2205	(2.91)
J.NWDRL	-0.3149	(1.38)	0.2396	(3.16)
MXLNL	-0.4416	(1.94)	0.2287	(3.02)
MXWDL	-0.1697	(0.75)	0.0222	(0.29)
APXAN	0.1194	(0.53)	-0.0323	(0.43)
APXPS	0.1065	(0.17)	0.1136	(1.50)
BSAN	0.2462	(1.08)	-0.0839	(1.10)
BSPS	0.1372	(0.60)	0.0016	(0.02)
SVINS	-0.1737	(0.76)	0.0163	(0.22)
NSECV	-0.2520	(1.10)	-0.1148	(1.52)
PINSV	-0.3885	(1.70)	0.0423	(0.56)
PTLLN	0.2167	(0.95)	-0.1643	(2.17)
INTLN	-0.0667	(0.29)	0.2365	(3.12)
NBR	0.8893	(3.91)	-0.1155	(1.53)
IBRL	0.8456	(3.72)	0.0378	(0.50)
OBRL	0.8720	(3.83)	0.0848	(1.12)
IBRW	0.5455	(2.40)	0.1395	(1.84)
ODRW	0.8035	(3.53)	0.1599	(2.11)
PMXL	0.8337	(3.67)	-0.0507	(0.67)
LBRP	0.7217	(3.17)	0.0236	(0.31)
NFLOR	0.8433	(3.71)	0.1146	(1.51)
CORLLN	0.6168	(2.71)	-0.3880	(5.12)
CORLWD	0.2680	(1.18)	-0.0685	(0.90)
CORTWD	0.6294	(2.77)	-0.1241	(1.64)
LCTPFA	0.7270	(3.20)	0.0258	(0.34)

CHARACTER	CAN. 1.		CAN. 2.	
	CORR. VALUE	(%)	CORR. VALUE	(%)
INFW	0.7270	(3.20)	0.2667	(3.52)
INFL	0.8205	(3.61)	0.0459	(0.61)
FMXLN	0.7408	(3.26)	-0.1082	(1.43)
AMXLN	0.6696	(2.94)	-0.0746	(0.99)
STMXLN	0.2934	(1.29)	-0.1924	(2.54)
VACMXLN	0.0764	(0.34)	0.3641	(4.81)
CRMXWD	0.5983	(2.63)	-0.1224	(1.62)
CRMNWD	0.1907	(0.84)	-0.1374	(1.81)
VANGS	-0.0884	(0.39)	0.1564	(2.00)
VANGB	0.3432	(1.51)	-0.1511	(2.00)
SHINL	-0.2444	(1.07)	0.2115	(2.79)
NWNOPHD	-0.8668	(3.81)	-0.0971	(1.28)
IBLWR	0.7369	(3.24)	-0.0143	(0.19)
OBLWR	0.2093	(0.92)	-0.2241	(2.96)
INVLWR	-0.3091	(1.36)	-0.5035	(6.65)
CRLLWR	0.4467	(1.96)	-0.3423	(4.52)
CORLWR	0.2562	(1.13)	0.0053	(0.60)
CORLWR	0.5945	(2.61)	0.0372	(0.49)
TLPLR	0.2705	(1.19)	0.2491	(3.29)
TLPLR	-0.8210	(3.61)	-0.1159	(1.53)
INFLWR	-0.4347	(1.91)	-0.5599	(7.39)
LRNFHR	0.7636	(3.36)	0.0305	(0.40)
ALFMLR	-0.4786	(2.10)	0.0966	(1.28)
LCPPCLR	0.2467	(1.08)	0.2905	(3.84)

Table 15- Results of the Stepwise Discriminant Procedure for female data.

STEP NO.	VAR. ENTERED	VAR. REMOVED	PART. R ²	F STAT.	WILKS' LAMBDA	AV.SQ. CAN. CORR.
1	INMXW		0.694	335.20	0.306	0.694
2	TFLPLR		0.310	72.52	0.205	0.795
3	SHINL		0.100	16.38	0.184	0.816
4	PMXL		0.095	15.26	0.167	0.833
5	CORLWR		0.057	8.76	0.157	0.843
6	DOGLLN		0.037	3.49	0.151	0.849
7	APXAN		0.032	4.70	0.147	0.853
8	CRMNWD		0.026	3.71	0.143	0.857
9	NYPAC		0.019	2.65	0.140	0.860
10	INFL		0.022	3.05	0.137	0.863
11	OBLWR		0.023	3.21	0.134	0.866
12		CRMNWD	0.013	1.83	0.136	0.864
13	LNWDRL		0.016	2.20	0.134	0.866
14		SHINL	0.003	0.42	0.134	0.866
15	PTLLN		0.017	2.33	0.132	0.868

Table 16:- Results of the Stepwise Discriminant Procedure for male data.

STEP NO.	VAR. ENTERED	VAR. REMOVED	PARTIAL R^2	F STAT.	WILKS' LAMBDA	AV. SQ. CANON. CORR.
1	NBR		0.737	378.92	0.263	0.737
2	NWNOFHD		0.284	53.22	0.188	0.812
3	FMXLN		0.092	13.54	0.171	0.829
4	TFLPLR		0.087	12.61	0.156	0.844
5	LRNFHR		0.076	7.74	0.147	0.852
6	NFLOR		0.050	6.78	0.140	0.860
7	SHINL		0.050	6.80	0.133	0.867
8	INTLN		0.063	8.59	0.124	0.876
9	APKAN		0.040	5.35	0.119	0.881
10	RACMLN		0.035	4.51	0.115	0.885
11	VACMXLN		0.038	4.93	0.111	0.889
12	IBLWR		0.035	4.55	0.107	0.893
13	LCPFCLR		0.035	4.46	0.103	0.897
14		TFLPLR	0.007	0.85	0.104	0.896
15	ISPS		0.028	3.48	0.101	0.899

5.0 DISCUSSION AND TAXONOMIC CONCLUSIONS

5.1 Discussion

The results of this investigation indicate that the *Brachylaena discolor* - *uniflora* species complex should be divided into two groups; 1. a coastal group comprising *B. discolor* subsp. *discolor*, and 2. an inland group comprising *B. discolor* subsp. *transvaalensis* and *B. uniflora*. All three analytical approaches that were used (cluster analysis, PCA, and CVA) support this division and it is consistent for both male and female data sets. The inconsistencies between the treatments are relatively minor and these can be attributed to certain of the techniques employed as well as the immaturity of certain of the specimens used.

The results presented are all derived from standardised data and in some instances (Figs. 7, 9, 10, 12, 16, 18, 19, 21) give the impression that there are large and clear differences between the groups. In reality though, the differences between the groups are very much narrower although the groups themselves can still be clearly discerned. As a result of this narrow difference and the geographical separation of the groups (although a certain amount of overlap does occur) it was decided to separate these groups at the subspecific level.

Davis and Heywood (1963) define the modern concept of a subspecies as "... a considerable segment of a species with a distinct area and a more or less distinct morphology, often showing some intergradation, ... also extended to cover regional ecotypes, and cases where taxa differ in chromosome number or are partly or incompletely intersterile and exhibit some correlated geographical or ecological differentiation but have an insufficient degree of morphological differentiation to permit satisfactory treatment as separate species."

They also indicate that the division into subspecies can be justified if such a division clearly fulfils a useful purpose. Given the above, it is clear that the division of the *B. discolor* - *uniflora* species complex at the subspecific level can be fully justified even though details of the reproductive biology and chromosome numbers are unknown for each of the elements of the complex.

Paiva (1972) recognised two varieties of *B. discolor* subsp. *discolor* namely var. *discolor* and var. *massambicensis* based mostly on characters of the involucre. These varieties are extremely difficult to tell apart and show almost continuous variation when analysed throughout the range of distribution. This variation is not clinal but tends to be rather unorganised and devoid of any clear pattern. Due to the extreme variation and the fact that the numerical methods used did not show any distinctive subgroupings which correspond in anyway to these varieties it was decided not to recognise this division.

The phenetic results add new information which makes it possible to comment on the ideas of Hilliard and Burtt (1971), Paiva (1972), and Hilliard (1980), all of whom suggest that hybridisation between two species may be responsible for the wide range of variation that is observed within the complex. The morphological differences between the groups have been shown to be rather small and thus the endpoints of each of the groups are not very far apart. In addition, the morphological variation does not support the notion that two distinct species with a series of intermediates, which could have resulted from hybridisation and the backcrossing of these hybrids, clearly exists. Therefore, it seems most probable that hybridisation is not responsible for the variation observed within the complex.

Another idea suggested by these authors which indicates that there may be a single species showing clinal variation in the numbers of flowers in a head, as well as in other associated characters, which may be loosely linked to an ecological cline, can also be addressed at this point. There appears to be some support for their first contention that the variation observed is clinal.

They also indicate that the division into subspecies can be justified if such a division clearly fulfills a useful purpose. Given the above, it is clear that the division of the *B. discolor* - *uniflora* species complex at the subspecific level can be fully justified even though details of the reproductive biology and chromosome numbers are unknown for each of the elements of the complex.

Paiva (1972) recognised two varieties of *B. discolor* subsp. *discolor* namely var. *discolor* and var. *mosambicensis* based mostly on characters of the involucre. These varieties are extremely difficult to tell apart and show almost continuous variation when analysed throughout the range of distribution. This variation is not clinal but tends to be rather unorganised and devoid of any clear pattern. Due to the extreme variation and the fact that the numerical methods used did not show any distinctive subgroupings which correspond in anyway to these varieties it was decided not to recognise this division.

The phenetic results add new information which makes it possible to comment on the ideas of Hilliard and Burtt (1971), Paiva (1972), and Hilliard (1980), all of whom suggest that hybridisation between two species may be responsible for the wide range of variation that is observed within the complex. The morphological differences between the groups have been shown to be rather small and thus the endpoints of each of the groups are not very far apart. In addition, the morphological variation does not support the notion that two distinct species with a series of intermediates, which could have resulted from hybridisation and the backcrossing of these hybrids, clearly exists. Therefore, it seems most probable that hybridisation is not responsible for the variation observed within the complex.

Another idea suggested by these authors which indicates that there may be a single species showing clinal variation in the numbers of flowers in a head, as well as in other associated characters, which may be loosely linked to an ecological cline, can also be addressed at this point. There appears to be some support for their first contention that the variation observed is clinal.

It appears from the studies conducted that there is a form of clinal variation from the coast to the inland regions but this is rather a loose association as the variation tends to be unorganised, although the general trend, from large heads at or near the coast to smaller heads inland, is evident. Part of the reason that this variation is not clearly or distinctly clinal may be due to the fact that there are forest remnants near the coast in some areas and because many of the areas between the coastal dunes and the inland mountains in Natal have been lost to agriculture (Moll and White, 1978) and thus prevent a more complete picture from being observed. There does, however, appear to be a loose association with altitude. Most of the plants with large numbers of florets per head are found below 75m altitude while in general the small headed plants are mostly found above this altitude. This is not a strict delimitation as there are still regions of overlap so that several large headed plants can be found above this altitude, while several small headed plants can be found below it. Nonetheless, this altitudinal level appears to be the one which most appropriately divides the subspecies.

It would appear that the connection between the coastal and inland groups probably existed via the river systems, with elements of the coastal group extending slightly inland up these river courses and elements of the inland groups extending almost to the coast. Examples of this can be seen from specimens collected along the Uvongo River, Natal (specimens 88, 89, 90, 91) and others collected from the adjoining coastal region (specimens 92 and 93). All the specimens collected along the river occur at an altitude of 75 - 100m, and they all, with the exception of DWH 88, form part of the inland group. The individual DWH 88 is almost intermediate between the inland group and the coastal group but is clearly placed within the coastal group by the numerical methods employed (Figs. 13 - 21). Specimens DWH 92 and 93 on the other hand both occur at 10m altitude and are well placed within the coastal group. All these specimens, particularly those along the river, grow within a very short distance of one another (500m radius) and they may be able to interbreed. It seems highly probable that similar areas of

overlap occur at other localities and these zones may provide many of the more intermediate individuals that are observed within this group.

Clearly the relationships between the elements of the complex are complicated and several more sophisticated studies still need to be carried out to fully elucidate the relationships within the complex. The present study has shown that two groups are discernable within the complex but that the distinction between them is fairly narrow. It has also shown the value of basing a study of this nature on the complete range of distribution of the elements under consideration. The results have also shown the close phenetic affinity of *B. discolor* subsp. *transvaalensis* and *B. uniflora* which could not be satisfactorily separated by the numerical methods employed. Palmer and Pitman (1973) while writing about '*B. transvaalensis*' noted that 'The differences between this and *Brachylaena uniflora* are no longer clear and a revision of the genus is probably necessary to determine what they are'. Although this study was only based on three taxa it has given some indication as to the phenetic relationships between these taxa and will help to give direction to more comprehensive studies of the genus which may follow in the future. Clearly what is needed now is a comprehensive study of all of the members of the genus *Brachylaena*, both those elements present on the continent of Africa and those on the island of Madagascar, in an attempt to work out the relationships between each of the species of the genus.

5.2 Taxonomy

Brachylaena discolor De Candolle, Prodr. 5: 430 (1836); Harv. in Harv. & Sond., Fl. Cap. 3: 117 (1865); Wood & Evans in Natal Plants 177: 22, t 23 & 24 (1898); Phillips & Schweickerdt in Bothalia 3: 219 (1937); Hilliard & Burt in Notes Roy. Bot. Gard. Edinb. 31: 3 (1971); Paiva in Bot. Soc. Brot. 46, ser. 2: 375 (1972); Hilliard in Comp. in Natal; 109 (1977).

Types: South Africa, Cape, Uitenhage distr., Burchell 375! (Lecto, here designated: K!, Isolocto: G-DC).

Syn: *B. natalensis* Sch. Bip. in Walp., Rep. 2: 972 (1843); Harv. in Harv. & Sond., Fl. C.p. 3: 117 (1865). Type: Port Natal, Krauss 243 (G!).

Large shrub or tree up to c. 25m (30m) high; branches grooved, minutely tomentose or subglabrous. Leaves petioled, (4)5 - 17(19) mm long, lamina (2.5)3.5 - 16.5(18) cm long, (1)2 - 7 cm broad, oblanceolate to elliptic obovate, apex obtuse to broadly acute, base cuneate, margins entire, repand or irregularly or regularly serrate, glabrous above, white-tomentose beneath, lateral nerves (5)6 - 12(14) pairs, grooved above and prominent beneath. Heads many (up to 200 recorded in a single raceme) in axillary and terminal racemes or panicles (2)3 - 12 cm long. Female heads 1 - 30(34) flowered, surrounded by involueral bracts in (3)4 - 10(12) series, shorter than the pappus; involuere (3)4 - 13(15) mm long, (1)2 - 7 (8) mm broad, campanulate, rarely funnel shaped; bracts ovate to lanceolate inwards, usually woolly, the inner bract long and lanceolate to linear. Corolla tube (2.8)3 - 8.5(9) mm long, usually widened at the base, sometimes 5 angled or 5 veined; lobes 0.35 - 1.0 mm long, ovate to linear, obtuse, more rarely subacute. Style (3.5)4 - 10(11) mm long, cylindric, usually swollen at the base; lobes (0.4)0.5 - 1.0(1.2) mm long, ovate to linear obtuse. Pappus 3 - 10(11) mm long, obscurely plumose. Achenes (2)2.5 - 4(5) mm long, linear in outline, grooved or angled, veins (6)7 - 10(11), thinly hairy or glabrescent. Male heads 1 - 60(62) flowered, surrounded by involueral bracts in (3)4 - 7(9) series, shorter than the pappus; involuere (2)3 - 9(11) mm long, (1)2 - 7(9) mm broad, funnel shaped or subcylindric; bracts ovate to lanceolate inwards, usually woolly, the inner bract long and lanceolate to linear. Corolla tube (3)4 - 8.5(9.5) mm long, cylindric; lobes 1.0 - 2.5(2.8) mm long, lanceolate to linear, usually obtuse, sometimes subacuminate and subacute. Filaments (0.7)0.9 - 2.2(2.5) mm long, linear; anthers (0.9)1.0 - 3.5(4.2) mm long, linear acute, tilted at the base. Style (4)5 - 10(12) mm long, cylindric; lobes (0.2)0.3 - 0.8(1.0) mm

long, ovate to lanceolate, subacute; rudimentary ovary nearly null. Pappus (2)3 - 6.5(7) mm long, less copious than in female florets

Brachylaena discolor was first described by De Candolle in 1836 and four specimens were listed. These four specimens represent the currently recognised syntypes of *B. discolor*. The quality and availability of the specimens varies greatly. The Drege 5043 specimen is extremely poor, so much so that it is not possible to say with any degree of certainty what sex it is. The leaves have been badly damaged by insects and the florets do not appear to be fully developed. The Ecklon 1422 specimen appears to be in reasonable shape but forms part of the De Candolle collection in Geneva (G) and is therefore not sent out on loan, thus restricting its usefulness as a type. Also, there do not appear to be duplicates of this specimen housed elsewhere.

The two most complete specimens are Burchell 3751 and Forbes sn. which are both female and well preserved. There do not appear to be any duplicates of the Forbes specimen while the Burchell specimen is housed at Kew and has a duplicate housed at Geneva. Thus, the Burchell specimen 3751 at Kew is nominated to represent the lectotype of *B. discolor* while the duplicate specimen at Geneva is nominated as the isolectotype.

Key to the subspecies of *B. discolor*

Shrub or tree up to c. 10m tall; involucre in female 5(7) - 10(12) seriate; in male 5 - 8 seriate; involucre (3)4 - 7(8) mm broad. Number of florets per head (4)6 - 30(34) in females, (12)17 - 60(62) in males. Mostly coastal in distribution (usually below 75m altitude).

..... subsp. *discolor*

Shrub or tree up to c. 25m tall; involucre in female (3)4 - 6(7) seriate; in males 3 - 5 seriate; involucre (1)2 - 4(4.5) mm broad. Number of florets per

head 1 - 10(13) in females, 1 - 16 (21) in males. Mostly inland in distribution (usually above 75m altitude).

..... subsp. *transvaalensis*

subspecies *discolor*

Syn: *B. discolor* subsp. *discolor* var. *mozambicensis* J. Paiva in Bol.Soc. Brot. 46, ser.2: 375 (1972). Type: Mozambique, Santaca, Maputo, Gomes e Sousa 3611 (Holotype: COH; Isotypes: B; K).

Large shrub or tree up to 10m high. Branches grooved, minutely tomentose or subglabrous. Leaves petiolate. Female heads (4)6 - 30(34) flowered; involucrel bracts in (5)7 - 10(12) series; involucre (4)13(15) mm long, (3)4 - 7(8) mm broad, shorter than the pappus; involucre lanceolate inwards. Corolla tube (4)5 - 8.5(9.5) mm long, usually flattened at the base; lobes (0.4)0.6 - 0.8(1.0) mm long, ovate to linear obtuse, more rarely subacute. Style (5)6 - 10(11.5) mm long, cylindric, usually swollen at the base; lobes (0.5)0.6 - 1.0(1.2) mm long, ovate to linear obtuse. Pappus (5)6 - 10(11) mm long, obscurely plumose. Male heads (12)17 - 60(62) flowered; involucrel bracts in (4)5 - 7(9) series; involucre (4)5 - 9(11) mm long, (3.5)4 - 7(9) mm broad, funnel shaped to cylindric. Corolla tube (4.5)5 - 8.5(9.5) mm long, cylindric; lobes (1.1)1.5 - 2.5(2.8) mm long, lanceolate to linear; anthers (1.6)2.2 - 3.5(4.2) mm long, linear acute tailed at the base. Style (6)6.5 - 10(12) mm long, cylindric. Pappus (3)4 - 6.5(7) mm long, less copious than in female florets.

Members of this subspecies are mostly coastal in distribution and are usually found below 75m altitude. They occur along the entire southern eastern coast of southern Africa from Port Elizabeth in the south to Hararuto Island, Mozambique in the north.

Representative specimens

Localities and herbaria have been cited according to Edwards and Leistner (1971) and Holmgren et al. (1981) respectively.

Female material

- 2335 (Inhambane): Inhambane (-CD) Gomes e Sousa 1667 (PRE)
- 2532 (Maputo): Lourenço Marques (Maputo), Costa do Sol (-DC), G. Cedro 107 (PRE)
- 2632 (Bela Vista): Inhaca Island (-BB) Myre & Carvalho 2569 (PRE), Ereyer 20442 (PRE)
- 2632 (Bela Vista): Kosi Estuary (-DD) Haines 199 (J), Haines 200 (J)
- 2732 (Ubombo): Mseleni, Lake Sibayi district (-BC) Haines 206 (J); Mkuzi Game Reserve (-CA) Haines 209 (J); False Bay Park, Lake St. Lucia (-CD) Ward 7137 (PRE NH), Haines 186 (J)
- 2832 (Mtubatuba): Faries Island, Lake St. Lucia (-AB) Haines 187 (J); Enseloni, north west of Richards Bay (-CA) Haines 181 (J); Richards Bay (-CR) Strey 9909 (NH); Richards Bay, Meerenssee (-CC) Haines 166 (J)
- 2831 (Nkandla): Mtunzini, Umlalazi (-DD) Haines 159 (J)
- 2931 (Stanger): Tinley Manor (-AC) Haines 151 (J); Tugela Mouth (-BA) Haines 155 (J); Tongaat Beach (-CA) Strey 8782 (NH, NU, PRE); Bluff, Durban (-CC) Haines 140 (J)
- 3030 (Port Shepstone): Amanzimtoti, Durban distr. (-BB) Strey 8789 (NH, NU, PRE); Kelso (-BC) Haines 114 (J); Scottburgh (-BD) Haines 129 (J); Umentweni (-CB) Haines 104 (J); Shelley Beach, Port Shepstone distr. (-CD) Strey 7658 (NH, NU, PRE); Hibberdene (-DA) Haines 110 (J)
- 3130 (Port Edward): Port Edward (-AA) Strey 8859 (NH, NU, PRE)
- 3129 (Port St Johns): Coffee Bay, Transkei (-CC) Haines 295 (J)
- 3228 (Butterworth): Dwesa, Transkei (-BD) Haines 288 (J); Kei Mouth (-CC) Haines 283 (J)
- 3327 (Peddie): Great Fish River Mouth (-AC) Haines 251 (J); Between Beghu Mo'h and Mgwilani (-AD) Haines 254 (J); Kaysers Bench, East

London distr. (-BA) Haines 260 (J); Leach's Bay, East London distr. (-BB) Haines 266 (J)

- 3326 (Grahamstown): Cannon Rocks (-CD) Haines 235 (J); Kasouga, west beach (-DA) Britten 2300 (GRA); Port Alfred, west bank of Kowie River (-DB) Tyson 54 (GRA); Britten 773 (GRA)

- 3325 (Port Elizabeth): Sordags Rivier, Port Elizabeth distr. (-DB) Haines 227 (J); Humewood Beach, Port Elizabeth (-DC) Haines 220 (J); Delagoa Bay (sphaalm. Algae Bay) (-DC/DB?) Forbes sn. 'K'

Male material

- 2135 (Bazaruto): Bazaruto Island, Ponta Estane Marsh (-CB) Mogg 28679 (PRE)

- 2532 (Maputo): Lourenco Marques (Maputo), Costa do Sol (-DC) Grandvaux Barbosa 8661 (PRE)

- 2632 (Bela Vista): Inhaca Island, Ponta Pindini Forest (-BB) Mogg (J, PRE)

- 2632 (Bela Vista): Kosi Estuary (-DD) Haines 198 (J); Haines 201 (J)

- 2732 (Ubombo): Mseleni, Lake Sibayi distr. (-BC) Law 5 (NBC); Haines 206 (J); Mkuzi Game Reserve (-CA) Haines 207 (J); False Bay Park, Lake St. Lucia (-CD) Taylor 610 (NH)

- 2832 (Mtubatuba): Fannies Island, Lake St. Lucia (-AB) Haines 188 (J); Enseteni, north west of Richards Bay (-CA) Haines 180 (J); Richards Bay (-CB) Ward 5806 (NH, NU); Richards Bay, Macorensce (-CC) Haines 169 (J)

- 2831 (Nkandla): Mtunzini, Umlalazi (-DD) Haines 160 (J)

- 2931 (Stanger): Tinley Manor (-AC) Haines 150 (J); Tugela Mouth (-BA) Haines 156 (J); Zinkwazi (-AD) Haines 157 (J); Tongaat Beach (-CA) Strey 8783 (NH, NU, PRE); Umhlanga Rocks (-CA) Moll 1816 (NH, NU, PRE); Bluff, Durban (-CC) Haines 141 (J)

- 3030 (Port Shepstone): Amenzimtoti, Durban distr. (-BB) Strey 8793 (NH, NU, PRE); Kelsco (-BC) Haines 113 (J); Scottburgh (-BD) Haines 128 (J); Umtentweni (-CB) Haines 103 (J); between the Umzimkulu and Umtentu Rivers (-CB) Drege 5043 (G-DC, K); Uvongo (-CD) Strey 8822 (NH, NU, PRE); Hibberdene (-DA) Haines 109 (J)

- 3130 (Port Edward) Port Edward (-AA) Haines 48 (J)
- 3129 (Port St. Johns) Coffee Bay, Transkei (-CC) Haines 294 (J)
- 3228 (Butterworth) Dwesa, Transkei (-BD) Haines 287 (J); Kei Mouth (-CC) Haines 284 (J)
- 3327 (Pieddie) Great Fish River Mouth (-AC) Haines 250 (J); Between Begha Mouth and Mgwelana (-AD) Haines 255 (J); Kaysers Beach, East London distr. (-BA) Haines 261 (J); Leach's Bay, East London distr. (-BB) Haines 265 (J)
- 3326 (Grahamstown); Kenton - on - Sea (-DA) Haines 242 (J); Port Alfred, west bank of Kowie River (-DB) Schonland 3304 (GRA); Cannon Rocks (-DC) Haines 237 (J)
- 3325 (Port Elizabeth); Sondags Rivier, Port Elizabeth distr. (-DB) Haines 288 (J); Humewood Beach (-DC) Haines 222 (J); Uitenhage distr. (-DB/DC?) Ecklon 1422 (G-DC)
- 3425 (Skoenmakerskop); The Island State Forest (-AB) Haines 224 (J)

subspecies *transvaalensis* (Phillips & Schweickerd) J. Paiva

Type: South Africa, north eastern Transvaal, between Woodbush and Haenertsberg, Hutchins sn (Lecto, here designated: K!).

Syn: *B. uniflora* Harv. in Harv. & Sond., Fl. Cap. 3: 117 (1865); Phillips & Schweickerd in Bothalia 3: 211 (1937). Type: Natal, on mountain ranges 30 - 60 miles from the sea, Sutherland sn (K!).

Syn: *B. transvaalensis* Phillips & Schweickerd in Bothalia 3: 214 (1937); Hilliard & Burt in Notes Royal Bot. Gard. Edinb. 31, 3 (1971). Type: South Africa, Transvaal, Pietersburg, between Woodbush and Haenertsberg, Hutchins sn (K!).

Large shrub or tree up to c. 25(30)m tall. Branches grooved, minutely tomentellous or glabrescent. Leaves petiolate. Female heads 1 - 10(12)(13) flowered; involueral bracts in (3)4 - 6(7) series; involuere (3)4 - 8(9) mm long, (1)2 - 4(4.5) mm broad, shorter than the pappus; bracts ovate to lanceolate

inwards. Corolla tube (2.3)3 - 5(6) mm long usually widened at the base; lobes (0.35)0.4 - 0.7(0.9) mm long, ovate to linear obtuse. Pappus 3 - 6(7) mm long, obscurely plumose. Male heads 1 - 16(21) flowered; involueral bracts in (3)4 - 5 series, shorter than the pappus; involucre (2)3 - 4.5(5) mm long, (1)2 - 4 mm broad, funnel shaped to subcylindric. Corolla tube (3)4 - 5(6) mm long, cylindric; lobes 1 - 2 mm long, fanceolate to linear, usually obtuse, sometimes subacuminate and subacute. Filaments (0.7)0.9 - 1.5 mm long, linear; anthers (0.9) 1 - 2.5 mm long, linear acute, tailed at the base. Style (4)5 - 6(7.5) mm long cylindric. Papus (2)3 - 4 mm long, less copious than in female florets.

Members of this subspecies have a predominantly inland distribution and usually occur above 75m altitude. They occur as forest clemens in the Natal region and extend into the Transvaal through the northern Natal region and across Swaziland

The type of *Brachylaena discolor* subsp. *transvaalensis* presents something of a small problem. According to G. L. Lucas (pers. comm., 1987), keeper of the Kew herbarium, when Phillips and Schweickhardt described *B. transvaalensis* in 1937 they cited the holotype as "Pietersburg distr.: Forest between Woodbush and Haenertsburg, 4 000 - 6 000 ft., Hutchins (typel deposited in Herb. Hort. Bot. Reg. Kew)" and later in the same paper commented "The specific epithet was given by Dr. J. Hutchinson but no description published."

There are three sheets at Kew that are possible contenders for type status. All three of the sheets bear a det slip with the name '*B. transvaalensis* Hutchinson' and the stamp 'Flora of Transvaal - Det. J. Burtt Davy, Kew, 1920 - 1923'. The writing is in a variety of hands and according to Lucas (pers. comm., 1987) none of these is that of Burtt Davy.

When viewing the typed manuscript copy of "A Manual of the Flowering Plants and Ferns of the Transvaal and Swaziland, South Africa", it is

apparent that there are two sheets that correspond to the D. E. Hutchins collection. One has a label in Hutchins' hand and is dated 27/9/03 with a note in another hand 'Reed, Oct. 10, 1903.' The other sheet, which has a 'Type Specimen' label on it merely has an abbreviated locality written onto the sheet and the date Oct. 10, 1903'. The name '*B. transvaalensis* Hutchinson' is written in pencil on the sheet but this is apparently not in Hutchinson's hand. The two specimens are also different in appearance in that they have quite different leaf margins. The third sheet is part of the 'Oranje' collection. This sheet also has a duplicate of the label appearing on the 'Hutchins' sheet as well as a label with the collectors name 'Oranje' on it. Both of these labels cannot belong to the same specimen as the collection date on the 'Oranje' label is 'Oct. 1905' therefore this specimen was not considered for the type material.

When Paiva (1972) transferred the taxon to subspecific rank under *B. discolor* he merely duplicated Phillips and Schweickhardt's citation of the holotype. To avoid further confusion the Hutchins specimen with the label in Hutchins' hand and without the 'Type Specimen' label is nominated to represent the lectotype of *B. discolor* subsp. *transvaalensis*.

Representative specimens

Female material

- 2230 (Messina): Tuto Vondo, Venda (-CC) Haines 330 (J), Hemm 268 (J)
- 2229 (Waterpoort): Bluegumspoort, Louis Trichardt (-DD) Haines 324 (J)
- 2330 (Tzaneen): Modjadji Nature Reserve (-CB) Haines 339 (J); Magoboeskloof (-CC) Haines 333 (J)
- 2329 (Pietersburg): Ben Lavin Nature Reserve, Louis Trichardt distr. (-BB) Haines 322 (J); Woodbush State Forest (-DD) Haines 338 (J)
- 2430 (Pilgrim's Rest): Thabana, nr. New Agatha (-AA) Haines 342 (J); Mariepskop, Klasaris distr. (-DB) Haines 345 (J). Mount Sheba (-DC) Haines 344 (J)

- 2429 (Zebedelea): Makapa: Valley, Potgietersrus distr. (-AA) Haines 316 (J)
- 2531 (Komatipoort): Kaalrug, Kaapmuiden distr. (-AD) Haines 301 (J); Koedoeskop, Kaapmuiden distr. (-CB) Haines 298 (J)
- 2530 (Lydenburg): Schoemanskloof, Nelspruit distr. (-AD) Haines 296 (J)
- Long Tom Pass (-BA) Haines 308 (J); Rietfontein State Forest (-BB) Haines 310 (J); Berlin State Forest (-DA) Haines 305 (J)
- 2732 (Ubombo): Gwalaweni Forest, Jozini distr. (-AA) Haines 213 (J)
- 2731 (Louwsburg): Ngome State Forest, Vryburg distr. (-CD) Haines 218 (J)
- 2831 (Nkandla): Nkandla Forest, Nkandla distr. (-CA) Forbes 766 (NH, NU); Edwards 1529 (NH, NU)
- 3030 (Port Shepstone): Dumisa, nr. Dumisa Station (-BC) Haines 119 (J); Scottburgh South (-BD) Haines 127 (J); Oribi Gorge Nature Reserve (-CB) Haines 97 (J); Uvongo River (-CD) Strey 8824 (NH, NU)
- 3130 (Port Edward) Port Edward, Pont Drift (-AA) Haines 39 (J)

Male material

- 2230 (Messina): Tuto Vondo, Venda (-CC) Haines 329 (J), Hemm 268 (J)
- 2229 (Waterpoort): Bluegumspoort, Louis Trichardt (-DD) Haines 323 (J)
- 2330 (Tzaneen): Maguboeskloof (-CC) Haines 334 (J); Between Woodbush and Haenertsburg (-CC) Hutchins an (K)
- 2329 (Pietersburg): Woodbush State Forest (-DD) Haines 335 (J)
- 2430 (Pigrim's Rest): Thabana, nr. New Agatha (-AA) Haines 343 (J); Mount Sheba (-DC) Kerfoot K8769 (J)
- 2429 (Zebedelea): Makapan Valley, Potgietersrus distr. (-AA) Haines 317 (J)
- 2531 (Komatipoort): Kaalrug, Kaapmuiden distr. (-AD) Haines 302 (J); Koedoeskop, Kaapmuiden distr. (-CB) Haines 299 (J)
- 2530 (Lydenburg): Long Tom Pass (-BA) Haines 309 (J); Bergvliet Forest Reserve (-BB) Haines 312 (J); Berlin State Forest (-DA) Haines 307 (J)
- 2732 (Ubombo): Gwalaweni Forest, Jozini distr. (-AA) Haines 214 (J)
- 2731 (Louwsburg): Ngome State Forest, Vryburg distr. (-CD) Haines 217 (J)

-2831 (Nkandla): Nkandla Forest, Nkandla distr. (-CA) Haines 173 (J); Ngoya Forest, Mjuzini distr. (-DC) Haines 176 (J)

-3030 (Port Shepstone): Dumisa, nr. Dumisa Station (-BC) Haines 120 (J); Scottburgh South (-BD) Haines 126 (J); Oribi Gorge Nature Reserve (-CB) Haines 96 (J)

REFERENCES

- Adams, R. P. and B. L. Turner (1970). Chemosystematic and numerical studies of natural populations of *Juniperus ashei* Buch. *Taxon* 19: 728 - 751.
- Arroyo-Calin, M. T. (1973). A taximetric study of infraspecific variation in autogamous *Limnanthes floccosa* (Limnanthaceae). *Brittonia* 25: 177 - 191.
- Atchley, W. R. and D. Anderson (1978). Ratios and the statistical analysis of biological data. *Syst. Zool.* 27: 71 - 78.
- Atchley, W. R.; C. T. Gaskins and D. Anderson (1976). Statistical properties of ratios. I. Empirical results. *Syst. Zool.* 25: 137 - 148.
- Baker, M. A. and D. J. Pinkava (1987). A cytological and morphometric analysis of a triploid apomict, *Opuntia* x *Kelvinensis* (subgenus *Cylindropuntia*, Cactaceae). *Brittonia* 39(3): 387 - 401.
- Barrett, H. C. and A. M. Rhodes (1976). A numerical taxonomic study of affinity relationships in cultivated citrus and its close relatives. *Syst. Bot.* 1: 105 - 136.
- Bawn, B. R.; T. Duncan and R. B. Phillips (1984). A bibliography of numerical phenetic studies in systematic botany. *Ann. Missouri Bot. Gard.* 71: 1040 - 1060.
- Bayer, R. J. (1985). Investigations into the evolutionary history of the polyploid complex *Antennaria neodioica* (Asteraceae: Inulaceae). *Pl. Syst. Evol.* 150: 143 - 163.
- Bayer, R. J. (1987). Morphometric analysis of western North American *Antennaria* (Asteraceae: Inulaceae). I. Sexual species of sections Alpinae, Dioicae and Plantaginifoliae. *Can. J. Bot.* 65: 2389 - 2395.
- Isayer, R. L.; J. C. La Duke and D. J. Crawford (1987). Isozyme variation in *Trillium nivale* (Liliaceae). *Can. J. Bot.* 65: 2250 - 2254.
- Hewes, T. (1921). *Flora of Natal and Zululand*. pp. 215.

- Blackith, R. E. and R. A. Reyment (1971). *Multivariate Morphometrics*. Academic Press, New York. 412 pp.
- Bretting, P. K.; M. M. Goodman and C. W. Stuber (1987). Karyological and isozyme variation in West Indian and allied American mainland races of maize. *Am. J. Bot.* 74(11): 1601 - 1613.
- Burtt, B. L.; I. C. Hodge and P. F. Stevens (1970). A taxonomic critique of recent numerical studies in Ericales and *Salvia*. *Notes Roy. Bot. Gard. Edinb.* 30: 141 - 158.
- Cain, A. J. and G. A. Harrison (1960). Phyletic weighting. *Proc. Zool. Soc. London* 135: 1 - 31.
- Chalton, D. O. (1982). *Applied Multivariate Analysis in Biology*. Dept. of Statistics and Biometry, University of Natal, Pietermaritzburg. 65 pp.
- Crisci, J. V.; J. H. Hunziker; R. A. Palacios and C. A. Naranjo (1979). A numerical taxonomic study of the genus *Bulnesia* (Zygophyllaceae): cluster analysis, ordination and simulation of evolutionary trees. *Am. J. Bot.* 66: 133 - 140.
- Dass, H. C. and N. Nybom (1967). The relationship between *Brassica nigra*, *B. campestris* and *B. oleracea* and amphidiploid hybrids studied by means of numerical chemotaxonomy. *Can. J. Genet. Cytol.* 9: 880 - 890.
- Dass, H. C.; G. S. Randhawa and M. Kaur (1974). Phylogenetic affinities in Cucurbitaceae by leaf phenolics. *Nucleus* 17: 103 - 109.
- Dass, H. C.; G. S. Randhawa and M. Kaur (1975). Variation in flavonoid patterns and species relationships in the genus *Ammonia*. *Ind. J. Hort.* 32: 111 - 116.
- Davis, P. H. and V. H. Heywood (1963). *Principles of Angiosperm Taxonomy*. Oliver and Boyd, Edinburgh & London. 576 pp.
- De Candolle, A. P. (1836). *Prodromus Systematis Naturalis Regni Vegetabilis*. vol. 5: 430.
- Decker, D. S. and H. D. Wilson (1986). Numerical analysis of seed morphology in *Cucurbita pepo*. *Syst. Bot.* 11(4): 595 - 607.

- Dedio, W.; P. J. Kalskes and E. N. Larter (1969a). A thin-layer chromatographic study of the phenolics of *Triticale* and its parental species. *Can. J. Bot.* 47: 1589 - 1593.
- Dedio, W.; P. J. Kalskes and E. N. Larter (1969b). Numerical chemotaxonomy in the genus *Secale*. *Can. J. Bot.* 47: 1175 - 1180.
- Diggs, G. M. (1927). Numerical systematics of *Comarostaphylis* (Ericaceae: Arbutaceae). *Syst. Bot.* 12(4): 586 - 600.
- Drury, D. G. and J. M. Randal (1969). A numerical study of the variation in the New Zealand *Erechtites arguta-scaberula* complex (Sencelionaceae - Compositae). *N. Z. J. Bot.* 7: 56 - 75.
- Ducker, S. C.; W. T. Williams and G. N. Lance (1965). Numerical classification of the Pacific forms of *Chlorodesmis* (Chlorophyta). *Aus. J. Bot.* 13: 489 - 499.
- Duncan, T. and B. R. Baum (1981). Numerical phenetics: its uses in botanical systematics. *Ann. Rev. Ecol. Syst.* 12: 387 - 404.
- Dunn, G. and B. S. Everitt (1982). *An Introduction to Mathematical Taxonomy*. Cambridge University Press, London, pp. 1.
- Edwards, D. and O. A. Leistner (1971). A degree reference system for citing biological records in southern Africa. *Mitt. Bot. Staatssamml. München* 10: 501 - 509.
- El-Gazzar, A. and L. Watson (1970a). A taxonomic study of Labiatae and related genera. *New Phytol.* 69: 451 - 486.
- El-Gazzar, A. and L. Watson (1970b). Some economic implications of the taxonomy of Labiatae. Essential oils and rusts. *New Phytol.* 69: 487 - 492.
- El-Gazzar, A.; L. Watson; W. T. Williams and G. N. Lance (1968). The taxonomy of *Salvia*: a test of two radically different numerical methods. *J. Linn. Soc. Lond. Bot.* 60: 237 - 250.
- Ellsens, W. J. and D. J. Crawford (1988). Genetic variation and differentiation in the genus *Mabrya* (Scrophulariaceae - Antirrhineae): systematic and evolutionary inferences. *Am. J. Bot.* 75: 85 - 96.
- Ellison, W. L.; R. E. Alston and B. L. Turner (1962). Methods of presentation of crude biochemical data for systematic purposes

- with particular reference to the genus *Bahia* (Compositae). *Am. J. Bot.* 49: 599 - 604.
- Engler, A. and K. Prantl (1890). *Die Natürlichen Pflanzenfamilien*. IV. 3: 174. Wilhelm Engelmann, Leipzig.
- Fosberg, F. R. (1967). The cult of the expert and numerical taxonomy. *Taxon* 16: 369 - 370.
- Furnier, G. R. and W. T. Adams (1986). Geographic patterns of allozyme variation in Jeffrey pine. *Am. J. Bot.* 73(7): 1009 - 1015.
- Gibbs Russell, G. E. (1984). List of species of southern African plants. *Mem. Bot. Surv. S.A.* 48.
- Giles, B. E. and L. P. Lefkovitch (1986). A taxonomic investigation of the *Hordeum murinum* complex (Poaceae). *Pl. Syst. Evol.* 153: 181 - 197.
- Gilmartin, A. J. (1967). Numerical taxonomy - An eclectic viewpoint. *Taxon* 16: 8 - 12.
- Gilmartin, A. J. and G. K. Brown (1987). Bromeliales, related monocots, and resolution of relationships among Bromelaceae subfamilies. *Syst. Bot.* 12(4): 493 - 500.
- Gilmartin, A. J.; J. Dobrowolski; D. Soltis; E. Kellogg and G. Harris (1986). Variability within and among populations of four grass species. *Syst. Bot.* 11(4): 559 - 566.
- Grant, W. F. and I. Zandstra (1968). The biosystematics of the genus *Lotus* (Leguminosae) in Canada. II. Numerical chemotaxonomy. *Can. J. Bot.* 46: 585 - 589.
- Harvey, W. H. and O. W. Sonder (1865). *Flora Capensis*. vol. III pp. 117. L. Reeve and Co., London.
- Heiser, C. B. Jr.; J. Soria and D. Burton (1965). A numerical taxonomic study of *Solanum* species and hybrids. *Amer. Nat.* 99: 471 - 488.
- Henkel, J. S. (1934). *Woody Plants of Natal and Zululand*. pp. 72.
- Hilliard, O. M. (1977). *Compositae in Natal*. University of Natal Press, Pietermaritzburg, pp. 109 - 110.
- Hilliard, O. M. and B. L. Burtt (1971). Notes on some plants of southern Africa chiefly from Natal: II. *Notes Roy. Bot. Gard. Edinb.* 31: 1 - 6.
- Hill, R. S. (1980). A numerical taxonomic approach to the study of Angiosperm leaves. *Bot. Gaz.* 141 (2): 213 - 229.

- Hills, M. (1978). On ratios - A response to Atchley, Gaskins, and Andersen. *Syst. Zool.* 27: 61 - 62.
- Holmgren, P. K.; W. Kouken and E. K. Schofield (1981). *Index Herbariorum*. I. The herbaria of the world. *Reg. Veg.* 106.
- Humbert, H. (1962). *Flore de Madagascar et des Comores. (Plantes Vasculaires) - Family Compositae. Tome III. Natural History Museum, Paris.* pp. 339 - 355.
- Iijima, K. and W. F. Grant (1972). A correlation of nuclear DNA content and thin layer chromatographic patterns in resolving genome relationships in *Avenae*. *Can. J. Bot.* 50: 1529 - 1545.
- Ising, G. and S. Frost (1969). Thin-layer chromatographic studies in *Cyrtanthus*. I. *C. breviflorus* and *C. luteus*. *Hereditas* 63: 385 - 414.
- Ivimey-Cook, R. B. (1969a). Investigations into the phenetic relationships between species of *Ononis* L. *Watsonia* 7: 1 - 23.
- Ivimey-Cook, R. B. (1969b). The phenetic relationships between species of *Ononis*. In: A. J. Cole (ed.), *Numerical Taxonomy*. Proceedings of the colloquium in numerical taxonomy held in the University of St. Andrews, September 1968, pp. 69 - 90. Academic Press, London. 324 pp.
- Jaworska, H. and N. Nybom (1967). Thin-layer chromatographic study of *Saxifraga caesia*, *S. aizoides* and their putative hybrid. *Hereditas* 57: 159 - 177.
- Jensen, R. J. (1977). A preliminary numerical analysis of the red oak complex in Michigan and Wisconsin. *Taxon* 26(4): 399 - 407.
- Jensen, R. J. and W. H. Eshbaugh (1976a). Numerical taxonomic studies of hybridization in *Quercus*. I. Populations of restricted areal distribution and low taxonomic diversity. *Syst. Bot.* 1: 1 - 10.
- Jensen, R. J. and W. H. Eshbaugh (1976b). Numerical taxonomic studies of hybridization in *Quercus*. II. Populations with wide areal distributions and high taxonomic diversity. *Syst. Bot.* 1: 11 - 19.
- Johnson, L. A. S. (1970). Rainbow's end: the quest for an optimal taxonomy. *Syst. Zool.* 19: 203 - 239.
- Kalkman, C. (1966). Keeping up with the Joneses. *Taxon* 15(5): 177 - 179.

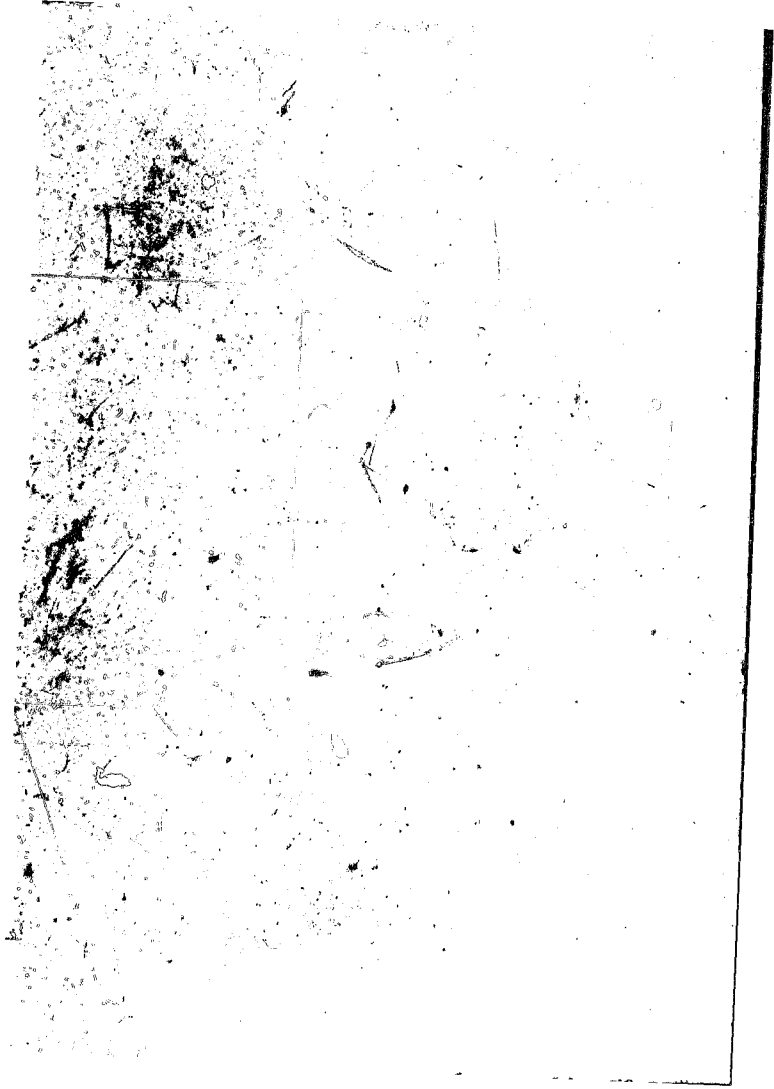
- Kallsikes, P. J. and W. Dedio (1970a). A thin-layer chromatographic study of the phenolics of the genus *Aegilops*. I. *Can. J. Bot.* 48: 1775 - 1780.
- Kallsikes, P. J. and W. Dedio (1970b). A thin-layer chromatographic study of the phenolics of the genus *Aegilops*. II. *Can. J. Bot.* 48: 1781 - 1786.
- Kleeck, W. R. (1980). *Discriminant Analysis*. Quantitative applications in the social sciences series, 19. Sage Publications, Beverly Hills and London. 71 pp.
- Lammers, T. G.; T. F. Stuessy and M. Silva O (1986). Systematic relationships of the Lactoridaceae, an endemic family of the Juan Fernandez Islands, Chile. *Pl. Syst. Evol.* 152: 243 - 266.
- Lavrack, P. S. (1976). The taxonomic affinities of the Australian Neottioideae. *Taxon* 25(2): 289 - 296.
- Les, D. H. (1986). The evolution of the achene morphology in *Ceratophyllum* (Ceratophyllaceae), I. Fruit-spine variation and relationships of *C. demersum* and *C. apiculatum*. *Syst. Bot.* 11(4): 549 - 558.
- Lorenz, H. and J. Schulz-Schaeffer (1964). Biosystematic investigations in the genus *Agropyron*. II. A chromatographic approach. *Z. Pflanzenzucht* 52: 13 - 26.
- Mason, L. G.; P. R. Ehrlich and T. C. Emmel (1968). The population biology of the butterfly *Euphydryas editha*. VI. Phenetics of the Jasper Ridge Colony, 1965 - 66. *Evolution* 22: 46 - 54.
- Matthews, J. F. (1966). A paper chromatographic study of the North and South American species of the genus *Tradescantia*. *Bot. Gaz.* 127: 74 - 78.
- Mayr, E. (1965). Numerical phenetics and taxonomic theory. *Syst. Zool.* 14: 73 - 97.
- Mayr, E. (1969). *Principles of Systematic Zoology*. McGraw-Hill, New York. 428 pp.
- Mayr, E. (1978). Origin and history of some terms in systematics and evolutionary biology. *Syst. Zool.* 27: 83 - 88.

- McNeill, J. (1974). A generic revision of *Portulacaceae* tribe *Montiaceae* using techniques of numerical taxonomy. *Can. J. Bot.* 53: 789 - 809.
- McNeill, J. (1975). The handling of character variation in numerical taxonomy. *Taxon* 23: 699 - 705.
- McNeill, J.; P. F. Parker and V. H. Heywood (1969). A taximetric approach to the classification of the spiny-fruited members (tribe *Caucalidene*) of the flowering-plant family *Umbelliferae*. In: A. J. Cole (ed.), *Numerical Taxonomy. Proceedings of the colloquium in numerical taxonomy held in the University of St. Andrews, September 1968*, pp. 129 - 147. Academic Press, London. 324 pp.
- Moll, E. J. and F. White (1978). The Indian Ocean coastal belt. In: J. Illies (ed.) *Monographiae Biologicae* 31(1): 561 - 598.
- Mooney, H. A. and W. H. Emboden (1968). The relationship of terpene composition, morphology, and distribution of populations of *Bursera microphylla* (*Burseraceae*). *Brittonia* 20: 44 - 51.
- Moret, J.; H. Coudere; J. M. Hubac and R. Gorenflot (1986). Contributions of numerical taxonomy to *Ornithogalum* subg. *Beryllis* (*Hyacinthaceae*) in Morocco. *Pl. Syst. Evol.* 154: 103 - 110.
- Natarella, N. J. and K. C. Sink (1974). A chromatographic study of phenolics of species ancestral to *Petunia hybrida*. *J. Hered.* 65: 85 - 90.
- Neff, N. A. and L. F. Marcus (1980). *A survey of multivariate methods for systematics*. American Museum of Natural History, New York. 245 pp.
- Nicholls, M. S. (1986). Variation and evolution in *Linum tenuifolium* (*Linaceae*). *Pl. Syst. Evol.* 153: 243 - 258.
- Nickrent, D. L. (1986). Genetic polymorphism in the morphologically reduced dwarf mistletoes (*Arceuthobium*, *Viscaceae*): An electrophoretic study. *Am. J. Bot.* 73(10): 1492 - 1502.
- Olden, E. J. and N. Nybom (1968). On the origin of *Prunus cerasus* L. *Hereditas* 59: 327 - 345.
- Paiva, J. A. R. (1972). New and little known species from the flora of Zambezi area. XXII. Notes on *Luiluana*. *Bot. Soc. Brot.* 46, ser. 2: 355 - 384.

- Palmer, E. and N. Pitman (1973). *Trees of Southern Africa*. Vol. III. pp. 2131 - 2170. Balkema Press, Cape Town. 2200 pp.
- Paris, C. A. and M. D. Windham (1988). A biosystematic investigation of the *Adiantum pedatum* complex in eastern North America. *Syst. Bot.* 13(2): 240 - 255.
- Parups, E. V.; J. R. Proctor; B. Meredith and J. M. Gillett (1966). A nomenclature-taxonomic study of some species of *Trifolium*, section *Lupinaster*. *Can. J. Bot.* 44: 1177 - 1182.
- Pehu, E.; R. E. Vailloux and K. W. Hill (1987). Cluster analysis of anther-derived plants of *Solanum phureja* (Solanaceae) based on morphological characters. *Am. J. Bot.* 74(1): 47 - 52.
- Phillips, E. P. and H. G. Schweickhardt (1937). A revision of the South African species of *Brachylaena* R. Brown. *Bothalia* 3: 205 - 251.
- Phillips, R. B. (1983). Shape characters in numerical taxonomy and problems with ratios. *Taxon* 32(4): 535 - 544.
- Prance, G. T.; D. J. Rogers and F. White (1969). A taximetric study of an angiosperm family: generic delimitation in the Chrysobalanaceae. *New Phytol* 68: 1203 - 1234.
- Pridgeon, A. M. (1982). Numerical analyses in the classification of the Pleurothallidinae (Orchidaceae). *Bot. J. Linn. Soc.* 85: 103 - 131.
- Randall, J. L. and K. W. Hill (1986). Biosystematic studies of North American *Trisetum spicatum* (Poaceae). *Syst. Bot.* 11(4): 567 - 578.
- Rhodes, A. M.; W. P. Bemis; T. W. Whitaker and S. G. Carmar (1968). A numerical taxonomic study of *Cucurbita*. *Brittonia* 20: 251 - 266.
- Riesberg, L. H.; P. M. Peterson; D. E. Soltis and C. R. Annable (1987). Genetic divergence and isozyme number variation among four varieties of *Allium douglasii* (Alliaceae). *Am. J. Bot.* 74(11): 1614 - 1624.
- Ringius, G. S. and J. G. Chmielewski (1987). Morphological variation within and among six populations of *Trillium erectum* in southern Ontario. *Can. J. Bot.* 65: 2450 - 2457.
- Rohlf, F. J. (1971). Perspectives on the application of multivariate statistics to taxonomy. *Taxon* 20(1): 85 - 90.

- Rohlf, F. J.; J. Kishpaugh; and D. Kirk (1974). NT-SYS Numerical Taxonomy System of Multivariate Statistical Programs. Tech. Rep. State University of New York at Stony Brook, New York. pp.7
- Rowley, G. D. (1967). A numerical survey of the genera of Aloineae. *Nat. Cactus Succulent J.* 22: 71 - 75.
- Rowley, G. D. (1969). Better botany by computer. *Taxon* 18: 625 - 628.
- SAS Institute Inc. (1985). SAS User's Guide: Statistics. 1985 ed. SAS Institute Inc., Cary, NC.
- Schilling, E. E. and C. B. Heiser (.976). Re-examination of a numerical taxonomic study of *Solanum* species and hybrids. *Taxon* 25(4): 451 - 462.
- Schilling, E. E. and C. B. Heiser (1981). Infrageneric classification of *Helianthus* (Compositae). *Taxon* 30(2): 393 - 403.
- Schuessler, K. (1974). Analysis of ratio variables: opportunities and pitfalls. *Amer. J. Sociobiology* 80: 379 - 396.
- Schultz, C. H. (1843). In: *Repertorium Botanices Systematicae* (W. G. Walpers, ed.) II (5): 972.
- Shaw, M. J.; B. M. Potts; and J. B. Reid (1984). Variation in and between *Eucalyptus nitida* Hook. f. and *E. coccifera* Hook. f.. *Aust. J. Bot.* 32: 641 - 654.
- Sim, T. R. (1909). *Forest Flora and Forest Researchers of Portuguese East Africa*. Taylor and Henderson, Aberdeen, Scotland. 167 pp.
- Skvaris, J. J.; B. L. Turner; V. C. Patel and A. S. Tomb (1977). Pollen morphology in the Compositae and in morphologically related families. In: V. H. Heywood; J. B. Harborne and B. L. Turner (eds.) *The Biology and Chemistry of the Compositae*. pp. 141 - 265. Academic Press, London. pp.
- Sneath, P. H. A. and R. R. Sokal (1973). *Numerical Taxonomy. The Principles and Practice of Numerical Classification*. Freeman, San Francisco. 573 pp.
- Sokal, R. R.; J. H. Camin; F. J. Rohlf and P. H. A. Sneath (1965). Numerical taxonomy: some points of view. *Syst. Zool.* 14: 237 - 243.
- Stearn, W. T. (1968). Observations on a computer-aided survey of the Jamaican species of *Columnea* and *Alloplectus*. In: V. H. Heywood

- (ed.), *Modern Methods in Plant Taxonomy*. pp. 219 - 224. Academic Press, London. 312 pp.
- Stein, W. T. (1969). The Jamaican species of *Colnmea* and *Alloplectus* (Gesneriaceae). *Bull. Brit. Mus. Nat. Hist. (Bot.)* 4: 179 - 236.
- Watson, L.; W. T. Williams and G. N. Lance (1966). Angiosperm taxonomy: a comparative study of some novel numerical techniques. *J. Linn. Soc. Bot.* 59: 491 - 501.
- West, J. G. and I. R. Noble (1984). Analysis of digitised leaf images of the *Dodonaea viscosa* complex in Australia. *Taxon* 33(4): 595 - 613.
- Whitkus, R. and J. G. Packer (1984). A contribution to the taxonomy of the *Carex macloviana* aggregate (Cyperaceae) in western Canada and Alaska. *Can. J. Bot.* 62(8): 1592 - 1607.
- Wolf, S. J. and R. Whitkus (1987). A numerical analysis of flavonoid variation in *Arnica* subgenus *Austromontana* (Asteraceae). *Am. J. Bot.* 74(10): 1577 - 1584.
- Wood, J. M. (1908). *A Handbook to the Flora Of Natal*. Bennett and Davis, Durban. 202 pp.
- Wood, J. M. and M. S. Evans (1898). *Natal Plants*. vol. I. Bennett and Davis, Durban. 83 pp.
- Wyse-Jackson, M. B. and J. A. N. Parnell (1987). A biometric study of the *Arenaria ciliata* L. complex (Caryophyllaceae). *Watsonia* 16: 373 - 382.
- Young, D. J. and L. Watson (1970). The classification of dicotyledons: a study of the upper levels of the hierarchy. *Aust. J. Bot.* 18: 387 - 433.
- Zeharof, E. (1986). Variation and taxonomy of *Fritillaria graeca* (Liliaceae) in Greece. *Pl. Syst. Evol.* 154: 41 - 61.
- Zandee, M. and P. C. G. Glas (1982). Studies in the *Holcus lanatus* - *Holcus mollis* complex (Poaceae - Gramineae). *Proc. Kon. Ned. Akad. Wetensch.* 85: 413 - 437.



APPENDIX IA

Pearsons and Spearmans Correlation
Coefficients for the Female Data Set

VARIABLE	N	MEAN	STD DEV	MEDIAN	MINIMUM	MAXIMUM
RACHLEN	150	54.78506667	14.30947711	54.17000000	26.01000000	90.84000000
W7WOLN	150	5.06086667	1.43782551	4.96000000	2.06000000	10.83000000
WDR	150	6.25400000	1.30728156	6.80000000	2.60000000	9.60000000
IBRL	150	6.65160000	2.20524880	6.81000000	2.79000000	10.67000000
ORIL	150	1.80093333	0.57208590	1.00000000	0.60000000	3.10000000
IDRW	150	1.15784667	0.21914799	1.17000000	0.50000000	1.88000000
ODRW	150	1.10000000	0.31950042	1.10000000	0.34000750	2.02000000
IMRML	150	9.25026667	1.23170887	9.54500000	3.41000000	15.40000000
IMPMW	150	4.81840000	1.55514115	5.10000000	1.18000000	7.54000000
PMOL	150	5.73506667	2.30685926	5.63000000	1.78000000	16.10000000
LMF	150	3.11813333	1.04352474	2.28000000	1.40000000	7.16000000
IRFL	150	12.64860000	3.37381759	12.66500000	6.67000000	19.23000000
IMPA	150	5.26453333	1.45964757	5.40000000	2.92000000	8.67500000
VANGS	150	56.74656667	6.28963851	58.00000000	42.20000000	70.00000000
VANGB	150	57.61000000	13.02006526	58.00000000	29.00000000	89.00000000
WIMBL	150	9.88033333	1.69055545	9.43000000	6.05000000	13.46000000
SHIRL	150	66.57800000	3.67771997	66.38000000	56.54000000	77.72000000
LEMRIL	150	3.27513333	0.64200028	3.18500000	1.91000000	5.34000000
MLRL	150	98.03866667	17.38029967	89.07500000	55.80000000	139.60000000
NOGRIL	150	28.65333333	5.69784684	18.39000000	18.39000000	61.50000000
APWAN	150	81.70000000	21.19845666	80.50000000	28.00000000	131.00000000
APXPS	150	3.77920000	1.23935394	3.72500000	1.26000000	5.00000000
BSAM	150	46.52500000	13.16071029	45.50000000	17.00000000	92.00000000
BSPS	150	96.14680000	2.11372790	92.51900000	85.54000000	97.46000000
SVIRIS	150	1.29620000	0.60108143	1.11500000	0.38000000	4.40000000
NSECV	150	19.56000000	3.16541716	19.00000000	12.00000000	28.00000000
PIREB	150	25.38400000	15.89499502	26.97500000	0.00000000	77.78000000
FTLLN	150	9.89266667	2.72498622	9.67500000	3.55000000	18.55000000
IRTLN	150	9.69633333	1.70504869	9.15000000	4.00000000	21.50000000
NFLOR	150	13.33333333	6.55027707	14.30900000	1.00000000	30.00000000
CORILN	150	0.58833333	0.12662989	0.56000000	0.30000000	1.02000000
CORLWD	150	0.20620000	0.02516176	0.21000000	0.14000000	0.29000000
CORTDO	150	0.43520000	0.05876663	0.40000000	0.30000000	0.60000000
WASL	150	279.32666667	458.98716293	109.00000000	0.00000000	1600.00000000
PAPMOLN	150	4.64673333	1.94230593	7.10000000	3.16000000	11.10000000
FTLLN	150	10.26396667	2.28399438	10.32000000	5.44000000	15.66000000
DIES	150	58.98866667	120.20099277	1.00000000	0.00000000	440.00000000
STHOLN	150	7.19973333	1.78963369	7.54900000	3.62000000	11.18000000
STHOLQ	150	0.68213333	0.11331638	0.65000000	0.42000000	1.18000000
STBLN	150	0.60700000	0.28632531	0.80000000	0.34000000	1.36000000
STEND	150	0.37906667	0.08106819	0.38000000	0.26000000	0.68000000
ACRML	150	2.91340000	0.73880037	2.78000000	1.70000000	4.70000000
ACRMDM	150	0.74520000	0.08593208	0.76000000	0.48000000	1.02000000
NYVAC	150	8.67333333	0.75780004	8.80000000	6.80000000	10.20000000
CRMLN	151	5.78726667	1.47520490	5.10000000	2.88000000	8.60000000
CRHMDM	150	0.51866667	0.04149238	0.52000000	0.43000000	0.60000000
CRHMD	150	0.28820000	0.02712313	0.29000000	0.18000000	0.37000000
WACRFD	150	1.17499587	0.35214780	1.10031503	0.63366846	2.20303289
IBLR	150	5.61020012	1.80951471	5.75811568	2.44615385	11.81521739
ORILR	150	1.67570911	0.21601178	1.66040711	1.02931023	2.41304748
IBVILR	150	1.94327219	0.35254874	1.91380000	1.21662125	3.07258065
GRILLR	150	2.86944039	0.50612176	2.78260870	1.80000000	4.42105263
GRILR	150	1.93318117	0.08556260	1.79284098	2.45718113	2.98362656
CORILR	150	11.04770000	2.71862666	11.70069500	5.41071429	16.28629630
CORILMR	150	20.10498600	5.65346079	20.98275862	8.18918919	32.25000000

VARIABLE	N	MEAN	STD DEV	MEDIAN	MINIMUM	MAXIMUM
STLLDR	150	10.61672801	2.43499171	10.26215278	3.35157135	17.00000000
TLFLR	150	1.99120554	0.22221932	1.53238430	1.29038114	2.28070175
INFLWR	150	2.43626464	0.37250747	2.40595451	1.51216369	3.46486786
LRNFWR	150	4.36993718	2.39296599	4.35744969	0.34467419	11.46000000

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / N = 150

	RACHLEN	INTNDLN	NBR	IBRL	QBRL	IDRW	QBRW	INMKL	INMQW	PMKL	LBPR	INFL	INFW
RACHLEN	1.00000 0.0000	0.62301 0.0001	-0.03383 0.6811	-0.02646 0.7479	-0.01691 0.8373	0.05966 0.4668	0.01576 0.8482	-0.02207 0.7687	0.02564 0.8263	0.01744 0.7462	-0.01532 0.8524	0.01286 0.8759	0.05311 0.5186
INTNDLN	0.62301 0.0001	1.00000 0.0000	0.06402 0.4364	0.06782 0.4089	0.03205 0.6970	0.13679 0.6903	0.05851 0.4769	0.05598 0.4970	0.11660 0.1553	-0.02371 0.7734	0.00720 0.9303	0.01008 0.9089	0.00975 0.9058
NBR	-0.03383 0.6811	0.06402 0.4364	1.00000 0.0000	0.85931 0.0001	0.70497 0.6601	0.34308 0.0001	0.59909 0.0001	0.89418 0.0001	0.80799 0.0001	0.68167 0.0001	0.50938 0.0001	0.87225 0.0001	0.73707 0.0001
IBRL	-0.02646 0.7479	0.06782 0.4089	0.85931 0.0001	1.00000 0.0000	0.85115 0.0001	0.48833 0.0001	0.74012 0.0001	0.98217 0.0001	0.90031 0.0001	0.62006 0.0001	0.62110 0.0001	0.90794 0.0001	0.76015 0.0001
QBRL	-0.01691 0.8373	0.03205 0.6970	0.70497 0.0001	0.85115 0.0001	1.00000 0.0000	0.40801 0.0001	0.91966 0.0001	0.84196 0.0001	0.02830 0.0001	0.61967 0.0001	0.50978 0.0001	0.81570 0.0001	0.88808 0.0001
IDRW	0.05966 0.4668	0.13679 0.6903	0.34308 0.0001	0.48833 0.0001	0.49901 0.0000	1.00000 0.0000	0.49188 0.0001	0.42003 0.0001	0.57338 0.0001	0.28157 0.0001	0.23101 0.0001	0.39371 0.0001	0.36398 0.0001
QBRW	0.01576 0.8482	0.05598 0.4769	0.59909 0.0001	0.74012 0.0001	0.91966 0.0001	0.49188 0.0001	1.00000 0.0000	0.73274 0.0001	0.77024 0.0001	0.56145 0.0001	0.50308 0.0001	0.70684 0.0001	0.55114 0.0001
INMKL	-0.02207 0.7687	0.05598 0.4769	0.89418 0.0001	0.98217 0.0001	0.94196 0.0001	0.42003 0.0001	0.73274 0.0001	1.00000 0.0000	0.90811 0.0001	0.61640 0.0001	0.60263 0.0001	0.96174 0.0001	0.88808 0.0001
INMQW	0.02564 0.7462	0.11660 0.1553	0.62006 0.0001	0.62110 0.0001	0.85115 0.0001	0.48833 0.0001	0.74012 0.0001	0.98217 0.0001	1.00000 0.0000	0.80358 0.0001	0.55409 0.0001	0.89059 0.0001	0.82936 0.0001
PMKL	0.01744 0.8263	-0.02371 0.7734	0.00720 0.9303	0.01008 0.9089	0.03205 0.6970	0.06782 0.4089	0.05851 0.4769	0.05598 0.4970	0.11660 0.1553	1.00000 0.0000	0.60132 0.0001	0.63909 0.0001	0.60284 0.0001
LBPR	-0.01532 0.8524	0.00720 0.9303	0.01008 0.9089	0.03205 0.6970	0.06782 0.4089	0.05851 0.4769	0.05598 0.4970	0.05598 0.4970	0.11660 0.1553	0.60132 0.0001	1.00000 0.0000	0.59100 0.0001	0.88741 0.0001
INFL	0.01286 0.8759	0.00720 0.9303	0.01008 0.9089	0.03205 0.6970	0.06782 0.4089	0.05851 0.4769	0.05598 0.4970	0.05598 0.4970	0.11660 0.1553	0.60132 0.0001	0.63909 0.0001	1.00000 0.0000	0.83709 0.0001
INFW	0.05311 0.5186	0.00975 0.9058	0.01008 0.9089	0.03205 0.6970	0.06782 0.4089	0.05851 0.4769	0.05598 0.4970	0.05598 0.4970	0.11660 0.1553	0.60132 0.0001	0.63909 0.0001	0.83709 0.0001	1.00000 0.0000
VAMGS	0.04003 0.6268	0.09708 0.3485	0.15304 0.0615	0.04436 0.5899	0.82088 0.7998	0.63911 0.6347	0.00267 0.9741	0.07346 0.3717	0.68208 0.3180	-0.00839 0.9188	0.85541 0.5907	0.05183 0.5288	0.03279 0.6904
VAMCB	-0.04775 0.5618	-0.05873 0.5056	0.36511 0.0001	0.32377 0.0001	0.24866 0.9023	0.04151 0.6140	0.18173 0.0260	0.05901 0.8006	0.27002 0.0006	0.17694 0.0303	0.14832 0.9002	0.31948 0.0001	0.23521 0.0038
MINDL	0.21634 0.0078	0.25222 0.0018	-0.02032 0.0057	-0.17594 0.0317	-0.10472 0.0226	0.01317 0.8729	-0.14399 0.0788	-0.18723 0.0217	-0.15725 0.0546	-0.25227 0.0018	-0.18829 0.0210	-0.21344 0.0087	-0.19979 0.0142
SHINL	-0.00277 0.9732	-0.00886 0.2796	-0.12735 0.1204	-0.19623 0.0161	-0.15609 0.0565	0.00600 0.9411	-0.11708 0.1538	-0.18801 0.0949	-0.18255 0.0254	-0.17848 0.0289	-0.09402 0.2524	-0.16575 0.0427	-0.22384 0.0059

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	RAGMLN	INTNDR	NDR	IBRL	QBRL	IBRW	QBRW	INMML	INMHW	PNML	LBRP	INFL	INFW
LINWRL	-0.08462 0.3032	-0.17628 0.0291	-0.30055 0.0002	-0.38105 0.0001	-0.30432 0.0002	-0.18576 0.0028	-0.27165 0.0006	-0.35740 0.0001	-0.39438 0.0001	-0.26007 0.0013	-0.21513 0.0062	-0.35513 0.0001	-0.38062 0.0001
MXLNL	0.12878 0.1163	0.37472 0.3635	-0.47540 0.0001	-0.49676 0.0001	-0.42942 0.0001	-0.17114 0.0363	-0.37121 0.0001	-0.49086 0.0001	-0.49646 0.0001	-0.4985 0.0001	-0.37518 0.0001	-0.50906 0.0001	-0.50876 0.0001
MXWDL	0.19084 0.0193	0.25363 0.0017	-0.16523 0.4433	-0.10438 0.2039	-0.12661 0.1226	0.01125 0.8974	-0.10056 0.2208	0.12454 0.1289	-0.09063 0.2700	-0.17744 0.0298	-0.13941 0.0899	-0.14757 0.0715	-0.11704 0.1538
APXAN	0.00441 0.9973	0.11663 0.1545	0.31631 0.0001	0.29451 0.0003	0.13869 0.0905	0.20271 0.0129	0.15595 0.0567	0.87658 0.0006	0.29066 0.0003	0.20581 0.0115	0.15354 0.0607	0.27784 0.0006	0.32199 0.0001
APXPS	0.01195 0.8846	-0.03700 0.6531	-0.25820 0.0014	-0.20289 0.0005	-0.27426 0.0007	-0.15167 0.0639	-0.26723 0.0009	-0.27934 0.0005	-0.27780 0.0006	-0.22506 0.0056	-0.11106 0.1151	-0.27699 0.0006	-0.25756 0.0015
BSAN	0.06122 0.4567	0.10475 0.2021	0.33527 0.0001	0.41195 0.0001	0.36017 0.0001	0.16638 0.0419	0.38787 0.0001	0.42904 0.0001	0.42457 0.0001	0.25097 0.0019	0.27021 0.0006	0.41865 0.0001	0.38110 0.0001
BSPS	0.03957 0.5469	0.06660 0.4181	0.29737 0.0002	0.32886 0.0001	0.32215 0.0001	0.13189 0.1077	0.25944 0.0016	0.32895 0.0001	0.34760 0.0001	0.24928 0.0021	0.27403 0.0007	0.42817 0.0001	0.30812 0.0001
SVIHS	0.04419 0.5913	0.04660 0.3712	0.12448 0.1291	0.07790 0.3434	0.17786 0.2452	-0.01888 0.8187	0.03207 0.6966	0.07645 0.3585	0.09222 0.2616	0.06291 0.4480	0.02917 0.7831	0.07781 0.3439	0.12624 0.1237
HSECV	0.02705 0.7424	-0.00632 0.9389	-0.23054 0.0045	-0.29340 0.0003	-0.35615 0.0001	-0.18676 0.0221	-0.31295 0.0001	-0.28609 0.0004	-0.39899 0.0001	-0.26403 0.0011	-0.16059 0.0496	-0.30462 0.0002	-0.28236 0.0005
PINSV	0.17817 0.0092	0.24079 0.0030	-0.23569 0.0037	-0.23033 0.0046	-0.23666 0.0038	-0.03239 0.5939	-0.19689 0.0158	-0.24756 0.0023	-0.23161 0.0043	-0.19222 0.0184	-0.21226 0.0091	-0.25021 0.0003	-0.28673 0.0004
PTLLN	0.11604 0.1573	0.05297 0.5197	0.24752 0.0023	0.26870 0.0013	0.22713 0.0852	0.07491 0.3623	0.21147 0.0094	0.26630 0.0010	0.17451 0.0327	0.02600 0.0054	0.38565 0.2974	0.28962 0.0008	0.20748 0.0130
INTLN	0.15690 0.0557	0.09565 0.2443	-0.03350 0.6833	-0.00993 0.9040	-0.02933 0.1216	0.05629 0.4936	-0.03259 0.6922	-0.03114 0.7852	0.02244 0.7051	-0.04939 0.3484	0.08416 0.3059	-0.02347 0.7719	0.00886 0.9143
HFLOP	0.00996 0.9037	0.35517 0.9025	0.71097 0.0001	0.79406 0.0001	0.77824 0.0001	0.38134 0.0001	0.68562 0.0001	0.88328 0.0001	0.88328 0.0001	0.56779 0.0001	0.01685 0.0001	0.74007 0.0001	0.77082 0.0001
CORLLN	0.04963 0.5464	0.10972 0.1814	0.35080 0.0001	0.18079 0.0001	0.14051 0.0863	0.36487 0.4303	0.87687 0.3498	0.35886 0.0001	0.28036 0.0005	0.19133 0.0190	0.14694 0.0728	0.38614 0.0001	0.30910 0.0001
CORLND	-0.14357 0.0797	-0.07973 0.3321	0.14189 0.0833	0.15775 0.0539	0.15541 0.0576	0.19649 0.0160	0.15862 0.0510	0.13683 0.0902	0.14091 0.0854	0.14525 0.0232	0.05197 0.5276	0.17541 0.0318	0.20469 0.0180
CORTND	0.02595 0.7526	-0.01723 0.8382	0.05871 0.5377	0.08003 0.3303	0.09165 0.2647	0.08721 0.2886	0.07871 0.3384	0.07790 0.3434	0.06634 0.4060	0.04371 0.5954	-0.15172 0.0638	0.13289 0.1050	0.08677 0.2911
HASL	0.04663 0.5710	-0.03103 0.7062	-0.69948 0.0001	-0.70285 0.0001	-0.55631 0.5501	-0.43248 0.1061	-0.43484 0.0001	-0.69464 0.0001	-0.60281 0.0001	-0.59841 0.0001	-0.51310 0.0001	-0.67126 0.0001	-0.64796 0.0001
PAPMML	-0.06419 0.4352	0.03423 0.6776	0.83935 0.0001	0.96940 0.0001	0.82145 0.0001	0.38246 0.0001	0.70657 0.0001	0.98890 0.0001	0.87011 0.0001	0.61761 0.0001	0.62713 0.0001	0.94531 0.0001	0.78246 0.0001

PEARSON CORRELATION COEFFICIENTS / PROG > IRE UNDER NO:RHO=0 / N = 150

	RACMLN	INTNDLN	NBR	LBRL	OBRL	IRRW	ODRW	INXKL	INXOW	PMKL	LBRP	INFL	IN7W
LINDRL	-0.09462 0.3032	-0.17628 0.0291	-0.30695 0.0002	-0.33106 0.0001	-0.30432 0.0002	-0.18576 0.0228	-0.27165 0.0008	-0.39438 0.0001	-0.26007 0.0013	-0.21513 0.0082	-0.35513 0.0001	-0.38062 0.0001	
MXLNL	0.12878 0.1163	0.07472 0.3635	-0.47340 0.0001	-0.49676 0.0001	-0.42942 0.0001	-0.17114 0.0363	-0.17121 0.0001	-0.49066 0.0001	-0.49546 0.0001	-0.37518 0.0001	-0.50905 0.0001	-0.50876 0.0001	
MXMDL	0.19084 0.1903	0.25363 0.0617	-0.16923 0.0433	-0.10434 0.2039	-0.12661 0.1226	0.01125 0.0914	-0.10056 0.2208	-0.18454 0.1289	-0.09063 0.2702	-0.17744 0.0298	-0.13947 0.0889	-0.14757 0.0715	-0.11704 0.1536
APKAN	0.00941 0.5731	0.11683 0.1543	0.31631 0.0001	0.29441 0.0001	0.1869 0.0903	0.20211 0.0129	0.15595 0.0567	0.27658 0.0005	0.09266 0.0003	0.20581 0.0115	0.15354 0.0507	0.27784 0.0001	0.32399 0.0001
APXPS	0.01192 0.8846	-0.03700 0.6531	-0.25820 0.5714	-0.28289 0.0005	-0.7705 0.3639	-0.11167 0.0009	-0.86723 0.0009	-0.21934 0.0009	-0.27780 0.0006	-0.28206 0.0056	-0.13305 0.0415	-0.27699 0.0006	-0.05726 0.0015
BSAN	0.06122 0.4267	0.10475 0.2021	0.13227 0.0001	0.46399 0.0001	0.36017 0.0001	0.16638 0.0001	0.30757 0.0001	0.42504 0.0001	0.02457 0.0019	0.25067 0.0056	0.2721 0.0001	0.41065 0.0001	0.36119 0.0001
BSFS	0.00557 0.5469	0.06668 0.4181	0.29737 0.0002	0.32666 0.0001	0.32215 0.0001	0.13189 0.1077	0.25544 0.0016	0.58895 0.0001	0.34760 0.0001	0.29820 0.0021	0.27803 0.0007	0.32417 0.0001	0.30812 0.0001
SVINS	0.09419 0.35.3	0.04660 0.3712	0.18448 0.1291	0.07790 0.3434	0.01786 0.8282	-0.31888 0.8187	0.03207 0.6968	0.07645 0.3525	0.09225 0.2616	0.06241 0.4480	0.02917 0.7231	0.07781 0.3439	0.12624 0.1237
NSCEV	0.82709 0.7424	-0.00632 0.9389	-0.33054 0.0005	-0.29310 0.0003	-0.35615 0.0001	-0.18676 0.0001	-0.31295 0.0001	-0.28609 0.0004	-0.26007 0.0001	-0.16059 0.0496	-0.30842 0.0006	-0.28236 0.0005	
PINSEV	0.17811 0.0292	0.24079 0.0030	-0.23569 0.0037	-0.23035 0.0046	-0.23666 0.0035	-0.03239 0.6939	-0.19669 0.0158	-0.30756 0.0023	-0.23161 0.0013	-0.19222 0.0184	-0.21226 0.0091	-0.29021 0.0003	-0.28673 0.0004
PTLLN	0.11604 0.1573	0.05297 0.2197	0.24752 0.0023	0.26070 0.0013	0.28713 0.0092	0.07091 0.3623	0.21147 0.0094	0.26630 0.0010	0.17451 0.0327	0.22600 0.0054	0.08565 0.2974	0.26962 0.0008	0.20248 0.0130
INTLN	0.15699 0.0957	0.09569 0.3321	-0.03358 0.0833	-0.00993 0.0040	-0.02033 0.7216	0.05629 0.4938	-0.03259 0.8922	-0.03111 0.7052	0.02244 0.7851	-0.04939 0.0484	0.08416 0.3059	-0.02387 0.7719	0.00988 0.9143
NFLOR	0.00996 0.5037	0.05217 0.5025	0.71097 0.0001	0.79406 0.0001	0.77824 0.0001	0.38314 0.0001	0.68502 0.0001	0.80558 0.0001	0.88374 0.0001	0.56779 0.0001	0.51685 0.0001	0.78207 0.0001	0.77032 0.0001
CORLLN	0.04963 0.3464	0.10972 0.1814	0.35080 0.0001	0.38079 0.0001	0.14051 0.0863	0.06487 0.4303	0.07687 0.3498	0.39888 0.0001	0.28036 0.0005	0.19133 0.0190	0.14624 0.0728	0.38614 0.0001	0.38840 0.0001
CORLMD	-0.14357 0.0797	-0.07973 0.3321	0.14189 0.0833	0.15775 0.0539	0.15541 0.0576	0.19649 0.0160	0.15962 0.0519	0.13883 0.0902	0.14091 0.0834	0.18525 0.0232	0.09197 0.5876	0.17541 0.0318	0.20640 0.0180
CORTMD	0.02995 0.1506	-0.01723 0.8342	0.05071 0.3377	0.08003 0.0001	0.09163 0.0001	0.06721 0.3384	0.07871 0.3438	0.07792 0.4850	0.06698 0.5994	0.04371 0.5572	0.35728 0.7838	0.12889 0.1030	0.08677 0.2911
HASL	0.06663 0.5710	-0.03103 0.7062	-0.69848 0.0001	-0.70285 0.0001	-0.55631 0.0001	-0.13248 0.1061	-0.43804 0.0001	-0.69848 0.0001	-0.60281 0.0001	-0.59881 0.0001	-0.51319 0.0001	-0.67126 0.0001	-0.64796 0.0001
PAFXXLN	-0.06419 0.4352	0.63823 0.6776	0.83935 0.0001	0.86940 0.0001	0.82319 0.0001	0.38246 0.0001	0.70657 0.0001	0.94750 0.0001	0.27011 0.0001	0.61741 0.0001	0.62713 0.0001	0.94531 0.0001	0.78246 0.0001

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / N = 150

	RACLEN	INTNDL	NBR	IDPL	OSBL	IDRW	ORRW	INMKL	INPKW	PMKL	LDRP	INFL	INFW
TFLN	0.01944 0.6133	0.00446 0.9568	0.80331 0.0001	0.92748 0.0001	0.78743 0.0001	0.24944 0.0001	0.97096 0.0001	0.91453 0.0001	0.84185 0.0001	0.61457 0.0001	0.59534 0.0001	0.97130 0.0001	0.82660 0.0001
DFRS	0.07718 0.3478	-0.01370 0.8679	-0.85609 0.0001	-0.68156 0.0001	-0.47358 0.0001	-0.10498 0.2011	-0.33289 0.0001	-0.82715 0.0001	-0.51841 0.0001	-0.97709 0.0001	-0.50681 0.0001	-0.89920 0.0001	-0.57322 0.0001
STOKLN	-0.01813 0.9029	0.02988 0.7166	0.21968 0.0001	0.94871 0.0001	0.08534 0.0001	0.39881 0.0001	0.71267 0.0001	0.92956 0.0001	0.86035 0.0001	0.60907 0.0001	0.51109 0.0001	0.9482 0.0001	0.78388 0.0001
S HKLGL	0.05633 0.4935	-0.21174 0.9093	0.43744 0.0001	0.42044 0.0001	0.26119 0.0012	0.03407 0.0039	0.21799 0.0001	0.42389 0.0001	0.38710 0.0001	0.23451 0.0036	0.20961 0.0118	0.82197 0.0001	0.34319 0.0001
STBLN	-0.01399 0.6651	-0.05402 0.5083	0.24396 0.0001	0.74142 0.0001	0.65799 0.0001	0.30820 0.0002	0.56982 0.0001	0.73630 0.0001	0.49157 0.0001	0.82123 0.0001	-0.47767 0.0001	0.78291 0.0001	0.66756 0.0001
STBD	0.15211 0.0631	0.15118 0.0648	0.33635 0.0001	0.24788 0.0022	0.88719 0.0110	0.82812 0.0030	0.20053 0.0139	0.24693 0.0023	0.89277 0.0003	0.17648 0.0806	0.11898 0.1470	0.89679 0.0002	0.32956 0.0001
ACMMLN	0.10353 0.2074	-0.08627 0.2939	0.63275 0.0001	0.51862 0.0001	0.41244 0.0001	0.11417 0.1642	0.33939 0.0001	0.51895 0.0001	0.90772 0.0001	0.39175 0.0001	0.33176 0.0001	0.26183 0.0001	0.64294 0.0001
ACMMDH	-0.01039 0.8996	-0.15876 0.0523	0.09540 0.2495	0.14126 0.0847	0.11442 0.1632	0.28938 0.0117	0.17991 0.0276	0.3180 0.1026	0.1525 0.0629	0.07723 0.3475	-0.14808 0.79025	0.22797 0.0050	0.19891 0.0168
WVAC	-0.12766 0.7195	0.03592 0.6625	0.35070 0.0001	0.62215 0.0081	0.00526 0.0001	0.06470 0.0001	0.55294 0.0001	0.60277 0.0001	0.58910 0.0001	0.52921 0.0001	0.49099 0.0001	0.59588 0.0001	0.84233 0.0001
CRMMLN	-0.01540 0.8510	0.07740 0.3465	0.83460 0.0001	0.95561 0.0001	0.82087 0.0001	0.89467 0.0001	0.71255 0.0001	0.93640 0.0001	0.86608 0.0001	0.80423 0.0001	0.41233 0.1101	0.83167 0.0001	0.77309 0.0001
CRMKDH	0.16916 0.1836	0.23661 0.0033	0.23339 0.0001	0.25236 0.0010	0.17399 0.0332	0.43268 0.0001	0.22224 0.0003	0.36521 0.0024	0.39846 0.0001	0.11537 0.1598	-0.0001 0.9926	0.88286 0.0003	0.32887 0.0001
CRHMDH	-0.05195 0.5278	0.86520 0.4280	-0.07788 0.3435	-0.12732 0.1208	-0.11034 0.1788	0.09185 0.2636	-0.09015 0.2726	-0.13882 0.0879	-0.02839 0.8044	-0.07669 0.3510	-0.10151 0.2165	-0.13863 0.0883	-0.06937 0.8989
MMHOFD	0.43311 0.0001	0.13361 0.1030	-0.64270 0.0001	-0.75481 0.0001	-0.70319 0.0001	-0.44008 0.0001	-0.69514 0.0001	-0.78724 0.0001	-0.77191 0.0001	-0.51710 0.0001	-0.44469 0.0001	-0.7027 0.006	-0.59553 0.0001
INFLNR	-0.07755 0.1193	-0.01150 0.4569	0.72985 0.0001	0.64121 0.0001	0.69963 0.0001	-0.11227 0.1714	0.53018 0.0001	0.38345 0.0001	0.88653 0.0001	0.55398 0.0001	0.54901 0.0001	0.79359 0.0001	0.51631 0.0001
OSBLNR	-0.08166 0.3192	-0.06120 0.4569	0.37953 0.0001	0.48320 0.0001	0.34633 0.0001	-0.15691 0.0527	-0.33423 0.6775	0.38287 0.0003	0.25546 0.0016	0.35139 0.0001	0.34330 0.0001	0.35341 0.0001	0.38937 0.0001
INFLNR	-0.11526 0.1602	-0.18835 0.0913	0.23635 0.0036	0.16581 0.0418	-0.02660 0.7467	-0.39333 0.0001	-0.12164 0.0257	0.16689 0.0230	-0.20261 0.0129	0.15932 0.0577	0.15296 0.0017	0.16161 0.0482	-0.06992 0.4229
ORLLNR	0.12983 0.1113	0.16614 0.0422	0.86550 0.0004	0.30570 0.0001	0.05468 0.5063	-0.03954 0.6309	-0.81314 0.8732	0.29671 0.0002	0.21398 0.0086	0.08110 0.3239	0.12408 0.1303	0.29913 0.0002	0.20193 0.0132
ACMLNR	0.11563 0.1133	-0.01198 0.8847	0.41388 0.0001	0.48210 0.0001	0.32860 0.0001	0.01114 0.8923	0.27049 0.0008	0.86625 0.0001	0.44349 0.0001	0.38730 0.6001	0.36518 0.0001	0.81504 0.0001	0.50689 0.0001

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	RACMLN	INTNDLN	NBR	ISRL	OBNL	IBRW	OBRW	INPKL	INNDW	PKKL	LBRP	INFL	INFW
CORLWR	-0.09477 0.5056	0.00191 0.9815	0.80773 0.0001	0.22097 0.0001	0.20947 0.0001	0.38381 0.0005	0.67963 0.0001	0.90498 0.0001	0.59981 0.0001	0.63892 0.0001	0.88136 0.0001	0.70706 0.0001	
CORLWR	-0.00204 0.9802	0.04899 0.6017	0.77876 0.0001	0.98153 0.0001	0.77877 0.0001	0.31151 0.0001	0.06983 0.0001	0.38978 0.0001	0.78205 0.0001	0.57454 0.0001	0.58341 0.0001	0.39192 0.0001	0.71749 0.0001
STLLBR	-0.05253 0.5392	-0.10589 0.1972	0.61943 0.0001	0.76932 0.0001	0.76498 0.0001	0.26052 0.0013	0.64172 0.0001	0.76799 0.0001	0.69197 0.0001	0.53425 0.0001	0.58224 0.0001	0.74888 0.0001	0.65139 0.0001
TFLPLR	0.17412 0.0331	-0.07808 0.3122	-0.67008 0.0001	-0.72095 0.0001	-0.61164 0.0001	-0.36883 0.0001	-0.56478 0.0001	-0.73081 0.0001	-0.67255 0.0001	-0.45335 0.0001	-0.48558 0.0001	-0.63029 0.0001	-0.51626 0.0001
INFLWR	-0.08462 0.3032	0.03907 0.7102	0.17638 0.0308	0.25456 0.0017	0.19354 0.0176	0.58562 0.6652	0.17815 0.6331	0.75752 0.0009	0.84728 0.5654	0.30953 0.9096	0.15159 0.6641	0.20336 0.0106	-0.34851 0.0001
LRNFWR	-0.15177 0.1040	0.06428 0.4245	0.70158 0.0001	0.81334 0.0001	0.73169 0.0001	0.46188 0.0001	0.66237 0.0001	0.30518 0.0001	0.38195 0.0001	0.60986 0.0001	0.48589 0.0001	0.78190 0.0001	0.64691 0.0001
	VANGS	VANGB	MINDL	SHIKL	LMNDL	PKLNL	HGMDL	APKAR	APKPS	BSAN	BSFS	SVINS	NSECV
RACMLN	0.08003 0.6268	-0.04775 0.5616	0.51834 0.0078	-0.00277 0.9732	-0.08462 0.1032	0.12878 0.1161	0.19084 0.0193	0.00441 0.9371	0.01195 0.8846	0.36122 0.4567	0.04957 0.5469	0.04419 0.5913	0.02705 0.7424
INTNDLN	0.07706 0.3465	-0.05473 0.5059	0.25822 0.0018	-0.08866 0.2756	-0.17820 0.0291	0.07872 0.3635	0.25363 0.1345	0.11683 0.6531	-0.03790 0.2021	0.10478 0.36560	0.36560 0.04650	-0.00632 0.9389	
NBR	0.15304 0.0615	0.36511 0.0001	-0.22032 0.0067	-0.12735 0.1204	-0.30055 0.0002	-0.47540 0.0001	-0.16523 0.0433	0.31631 0.0001	-0.28880 0.0018	0.33587 0.0001	0.29737 0.0002	0.12648 0.1291	-0.23054 0.0045
ISRL	0.04436 0.5899	0.32377 0.0401	-0.17554 0.0317	-0.19623 0.0161	-0.38106 0.0001	-0.49676 0.0001	-0.10434 0.2039	0.29491 0.0003	-0.28889 0.0005	0.38395 0.0001	0.32696 0.0001	0.07790 0.3434	-0.29340 0.0003
OBRL	0.02088 0.7998	0.26656 0.0023	-0.18473 0.0236	-0.15609 0.0565	-0.30432 0.0002	-0.42942 0.0001	-0.12661 0.1226	0.11869 0.0905	-0.27426 0.0007	0.36077 0.0001	0.32215 0.0001	-0.01786 0.8282	-0.35615 0.0001
IBRW	0.03911 0.6347	0.04151 0.6140	0.01317 0.8729	0.00609 0.9111	-0.18576 0.0228	-0.17114 0.0363	0.01125 0.8914	0.30271 0.0129	-0.15167 0.0639	0.16638 0.0419	0.13189 0.1077	-0.01888 0.8187	-0.18676 0.0221
OBRW	0.00667 0.37.7	0.02660 0.0260	0.0788 0.0788	0.17104 0.1538	-0.27165 0.0008	-0.37121 0.0001	-0.10056 0.2208	0.15595 0.0567	-0.38723 0.0009	0.30757 0.0001	0.25544 0.0016	0.03207 0.6968	-0.31298 0.0001
INPKL	0.07716 0.37.7	0.35901 0.0001	-0.18733 0.0217	-0.16401 0.0449	-0.35740 0.0001	-0.49086 0.0001	-0.12454 0.1289	0.27658 0.0006	-0.27931 0.0005	0.42904 0.0001	0.32895 0.0001	0.07645 0.3525	-0.28609 0.0004
INNDW	0.08208 0.3180	0.27802 0.0006	-0.15725 0.0546	-0.18255 0.0254	-0.39438 0.0001	-0.49546 0.0001	-0.09065 0.2700	0.29066 0.0003	-0.27780 0.0006	0.42457 0.0001	0.34760 0.0001	0.02225 0.02616	-0.35059 0.0001
PKKL	-0.80039 0.9748	0.17694 0.0303	-0.25227 0.0018	-0.17848 0.0289	-0.26007 0.0013	-0.44985 0.0001	-0.17744 0.0298	0.88501 0.0115	-0.22506 0.0036	0.25097 0.0019	0.24926 0.0021	0.06241 0.4460	-0.88403 0.0011
LBRP	0.05941 0.5007	0.14332 0.0802	-0.18829 0.0210	-0.09402 0.2524	-0.1513 0.0062	-0.37518 0.0001	-0.13941 0.0889	0.15354 0.0607	-0.15306 0.0615	0.27821 0.0006	0.27403 0.0007	0.02917 0.7231	-0.16059 0.0496

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

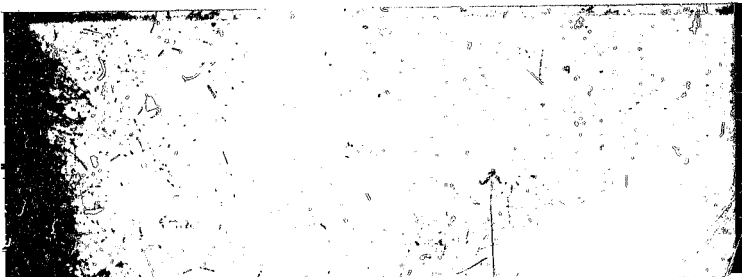
	VANGS	VANGB	NRMOL	SHINL	LMNDR	MLSL	MMNDL	APKAN	APKPS	BSAN	BSFS	SVINS	NSECV
IMFL	0.05183 0.5288	0.3198 0.0001	-0.2134 0.0087	-0.1657 0.0427	-0.3553 0.0001	-0.5096 0.0001	-0.1475 0.0715	0.2778 0.0006	-0.2769 0.0006	0.1858 0.0001	0.3241 0.0001	0.0778 0.3439	-0.3042 0.0002
IKFM	0.03279 0.6904	0.2352 0.0038	-0.1997 0.0142	-0.2234 0.0059	-0.3862 0.0001	-0.5087 0.0001	-0.1170 0.1538	0.3239 0.0001	-0.2576 0.0015	0.0610 0.0001	0.3062 0.0001	0.1828 0.1237	-0.0626 0.0005
VANGS	1.00000 0.0000	0.3065 0.0002	0.09609 0.2421	0.00152 0.9471	-0.08925 0.2775	-0.00260 0.5740	0.08452 0.3038	0.07901 0.3365	0.04259 0.6048	0.17041 0.0371	0.28140 0.0029	0.30961 0.0001	0.12179 0.1376
VANGB	0.30645 0.0068	1.00000 0.0000	0.11999 0.1436	-0.1482 0.0770	-0.31842 0.0001	-0.18195 0.0477	0.14997 0.0670	0.18054 0.0827	-0.14240 0.0001	0.37385 0.0001	0.37378 0.0001	0.01765 0.0075	0.11226 0.1793
NRMOL	0.09609 0.2421	0.11999 0.1436	1.00000 0.0000	-0.20128 0.0135	-0.31080 0.0001	0.68762 0.0001	0.96056 0.0001	0.00280 0.7729	0.18181 0.0001	0.36652 0.0001	0.37060 0.0001	0.00124 0.5800	0.26843 0.0009
SHINL	0.00752 0.9273	-0.1482 0.0770	-0.20128 0.0135	1.00000 0.0000	0.78344 0.0001	0.34814 0.0001	-0.46005 0.0001	-0.35756 0.0001	-0.06035 0.4635	-0.38133 0.0001	0.16539 0.0029	-0.26336 0.0027	0.14613 0.0744
LMNDR	-0.08925 0.2775	-0.31682 0.0001	-0.31080 0.0001	0.78344 0.0001	1.00000 0.0000	0.49413 0.0001	-0.49789 0.0001	0.48628 0.0001	0.09754 0.2350	-0.61067 0.0001	-0.15942 0.0001	-0.24929 0.0001	0.25103 0.0013
MLSL	-0.00260 0.5740	-0.16195 0.0477	0.68762 0.0001	0.34814 0.0001	0.49413 0.0001	1.00000 0.0000	0.48628 0.0001	-0.41527 0.0001	0.09309 0.0003	-0.21186 0.0092	-0.02241 0.7576	-0.17505 0.0322	0.07733 0.0001
MMNDL	0.08452 0.3030	0.14997 0.0670	0.96056 0.0001	-0.46005 0.0001	-0.49789 0.0001	0.48628 0.0001	1.00000 0.0000	0.11153 0.11742	0.18082 0.0268	0.42333 0.0001	0.11188 0.1503	0.06926 0.3997	0.19814 0.0151
APKAN	0.07901 0.3365	0.18054 0.0029	0.00280 0.7729	-0.35756 0.0001	-0.46005 0.0001	-0.41527 0.0001	0.11153 0.11742	1.00000 0.0000	-0.45849 0.0001	0.22584 0.0052	0.01895 0.8952	0.16301 0.0258	-0.18451 0.0443
APKPS	0.04259 0.6048	-0.14240 0.0001	0.14181 0.0250	-0.06035 0.4632	0.09754 0.2350	0.29399 0.0003	0.18082 0.0808	-0.45849 0.0001	1.00000 0.0000	-0.07439 0.3656	-0.08560 0.2977	0.01827 0.8180	0.19321 0.0891
BSAN	0.17041 0.0371	0.37385 0.0001	0.36632 0.0001	-0.32123 0.0001	-0.61067 0.0801	-0.21188 0.0092	0.42333 0.0001	0.22684 0.0052	-0.07439 0.3656	1.00000 0.0000	0.57324 0.0001	0.23353 0.0000	-0.03491 0.5715
BSFS	0.06180 0.37878	0.37378 0.0001	0.17868 0.0001	0.16539 0.0001	-0.10942 0.0513	-0.02941 0.7576	0.11308 0.1683	0.01085 0.0001	-0.08560 0.2977	0.57324 0.0001	1.00000 0.0000	0.06459 0.4161	0.06059 0.5921
SVINS	0.30961 0.0001	0.31786 0.0001	0.00124 0.5800	-0.26336 0.0027	-0.46005 0.0001	-0.41527 0.0001	0.11153 0.11742	0.18082 0.0268	-0.45849 0.0001	0.22584 0.0052	0.01895 0.8952	0.16301 0.0258	-0.18451 0.0443
NSECV	0.12179 0.1376	0.11226 0.1793	0.26843 0.0009	0.14613 0.0744	0.26103 0.0013	0.47733 0.0001	0.19414 0.0151	-0.16851 0.0443	0.13931 0.0891	0.03491 0.5715	0.08559 0.2921	0.21079 0.0096	0.10000 0.0000
PINSEV	0.09539 0.2450	-0.12227 0.1361	0.25187 0.0019	0.00079 0.9675	0.03464 0.6739	0.27355 0.0007	0.22455 0.0058	0.04504 0.5840	0.03225 0.6697	-0.06124 0.8566	-0.06700 0.4734	-0.15334 0.0987	-0.08027 0.02638
PTLLH	-0.05109 0.5346	-0.09372 0.2540	0.17009 0.0292	0.00079 0.9924	0.03464 0.6739	0.27355 0.0007	0.22455 0.0058	-0.01953 0.8123	-0.00634 0.9386	-0.02007 0.8074	-0.07866 0.3387	-0.12710 0.1212	0.00000 0.2411
INTLN	-0.02734 0.7398	-0.07426 0.3665	0.07181 0.0008	-0.09284 0.2585	-0.04168 0.6126	0.19448 0.0171	0.27981 0.0005	0.00987 0.9046	0.00218 0.3174	0.07363 0.3706	0.03719 0.6514	0.01660 0.8402	0.05654 0.4919

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	VANGS	VANGB	MMNDL	SIIRL	LIMDR	MLKL	MMHDL	APKAX	APKPS	BSAN	BSPS	SVINS	NSECV
NFLDR	0.32230 0.7689	0.25187 0.0019	-0.15675 0.0523	-0.17177 0.0356	-0.33157 0.0001	-0.43159 0.0001	-0.09687 0.2383	0.18290 0.0255	-0.20818 0.0105	0.41499 0.0001	0.37998 0.0001	0.08130 0.3227	-0.31274 0.0001
CORLLN	0.00368 0.9644	0.09668 0.2392	0.04247 0.6058	-0.22238 0.0062	-0.28246 0.0028	-0.14971 0.0575	0.09869 0.2296	0.20293 0.0128	-0.06747 0.4128	0.28739 0.0004	0.12938 0.7146	0.13642 0.0560	0.08426 0.7681
CORLWD	-0.36422 0.8349	0.03656 0.6569	-0.00297 0.9712	-0.10604 0.1965	-0.15222 0.0630	-0.13118 0.1096	0.08827 0.7313	0.14355 0.0797	-0.08758 0.2865	0.17037 0.0371	0.14046 0.0865	-0.06136 0.4557	-0.00209 0.8053
CORTWD	-0.17171 0.0356	-0.05834 0.4782	0.08077 0.3258	-0.35422 0.5099	-0.08681 0.2908	-0.00108 0.9690	0.08678 0.2910	0.05279 0.5211	-0.08058 0.3270	0.10490 0.2014	0.10971 0.1814	-0.11957 0.1450	-0.06403 0.4363
HASL	-0.38780 0.2854	-0.16418 0.0001	0.09768 0.2344	0.11472 0.0001	0.42633 0.0001	0.83705 0.0001	-0.00026 0.9773	-0.38363 0.0001	0.35043 0.0001	-0.32618 0.0801	-0.31532 0.0081	-0.09968 0.2249	0.14037 0.0867
PAPMKLN	0.33983 0.6285	0.38689 0.0001	-0.18723 0.6218	-0.22425 0.0058	-0.40482 0.0001	-0.52750 0.0001	-0.10521 0.8001	0.33188 0.0001	-0.30572 0.0001	0.42506 0.0001	0.28028 0.0005	0.07896 0.3313	-0.31577 0.0001
TFLIN	0.03359 0.6832	0.24912 0.0021	-0.20769 0.0108	-0.18612 0.0226	-0.36705 0.0001	-0.51703 0.0001	-0.13367 0.1030	0.30340 0.0002	-0.26582 0.0010	0.39872 0.0001	0.27702 0.6006	0.05707 0.4879	-0.31793 0.0001
DFRS	-0.05781 0.4822	-0.06887 0.6011	0.1131 0.1751	0.23243 0.0042	0.29806 0.0002	0.36374 0.0001	0.02994 0.7161	-0.16333 0.0001	0.08298 0.0008	-0.24981 0.0020	-0.12252 0.1353	-0.05075 0.5374	0.09534 0.2458
STMKLN	0.04324 0.5993	0.29419 0.0017	-0.19578 0.1163	-0.32142 0.0065	-0.41108 0.0001	-0.03733 0.1660	-0.11368 0.0001	0.34563 0.0001	-0.29203 0.0003	0.40845 0.0001	0.25375 0.0018	0.06448 0.4330	-0.35551 0.0001
STMKLQ	0.12873 0.1164	0.09887 0.2287	-0.00014 0.9987	-0.18747 0.0805	-0.22605 0.0054	-0.17377 0.0394	0.04657 0.5750	0.16647 0.0737	-0.07557 0.3590	0.10186 0.2749	-0.05729 0.4662	0.10046 0.2213	-0.08343 0.1701
STBLN	0.04032 0.5571	0.31539 0.0001	-0.18219 0.0057	-0.30338 0.0117	-0.38889 0.0001	-0.43704 0.0001	-0.11303 0.1685	0.31650 0.0001	-0.25191 0.0001	0.31201 0.0001	0.17663 0.0386	0.10707 0.1922	-0.22828 0.0007
STBWD	-0.30586 0.9432	-0.00169 0.9836	-0.06151 0.7938	-0.02735 0.7356	-0.15183 0.0636	-0.15927 0.0517	-0.01044 0.7991	0.29306 0.0032	-0.16846 0.7865	0.13397 0.1022	0.15563 0.0513	0.07401 0.5928	-0.20214 0.0131
AOHKL	0.00134 0.9870	0.11158 0.1743	-0.16537 0.0231	0.09105 0.9898	-0.10964 0.1817	-0.10964 0.1817	-0.10791 0.1587	0.36888 0.8102	-0.10791 0.1587	0.23253 0.0040	0.26215 0.0012	-0.01880 0.8194	-0.18167 0.0639
AOHWD	-0.05834 0.4782	0.10571 0.979	-0.04105 0.6180	0.17283 0.0344	0.27983 0.3315	-0.10964 0.8880	0.08247 0.3157	0.03398 0.8652	-0.36873 0.0677	0.07300 0.3767	0.08059 0.3269	-0.06962 0.3973	0.06763 0.4109
NVPAC	0.00477 0.9538	0.13792 0.6923	-0.15756 0.0542	-0.29133 0.0019	-0.34338 0.0001	-0.43947 0.0001	-0.06542 0.4264	0.32908 0.0007	-0.36873 0.0001	0.20942 0.0101	0.03859 0.6392	-0.04286 0.6025	-0.30292 0.0002
CRMKLN	0.03896 0.6359	0.28188 0.0004	-0.17907 0.0283	-0.29882 0.0017	-0.42249 0.0001	-0.52676 0.0001	-0.08954 0.2758	0.35588 0.0001	-0.30540 0.0001	0.42483 0.0001	0.27599 0.0006	0.09843 0.2308	-0.30295 0.0001
CRHWD	0.08048 0.3276	0.04450 0.5887	0.07288 0.3754	-0.06106 0.4579	-0.21366 0.0067	-0.12886 0.1051	0.08657 0.2922	0.24233 0.0026	-0.10929 0.1872	0.20460 0.0120	0.07522 0.3402	0.05254 0.5231	-0.10312 0.2092
CRHWD	0.10628 0.1955	-0.05929 0.4714	0.17527 0.076	-0.43487 0.6754	-0.01908 0.8167	0.12074 0.1411	0.11514 0.1606	0.03185 0.6988	0.06067 0.9413	0.05029 0.5267	0.11569 0.1586	-0.04988 0.3518	0.06810 0.4076

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	VANGC	VARGC	MMOL	SHML	LMROL	NKML	NKMDL	APKAM	APKPS	BSAN	SPSI	SVINS	NSECV
MMNOFHD	-0.02069 0.0015	-0.27423 0.0007	0.24003 0.0026	0.21163 0.0087	0.33391 0.0001	0.51678 0.0001	0.15811 0.123	-0.28588 0.0004	0.24763 0.0022	-0.30668 0.0001	-0.22819 0.0050	-0.33916 0.0345	0.36038 0.0001
IBLWR	0.00599 0.9400	0.38938 0.0001	-0.21892 0.0083	-0.21056 0.0097	-0.38815 0.0001	-0.48008 0.0001	-0.13597 0.5971	0.22402 0.0058	-0.23122 0.0044	0.37853 0.0001	0.26128 0.0012	0.29247 0.2604	-0.22590 0.0054
OBLWR	0.05268 0.5221	0.19218 0.0185	-0.12354 0.1320	-0.17023 0.0365	-0.16900 0.0387	-0.23467 0.0038	-0.06290 0.4444	0.00418 0.9599	-0.02856 0.7287	0.40571 0.0229	0.18241 0.0059	0.01271 0.8774	-0.12154 0.1385
INVLWR	0.08089 0.9911	0.16334 0.3095	-0.25675 0.4903	-0.01552 0.8509	0.03055 0.7119	-0.22188 0.7904	-0.04601 0.5761	0.02238 0.7433	-0.00947 0.9095	0.08605 0.2416	-0.05965 0.4684	0.02728 0.7904	0.30742 0.0109
CALLWR	0.02837 0.7303	0.04083 0.3255	0.03794 0.6448	-0.16358 0.0455	-0.15679 0.0554	-0.07670 0.3384	0.07741 0.3464	0.11520 0.1404	-0.01909 0.6167	0.16061 0.0210	0.04132 0.6156	0.18609 0.9256	-0.08162 0.6131
ACLWR	0.02593 0.7528	0.04754 0.2608	-0.19432 0.0172	-0.08251 0.3155	-0.15131 0.0546	-0.31103 0.0001	-0.15172 0.0838	0.06317 0.4425	-0.03083 0.7076	0.08263 0.0129	0.24135 0.0029	0.01530 0.8526	-0.21143 0.0094
CORLWR	0.00920 0.9111	0.31206 0.0001	-0.32111 0.0065	-0.23910 0.0032	-0.36989 0.0001	-0.51444 0.0001	-0.13333 0.1038	0.29650 0.0002	-0.29158 0.0002	0.36647 0.0001	0.26542 0.0018	0.08245 0.3100	-0.29090 0.0003
CORLWR	0.00368 0.9624	0.27581 0.0006	-0.21770 0.0074	-0.22550 0.0055	-0.35952 0.0001	-0.51087 0.0001	-0.13035 0.1119	0.30715 0.0001	-0.27539 0.0006	0.36272 0.0001	0.21004 0.0097	0.11961 0.1449	-0.29438 0.0003
STLLBR	-0.05006 0.5430	0.22347 0.0655	-0.24706 0.0076	-0.14454 0.0776	-0.31632 0.0001	-0.48643 0.0001	-0.15487 0.0589	0.29265 0.0003	-0.29809 0.0004	0.38579 0.0001	0.32461 0.0097	0.01257 0.6786	-0.34806 0.0001
TFLLPLR	-0.00301 0.9709	-0.28305 0.0004	0.10082 0.2196	0.23480 0.0038	0.25793 0.0001	0.38318 0.0001	0.02824 0.7316	-0.30025 0.0002	0.38984 0.0001	-0.30999 0.0001	-0.17175 0.0356	-0.07379 0.3698	0.22191 0.0053
INFLMP	0.04248 0.8085	0.09377 0.2537	0.00173 0.9832	0.10929 0.1032	0.08396 0.3870	0.05798 0.4810	-0.05256 0.6925	-0.08971 0.2750	-0.01975 0.8104	-0.01224 0.4818	-0.04943 0.5481	-0.07262 0.3772	0.00254 0.7554
LRNFHR	0.06477 0.8324	0.25032 0.0004	-0.16021 0.0946	-0.28364 0.0077	-0.39368 0.0001	-0.49706 0.0001	-0.07463 0.3460	0.30504 0.0001	-0.29035 0.0021	0.39219 0.0001	0.28117 0.0005	0.07823 0.3473	-0.03247 0.0001
PIHGV		PTLLH	INTLN	NFLOR	CORLLH	CORLWD	CORLWD	HASL	PAPKKN	TFLLN	DFRS	STHMLN	STHMLL
RACHLEN	0.17017 0.0262	0.31604 0.1573	0.13659 0.0557	0.06996 0.9037	0.04963 0.5464	-0.14857 0.0797	0.02295 0.1526	0.04663 0.5110	-0.06419 0.8113	0.01944 0.3478	0.07718 0.9809	-0.01213 0.8609	0.05613 0.9035
INTROLN	0.26079 0.0030	0.05297 0.5197	0.09565 0.2043	0.05517 0.3025	0.10972 0.1814	-0.07913 0.3321	-0.01723 0.8342	-0.03193 0.7062	0.03883 0.6776	0.00446 0.9568	-0.01370 0.8679	0.02988 0.7166	0.21174 0.0093
NSR	-0.23569 0.0037	0.24282 0.0023	-0.03358 0.8833	0.71097 0.0940	0.35000 0.0001	0.14189 0.0833	0.05071 0.5377	-0.69948 0.0201	0.03035 0.0001	0.80331 0.0001	-0.65505 0.0001	0.01566 0.0001	0.43744 0.0001
ISRL	-0.23635 0.8946	0.25078 0.0013	-0.00993 0.9540	0.79406 0.8001	0.30079 0.0001	0.19775 0.0839	0.08003 0.3303	-0.70245 0.0001	0.95990 0.0001	0.92748 0.0001	-0.64156 0.0001	0.94871 0.0001	0.82044 0.0001
OSRL	-0.23668 0.0035	0.22713 0.0052	-0.02933 0.7216	0.77824 0.0001	0.14051 0.0063	0.15541 0.0576	0.09165 0.2647	-0.55631 0.0001	0.82315 0.0001	0.78743 0.0001	-0.42158 0.0001	0.82934 0.0001	0.26115 0.0012



PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	PINSV	PTLLN	INTLIN	NFLOR	CORLLN	CORLWD	CORTWD	NASL	PAPMKLN	TEFLN	DFRS	STKMLN	STKMLD
ISRW	-0.03219 0.6939	0.07691 0.3623	0.05629 0.4938	0.38311 0.0001	0.06467 0.4303	0.19849 0.0160	0.08721 0.2686	-0.13248 0.1061	0.38246 0.0001	0.36944 0.2201	-0.10098 0.0001	0.39621 0.0001	0.23407 0.0039
OSRW	-0.19669 0.0158	0.21147 0.0019	-0.03259 0.6922	0.68562 0.0001	0.07687 0.3898	0.15962 0.0510	0.07671 0.3384	-0.33848 0.0001	0.70657 0.0001	0.67096 0.0001	-0.35394 0.0001	0.71627 0.0001	0.21799 0.0078
IKMKL	-0.26756 0.0023	0.26638 0.0010	-0.03114 0.7052	0.80528 0.0001	0.35883 0.0001	0.13883 0.0902	0.07790 0.3434	-0.69654 0.0001	0.99590 0.0001	0.91853 0.0001	-0.62719 0.0001	0.92056 0.0001	0.42395 0.0001
IKMKH	-0.23161 0.0043	0.17551 0.0327	0.02244 0.7851	0.88374 0.0001	0.28036 0.0005	0.16091 0.0854	0.06834 0.4060	-0.60281 0.0001	0.87011 0.0001	0.85185 0.0011	-0.51441 0.0001	0.86095 0.0001	0.36710 0.0001
PKDL	-0.19222 0.0184	0.22600 0.0054	-0.04039 0.5464	0.56779 0.0001	0.19133 0.0190	0.18255 0.0238	0.04371 0.5950	-0.99841 0.0001	0.61741 0.0001	0.61457 0.0001	-0.57769 0.0001	0.60907 0.0001	0.24651 0.0036
LBWP	-0.21226 0.0091	0.08565 0.2974	0.08016 0.3059	0.51645 0.0001	0.14694 0.0728	0.05197 0.5276	-0.15178 0.0648	-0.51110 0.0001	0.62713 0.0001	0.59254 0.0001	-0.50681 0.0001	0.61105 0.0001	0.20561 0.0116
IKFL	-0.29621 0.0003	0.26962 0.0000	-0.02587 0.7719	0.78207 0.0001	0.18514 0.0001	0.13289 0.0318	-0.37186 0.1050	-0.00001 0.0001	0.94531 0.0001	0.97110 0.0001	-0.39930 0.0001	0.94839 0.0001	0.42197 0.0001
IKFW	-0.28673 0.0004	0.20248 0.0130	0.08686 0.9143	0.77332 0.0011	0.30970 0.0001	0.20468 0.0120	0.08877 0.2911	-0.64996 0.0001	0.78206 0.0001	0.82566 0.8001	-0.57322 0.0001	0.78186 0.0001	0.24339 0.0001
VANGS	0.09539 0.2456	-0.05109 0.5846	-0.02734 0.7398	0.02230 0.7865	0.00368 0.9644	-0.06422 0.4349	-0.17171 0.0756	-0.08780 0.2854	0.53983 0.6265	0.03359 0.8032	-0.05781 0.4822	0.04324 0.5993	0.12873 0.1164
VANGB	-0.13227 0.1361	-0.09372 0.2340	0.07426 0.3665	0.85187 0.0019	0.09668 0.2392	0.03656 0.6569	-0.05834 0.4782	-0.36816 0.0001	0.30627 0.0001	0.28912 0.0021	-0.26187 0.0011	0.25415 0.0017	0.09887 0.2207
IKMDL	0.25187 0.0019	0.17809 0.0252	0.27161 0.0008	-0.19875 0.0523	0.04247 0.5058	-0.00297 0.9712	0.08077 0.3258	0.99768 0.2344	-0.18723 0.0218	-0.28769 0.0108	0.11131 0.1751	-0.19978 0.0163	-0.00014 0.9987
SHIKL	0.00335 0.5675	0.00839 0.9988	-0.09288 0.2585	-0.17177 0.0356	-0.28238 0.0062	-0.10604 0.1965	-0.05422 0.5099	0.31472 0.0001	-0.18612 0.0858	0.28243 0.0226	-0.32182 0.0042	-0.18747 0.0065	0.16747 0.0405
IKMDRL	0.03464 0.6739	0.01887 0.6187	-0.04168 0.6126	-0.33157 0.0001	-0.24246 0.0028	-0.15222 0.0830	-0.08681 0.2908	0.82633 0.0001	-0.40422 0.0001	-0.36705 0.0001	0.29806 0.0002	-0.91108 0.0001	-0.22605 0.0054
IKMLL	0.27355 0.0007	0.16691 0.0386	0.19488 0.0171	-0.43159 0.0001	-0.14971 0.0675	-0.13118 0.1096	-0.00108 0.9896	0.43705 0.0001	-0.52250 0.0001	-0.51703 0.0001	0.02999 0.0001	-0.11368 0.0001	-0.17377 0.0334
IKMDL	0.22445 0.0058	0.19920 0.0517	0.27951 0.0005	-0.09887 0.2393	0.09869 0.2296	0.02827 0.7313	-0.00028 0.2910	-0.10521 0.9973	0.13367 0.2001	0.02999 0.1030	0.02999 0.7121	0.11368 0.1680	0.04651 0.5720
APKAN	0.04505 0.5840	-0.01995 0.8123	0.00987 0.9046	0.18240 0.0295	0.20283 0.0128	0.14355 0.0797	-0.05279 0.5211	-0.36363 0.0001	0.33184 0.0001	0.30398 0.0002	-0.36333 0.0001	0.34563 0.0001	0.14647 0.0737
APKPS	0.03286 0.6997	-0.00634 0.9386	0.08218 0.9174	-0.20848 0.0105	-0.06747 0.4120	-0.08798 0.2865	-0.38058 0.3270	-0.30572 0.0001	0.35083 0.0001	-0.30572 0.0010	0.26582 0.0003	-0.29803 0.0003	-0.07957 0.3580
BSAN	-0.06124 0.4566	-0.02007 0.8074	0.07363 0.3708	0.41499 0.0001	0.98739 0.0004	0.17037 0.0371	0.10490 0.2014	-0.32818 0.0001	0.42586 0.0001	0.39872 0.0001	-0.84981 0.0028	0.48465 0.0001	0.10186 0.2149

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	PINSV	PTLLN	INTLN	NFLOR	CORLLN	CORLND	CORTWO	HASL	PAPMKLN	TFLLN	DFRS	STMKLN	STMKLOL
BSPS	-0.06770 0.4104	-0.07666 0.3387	0.03719 0.0514	0.37998 0.0001	0.12938 0.1145	0.14046 0.0805	0.10971 0.1814	-0.21532 0.0001	0.28024 0.0005	-0.12252 0.0005	0.25575 0.1353	-0.05729 0.0016	-0.05729 0.4862
SVINS	-0.14534 0.0987	-0.12710 0.1212	0.01660 0.2862	0.08130 0.3227	0.13142 0.0960	-0.06136 0.4957	-0.11957 0.11458	-0.39968 0.2249	0.07086 0.313	0.25707 0.4679	-0.35075 0.5374	0.06449 0.4330	0.10046 0.2213
NSECV	-0.08027 0.3208	0.09630 0.2411	0.05654 0.4519	-0.0001 0.0001	0.02428 0.7681	-0.02029 0.8053	-0.06403 0.4363	0.14037 0.0867	-0.31339 0.0001	-0.31793 0.0001	0.19534 0.2458	-0.35551 0.0001	-0.08343 0.3101
PINSV	1.00000 0.0002	-0.32793 0.7384	0.08218 0.3178	-0.23302 0.0001	-0.32721 0.7818	-0.39383 0.5129	0.00312 0.8927	0.23309 0.0002	-0.25309 0.0001	-0.26970 0.0008	0.23595 0.0037	-0.21700 0.0016	-0.00298 0.9711
PTLLN	-0.32793 0.7348	1.00000 0.0000	-0.01777 0.0291	0.32772 0.1194	0.16798 0.0404	-0.01769 0.8299	0.13965 0.0862	-0.26454 0.0011	0.26351 0.0011	0.27270 0.0007	-0.36816 0.0001	0.26316 0.0011	0.00708 0.2593
INTLN	0.00212 0.3178	-0.01777 0.8291	1.00000 0.0000	-0.01131 0.8907	0.07221 0.3799	-0.10857 0.1860	-0.06665 0.4038	0.00534 0.9483	-0.01126 0.8913	0.00817 0.9209	-0.40357 0.7104	0.00354 0.9657	-0.06085 0.4595
NFLOR	-0.23302 0.0041	0.12772 0.1194	-0.01131 0.8907	1.00000 0.0000	0.16417 0.0467	0.06605 0.4220	0.03804 0.6439	-0.53800 0.0001	0.78733 0.8001	0.78053 0.8001	-0.08041 0.8001	0.75393 0.8001	0.21541 0.0001
CORLLN	-0.02721 0.7410	0.16798 0.0400	0.07221 0.3799	0.16417 0.0447	1.00000 0.0000	0.35925 0.0001	0.35729 0.0001	-0.28270 0.0005	0.38645 0.0001	0.38687 0.0001	-0.32659 0.0001	0.30685 0.0001	0.34169 0.0001
CORLND	-0.05383 0.5189	-0.01769 0.8299	-0.10857 0.1860	0.06605 0.4220	0.35925 0.0001	1.00000 0.0000	0.50042 0.0001	-0.02126 0.7963	0.15270 0.6621	0.17227 0.0356	-0.01552 0.8505	0.17514 0.9321	0.10643 0.3949
CORTWO	0.00312 0.9697	0.13966 0.0882	-0.08465 0.4038	0.03804 0.6439	0.35729 0.0001	0.58042 0.0001	1.00000 0.0000	0.62812 0.7327	0.66953 0.5978	0.13978 0.0977	0.00897 0.9038	0.14981 0.0680	0.09040 0.2713
HASL	0.23309 0.0002	-0.26454 0.0011	0.00534 0.9483	-0.03804 0.0001	-0.53800 0.0005	-0.78733 0.7963	0.02812 0.7327	1.00000 0.0000	-0.78272 0.0001	-0.08882 0.0001	0.88821 0.0001	-0.69392 0.0001	-0.32834 0.0001
PAPMKLN	-0.08309 0.0041	0.26351 0.0011	-0.01126 0.8913	0.07221 0.0001	0.16798 0.0404	0.06605 0.0001	0.15270 0.0621	-0.08953 0.3978	0.00000 0.0001	0.00823 0.0000	-0.07552 0.0001	0.06454 0.0001	0.44833 0.0001
TFLLN	-0.26970 0.0008	0.27270 0.0007	0.00817 0.9209	0.78733 0.8001	0.38687 0.0001	0.78227 0.0350	0.13774 0.0977	-0.68002 0.0001	0.94423 0.0001	1.00008 0.0000	-0.61146 0.0001	0.06749 0.9801	0.42086 0.0001
DFRS	0.23595 0.0037	-0.26970 0.0008	-0.03057 0.7104	-0.08041 0.8001	-0.03659 0.0001	-0.01552 0.8505	0.00997 0.9036	0.88821 0.0001	-0.87452 0.0001	-0.61146 0.0001	1.00000 0.0000	-0.82457 0.0001	-0.29769 0.0002
STMKLN	-0.21700 0.0076	0.26316 0.0011	0.00354 0.9657	0.75393 0.8001	0.36866 0.0001	0.17514 0.0321	0.14741 0.0650	-0.89392 0.8001	0.96454 0.0001	0.06749 0.0001	-0.68457 0.0001	1.00000 0.0000	0.45236 0.0001
STMKLOL	-0.00298 0.9711	0.00708 0.2593	-0.06085 0.4595	0.21541 0.0001	0.34169 0.0001	0.10643 0.1948	0.09040 0.2713	-0.32034 0.0001	0.44833 0.0001	-0.42086 0.0001	-0.9749 0.5002	0.46236 0.0001	1.00000 0.0000
STBLN	0.09999 0.0199	0.19097 0.0071	-0.02309 0.7731	0.54473 0.0001	0.28613 0.0004	0.05738 0.4856	0.18726 0.0218	-0.56918 0.0001	0.76064 0.0001	0.79019 0.0001	-0.51695 0.0001	0.79063 0.0001	0.38804 0.0001
STBND	0.08189 0.4939	0.11028 0.1191	-0.02090 0.7998	0.19927 0.0145	0.00567 0.9116	0.26193 0.0012	-0.16660 0.0001	0.34243 0.0416	0.26296 0.0012	0.29217 0.0008	-0.16310 0.0302	0.31049 0.0001	0.21210 0.0092

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	PIHSV	PTLLN	INTLN	NFLGR	CORLLN	CORLWD	CORTWD	NASL	PAPMKLN	TFLLN	DFRS	STMKLN	STMKOL
ACHKLN	-0.33662 0.0001	0.13882 0.0286	0.02356 0.7758	0.00916 0.0001	0.29855 0.0017	0.13122 0.1095	0.15913 0.0518	-0.38653 0.0001	0.51971 0.0001	0.73888 0.0001	-0.28891 0.0003	0.55760 0.0001	0.18717 0.04773
ACHMWD	-0.18399 0.0788	0.12137 0.1390	-0.12079 0.1809	-0.00184 0.9882	0.17886 0.0123	0.12351 0.0001	0.33392 0.0001	-0.03804 0.6882	0.12515 0.1270	0.98453 0.0022	-0.03565 0.6649	0.16925 0.0388	0.09311 0.2669
KVPAC	-0.18352 0.0798	0.17097 0.0365	-0.00895 0.7907	0.47664 0.0001	0.19816 0.0151	0.25713 0.0015	0.09380 0.2536	-0.55245 0.0001	0.66402 0.0001	0.60041 0.0001	-0.55473 0.0001	0.68920 0.0001	0.33160 0.0001
CRMKLN	-0.18168 0.0201	0.86441 0.0010	0.03888 0.6366	0.76214 0.0001	0.35939 0.0001	0.16351 0.0456	0.13331 0.1039	-0.69994 0.0001	0.97198 0.0001	0.98399 0.0001	-0.63528 0.0001	0.97889 0.0001	0.88281 0.0001
CRKMWD	0.08399 0.3069	-0.03277 0.6903	0.06456 0.4325	0.14092 0.0854	0.26079 0.0013	0.43095 0.0007	0.30645 0.0001	-0.10836 0.2037	0.86773 0.0009	0.29307 0.0003	-0.03727 0.0001	0.30587 0.0001	0.31583 0.0001
CRHMWD	0.16744 0.0406	-0.12790 0.1188	0.18927 0.0683	-0.10562 0.1981	0.12282 0.1343	0.35279 0.0001	0.22608 0.0054	0.15797 0.0535	-0.13259 0.1058	-0.15257 0.8523	0.10533 0.1996	-0.11919 0.1463	0.11815 0.1643
INNOFHD	0.19769 0.0153	-0.08389 0.3074	0.08951 0.2760	-0.07871 0.0001	-0.18709 0.0725	-0.17681 0.0304	-0.03858 0.6392	0.52707 0.0001	-0.76218 0.0001	-0.07186 0.0001	0.14865 0.0001	-0.78216 0.0001	-0.28956 0.0003
IBLWR	-0.92493 0.0057	0.24303 0.0027	-0.05890 0.4740	0.64281 0.0001	0.34859 0.0001	0.06944 0.4263	0.02764 0.7371	-0.67897 0.0001	0.83788 0.0001	0.79715 0.0001	-0.63370 0.0001	0.79647 0.0001	0.20106 0.0002
OBILWR	-0.17778 0.0229	0.09286 0.2589	0.02238 0.7858	0.32944 0.0001	0.21158 0.0093	0.09428 0.5973	0.01895 0.8180	-0.92800 0.0001	0.48133 0.0001	0.01597 0.0001	-0.84588 0.0001	0.42088 0.0001	0.55288 0.0082
INVLWR	-0.11829 0.1638	-0.08828 0.0088	-0.09666 0.5462	-0.18986 0.0209	-0.27062 0.0006	-0.02057 0.8021	-0.01225 0.6817	-0.33979 0.0001	0.18495 0.0335	0.18172 0.0260	-0.97798 0.0001	0.15665 0.0556	0.13037 0.1118
CRLLWR	-0.91505 0.8550	0.18347 0.0246	0.13769 0.0929	0.18189 0.0833	0.82099 0.0001	-0.22892 0.0048	0.06951 0.3960	-0.28123 0.8064	0.31451 0.0001	-0.33496 0.0002	0.00001 0.0001	0.29960 0.0003	0.29980 0.0005
ACLWR	-0.28369 0.0004	0.11119 0.1755	0.08956 0.2757	0.83977 0.0003	0.17579 0.0314	-0.02618 0.7504	-0.00848 0.9180	-0.39037 0.0001	0.69891 0.0001	0.68806 0.0801	-0.28880 0.0003	0.81115 0.0001	0.10156 0.2762
CORLWR	-0.29467 0.4038	0.05893 0.0014	0.00876 0.9152	0.76087 0.0007	0.36875 0.0001	0.03291 0.6893	-0.70987 0.6527	-0.70853 0.0001	0.93295 0.0001	0.89217 0.0001	-0.05342 0.0001	0.98738 0.8085	0.38225 0.0001
CORLMWR	-0.23319 0.0041	0.87228 0.0007	-0.62326 0.7776	0.72931 0.0001	0.90118 0.0002	0.01864 0.0209	0.03845 0.7404	-0.88493 0.0001	0.91972 0.0001	0.90069 0.0001	-0.61377 0.0001	0.91982 0.0001	0.37960 0.0001
STLLBR	-0.05280 0.0018	0.24511 0.0025	0.62117 0.7970	0.70510 0.0001	0.18647 0.0223	0.18227 0.0824	-0.97112 0.1277	0.77886 0.0001	0.78568 0.0001	-0.50812 0.0001	0.79702 0.0001	-0.15430 0.0094	
TFLPLR	0.12282 0.0018	-0.23651 0.0036	0.03308 0.6818	-0.55411 0.0001	-0.28828 0.0022	-0.07224 0.7797	0.05742 0.63025	-0.79919 0.0001	-0.57888 0.0001	0.61277 0.0001	-0.67773 0.0001	-0.38063 0.0001	
INFLWR	0.06628 0.5139	0.10595 0.1990	-0.01018 0.9016	-0.03625 0.6599	0.09443 0.2508	-0.07932 0.1386	0.05180 0.7930	0.03023 0.7135	0.81296 0.0089	0.17199 0.0053	-0.00702 0.9320	0.20099 0.0099	0.16268 0.0467
LNFWHR	-0.17264 0.0346	0.11607 0.1572	-0.03213 0.6963	0.70361 0.0001	0.29835 0.0003	0.16580 0.0228	0.10083 0.2195	-0.58138 0.0001	0.80587 0.0001	0.75339 0.0001	-0.89801 0.0001	0.78872 0.0001	0.28118 0.0001

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	STBLH	STBWD	ACHKLN	ACHGWD	NVPC	CRMKLN	CRMGWD	CRMNHD	NVNOFID	IBLNR	GBLNR	INVLNR	CRLLNR
RACMLN	-0.01399 0.8651	0.15211 0.0531	0.10353 0.2074	-0.01039 0.8996	-0.12766 0.1195	-0.01540 0.0518	0.18916 0.1836	-0.05195 0.5278	0.43311 0.0001	-0.07755 0.3456	-0.08186 0.3193	-0.11526 0.1602	0.12953 0.1133
INTRDLN	-0.05442 0.5083	0.15118 0.0648	-0.08627 0.2939	-0.15876 0.0523	0.03592 0.6625	0.07740 0.45	0.23863 0.0033	0.06520 0.0280	0.13364 0.1030	-0.01150 0.8889	-0.06120 0.4569	-0.13835 0.0913	0.16614 0.0422
NBR	0.64956 0.0001	0.33635 0.0001	0.43275 0.0081	0.09540 0.2455	0.55070 0.0001	0.89460 0.0001	0.22359 0.0060	-0.07788 0.3435	-0.64278 0.0001	0.72985 0.0001	0.37953 0.0601	0.27835 0.0036	0.28850 0.6304
IBRL	0.74182 0.0001	0.24788 0.0522	0.81862 0.0001	0.18126 0.0847	0.62315 0.0001	0.95581 0.0001	0.29236 0.0018	-0.12723 0.1208	-0.79481 0.0001	0.64327 0.0001	0.40328 0.0001	0.16641 0.0418	0.30570 0.0960
GBRL	0.65799 0.0001	0.28719 0.0110	0.41944 0.0001	0.11442 0.1638	0.60526 0.0001	0.82687 0.0001	0.17899 0.0332	-0.11036 0.1788	-0.70319 0.0001	0.69863 0.0001	0.34625 0.0001	-0.05680 0.7487	0.05461 0.5063
IBRW	0.30020 0.0002	0.22812 0.0050	0.11617 0.1682	0.26538 0.0117	0.36470 0.0001	0.38457 0.0001	0.43268 0.0001	0.09105 0.5836	-0.48806 0.0001	-0.11227 0.1716	-0.15851 0.0527	-0.39383 0.0001	-0.03954 0.6309
GBRW	0.56988 0.0001	0.80053 0.0139	0.33932 0.0001	0.17391 0.0276	0.55298 0.0001	0.71255 0.0001	0.4724 0.0083	-0.09015 0.2726	0.65914 0.0001	0.53810 0.0001	-0.08303 0.6775	-0.17164 0.0357	-0.01314 0.8732
IMQCL	0.73439 0.0001	0.38693 0.0023	0.51853 0.0001	0.13380 0.1026	0.60277 0.0001	0.93648 0.0001	0.28621 0.0028	-0.13982 0.0879	0.75124 0.0001	0.82145 0.0001	0.39267 0.0001	0.16686 0.0220	0.29671 0.0802
IMQGW	0.69157 0.0001	0.29277 0.0003	0.48378 0.0001	0.15223 0.0629	0.58910 0.0001	0.86602 0.0001	0.39046 0.0001	-0.02939 0.8044	0.77191 0.0001	0.64653 0.0001	0.59545 0.0016	-0.20261 0.0129	0.21898 0.0088
PMKL	0.58123 0.0001	0.17680 0.0300	0.39175 0.0001	0.07723 0.3475	0.52991 0.0001	0.00423 0.0001	0.11537 0.1598	-0.07669 0.3510	-0.51710 0.0001	0.55198 0.0001	0.39139 0.0001	0.15532 0.0577	0.08110 0.3839
LBRP	0.47767 0.0001	0.11890 0.1470	0.33176 0.0001	-0.01088 0.9025	0.49859 0.0001	0.00236 0.0001	-0.00074 0.9928	-0.10151 0.2165	-0.44469 0.0001	0.54981 0.0001	0.34338 0.0001	0.18296 0.0617	0.12808 0.1303
IBFL	0.78241 0.0001	0.29679 0.0802	0.88183 0.0001	0.22797 0.0850	0.59588 0.0001	0.93767 0.0001	0.28280 0.0005	-0.13963 0.0883	0.70295 0.0001	0.79393 0.0001	0.39281 0.0001	0.16141 0.0482	0.29813 0.8002
IMFW	0.66196 0.0007	0.32956 0.0001	0.68294 0.0001	0.14891 0.0168	0.54232 0.0001	0.77309 0.0001	0.32887 0.0007	-0.06937 0.3989	0.59553 0.0001	0.61631 0.0001	0.83037 0.0001	-0.06592 0.8229	0.20193 0.0132
VANGS	0.04832 0.3571	-0.00986 0.9432	0.00130 0.9870	-0.05931 0.4785	0.00877 0.5938	0.03956 0.6359	0.08048 0.3278	-0.02069 0.1955	0.00599 0.8015	0.00599 0.9420	0.05268 0.5221	0.00089 0.9913	0.92337 0.7308
VANBG	0.31539 0.0001	-0.00169 0.9836	0.11952 0.1783	0.10971 0.1979	0.13792 0.0923	0.26388 0.0004	-0.04950 0.5887	-0.05024 0.4714	-0.23423 0.0087	0.39938 0.0001	0.19218 0.0185	0.16804 0.0395	0.80633 0.3255
MINDL	-0.18219 0.0257	-0.82151 0.7930	-0.18537 0.0231	-0.04104 0.6180	-0.15756 0.0542	-0.17907 0.0283	0.07288 0.3754	0.14592 0.0762	0.29403 0.0026	-0.21892 0.0083	-0.12354 0.1320	-0.05475 0.4903	0.03794 0.6444
SHHNL	-0.20538 0.0117	-0.02736 0.7396	0.00105 0.9898	0.17283 0.0384	-0.25133 0.0019	-0.25482 0.0017	-0.05106 0.4579	0.03847 0.6754	0.2110 0.0087	-0.21056 0.0097	-0.17093 0.0305	-0.01552 0.8575	-0.16398 0.0455

PEARSON CORRELATION COEFFICIENTS / PROB > IRI UNDER HQ:HQ=0 / N = 150

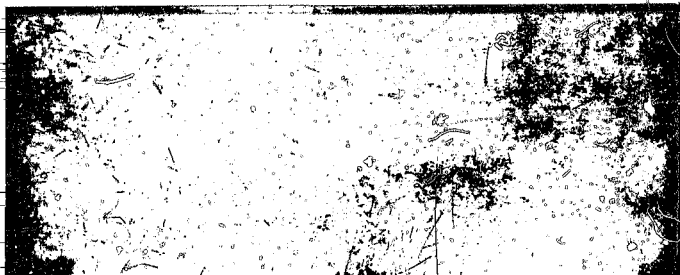
	STBLN	STBWD	ACHKLN	ACHWD	NYPAC	CRKLN	CRKWD	CRHWD	HNNOFHD	BLWR	DBLWR	INVLWR	CRLLWR
LMOBL	-0.13880 0.0001	-0.15185 0.8636	-0.10964 0.1817	0.07993 0.3315	-0.10249 0.0001	-0.42849 0.0001	-0.34338 0.0087	-0.01998 0.6187	0.33391 0.0001	-0.09815 0.0601	-0.16908 0.0307	0.03950 0.7110	-0.15679 0.8554
MXLNL	-0.43704 0.0001	-0.15927 0.0516	-0.28855 0.0003	-0.01159 0.0880	-0.43947 0.0001	-0.52676 0.0001	-0.13286 0.1051	0.12074 0.1411	0.51678 0.0003	-0.49808 0.1397	-0.23467 0.0038	-0.02188 0.7904	-0.07870 0.3384
MOUML	-0.11303 0.1685	-0.02094 0.8091	-0.16608 0.0422	0.08907 0.3197	-0.06542 0.4264	-0.08954 0.2756	0.08657 0.2922	0.11514 0.1606	0.15811 0.0533	-0.13597 0.0971	-0.06290 0.9444	-0.04601 0.5761	0.07781 0.3464
APXAN	0.31550 0.0001	0.23904 0.0836	0.06458 0.4302	0.01398 0.8632	0.18908 0.0001	0.35654 0.0001	0.24833 0.0004	0.03185 0.4900	-0.28548 0.0004	0.22652 0.0014	0.00914 0.5909	0.32258 0.7039	0.11520 0.1684
APXFS	-0.25491 0.0016	-0.10346 0.1865	-0.10791 0.1887	-0.19059 0.0077	-0.36873 0.0081	-0.38530 0.0001	-0.10829 0.1872	0.30607 0.9413	0.44763 0.0022	-0.23132 0.8084	-0.02853 0.0047	-0.00947 0.9085	-0.01809 0.8167
BSAN	0.31201 0.0001	0.11397 0.1022	0.23353 0.0040	0.07200 0.3747	0.20942 0.0101	0.42463 0.0001	0.20660 0.0120	0.05209 0.5267	-0.20668 0.0001	0.37053 0.0001	0.16571 0.0229	0.09605 0.9414	0.19861 0.0270
BSPS	0.17663 0.0306	0.15933 0.0515	0.26215 0.0012	0.08059 0.3269	0.03859 0.6392	0.27594 0.0006	0.07522 0.3602	0.11569 0.1586	-0.22819 0.0050	0.28128 0.0012	0.18241 0.0255	-0.09569 0.4684	0.04132 0.6156
SVING	0.18707 0.1522	-0.04401 0.5928	-0.01880 0.8194	-0.06962 0.3973	0.04286 0.6025	0.09843 0.2308	0.09254 0.5231	-0.04984 0.5512	-0.03913 0.6345	0.09247 0.2804	0.01271 0.8774	0.02728 0.7484	0.16609 0.0286
NSECV	-0.27434 0.0007	-0.20212 0.0131	-0.15167 0.0639	-0.06763 0.4109	-0.30292 0.0002	-0.30595 0.0001	-0.18312 0.2092	0.06010 0.4076	0.36038 0.0004	-0.22590 0.0054	-0.12194 0.1385	0.20742 0.0109	0.04162 0.6131
PINSV	-0.18999 0.0199	0.06189 0.4519	-0.31662 0.0001	-0.14399 0.0708	-0.14392 0.0798	-0.18860 0.0201	0.08399 0.3069	0.18784 0.0486	0.19769 0.0153	-0.22493 0.0057	-0.17779 0.0895	-0.11429 0.1638	-0.01505 0.8550
PTLLN	0.81027 0.0071	0.11028 0.1791	0.17882 0.0286	0.12137 0.1350	0.17097 0.6365	0.26541 0.0010	0.03277 0.6906	-0.12790 0.1108	-0.08839 0.3074	0.04303 0.0027	0.09276 0.2589	0.24880 0.0088	0.18347 0.0246
INTLN	0.92309 0.7791	-0.08090 0.7996	0.85356 0.7740	-0.12079 0.1409	-0.00096 0.9907	0.03880 0.6366	0.06456 0.4325	0.18227 0.0683	0.08951 0.8780	-0.09890 0.1789	0.02238 0.7095	-0.04966 0.5402	0.13769 0.0909
HFLOR	0.54733 0.0001	0.19927 0.0145	0.48918 0.0001	-0.00148 0.9832	0.47664 0.0001	0.76214 0.0001	0.14092 0.0854	-0.10562 0.1983	-0.87871 0.0001	0.84831 0.0001	0.32944 0.0001	-0.18996 0.0200	0.17189 0.0833
CORLLN	0.28613 0.0004	0.20567 0.8116	0.25455 0.0017	0.17008 0.0323	0.19816 0.0151	0.38939 0.0001	0.26079 0.0813	0.12282 0.1343	-0.14769 0.0729	0.34859 0.0001	0.21164 0.0093	0.27062 0.0008	0.80599 0.6001
COHLWD	0.05738 0.8056	0.86193 0.0012	0.13722 0.1095	0.32351 0.0001	0.25713 0.8015	0.16351 0.0456	0.43095 0.0087	0.39279 0.0001	-0.17631 0.0304	0.06544 0.8263	0.00028 0.9973	-0.08057 0.0027	-0.22692 0.8048
CORTWD	0.18726 0.0210	0.34243 0.0001	0.15913 0.5518	0.33848 0.0001	0.05360 0.2536	0.15381 0.1039	0.38645 0.0001	0.28608 0.0054	-0.01858 0.6392	0.02764 0.7371	0.07895 0.8180	-0.01225 0.8817	-0.06951 0.3980
HAGL	-0.30918 0.0001	-0.16680 0.0416	-0.34963 0.0001	-0.03304 0.6882	-0.05245 0.0001	-0.69594 0.0001	-0.10486 0.2037	0.15797 0.0535	0.52707 0.0001	-0.67897 0.0081	-0.42809 0.0001	-0.33979 0.0001	-0.28328 0.0044
PAPMKLN	0.76064 0.0001	0.26288 0.0012	0.51971 0.0001	0.12515 0.1270	0.66402 0.0001	0.07190 0.0001	0.26777 0.0009	-0.13259 0.1058	-0.76210 0.0001	0.83780 0.0001	0.42133 0.0001	0.10495 0.0235	0.01981 0.0001

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	STBLN	STBWD	ACMCLN	ACF3ND	NVPAC	CRMKLN	CRHWD	CRHND	CRHND	IBLWR	IBLWR	INVLR	CRLLWR
TFLLN	0.29019 0.0001	0.29217 0.0003	0.78444 0.0001	0.28553 0.0002	0.80091 0.0001	0.94309 0.0001	0.29307 0.0003	-0.15257 0.0023	-0.67105 0.0001	0.70715 0.0001	0.41597 0.0001	0.18132 0.0060	0.29714 0.0002
DFRS	-0.51696 0.0001	-0.14330 0.0002	-0.28991 0.0003	-0.03565 0.0003	-0.55473 0.0001	-0.83528 0.0001	-0.03727 0.0003	0.10533 0.1996	0.41665 0.0001	-0.63370 0.0001	-0.42586 0.0001	-0.41798 0.0001	-0.33996 0.0001
STMKLN	0.79063 0.0001	0.31049 0.0001	0.55740 0.0001	0.16925 0.0384	0.64980 0.0001	0.97880 0.0001	0.30587 0.0001	-0.11919 0.1463	-0.72216 0.0001	0.79847 0.0001	0.42008 0.0001	0.15665 0.0556	0.27909 0.0005
STMKLOL	0.38004 0.0001	0.21018 0.0092	0.14717 0.0723	0.09131 0.2055	0.33160 0.0001	0.46201 0.0001	0.31563 0.0001	0.11415 0.1643	-0.28056 0.0003	0.38185 0.0002	0.15206 0.0632	0.13037 0.1118	0.29300 0.0003
STBLN	1.00000 0.0000	0.23005 0.0046	0.53568 0.0001	0.20781 0.0137	0.54813 0.0001	0.77953 0.0001	0.26200 0.0012	-0.07493 0.3021	-0.55524 0.0001	0.62159 0.0001	0.85312 0.0001	0.11990 0.1452	0.26414 0.0011
STBWD	0.23006 0.0046	1.00000 0.0000	0.18016 0.0274	0.14599 0.0717	0.27180 0.0008	0.29523 0.0002	0.51572 0.0001	0.28156 0.0004	-0.16575 0.0427	0.19587 0.0568	0.03125 0.7092	-0.09198 0.2650	0.05736 0.4057
ACMCLN	0.53565 0.0001	0.18016 0.0274	1.00000 0.0000	0.42710 0.0001	0.23338 0.0001	0.80050 0.0001	0.17891 0.0001	-0.17303 0.16345	-0.26287 0.0005	0.46527 0.0001	0.25160 0.2015	0.10530 0.1980	0.17273 0.0335
ACMWD	0.20781 0.0107	0.14599 0.0747	0.18710 0.0001	0.00008 0.0000	0.18325 0.2066	0.13085 0.1105	0.32401 0.0001	-0.16345 0.0457	-0.01527 0.0328	0.01102 0.8535	-0.13733 0.0938	-0.02758 0.7376	-0.01856 0.8217
NVPAC	0.54813 0.0001	0.27180 0.0068	0.23338 0.0041	0.10325 0.2085	1.00000 0.0000	0.63826 0.0001	0.37721 0.0003	0.40404 0.6230	-0.57485 0.0001	0.47121 0.0001	0.24509 0.0021	0.75311 0.3610	0.52713 0.5213
CRMKLN	0.77053 0.0001	0.29528 0.0002	0.50850 0.0001	0.13085 0.1105	0.63826 0.0001	1.00000 0.0000	0.30238 0.0002	-0.09802 0.2205	-0.73707 0.0001	0.00920 0.0001	0.40321 0.0001	0.10004 0.1504	0.11047 0.0001
CRHWD	0.26200 0.0012	0.51572 0.0001	0.17891 0.0285	0.32401 0.0001	0.31721 0.0001	0.30218 0.0002	1.1 0.0001	0.43080 0.0001	-0.22515 0.0056	0.03347 0.6843	-0.06410 0.3062	-0.32903 0.0048	0.31608 0.8452
CRHND	-0.07493 0.1621	0.23156 0.0044	-0.17303 0.0342	0.16345 0.0457	0.04046 0.6230	-0.09892 0.2285	-0.48088 0.0001	1.08000 0.0000	0.10104 0.2186	-0.19250 0.0103	-0.86742 0.4124	-0.23600 0.0045	-0.08738 0.2677
INVLR	-0.55924 0.0001	-0.16575 0.0427	-0.28247 0.0005	-0.01527 0.0580	-0.57485 0.0001	-0.73707 0.0001	-0.22515 0.0056	0.10104 0.2186	1.00000 0.0000	-0.00041 0.0001	-0.20355 0.0118	0.10873 0.1834	-0.05349 0.5145
IBLWR	0.82155 0.0001	0.15887 0.0548	0.46587 0.0001	0.01102 0.0935	0.47121 0.0001	0.86920 0.0001	0.03347 0.0001	-0.19250 0.0103	-0.58041 0.0001	1.08000 0.0000	0.51852 0.0001	0.39709 0.0001	0.32002 0.0001
OBVLR	0.18312 0.0001	0.83125 0.7042	0.25160 0.0019	-0.13733 0.0938	0.24939 0.0021	0.80321 0.0001	-0.08819 0.3002	-0.06782 0.1126	-0.80035 0.0118	0.51652 0.0001	1.00000 0.0000	0.39809 0.0001	0.21764 0.0075
INVLR	0.11950 0.1452	-0.09158 0.2650	0.10550 0.1908	-0.02758 0.7376	0.07511 0.3610	0.16904 0.0504	-0.22903 0.0040	-0.23060 0.0045	0.10873 0.1854	0.39709 0.0001	0.39809 0.0001	1.00000 0.0000	0.29967 0.0002
CRLLWR	0.26414 0.0011	0.05736 0.4057	0.17273 0.0285	-0.01856 0.8217	0.05277 0.5213	0.31047 0.0001	0.01608 0.8952	-0.00738 0.2077	-0.05349 0.5146	0.32002 0.0001	0.21764 0.0075	0.29967 0.0002	1.00000 0.0000
ACLWR	0.47091 0.0001	0.13411 0.1018	0.68006 0.0001	-0.00510 0.4206	0.00419 0.0122	0.47627 0.0001	0.03725 0.7042	-0.28024 0.0005	-0.29704 0.0002	0.49589 0.0001	0.33888 0.0001	0.12799 0.1166	0.18752 0.0216

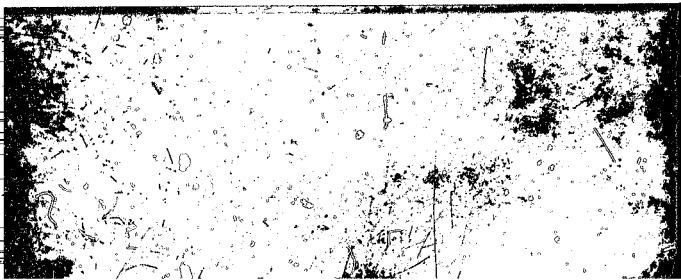
PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	STBLN	STBWD	ACHKLN	ACHQWD	NVPAC	CRMKLN	CRMQWD	CRMKWD	KHNOFHD	IBLWR	GBLWR	INVLWR	GRLLWR
CORLWR	0.73473 0.0001	0.15300 0.0616	0.46805 0.0001	0.02891 0.7254	0.67276 0.0001	0.92059 0.0001	0.00023 0.9978	-0.24177 0.0029	-0.70780 0.0001	0.23728 0.0001	0.45132 0.0001	0.23618 0.0036	0.35889 0.0002
CORLMWR	0.72807 0.0001	0.18746 0.0216	0.38154 0.0001	0.06821 0.4698	0.56445 0.0001	0.93219 0.0001	0.12573 0.1253	-0.43964 0.0001	-0.40014 0.0001	0.30078 0.0001	0.38646 0.0001	0.23659 0.0036	0.38718 0.0081
STLLBR	0.60748 0.0001	0.22939 0.0047	0.50527 0.0001	0.10352 0.2075	0.48914 0.0001	0.77320 0.0001	0.11616 0.1569	-0.21455 0.0084	-0.68882 0.0001	0.69632 0.0001	0.36958 0.0001	0.09965 0.2250	0.10988 0.1807
TFLPLR	-0.49446 0.0001	-0.13456 0.1006	-0.50773 0.9252	0.14653 0.0756	-0.59367 0.0001	-0.73952 0.0001	-0.13677 0.0951	0.06663 0.4180	0.71368 0.0001	-0.33641 0.0001	-0.38227 0.0903	-0.12667 0.1224	-0.23074 0.0045
INFLWR	0.14102 0.0892	-0.09640 0.2406	-0.01597 0.8462	-0.00233 0.9774	0.06288 0.4446	0.21420 0.0085	-0.12323 0.1330	-0.09205 0.2473	-0.14527 0.0761	0.24431 0.0026	0.08236 0.3163	0.39261 0.0001	0.14642 0.0738
LRNFHR	0.61012 0.0001	0.25841 0.0014	0.39340 0.0001	0.08133 0.3225	0.62821 0.0001	0.79691 0.0001	0.33879 0.0001	-0.10026 0.2222	-0.87820 0.0001	0.63205 0.0001	0.23768 0.0034	-0.83951 0.6312	0.19124 0.6191
	ACLWR	CORLWR	CORLMWR	STLLBR	TFLPLR	INFLWR	LRNFHR						
RACHLEN	0.11563 0.1588	-0.05477 0.5056	-0.00204 0.9802	-0.05053 0.5392	0.17812 0.0331	-0.08862 0.3032	-0.13177 0.1080						
INTNDLN	-0.01194 0.0847	0.00191 0.9813	0.04291 0.6011	-0.10589 0.1972	-0.07888 0.3422	0.83789 0.7102	0.06428 0.4345						
NBR	0.41388 0.0001	0.60773 0.0001	0.77876 0.0001	0.61948 0.0001	-0.83808 0.0061	0.17638 0.0208	0.70256 0.0001						
IBRL	0.48210 0.0001	0.92097 0.0001	0.30153 0.0001	0.76932 0.0001	-0.75205 0.0001	0.25456 0.0017	0.81334 0.0001						
GBRL	0.38560 0.0001	0.80947 0.0001	0.77877 0.0001	0.78490 0.0001	-0.68164 0.0801	0.19354 0.0176	0.73168 0.3061						
IBRW	0.01114 0.8923	0.28181 0.0005	0.81151 0.0001	0.36932 0.0013	-0.36982 0.0001	0.33562 0.6652	0.44163 0.3001						
GBRW	0.27045 0.0006	0.67963 0.0001	0.66903 0.0001	0.68172 0.0001	-0.56478 0.0001	0.17415 0.0331	0.68237 0.0001						
INVKL	0.48625 0.0001	0.90408 0.0001	0.88978 0.0001	0.74799 0.0001	-0.73083 0.0001	0.26752 0.0009	0.80918 0.0001						
INQW	0.44349 0.0001	0.79669 0.0001	0.78286 0.0001	0.89197 0.0001	-0.67254 0.0001	0.84720 0.5658	0.82193 0.0001						
PKKL	0.38730 0.0001	0.59981 0.0001	0.57494 0.0001	0.53426 0.0001	-0.48835 0.0001	0.00933 0.3098	0.65056 0.0001						
LBRP	0.36518 0.0001	0.63822 0.0001	0.56441 0.0001	0.54824 0.0001	-0.49350 0.0001	0.15199 0.0881	0.48569 0.0001						



PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	AGLWR	CORLWR	CORLMWR	STLLR	TFLPLR	INFLWR	LRRFMR
INFL	0.61504 0.0001	0.89136 0.0001	0.69192 0.0001	0.76800 0.0001	-0.63025 0.0001	0.20036 0.0140	0.76390 0.0001
INFW	0.99689 0.0001	0.70706 0.0001	0.71749 0.0001	0.9511 0.0001	-0.51628 0.0001	-0.34451 0.0001	0.84891 0.0001
VANGS	0.02593 0.7528	0.00820 0.9117	0.00388 0.9624	-0.05006 0.5430	-0.70381 0.9709	0.04280 0.6065	0.06457 0.4324
VANGB	0.04787 0.5608	0.31206 0.0001	0.27581 0.0006	0.22547 0.0055	-0.28105 0.0804	0.09377 0.2537	0.28532 0.0004
MINDL	-0.19432 0.0172	-0.52111 0.0065	-0.21770 0.0074	-0.21706 0.0076	0.10082 0.2196	0.00173 0.9832	-0.16421 0.0446
SHINL	-0.08251 0.3152	-0.23510 0.0032	-0.22550 0.0055	-0.18454 0.0776	0.23480 0.0030	0.10925 0.1832	-0.25366 0.0017
LHWDR	-0.15131 0.0646	-0.36889 0.0001	-0.35952 0.0001	-0.31632 0.0001	0.35793 0.0001	0.06396 0.3070	-0.39762 0.0001
MGLML	-0.31103 0.0001	-0.51848 0.0001	-0.51087 0.0001	-0.60643 0.0001	0.38318 0.0001	0.05798 0.4810	-0.49708 0.0001
MINDL	-0.15172 0.0638	-0.13333 0.1038	-0.13035 0.1119	-0.15457 0.0589	0.02824 0.7316	-0.03256 0.6925	-0.07663 0.3640
APKAM	0.06117 0.5425	0.29830 0.0002	0.30715 0.0001	0.29265 0.0003	-0.30025 0.0002	-0.08971 0.2750	0.30504 0.0001
APKPS	-0.03088 0.7076	-0.29550 0.0002	-0.27539 0.0006	-0.28609 0.0004	0.30964 0.0001	-0.01975 0.8104	-0.24935 0.0021
BSAH	0.38263 0.6729	0.66647 0.0001	0.06272 0.0001	0.38579 0.0001	-0.30999 0.0001	-0.01224 0.8818	0.99819 0.0001
BSPS	0.28135 0.0029	0.26648 0.5010	0.21044 0.0097	0.38461 0.0001	-0.17175 0.0396	-0.04943 0.5481	0.26177 0.0005
SVINS	0.01530 0.8938	0.08395 0.3100	0.11961 0.1449	0.01257 0.0786	-0.07375 0.3698	-0.07262 0.3712	0.07823 0.3813
NSECV	-0.31182 0.0894	-0.29090 0.0003	-0.29830 0.0002	-0.34088 0.0001	0.26191 0.0003	0.30254 0.9754	-0.33287 0.0001
PIHSV	-0.08369 0.0004	-0.23667 0.0038	-0.93319 0.6041	-0.95280 0.0018	0.12582 0.1250	0.94628 0.5738	-0.17264 0.0346
F/LLH	0.11119 0.1755	0.25893 0.0014	0.27228 0.0007	0.20511 0.0025	-0.23657 0.0836	0.19545 0.1990	0.31607 0.1572
INTLN	0.38956 0.2757	0.08876 0.0152	-0.32326 0.7776	0.02117 0.7970	0.03808 0.6878	-0.01818 0.9018	-0.03213 0.6963

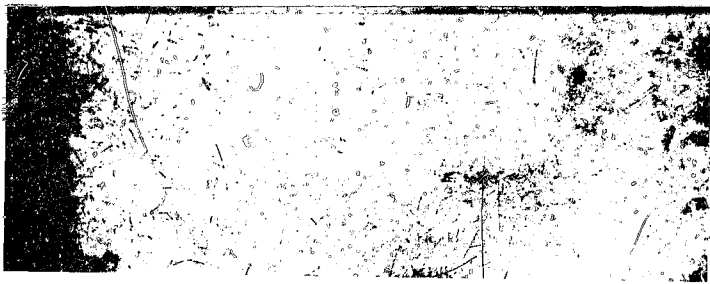


PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	AGLWR	CORLWR	CORLWHR	STLLBR	TFLPR	INFILWR	LRNFHR
NFLOR	0.43977 0.0001	0.76087 0.0001	0.72001 0.0001	0.70510 0.0001	-0.59411 0.0001	-0.03622 0.6599	0.70361 0.0001
CORLLN	0.17579 0.0314	0.30675 0.0001	0.30110 0.0002	0.18647 0.0223	-0.24828 0.0022	0.09443 0.2504	0.29435 0.0003
CORLWD	-0.02616 0.7504	0.53291 0.6893	0.01864 0.8209	0.14227 0.0624	-0.07224 0.3797	-0.07932 0.3346	0.19560 0.0226
CORTWD	-0.00448 0.9180	0.04049 0.6227	0.03445 0.6404	0.12492 0.1277	0.05742 0.4852	0.02160 0.7950	0.10083 0.2195
HABL	-0.35937 0.0001	-0.70637 0.0001	-0.68423 0.0001	-0.57112 0.0001	0.03025 0.0001	0.03023 0.7135	-0.50138 0.0001
PAPPKLN	0.49251 0.0001	0.93899 0.0001	0.91972 0.0001	0.77046 0.0001	-0.79919 0.0001	0.21295 0.0089	0.80547 0.0001
TFLN	0.66306 0.0001	0.59217 0.0001	0.90069 0.0001	0.78568 0.0001	-0.57484 0.0001	0.17199 0.0393	0.75339 0.0001
DPKS	-0.26680 0.0503	-0.05342 0.0001	-0.81377 0.0001	-0.50912 0.0001	0.61677 0.0001	-0.00702 0.9300	-0.46401 0.0001
STKLN	0.51115 0.0001	0.92738 0.0001	0.81922 0.0001	0.79702 0.0001	-0.67773 0.0001	0.90999 0.0099	0.78472 0.0001
STKLOL	0.10156 0.2162	0.58225 0.0001	0.57560 0.0001	-0.15430 0.0594	-0.18063 0.0001	0.16258 0.0467	0.34114 0.0001
STBLN	0.47901 0.0001	0.73473 0.0001	0.72807 0.0001	0.60748 0.0001	-0.49446 0.0001	0.14102 0.0652	0.61012 0.0001
STWD	0.13411 0.1018	0.15300 0.0616	0.18746 0.0216	0.22939 0.0047	0.13456 0.1006	-0.09640 0.2406	0.25841 0.0014
ACNKLN	0.86006 0.0001	0.46845 0.0001	0.52154 0.0001	0.50527 0.0001	-0.00773 0.9252	-0.01597 0.8444	0.39340 0.0001
ACNWD	-0.06510 0.4286	0.02891 0.7254	0.06221 0.4495	0.10352 0.2075	0.14553 0.0756	-0.00233 0.9774	0.08133 0.3225
NVPAC	0.20419 0.0122	0.87276 0.0001	0.86445 0.0001	0.49514 0.0001	-0.59167 0.0001	0.86288 0.4446	0.6421 0.0001
CRNKLN	0.47827 0.0001	0.95059 0.0001	0.93219 0.0001	0.77320 -1.0001	-0.73952 0.0001	0.71420 0.0085	0.79881 0.0001
CRNWD	0.03125 0.7042	0.00023 0.9978	0.12573 0.1253	0.11616 0.1589	-0.13677 0.0951	-0.12323 0.1130	0.33879 0.0001
CRNWD	-0.88024 0.0005	-0.08177 0.0009	-0.43964 0.0001	-0.31456 0.0084	0.06661 0.4180	-0.09505 0.2479	-0.10026 0.2222

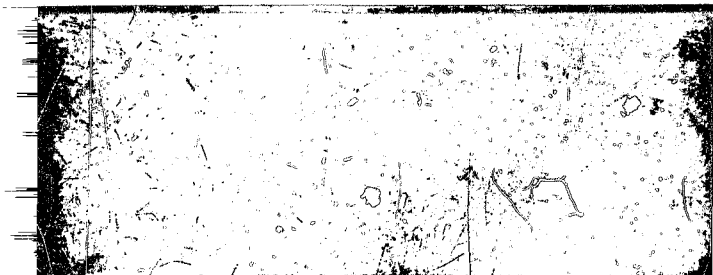
PEARSON CORRELATION COE. 'ENTY / PROP' > 1R1 UNDER HQ:RHO=0 / N = 150

	ACLWR	CORLWR	CORLWVR	STLLBR	TFLPLR	IFPLWR	LRFHVR
IGNOFHD	-0.29704 0.0002	-0.70780 0.0001	-0.69814 0.0001	-0.60782 0.0001	0.71362 0.0001	-0.14527 0.0761	-0.87820 0.0001
IDLWR	0.99589 0.0001	0.83728 0.0001	0.80078 0.0001	0.59812 0.0001	-0.63641 0.0001	0.24431 0.0026	0.63205 0.0001
OBLWR	0.33838 0.0001	0.45132 0.0001	0.38846 0.0001	0.26996 0.0001	-0.29227 0.0063	0.28236 0.3163	0.33768 0.0034
INVLWR	0.12739 0.1186	0.23618 0.0036	0.23659 0.0036	0.09965 0.0250	-0.12567 0.1229	0.39261 0.0001	-0.03951 0.6312
ORLWVR	0.18752 0.0216	0.38889 0.0002	0.30718 0.0001	0.10288 0.1801	-0.23078 0.0045	0.14642 0.0738	0.19128 0.0191
ACLWR	1.00000 0.0000	0.48735 0.0001	0.53236 0.0001	0.49682 0.0001	-0.07378 0.3699	-0.02685 0.7443	0.38026 0.0007
CORLWR	0.48735 0.0001	1.00000 0.0000	0.92638 0.0001	0.77861 0.0001	-0.78058 0.0001	0.26097 0.0013	0.72959 0.0001
CORLWVR	0.53216 0.0001	0.92638 0.0001	1.00000 0.0000	0.76899 0.0001	-0.68861 0.0001	0.23170 0.0043	0.75919 0.0001
STLLBR	0.49838 0.0001	0.77941 0.0001	0.78899 0.0001	1.00000 0.0000	-0.51221 0.0001	0.10568 0.1938	0.61941 0.0001
TFLPLR	-0.07378 0.3699	-0.78954 0.0001	-0.68081 0.0001	-0.51221 0.0001	1.00000 0.0000	-0.17922 0.0282	-0.65000 0.0001
IFPLWR	-0.02685 0.7443	0.26097 0.0013	0.23170 0.0043	0.10568 0.1938	-0.17922 0.0282	1.00000 0.0000	0.17589 0.0013
LRFHVR	0.38826 0.0001	0.72959 0.0001	0.75919 0.0001	0.63941 0.0001	-0.65000 0.0001	0.17589 0.0013	1.00000 0.0000



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H₀:R=0 / N = 150

	RACHLEN	INTNOLN	NBR	IBRL	IBRW	OBRW	INPKL	INPOW	PNKL	LBRP	INFL	INFW
RACHLEN	1.00000 0.0000	0.66001 0.0001	-0.05661 0.49114	-0.08639 0.7485	-0.01413 0.8608	0.06196 0.4513	0.09335 0.7750	-0.02656 0.7470	0.00322 0.0000	-0.00432 0.7122	0.00146 0.5494	0.01754 0.8313
INTNOLN	0.66001 0.0001	1.00000 0.0000	0.02829 0.7311	0.03189 0.7003	0.03641 0.6582	0.12392 0.1308	0.06024 0.4660	0.02125 0.7903	0.00125 0.3220	0.01758 0.6309	0.02709 0.7421	-0.01973 0.0100
NBR	-0.05661 0.49114	0.02829 0.7311	1.00000 0.0000	0.82534 0.0001	0.78715 0.0001	0.32379 0.0001	0.60616 0.0001	0.87356 0.0001	0.00072 0.0001	0.03447 0.0001	0.52991 0.0001	0.95675 0.0001
IBRL	-0.02639 0.7485	0.03189 0.7003	0.82534 0.0001	1.00000 0.0000	0.81966 0.0001	0.39585 0.0001	0.74874 0.0001	0.97342 0.0001	0.98577 0.0001	0.03030 0.0001	0.64207 0.0001	0.94023 0.0001
OBRW	-0.01413 0.8608	0.03641 0.6582	0.78715 0.0001	0.81966 0.0001	1.00000 0.0000	0.33128 0.0001	0.91415 0.0001	0.53747 0.0001	0.79407 0.0001	0.62306 0.0001	0.81612 0.0001	0.96110 0.0001
INPKL	0.06196 0.4513	0.12392 0.1308	0.60616 0.0001	0.87356 0.0001	0.32379 0.0001	1.00000 0.0000	0.40956 0.0001	0.00001 0.0001	0.52987 0.0001	0.14229 0.0001	0.22450 0.0001	0.36608 0.0001
INPOW	0.02656 0.7750	0.06024 0.4660	0.00072 0.0001	0.03447 0.0001	0.52991 0.0001	0.95675 0.0001	0.71253 0.0001	0.56127 0.0001	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001
PNKL	-0.00322 0.7122	0.01758 0.6309	0.00072 0.0001	0.03447 0.0001	0.52991 0.0001	0.95675 0.0001	0.71253 0.0001	0.56127 0.0001	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001
LBRP	-0.00432 0.7470	0.01758 0.6309	0.00072 0.0001	0.03447 0.0001	0.52991 0.0001	0.95675 0.0001	0.71253 0.0001	0.56127 0.0001	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001
INFL	0.00146 0.5494	0.02709 0.7421	0.52991 0.0001	0.95675 0.0001	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001
INFW	0.01754 0.8313	-0.01973 0.0100	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001	0.00001 0.0001	0.68065 0.5421	0.89057 0.0001	0.96007 0.0001	0.00001 0.0001	0.68065 0.5421
VANDS	0.82534 0.7618	0.06080 0.4589	0.16921 0.0474	0.06170 0.4932	0.81496 0.0178	0.33864 0.6367	0.71253 0.0001	0.96552 0.0001	0.95957 0.0001	0.63557 0.0001	0.69017 0.0001	1.00000 0.0000
VANOB	-0.09859 0.8763	-0.04520 0.5529	0.35259 0.0001	0.31728 0.0001	0.22914 0.0048	0.03150 0.7020	0.15662 0.0572	0.14956 0.0001	0.26616 0.0010	0.90959 0.0115	0.19448 0.0165	0.30300 0.0002
HNOL	0.19923 0.0146	0.23882 0.0035	-0.26137 0.0012	-0.17189 0.0573	-0.21164 0.0093	0.00189 0.9817	-0.14791 0.0709	-0.19612 0.0198	-0.17341 0.0338	-0.25037 0.0025	-0.18195 0.0048	-0.22887 0.0063
SHML	0.02633 0.7191	-0.04095 0.6605	-0.10274 0.2109	-0.16471 0.0587	-0.10791 0.1587	0.08071 0.8011	-0.13592 0.0972	-0.13678 0.0991	-0.15666 0.0346	-0.17337 0.0633	-0.15088 0.0523	-0.15274 0.1252



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / N = 150

	RACHLEN	INTNDLN	NBR	INFL	OBRL	IBRW	OBW	INMKL	INMOW	PNKL	LBRP	INFL	INFW
LMDRL	-0.03673 0.5554	-0.12440 0.1293	-0.25327 0.0018	-0.33058 0.0001	-0.1257 0.0042	-0.11799 0.1504	-0.25559 0.0016	-0.31165 0.0001	-0.34276 0.0001	-0.24197 0.0029	-0.25737 0.0015	-0.30703 0.0001	-0.35101 0.0001
MDLKL	0.12467 0.1285	0.10992 0.1806	-0.46423 0.0001	-0.47991 0.0001	-0.42776 0.0071	-0.13701 0.0945	-0.38233 0.0001	-0.46864 0.0001	-0.43802 0.0001	-0.43395 0.0001	-0.38727 0.0001	-0.50138 0.0001	-0.52038 0.0001
MDMDL	0.18244 0.0255	0.22275 0.0061	-0.20513 0.0117	-0.10659 0.1942	-0.14999 0.0570	-0.08081 0.0921	-0.08335 0.1105	-0.13078 0.1108	-0.11252 0.1704	-0.17584 0.0314	-0.13733 0.0933	-0.16511 0.0435	-0.14292 0.0810
APKAN	-0.00790 0.71936	0.07351 0.8713	0.30392 0.0002	0.25938 0.0013	0.16276 0.0466	0.18573 0.0229	0.21265 0.0090	0.25509 0.0016	0.27386 0.0007	0.21068 0.0097	0.18783 0.0213	0.27749 0.0006	0.31374 0.0001
APKPS	0.02952 0.7199	-0.01565 0.8493	-0.00470 0.0120	-0.22721 0.0052	-0.26341 0.0018	-0.15700 0.0550	-0.26387 0.0011	-0.02149 0.0065	-0.71871 0.0033	-0.17381 0.0334	-0.12507 0.1273	-0.23852 0.0033	-0.23556 0.0037
BSAN	0.08063 0.3267	0.10477 0.2020	0.35082 0.0001	0.46018 0.0001	0.35728 0.0081	0.18710 0.0219	0.31486 0.0081	0.44782 0.0001	0.44690 0.0001	0.29319 0.0003	0.38184 0.0001	0.41782 0.0001	0.39535 0.0001
RSPS	0.04270 0.6032	0.04668 0.4161	0.88067 0.0005	0.34168 0.0001	0.31040 0.0001	0.10920 0.1835	0.24216 0.0028	0.33176 0.0001	0.33702 0.0001	0.36419 0.0009	0.27780 0.0000	0.31957 0.0001	0.39988 0.0002
SVIR3	0.01268 0.8776	0.00655 0.9337	0.12247 0.1394	0.08226 0.3170	0.00140 0.0968	0.03654 0.6571	0.04231 0.6072	0.07636 0.5230	0.07755 0.3455	0.12900 0.1154	0.19041 0.0666	0.09067 0.3264	0.07642 0.3992
KSECV	-0.01904 0.0521	-0.00594 0.9328	-0.82891 0.0048	-0.26646 0.0010	-0.33393 0.0001	-0.13211 0.1071	-0.26784 0.0009	-0.26682 0.0013	-0.38732 0.0001	-0.29712 0.0002	-0.18061 0.0270	-0.39386 0.0003	-0.29111 0.0003
PINSV	0.17874 0.0309	0.23600 0.0036	-0.19878 0.0003	-0.25864 0.0014	-0.26419 0.0811	-0.31269 0.0512	-0.22495 0.0056	-0.27733 0.0006	-0.28262 0.0005	-0.18838 0.0210	-0.23776 0.0043	-0.31158 0.0001	-0.30662 0.0002
PTLNM	0.39777 0.3245	0.02256 0.7841	-0.03626 0.0069	0.20449 0.0026	0.27831 0.0007	0.30456 0.3035	0.26296 0.0005	0.28493 0.0025	0.15693 0.0551	0.25982 0.0037	0.19802 0.0927	0.25040 0.0013	0.20506 0.0118
INTLN	0.13050 0.1106	0.07805 0.3425	-0.00659 0.6598	-0.03022 0.7135	-0.32702 0.7427	0.10847 0.1989	-0.01877 0.0197	-0.04806 0.5592	0.03947 0.0315	0.23889 0.7079	0.05347 0.5158	-0.02966 0.7189	0.01246 0.8798
MFLOP	-0.02443 0.7666	0.03077 0.7085	0.71918 0.0001	0.78975 0.0001	0.77122 0.0001	0.31895 0.0001	0.69569 0.0001	0.51028 0.0001	0.87506 0.0001	0.61178 0.0001	0.54335 0.0001	0.78789 0.0001	0.77416 0.0001
CORLLN	0.03104 0.6793	0.08380 0.3080	0.36038 0.0001	0.38669 0.0001	0.16930 0.0384	0.5538 0.0576	0.14916 0.0763	0.37239 0.0001	0.32622 0.0001	0.22819 0.0011	0.15514 0.0580	0.37894 0.0001	0.30049 0.0002
CORLMD	-0.07395 0.3685	-0.01508 0.8546	0.13369 0.1029	0.18481 0.0236	0.19713 0.0072	0.21861 0.0053	0.15075 0.0056	0.14916 0.0685	0.22699 0.0066	0.04093 0.4589	0.04093 0.0425	0.16591 0.0425	0.19220 0.6184
CORLMD	0.01999 0.4081	-0.01162 0.7063	0.92252 0.7035	0.07720 0.3477	0.09700 0.2377	0.07027 0.0727	0.11132 0.1790	0.07108 0.3474	0.05227 0.5955	0.04882 0.1175	-0.13048 0.5005	0.10510 0.5005	0.06797 0.4084
IASL	0.04328 0.4074	-0.07320 0.3738	-0.30794 0.0001	-0.70459 0.0001	-0.47930 0.0007	-0.47027 0.0007	-0.47027 0.0001	-0.63182 0.0001	-0.73325 0.0001	-0.70588 0.0001	-0.59625 0.0001	-0.53381 0.0001	-0.69623 0.0001
PAPKLN	-0.05449 0.4830	0.28070 0.9632	0.80275 0.0001	0.95217 0.0001	0.81693 0.0001	0.31882 0.0001	0.70800 0.0001	0.92822 0.0001	0.98496 0.0001	0.65733 0.0001	0.84661 0.0001	0.93886 0.0001	0.76204 0.0001

SPEARMAN CORRELATION COEFFICIENTS / PRUG > |R| UNDER H0:RHO=0 / N = 150

	RACHLEN	INTDOLN	NBR	IBRL	GBRL	IBRW	GBRW	INMKL	INMKW	PMKL	LBRP	INFL	INFW
TFLLN	-0.00737 0.9096	-0.04609 0.5754	0.79197 0.0001	0.91339 0.0001	0.76542 0.0001	0.32648 0.0001	0.67177 0.0001	0.89994 0.0001	0.89939 0.0001	0.65469 0.0001	0.62522 0.0001	0.96863 0.0001	0.88472 0.0001
FRS	0.06240 0.9496	-0.05255 0.3281	-0.76882 0.0001	-0.72276 0.0001	-0.30122 0.0002	-0.89945 0.0001	-0.56279 0.0001	-0.75379 0.0001	-0.72993 0.0001	-0.51191 0.0001	-0.46768 0.0001	-0.72002 0.0001	-0.34078 0.0001
SHKLN	-0.01599 0.8598	-0.01407 0.6643	0.79584 0.0001	0.83268 0.0001	0.41998 0.0001	0.37686 0.0001	0.71109 0.0001	0.91212 0.0001	0.84273 0.0001	0.64272 0.0001	0.63007 0.0001	0.98550 0.0001	0.77559 0.0001
STKLOL	0.06459 0.4323	-0.18075 0.0269	0.42136 0.0001	0.39639 0.0001	0.44095 0.0030	0.22306 0.0061	0.21902 0.0071	0.39498 0.0061	0.37206 0.0001	0.27410 0.0006	0.24973 0.0021	0.40809 0.0001	0.33107 0.0001
IBLH	-0.02973 0.7546	-0.05573 0.4981	0.68291 0.0001	0.75261 0.0001	0.67399 0.0001	0.29563 0.0002	0.56729 0.0001	0.75976 0.0001	0.72448 0.0001	0.57425 0.0001	0.53126 0.0001	0.81408 0.0001	0.71598 0.0001
IBMD	0.13679 0.6951	0.19948 0.6144	0.24488 0.0001	0.31831 0.0001	0.33803 0.0034	0.06212 0.0001	0.28914 0.0009	0.38000 0.0003	0.40843 0.0001	0.28226 0.0012	0.10364 0.0001	0.34733 0.0001	0.81170 0.0001
IBKLN	0.06001 0.4222	-0.11397 0.1659	0.40822 0.0001	0.50225 0.0001	0.41875 0.0001	0.08577 0.2967	0.31557 0.0001	0.42936 0.0001	0.50038 0.0001	0.37540 0.0001	0.29574 0.0002	0.65030 0.0001	0.65642 0.0001
IBMD	-0.03466 0.6737	-0.16759 0.0404	0.32377 0.1313	0.20398 0.0123	0.11536 0.1627	0.24600 0.0024	0.13279 0.1052	0.17766 0.0296	0.20493 0.0119	0.06566 0.4849	-0.01619 0.0075	0.25561 0.0075	0.21663 0.0078
IBKAC	-0.11946 0.1454	0.01391 0.8658	0.53193 0.0001	0.59419 0.0001	0.60544 0.0001	0.35007 0.0001	0.57575 0.0001	0.57234 0.0001	0.57944 0.0001	0.55147 0.0001	0.53797 0.0001	0.59020 0.0001	0.58522 0.0001
IBKLN	-0.01777 0.8291	0.03943 0.6905	0.80726 0.0001	0.93576 0.0001	0.81848 0.0001	0.35915 0.0001	0.71419 0.0001	0.91746 0.0001	0.84889 0.0001	0.64143 0.0001	0.52859 0.0001	0.93317 0.0001	0.76653 0.0001
IBMD	0.13839 0.0912	0.26018 0.0013	0.22218 0.0063	0.26137 0.0034	0.17380 0.0034	0.46094 0.0001	0.23589 0.0033	0.25223 0.0016	0.36710 0.0001	0.14556 0.0755	0.31957 0.0121	0.28288 0.0005	0.34483 0.0005
IBMD	-0.01292 0.8753	0.06644 0.4319	-0.09297 0.2578	-0.15655 0.0557	-0.14284 0.0812	0.13075 0.1107	-0.09760 0.2348	-0.16305 0.0462	-0.03195 0.7015	-0.06701 0.4152	-0.08332 0.3108	-0.15356 0.0606	-0.09938 0.4704
IBMD	0.89595 0.0001	0.18953 0.0202	-0.61587 0.0001	-0.70180 0.0001	-0.65676 0.0001	-0.32053 0.0001	-0.60845 0.0001	-0.69977 0.0001	-0.70734 0.0001	-0.57257 0.0001	-0.49646 0.0001	-0.65962 0.0001	-0.56515 0.0001
BLMR	-0.07771 0.3945	-0.02235 0.7581	0.79222 0.0001	0.85029 0.0001	0.73989 0.0001	-0.08479 0.3022	0.59568 0.0001	0.82572 0.0001	0.67055 0.0001	0.63221 0.0001	0.59694 0.0001	0.79607 0.0001	0.62364 0.0001
BLMR	-0.09406 0.2523	-0.05992 0.4084	0.38633 0.0001	0.39548 0.0001	0.35096 0.0001	-0.12792 0.1188	0.94861 0.5466	0.39082 0.0002	0.38115 0.0002	0.43816 0.0001	0.40230 0.0001	0.80478 0.0001	0.37795 0.0001
IBLWR	-0.11241 0.1708	-0.13169 0.1082	0.35026 0.0001	0.31526 0.0001	0.16245 0.0850	-0.25034 0.6039	0.94874 0.0001	0.32479 0.0001	-0.03519 0.6570	0.27379 0.0007	0.29578 0.0002	0.26129 0.0002	0.03582 0.6578
IBLWR	0.10995 0.1804	0.14643 0.0754	0.25182 0.0003	0.29786 0.0002	0.67082 0.3991	0.08131 0.6157	0.33035 0.1002	0.30662 0.0012	0.28118 0.1940	0.10665 0.1014	0.13048 0.0002	0.29497 0.0002	0.19796 0.6152
IBLWR	0.09147 0.2656	-0.02283 0.7298	0.40081 0.0001	0.47444 0.0001	0.40512 0.0701	-0.80060 0.9942	0.27690 0.0006	0.47343 0.0001	0.85960 0.0001	0.37748 0.0001	0.35992 0.0001	0.61844 0.0001	0.62219 0.0001

SPERMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

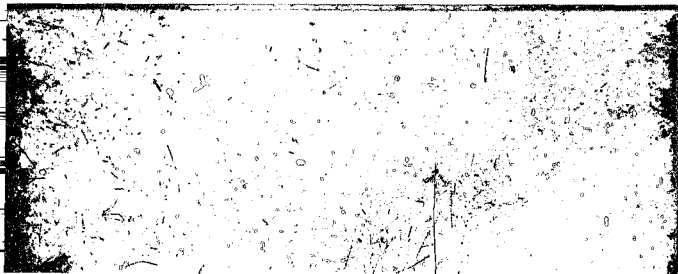
	RACHLR	INTDLM	NBR	IBRL	OBRL	IBRW	OBKW	INMKL	INMKW	LBKP	INFL	INFM
CORLMR	-0.07226 0.3795	-0.06377 0.4382	0.78787 0.0001	0.88885 0.0001	0.79887 0.0001	0.21304 0.0086	0.63561 0.0001	0.86556 0.0001	0.75301 0.0001	0.63975 0.0001	0.68556 0.0001	0.67436 0.0001
CORLMR	-0.00464 0.9550	0.00678 0.9344	0.78466 0.0001	0.86580 0.0001	0.76037 0.0001	0.25924 0.0014	0.66279 0.0001	0.66106 0.0001	0.74656 0.0001	0.50587 0.0001	0.68003 0.0001	0.68215 0.0001
STLLBR	-0.07487 0.3664	-0.10361 0.2070	0.62100 0.0001	0.76182 0.0001	0.76586 0.0001	0.29136 0.0019	0.66824 0.0001	0.73844 0.0081	0.69218 0.0001	0.57889 0.0001	0.69445 0.0001	0.76517 0.0001
TFPLR	0.21033 0.0098	-0.07148 0.3850	-0.58786 0.0001	-0.63971 0.0001	-0.57589 0.0001	-0.27782 0.0006	-0.54299 0.0001	-0.62190 0.0001	-0.58274 0.0001	-0.49188 0.0001	-0.53129 0.0001	-0.51061 0.0001
INFLMR	-0.08187 0.3193	0.00136 0.9875	0.17575 0.0315	0.30357 0.0002	0.31891 0.0037	0.07228 0.3794	0.21197 0.0092	0.38112 0.6002	0.37562 0.3577	0.05227 0.5253	0.16415 0.0281	0.21740 0.0075
LRNFHR	-0.16395 0.0450	0.04337 0.5982	0.89402 0.0001	0.66781 0.0001	0.75122 0.0001	0.39363 0.0001	0.71243 0.0001	0.80504 0.0001	0.82674 0.0001	0.87872 0.0001	0.95829 0.0001	0.77633 0.0001
	VANGS	VANGS	HMNDL	SHIRL	LMNDL	KMLNL	HMNDL	APKAN	APKPS	BSAR	BSPS	SVINS
RACHLR	0.02502 0.7612	-0.05859 0.4763	0.19923 0.0145	0.02633 0.7451	-0.83673 0.6554	0.12467 0.1285	0.18244 0.0255	-0.08790 0.9936	0.82952 0.7199	0.88563 0.3267	0.08278 0.6032	-0.01504 0.8551
INTDLM	0.06049 0.5621	-0.04525 0.5878	0.23682 0.0035	-0.38005 0.6265	-0.12840 0.1293	0.10952 0.1806	0.28275 0.6061	0.07351 0.3713	-0.01565 0.8493	0.18477 0.2020	0.06680 0.4161	0.06695 0.9357
NBR	0.16281 0.0878	0.35253 0.0001	-0.26137 0.0012	-0.10274 0.5109	-0.25327 0.0010	-0.56423 0.0001	-0.20533 0.0117	0.38392 0.0002	-0.00870 0.9128	0.35082 0.0001	0.38667 0.0005	0.12287 0.1354
IBRL	0.06170 0.4532	0.31728 0.0001	-0.17839 0.6323	-0.19471 0.6287	-0.33668 0.0001	-0.47901 0.0001	-0.10655 0.1942	0.25038 0.0013	-0.82771 0.9052	0.46018 0.0001	0.34168 0.0001	0.08226 0.3170
OBRL	0.01896 0.8178	0.22914 0.0048	-0.21164 0.0093	-0.19791 0.1807	-0.23257 0.0042	-0.41576 0.0001	-0.14988 0.0670	0.18276 0.0460	-0.25381 0.0018	0.25728 0.0001	0.31838 0.0001	0.00180 0.9884
IBRW	0.03864 0.6387	0.03150 0.7020	0.00189 0.9817	0.02079 0.8011	-0.11729 0.1504	-0.13701 0.0945	-0.00081 0.9921	0.18573 0.0229	-0.15700 0.0550	0.18710 0.0219	0.18920 0.1035	0.03654 0.6571
OBKW	-0.01322 0.8784	0.15562 0.0512	-0.14791 0.0769	-0.13592 0.0972	-0.25559 0.0016	-0.38233 0.0001	-0.08335 0.3105	0.21265 0.0090	-0.26307 0.0011	0.31406 0.0001	0.28216 0.0028	0.04231 0.6072
INMKL	0.08820 0.3167	0.34956 0.0001	-0.19612 0.6158	-0.16678 0.0951	-0.37165 0.0001	-0.46464 0.0001	-0.13074 0.1108	0.25989 0.0016	-0.22189 0.0085	0.44782 0.0001	0.38178 0.0001	0.07636 0.3530
INMKW	0.09789 0.2334	0.26618 0.0010	-0.17341 0.6338	-0.19666 0.0356	-0.34276 0.0001	-0.47802 0.0001	-0.11252 0.1704	0.87386 0.0007	-0.23871 0.0033	0.44690 0.0001	0.33702 0.0001	0.07759 0.3455
PKWL	0.00309 0.9701	0.20595 0.0115	-0.25037 0.0020	-0.11337 0.0338	-0.24197 0.0628	-0.45195 0.0001	-0.11584 0.0314	0.31068 0.0097	-0.17381 0.8334	0.29319 0.0001	0.26819 0.0009	0.12908 0.1154
LBKP	0.01910 0.6165	0.19548 0.0165	-0.18455 0.0235	-0.15088 0.0953	-0.25737 0.0001	-0.36727 0.0001	-0.18753 0.0933	0.18783 0.0813	-0.12507 0.1273	0.35384 0.0001	0.27700 0.0001	0.15081 0.6662

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	VANGS	VANGB	HMNDL	SHML	LMNDL	NKML	MDMDL	APKAN	APKPS	BSAN	SSPS	SVINS	NSECV
INCL	0.07237 0.3788	0.30300 0.0002	-0.82887 0.0048	-0.12574 0.1252	-0.30793 0.0001	-0.59138 0.0001	-0.16511 0.0435	0.27740 0.0006	-0.98862 0.0033	0.41782 0.0001	0.31937 0.0001	0.08067 0.3264	-0.29566 0.0003
IRNV	0.04746 0.5641	0.22478 0.0057	-0.22217 0.0058	-0.18630 0.8224	-0.35101 0.0001	-0.52033 0.0001	-0.14292 0.0810	0.31774 0.0001	-0.35556 0.0037	0.39535 0.0001	0.20187 0.0082	0.07649 0.2582	-0.29111 0.0003
VANGS	1.00000 0.0000	0.30373 0.0002	0.11886 0.1582	-0.06784 0.0095	-0.12340 0.1325	-0.91362 0.8878	0.11247 0.1706	0.06172 0.3202	0.09931 0.2266	0.22809 0.0061	0.20136 0.0005	0.30649 0.0001	0.19686 0.1931
VANGB	0.30373 0.0002	1.00000 0.0000	0.10332 0.2003	-0.13743 0.0935	-0.25985 0.0013	-0.13513 0.0992	0.11599 0.1575	0.16208 0.0475	-0.10916 0.1836	0.17418 0.0001	0.30437 0.0001	0.22688 0.0001	0.11205 0.1722
HMNDL	0.11886 0.1582	0.10332 0.2003	1.00000 0.0000	-0.22438 0.0058	-0.31220 0.0001	0.07228 0.0001	0.25497 0.8001	-0.02101 0.2386	0.13882 0.0902	0.32013 0.0001	0.13753 0.0933	0.08683 0.5693	0.29657 0.0002
SHML	-0.06784 0.0095	-0.13743 0.0935	-0.22438 0.0058	1.00000 0.0000	0.79908 0.0001	0.28461 0.0004	-0.47118 0.0001	-0.36854 0.0001	-0.07193 0.3817	-0.32408 0.0001	0.18267 0.8182	-0.30753 0.0001	0.16081 0.0493
LMNDL	-0.12340 0.1325	-0.25985 0.0013	-0.31220 0.0001	0.79908 0.0001	1.00000 0.0000	0.41849 0.0001	-0.49771 0.0001	-0.52985 0.0001	0.09868 0.2308	-0.61292 0.0001	-0.06556 0.4254	-0.06616 0.0818	0.23934 0.0032
NKML	-0.01162 0.0572	-0.13513 0.0992	0.07222 0.0081	0.28461 0.0001	0.41849 0.0001	1.00000 0.0000	0.52350 0.0001	-0.43171 0.0002	0.25622 0.0087	-0.21361 0.0087	-0.02286 0.7850	-0.17422 0.0330	0.48060 0.0003
MDMDL	0.11247 0.1706	0.15759 0.0001	-0.09787 0.0001	-0.47113 0.0001	-0.39771 0.0001	0.52350 0.0001	1.00000 0.0000	0.07812 0.3420	0.14295 0.0810	0.36981 0.0001	0.35335 0.5167	0.13071 0.1109	0.22317 0.0060
APKAN	0.06172 0.3202	0.09931 0.0475	-0.02101 0.7986	-0.36054 0.0001	-0.52985 0.0001	-0.43171 0.0001	0.07832 0.3420	1.00000 0.0000	-0.47743 0.0000	0.24308 0.0001	-0.00067 0.0027	0.10533 0.0432	-0.17880 0.0304
APKPS	0.09931 0.2266	0.22809 0.0061	0.10332 0.1586	0.09359 0.0902	-0.02598 0.2883	0.29622 0.0002	0.15293 0.0410	-0.47283 0.0000	1.00000 0.0000	-0.04133 0.6155	0.57047 0.6899	0.03284 0.0001	0.01628 0.0000
BSAN	0.02304 0.0001	0.30437 0.0001	0.10332 0.0001	-0.32406 0.0001	-0.61992 0.0001	-0.31201 0.0001	0.36321 0.0001	0.24306 0.0027	-0.04133 0.6155	1.00000 0.0000	0.57047 0.0001	0.27098 0.0000	-0.03084 0.0000
SSPS	0.22136 0.0065	0.30437 0.0001	0.10332 0.0933	0.19667 0.0182	-0.36556 0.0234	-0.02246 0.7050	0.05335 0.5167	-0.02047 0.8037	-0.03284 0.6899	0.57047 0.0001	1.00000 0.0000	0.03156 0.7014	0.07689 0.3493
SVINS	0.08067 0.3264	0.20187 0.0082	0.08683 0.5693	-0.39753 0.0001	-0.26616 0.0010	-0.17422 0.0330	0.13071 0.1109	0.15233 0.0432	0.01628 0.0432	0.07098 0.0008	0.03756 0.7014	1.00000 0.0000	0.24083 0.0030
NSECV	0.10686 0.1931	0.11205 0.1722	0.29657 0.0002	0.16081 0.0493	0.30373 0.0032	0.48860 0.0001	0.22317 0.0060	-0.17890 0.0304	0.10825 0.2222	0.03988 0.4284	0.07659 0.3493	0.04083 0.0086	1.08888 0.0000
PINRV	0.06074 0.4503	-0.13388 0.1029	0.29887 0.0002	0.01177 0.8663	0.83278 0.6905	0.86567 0.0001	0.27408 0.5007	-0.80733 0.3086	0.95946 0.4898	-0.10091 0.2198	-0.09263 0.5276	-0.18850 0.0202	-0.06105 0.4540
PTLLN	-0.05112 0.3348	-0.08687 0.3133	0.16765 0.0405	0.01658 0.8407	0.03011 0.7143	0.18313 0.02849	0.15282 0.0619	-0.03380 0.6893	0.00082 0.3070	-0.31537 0.6919	-0.06681 0.8222	-0.10586 0.1994	0.09558 0.2257
HTLLN	-0.00925 0.8268	-0.07729 0.3472	0.22756 0.0051	-0.08795 0.2846	-0.38238 0.3172	0.17794 0.0294	0.23776 0.0024	-0.02128 0.7961	0.09927 0.2208	0.08654 0.2924	0.04578 0.0001	0.02845 0.7031	0.92698 0.7463

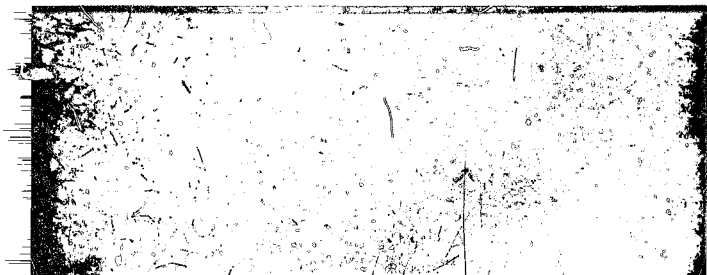
SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	VANGS	VANGB	MMDL	SHILL	LINDRL	MLNLL	NMMDL	APXAN	APKPS	BSAN	BSPS	SVINS	NSCVC
HFLLR	0.03414 0.6703	0.24134 0.0029	-0.16629 0.0395	-0.17762 0.0297	-0.29755 0.0002	-0.44996 0.0001	-0.10615 0.1961	0.19804 0.0151	-0.19834 0.6196	0.04293 0.0001	0.16059 0.0001	0.85906 0.0001	-0.30781 0.0001
CORLLN	-0.00638 0.9382	0.07764 0.3450	0.04112 0.5987	-0.18691 0.0220	-0.30731 0.0709	-0.13654 0.0957	0.10560 0.1984	0.16166 0.0461	-0.94796 0.5660	0.19611 0.0162	0.10771 0.1896	0.18099 0.1154	-0.01582 0.8476
CORLMD	-0.36804 0.1408	-0.03034 0.7125	-0.08219 0.9786	-0.04868 0.5542	-0.09159 0.2676	-0.14115 0.0849	0.01975 0.8104	0.15213 0.0631	-0.11249 0.1705	0.07162 0.3838	0.09607 0.8222	-0.02520 0.7595	-0.06188 0.4319
CORLMD	-0.51302 0.0089	-0.09947 0.5979	0.08022 0.3587	0.01690 0.8104	-0.05201 0.5273	0.02187 0.7990	0.09177 0.3640	0.06587 0.4532	-0.09372 0.2580	0.03264 0.4917	0.10956 0.1820	-0.10597 0.1468	-0.06653 0.4488
HASL	-0.22371 0.0059	-0.33504 0.0031	0.10779 0.1692	0.28769 0.0022	0.35112 0.0007	0.38370 0.0001	0.03566 0.6649	-0.29990 0.0002	0.09390 0.0004	-0.38422 0.0001	-0.25625 0.0011	-0.15766 0.0040	0.20906 0.0123
PAPKMLN	0.05580 0.4909	0.1030 0.0001	-0.19907 0.0146	-0.19929 0.0515	-0.19095 0.0001	-0.80727 0.0001	-0.12372 0.1315	0.27993 0.0005	-0.33139 0.0044	0.44693 0.0001	0.30575 0.0001	0.09283 0.2606	-0.08575 0.0010
TFLN	0.34029 0.3402	0.28999 0.0886	-0.23568 0.0037	-0.14363 0.0795	-0.13123 0.0801	-0.51682 0.0001	-0.14611 0.0441	0.29733 0.0002	-0.22004 0.0068	0.41123 0.0001	0.20827 0.0003	0.06101 0.8324	-0.31077 0.8001
GRFS	-0.21149 0.0044	-0.34266 0.0001	0.10223 0.2132	0.17568 0.0316	0.32803 0.0001	0.33198 0.0001	0.05580 0.4973	-0.34623 0.0001	0.25243 0.0018	-0.37689 0.0007	-0.28087 0.0005	-0.12941 0.7145	0.12200 0.1370
STOKLN	0.05279 0.5212	0.03971 0.0037	-0.20399 0.0123	-0.17226 0.8350	-0.36930 0.8001	-0.52987 0.0001	-0.12595 0.1246	0.32880 0.0001	-0.24508 0.0025	0.42658 0.0001	0.26777 0.0089	0.06786 0.4093	-0.33823 0.0001
STOKLOL	0.12556 0.0981	0.03072 0.7090	-0.01884 0.8570	-0.16080 0.0493	-0.00500 0.0103	-0.17081 0.0368	0.03923 0.8311	0.10152 0.2164	-0.05902 0.4731	0.06781 0.4996	-0.10709 0.1921	0.06032 0.3285	-0.06502 0.3009
STBLN	0.36398 0.4387	0.32645 0.0001	-0.17955 0.0079	-0.20943 0.0101	-0.34464 0.0001	-0.18666 0.0001	-0.09588 0.5917	0.52515 0.0001	-0.23456 0.0039	0.56248 0.0001	0.19756 0.0194	0.12601 0.1204	-0.07836 0.0006
STBMD	0.08998 0.4659	-0.05878 0.4749	0.02168 0.7923	-0.09202 0.7245	-0.15531 0.0577	-0.15183 0.0638	0.03775 0.0465	0.27389 0.0807	-0.13698 0.1112	0.12357 0.1319	0.11754 0.1520	0.02040 0.7707	-0.21356 0.0087
ACKMLN	-0.02013 0.8068	0.08418 0.3060	-0.21181 0.0093	0.00158 0.9847	-0.12666 0.1225	-0.31480 0.0001	-0.18529 0.0232	0.13111 0.1098	-0.13438 0.1011	0.19963 0.0143	0.25679 0.0015	-0.05875 0.4750	-0.20442 0.0121
ACKMDH	-0.01397 0.8653	0.12356 0.1320	-0.06874 0.4932	0.13551 0.0230	0.36083 0.4598	-0.04404 0.5926	-0.11582 0.1603	0.08204 0.3183	-0.21730 0.0076	0.02896 0.7612	0.06879 0.4029	0.00064 0.9938	0.05343 0.5161
NPAC	0.30303 0.5706	0.11694 0.1573	-0.16925 0.0204	-0.22495 0.0057	-0.31910 0.0081	-0.43895 0.0001	-0.09714 0.2370	0.31795 0.0001	-0.34392 0.0001	0.30838 0.0111	0.03303 0.6882	0.07052 0.3905	-0.28699 0.0003
CRPHLN	0.04565 0.5797	0.28260 0.0005	-0.17802 0.0293	-0.21292 0.0089	-0.38809 0.0007	-0.51122 0.0001	-0.09016 0.2726	0.33176 0.0001	-0.24966 0.0029	0.49054 0.6001	0.39102 0.0803	0.10764 0.1898	-0.28126 0.0005
CRPHMD	0.06759 0.4118	-0.06741 0.4124	0.07021 0.8932	-0.04083 0.6199	-0.19106 0.0192	-0.13476 0.1001	0.07346 0.3717	-0.25039 0.0020	-0.10931 0.1830	0.08835 0.0121	0.04460 0.5078	0.06835 0.9059	-0.13407 0.1019
CRPHMD	0.06746 0.2889	-0.38366 0.3088	0.13581 0.0975	0.08563 0.2972	0.02691 0.7447	0.11197 0.1725	0.08878 0.2800	0.31148 0.8893	-0.20779 0.3284	0.04319 0.5908	0.09098 0.2783	-0.05406 0.5112	0.06660 0.4181



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	VANG5	VANG8	MMIDL	SHINL	LSMDL	MXLRL	NMDL	APKAN	APKPS	BSAN	BS'S	SVINS	NSECY
MNNOFND	-0.03805	-0.28817	0.25179	0.25020	0.32730	0.50241	0.15830	-0.26163	0.20429	-0.27075	-0.16562	-0.05864	0.28387
	0.0271	0.0009	0.0019	0.0005	0.0001	0.0001	0.0250	0.0012	0.0122	0.0005	0.04828	0.4760	0.0004
ISLMR	0.08845	0.31758	-0.22639	-0.19204	-0.29273	-0.18548	-0.18714	0.08996	-0.17648	0.37888	0.56337	0.09341	-0.20337
	0.6750	0.0001	0.0051	0.0183	0.0003	0.0001	0.0724	0.0099	0.0308	0.0001	0.0011	0.2455	0.0186
OBLMR	0.09061	0.24630	-0.10826	-0.17649	-0.18923	-0.23025	-0.05020	0.04578	0.04046	0.03559	0.18359	0.00330	-0.13500
	0.2701	0.0024	0.1873	0.0307	0.0204	0.0046	0.5418	0.5785	0.3955	0.0053	0.0230	0.9680	0.0995
IRVLNR	-0.01379	0.22509	-0.04823	-0.07542	-0.07530	-0.07292	-0.02697	0.09885	-0.05109	0.10916	0.00883	0.11619	0.10907
	0.8670	0.0054	0.5570	0.3590	0.3598	0.3752	0.7432	0.2880	0.5002	0.1836	0.9146	0.1568	0.1840
CLLMLR	0.04083	0.08841	0.04472	-0.14889	-0.15516	-0.06253	0.09004	0.06340	-0.00226	0.15307	0.06119	0.12990	0.03274
	0.6190	0.2820	0.5869	0.0690	0.0580	0.9471	0.2732	0.3103	0.9105	0.0615	0.4569	0.1131	0.8909
ACLMLR	0.02123	0.05096	-0.31023	-0.08567	-0.16667	-0.33143	-0.16082	0.10698	-0.33597	0.19829	0.23089	-0.03352	-0.25771
	0.7965	0.3357	0.0096	0.2973	0.0415	0.0001	0.0493	0.1926	0.6821	0.0150	0.0045	0.0139	0.0015
CORLMR	0.01611	0.18289	-0.21645	-0.22804	-0.33067	-0.49788	-0.12533	0.27678	-0.24097	0.09091	0.07836	0.11468	-0.26631
	0.0448	0.0001	0.8078	0.0068	0.0001	0.0001	0.1265	0.0006	0.0010	0.0001	0.0006	0.1683	0.0010
CORLMHR	0.30659	0.27787	-0.23029	-0.20593	-0.32779	-0.48074	-0.13034	0.03388	-0.21020	0.06056	0.00253	0.13044	-0.27366
	0.9362	0.0803	0.0046	0.0115	0.0001	0.0001	0.0914	0.0004	0.0090	0.0001	0.0129	0.1116	0.0007
STLLBR	-0.00082	0.23039	-0.24183	-0.11836	-0.38314	-0.49282	-0.17971	0.33073	-0.29703	0.37915	0.32510	0.00515	-0.33303
	0.5199	0.0039	0.0029	0.1635	0.0004	0.0001	0.0278	0.0001	0.0002	0.0001	0.0001	0.5832	0.0001
THPLMR	-0.03271	-0.30767	0.09704	0.25253	0.38176	0.35098	0.01635	-0.28518	-0.28772	-0.33593	-0.10023	-0.11821	0.12666
	0.6911	0.0001	0.5374	0.0038	0.0001	0.0001	0.8605	0.0004	0.0051	0.0001	0.0684	0.1187	0.1056
IMFLMR	0.03097	0.11328	0.00609	0.09483	0.06078	0.04657	-0.01814	-0.06298	-0.02284	0.02153	-0.00563	0.01181	-0.00636
	0.7067	0.1677	0.9811	0.2504	0.4600	0.5715	0.3636	0.4839	0.2871	0.7937	0.9435	0.8868	0.9192
LINFHR	0.05224	0.23558	-0.20879	-0.23816	-0.36388	-0.50896	-0.12194	0.30728	-0.21902	0.35507	0.23722	0.05085	-0.32246
	0.5820	0.0008	0.0103	0.0033	0.0001	0.0001	0.1371	0.0001	0.0071	0.0001	0.0035	0.2688	0.0001
PINSV	PTLLN	INTLN	NFLOR	CORLLN	CORLMD	CORTMD	HASL	PAPKLN	TFLLN	DFRS	STMKLN	STMKLMD	
RACHLEN	0.17674	0.09977	0.13880	-0.02843	0.03804	-0.07395	0.01999	0.04028	-0.06469	-0.07327	0.06220	-0.01549	0.06359
	0.0305	0.2265	0.1106	0.7666	0.6793	0.3685	0.8081	0.6078	0.4330	0.9296	0.4496	0.8508	0.4323
INTNDLN	0.21600	0.02256	0.07885	0.03077	0.08380	-0.31508	-0.03102	-0.07320	0.00070	-0.04609	-0.05255	-0.01407	0.18075
	0.0036	0.7804	0.3485	0.7085	0.3080	0.8546	0.7063	0.3734	0.9932	0.5754	0.6831	0.8643	0.6269
NBR	-0.79070	0.21956	-0.03626	0.71918	0.36078	0.13369	0.08202	-0.70794	0.00275	0.79797	-0.76882	0.79584	0.42136
	0.0003	0.0069	0.8596	0.0001	0.0001	0.1029	0.7835	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
IBRL	-0.25864	0.24449	-0.03022	0.78975	0.26669	0.18481	0.07720	-0.72455	0.95277	0.91389	-0.72876	0.93288	0.39639
	0.0014	0.0026	0.7125	0.0001	0.0001	0.0236	0.8477	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
OBLR	-0.36415	0.27331	-0.02702	0.71122	0.16930	0.12325	0.09700	-0.67930	0.01603	0.78932	-0.68102	0.81998	0.24095
	0.0011	0.0007	0.7427	0.0001	0.0384	0.0184	0.2777	0.0001	0.0001	0.0001	0.0001	0.0001	0.0030

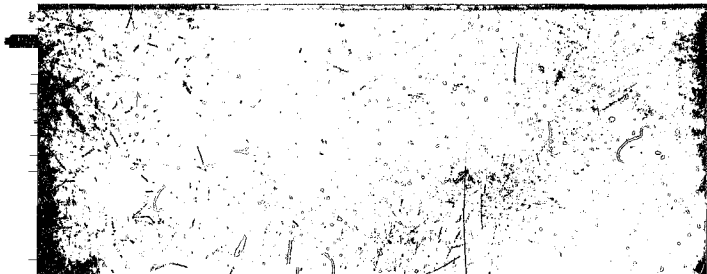


SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	PINSV	PTLLN	INTLN	NFLOR	CORLLN	CORLND		HASL	PAPMKLN	TFLLN	DFRS	STMKLN	STMKOL
IBRW	-0.03269 0.6912	0.08058 0.3035	0.10547 0.1989	0.33895 0.0001	0.19538 0.0576	0.21851 0.0072	0.14697 0.0727	-0.27267 0.0007	0.03682 0.0001	0.32648 0.0001	-0.29945 0.0502	0.37606 0.0001	0.22306 0.0061
GBRW	-0.32895 0.0056	0.24828 0.0085	-0.01677 0.8197	0.69569 0.0001	0.18516 0.0763	0.22640 0.0053	0.11132 0.1750	-0.65182 0.8001	0.70808 0.0001	0.67177 0.0001	-0.56579 0.0001	0.71109 0.0001	0.21982 0.0071
INMKL	-0.27713 0.0006	0.24893 0.0025	-0.04806 0.5592	0.81028 0.0001	0.37839 0.0001	0.19075 0.0656	0.07100 0.3876	-0.73325 0.0001	0.92822 0.0001	0.89994 0.0001	-0.75379 0.0001	0.91212 0.0001	0.19498 0.0001
IRNDW	-0.26262 0.0005	0.15693 0.0551	0.03947 0.6315	0.82806 0.0001	0.38688 0.0001	0.14916 0.0685	0.09527 0.5017	-0.76928 0.0001	0.88896 0.0001	0.83389 0.0001	-0.72993 0.0001	0.80873 0.0001	0.37804 0.0501
PKKL	-0.18836 0.0210	0.23582 0.0037	-0.03085 0.7079	0.61178 0.0001	0.82819 0.0050	0.82099 0.0066	0.08852 0.5555	-0.53625 0.0001	0.65733 0.0001	0.65489 0.0001	-0.81191 0.0001	0.68482 0.0001	0.22618 0.0006
LDRP	-0.23176 0.0001	0.13802 0.0921	0.05387 0.7189	0.58285 0.0001	0.15518 0.0580	0.06093 0.4589	-0.13048 0.1115	-0.53341 0.0001	0.65466 0.0001	0.32522 0.0001	-0.46382 0.0001	0.63907 0.0001	0.29273 0.0021
INFL	-0.31152 0.0043	0.09940 0.0013	-0.02963 0.7189	0.78783 0.0001	0.87894 0.0001	0.16591 0.0425	0.10510 0.2005	-0.69623 0.0001	0.83588 0.0001	0.96883 0.0001	-0.72808 0.0001	0.94550 0.0001	0.88809 0.0001
IRFW	-0.38062 0.0002	0.20506 0.0118	0.01286 0.8798	0.77816 0.0001	0.30049 0.0002	0.19228 0.0184	0.06797 0.8085	-0.58361 0.0001	0.76204 0.0001	0.83472 0.0001	-0.64078 0.0001	0.77599 0.0001	0.33107 0.0001
VANGS	0.06074 0.4603	-0.05112 0.5344	-0.09928 0.2268	0.03414 0.6783	-0.00638 0.9368	-0.06806 0.4084	-0.21302 0.8009	-0.22371 0.0059	0.85990 0.4989	0.04928 0.5492	-0.83185 0.0044	0.03279 0.5212	0.18756 0.0981
VANGB	-0.13384 0.1025	-0.08287 0.3133	-0.07729 0.3472	0.88134 0.0089	0.07764 0.3450	-0.03034 0.7125	-0.09947 0.2259	-0.13004 0.0001	0.30308 0.0002	0.23599 0.0036	-0.38356 0.0001	0.23571 0.0037	0.03072 0.7090
MIWDL	0.39947 0.8002	0.16765 0.0803	0.22756 0.0051	-0.16829 0.0355	0.11332 0.3987	-0.00021 0.9780	0.08829 0.1287	0.10779 0.0148	-0.19907 0.0148	0.23566 0.0037	0.10223 0.2132	-0.28199 0.0123	-0.01884 0.8570
SHINL	0.03177 0.8663	0.61694 0.8607	-0.88708 0.2885	-0.17702 0.0027	-0.18691 0.0220	-0.04869 0.5588	0.01890 0.0184	0.98169 0.0028	-0.18661 0.0792	0.17563 0.0336	-0.17226 0.0350	-0.16080 0.0093	
LINDRL	0.03178 0.6905	0.03018 0.7143	-0.88222 0.3172	-0.29755 0.0002	-0.26731 0.0109	-0.09109 0.2676	-0.09201 0.5273	0.35142 0.0001	-0.38895 0.0001	0.33123 0.0001	0.32893 0.0001	-0.38990 0.0081	-0.20900 0.0103
NKLN	0.30587 0.0001	0.18313 0.0249	0.17794 0.0534	-0.84896 0.0001	-0.13654 0.0957	-0.18115 0.0649	0.02107 0.7980	0.16370 0.8001	-0.50737 0.0001	0.51688 0.0001	0.37108 0.0001	-0.89297 0.0001	-0.17081 0.0368
NKNDL	0.27408 0.0007	0.15282 0.0619	0.23776 0.0034	-0.10615 0.1961	0.10960 0.1984	0.01975 0.8104	0.09177 0.2640	0.03566 0.6049	-0.12372 0.1315	-0.16461 0.8441	0.05584 0.4973	0.12595 0.1245	0.03951 0.6311
APKAN	-0.00731 0.9206	-0.03560 0.6653	-0.82128 0.7961	0.19804 0.0151	0.16166 0.0481	0.15213 0.0631	0.00587 0.4232	-0.09280 0.0002	0.27993 0.0009	0.29733 0.0002	-0.34923 0.0001	0.32020 0.8001	0.10152 0.2164
APKPS	0.05946 0.4698	0.00962 0.9870	0.09927 0.2268	-0.19034 0.0196	-0.04796 0.5600	-0.11289 0.1705	-0.09372 0.2940	0.88390 0.0004	-0.03189 0.0044	0.25804 0.6966	0.25043 0.0018	-0.29508 0.0025	-0.05902 0.4731
BSAN	-0.10091 0.2192	-0.81537 0.0519	0.88554 0.2924	0.84893 0.0001	0.19611 0.0162	0.87162 0.3838	0.03268 0.6917	-0.30822 0.8001	0.88682 0.0001	0.81121 0.0001	-0.37399 0.0001	0.42601 0.0001	0.06781 0.4098

SPEARMAN CORRELATION COEFFICIENTS / PROB > |RI| UNDER H0:RHO=0 / N = 150

	PIRSV	PTLLN	INTLN	NFLOR	CORLLN	CORLMD	CORTWD	HASL	PAPMKLN	TFLLN	DFRS	STMKLN	STMKUL
BSFS	-0.09861 0.2596	-0.06691 0.4022	0.08576 0.5782	0.36069 0.0001	0.10771 0.1896	0.89607 0.2422	0.10935 0.1820	-0.25625 0.0001	0.30575 0.0001	0.88827 0.0003	-0.80687 0.0005	0.06788 0.0088	-0.10709 0.1921
SVINS	-0.18950 0.0202	-0.10536 0.1994	0.02285 0.7851	0.35906 0.4728	0.12909 0.1194	-0.32520 0.7595	-0.10597 0.1968	-0.15768 0.0540	0.39243 0.2604	0.06181 0.4524	-0.12941 0.1145	0.88588 0.0089	0.88888 0.3885
NSECV	-2.06105 0.4580	0.09950 0.2257	0.02656 0.7433	-0.30781 0.0001	-0.01582 0.8476	-0.06188 0.4519	-0.06653 0.4185	0.20406 0.0123	-0.26575 0.0010	-0.31077 0.0001	0.12200 0.1370	-0.33823 0.0001	-0.08502 0.3009
PIINSV	1.00000 0.0000	-0.04183 0.6112	0.10405 0.2051	-0.06795 0.0009	-0.34699 0.5680	-0.02086 0.8980	-0.02209 0.7810	0.25060 0.0020	-0.84721 0.0023	-0.29434 0.0003	0.25087 0.0015	-0.28049 0.0088	-0.00093 0.9910
PTLLN	-0.04183 0.6112	1.00000 0.0000	-0.06010 0.4650	0.14036 0.0867	0.19118 0.0191	0.02782 0.7354	0.14370 0.0794	-0.39702 0.0002	0.34210 0.0028	0.27651 0.0006	-0.30063 0.0002	0.27039 0.0088	0.11827 0.1495
INTLN	0.10405 0.2051	-0.06010 0.4650	1.00000 0.0000	0.00010 0.9990	0.10935 0.1828	-0.01659 0.8403	-0.01727 0.8339	0.02965 0.7187	-0.04109 0.0176	0.00332 0.9670	-0.02936 0.7214	-0.00839 0.9198	-0.01769 0.8299
NFLOR	-0.06795 0.0909	0.14036 0.0867	0.00018 0.9990	1.00008 0.0000	0.20194 0.0132	0.86513 0.4285	0.01927 0.8149	-0.65838 0.0001	0.75755 0.8401	0.73737 0.0001	-0.63470 0.0001	0.75110 0.0001	0.20059 0.0138
CORLLN	-0.04699 0.5680	0.19118 0.0191	0.10935 0.1828	0.20194 0.0132	1.00000 0.0000	0.28114 0.0000	0.32340 0.0001	-0.24144 0.0029	0.38069 0.0001	0.37133 0.0001	-0.29831 0.0002	0.36211 0.0007	0.26889 0.0009
CORLMD	-0.02006 0.8000	0.2782 0.7354	-0.01659 0.8403	0.86513 0.4285	0.01927 0.0005	0.8149 0.0000	-0.02232 0.0001	0.7187 0.7863	0.16871 0.0360	0.9670 0.0579	-0.33324 0.6864	0.19255 0.6144	0.06198 0.4515
CORTWD	-0.25060 0.7810	0.14370 0.0894	-0.01727 0.8339	0.10935 0.1896	0.12909 0.0001	0.32520 0.7595	0.10597 0.0000	0.1968 0.7583	0.0540 0.3510	0.07668 0.1510	0.12130 0.7977	0.15126 0.0646	-0.02396 0.7710
HASL	0.25060 0.0020	-0.29702 0.0002	0.02965 0.7187	-0.06516 0.0001	-0.24144 0.0029	-0.02232 0.7863	0.02533 0.7583	1.00000 0.0000	-0.69749 0.0001	0.66478 0.0001	0.86289 0.0001	-0.69599 0.0001	-0.34060 0.0001
PAPMKLN	-0.24721 0.0023	0.24210 0.0028	-0.04109 0.8176	0.75755 0.0001	0.10068 0.0001	0.17723 0.0300	0.87668 0.3510	-0.69749 0.0001	1.00000 0.0000	0.93526 0.0001	-0.70406 0.0001	0.94936 0.0001	0.41249 0.0001
TFLLN	-0.39434 0.0003	0.27651 0.0006	0.00332 0.9678	0.73737 0.0001	0.37133 0.0001	0.16971 0.0379	0.11703 0.1510	-0.66414 0.0001	0.91526 0.0001	1.00008 0.0000	-0.28606 0.0001	0.96434 0.0001	0.40786 0.0001
DFRS	0.25687 0.0015	-0.30003 0.0002	-0.02936 0.7214	-0.02936 0.0001	-0.20831 0.0002	-0.33354 0.6864	0.02110 0.7977	0.96209 0.0001	-0.70406 0.0001	-0.88606 0.0001	1.00000 0.0000	-0.70382 0.0001	-0.36179 0.0001
STMKLN	-0.08565 0.0024	0.27839 0.0008	-0.00029 0.9138	0.75110 0.0001	0.10211 0.0001	0.19955 0.0144	0.15126 0.0646	-0.69599 0.0001	0.98934 0.0001	0.98434 0.0001	-0.70382 0.0001	1.00000 0.0000	0.42928 0.0001
STMKUL	-0.08093 0.5910	0.11827 0.1495	-0.01789 0.8239	0.20059 0.0138	0.26889 0.0009	0.36194 0.4515	-0.02396 0.7710	-0.34060 0.0001	0.41269 0.0001	0.40786 0.0001	-0.36179 0.0001	0.42928 0.0001	1.00000 0.0000
STBLN	-0.23713 0.0033	0.25270 0.0018	0.00939 0.9692	0.59314 0.0001	0.29068 0.0002	0.07701 0.3489	0.17263 0.0346	-0.44415 0.0001	0.78460 0.0001	0.82105 0.0001	-0.66041 0.0001	0.88389 0.0001	0.38364 0.0001
STBHD	0.10741 0.1908	0.13865 0.1170	0.36825 0.4060	0.24422 0.0026	0.25068 0.0020	0.39948 0.0001	0.28429 0.0004	-0.33112 0.0014	0.33188 0.0001	0.34243 0.0001	-0.27901 0.0005	0.36901 0.0001	0.36556 0.0001



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / N = 150

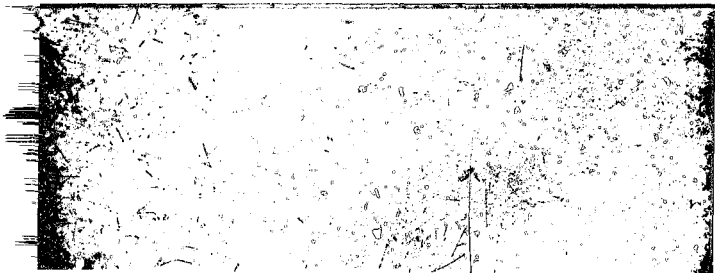
	PINSV	FTLLN	INTLN	NFLOR	CORLLN	CORLWD	CORTWD	HASL	PAPMKLN	FTLLN	DFRS	STMKLN	STMKOL
ACRMLN	-0.38886 0.0001	0.13350 2.1034	0.03380 0.6813	0.39916 0.0001	0.23175 0.0043	0.11304 0.1684	0.15915 0.0517	-0.27517 0.0097	0.52839 0.0001	0.72506 0.0001	-0.30346 0.0002	0.56684 0.0001	0.16166 0.0481
ACHWD	-0.17220 0.0351	0.07147 0.3049	-0.09616 0.2010	0.30662 0.9166	0.17104 0.0364	0.27969 0.0005	0.38718 0.0001	-0.02566 0.7552	0.18794 0.0013	0.37773 0.0006	-0.07219 0.3600	0.22897 0.0096	0.10166 0.2158
HVPAC	-0.16227 0.0473	0.15868 0.0524	-0.00257 0.9803	0.10116 0.0001	0.17532 0.0319	0.20683 0.0030	0.05724 0.4866	-0.55405 0.0001	0.43168 0.0001	0.60216 0.0001	-0.50938 0.0001	0.42687 0.0001	0.33694 0.0001
CRMKLN	-0.23381 0.0124	0.26544 0.0010	0.03156 0.7015	0.78733 0.0001	0.39418 0.0001	0.18482 0.0236	0.15005 0.0668	-0.70795 0.0901	0.95851 0.0001	0.93798 0.0001	-0.71676 0.0001	0.56919 0.0001	0.41254 0.0001
CRHWD	0.11656 0.1555	0.02857 0.7285	0.11601 0.1574	0.16018 0.0502	0.28045 0.0030	0.46977 0.0001	0.29569 0.0002	-0.16960 0.0380	0.98019 0.0005	0.27822 0.0006	-0.20170 0.0133	0.30765 0.0007	0.32763 0.0001
CRHWD	0.20001 0.0161	-0.11465 0.1624	0.16474 0.0440	-0.13031 0.1126	0.35913 0.4723	0.37185 0.0001	0.21604 0.4079	0.13245 0.1062	-0.14168 0.0837	-0.15687 0.0552	0.08070 0.3263	-0.12659 0.1227	0.88244 0.3159
RHNOFHD	0.26003 0.0013	-0.04748 0.5640	0.1 2	-0.60490 0.0007	0.17945 0.0280	-0.16649 0.0417	-0.02924 0.7225	0.63468 0.0001	-0.70908 0.0001	-0.63424 0.0001	0.56204 0.0001	-0.66519 0.0001	-0.07116 0.0001
IBLWR	-0.26513 0.0010	0.26418 0.0011	-0.06973 0.3965	0.68734 0.0001	0.35300 0.0001	0.05783 0.4821	-0.00487 0.9528	-0.67577 0.0001	0.24881 0.0001	0.79473 0.0001	-0.86637 0.0001	0.79751 0.0001	0.31726 0.0001
OBLWR	-0.19320 0.0204	0.10351 0.2075	0.00916 0.9114	0.35717 0.0001	0.21598 0.0078	0.01109 0.0989	0.02594 0.7527	-0.31461 0.0001	0.42879 0.0001	0.43413 0.0001	-0.37283 0.0001	0.47325 0.0001	0.17080 0.0371
INVLWR	-0.10763 0.1809	0.28013 0.0013	-0.08870 0.2804	-0.02520 0.7596	0.09930 0.0002	0.03537 0.6874	0.01236 0.8806	-0.58704 0.0004	0.32988 0.0001	0.80662 0.0001	-0.31166 0.0001	0.30533 0.0001	0.16725 0.0001
CKLLWR	-0.04104 0.4172	0.18952 0.0002	0.12025 0.1427	0.78533 0.8288	0.01875 0.0008	-0.26095 0.4793	0.03805 0.0015	-0.59778 0.0002	0.30182 0.0002	0.20214 0.0001	-0.31419 0.0001	0.56780 0.0009	0.26816 0.0009
ACLWR	-0.32780 0.0001	0.12639 0.1233	0.00980 0.2786	0.84917 0.0001	0.19642 0.0160	-0.04663 0.5709	0.00646 0.9374	-0.32773 0.0001	0.50052 0.0003	0.67487 0.0001	-0.62370 0.0001	0.52532 0.0003	0.13576 0.0976
CORLWR	-0.26189 0.0012	0.21185 0.0043	0.00849 0.9952	0.75959 0.0001	0.29185 0.0003	0.00928 0.7057	0.02922 0.7226	-0.70687 0.0001	0.89446 0.0001	0.87018 0.0001	-0.68789 0.0001	0.89752 0.0001	0.32854 0.0001
CORLWR	-0.25849 0.0014	0.27832 0.0006	-0.83776 0.6996	0.71773 0.0001	0.30268 0.0002	0.00200 0.9806	0.02857 0.8027	-0.67339 0.0001	0.85734 0.0001	0.87989 0.0003	-0.65813 0.8901	0.88889 0.0001	0.34632 0.0001
STLLWR	-0.39499 0.0002	0.26637 0.0010	0.01329 0.0510	0.78721 0.0001	0.19732 0.0155	0.14675 0.0731	0.19110 0.1399	-0.81413 0.0001	0.78389 0.0001	0.78429 0.0001	-0.57281 0.0001	0.79595 0.0001	-0.12063 0.1415
TFLPLR	0.09192 0.2632	-0.18078 0.0200	0.05009 0.4726	-0.55644 0.0001	-0.28890 0.0037	-0.34358 0.5964	0.13301 0.1047	0.62422 0.0001	-0.67731 0.0001	-0.43287 0.0001	0.58589 0.0001	-0.54083 0.0001	-0.31291 0.0001
INFLWR	0.00681 0.9341	0.07638 0.3404	-0.07743 0.8323	-0.00572 0.9446	-0.05687 0.2316	-0.4894 0.4894	0.01779 0.8289	-0.20697 0.0110	0.26771 0.0009	0.18993 0.0199	-0.13100 0.1101	0.25116 0.0019	0.15604 0.0565
LRNFHR	-0.28256 0.8062	0.13649 0.0998	-0.01008 0.9028	0.78102 0.0001	0.80664 0.0013	0.17717 0.0301	0.04554 0.5800	-0.71983 0.0001	0.38108 0.0001	0.78944 0.0001	-0.66983 0.3600	0.77118 0.0001	0.93034 0.0001

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	STBLN	STBDW	ACHKLN	ACHMDW	HYFAC	CRMKLN	CRMKWD	CRMKWD	MMHOFMD	IBLMR	OBLMR	HLVLMR	CRLLMR
KACHLN	-0.02573 0.75466	0.13673 0.0951	0.06601 0.4222	-0.03466 0.6737	-0.11946 0.1494	-0.01777 0.8291	0.13839 0.0912	-0.01292 0.6753	0.49595 0.0001	-0.07771 0.3445	-0.09906 0.2523	-0.11281 0.1700	0.10995 0.1484
INTNDLN	-0.05573 0.4941	0.19945 0.0144	-0.11397 0.1649	-0.16759 0.0404	0.01191 0.8658	0.03843 0.6405	0.26016 0.0013	0.04644 0.4319	0.16935 0.0502	-0.02535 0.7581	-0.05992 0.4664	-0.13169 0.1082	0.14563 0.0754
NBR	0.66291 0.0001	0.34482 0.0001	0.40482 0.0001	0.12377 0.1313	0.53193 0.0001	0.80726 0.0001	0.22218 0.0063	-0.09297 0.2576	-0.61587 0.0001	0.74922 0.0001	0.38633 0.0001	0.35026 0.0001	0.29142 0.0003
IBRL	0.75261 0.0001	0.31031 0.0001	0.50825 0.0001	0.20396 0.0123	0.59419 0.0001	0.93576 0.0001	0.26337 0.0011	-0.15693 0.0557	-0.70180 0.0001	0.85029 0.0001	0.39542 0.0001	0.31526 0.0001	0.29764 0.0002
OBRL	0.67398 0.0001	0.23803 0.0034	0.41075 0.0001	0.11956 0.1627	0.60544 0.0001	0.81048 0.0001	0.17380 0.0334	-0.14284 0.0812	-0.65676 0.0001	0.73289 0.0001	0.38096 0.0001	0.16285 0.0470	0.07082 0.3891
IBRW	0.29567 0.0002	0.36232 0.0001	0.88577 0.2967	0.24600 0.0024	0.35007 0.0001	0.35915 0.0001	0.46094 0.0001	0.13075 0.7107	-0.32053 0.1022	-0.08479 0.3022	-0.12792 0.1188	-0.25034 0.0020	0.04131 0.6157
OBRW	0.58129 0.0001	0.26914 0.0009	0.31557 0.0051	0.13279 0.1092	0.57075 0.0001	0.71818 0.0001	0.23869 0.0013	-0.09760 0.2348	-0.00845 0.0001	0.58558 0.0001	0.04961 0.5466	0.06274 0.6035	0.03038 0.7186
INMKL	0.75716 0.0001	0.30080 0.0002	0.49398 0.0001	0.17765 0.0296	0.57234 0.0001	0.91748 0.0001	0.25013 0.0016	-0.16305 0.0462	-0.69977 0.0001	0.80572 0.0001	0.38092 0.0001	0.32975 0.0001	0.30062 0.0002
INPMW	0.72143 0.0001	0.40843 0.0001	0.50038 0.0001	0.20493 0.0119	0.57964 0.8001	0.84889 0.0001	0.36718 0.0001	-0.03155 0.7015	-0.70734 0.0001	0.67955 0.0001	0.30145 0.0002	-0.03519 0.6690	0.26748 0.6812
PMKL	0.57825 0.0001	0.26826 0.0012	0.87590 0.0001	0.06564 0.8209	0.55187 0.0001	0.64183 0.0001	0.14556 0.0755	-0.06701 0.4132	-0.87257 0.0001	0.83891 0.0001	0.43816 0.0001	0.27875 0.0007	0.10665 0.1014
LBRP	0.53186 0.0001	0.10364 0.0001	0.29574 0.0002	-0.01619 0.0078	0.38797 0.0001	0.62569 0.0001	0.01957 0.8121	-0.08332 0.3108	-0.49646 0.0001	0.59694 0.0001	0.40230 0.0001	0.28838 0.0002	0.13428 0.1014
INFL	0.31408 0.0001	0.34783 0.0001	0.65030 0.0001	0.25561 0.0016	0.59920 0.0001	0.93317 0.0001	0.38288 0.0005	-0.15396 0.0606	-0.35968 0.0001	0.75607 0.0001	0.80478 0.0001	0.28184 0.0005	0.29997 0.8008
INFW	0.71598 0.0001	0.41170 0.0001	0.65642 0.0001	0.21663 0.0078	0.54522 0.0001	0.76653 0.0001	0.34483 0.0001	-0.05928 0.4784	-0.56515 0.0001	0.62364 0.0001	0.37725 0.0001	0.33582 0.0001	0.19796 0.5152
VANGS	0.06398 0.4357	0.05998 0.4659	-0.02013 0.8068	-0.01397 0.8651	0.00303 0.7706	0.04565 0.5191	0.86750 0.1110	0.08718 0.2038	-0.03205 0.4971	0.03445 0.2701	0.09061 0.2701	-0.01379 0.4670	0.04095 0.6180
VANGB	0.32685 0.0001	-0.05878 0.4749	0.86418 0.3060	0.12355 0.1320	0.11604 0.1573	0.28260 0.8005	-0.06781 0.4124	-0.08365 0.3000	-0.38217 0.0005	0.33164 0.0001	0.29630 0.0024	0.28609 0.0054	0.08841 0.2820
MMKL	-0.17955 0.0879	0.02166 0.7923	-0.21181 0.0093	-0.06074 0.4032	-0.18925 0.0204	-0.11802 0.0293	0.07021 0.1932	0.13581 0.0975	0.25179 0.0019	-0.22639 0.0053	-0.16826 0.1873	-0.04632 0.5579	0.04472 0.5869
SHINL	-0.20943 0.0101	-0.02902 0.7245	0.00158 0.9847	0.18251 0.7330	-0.22495 0.0057	-0.21292 0.0089	-0.04083 0.6199	0.08568 0.2972	0.29020 0.0020	-0.19244 0.0163	-0.17649 0.0307	-0.07582 0.3590	-0.14889 0.0690

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / N = 130

	STBLN	STBND	ACPKLN	ACPKND	NVPAC	CRMKLN	CRMKND	CRMMND	MMNOFND	IBLMR	OBLMR	INVLNR	CRLLNR
LNDRL	-0.34464 0.0001	-0.15531 0.0577	-0.12664 0.1225	-0.05083 0.4596	-0.37910 0.0001	-0.38809 0.0001	-0.19106 0.0192	0.02681 0.7447	0.32710 0.0001	-0.29273 0.0003	-0.18923 0.0204	-0.07530 0.5598	-0.15516 0.0580
NKLN	-0.14366 0.0001	-0.15183 0.0638	-0.31880 0.0001	-0.04804 0.5926	-0.43095 0.0001	-0.51122 0.0001	-0.13476 0.1001	-0.50281 0.1197	-0.48540 0.0001	-0.23025 0.0001	-0.07292 0.0046	-0.06253 0.3572	-0.06253 0.4471
NKND	-0.09588 0.2431	-0.03775 0.0405	-0.18529 0.0832	-0.11522 0.1603	-0.09718 0.2370	-0.09216 0.2726	0.07346 0.3717	0.08878 0.2800	0.15810 0.0530	-0.14714 0.0724	-0.09202 0.5418	-0.02697 0.7432	0.09004 0.2732
APKAN	0.32615 0.0001	0.27388 0.0007	0.13111 0.1058	0.38804 0.3183	0.31795 0.0001	0.31778 0.0001	0.25039 0.0000	0.01146 0.8493	-0.26163 0.0012	0.20998 0.0009	0.00472 0.5395	0.89885 0.2288	0.06380 0.3103
APKFS	0.23856 0.0039	-0.13058 0.1712	-0.13838 0.1011	-0.21730 0.0076	-0.34792 0.0029	-0.24166 0.0029	-0.10931 0.1830	-0.00778 0.9248	0.20429 0.0122	-0.17644 0.0308	0.00086 0.9925	-0.05189 0.5282	-0.00926 0.9105
BSAN	0.38280 0.0001	0.12157 0.1319	0.19963 0.0143	0.02896 0.7617	0.20638 0.0113	0.85054 0.0001	0.28453 0.0121	0.04139 0.3590	-0.27075 0.0000	0.37848 0.0001	0.23559 0.0037	0.10918 0.1631	0.15307 0.0615
BSFS	0.19750 0.0154	0.11754 0.1520	0.25679 0.0119	0.06879 0.4029	0.03303 0.6892	0.39192 0.0003	0.04860 0.5878	0.00908 0.2783	-0.16562 0.0428	0.26337 0.0011	0.18559 0.0238	0.30883 0.9146	0.06179 0.4569
SVINR	0.12601 0.1244	-0.02400 0.7707	-0.05876 0.4750	0.00064 0.9938	0.07062 0.3905	0.10764 0.1898	0.06035 0.4059	-0.05906 0.5112	0.05864 0.4760	0.09541 0.2455	0.00330 0.9600	0.11619 0.1568	0.12990 0.1131
KEECV	-0.27836 0.0006	-0.21356 0.0007	-0.30442 0.0121	0.05343 0.1561	-0.28899 0.0003	-0.28126 0.0005	-0.13407 0.1019	0.06668 0.4181	0.89867 0.0004	-0.20337 0.0126	-0.13500 0.0595	0.10907 0.1840	0.03274 0.6509
PINSV	-0.23713 0.0035	0.10781 0.1908	-0.34886 0.0001	-0.17228 0.0351	-0.16227 0.0473	-0.20381 0.0124	0.11656 0.1555	0.00061 0.0181	0.28803 0.0613	-0.28513 0.0510	-0.18920 0.0804	-0.10763 0.1899	-0.04184 0.6112
PTLLN	0.25270 0.0018	0.13065 0.1110	0.13350 0.1034	0.07147 0.3048	0.15868 0.0924	0.26544 0.0010	0.02857 0.7285	-0.11465 0.1624	-0.04748 0.5640	0.26210 0.0011	0.10331 0.2075	0.26013 0.0013	0.18952 0.0202
INTLN	0.00939 0.9092	0.06825 0.4666	0.03380 0.4813	-0.09516 0.2818	-0.00557 0.9460	0.23156 0.7015	0.11601 0.1574	0.16071 0.0840	-0.08973 0.5842	-0.08973 0.9114	-0.08973 0.9114	-0.08973 0.9114	0.15252 0.1127
NFLOR	0.59878 0.0001	0.04822 0.0026	0.39916 0.0001	0.00062 0.9166	0.40116 0.0001	0.76733 0.0001	0.18018 0.0502	-0.13831 0.1120	-0.38899 0.0001	0.68738 0.0001	0.35717 0.0081	-0.02526 0.7996	0.17053 0.0208
CORLLN	0.29684 0.0002	0.25086 0.0020	0.23175 0.0043	0.17104 0.2766	0.17532 0.0319	0.19412 0.0001	0.28845 0.0930	0.05913 0.4723	-0.17795 0.0280	0.35790 0.0001	0.01079 0.0001	0.00961 0.0002	0.01875 0.0001
CORLND	0.07701 0.3489	0.39940 0.0001	0.11304 0.1684	0.27969 0.0005	0.24083 0.0030	0.18862 0.0236	0.46977 0.0001	0.37109 0.0001	-0.16649 0.0411	0.05783 0.4821	0.01109 0.8929	0.01537 0.8674	-0.26953 0.0006
CORTND	0.17263 0.0386	0.28429 0.0004	0.15915 0.0517	0.34712 0.0007	0.05724 0.4366	0.15005 0.0668	0.29569 0.8002	0.81504 0.0079	-0.02924 0.7225	-0.00487 0.9529	0.02594 0.7527	0.01238 0.8006	0.03403 0.6793
NABL	-0.64475 0.0001	-0.28712 0.0044	-0.07517 0.0007	-0.02566 0.7552	-0.55406 0.0001	-0.70795 0.0001	-0.18960 0.0380	0.13205 0.1062	0.63468 0.0001	-0.31657 0.0001	-0.31657 0.0001	-0.28704 0.0004	-0.25774 0.0015
PAPPKLN	0.78460 0.0001	0.38388 0.0001	0.52859 0.0001	0.18794 0.0213	0.04168 0.0001	0.95851 0.0001	0.28019 0.0005	-0.14166 0.0037	-0.70908 0.0001	0.84561 0.0001	0.42879 0.0001	0.32985 0.0001	0.30182 0.0002



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	STBLN	STBWD	ACHKLN	ACHWWD	NVPAC	CRMKLN	CRMKWD	CRMKFHD	BLBLR	OBLLR	INVLWR	CRLLWR	
TFLN	0.82105 0.0001	0.34293 0.0001	0.72506 0.0001	0.37773 0.0006	0.60216 0.0001	0.93759 0.0001	0.27829 0.0006	-0.15687 0.0552	-0.03884 0.0001	0.78473 0.0001	0.43413 0.0001	0.30652 0.0001	0.29214 0.0003
DRS	-0.16041 0.0001	-0.27901 0.0005	-0.10346 0.0002	-0.07219 0.3800	-0.50938 0.0001	-0.71676 0.0001	-0.20170 0.0133	0.38070 0.3263	0.58204 0.0001	-0.66607 0.0001	-0.33363 0.0001	-0.31166 0.0001	-0.31419 0.0001
STMKLN	0.80629 0.0001	0.35001 0.0001	0.56684 0.0001	0.22497 0.0056	0.62497 0.0001	0.96910 0.0001	0.30765 0.0001	-0.12659 0.1227	-0.66519 0.0001	0.79781 0.0001	0.43325 0.0001	0.30533 0.0001	0.26740 0.0009
STMKLCL	0.38364 0.0001	0.36656 0.0001	0.16166 0.0481	0.10166 0.2158	0.83694 0.0001	0.81254 0.0001	0.32763 0.0001	0.08244 0.3159	-0.27146 0.0000	0.81726 0.0001	0.17040 0.0371	0.18125 0.0284	0.26216 0.0009
STBLN	1.00000 0.0000	0.12076 0.0001	0.54939 0.0001	0.30341 0.0125	0.58428 0.0001	0.88428 0.0001	0.23977 0.0003	-0.02612 0.2223	-0.98912 0.0001	0.06879 0.0001	0.07118 0.0001	0.39444 0.0001	0.83568 0.0009
STBWD	0.92076 0.0001	1.00000 0.0000	0.23592 0.0037	0.26221 0.0012	0.16434 0.0001	0.35684 0.0001	0.76469 0.0001	0.32374 0.0001	-0.21822 0.0033	0.12948 0.1143	0.04040 0.6835	-0.14028 0.0869	0.01978 0.8101
ACHKLN	0.50692 0.0001	0.23592 0.0037	1.00000 0.0000	0.43571 0.0001	0.28839 0.0005	0.52378 0.0001	0.17266 0.0344	-0.15573 0.6570	-0.26913 0.0009	0.40504 0.0001	0.88124 0.0005	0.10223 0.2132	0.17031 0.0372
ACHWWD	0.30361 0.0125	0.86621 0.0052	0.86621 0.0001	1.00000 0.0000	0.36555 0.0957	0.38895 0.0208	0.32536 0.0001	0.20140 0.0125	-0.05038 0.3344	0.08188 0.8986	-0.07831 0.3808	0.00125 0.9979	0.01561 0.8496
NVPAC	0.56978 0.0001	0.36438 0.0001	0.88239 0.0005	0.18655 0.0957	1.00000 0.0000	0.59842 0.0001	0.38388 0.0001	0.02097 0.7990	-0.59865 0.0001	0.83131 0.0001	0.26372 0.0011	0.15822 0.0531	0.05578 0.4978
CRMKLN	0.80128 0.0001	0.35668 0.0001	0.52378 0.0001	0.18895 0.0206	0.59942 0.0001	1.00000 0.0000	0.31686 0.0001	-0.10340 0.2062	-0.68555 0.0001	0.82468 0.0001	0.42468 0.0001	0.30077 0.0062	0.30756 0.0001
CRMKWD	0.28977 0.0003	0.76469 0.0001	0.17286 0.0344	0.32538 0.0001	0.33140 0.0001	0.31686 0.0000	1.00000 0.0000	0.40663 0.0001	-0.19903 0.0146	0.02120 0.7966	-0.08763 0.2863	-0.16487 0.0938	-0.02011 0.0070
CRMKFHD	-0.09812 0.2123	0.32374 0.0001	-0.15573 0.0570	0.20140 0.0135	0.82097 0.7990	-0.10380 0.2062	0.40663 0.0001	1.00030 0.0000	0.09571 0.2440	-0.20327 0.0126	-0.08026 0.3289	-0.23896 0.0032	-0.14045 0.0865
MINOFHD	-0.56979 0.0001	-0.23882 0.0033	-0.26913 0.0009	-0.04088 0.5354	-0.59865 0.0001	-0.68355 0.0001	-0.19803 0.0146	0.09571 0.2440	1.00000 0.0000	-0.59660 0.0001	-0.25139 0.0005	-0.09151 0.2654	-0.09434 0.2508
BLBLR	0.67118 0.0001	0.12948 0.1148	0.42608 0.0001	0.03188 0.6958	0.48151 0.0001	0.82168 0.0001	0.02120 0.7968	-0.20317 0.0126	-0.39660 0.0001	1.00808 0.0000	0.52883 0.0001	0.50512 0.0001	0.33425 0.0001
OBLLR	0.39444 0.0001	0.04040 0.6835	0.28124 0.0005	-0.07831 0.1868	0.26372 0.0011	0.41689 0.0001	-0.05781 0.2961	-0.88026 0.3289	-0.86159 0.0005	0.52583 0.0001	1.00000 0.0000	0.30077 0.0001	0.19923 0.0145
INVLWR	0.23688 0.0039	-0.14028 0.0869	0.10223 0.2132	0.00125 0.9979	0.15822 0.0531	0.05578 0.0002	0.80077 0.0438	-0.16487 0.0032	-0.33896 0.2654	0.58512 0.0001	0.89877 0.0001	1.00000 0.0000	0.27214 0.0008
CRLLWR	0.25153 0.0019	0.81978 0.1071	0.17031 0.0372	0.01561 0.8496	0.05578 0.9978	0.40758 0.0001	-0.82011 0.3070	-0.14045 0.0865	-0.09434 0.2568	0.33425 0.0001	0.19923 0.0145	0.27214 0.0008	1.00000 0.0000
ACLWR	0.53793 0.0001	0.12184 0.1311	0.87270 0.0001	-0.80687 0.0015	0.85737 0.0001	0.49846 0.0001	0.01365 0.8603	-0.27827 0.0007	-0.27662 0.0006	0.46795 0.0001	0.38691 0.0001	0.13593 0.0972	0.22198 0.0065

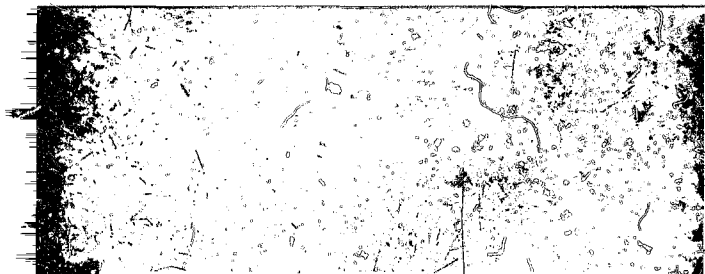
SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / N = 150

	STBLN	STBND	ACPKLN	ACKWD	NVPAC	CRNKLN	CRNKWD	CRNNWD	NNNNFD	IBLWR	OBLWR	INVLWR	ORLLWR
CORLWR	0.73296 0.0001	0.09226 0.2913	0.45997 0.0001	0.06278 0.4453	0.52612 0.0001	0.92107 0.0001	-0.02841 0.7300	-0.28520 0.0001	-0.64912 0.0001	0.65738 0.0001	0.46250 0.0001	0.38518 0.0001	0.29055 0.0003
CORLWR	0.74092 0.0001	0.17163 0.0357	0.50283 0.0001	0.08349 0.1097	0.54134 0.0001	0.90597 0.0001	0.10502 0.1034	-0.46313 0.0001	-0.63791 0.0001	0.60170 0.0001	0.38600 0.0001	0.37419 0.0001	0.28161 0.0001
STLLWR	0.65546 0.0001	0.10378 0.0793	0.48788 0.0001	0.11545 0.1595	0.61807 0.0001	0.78028 0.0001	0.10496 0.2815	-0.26520 0.0001	-0.80011 0.0001	0.69485 0.0001	0.39432 0.0001	0.32234 0.0062	0.10699 0.1843
TFLPLR	-0.43782 0.0001	-0.13005 0.1127	0.11483 0.1632	0.18125 0.0467	-0.52386 0.0001	-0.60682 0.0001	-0.09251 0.2601	0.10094 0.2191	0.64414 0.0001	-0.26559 0.0001	-0.26468 0.0010	-0.23977 0.0011	-0.29077 0.0031
INFLWR	0.14810 0.0873	-0.11437 0.1634	-0.04027 0.6267	0.02696 0.7433	0.07116 0.3889	0.20955 0.0021	-0.12078 0.1411	-0.10528 0.1998	-0.17347 0.0338	0.28089 0.0004	0.06754 0.4115	0.43391 0.0001	0.14860 0.0696
LRNPLR	0.85160 0.0001	0.86155 0.0001	0.37719 0.0001	0.07957 0.3331	0.64693 0.0001	0.79233 0.0001	0.33854 0.0001	-0.11047 0.1784	-0.51682 0.0001	0.65946 0.0001	0.28080 0.0005	0.08869 0.2805	0.19015 0.0198
	ACLWR	CORLWR	CORLWR	STLLWR	TFLPLR	INFLWR	LRNPLR						
RACHLEN	0.09247 0.2556	-0.07226 0.3799	-0.00464 0.9550	-0.07427 0.3660	0.21033 0.0098	-0.08187 0.3193	-0.16395 0.0450						
INTNDLN	-0.02843 0.7298	-0.06377 0.4382	0.00678 0.9344	-0.10361 0.2070	-0.07184 0.3850	0.00336 0.9675	0.04137 0.5982						
IBR	0.40081 0.0001	0.76787 0.0001	0.78488 0.0001	0.62188 0.0001	-0.56786 0.0801	0.17575 0.0315	0.69402 0.0001						
IBRL	0.47458 0.0001	0.88285 0.0001	0.66840 0.0001	0.76182 0.0001	-0.63511 0.0001	0.30357 0.0002	0.80781 0.0001						
OBRL	0.40512 0.0001	0.79487 0.0001	0.76037 0.0001	0.76506 0.0001	-0.57335 0.0001	0.23591 0.0037	0.73122 0.0001						
IBRW	-0.00060 0.9942	0.21384 0.0086	0.25929 0.0014	0.25136 0.0019	-0.27702 0.0006	0.07228 0.1794	0.39363 0.0001						
OBRW	0.87690 0.0001	0.67661 0.0001	0.66275 0.0001	0.50820 0.0001	-0.54299 0.0001	0.21197 0.0082	0.71263 0.0001						
JNCKL	0.47343 0.0001	0.85856 0.0001	0.85106 0.0001	0.73868 0.0001	-0.62150 0.0001	0.30112 0.0002	0.80508 0.0001						
INPOW	0.45960 0.0001	0.75301 0.0001	0.74886 0.0001	0.69218 0.0001	-0.56274 0.0001	0.07562 0.3577	0.82878 0.0001						
PKKL	0.37744 0.0001	0.63975 0.0001	0.60507 0.0001	0.57830 0.0001	-0.48186 0.0001	0.25227 0.5253	0.67872 0.0001						
LBWF	0.35922 0.0001	0.68456 0.0001	0.62003 0.0001	0.59445 0.0001	-0.53129 0.0001	0.18415 0.0241	0.55829 0.0001						



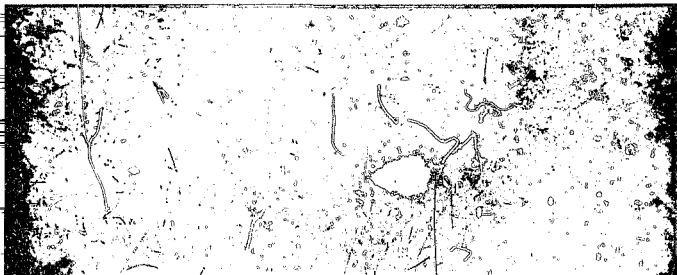
SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / N = 150

	AGLWR	CORLWR	CORLWHR	STLLBR	TFLPLR	INFLWR	LRWHR
HFLDR	0.44917 0.0001	0.75959 0.0001	0.71773 0.0001	0.70721 0.0001	-0.55844 0.0001	-0.00572 0.9446	0.74102 0.0001
CORLLN	0.19642 0.6160	0.89185 0.0001	0.30268 0.0002	0.19732 0.0195	-0.23590 0.0037	0.09825 0.2316	0.26064 0.0013
CORLMD	-0.04663 0.5709	0.03098 0.7057	0.00200 0.9806	0.14675 0.0731	-0.04358 0.5964	-0.05687 0.8894	0.17717 0.0001
CORTMD	0.00646 0.9374	0.09222 0.7226	0.02057 0.8037	0.12119 0.1399	0.13301 0.1047	0.01779 0.8269	0.04554 0.5800
HASL	-0.32773 0.0001	-0.70407 0.0001	-0.67339 0.0001	-0.61413 0.0001	0.62922 0.0001	-0.20697 0.0110	-0.71985 0.0001
PAPKLN	0.50062 0.0001	0.89446 0.0001	0.88754 0.0001	0.76369 0.0001	-0.67731 0.0001	0.26771 0.0009	0.80109 0.0001
TELIN	0.67437 0.0001	0.87018 0.0001	0.87925 0.0001	0.78429 0.0001	-0.45287 0.0001	0.18993 0.0199	0.74944 0.0001
DFRS	-0.32270 0.0001	-0.68789 0.0001	-0.65813 0.0001	-0.57581 0.0001	0.58506 0.0001	-0.13100 0.1101	-0.66953 0.0001
STKMLN	0.92532 0.0001	0.89754 0.0001	0.88205 0.0001	0.79595 0.0001	-0.50653 0.0001	0.25116 0.0019	0.77118 0.0001
STKMLOL	0.13576 0.0976	0.32854 0.0001	0.34842 0.0001	-0.12063 0.1415	-0.31291 0.0001	0.15604 0.0565	0.33034 0.0001
STBLN	0.53793 0.0001	0.73296 0.0001	0.74092 0.0001	0.65584 0.0001	-0.43782 0.0001	0.14010 0.0873	0.65160 0.0001
STBYD	0.12384 0.1311	0.09626 0.2413	0.17163 0.0357	0.14374 0.0793	-0.13005 0.1127	-0.11437 0.1634	0.36155 0.0001
ACHMLN	0.87270 0.0001	0.45997 0.0001	0.50243 0.0001	0.48748 0.0001	0.11443 0.1632	-0.04027 0.6247	0.37710 0.0001
ACHMMD	-0.00687 0.9335	0.06278 0.4453	0.08349 0.3097	0.11543 0.1595	0.16125 0.0487	0.02696 0.7423	0.07957 0.3333
IVPAC	0.25737 0.0015	0.97612 0.0001	0.58134 0.0001	0.51807 0.0001	-0.52386 0.0901	0.07116 0.3869	0.64693 0.0001
CRKMLN	0.49846 0.0001	0.92101 0.0001	0.90597 0.0001	0.78029 0.0001	-0.60682 0.0001	0.24955 0.0081	0.79233 0.0001
CRKMD	0.01365 0.8661	-0.02881 0.7300	0.10992 0.1834	0.10496 0.2012	-0.09953 0.5601	-0.18074 0.1471	0.33054 0.0001
CRKMD	-0.27927 0.0007	-0.66380 0.0010	-0.46313 0.0001	-0.23504 0.0030	0.10096 0.2197	-0.10528 0.1996	-0.11047 0.1704



SPCARMAN CORRELATION COEFFICIENTS / PROD > |R| UNDER H0:RHO=0 / N = 150

	ACLWR	CORLWR	CORLWR	STLLR	TFLPLR	INFLWR	LINFHR
HWNOFHD	-0.27682 0.0006	-0.64912 0.0001	-0.63791 0.0001	-0.60011 0.0001	0.64819 0.0001	-0.17337 0.0338	-0.91682 0.0001
IBLWR	0.46725 0.0001	0.85738 0.0001	0.80170 0.0001	0.69485 0.0001	-0.41613 0.0001	0.28889 0.0004	0.65940 0.0001
OBLWR	0.38091 0.0001	0.46269 0.0001	0.88600 0.0001	0.38432 0.0001	-0.26559 0.0010	0.06754 0.4115	0.88080 0.0005
INVLWR	0.13593 0.0972	0.38518 0.0001	0.37419 0.0001	0.22234 0.0062	-0.26468 0.0011	0.43391 0.0001	0.08069 0.2805
CRLLWR	0.22194 0.0063	0.29035 0.0003	0.32161 0.0001	0.10899 0.1843	-0.23977 0.0031	0.14860 0.0696	0.19015 0.0198
ACLWR	1.00000 0.0000	0.50108 0.0001	0.93260 0.0001	0.49885 0.0001	0.02178 0.7913	-0.02903 0.7243	0.37603 0.0001
LORLWR	0.50108 0.0001	1.00000 0.0000	0.91498 0.0001	0.78231 0.0001	-0.62343 0.0001	0.30677 0.0001	0.70044 0.0001
CORLWR	0.53260 0.0001	0.91498 0.0001	1.00000 0.0000	0.76751 0.0001	-0.59150 0.0001	0.26948 0.0009	0.74026 0.0001
STLLR	0.49885 0.0001	0.78231 0.0001	0.76751 0.0001	1.00000 0.0000	-0.47044 0.0001	0.15312 0.0580	0.66725 0.0001
TFLPLR	0.02178 0.7913	-0.62343 0.0001	-0.59150 0.0001	-0.47044 0.0001	1.00000 0.0000	-0.50029 0.0140	-0.62870 0.0001
INFLWR	-0.02903 0.7243	0.30677 0.0001	0.26948 0.0009	0.15312 0.0580	-0.20029 0.0140	1.00000 0.0000	0.16976 0.0378
LINFHR	0.67603 0.0001	0.70844 0.0001	0.74026 0.0001	0.66725 0.0001	-0.62070 0.0001	0.16976 0.0378	1.00000 0.0000



QDS	TYPE	NAME	RACHLEN	INTNOLN	NBR	IBRL	OBRL	IBRW	OBRW	INXOL	INXOW	PKXL	LBPR
1	NEAN		54.7851	5.05087	6.556	6.4516	1.84093	1.15787	1.1	9.23027	4.8184	5.73507	3.11813
2	STD		14.3095	1.43783	1.50558	2.20525	0.572086	0.219348	0.319905	3.23171	1.59314	2.30686	1.04356
3			150	150	150	150	150	150	150	150	150	150	150
4	CORR	RACHLEN	1	0.623005	-0.03826	-0.026465	-0.016908	0.0598613	0.0157567	-0.022069	0.0266391	0.074357	-0.015315
5	CORR	INTNOLN	0.623005		0.0640201	0.0679247	0.0320548	0.138791	0.045104	0.0558802	0.116595	-0.023706	0.0072015
6	CORR	NBR	-0.03826	0.0640203	1	0.659314	0.704973	0.341082	0.599093	0.897176	0.807995	0.601667	0.509378
7	CORR	IBRL	0.026465	0.0679247	0.859314	1	0.851146	0.026327	0.740118	0.982714	0.90031	0.608682	0.621101
8	CORR	OBRL	-0.016908	0.0320548	0.704973	0.851146	1	0.400007	0.91966	0.841925	0.8235	0.639666	0.589775
QDS	INFL	INFW	VANGS	VANGB	MINDL	SHINL	LNMDL	KLRL	MOUL	APXAN	APXPS	BSAN	
1	12.6446	5.26653	56.7467	57.64	9.49033	66.578	3.27513	92.0387	28.6533	81.7	3.7792	46.52	
2	3.37382	1.45565	6.28964	13.02	1.69056	3.67772	0.642001	17.3809	5.69785	21.1986	1.23939	13.1607	
3	150	150	150	150	150	150	150	150	150	150	150	150	
4	0.012857	0.531172	0.0400256	-0.047748	0.216344	-0.002728	-0.084615	0.126779	0.190837	0.044115	0.0119519	0.0612202	
5	0.007067	0.009716	0.0770801	-0.054727	0.252216	-0.088657	-0.178284	0.0747154	0.253628	0.116823	-0.036999	0.10475	
6	0.072844	0.173704	0.153035	0.166114	-0.22832	-0.127347	-0.004994	-0.473402	-0.16587	0.316517	-0.262052	0.226608	
7	0.947945	0.160151	0.043569	0.323768	-0.175943	-0.19623	-0.381057	-0.495757	-0.104338	0.295059	-0.26289	0.443948	
8	0.815702	0.649252	0.0208618	0.246658	-0.184717	-0.196089	-0.304318	-0.429417	-0.126615	0.138685	-0.274261	0.360168	
QDS	BSFS	SVINS	NSECV	PNSV	FTLLN	INTLN	NFLOR	CORLLN	CORLWD	CORLWD	HASL	PAPMUL	
1	92.1488	1.29652	19.56	29.3044	9.89267	9.89633	13.3333	0.588333	0.2062	0.4522	279.327	6.66673	
2	2.31373	0.601081	3.16542	15.895	2.72899	3.70505	6.55028	0.126626	0.025168	0.087666	458.927	1.9231	
3	150	150	150	150	150	150	150	150	150	150	150	150	
4	0.049578	0.041879	0.270535	0.178168	0.116037	0.156587	0.009957	0.0496334	-0.143567	0.0259514	0.0462625	-0.06419	
5	0.046600	0.045974	-0.006315	0.240795	0.0529727	0.095623	0.0551688	0.109718	-0.079733	-0.071235	-0.031027	0.0342267	
6	0.297131	0.124479	-0.230535	-0.236964	0.247524	-0.031585	0.710967	0.350804	0.141892	0.0507099	-0.699478	0.819315	
7	0.326665	0.077895	-0.293199	-0.230345	-0.009935	0.794055	0.280794	0.127548	0.091477	-0.056133	0.028235	0.82315	
8	0.322152	0.0178648	-0.365154	-0.236602	0.227131	-0.029328	0.778244	0.140511	0.159413	0.0916477	-0.556133	0.82315	
QDS	FTLLN	DFRS	STXKLN	STXKLN	STBLN	STBKD	ACKLN	ACKWLN	NFVAC	CORLN	CORWLN	CORWLN	
1	10.2655	58.9689	7.19973	0.682133	0.807	0.379067	2.9184	0.7432	4.67333	5.72727	0.518667	0.2882	
2	2.28399	120.281	1.78983	0.113318	0.286325	0.0610682	0.7228	0.0859321	0.75704	1.47524	0.0410314	0.0271231	
3	150	150	150	150	150	150	150	150	150	150	150	150	
4	0.019409	0.0771845	-0.012133	0.0563326	-0.013985	0.152107	0.103531	-0.010386	-0.127652	-0.015405	0.109155	-0.051953	
5	0.0044556	-0.136699	0.0598827	0.211742	-0.054824	0.151182	-0.086227	-0.150765	0.0958248	-0.0774033	0.23863	0.0651953	
6	0.80315	0.49609	0.190761	0.437828	0.640661	0.131635	0.432572	0.0950035	0.550698	0.43366	0.223586	-0.077882	
7	0.927419	-0.641558	0.948712	0.420436	0.74182	0.248779	0.518625	0.141258	0.62315	0.255614	0.252364	-0.127227	
8	0.787426	-0.473585	0.829342	0.261146	0.657995	0.207191	0.415442	0.114425	0.605258	0.620872	0.173989	-0.110358	
QDS	MMNOFO	IBLWR	OBLWR	INWLWR	ORLLWR	ACLWR	CORLWR	CORLWR	STLLWR	FTFLWR	INFLWR	LRMFR	
1	1.175	5.6102	1.67571	1.99327	2.86948	3.93342	11.0422	20.1049	10.6167	1.59121	2.43626	4.36994	
2	0.353148	1.80951	0.216012	0.35253	0.586122	0.895506	2.71866	5.65346	2.43498	0.222239	0.372927	2.39597	
3	150	150	150	150	150	150	150	150	150	150	150	150	
4	0.833113	-0.077547	-0.081859	-0.115259	0.129634	-0.115628	-0.054771	-0.002039	-0.05053	0.174116	-0.08619	-0.131774	
5	0.133637	-0.015054	-0.051204	-0.138348	0.166142	-0.011994	0.0190777	0.0429537	-0.058889	-0.078082	0.030577	0.064877	
6	-0.042783	0.729848	0.179531	0.236355	0.286499	0.118884	0.807122	0.774764	0.619435	-0.670017	0.176316	0.702575	
7	-0.754806	0.841207	0.803276	0.166412	0.305701	0.882104	0.920793	0.901529	0.769317	-0.752451	0.254555	0.013343	
8	-0.703185	0.699629	0.34635	-0.026595	0.0546763	0.385601	0.80947	0.77477	0.744899	-0.641638	0.193543	0.73169	

OBS	_TYPE_	_NAME_	RACHLEN	INTNDLH	NDR	IBRL	DBRL	IBRW	DBRW	INMHW	PMXL	LBPR	
9	CORR	IRBW	.0598613	.0138791	.033302	.022327	.000007	1	.091843	.0202427	.0573361	.0201578	.0231011
10	CORR	QBWR	.0157567	.0585106	.059993	.0740118	.019666	.091883	1	.732736	.077494	.0561453	.0503082
11	CORR	INMHL	-.022609	.0558802	.0599176	.0582174	.0841952	.0282827	.732736	1	.9068109	.0616404	.0602628
12	CORR	INMHW	.0866191	.0116595	.080709	.030311	.0235	.073361	.070044	.9068109	1	.0363177	.055885
13	CORR	PMXL	.0174357	-.023706	.050167	.0608682	.0636666	.0201574	.0561953	.0616404	.0583577	1	.0601316
14	CORR	LBPR	-.013515	.0072015	.059378	.0521101	.0589775	.0231011	.0530382	.0602628	.0598885	.0603391	.0591005
15	CORR	INFL	.0128857	.0100767	.0122348	.0347943	.051702	.033707	.070044	.0561794	.0380589	.063899	.0587409
16	CORR	INFW	.0531112	.009776	.0730774	.0760151	.0649252	.0363981	.0551144	.0769995	.029357	.0602835	.0587409
OBS	INFL	INFW	VANGB	HHMOL	SHINL	LNWDL	NDLNL	HHMGL	APXAN	APXPS	BSAN		
9	0.393707	0.363981	.0391068	.0015124	.0131677	.0060863	-.185763	-.171137	.011285	.0202711	-.151669	.0166383	
10	0.706849	0.591144	.0026718	.0181726	-.143992	-.117043	-.271647	-.371208	-.100556	.0159948	-.267231	.0307566	
11	0.961724	0.765995	.0737593	.0350111	-.187332	-.164008	-.357397	-.490856	-.128435	.027658	-.279338	.0289038	
12	0.805386	0.639157	.0680787	.0774016	-.157046	-.18791	-.394375	-.494643	-.090632	.0290658	-.277798	.0284569	
13	0.639091	0.602835	-.008394	.0176945	.0252686	-.178479	-.250609	-.494948	-.177443	.0205813	-.225064	.0250972	
14	0.591005	0.487409	.005409	.014334	-.188285	-.094024	-.215311	-.375101	-.139412	.015354	-.153064	.0278212	
15	0.837498	0.837498	.0518221	.0130878	-.213337	-.016572	-.155128	-.500061	-.14413	.027788	-.276982	.0106866	
16			1.0237858	.023214	-.199792	-.223839	-.380623	-.508761	-.117038	.0235986	-.257561	.0381101	
OBS	BSFS	SVINS	NSECV	PIHNB	PTLLN	INTLN	NFLOR	CORLLN	CORLAD	CORTUD	HASL	PAPMHL	
9	0.131887	0.188676	-.186756	-.032394	.0749116	.0568998	.0383137	.0684706	.0196489	.0882116	-.132484	.0328259	
10	0.255444	.0320739	-.312953	-.196694	.0211468	-.035858	.0885022	.0768723	.0159619	.0707088	-.434835	.0365573	
11	0.328951	.0764466	-.286094	-.247257	.0662996	-.037137	.0059284	.0238862	.0138029	.0778975	.069969	.0494986	
12	0.367606	.0292259	-.350592	-.231606	.0170511	.0224839	.017337	.028015	.016091	.0681396	-.602809	.070109	
13	0.249201	.0026207	-.264025	-.192225	.0226	-.049387	.0567791	.011328	.0182553	.0340737	-.598411	.0167413	
14	0.274029	.0291724	-.160593	.0212626	.0856455	.0841621	.0516846	.014694	.0591971	-.151721	-.05131	.027713	
15	0.32417	.077814	-.030462	-.290214	.0269682	-.023868	.078067	.0386137	.01791	.0138865	-.671284	.094511	
16	0.300123	.0126244	-.282362	-.286728	.0202481	.0088559	.0770315	.0305939	.0204594	.07086765	-.647982	.078244	
OBS	FTLLN	OTRS	SKMLN	SKMLDL	STBLN	STWMD	ACKMLN	ACKMWD	INPAC	CKMLN	CKMWD	CKMWD	
9	0.384449	-.104978	.0398215	.0234067	.0300199	.022812	.0114171	.0205385	.0364699	.0394671	.0432685	.0918528	
10	0.670926	.383444	.071267	.0217993	.0569825	.0200535	.0393216	.0179912	.052944	.012554	.02224	-.090147	
11	0.914533	-.627154	.0295959	.0423552	.0736299	.0246928	.0518933	.0133801	.002766	.0363959	.0246213	.1339821	
12	0.841828	.514407	.0560346	.0387057	.0581574	.0292769	.01716	.015231	.048104	.0864052	.0354085	.0203888	
13	0.61457	.077087	.0690972	.0236508	.0521232	.0176476	.0391754	.0772315	.0529209	.060423	.0115369	-.067686	
14	0.595939	-.506812	.061105	.005607	.0477645	.0118975	.033176	-.010081	.0490587	.0602378	-.146404	-.015509	
15	0.571308	-.05992	.038393	.042197	.078814	.026794	.068183	.0227571	.059587	.037671	.0287399	.133613	
16	0.625604	-.573222	.0783955	.0433392	.0617956	.0329558	.0648943	.0194908	.0542326	.0773094	.0328869	-.0693774	
OBS	NMNFHD	ILBLR	OBLMR	INVLNR	CRLLMR	ACLMR	CORLNR	CORLNR	STLLBR	FTFLPR	INFLMR	LRNFRH	
9	-.880082	-.112266	-.150512	-.033933	-.039542	.0111433	.0291806	.031508	.0260525	-.369417	.0356233	.0441616	
10	-.065514	.0320102	-.034229	-.177461	-.013111	.0270448	.0769634	.066025	.0841717	-.056478	.0171552	.0682375	
11	-.751242	.0821446	.0329659	.0186676	.0296714	.0460946	.0904089	.0589776	.0747992	-.730825	.0279717	.0091078	
12	-.771511	-.040578	.0259563	-.206181	.0213984	.004033	.078664	.078206	.067362	.0077751	.0218959		
13	-.05171	.055191	.031339	.155315	.0810973	.0127297	.0599814	.0154943	.0334621	-.453345	.0091286	.0505451	
14	-.444686	.049006	.0433055	.0126076	.065184	.038992	.052412	.0348239	.049558	.015159	.0885379		
15	-.002513	.079329	.0393008	.0161609	.029813	.015082	.081161	.081921	.076796	.030285	.020016	.08354	
16	-.555532	.0616513	.0339372	-.065921	.0201929	.0596891	.0707063	.0717995	.0651389	-.051628	-.344505	.068991	

DBS	TYPE	NAME	RACHEN	INTNDLN	NDR	IBRL	USRL	IBRW	OSRW	INPKL	INPKW	PKKL	LRBP
17	CORR	VANGS	.0002056	.0770001	0.153036	.0043549	.0208018	.0391060	.0066718	.0734593	.0620787	-.008394	0.055409
18	CORR	VANGS	-.0047768	-.050127	0.365114	.0337560	.2046508	.0015124	.018126	0.359011	0.278016	0.176985	0.143356
19	CORR	MINDL	0.216304	0.252216	-.220321	-.175943	-.184717	-.013167	-.143992	-.187332	-.157946	-.252568	-.182829
20	CORR	SHIHL	-.002768	-.088897	-.127347	-.019623	-.156089	.0060863	-.117043	-.164008	-.162591	-.178479	-.094024
21	CORR	LNUOHL	-.088475	-.178084	-.304954	.381057	-.303118	-.105163	-.271687	-.357397	-.330175	-.260009	-.219131
22	CORR	NALHL	0.128719	.0747154	-.475402	.496757	.420917	-.171137	.371208	.420856	.459643	.449848	-.375181
23	CORR	MINDL	0.190637	0.235628	-.018523	.104338	.126415	0.011285	.005056	.124535	-.090632	-.177943	-.139412
24	CORR	APXAN	.0041119	0.116836	0.316311	0.294309	0.138065	0.002711	0.155946	0.27658	0.205690	0.205813	0.15394
DBS													
17	INFL	INFW	VANGS	VANGS	MINDL	SHIHL	LNUOHL	NKHL	NKWL	APXAN	APKPS	BSAN	
17	0518297	.0327858	1	0.304654	.0960937	.0075158	-.089245	-.002596	.0045217	.0790079	.0425909	0.170409	
18	0.319476	0.235214	0.304654	0.119986	0.119986	-.116432	-.116431	0.189666	0.189666	0.189666	-.183031	0.373895	
19	-.213437	-.199792	.0960937	0.119986	1	-.201235	-.130801	0.647616	0.960558	.0028007	0.151812	0.366522	
20	-.0.16075	-.282639	.0075158	0.119986	-.201235	0.1	0.783441	-.460251	-.357298	.000352	-.271932	-.271932	
21	-.1395128	-.380623	-.002596	-.116432	-.116431	0.1	0.783441	-.460251	-.357298	.000352	-.271932	-.271932	
22	-.569061	-.008761	-.002596	-.161961	0.647616	0.348139	0.404133	1	0.494133	.079752	.079752	0.61067	
23	-.197573	-.117038	.0045217	0.149966	0.960558	.000352	.079752	0.1	0.494133	.079752	.079752	0.61067	
24	0.27794	0.323986	.0790079	0.18064	.0028007	-.357558	-.486277	-.145265	0.111532	0.111532	0.111532	0.111532	
DBS													
17	BSPS	SVINS	MSCCV	PINSV	FTLLN	INTLN	NFLOR	CORLWL	CORLWO	CORTWO	HASL	PAPMOLN	
17	0.28118	0.30961	0.121787	.0953926	-.051093	-.002343	0.022256	.0036797	-.064223	-.171705	-.087795	.0398276	
18	0.373778	0.217158	0.111261	-.122272	-.0.02372	.074258	0.251069	.0966816	0.036538	.058341	-.364179	0.306269	
19	0.178679	.0012363	.0258431	0.251669	0.178091	0.27161	-.156745	.0042717	-.002968	.0007763	0.097768	-.187239	
20	0.165586	-.283363	0.146132	0.003355	7.9E-04	-.009295	-.171765	-.0.22238	-.100036	-.054223	0.314701	.204291	
21	-.159423	-.240294	0.261026	0.46348	.018695	.016277	-.315566	.242456	-.152217	-.006808	0.263333	-.004022	
22	-.025418	-.175048	.0076331	0.27355	.168906	0.194841	-.431589	-.0.14971	-.131178	.001076	.437052	-.252999	
23	0.113077	.0026222	0.190138	0.224558	0.159021	0.270818	-.006068	0.098688	.0052701	.0067761	-.8.E-04	-.105212	
24	.0108477	0.183706	.1443509	.0050608	-.0.019551	.0098662	0.182401	0.020293	0.183554	.0527908	-.383689	0.331841	
DBS													
17	FTLLN	QFRS	STPKLN	STKMLD	STBLN	STBWD	ACKPKLN	ACKHWD	NVPAC	GRUHLN	CRPHWD	CRPHWD	
17	.0335899	-.057812	.0432407	0.128733	.0083208	-.005862	.0013422	-.050342	.0047736	.0386519	0.080475	0.106824	
18	0.28912	-.0.26387	0.294149	.0988703	0.315389	-.001695	0.105771	0.137923	0.283878	.0044949	-.099242	0.155224	
19	-.207694	0.111312	-.195779	1.4E-04	-.182817	-.021515	-.165365	-.081046	-.0.7376	-.179067	.0728632	0.145249	
20	-.18518	0.32383	.221488	0.16747	-.203376	-.0.0736	.0010519	0.172829	-.251329	.254415	-.061058	.0344666	
21	-.367053	0.298059	.411082	-.0.22605	-.337999	-.151854	-.109644	.0798331	-.383179	-.422489	-.218659	-.019084	
22	-.517053	0.363744	-.0.33731	.173772	-.437036	-.159269	-.288549	-.011594	-.439471	-.226763	-.132559	-.077304	
23	0.134667	.0299363	-.135682	.0465094	-.118027	0.10433	-.166076	-.006371	-.065241	-.069344	.0865718	0.115143	
24	0.303396	-.363327	0.345632	0.146472	0.310504	0.239039	.0648779	.0139781	0.329005	0.356583	.0282331	.0318545	
DBS													
17	INNOPIF	IBLWR	OBLWR	INLWR	CLLWR	ACLWR	CORLWR	CORLWR	STLWR	FTPLR	INFLWR	LRNHR	
17	-.020694	.0059992	.0526752	8.9E-04	.0283744	.0255293	0.009198	.0384805	-.050057	-.003008	.0423365	.0645698	
18	-.0.27423	0.309376	0.192182	0.168335	.0080301	.0478568	0.312058	0.275807	0.252473	-.283052	.0971664	0.289332	
19	.0244032	-.218522	-.183535	-.0.05673	.0179392	-.194322	-.221112	.171696	0.180065	0.171058	0.10094	0.25166	
20	0.213635	-.210597	.707932	0.025146	-.163581	-.002507	-.293907	-.225497	-.145136	0.1	0.109294	-.0.25366	
21	.0333915	-.0.30871	-.0.169	.0035012	-.156793	-.151313	.336885	-.359522	-.216319	.0039633	-.397216	-.077304	
22	0.116777	-.186439	-.0.10871	-.0.18439	-.186439	0.183184	-.0.186439	-.0.186439	-.0.186439	-.0.186439	-.0.186439	-.0.186439	
23	0.156114	-.0.13597	-.062093	-.046012	.0774107	-.151726	-.133327	-.130346	-.154568	.0082384	-.0325299	.074634	
24	-.285479	.0224878	.0041647	.0225795	0.1152	.0631728	0.298496	0.30715	.0299652	-.300246	-.0.08771	0.305938	

OBS	_TYPE_	_NAME_	RAGNLEN	INTNDLN	QBR	IDRL	QBRLL	IBRW	QBRW	INPKL	IKNOG	PKML	LRP
25	CORR	APKPS	0.119519	-0.036999	-0.250202	-0.28289	-0.274261	-0.156699	-0.267231	-0.279338	-0.277796	-0.225064	-0.193064
26	CORR	BSAK	0.0612202	0.104175	0.335268	0.343998	0.360168	0.165383	0.307566	0.429038	0.429569	0.250972	0.278812
27	CORR	BSF8	0.0495718	0.0664006	0.297371	0.356665	0.322152	0.11887	0.295404	0.328951	0.347604	0.249201	0.274029
28	CORR	SVNS	0.0418179	0.0459974	0.128479	0.077895	0.078646	-0.018876	-0.032079	0.074465	0.082259	0.062407	0.0291724
29	CORR	NBVC	0.0270535	-0.063115	-0.230535	-0.293399	-0.356134	-0.186756	-0.312953	-0.286094	-0.195052	-0.160405	-0.160593
30	CORR	PIVSV	0.170168	0.340795	-0.336084	-0.300345	-0.366652	-0.032394	-0.196694	-0.217577	-0.211606	-0.192225	-0.215082
31	CORR	PTLLA	0.116031	0.059727	0.241384	0.260701	0.227111	0.0799116	0.211468	0.266296	0.174514	0.226	0.085455
32	CORR	INTLN	0.136587	0.059523	-0.03365	-0.099935	-0.029328	0.0562948	-0.032588	-0.031137	0.028439	-0.093287	0.0841821

OBS	INFL	INFW	VANGS	VANGB	MRDL	SHNL	LIMDL	PKXNL	PKMDL	APKAN	APKPS	BSAK
25	-0.276992	-0.257561	0.0425909	-0.142403	0.181812	-0.060352	0.0975405	0.233994	0.18082	-0.450493	1	-0.78366
26	0.410644	0.381101	0.170809	0.373855	0.366522	-0.321932	-0.61067	-0.21878	0.42333	0.228836	-0.070386	1
27	0.32417	0.308123	0.2414	0.317178	0.17679	0.165586	-0.158423	-0.02412	0.113077	0.018877	-0.08539	0.573242
28	0.0778114	0.126244	0.30961	0.217458	0.0012363	-0.203363	-0.249294	-0.175088	0.0692622	0.183006	0.0188659	0.233528
29	-0.30462	-0.282362	0.121787	0.111251	0.268031	0.146132	0.261028	0.477331	0.158138	-0.164409	0.119314	0.034908
30	-0.300214	-0.260768	0.0973966	0.125272	0.251869	-0.033392	0.036389	0.17195	0.228494	0.045006	0.032661	-0.06124
31	0.269622	0.202481	-0.051093	-0.09312	0.178091	7.9E-04	0.018695	0.169906	0.192091	-0.19521	-0.00341	-0.02007
32	-0.023688	0.008959	-0.077343	-0.042850	0.27161	-0.092849	-0.041677	0.194461	0.279814	0.0896868	0.081824	0.073679

OBS	BSFS	SVNS	NBVC	PIVSV	PTLLA	INTLN	SVLOR	CORLNL	CORLMD	HASL	PARPKML
25	-0.085595	0.018659	0.119314	0.032861	-0.006341	-0.0821824	-0.208479	-0.067869	-0.087591	-0.080573	0.390438
26	0.573242	0.233528	-0.034908	-0.051284	-0.020067	0.018679	0.414887	0.283387	0.170374	0.104889	-0.38176
27	1	0.662501	0.085883	-0.07103	-0.078626	0.0371877	0.379982	0.129384	0.140461	0.109711	-0.15318
28	0.0669091	0.210792	1	0.132349	-0.127096	0.0169807	0.0812955	0.136415	0.061356	-0.112575	0.099676
29	0.0655085	0.010792	1	-0.002699	0.094286	0.054343	0.12745	0.024789	-0.020291	-0.064013	0.140166
30	-0.067703	-0.13539	-0.002029	1	-0.027934	0.0821194	-0.231019	-0.02721	-0.053438	0.031229	0.232305
31	-0.076658	-0.127096	0.094286	-0.027934	1	-0.01777	0.127715	0.167937	-0.017686	0.139683	0.264538
32	-0.0371877	-0.0169807	0.054343	0.0821194	-0.01777	1	-0.01311	-0.022072	-0.100549	-0.066504	0.003399

OBS	TFLLN	DFRS	STAKL	STKDL	STBLN	STBMD	ACKXNL	ACKXMD	WYPAK	GRKXNL	GRKXMD	CINXMD
25	-0.265917	0.292978	-0.292033	-0.075571	-0.294913	-0.108456	-0.107911	-0.189594	-0.368729	-0.305304	-0.108287	0.060661
26	0.158722	0.349896	-0.040651	0.101856	0.115001	0.133568	0.079999	0.289415	0.424828	0.26479	0.05079	
27	0.277021	-0.12292	0.295749	-0.072491	0.17563	0.159333	0.26215	-0.080574	0.034959	0.275992	0.073295	0.115691
28	0.0570673	-0.050794	0.064921	-0.100596	0.107071	-0.048015	-0.018802	-0.069616	0.028875	0.094256	0.052576	-0.04904
29	-0.17932	0.091302	0.39506	-0.03113	-0.274339	-0.20212	-0.16171	0.061345	-0.03022	0.109551	0.03116	0.061021
30	-0.269626	0.235951	-0.216998	-0.002982	-0.193991	0.018891	-0.336623	-0.143992	-0.183517	-0.189277	0.083989	0.16744
31	0.278696	-0.269556	0.263166	0.087058	0.219068	0.110283	0.178816	0.321365	0.170566	0.265406	0.037669	0.17297
32	0.006172	-0.00571	0.033966	-0.00051	0.025074	-0.006977	0.025766	-0.12072	-0.4E-04	0.048826	0.049246	0.176025

OBS	HANDMD	ISLWR	OBLSWR	IRVLWR	GRLLWR	ACILWR	CORLWR	CORLMD	STLLR	TFPLR	INFLWR	LRNMD
25	0.247627	-0.231216	-0.028555	-0.009467	-0.019085	-0.030875	-0.297576	-0.275395	-0.286095	0.309639	-0.197951	-0.269348
26	-0.306811	0.37485	0.185706	0.060547	0.160509	0.020234	0.366872	0.365792	0.369889	0.122339	0.398191	
27	-0.228188	0.261284	0.182411	-0.099532	0.0413204	0.281325	0.266614	0.210438	0.32461	-0.177154	-0.099282	
28	0.031925	0.090686	0.012057	0.077192	0.166092	0.013007	0.084466	0.119613	0.025729	-0.073751	-0.072617	
29	0.360382	-0.269061	-0.151538	0.207821	0.016186	-0.21433	-0.290077	-0.296077	-0.340064	0.251909	0.005474	
30	0.19769	-0.289225	-0.177799	-0.114286	-0.283698	-0.23867	-0.233188	-0.252809	0.125822	-0.046783	-0.172636	
31	0.083892	0.262463	0.018466	0.011111	0.18346	0.111111	0.036935	0.150792	0.273217	0.236514	0.116067	
32	0.085094	-0.056899	0.023786	-0.049651	0.137669	0.095621	0.0087636	-0.023257	0.021132	0.030788	-0.010178	

DBS	TYPE	NAME	RACHEN	INTNDL	NBR	IBRL	ODRL	IBRW	OSRW	INXKL	INXW	PHXL	LBWP
33	CORR	NFLOR	0.009557	0.051688	0.710967	0.794055	0.778244	0.381317	0.685622	0.805284	0.883737	0.567791	0.516846
34	CORR	CORLLN	0.0496334	0.109718	0.350884	0.380794	0.145511	0.068706	0.078713	0.358862	0.280357	0.191320	0.14694
35	CORR	CORLW	0.145677	0.079733	0.141892	0.157740	0.155413	0.196489	0.198419	0.138829	0.14091	0.182553	0.057718
36	CORR	CORLMD	0.025914	0.017235	0.050709	0.080031	0.091647	0.087216	0.078088	0.077977	0.068336	0.037057	0.151721
37	CORR	HASL	0.066265	0.037027	0.699719	0.702848	0.556313	0.132844	0.438835	0.059464	0.602809	0.299811	0.5131
38	CORR	PAKMLN	0.06419	0.034227	0.833951	0.909335	0.82315	0.328457	0.705513	0.989496	0.870109	0.617818	0.62713
39	CORR	TFLN	0.194009	0.044558	0.803315	0.927419	0.787426	0.349445	0.617096	0.914533	0.841852	0.61457	0.595359
40	CORR	DFRS	0.071845	0.013699	0.65605	0.643558	0.473505	0.104978	0.353944	0.627154	0.514407	0.577087	0.506812
DBS	INFL	INFW	VANGS	VANGB	MNDL	SHNL	LINDRL	NKULN	MNDL	APKAN	APKPS	ISAN	
33	0.782067	0.770215	0.022296	0.251687	0.158745	0.171765	0.331566	0.431589	0.096868	0.182401	0.208479	0.416987	
34	0.386137	0.309399	0.003767	0.066816	0.042817	0.022218	0.242456	0.149111	0.098689	0.202933	0.067469	0.287187	
35	0.17341	0.200496	0.064223	0.036558	0.002968	0.106036	0.152217	0.131178	0.082101	0.183554	0.087381	0.170374	
36	0.132885	0.085765	0.117705	0.058341	0.080763	0.054723	0.096808	0.007076	0.086771	0.052708	0.080575	0.104899	
37	0.671264	0.687962	0.087795	0.364179	0.097678	0.318721	0.426333	0.437032	0.245408	0.383629	0.350438	0.328716	
38	0.545111	0.785844	0.039876	0.106859	0.187235	0.282951	0.040422	0.529499	0.105212	0.331881	0.305725	0.425056	
39	0.971302	0.825604	0.032999	0.249712	0.207694	0.186732	0.387053	0.517303	0.133667	0.303396	0.255417	0.398782	
40	0.55992	0.513242	0.057612	0.263857	0.111312	0.23243	0.298059	0.363744	0.029363	0.363327	0.292978	0.249806	
DBS	BSFS	SVINS	NSECV	PINSV	PTLLN	INTLN	NFLOR	CORLW	CORLMD	CORTWD	HASL	PAKMLN	
33	0.379982	0.0812955	0.327845	0.233019	0.127715	0.01131	1	0.164172	0.064048	0.038043	0.536804	0.757331	
34	0.129384	0.136415	0.0842769	0.027271	0.167937	0.072872	0.164172	1	0.359254	0.357289	0.282697	0.386448	
35	0.140481	0.081356	0.002091	0.053834	0.017086	0.108549	0.066046	0.359254	0.500422	0.021257	0.152699		
36	0.109711	0.119575	0.064033	0.031292	0.139683	0.008694	0.038043	0.337289	0.500422	1	0.028182	0.069337	
37	0.215318	0.095676	0.104366	0.232305	0.264538	0.003359	0.258804	0.282697	0.021257	0.028182	1	0.738718	
38	0.28028	0.070841	0.113395	0.231094	0.263509	0.011296	0.75131	0.388448	0.152699	0.069337	0.738718		
39	0.277021	0.0570673	0.137912	0.269596	0.272696	0.008172	0.728526	0.386865	0.172266	0.137535	0.682018	0.904231	
40	0.12252	0.050754	0.095362	0.235951	0.368156	0.030541	0.440411	0.326594	0.015561	0.009708	0.868808	0.74521	
DBS	TFLN	DFRS	STKMLN	STKOLN	STBLN	ST6MD	ACMLN	ACMLW	NYPAC	CRMLN	CRMLW	CRMLMD	
33	0.728526	0.440411	0.215405	0.248725	0.192266	0.409159	0.001836	0.476681	0.762141	0.140915	0.105621		
34	0.386865	0.326594	0.36868	0.141689	0.286135	0.205666	0.254551	0.178859	0.198157	0.389387	0.260794	0.122816	
35	0.172266	0.019507	0.179102	6.10643	0.051751	0.261925	0.13122	0.321508	0.25113	0.163509	0.41091	0.397707	
36	0.135735	0.009708	0.19491	0.090373	0.187262	0.349243	0.199129	0.338444	0.093260	0.133307	0.306487	0.626083	
37	0.682018	0.080286	0.69322	0.328338	0.569182	0.166894	0.399628	0.033055	0.59845	0.699942	0.106364	0.157972	
38	0.946231	0.674521	0.905482	0.488356	0.760643	0.262856	0.519777	0.125146	0.680419	0.971583	0.267766	0.125922	
39	0.611496	1	0.624545	0.297484	0.026863	0.190187	0.29237	0.734444	0.248529	0.600408	0.943088	0.29307	
40				0.291693	0.516956	0.193296	0.289913	0.036534	0.554729	0.63527	0.037268	0.105328	
DBS	MMOFD	IBLWR	ODLWR	INLWR	URLLWR	ACLWR	CORLWR	CORLMDR	STLLDR	TFLPLR	INFLWR	LNFRWR	
33	0.678714	0.642309	0.329481	0.185	0.181892	0.839769	0.76087	0.720009	0.705103	0.594111	0.036218	0.703613	
34	0.147094	0.34459	0.21636	0.20652	0.820588	0.157586	0.306746	0.381102	0.184968	0.248281	0.094428	0.294352	
35	0.176814	0.080381	0.81504	0.00572	0.529916	0.05184	0.032915	0.076519	0.148259	0.072329	0.073261	0.163604	
36	0.038585	0.0276379	0.018987	0.012299	0.089562	0.008479	0.040917	0.038491	0.129917	0.074163	0.0215992	0.100831	
37	0.527008	0.670949	0.408	0.337489	0.20228	0.359267	0.70028	0.684229	0.571118	0.61002	0.030272	0.581384	
38	0.762102	0.837402	0.821335	0.048951	0.314511	0.492511	0.932954	0.919722	0.770463	0.799191	0.021249	0.802475	
39	0.671956	0.797147	0.415971	0.181716	0.297137	0.663057	0.892169	0.900687	0.785682	0.574857	0.071989	0.753388	
40	0.416551	0.633703	0.428586	0.417917	0.134965	0.280798	0.533463	0.671577	0.509118	0.612769	0.007021	0.694011	

085	TYPE	NAME	RACKLN	INTRDLN	NBR	IBRL	ODRL	IBRW	ODRW	INMHL	INRW	PHKL	LBPR
41	CORR	STKMLN	-012133	0298827	0.819678	0.948712	0.829342	0.398215	0.71267	0.922559	0.860386	0.609072	0.61105
42	CORR	STKMLN	-056326	0.211742	0.637438	0.420436	0.261186	0.234067	0.217793	0.232952	0.387097	0.235608	0.205607
43	CORR	STBLN	-013365	-038428	0.648961	0.74182	0.657995	0.300199	0.269685	0.73699	0.691578	0.58132	0.477605
44	CORR	STBLN	0.152107	0.151182	0.33635	0.247819	0.207191	0.22812	0.200535	0.246928	0.292769	0.176476	0.118975
45	CORR	ACKMLN	0.103531	-0.08627	0.432752	0.518625	0.418482	0.118171	0.339316	0.518933	0.487716	0.331754	0.33176
46	CORR	ACKMDL	-010188	-158765	0.954035	0.141258	0.118425	0.205385	0.179812	0.138001	0.152031	0.072015	-0.010081
47	CORR	NYPAC	-127662	0159248	0.550698	0.62315	0.605258	0.364699	0.589494	0.602768	0.589104	0.592909	0.600587
48	CORR	CRMLN	-015405	0774033	0.8346	0.955614	0.820872	0.394671	0.712554	0.936399	0.660282	0.40823	0.600378
085	INFL	INFW	VANGS	VANGB	HMWDL	SHINL	LMDRL	IKMLN	PMWDL	APKAN	APKPS	BSAN	
41	0.48393	0.783955	0432407	0.254149	-195779	-221424	-411082	-0.53733	-113682	0.345632	-292023	0.404651	
42	0.42197	0.343392	0.126733	0.988703	-1.46-04	-0.16747	-0.22605	-1.17372	0.0465094	0.146472	-0.77571	0.101856	
43	0.182814	0.615356	0.043268	0.315389	-182187	205376	-338799	-437036	-113027	0.105004	-254913	0.31201	
44	0.226794	0.329556	-005862	-001692	-021515	-0.02736	-151054	-159265	-010435	0.239039	-100456	0.133968	
45	0.681831	0.642943	0.013422	0.115119	-185365	0.010519	-109654	-288849	-146076	0.064879	-107971	0.235257	
46	0.527971	0.198908	-038326	0.105711	-041046	0.176889	0.795311	-011594	-069671	0.139761	-140504	0.022989	
47	0.995879	0.242326	0.087736	0.137923	-0.15756	-251339	-343379	-439471	-052541	0.329005	-368729	0.209415	
48	0.937671	0.773094	0.938619	0.283878	-179087	-254815	-422469	-526763	-089594	0.354583	-305304	0.424828	
085	BSFS	SVINS	NSECV	PINSV	PTLLN	INTLN	NFLOR	CORLNL	CORMLD	CORTWD	HASL	PAPMPLK	
41	0.255749	0.644921	-355506	-216998	0.263162	0.0035446	0.753927	0.36868	0.175182	0.14941	-693923	0.964542	
42	-0.057291	0.100456	-083433	-002892	0.870758	-060853	0.212405	0.341669	0.10643	0.090373	-328338	0.448326	
43	0.17663	0.107071	-276339	-189991	0.219088	0.0230874	0.484725	0.286135	0.057157	0.187262	-569182	0.760643	
44	0.159333	-0.040413	-0.20212	0.063851	0.110283	-020897	0.199266	0.205466	0.261925	0.342633	-156604	0.262856	
45	0.26215	-0.018802	-191677	-135623	0.178816	0.035566	0.009159	0.254553	0.13182	0.191929	-349628	0.519707	
46	0.085674	0.069616	0.0676345	0.143982	0.121166	0.120752	-001836	0.174859	0.325508	0.338454	-031035	0.125146	
47	0.038589	0.042875	-305922	-145217	0.170966	-9.6E-04	0.478641	0.198157	0.257113	0.0318026	-0.39245	0.664019	
48	0.275942	0.0984256	-305953	-185677	0.265406	0.038826	0.762141	0.389387	0.185309	0.133307	-695942	0.971983	
085	TFLLN	DFRS	STKMLN	STKMLDL	STBLN	STMDL	ACKMLN	ACKMDL	NYPAC	CRMLN	CRMDL	CRNMDL	
41	0.967494	-628565	1	0.462357	0.790631	0.310466	0.557401	0.169288	0.649195	0.978798	0.305669	-119194	
42	0.420663	-297693	0.462357	1	0.388041	0.212102	0.147713	0.091305	0.331957	0.462814	0.315628	0.11415	
43	0.790187	-516958	0.790631	0.388041	1	0.23006	0.552661	0.207808	0.548128	0.77953	0.262003	-274035	
44	0.20237	-143296	0.310466	0.212102	0.23006	1	0.180158	0.145986	0.271799	0.29253	0.515722	0.231556	
45	0.174444	-289913	0.557401	0.147713	0.253661	0.180158	1	0.427101	0.233378	0.500503	0.178906	-173029	
46	0.248529	-033654	0.169288	0.091305	0.307808	0.145986	0.427101	1	0.102249	0.13085	0.324012	0.163452	
47	0.600406	-534729	0.649195	0.331597	0.546128	0.271799	0.233378	0.102249	1	0.638258	0.371209	0.040466	
48	0.943086	-635277	0.797898	0.462814	0.77953	0.29253	0.500503	0.13085	0.638258	1	0.302383	-0.095917	
085	NHMDL	IBLRL	ODLRL	INVLRL	CRMLRL	ACLRL	CORLRL	CORMLRL	STDLRL	TFLPLR	INFLRL	LNFLRL	
41	-722159	0.79647	0.420977	0.158646	0.279807	0.511196	0.927378	0.919216	0.797017	-677733	0.209993	0.704713	
42	-289559	0.301055	0.15820	0.13037	0.291405	0.101564	0.382252	0.373605	-154296	-380628	0.162676	0.341148	
43	-355243	0.621594	0.353121	0.1199	0.504144	0.470908	0.13479	0.789013	0.567484	0.494455	0.141019	0.6101	
44	-157749	0.19567	0.312934	0.091282	0.073578	0.139109	0.184566	0.255389	-134564	-096397	0.254812		
45	-288275	0.665871	0.251599	0.105503	0.172733	0.686057	0.468454	0.521536	0.505269	-007725	-019772	0.391303	
46	-015274	0.110241	-137327	-027562	-018657	-069104	0.029114	0.062723	0.103516	0.14853	0.00233	0.013228	
47	-078487	0.471209	0.248508	0.071102	0.027735	0.204186	0.572756	0.564845	0.051443	-592675	0.662837	0.624026	
48	-733784	0.809198	0.403212	0.160038	0.310469	0.478274	0.95059	0.932191	0.771397	-739524	0.214196	0.789813	

DBS	_TYPE	_NAME	RACHLEN	INTNDLN	NBR	IBRL	OBRL	IBRW	OBRW	INMKL	INMRW	PMKL	LBWP
49	CORR	CRWDND	0.109195	0.23863	0.221586	0.252364	0.173999	0.432685	0.22828	0.216213	0.358455	0.115369	-7.4E-04
50	CORR	CRWDND	-0.051953	0.065193	-0.077662	-0.127287	-0.103584	0.091828	-0.090147	-0.139821	-0.02038	-0.076686	-0.101509
51	CORR	NMRWHD	0.431113	0.133637	-0.642783	-0.754806	-0.703185	-0.449802	-0.62514	-0.751248	-0.777517	-0.51771	-8.84668E
52	CORR	IBLWR	-0.077917	-0.111504	0.725848	0.841207	0.099629	-0.112648	0.130102	0.821486	0.846528	0.591878	0.548905
53	CORR	OBLWR	-0.081899	-0.051204	0.379531	0.403276	0.36635	-0.158512	-0.324229	-0.392665	0.825458	0.35139	0.243305
54	CORR	INVLWR	-0.115259	-0.138146	0.236352	0.166412	-0.086595	-0.39333	-0.116441	-0.186876	-0.202651	0.159319	0.152956
55	CORR	CRLLWR	0.125934	0.166142	0.286499	0.405701	0.046763	-0.027242	-0.031341	0.296714	0.213964	-0.070973	0.124076
56	CCOR	ACLWR	0.115608	-0.111944	0.413884	0.482104	0.385001	0.011133	0.270448	0.446246	0.443493	0.387297	0.365184
DBS	INFL	INFW	VANGS	VANOB	MRWDL	SHWRL	LNWDL	NMLWL	NWMDL	APKAN	APKPS	DSAN	
49	0.282799	0.328869	0.084475	-0.044699	0.072832	-0.051058	-0.213665	-0.065718	0.242331	-0.108287	0.204679		
50	-0.139633	-0.069374	0.106284	-0.059242	0.145284	0.034656	-0.019884	0.120738	0.115143	0.031845	0.006061	0.050879	
51	-0.02853	-0.395832	-0.006644	0.27423	0.204032	0.214632	0.238195	0.516777	0.158114	-0.281479	-0.247627	-0.06581	
52	-0.793529	0.616315	-0.005982	0.309376	-0.214922	-0.210557	-0.30815	-0.508084	-0.13597	0.224218	-0.231216	0.176525	
53	0.393408	0.133972	0.0265752	0.192182	-0.125339	-0.170932	-0.169	-0.234664	-0.669203	0.0641447	-0.082525	0.189705	
54	0.161695	-0.067507	0.51-04	0.168335	0.056715	0.015518	0.020121	-0.021885	-0.446132	-0.025769	-0.095467	0.0062917	
55	0.29813	0.201829	0.0287344	0.0808301	-0.037393	-0.163583	-0.156793	-0.076699	0.0774107	0.1152	-0.01905	0.186069	
56	0.619042	0.596891	0.025923	0.047858	-0.194322	-0.082507	-0.151313	-0.11025	-0.151724	0.063728	-0.038875	0.208634	
DBS	BSPS	SVINS	MSGV	FINSV	PTLLN	INTLN	NFLOR	CORLLN	CORLWD	CORTWD	NASL	PAFMRKL	
49	-0.752265	-0.522376	-0.103116	-0.033989	-0.037669	-0.045566	0.140915	0.260754	0.430951	0.306447	-0.104361	0.267726	
50	-0.115691	-0.049604	-0.681021	0.16744	-0.127897	0.149285	-0.095621	0.128816	0.352787	0.226083	0.157572	-0.125952	
51	-0.288108	-0.03725	0.803282	0.17649	-0.063592	0.0895094	-0.687814	-0.147094	-0.176814	-0.036585	0.527068	-0.762102	
52	-0.029884	-0.094665	-0.225901	-0.224925	0.24303	-0.058699	0.642309	0.346559	0.849381	0.0274379	-0.678985	0.437402	
53	-0.180411	-0.027055	-0.125138	-0.177594	-0.0927519	0.023786	0.309441	0.211636	2.8E-04	0.188887	-0.4458	0.813135	
54	-0.059522	-0.027292	0.207421	-0.114284	0.3422	-0.048661	-0.189584	0.270681	-0.020752	0.032849	-0.339789	0.184951	
55	-0.043204	-0.186092	-0.041688	-0.015048	0.123466	0.137689	0.181892	0.800588	-0.228916	0.095062	-0.28223	0.214511	
56	0.241355	-0.031007	-0.211413	-0.083604	0.111192	-0.089561	0.439769	0.175786	-0.025184	-0.009749	-0.595367	0.482511	
DBS	FTLLN	DFRS	STMKLN	STMKDL	STBLN	STBWD	ACHMKLN	ACHWMD	INVCAG	CRMKLN	CLWMD	CRWMD	
49	0.29307	-0.037688	0.305869	0.315628	0.262003	0.514722	0.178906	0.328012	0.317209	0.302383	1	0.430797	
50	-0.158276	0.102388	-0.119194	0.11415	-0.074933	0.231558	-0.173029	0.163452	0.040646	-0.098917	-0.430797	1	
51	-0.671856	0.116501	-0.728159	-0.289549	-0.55263	-0.165749	-0.284745	-0.015274	-0.574847	-0.737874	-0.225148	0.101038	
52	-0.797147	-0.62703	0.79647	0.501055	0.621594	0.15687	0.465841	0.010281	0.471009	0.099196	0.034741	0.92495	
53	-0.419771	-0.429858	-0.490877	0.15206	0.353121	0.312534	0.251299	-0.137327	0.249789	0.003212	-0.06471	0.06742	
54	-0.187118	-0.171977	0.156646	0.13037	0.1195	-0.091582	0.105503	-0.027582	0.075110	0.160838	-0.290229	0.305956	
55	-0.287137	-0.338063	0.270087	0.097805	0.264144	-0.073718	0.12733	0.18957	-0.027725	0.104869	0.040778	0.887181	
56	-0.663057	-0.288798	0.511146	0.101564	0.470509	0.134109	0.868057	-0.065104	0.204186	0.478274	0.132516	0.802623	
DBS	NMRWHD	IBLWR	OBLWR	INVLWR	CRLLWR	ACLWR	CORLWR	CORLWR	STLWR	FTFLPA	INFLWR	LRNFWR	
49	-0.225148	-0.0314741	-0.0841	-0.229029	-0.060778	-0.0312516	2.3E-04	0.125731	0.114613	-0.136707	-0.132227	0.330787	
50	-0.101038	-0.192493	-0.067462	-0.230596	-0.087381	-0.280643	-0.241772	-0.439462	-0.18558	0.0665131	-0.09305	0.102662	
51	-0.580409	-0.305946	0.14073	-0.093489	-0.07042	-0.707508	-0.698139	-0.608177	-0.113822	-0.145274	-0.874198	0.632048	
52	-0.580409	1	0.518524	0.370809	0.320018	0.49589	0.837284	0.060778	0.598317	-0.036438	0.024038	0.632048	
53	-0.205446	0.518524	0.370809	0.320018	0.49589	0.837284	0.060778	0.598317	-0.036438	0.024038	0.632048	0.23768	
54	0.110073	0.197089	0.398085	0.270087	0.097805	0.264144	-0.073718	0.12733	0.18957	-0.027725	0.104869	0.040778	
55	-0.031895	0.320018	0.21764	0.299473	1	0.187517	0.303891	0.307179	0.10598	-0.203736	0.146819	0.191244	
56	-0.257042	0.495989	0.23838	0.127988	0.187517	1	0.487347	0.532361	0.496621	-0.071736	-0.026447	0.348263	

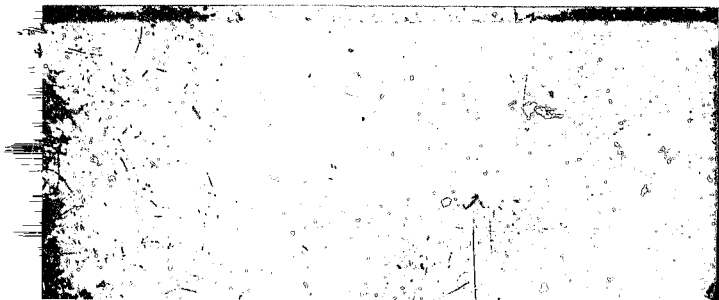
OBS	TYPE	NAME	RACHLN	INTNDLN	NDR	IBRL	OBRL	IBRW	OSRW	INMKL	INMKW	PMKL	LBPR
37	CORR	CORLWR	-0.04771	-0.019077	0.807729	0.920973	0.80947	0.281806	0.679634	0.904085	0.796666	0.599844	0.43892
58	CORR	CORLWR	-0.02039	-0.005937	0.778764	0.901529	0.77477	0.311508	0.669025	0.889776	0.78206	0.574943	0.583412
59	CORR	STLLR	-0.05053	-0.105889	0.619435	0.769317	0.744899	0.260529	0.641771	0.747992	0.69197	0.534281	0.542239
60	CORR	FTFLPR	0.174116	-0.078082	-0.670017	-0.752051	-0.641638	-0.369817	-0.56478	-0.730825	-0.672562	-0.493345	-0.49558
61	CORR	INFLWR	-0.08419	-0.030877	0.176376	0.256559	0.193943	0.035233	0.179152	0.267517	-0.072751	-0.093286	0.15159
62	CORR	LNFRHR	-0.131774	0.064277	0.702575	0.813343	0.73169	0.441616	0.682375	0.609178	0.821955	0.650561	0.485699
OBS	INFL	INFW	VANGS	VAINB	NMMDL	SHINL	LNMDL	NKMLN	NMMDL	APXAN	APXPS	BSAN	
07	0.891361	0.707063	0.009198	0.312058	-0.221112	-0.239097	-0.369885	-0.514484	-0.133327	0.296496	-0.297576	0.356672	
26	0.891921	0.717495	0.038805	0.275607	-0.217696	-0.225099	-0.359522	-0.510871	-0.130366	0.30715	-0.275395	0.362722	
58	0.767996	0.651369	-0.050057	0.825473	-0.217058	-0.144536	-0.316315	-0.486434	-0.154568	0.292652	-0.286095	0.385792	
59	0.320461	-0.517123	-0.031002	-0.263052	0.106882	0.2348	0.357831	0.383189	-0.028384	-0.300846	0.309639	-0.309888	
61	0.26036	-0.344505	0.623962	0.937666	-0.077304	0.109254	0.839632	-0.057993	-0.032559	-0.08971	-0.019751	-0.012239	
62	0.723904	0.64891	0.064599	0.28932	-0.166215	-0.25366	-0.397618	-0.497089	-0.074634	0.305038	-0.249348	0.395191	
OBS	BSPS	SVINS	NSECV	PINSV	PTLLN	INTLN	NFLOR	CORLLN	CORLWD	CORTWD	HASL	PAPHDLN	
57	0.266416	0.830466	-0.298897	-0.23467	0.258935	-0.087636	0.76087	0.306746	0.037915	-0.0404917	-0.706873	0.932954	
58	0.210438	0.119613	-0.294297	-0.231388	0.272727	-0.02357	0.720009	0.307102	0.018639	0.0384491	-0.684229	0.919722	
59	0.320461	0.125725	-0.340059	-0.250009	0.245115	0.021132	0.709103	0.188668	0.145229	0.128917	-0.271108	0.770463	
60	-0.171754	-0.073751	0.221909	0.125822	-0.256514	0.030788	-0.594111	-0.248281	-0.072239	-0.074163	0.610253	-0.799191	
61	-0.09428	-0.02617	-0.025437	-0.0462763	0.105495	-0.010178	0.094428	0.03621	0.094428	-0.07321	0.021999	0.030272	
62	0.891173	-0.020237	-0.32678	-0.176636	0.166087	-0.027128	0.705613	0.294352	0.169404	0.702091	-0.501384	0.802475	
OBS	FTLLN	D7RS	STHKLN	STHQLL	STBLN	DTBWD	ACRHLN	ACDWD	NYPAC	GRHKLN	GRHWD	CRHWD	
37	0.892169	-0.63423	0.227378	0.382252	0.73073	0.152996	0.468054	0.028914	0.572756	0.95059	2.31-ON	-0.241772	
58	0.500487	-0.61137	0.719216	0.375605	0.708073	0.187656	0.591515	0.028123	0.56485	0.931391	0.125731	-0.839602	
59	0.785682	-0.504718	0.797017	-0.154296	0.607484	0.226389	0.505269	0.103216	0.455103	0.737197	0.116163	-0.214558	
60	-0.74637	0.612769	-0.77773	-0.386228	-0.494455	-0.007725	-0.14553	-0.36375	-0.739528	-0.136785	-0.666611	-0.566611	
61	0.717089	-0.07021	0.200993	0.166216	0.181012	0.096397	0.129772	0.00233	0.096397	0.214196	-0.232627	-0.59905	
62	0.753388	-0.494011	0.784723	0.371138	0.610110	0.258412	0.393403	-0.081328	0.624206	0.798913	0.330787	-0.100262	
OBS	NMMDL	10LWR	OBRLR	INVLWR	CORLLWR	ACLLWR	CORLWR	CORLWR	STLLR	FTFLPR	INFLWR	LNFRHR	
57	-0.707398	0.837289	0.451317	0.236185	0.303891	0.487347	1	0.936381	0.775411	-0.739359	0.260968	0.729588	
58	-0.691139	0.300778	0.388464	0.236591	0.307179	0.932361	0.936381	1	0.76099	-0.668607	0.231701	0.795169	
59	-0.608117	0.698317	0.369585	0.099472	0.10988	0.496681	0.775411	1	-0.521212	0.106679	0.639415	0.639415	
60	-0.735222	-0.636006	-0.292669	-0.12673	-0.230736	-0.073736	-0.739539	-0.688607	-0.512212	1	-0.179218	-0.65	
61	-0.185274	0.244308	0.082363	0.926606	0.146419	-0.026847	0.260968	0.231701	0.106679	-0.179218	1	0.175892	
62	-0.878198	0.632048	0.23768	-0.039508	0.191244	0.388263	0.729588	0.729588	0.639415	-0.65	0.175892	1	

APPENDIX IB

**Pearsons and Spearmans Correlation
Coefficients for the Male Data Set**

VARIABLE	N	MEAN	STD DEV	MEAN	MINIMUM	MAXIMUM
RACHLEN	137	53.00189781	15.15477800	51.67000000	18.27000000	95.07000000
INTHOLD	137	5.17983123	1.56590800	5.12000000	1.76000000	17.66000000
LNWQRL	130	3.11652174	0.55569662	3.09500000	2.05000000	5.87000000
MXLRL	130	67.18669505	17.76586185	65.82500000	46.65000000	101.75000000
MXQRL	130	28.15615902	5.54110974	27.67500000	16.35000000	42.65000000
APXAN	130	80.08347826	17.70062043	81.00000000	32.00000000	126.00000000
APXAS	130	3.39753623	1.26397979	3.40500000	0.91000000	7.66000000
BSAN	130	65.16665667	11.19480356	64.00000000	36.00000000	78.00000000
BSPS	130	92.28166567	2.37685420	92.62000000	86.48000000	96.73000000
SVINS	130	1.29559420	0.65664921	1.13000000	0.40000000	4.50000000
INSECV	130	18.56521739	2.89211493	18.00000000	12.00000000	28.00000000
FINSEV	130	39.37782609	16.92912362	26.67000000	1.00000000	73.68000000
FTLLN	130	9.60293613	3.54887603	9.47500000	3.70000000	15.30000000
INTLN	130	10.16666667	3.93757092	9.47300000	3.75000000	23.50000000
NBR	130	5.44130435	0.91735916	5.60500000	3.60000000	7.40000000
PHRL	130	3.30844058	0.77856219	4.03000000	1.15000000	6.48000000
DBRL	130	1.90623188	0.54675580	2.00000000	0.72000000	3.28000000
IBRM	130	0.08899551	0.15718922	0.08400000	0.04100000	1.39000000
OBRY	130	1.03942029	0.20963548	1.03000000	0.38000000	1.76000000
INWDL	130	6.22876812	2.14276936	6.72500000	1.82000000	10.34000000
INWOF	130	0.46177236	1.74747028	5.15000000	1.04000000	5.10000000
PRDL	130	4.77854006	1.89027266	4.91000000	1.12000000	9.38000000
FXBL	130	0.56737850	0.59212384	2.09000000	0.76000000	7.00000000
WFLOR	130	16.75941717	12.61353312	27.10000000	1.00000000	62.00000000
GORLLR	130	1.77926111	0.32796411	1.78000000	1.00000000	2.70000000
CORLVD	130	0.45789823	0.04780515	0.45000000	0.39000000	0.58000000
CORTND	130	0.93123188	0.13619194	0.94000000	0.56000000	1.38000000
LCTPFA	130	3.48199420	0.61426817	3.40000000	1.12000000	5.58000000
INFL	130	8.75097255	2.77777778	5.14000000	1.56000000	16.30000000
INFL	130	9.81086956	2.25501330	7.97500000	4.46000000	16.28000000
PAPKLN	130	4.58166667	1.13882600	4.70000000	2.21000000	7.66000000
FTLLN	130	6.17123188	1.38891763	6.39000000	4.20000000	12.30000000
FXKLN	130	1.33884058	0.36115806	1.57000000	0.68000000	2.48000000
AKKLN	130	6.11976552	0.40121541	6.26000000	1.69000000	10.00000000
STKML	130	7.45804348	1.34529885	7.78000000	3.90000000	11.60000000
STKMLQ	130	0.40528986	0.11392552	0.38000000	0.20000000	0.70000000
VACKLN	130	0.47576261	0.14551426	0.51000000	0.18000000	1.20000000
CHKLN	130	5.99975261	1.19701886	6.88000000	3.07000000	9.52000000
CRWMD	130	0.78949275	0.14211312	0.79500000	0.44000000	1.28000000
CRWMD	130	0.39188406	0.09712773	0.38500000	0.21000000	0.58000000
VANGS	130	57.50726338	7.66377999	58.00000000	40.00000000	90.00000000
VANGS	130	58.10748988	12.86662865	59.50000000	30.00000000	88.00000000
SINFL	130	66.62362067	3.26862694	66.59000000	57.89000000	76.19000000
NNWOFD	137	1.25012517	0.40761435	1.14612884	0.55630250	3.30295948
IBLMR	130	1.23897410	1.23997410	1.75000000	0.75000000	4.03255806
OBLMR	130	1.04520559	0.29469008	1.81774059	1.15135135	2.43478261
INVLNR	130	1.32637831	0.26497561	1.28163949	0.94590164	2.61538462
ORLLMR	130	1.91061005	0.78407821	3.42604896	2.03773385	6.28367692
CORLMR	130	7.71512677	1.42935873	7.37696093	3.07000000	11.56610169
CORLMR	130	15.34664841	3.36321070	15.29697749	6.57191304	26.44444444
STFLR	130	19.66137009	0.46329532	20.09716195	7.02187660	29.57375758
TFPLR	130	1.83171321	0.20126634	1.76507806	1.30815710	2.79674797
INFLMR	130	1.73734999	0.46341873	1.08522648	0.04720050	4.53600991
LNFLMR	137	3.75337175	2.27083412	3.81386135	0.26763727	12.79263313
ALNFLR	130	1.75860096	0.32779224	1.78570533	0.65322591	2.79411765

VARIABLE	N	MEAN	STD DEV	MEDIAN	MINIMUM	MAXIMUM
LCPTCLR	138	0.57637349	0.04780051	0.57679487	0.36482085	0.69680851



PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLEN	INTNDLN	LWHDRL	MKLRL	MKDL	APKAN	APXPS	BSAN	BSPS	SVIRS	NSECV	PINSV	PTLLN
RACHLEN	1.0000 137	0.62298 137	0.11995 137	0.21655 137	0.09721 137	-0.88951 137	-0.10400 137	-0.13755 137	-0.09271 137	-0.00205 137	-0.00811 137	-0.01309 137	0.89736 137
INTNDLN	0.62298 0.0001	1.00000 138	0.04159 137	0.11378 137	0.31137 137	-0.06446 137	-0.12862 137	0.01702 137	-0.34575 137	-0.12597 137	-0.02726 137	0.00681 137	0.22465 137
LWHDRL	0.11995 0.1627	0.04159 0.6049	1.00000 138	0.49513 138	-0.37147 138	-0.46917 138	0.03961 138	-0.49416 138	0.03168 138	-0.29183 138	0.22814 138	0.13763 138	0.05600 138
MKLRL	0.21655 0.0111	0.11378 0.1856	0.49513 0.0001	1.00000 138	0.60490 0.0001	-0.26578 0.0018	0.02024 0.7423	-0.15771 0.0647	0.11979 0.1617	0.04363 0.6116	0.57180 0.0001	0.30774 0.0002	0.36141 0.0001
MKDL	0.09721 0.2584	0.31137 0.4072	-0.37147 0.0001	0.60490 0.0001	1.00000 138	0.11894 0.1680	-0.00239 0.9778	0.27471 0.0011	0.87511 0.3813	0.33278 0.0001	0.38351 0.0001	0.18467 0.0301	0.12340 0.1493
APKAN	-0.88951 0.2977	-0.06446 0.6543	-0.46917 0.0001	-0.26578 0.6016	0.12808 0.1680	1.00000 0.0000	-0.41444 0.0001	0.04506 0.5997	-0.15715 0.0657	0.24308 0.0081	-0.14649 0.0054	-0.07186 0.4022	-0.21592 0.6112
APXPS	-0.10400 -0.2265	-0.12862 0.1342	0.03961 0.6463	0.02824 0.7423	-0.00239 0.9778	-0.41444 0.0001	1.00000 0.0000	0.16600 0.0511	0.20033 0.0185	-0.09492 0.2681	-0.08049 0.5722	0.02279 0.7907	0.33168 0.7109
BSAN	-0.13755 0.1650	0.01702 0.6435	-0.49416 0.0001	-0.15771 0.0647	0.02024 0.7423	0.04506 0.5997	0.16600 0.0511	1.00000 0.0000	0.56081 0.0001	0.08937 0.6676	-0.03407 0.6916	-0.06614 0.4008	
BSPS	-0.09271 0.2813	-0.04675 0.5875	0.03168 0.7126	0.11979 0.1617	0.07511 0.3813	-0.15715 0.0657	0.20033 0.0185	0.56081 0.0001	1.00000 0.0000	-0.06748 0.4317	0.22223 0.0088	0.04565 0.0949	0.15018 0.0787
SVIRS	-0.00205 0.3810	-0.12597 0.1393	-0.12697 0.0005	-0.29183 0.6114	0.03663 0.0001	0.33278 0.1680	0.28308 0.0001	-0.09492 0.2681	0.16997 0.4517	1.00000 0.0000	0.63410 0.0005	-0.04907 0.5676	-0.07074 0.4097
NSECV	0.00811 0.3059	-0.02726 0.7518	0.00681 0.0071	0.22814 0.0001	0.13763 0.0001	0.05600 0.0001	-0.04949 0.0864	0.02823 0.5722	0.23410 0.5676	0.00099 0.0057	0.63421 0.0008	0.51028 0.6904	0.01008 0.0002
PINSV	-0.01309 0.8783	0.00681 0.9330	0.13763 0.1080	0.30774 0.0002	0.18467 0.0301	-0.07186 0.4022	0.08279 0.4062	-0.03407 0.6916	0.04565 0.5949	-0.04907 0.5676	0.03421 0.6904	1.00000 0.0000	-0.04551 0.5961
PTLLN	0.09726 0.2582	0.02465 0.0063	0.05600 0.0007	0.36161 0.0001	0.12340 0.1493	0.21592 0.6112	0.03168 0.7109	-0.06614 0.4008	0.18018 0.4008	-0.07074 0.4097	0.31083 0.0009	-0.04551 0.5961	1.00083 0.0009

PEARSON CORRELATION COEFFICIENTS / PROB > IRI UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLN	INTNDLN	LHWORL	MXLNL	KXMDL	APXAN	APXPS	BSAN	BSFS	SVINS	NSECV	PINSV	PTLLN
INTLN	0.21955 0.0005 137	0.09773 0.2463 137	-0.04573 0.5983 130	0.20377 0.0105 130	0.25848 0.0082 130	0.06601 0.4418 130	-0.10681 0.2124 130	0.00969 0.6115 130	0.02848 0.6894 130	0.23479 0.2636 130	-0.00176 0.7836 130	0.12291 0.1510 130	-0.09683 0.2505 130
NBR	-0.04629 0.5912 137	0.15598 0.0618 137	-0.29206 0.0905 130	-0.40398 0.0001 130	-0.15340 0.0724 130	0.20249 0.0172 130	0.03509 0.6828 130	0.16514 0.1225 130	0.13809 0.1225 130	-0.06502 0.4487 130	-0.13582 0.1133 130	-0.32844 0.0001 130	0.23172 0.0052 130
IDRL	-0.03594 0.5900 137	0.10756 0.2109 137	-0.20763 0.0195 130	-0.35754 0.0001 130	-0.18821 0.0271 130	0.06793 0.4285 130	0.12398 0.7474 130	0.32831 0.0001 130	0.30392 0.0003 130	-0.10248 0.2317 130	-0.09970 0.2446 130	-0.31689 0.0002 130	0.22186 0.0009 130
OBRL	-0.03600 0.6762 137	0.18001 0.0353 137	-0.17132 0.0845 130	-0.28466 0.0006 130	-0.14175 0.0972 130	0.09639 0.2607 130	0.10834 0.2050 130	0.85178 0.0029 130	0.24241 0.0042 130	-0.14135 0.0982 130	-0.14626 0.0859 130	-0.31956 0.0001 130	0.23231 0.0061 130
IRRN	-0.00654 0.9395 137	0.13900 0.1093 137	-0.2559 0.0002 130	-0.23122 0.0061 130	0.09134 0.9876 130	0.05214 0.5435 130	0.15573 0.0602 130	0.22818 0.0071 130	0.08999 0.2939 130	0.11061 0.1905 130	-0.11209 0.1905 130	-0.13898 0.1816 130	0.02341 0.7832 130
OBRIW	0.30452 0.9582 137	0.25116 0.0010 137	-0.12989 0.1289 130	-0.12923 0.0354 130	-0.06129 0.4751 130	0.06957 0.4175 130	0.38944 0.2968 130	0.30404 0.0164 130	0.18220 0.0324 130	-0.19169 0.0293 130	-0.12195 0.1542 130	-0.26394 0.0018 130	0.25474 0.0026 130
INXKL	-0.02380 0.7825 137	0.16461 0.0546 137	-0.20400 0.0161 130	-0.32067 0.0001 130	-0.14614 0.0872 130	0.10849 0.2053 130	0.05104 0.5522 130	0.28215 0.0008 130	0.29943 0.0005 130	-0.10541 0.2142 130	-0.08060 0.1473 130	-0.30760 0.0002 130	0.25142 0.0009 130
INXKM	0.01266 0.6833 133	0.18992 0.0262 137	-0.20410 0.0163 130	-0.34885 0.0001 130	-0.17654 0.0383 130	0.08516 0.3207 130	0.09539 0.2657 130	0.29519 0.0004 130	0.29165 0.0005 130	-0.12843 0.1499 130	-0.13361 0.1188 130	-0.30468 0.0003 130	0.24815 0.0033 130
PKDL	-0.30089 0.9988 137	0.15175 0.0707 137	-0.28911 0.0014 130	-0.30563 0.0005 130	-0.07236 0.3990 130	0.23879 0.0048 130	-0.03072 0.7205 130	0.12710 0.1374 130	0.08446 0.3246 130	-0.36770 0.4302 130	-0.09745 0.2958 130	-0.30635 0.0003 130	0.21286 0.0122 130
UBRP	0.03138 0.6645 137	0.17776 0.0377 137	-0.13220 0.1222 130	-0.17934 0.0353 130	-0.04429 0.4538 130	0.06302 0.4620 130	-0.19486 0.8425 130	0.17112 0.0448 130	0.18022 0.0341 130	-0.05843 0.5230 130	0.00562 0.9478 130	-0.28889 0.0008 130	0.21458 0.0018 130
WFLOR	-0.01758 0.8384 137	0.15753 0.0680 137	-0.13292 0.1202 130	-0.34307 0.0001 130	-0.23630 0.0053 130	0.12942 0.1303 130	0.08007 0.3505 130	0.21369 0.0118 130	0.27908 0.0609 130	-0.14829 0.0626 130	-0.17801 0.0367 130	-0.28463 0.0007 130	0.23853 0.0008 130
CORLLN	-0.16510 0.0539 137	0.03733 0.6889 137	-0.15885 0.0628 130	-0.22139 0.0091 130	-0.05601 0.5141 130	0.07894 0.3098 130	0.05555 0.5175 130	0.01391 0.8821 130	0.06061 0.4802 130	-0.10599 0.2178 130	-0.00327 0.9697 130	-0.26291 0.0018 130	0.19287 0.0234 130
CORLND	0.90343 0.9389 137	0.15113 0.0779 137	-0.12167 0.1551 130	-0.04404 0.0080 130	0.11936 0.1632 130	0.30986 0.9087 130	0.03289 0.7078 130	0.07157 0.4042 130	0.02988 0.7278 130	0.06454 0.3242 130	0.00760 0.9895 130	0.08342 0.3307 130	0.16665 0.0284 130

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLEN	INTNDLH	LIMDR	MLLNL	MMDBL	APKAN	APKPS	BSAN	BSBP	SVINS	NSECV	PINSV	PTLLN
DORTWO	-0.16301 0.5070 137	0.02599 0.7639 137	-0.22808 0.0071 138	-0.28918 0.0006 138	-0.09900 0.6677 136	0.03758 0.0071 138	0.09330 0.2764 138	0.22758 0.0073 138	0.11898 0.1646 138	-0.28712 0.5096 138	-0.06531 0.4966 138	-0.18622 0.0288 138	0.19965 0.0538 138
LCTPFA	-0.05217 0.9489 137	0.10386 0.2271 137	-0.17889 0.6558 138	-0.25933 0.0021 138	-0.10433 0.2233 138	0.08865 0.3012 138	0.10140 0.2367 138	0.11707 0.1715 138	0.14670 0.0860 138	-0.09942 0.2460 138	-0.09904 0.2478 138	-0.24959 0.0032 138	0.16453 0.0538 138
INFW	0.02510 0.7709 137	0.13872 0.1050 137	-0.12972 0.1294 138	-0.26064 0.0014 138	-0.16474 0.0535 138	0.13398 0.1158 138	0.10942 0.2014 138	0.15170 0.0757 138	0.18190 0.0327 138	-0.21308 0.0121 138	-0.21642 0.0108 138	-0.27563 0.0011 138	0.16573 0.0521 138
INFL	-0.00616 0.9430 137	0.13715 0.7100 137	-0.21565 0.0110 138	-0.32717 0.0071 138	-0.14838 0.1055 138	0.11847 0.1055 138	0.04348 0.6122 138	0.22385 0.0083 138	0.22812 0.0071 138	-0.10201 0.2338 138	-0.09148 0.8659 138	-0.30059 0.0003 138	0.20386 0.0186 138
PAPKLN	-0.02333 0.6233 137	0.12971 0.1531 137	-0.21698 0.0106 138	-0.31813 0.0001 138	-0.13276 0.1200 138	0.09024 0.2920 138	0.15143 0.0172 138	0.20057 0.0258 138	0.19288 0.2897 138	-0.09077 0.2997 138	-0.13042 0.1160 138	-0.32195 0.0001 138	0.19451 0.0223 138
TFLLN	-0.04517 0.6002 137	0.09180 0.2860 137	-0.17107 0.0114 138	-0.24628 0.0036 138	-0.09823 0.2880 138	0.09686 0.2466 138	0.07709 0.1273 138	0.13044 0.0015 138	0.14881 0.0015 138	-0.11143 0.1932 138	-0.05413 0.5185 138	-0.26097 0.0019 138	0.18305 0.0316 138
PMKLN	-0.11558 0.1787 137	0.12537 0.1484 137	-0.20676 0.0150 138	-0.26990 0.0014 138	-0.07914 0.3561 138	0.12801 0.1473 138	0.01805 0.8356 138	0.11572 0.1765 138	0.07848 0.3830 138	-0.15531 0.0689 138	-0.15758 0.0649 138	-0.23732 0.0051 138	0.16670 0.0507 138
AMKLN	-0.03995 0.6430 137	0.03883 0.6862 137	-0.00954 0.0136 138	-0.00753 0.0146 138	-0.02089 0.4079 138	0.10850 0.2052 138	0.08630 0.3142 138	0.20194 0.0175 138	0.34284 0.0081 138	-0.02268 0.7918 138	0.03577 0.6770 138	-0.33008 0.0051 138	0.18491 0.0299 138
STWKLN	-0.05190 0.5470 137	0.09812 0.2940 137	-0.18919 0.0263 138	-0.28211 0.0042 138	-0.07575 0.3772 138	0.09931 0.2465 138	0.07865 0.3841 138	0.12925 0.1308 138	0.15523 0.0747 138	-0.11595 0.1756 138	-0.05020 0.5444 138	-0.28989 0.0021 138	0.19728 0.0204 138
STMKLOL	0.02404 0.7803 137	0.24161 0.0045 137	-0.18040 0.0302 138	-0.06894 0.4217 138	0.11659 0.1733 138	0.02102 0.8067 138	0.05495 0.5221 138	0.07333 0.3927 138	-0.03082 0.6851 138	0.02643 0.7583 138	-0.03373 0.6945 138	0.01620 0.8504 138	0.07747 0.8664 138
YACHKLN	0.00354 0.9672 137	-0.10946 0.2029 137	0.10370 0.2261 138	-0.07497 0.3822 138	-0.15783 0.0645 138	0.00941 0.9728 138	0.02990 0.7878 138	0.08697 0.2294 138	-0.03985 0.6426 138	-0.01787 0.8407 138	-0.03187 0.7158 138	-0.06521 0.4473 138	0.12072 0.1584 138
CRMKLN	-0.07789 0.5689 137	0.09351 0.2771 137	-0.19851 0.0196 138	-0.28188 0.0007 138	-0.10806 0.2071 138	0.06664 0.2595 138	0.10385 0.6273 138	0.13884 0.1095 138	0.15742 0.0652 138	-0.10482 0.2288 138	-0.08839 0.3026 138	-0.28997 0.0006 138	0.20438 0.0182 138
CRMKWD	-0.06710 0.8360 137	0.10859 0.2239 137	-0.19305 0.0233 138	-0.21064 0.0131 138	-0.08433 0.6057 138	-0.02056 0.0108 138	0.10370 0.2261 138	0.27042 0.0013 138	0.17635 0.0385 138	-0.11078 0.1998 138	-0.09621 0.9423 138	-0.21172 0.0127 138	0.28926 0.0006 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / NUMBER OF OBSERVATIONS

	RACHLEN	INTNDLN	LIMDRL	NKLLN	NMDDL	APKAN	APKPS	BSAN	BSPS	SVIHS	NSECV	PINSV	PLYLN
GRMWD	-0.00409 0.9651 137	0.01534 0.8586 137	-0.11043 0.1978 138	-0.01972 0.8185 138	0.08029 0.3492 138	-0.04729 0.5818 138	0.13917 0.1035 138	0.16888 0.0060 138	0.16465 0.0534 138	-0.30988 0.1234 138	0.13179 0.1234 138	0.02430 0.7772 138	0.15708 0.0680 138
VANGS	0.15311 0.0735 137	0.12538 0.1943 137	-0.28367 0.0040 138	-0.10988 0.1995 138	0.34200 0.0001 138	0.22271 0.0787 138	-0.13616 0.1113 138	0.18359 0.0310 138	0.05817 0.4980 138	0.43989 0.0001 138	0.28138 0.0008 138	0.38970 0.2924 138	-0.11850 0.1735 138
VANGB	-0.33790 0.0091 137	-0.07534 0.3816 137	-0.31204 0.0002 138	-0.02425 0.7777 138	0.26482 0.0017 138	0.01302 0.6795 138	0.01505 0.8609 138	0.38108 0.8001 138	0.29287 0.0005 138	0.11883 0.1689 138	0.14909 0.0809 138	-0.82164 0.8011 138	0.11282 0.1893 138
SHINL	0.3347 0.7138 137	0.03700 0.6677 137	0.81031 0.6001 138	0.37002 0.0001 138	-0.37040 0.0001 138	-0.32564 0.0001 138	-0.08188 0.3421 138	-0.25100 0.0030 138	0.26590 0.0016 138	-0.27897 0.0013 138	0.23665 0.0052 138	0.09190 0.2837 138	0.28099 0.0008 138
HWNOFHD	0.39420 0.0001 137	0.04337 0.6148 137	0.22717 0.0094 137	0.38800 0.0061 137	0.28371 0.0776 137	-0.19377 0.0233 137	-0.11593 0.1773 137	-0.21288 0.0013 137	-0.20861 0.0443 137	0.16185 0.0588 137	0.34105 0.0045 137	0.76360 0.9519 137	-0.13364 0.1195 137
IBLWR	-0.06824 0.4282 137	0.04282 0.6226 137	-0.18059 0.2804 138	-0.31388 0.0002 138	-0.28972 0.0031 138	0.08368 0.1283 138	0.02229 0.7953 138	0.04701 0.0035 138	0.31378 0.0092 138	-0.05396 0.5236 138	-0.07682 0.3708 138	-0.30888 0.0082 138	0.26483 0.0017 138
OBLWR	-0.09403 0.2744 137	-0.13229 0.1233 137	-0.14391 0.0922 138	-0.27860 0.0009 138	-0.16268 0.0566 138	0.10673 0.2128 138	0.80457 0.9576 138	0.08874 0.3007 138	0.10398 0.2249 138	0.18797 0.0273 138	-0.38701 0.3102 138	-0.12291 0.1509 138	-0.00970 0.9101 138
IMVLR	-0.13331 0.3204 137	-0.16782 0.0505 137	0.01817 0.8323 138	0.10656 0.2135 138	0.09201 0.2831 138	0.02882 0.8085 138	-0.19990 0.0187 138	-0.12447 0.1403 138	-0.08288 0.3139 138	0.12679 0.1386 138	0.19820 0.0198 138	0.11201 0.1509 138	-0.04523 0.1804 138
J. LWR	-0.15594 0.0688 137	-0.04883 0.5949 137	-0.07331 0.3929 138	-0.18886 0.0265 138	-0.13097 0.1237 138	0.06903 0.4211 138	0.02013 0.8147 138	-0.04514 0.8991 138	0.02778 0.7288 138	-0.14934 0.0804 138	-0.01326 0.8773 138	-0.39665 0.0005 138	0.04573 0.3174 138
CORLWR	-0.01084 0.0248 138	-0.30675 0.9377 138	-0.03609 0.6743 138	-0.09442 0.2706 138	-0.05807 0.4987 138	0.12055 0.1590 138	0.01451 0.0659 138	-0.09346 0.2756 138	0.01472 0.7557 138	-0.02196 0.3458 138	-0.08087 0.3272 138	-0.08088 0.3688 138	-0.07838 0.3688 138
CORLWR	-0.07099 0.4047 137	0.05518 0.5212 137	-0.10605 0.2157 138	-0.28728 0.0023 138	-0.18682 0.0509 138	0.12063 0.1587 138	0.01021 0.9054 138	0.00587 0.9455 138	0.03390 0.6759 138	-0.39485 0.2685 138	0.18516 0.0297 138	-0.26764 0.0012 138	0.06967 0.4168 138
STLLBR	0.01893 0.8262 137	-0.09991 0.2894 137	-0.01246 0.6847 138	-0.14482 0.0901 138	-0.18211 0.0575 138	0.07370 0.3903 138	0.02146 0.8027 138	0.10025 0.2307 138	0.18942 0.0261 138	-0.06906 0.4299 138	-0.03679 0.6884 138	-0.16879 0.0476 138	0.07855 0.3590 138
TFPLR	0.35129 0.5517 137	-0.15181 0.0786 137	0.19719 0.0200 138	0.34326 0.0001 138	0.19152 0.0284 138	-0.09196 0.2834 138	-0.13856 0.1051 138	-0.28184 0.8043 138	-0.19010 0.0225 138	0.06320 0.4615 138	0.23823 0.0049 138	0.33436 0.0001 138	-0.16887 0.0504 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLN	INTNDLN	LIMNDLN	NKLN	NKXDL	APKAN	APKPS	BSAN	BSPS	SVINS	NSECV	PKNSV	PTLLN
INFLMR	-0.07433 0.3880 137	-0.14056 0.1014 137	-0.02238 0.7944 138	0.10355 0.1348 138	0.12794 0.2635 138	-0.09588 0.0439 138	-0.17822 0.2198 138	-0.10666 0.1496 138	-0.12333 0.0059 138	0.23138 0.0014 138	0.26892 0.0014 138	0.10109 0.2381 138	-0.05033 0.5577 138
LRNFHR	-0.12086 0.1992 137	0.10966 0.2021 137	-0.15647 0.0679 137	-0.11587 0.0002 137	-0.17844 0.0370 137	0.13798 0.1076 137	0.35681 0.5127 137	0.20345 0.0087 137	0.20413 0.0167 137	-0.16841 0.0492 137	-0.15199 0.0762 137	-0.25831 0.0023 137	0.19045 0.0236 137
ALFMR	0.17188 0.0446 137	-0.06189 0.0725 137	0.12429 0.1464 138	0.26000 0.0021 138	0.13637 0.1107 138	-0.06757 0.8071 138	0.02006 0.7794 138	0.01212 0.8078 138	0.07429 0.3865 138	0.15586 0.0291 138	0.27591 0.0011 138	0.09227 0.2817 138	-0.03775 0.8602 138
LCFFGLR	0.00478 0.9958 137	0.07328 0.3908 137	-0.07328 0.3933 138	-0.13129 0.1248 138	-0.07275 0.3965 138	0.06380 0.4226 138	0.05826 0.5273 138	0.03390 0.6931 138	0.06589 0.4026 138	-0.01995 0.8160 138	-0.14802 0.032 138	-0.05389 0.5369 138	-0.04226 0.6226 138
RACHLN	0.21889 0.0898 137	0.05629 0.5912 137	-0.04594 0.5940 137	-0.06694 0.6762 137	0.00352 0.9399 137	-0.02380 0.7623 137	0.01266 0.8833 137	-0.00039 0.9904 137	0.03738 0.6645 137	-0.01796 0.8384 137	-0.16510 0.0539 137	0.00445 0.9589 137	
INTNDLN	0.09973 0.2863 137	0.19998 0.0618 137	0.10756 0.2109 137	0.18001 0.0393 137	0.13900 0.1053 137	0.05133 0.0030 137	0.16461 0.0546 137	0.18992 0.0262 137	0.15175 0.0767 137	0.17776 0.0377 137	0.15753 0.0680 137	0.03733 0.6889 137	0.15113 0.0779 137
LIMNDLN	-0.04523 0.5983 138	-0.08805 0.8805 138	-0.20763 0.0145 138	-0.17132 0.0445 138	-0.25590 0.0025 138	-0.12969 0.1289 138	-0.20802 0.0164 138	-0.00410 0.0163 138	-0.26911 0.0014 138	-0.13220 0.1222 138	-0.13225 0.1282 138	-0.15885 0.0628 138	-0.12167 0.751 138
NKLN	0.20377 0.0105 138	-0.16386 0.8061 138	-0.35754 0.9001 138	-0.08866 0.0006 138	-0.23120 0.0069 138	-0.17923 0.0354 138	-0.38685 0.0001 138	-0.90562 0.0063 138	-0.17934 0.0003 138	-0.34307 0.0001 138	-0.22139 0.0091 138	-0.04404 0.6080 138	
NKXDL	0.25848 0.0022 138	-0.15310 0.0724 138	-0.18821 0.0271 138	-0.14175 0.0972 138	0.00134 0.9876 138	-0.06129 0.4751 138	-0.14614 0.0383 138	-0.17654 0.0390 138	-0.07236 0.3990 138	-0.06429 0.4538 138	-0.23610 0.0053 138	-0.05601 0.5141 138	0.11936 0.1632 138
APKAN	0.06601 0.4418 138	0.20249 0.0172 138	0.06793 0.4235 138	0.09639 0.2607 138	0.05214 0.5436 138	0.06957 0.4179 138	0.10849 0.2053 138	0.03516 0.3207 138	0.23879 0.0048 138	0.06302 0.1303 138	0.12982 0.3952 138	0.07894 0.9087 138	0.00986 0.9087 138
APKPS	-0.10681 0.2124 138	0.03509 0.6828 138	0.12398 0.1474 138	0.10834 0.2059 138	0.15573 0.0682 138	0.08946 0.2968 138	0.05104 0.3522 138	0.09539 0.2657 138	-0.03078 0.7205 138	-0.03986 0.6425 138	0.08007 0.3505 138	0.05555 0.5175 138	0.03228 0.7070 138
BSAN	0.00969 0.9102 138	0.18514 0.0297 138	0.32831 0.0001 138	0.25178 0.0029 138	0.22818 0.0071 138	0.28404 0.0168 138	0.28216 0.0068 138	0.09519 0.0004 138	0.12710 0.1774 138	0.17112 0.0448 138	0.21369 0.0118 138	0.01931 0.8221 138	0.07157 0.4042 138
BSPS	0.00048 0.8115 138	0.13209 0.1225 138	0.30392 0.0003 138	0.28241 0.0042 138	0.08999 0.2539 138	0.18320 0.0324 138	0.29483 0.0005 138	0.29165 0.0005 138	0.08486 0.3244 138	0.18022 0.0344 138	0.27908 0.6009 138	0.08860 0.8804 138	0.02889 0.7278 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INTLN	NDR	IBRL	ODRL	IBRW	ODRW	INMKL	INMKN	PMKL	LBPR	NFLOR	CORLLN	CORLMD
EVINS	0.83479 0.054 136	-0.06502 0.4087 136	-0.10248 0.2317 136	-0.14135 0.0982 136	-0.11061 0.1985 136	-0.19169 0.0243 136	-0.10641 0.2142 136	-0.12443 0.1459 136	-0.06770 0.4302 136	-0.25443 0.5230 136	-0.14829 0.0825 136	-0.13559 0.2179 136	0.08454 0.3212 136
NSECV	-0.00176 0.9835 136	-0.13542 0.1133 136	-0.09970 0.2046 136	-0.14626 0.0869 136	-0.11209 0.1905 136	-0.18195 0.1542 136	-0.08060 0.3473 136	-0.13341 0.1188 136	-0.09745 0.2555 136	0.80562 0.5478 136	-0.17801 0.0367 136	-0.00882 0.9807 136	0.00760 0.9995 136
PINSV	0.12291 0.1518 136	-0.32844 0.0002 136	-0.31689 0.0002 136	-0.31958 0.0001 136	-0.13994 0.1016 136	-0.26394 0.0010 136	-0.30760 0.0082 136	-0.30468 0.0003 136	-0.10635 0.0003 136	-0.28289 0.0008 136	-0.20463 0.0007 136	-0.26291 0.0918 136	0.08342 0.3307 136
PTLLN	-0.09683 0.2465 136	0.23172 0.0062 136	0.23156 0.0089 136	0.23231 0.0061 136	0.02341 0.7852 136	0.25474 0.0056 136	0.25142 0.0029 136	0.24855 0.0633 136	0.21864 0.0122 136	0.27052 0.0011 136	0.23853 0.0048 136	0.19287 0.0234 136	0.18665 0.0284 136
INTLN	1.00000 0.0000 136	0.81900 0.8249 136	0.05608 0.5137 136	0.06205 0.4696 136	0.16511 0.0530 136	0.85132 0.3421 136	0.07600 0.3756 136	0.09475 0.2690 136	0.02428 0.5174 136	0.09478 0.8950 136	0.01057 0.9081 136	-0.05986 0.4855 136	0.13823 0.1039 136
NDR	-0.01900 0.8249 136	1.00000 0.0000 136	0.08400 0.0001 136	0.80998 0.0001 136	0.56798 0.0001 136	0.74133 0.0001 136	0.80959 0.0001 136	0.82013 0.0001 136	0.85905 0.0001 136	0.38299 0.0001 136	0.01688 0.0001 136	0.59753 0.0001 136	0.26464 0.0017 136
IBRL	0.05608 0.5188 136	0.04660 0.0001 136	1.00000 0.0000 136	0.88612 0.0001 136	0.83943 0.0001 136	0.78590 0.0001 136	0.58899 0.0001 136	0.90108 0.0001 136	0.76584 0.0001 136	0.78388 0.0001 136	0.82474 0.0001 136	0.63827 0.0001 136	0.17853 0.0362 136
ODRL	0.06205 0.4696 136	0.80998 0.0001 136	0.88612 0.0001 136	1.00000 0.0000 136	0.57361 0.0001 136	0.88611 0.0001 136	0.09135 0.0001 136	0.28324 0.0001 136	0.80720 0.0001 136	0.67338 0.0001 136	0.64264 0.0001 136	0.56891 0.0001 136	0.17508 0.0391 136
IBRW	0.16511 0.0530 136	0.56798 0.0001 136	0.62943 0.0001 136	0.37361 0.0001 136	1.00000 0.0000 136	0.62340 0.0001 136	0.64849 0.0001 136	0.65318 0.0001 136	0.35192 0.0001 136	0.51972 0.0001 136	0.52404 0.0001 136	0.35480 0.0001 136	0.25975 0.0021 136
ODRW	0.08132 0.3431 136	0.74133 0.0001 136	0.78598 0.0001 136	0.88611 0.0001 136	0.82340 0.0001 136	1.00000 0.0000 136	0.88185 0.0001 136	0.80067 0.0001 136	0.72520 0.0001 136	0.61013 0.0001 136	0.74742 0.0001 136	0.54388 0.0001 136	0.82902 0.0009 136
INMKL	0.07600 0.3756 136	0.89299 0.0001 136	0.96889 0.0002 136	0.89135 0.0001 136	0.64489 0.0001 136	0.80182 0.0000 136	1.00008 0.0000 136	0.92913 0.0001 136	0.84343 0.0001 136	0.77876 0.0001 136	0.67741 0.0001 136	0.55466 0.0001 136	0.23108 0.0068 136
INMKN	0.09475 0.2465 136	0.82613 0.0001 136	0.90108 0.0001 136	0.88324 0.0001 136	0.65338 0.0001 136	0.80067 0.0001 136	0.82713 0.0001 136	1.00000 0.0000 136	0.79887 0.0001 136	0.72588 0.0001 136	0.82374 0.0001 136	0.47070 0.0001 136	0.24438 0.0039 136
PMKL	0.05624 0.5120 136	0.85995 0.0001 136	0.78884 0.0001 136	0.80720 0.0001 136	0.55192 0.0001 136	0.72513 0.0001 136	0.84343 0.0001 136	0.79887 0.0001 136	1.00008 0.0000 136	0.72710 0.0001 136	0.77820 0.0001 136	0.65209 0.0001 136	0.21692 0.0106 136

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INTLN	NBR	ISBL	ODRL	IBRW	GBRW	INMCL	INMKW	PMKL	LBRP	NFLOR	CORLLN	CORLMD
LBRP	0.00976 0.2990 136	0.68299 0.0001 136	0.72855 0.0001 136	0.87338 0.0001 136	0.51972 0.0001 136	0.61013 0.0001 136	0.77876 0.0001 136	0.72586 0.0001 136	0.72710 0.0001 136	1.00000 0.0001 136	0.66327 0.0001 136	0.51187 0.0001 136	0.28065 0.0001 136
NFLOR	0.01057 0.9021 136	0.81688 0.0001 136	0.82974 0.0001 136	0.80264 0.0001 136	0.52044 0.0001 136	0.74702 0.0001 136	0.87711 0.0001 136	0.92374 0.0001 136	0.77220 0.0001 136	0.56327 0.0001 136	1.00000 0.0001 136	0.46361 0.0001 136	0.13869 0.1048 136
CORLLN	-0.05986 0.4855 136	0.59793 0.0001 136	0.53427 0.0001 136	0.56601 0.0001 136	0.35456 0.0001 136	0.54388 0.0001 136	0.58466 0.0001 136	0.67070 0.0001 136	0.55209 0.0001 136	0.51147 0.0001 136	0.46361 0.0001 136	1.00000 0.0001 136	0.17840 0.0001 136
CORLMD	0.13823 0.1095 136	0.28464 0.0017 136	0.17653 0.0362 136	0.17988 0.0391 136	0.25975 0.0021 136	0.22902 0.0069 136	0.23108 0.0004 136	0.20428 0.0039 136	0.21692 0.0105 136	0.22065 0.0093 136	0.13669 0.1098 136	0.17940 0.1098 136	1.00000 0.0000 136
CORTWD	0.13077 0.1263 136	0.58898 0.0001 136	0.66995 0.0001 136	0.64213 0.0001 136	0.60219 0.0001 136	0.57057 0.0001 136	0.67508 0.0001 136	0.88086 0.0001 136	0.60781 0.0001 136	0.60280 0.0001 136	0.56650 0.0001 136	0.47736 0.0001 136	0.38103 0.0001 136
LCTPFA	-0.00142 0.9868 136	0.73527 0.0001 136	0.75914 0.0001 136	0.73954 0.0001 136	0.46914 0.0001 136	0.67245 0.0001 136	0.77585 0.0001 136	0.68731 0.0001 136	0.90690 0.0001 136	0.56593 0.0001 136	0.69898 0.0001 136	0.67472 0.0001 136	0.14485 0.0914 136
INPW	0.09332 0.2763 136	0.69549 0.0001 136	0.72797 0.0001 136	0.78482 0.0001 136	0.47694 0.0001 136	0.73954 0.0001 136	0.77825 0.0001 136	0.80923 0.0001 136	0.74280 0.0001 136	0.63136 0.0001 136	0.81090 0.0001 136	0.53448 0.0001 136	0.17342 0.0019 136
INPL	0.67690 0.3700 136	0.83924 0.0001 136	0.89922 0.0001 136	0.94437 0.0001 136	0.62119 0.0001 136	0.75841 0.0001 136	0.94202 0.0001 136	0.86323 0.0001 136	0.83018 0.0001 136	0.71614 0.0001 136	0.82166 0.0001 136	0.61981 0.0001 136	0.19711 0.0209 136
PAPMCLN	0.00428 0.6064 136	0.83013 0.0001 136	0.90010 0.0001 136	0.84754 0.0001 136	0.61198 0.0001 136	0.74076 0.0001 136	0.88752 0.0001 136	0.81260 0.0001 136	0.58083 0.0001 136	0.78118 0.0001 136	0.75769 0.0001 136	0.69029 0.0001 136	0.17134 0.0045 136
TFLLN	0.07723 0.3679 136	0.72684 0.0001 136	0.78216 0.0001 136	0.74367 0.0001 136	0.51461 0.0001 136	0.67530 0.0001 136	0.78550 0.0001 136	0.70671 0.0001 136	0.94009 0.0001 136	0.62073 0.0001 136	0.65046 0.0001 136	0.72566 0.0001 136	0.15647 0.0668 136
PMCLN	0.03979 0.6431 136	0.60517 0.0001 136	0.60209 0.0001 136	0.63908 0.0001 136	0.36660 0.0001 136	0.60055 0.0001 136	0.51593 0.0001 136	0.56477 0.0001 136	0.64219 0.0001 136	0.51397 0.0001 136	0.59587 0.0001 136	0.72711 0.0001 136	0.25251 0.0028 136
AMCLN	0.11555 0.1772 136	0.69993 0.0001 136	0.74528 0.0001 136	0.69966 0.0001 136	0.50118 0.0001 136	0.61579 0.0001 136	0.75188 0.0001 136	0.68625 0.0001 136	0.71296 0.0001 136	0.65846 0.0001 136	0.65239 0.0001 136	0.72733 0.0001 136	0.11178 0.1918 136
STPMCLN	0.05460 0.5247 136	0.74181 0.0001 136	0.77091 0.0001 136	0.74231 0.0001 136	0.49909 0.0001 136	0.67889 0.0001 136	0.78178 0.0001 136	0.69436 0.0001 136	0.75811 0.0001 136	0.62269 0.0001 136	0.56382 0.0001 136	0.74681 0.0001 136	0.17277 0.0027 136

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INTLN	NBR	ORCL	ORCL	ORW	ORW	INNOV	INNOV	PKKL	LRRP	NFLOR	CORLH1	CORLH0
STKXLOL	0.05113 0.5915 138	0.4180 0.0001 138	0.25346 0.0001 138	0.21821 0.0112 138	0.40758 0.0001 138	0.25991 0.0001 138	0.37579 0.0011 138	0.20410 0.0163 138	0.31283 0.0001 138	0.27266 0.0012 138	0.13880 0.1177 138	0.36673 0.0001 138	0.28231 0.0008 138
VACHMLN	0.02188 0.0089 138	0.03681 0.6682 138	0.29897 0.0004 138	0.28815 0.0077 138	0.24488 0.0038 138	0.15608 0.0675 138	0.22009 0.0095 138	0.29093 0.0005 138	0.06931 0.4192 138	0.10736 0.2101 138	0.21108 0.0130 138	-0.01201 0.8888 138	-0.28332 0.0168 138
CRKXLN	0.01690 0.0476 138	0.79374 0.0001 138	0.31875 0.0001 138	0.79136 0.0001 138	0.53531 0.0001 138	0.78611 0.0001 138	0.42711 0.0001 138	0.73933 0.0001 138	0.78288 0.0001 138	0.65887 0.0001 138	0.69789 0.0001 138	0.78999 0.0001 138	0.19170 0.0263 138
CRKXMD	0.13536 0.1134 138	0.58034 0.0001 138	0.66980 0.0001 138	0.61124 0.0001 138	0.64617 0.0001 138	0.36096 0.0001 138	0.66773 0.0001 138	0.66646 0.0001 138	0.60861 0.0001 138	0.63205 0.0001 138	0.51853 0.0001 138	0.43252 0.0001 138	0.36967 0.0001 138
CRKXND	0.10833 0.0882 138	0.23918 0.0001 138	0.34938 0.0001 138	0.29032 0.0031 138	0.38933 0.0001 138	0.22726 0.0974 138	0.35860 0.0001 138	0.33595 0.0001 138	0.24124 0.0044 138	0.85661 0.0034 138	0.18437 0.0304 138	0.13949 0.1227 138	0.49382 0.0001 138
VANGS	0.09454 0.2701 138	-0.01546 0.8772 138	-0.05088 0.5334 138	-0.38026 0.3494 138	-0.04719 0.5825 138	-0.07137 0.3944 138	-0.03025 0.7247 138	-0.27575 0.3772 138	-0.01035 0.9041 138	-0.05347 0.5334 138	-0.10536 0.2188 138	-0.00908 0.9150 138	0.06131 0.4751 138
VAROB	-0.06307 0.4624 138	0.31156 0.0002 138	0.28217 0.0008 138	0.29116 0.0005 138	0.17235 0.0432 138	0.24978 0.0038 138	0.30666 0.0003 138	0.25070 0.0004 138	0.28230 0.0004 138	0.18911 0.0192 138	0.22111 0.0092 138	0.33442 0.0001 138	0.18547 0.0298 138
SHINL	-0.09551 0.2051 138	-0.22192 0.6089 138	-0.08564 0.3179 138	-0.09785 0.2555 138	-0.22563 0.0078 138	-0.08936 0.2548 138	-0.09759 0.3330 138	-0.08303 0.3330 138	-0.23551 0.0093 138	-0.09403 0.2527 138	-0.02656 0.7571 138	-0.21270 0.0123 138	-0.14095 0.0992 138
INNOFNU	0.03303 0.7016 137	-0.75083 0.0001 137	-0.76886 0.0001 137	-0.82135 0.0001 137	-0.53844 0.0001 137	-0.78082 0.0001 137	-0.80820 0.0001 137	-0.81272 0.0001 137	-0.75043 0.0001 137	-0.61115 0.0001 137	-0.78881 0.0001 137	-0.87199 0.0001 137	-0.16577 0.0529 137
IBLMR	-0.03877 0.6516 138	0.71138 0.0001 138	0.78913 0.0001 138	0.71365 0.1844 138	0.50001 0.0001 138	0.76374 0.0001 138	0.71164 0.0001 138	0.68840 0.0001 138	0.56156 0.0001 138	0.78886 0.0001 138	0.44217 0.0001 138	0.06798 0.4280 138	0.06798 0.4280 138
OBLMR	-0.02651 0.7574 138	0.23162 0.0063 138	0.26105 0.0020 138	0.29401 0.0009 138	-0.09568 0.2643 138	-0.15993 0.0610 138	0.24184 0.0043 138	0.22052 0.0093 138	0.28662 0.0083 138	0.16853 0.0482 138	0.24773 0.0034 138	0.11997 0.1610 138	-0.03715 0.6053 138
INVLNR	-0.12657 0.1397 138	-0.11204 0.1908 138	-0.18313 0.0316 138	-0.32015 0.0001 138	-0.27815 0.0010 138	-0.35617 0.0001 138	-0.18035 0.0345 138	-0.46629 0.0001 138	-0.16642 0.6111 138	-0.13993 0.1015 138	-0.38918 0.0001 138	0.03407 0.8910 138	-0.16577 0.9136 138
GRLLNR	-0.12867 0.1326 138	0.42993 0.0001 138	0.81204 0.0001 138	0.44190 0.0001 138	0.19886 0.0194 138	0.19597 0.0001 138	0.40249 0.0001 138	0.31786 0.0001 138	0.50840 0.0001 138	0.36069 0.0001 138	0.36883 0.0001 138	0.68977 0.0001 138	-0.35815 0.0001 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:HO=0 / NUMBER OF OBSERVATIONS

	INTLN	NBR	IBRL	GBRL	IBRW	GBRW	INMGL	INMGW	FXDL	LBWP	NFLOR	CORLNL	CORLND
CORLNR	-0.11170 0.1921 136	0.26926 0.19842 136	0.19842 0.10127 136	0.24400 0.40336 136	-0.06759 0.4309 136	0.23227 0.0001 136	0.20708 0.12344 136	0.32478 0.1492 136	0.06529 0.0081 136	0.21826 0.4468 136	0.40436 0.0101 136	-0.15923 0.0001 136	-0.15923 0.0001 136
CORLNR	-0.06828 0.0001 136	0.95569 0.0001 136	0.49920 0.0001 136	0.50021 0.0049 136	0.21812 0.0001 136	0.51388 0.0001 136	0.52215 0.0001 136	0.44168 0.0037 136	0.34175 0.0001 136	0.50106 0.0001 136	0.40368 0.0001 136	-0.11277 0.0001 136	-0.11277 0.0001 136
STLLR	0.07473 0.2887 136	0.45085 0.0774 136	0.53007 0.0001 136	0.34739 0.0001 136	0.02586 0.7613 136	0.29865 0.0005 136	0.32550 0.0001 136	0.36881 0.0001 136	0.22517 0.0079 136	0.21941 0.0007 136	0.29888 0.0001 136	0.09417 0.2700 136	-0.05896 0.2700 136
TFLPLR	0.00220 0.9789 136	-0.76103 0.0001 136	-0.81925 0.0001 136	-0.80476 0.0001 136	-0.58769 0.0001 136	-0.76081 0.0001 136	-0.80803 0.0001 136	-0.78993 0.0001 136	-0.71399 0.0001 136	-0.67543 0.0001 136	-0.78210 0.0001 136	-0.83117 0.0001 136	-0.16154 0.0001 136
INFLMR	-0.64184 0.2861 136	-0.75385 0.0027 136	-0.31660 0.0002 136	-0.43272 0.0001 136	-0.26993 0.0014 136	-0.47849 0.0001 136	-0.33848 0.0001 136	-0.46579 0.0001 136	-0.30170 0.0003 136	-0.26515 0.0038 136	-0.46588 0.0001 136	-0.11012 0.1995 136	-0.07707 0.1995 136
LRNFIN	-0.01907 0.8560 137	0.75844 0.0001 137	0.80390 0.0001 137	0.79994 0.0001 137	0.52783 0.0001 137	0.70758 0.0001 137	0.61879 0.0001 137	0.77683 0.0001 137	0.70151 0.0001 137	0.63008 0.0001 137	0.76176 0.0001 137	0.63560 0.0001 137	0.18423 0.1841 137
ALFPLR	0.03679 0.6684 136	-0.83513 0.0001 136	-0.83746 0.0034 136	-0.32887 0.0001 136	-0.09153 0.2857 136	-0.31466 0.0002 136	-0.28826 0.0036 136	-0.84178 0.0043 136	-0.29378 0.0005 136	-0.14245 0.0956 136	-0.28696 0.0051 136	-0.40373 0.0041 136	-0.25263 0.0023 136
LCFFGLR	-0.05910 0.5439 136	0.26357 0.0018 136	0.27514 0.0011 136	0.28806 0.0039 136	0.08410 0.3768 136	0.48380 0.0040 136	0.29821 0.0004 136	0.36833 0.0015 136	0.19389 0.0213 136	0.87292 0.3557 136	0.38764 0.0006 136	0.06557 0.4448 136	-0.00815 0.9244 136
OKTWD	-0.05217 0.0570 137	-0.05217 0.5040 137	0.02510 0.7709 137	-0.00616 0.9430 137	-0.04233 0.6002 137	-0.04917 0.6002 137	-0.11556 0.1183 137	-0.05995 0.0001 137	-0.05190 0.4470 137	0.02408 0.7803 137	0.00354 0.9672 137	-0.07785 0.1005 137	-0.06710 0.4160 137
INTRDLM	0.02589 0.7639 136	0.10306 0.2271 136	0.13872 0.1988 136	0.13715 0.1100 136	0.12271 0.1531 136	0.09180 0.2850 136	0.12537 0.1444 136	0.03483 0.6862 136	0.09812 0.2840 136	0.24161 0.0045 136	-0.10946 0.8029 136	0.09351 0.2771 136	0.10459 0.2238 136
LNWDR	-0.22604 0.0071 136	-0.78803 0.8358 136	-0.12572 0.1294 136	-0.21585 0.0110 136	-0.01698 0.0106 136	-0.17507 0.0424 136	-0.20676 0.0190 136	-0.20954 0.0136 136	-0.30919 0.8663 136	-0.18040 0.0342 136	-0.10378 0.2281 136	-0.19651 0.0196 136	-0.19305 0.0231 136
MOGLNL	-0.28918 0.0006 136	-0.26948 0.0051 136	-0.26564 0.0014 136	-0.32777 0.0001 136	-0.37003 0.0001 136	-0.26628 0.0001 136	-0.26940 0.0016 136	-0.20753 0.0002 136	-0.26211 0.0002 136	-0.06894 0.4617 136	-0.07487 0.8822 136	-0.28188 0.0007 136	-0.21064 0.0131 136
MOGLD	-0.08808 0.2888 136	-0.10433 0.2233 136	-0.16874 0.0535 136	-0.13838 0.1093 136	-0.13296 0.1200 136	-0.09223 0.2850 136	-0.07911 0.3561 136	-0.02089 0.8079 136	-0.27575 0.1753 136	0.11659 0.1553 136	-0.15783 0.0001 136	-0.10806 0.2071 136	-0.04433 0.6057 136

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

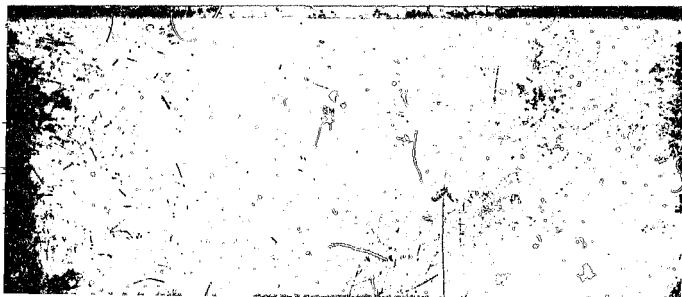
	CORTWD	LCTPFA	INFW	INFL	PAKPKLN	TFLN	FMKLN	AMKLN	STKLN	STMKLOL	VAKKLN	CRKLN	CRKWD
APKAN	0.23758 0.6617 138	0.08869 0.3012 138	0.13398 0.1172 138	0.21447 0.1813 138	0.09034 0.2920 138	0.09886 0.2066 138	0.12401 0.1473 138	0.10850 0.2052 138	0.09831 0.2065 138	0.02102 0.8007 138	0.00941 0.9128 138	0.09664 0.2295 138	-0.02056 0.8708 138
APKPS	0.09330 0.2764 138	0.10140 0.2367 138	0.10982 0.2014 138	0.04348 0.6126 138	0.12393 0.1476 138	0.07709 0.3688 138	0.01805 0.6336 138	0.08630 0.3142 138	0.07464 0.3841 138	0.05495 0.5221 138	0.02990 0.7278 138	0.10345 0.2273 138	0.10370 0.2261 138
BSAN	0.27758 0.0073 138	0.11707 0.1715 138	0.15170 0.0757 138	0.22385 0.0083 138	0.20257 0.0172 138	0.13044 0.1273 138	0.11572 0.1765 138	0.20194 0.0175 138	0.12925 0.1308 138	0.07333 0.3927 138	0.06898 0.2998 138	0.13684 0.1899 138	0.27042 0.0013 138
BSPS	0.11898 0.1046 138	0.14670 0.0860 138	0.18190 0.0327 138	0.22812 0.0071 138	0.19286 0.0219 138	0.14881 0.0815 138	0.07484 0.3830 138	0.24284 0.0041 138	0.15223 0.0747 138	-0.03482 0.6857 138	0.03985 0.6426 138	0.15742 0.0652 138	0.17635 0.0385 138
SVINS	-0.08712 0.1094 138	-0.09982 0.2460 138	-0.21308 0.0121 138	-0.10201 0.2130 138	-0.09077 0.2897 138	-0.11143 0.1932 138	-0.15531 0.0689 138	-0.02263 0.0689 138	-0.11596 0.1756 138	0.02643 0.7583 138	-0.01727 0.8407 138	-0.10452 0.2224 138	-0.11078 0.1958 138
HSECV	-0.06531 0.4866 138	-0.09904 0.2478 138	-0.21842 0.0188 138	-0.08448 0.2859 138	-0.13442 0.1160 138	-0.05543 0.5185 138	-0.15758 0.0649 138	0.03577 0.6770 138	-0.05204 0.5444 138	-0.03373 0.6945 138	-0.03127 0.7153 138	-0.08839 0.3026 138	-0.00621 0.8423 138
PINSV	-0.18622 0.0258 138	-0.24954 0.0032 138	-0.27563 0.0011 138	-0.30059 0.0063 138	-0.32195 0.0007 138	-0.26207 0.0019 138	-0.23732 0.0051 138	-0.33008 0.0081 138	-0.25989 0.0021 138	0.01620 0.8504 138	-0.06521 0.4473 138	-0.28997 0.0006 138	-0.21112 0.0127 138
PTLLN	0.19945 0.0189 138	0.16383 0.0588 138	0.16573 0.0921 138	0.20366 0.0166 138	0.19451 0.0223 138	0.18305 0.0316 138	0.16670 0.0507 138	0.18491 0.0299 138	0.19728 0.0204 138	0.07747 0.3664 138	-0.12072 0.1544 138	0.20438 0.0162 138	0.25826 0.0006 138
INTLN	0.13077 0.1283 138	-0.00142 0.9868 138	0.09332 0.2763 138	0.07690 0.1700 138	0.04424 0.8064 138	0.07723 0.3679 138	0.03979 0.6431 138	0.11555 0.1772 138	0.05460 0.5247 138	0.05113 0.5515 138	0.28186 0.0089 138	0.01650 0.8476 138	0.13346 0.1134 138
NBR	0.58656 0.0027 138	0.73527 0.0207 138	0.69549 0.0001 138	0.83928 0.0001 138	0.83013 0.0001 138	0.72884 0.0001 138	0.84517 0.0001 138	0.68993 0.0001 138	0.74141 0.0001 138	0.41830 0.7301 138	0.33681 0.6682 138	0.79374 0.0001 138	0.58034 0.0001 138
IBRL	0.66995 0.0001 138	0.75914 0.0001 138	0.72797 0.0001 138	0.89822 0.0001 138	0.90810 0.0001 138	0.78216 0.0001 138	0.60209 0.0001 138	0.74528 0.0001 138	0.77091 0.0001 138	0.25346 0.0027 138	0.28997 0.0004 138	0.81895 0.0001 138	0.66980 0.0001 138
ORRL	0.84211 0.0001 138	0.73994 0.0001 138	0.78482 0.0001 138	0.84437 0.0001 138	0.94754 0.0001 138	0.74367 0.0001 138	0.63908 0.0001 138	0.69966 0.0001 138	0.74267 0.0001 138	0.21521 0.0112 138	0.22615 0.0017 138	0.75136 0.0001 138	0.61124 0.0001 138
LSW	0.68249 0.0001 138	0.86914 0.0001 138	0.47694 0.0001 138	0.62119 0.0001 138	0.61159 0.0001 138	0.51461 0.0001 138	0.36660 0.0001 138	0.50118 0.0001 138	0.40999 0.0001 138	0.40758 0.0001 138	0.24488 0.0038 138	0.53531 0.0001 138	0.64617 0.0001 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CORTWD	LCTPFA	INFW	INFL	PAPKLN	TFLN	FOLKLN	AMKLN	STKLN	STMKLOL	VACKLN	CRKLN	CRKMD
DBRW	0.7057 0.0001 138	0.6785 0.0001 138	0.7395 0.0001 138	0.7581 0.0001 138	0.7807 0.0001 138	0.6753 0.0001 138	0.6005 0.0001 138	0.6157 0.0001 138	0.6769 0.0001 138	0.2599 0.0001 138	0.1568 0.0001 138	0.7261 0.0001 138	0.5609 0.0001 138
INMKL	0.6759 0.0001 138	0.7786 0.0001 138	0.7786 0.0001 138	0.9022 0.0001 138	0.8875 0.0001 138	0.7850 0.0001 138	0.6159 0.0001 138	0.7518 0.0001 138	0.7817 0.0001 138	0.2759 0.0001 138	0.2209 0.0001 138	0.8211 0.0001 138	0.6677 0.0001 138
INMGW	0.6806 0.0001 138	0.6873 0.0001 138	0.8093 0.0001 138	0.8632 0.0001 138	0.8126 0.0001 138	0.7067 0.0001 138	0.7647 0.0001 138	0.6889 0.0001 138	0.6988 0.0001 138	0.2010 0.0001 138	0.2803 0.0001 138	0.7393 0.0001 138	0.6686 0.0001 138
PKKL	0.6074 0.0001 138	0.7069 0.0001 138	0.7420 0.0001 138	0.8893 0.0001 138	0.8963 0.0001 138	0.7893 0.0001 138	0.6421 0.0001 138	0.7129 0.0001 138	0.7341 0.0001 138	0.3383 0.0001 138	0.8691 0.0001 138	0.7820 0.0001 138	0.6086 0.0001 138
LBRP	0.6022 0.0001 138	0.5693 0.0001 138	0.6136 0.0001 138	0.7164 0.0001 138	0.7218 0.0001 138	0.6207 0.0001 138	0.9138 0.0001 138	0.8546 0.0001 138	0.6226 0.0001 138	0.3786 0.0001 138	0.1876 0.0001 138	0.6540 0.0001 138	0.6305 0.0001 138
BFLO	0.5685 0.0001 138	0.5589 0.0001 138	0.8109 0.0001 138	0.8216 0.0001 138	0.7876 0.0001 138	0.6586 0.0001 138	0.5358 0.0001 138	0.6529 0.0001 138	0.6532 0.0001 138	0.1338 0.0001 138	0.2110 0.0001 138	0.6972 0.0001 138	0.5163 0.0001 138
CORLLN	0.4773 0.0001 138	0.6742 0.0001 138	0.6348 0.0001 138	0.6198 0.0001 138	0.6902 0.0001 138	0.7266 0.0001 138	0.7271 0.0001 138	0.7273 0.0001 138	0.7481 0.0001 138	0.3667 0.0001 138	-0.0101 0.0001 138	0.7890 0.0001 138	0.4325 0.0001 138
CORLWD	0.3810 0.0001 138	0.1425 0.0918 138	0.1732 0.0819 138	0.1971 0.0805 138	0.1714 0.0445 138	0.1567 0.0668 138	0.2551 0.0028 138	0.1178 0.1918 138	0.1727 0.0427 138	0.2831 0.0008 138	-0.2832 0.0168 138	0.1917 0.0243 138	0.3686 0.0001 138
CORTWD	1.0000 0.0000 138	0.4824 0.0001 138	0.4894 0.0001 138	0.6012 0.0001 138	0.5985 0.0001 138	0.4717 0.0001 138	0.4449 0.0001 138	0.5348 0.0001 138	0.4639 0.0001 138	0.1345 0.1162 138	0.2187 0.0102 138	0.5361 0.0001 138	0.6616 0.0001 138
LCTPFA	0.4824 0.0001 138	1.0000 0.0000 138	0.7691 0.0000 138	0.8634 0.0001 138	0.8729 0.0001 138	0.9261 0.0001 138	0.7369 0.0001 138	0.7564 0.0001 138	0.9326 0.0001 138	0.2167 0.1809 138	0.1809 0.0001 138	0.9567 0.0001 138	0.3894 0.0001 138
INFW	0.4894 0.0001 138	0.7691 0.0000 138	1.0000 0.0000 138	0.8272 0.0001 138	0.7945 0.0001 138	0.7924 0.0001 138	0.6783 0.0001 138	0.7844 0.0001 138	0.7377 0.0001 138	0.0680 0.8227 138	0.3023 0.0003 138	0.7896 0.0001 138	0.3959 0.0001 138
INFL	0.6012 0.0001 138	0.8634 0.0001 138	0.8272 0.0001 138	1.0000 0.0000 138	0.9812 0.0001 138	0.8998 0.0001 138	0.6783 0.0001 138	0.8292 0.0001 138	0.8938 0.0001 138	0.3706 0.0013 138	0.2560 0.0024 138	0.9038 0.0001 138	0.5857 0.0001 138
PAPKLN	0.5681 0.0001 138	0.8779 0.0001 138	0.7936 0.0001 138	0.9212 0.0001 138	1.0000 0.0000 138	0.9228 0.0001 138	0.7481 0.0001 138	0.8558 0.0001 138	0.9207 0.0001 138	0.2560 0.0001 138	0.2379 0.0001 138	0.9473 0.0001 138	0.5770 0.0001 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CORTVD	LCTPFA	INFW	INFL	PAFCKLN	TFLN	FMKLN	AMKLN	STKLN	STKLOL	VACHLN	CRKLN	CRKMD
TFLN	0.47147 0.0001 138	0.92631 0.0001 138	0.79246 0.0001 138	0.89998 0.0001 138	0.92284 0.0001 138	1.08000 0.0000 138	0.79505 0.0001 138	0.76594 0.0001 138	0.39470 0.0001 138	0.28101 0.0008 138	0.28000 0.0008 138	0.96313 0.0001 138	0.43346 0.0001 138
FMKLN	0.44492 0.0001 138	0.73696 0.0001 138	0.67033 0.0001 138	0.87883 0.0001 138	0.74831 0.0001 138	0.79505 0.0001 138	1.00000 0.0000 138	0.64597 0.0001 138	0.81233 0.0001 138	0.26649 0.0016 138	0.05727 0.5046 138	0.80757 0.0001 138	0.36865 0.0001 138
AMKLN	0.53402 0.0001 138	0.75694 0.0001 138	0.72804 0.0001 138	0.82962 0.0001 138	0.85568 0.0001 138	0.86594 0.0001 138	0.64597 0.0000 138	1.00000 0.0000 138	0.86184 0.0001 138	0.28820 0.0886 138	0.24848 0.0053 138	0.85402 0.0001 138	0.51046 0.0001 138
STKLN	0.46397 0.0001 138	0.93264 0.0001 138	0.78377 0.0001 138	0.89514 0.0001 138	0.92067 0.0001 138	0.89470 0.0001 138	0.81233 0.0001 138	0.86184 0.0001 138	1.00000 0.0000 138	0.29962 0.0001 138	0.20013 0.0186 138	0.96907 0.0001 138	0.43230 0.0001 138
STKLOL	0.12425 0.1162 138	0.21647 0.0108 138	0.06880 0.4227 138	0.87066 0.0013 138	0.35560 0.0001 138	0.28101 0.0008 138	0.26644 0.0016 138	0.28679 0.0006 138	0.29962 0.0004 138	1.00000 0.0000 138	-0.23345 0.0029 138	0.32032 0.0001 138	0.30817 0.0002 138
VACHLN	0.21817 0.0102 138	0.10580 0.0003 138	0.38237 0.0003 138	0.85600 0.0005 138	0.23079 0.0005 138	0.29000 0.0006 138	0.85727 0.5046 138	0.34684 0.0035 138	0.20013 0.8186 138	-0.23345 0.0029 138	1.00000 0.0000 138	0.17946 0.0352 138	0.12639 0.1396 138
CRKLN	0.33615 0.0001 138	0.85667 0.0001 138	0.78962 0.0001 138	0.98858 0.0001 138	0.86373 0.0001 138	0.86313 0.0001 138	0.80757 0.0001 138	0.85422 0.0001 138	0.56907 0.0001 138	0.32032 0.0001 138	0.17946 0.0352 138	1.00000 0.0000 138	0.46041 0.0001 138
CRKMD	0.26396 0.0001 138	0.34934 0.0001 138	0.39959 0.0001 138	0.58657 0.0001 138	0.57770 0.0001 138	0.43746 0.0001 138	0.36865 0.0001 138	0.51046 0.0001 138	0.43230 0.0001 138	0.30817 0.0002 138	0.12639 0.1396 138	0.44041 0.0001 138	1.00000 0.0000 138
CRKMD	0.84780 0.0001 138	0.05961 0.8878 138	0.08717 0.3003 138	0.23380 0.0028 138	0.20394 0.0104 138	0.08451 0.3244 138	0.00605 0.9439 138	0.18366 0.0311 138	0.08093 0.8458 138	0.29667 0.0008 138	0.83201 0.7004 138	0.14597 0.0876 138	0.56893 0.0001 138
VANGS	-0.11080 0.1958 138	-0.00090 0.9916 138	-0.0173 0.2542 138	-0.01831 0.8677 138	-0.05474 0.5237 138	-0.30462 0.9571 138	-0.03555 0.6789 138	-0.03660 0.6793 138	-0.00051 0.9952 138	0.82889 0.0001 138	-0.06496 0.1358 138	-0.01340 0.8761 138	-0.11921 0.1784 138
VANGB	0.22354 0.0004 138	0.28400 0.0007 138	0.17949 0.0352 138	0.26681 0.0005 138	0.29918 0.0004 138	0.27640 0.0002 138	0.36872 0.0003 138	0.30460 0.0003 138	0.30529 0.0003 138	0.20203 0.0173 138	0.20462 0.0161 138	0.33473 0.0001 138	0.17861 0.0361 138
SHIRL	-0.19250 0.6237 138	-0.15811 0.0640 138	-0.10007 0.2429 138	-0.13779 0.1070 138	-0.15720 0.8656 138	-0.16389 0.0528 138	-0.20418 0.0163 138	-0.16732 0.0494 138	-0.17610 0.0366 138	-0.20490 0.0159 138	-0.08520 0.8204 138	-0.17680 0.0393 138	-0.14038 0.1305 138
NNNOFND	-0.64404 0.0001 137	-0.70097 0.0001 137	-0.79059 0.0001 137	-0.77435 0.0001 137	-0.78208 0.0001 137	-0.71043 0.0001 137	-0.64827 0.0001 137	-0.64133 0.0001 137	-0.70535 0.0001 137	-0.16492 0.0541 137	-0.26829 0.0019 137	-0.75531 0.0001 137	-0.52679 0.0001 137



PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:HO=0 / NUMBER OF OBSERVATIONS

	CORTUO	LCTFFA	IMFW	INFL	PAPMKLN	TFLN	FMKLN	AMKLN	STMKLN	STMKOL	VACMKLN	GRMKLN	GRMKWD
IDLWR	0.44372 0.0001 138	0.64479 0.0001 138	0.62216 0.0001 138	0.71138 0.0001 138	0.72419 0.0001 138	0.63611 0.0001 138	0.53001 0.0001 138	0.59239 0.0001 138	0.63440 0.0001 138	0.05357 0.5326 138	0.19837 0.0197 138	0.67593 0.0001 138	0.40065 0.0001 138
OBLWR	0.17959 0.0231 138	0.18625 0.0270 138	0.11779 0.1689 138	0.23267 0.0060 138	0.19714 0.0205 138	0.19323 0.0232 138	0.16509 0.0530 138	0.21948 0.0096 138	0.19027 0.0294 138	0.00402 0.9687 138	0.09267 0.2797 138	0.19840 0.0197 138	0.13969 0.1032 138
INVLWR	-0.19906 0.0193 138	-0.13808 0.1227 138	-0.49356 0.0001 138	-0.16653 0.0509 138	-0.17861 0.0361 138	-0.13709 0.1089 138	-0.12013 0.1605 138	-0.08824 0.3034 138	-0.10503 0.2202 138	0.14586 0.0078 138	-0.35829 0.0001 138	-0.12580 0.1415 138	-0.15806 0.0627 8
CRLWR	0.29814 0.0022 138	0.55086 0.0001 138	0.39762 0.0001 138	0.47213 0.0001 138	0.55038 0.0001 138	0.59014 0.0001 138	0.54105 0.0001 138	0.61263 0.0001 138	0.60108 0.0001 138	0.19430 0.0224 138	0.08478 0.3228 138	0.68959 0.0001 138	0.21840 0.0101 138
CORLWR	-0.27568 0.0011 138	0.61728 0.0001 138	0.41363 0.0001 138	0.34615 0.0001 138	0.40888 0.0001 138	0.36435 0.0001 138	0.45933 0.0001 138	0.38228 0.0001 138	0.55889 0.0001 138	0.06555 0.4469 138	0.04661 0.5713 138	0.54625 0.0001 138	-0.45188 0.0001 138
CORLWR	0.13910 0.1037 138	0.73069 0.0001 138	0.63149 0.0001 138	0.24128 0.0001 138	0.69845 0.0001 138	0.38116 0.0001 138	0.69979 0.0001 138	0.63476 0.0001 138	0.78955 0.0001 138	0.11318 0.1863 138	0.12636 0.1335 138	0.77727 0.0001 138	0.07090 0.4086 138
STLLWR	0.19736 0.0203 138	0.48404 0.0001 138	0.50290 0.0001 138	0.89151 0.0001 138	0.31522 0.0002 138	0.39760 0.0001 138	0.23704 0.0001 138	0.32277 0.0001 138	0.37827 0.0001 138	-0.69918 0.0001 138	0.36398 0.0001 138	0.39638 0.0001 138	0.04952 0.5720 138
TFLPLR	-0.59432 0.0001 138	-0.56323 0.0001 138	-0.65226 0.0001 138	-0.69034 0.0001 138	-0.81338 0.0001 138	-0.58188 0.0001 138	-0.50527 0.0001 138	-0.56740 0.0001 138	-0.55229 0.0001 138	-0.36229 0.0001 138	-0.11850 0.0001 138	-0.64503 0.0001 138	-0.62867 0.0001 138
INFLWR	-0.20214 0.0174 138	-0.33119 0.0081 138	-0.70655 0.0001 138	-0.31846 0.0001 138	-0.35786 0.0001 138	-0.31863 0.0001 138	-0.29751 0.0008 138	-0.23615 0.0053 138	-0.29322 0.0005 138	0.13511 0.1196 138	-0.33798 0.0001 138	-0.51610 0.0002 138	-0.11752 0.1698 138
LRNFWR	0.61728 0.0001 138	0.72948 0.0001 138	0.73669 0.0001 138	0.41678 0.0001 138	0.73518 0.0001 138	0.24695 0.0001 138	0.64542 0.0001 138	0.70930 0.0001 138	0.74664 0.0001 138	0.31265 0.0001 138	0.22559 0.0001 138	0.78152 0.0001 138	0.55357 0.0001 138
ALFMLR	-0.17691 0.0358 138	-0.43818 0.0001 138	-0.37391 0.0001 138	0.34332 0.0001 138	-0.41710 0.0001 138	-0.80208 0.0001 138	-0.12155 0.0001 138	-0.48990 0.0001 138	-0.37392 0.0001 138	0.04975 0.5623 138	-0.83513 0.0001 138	-0.86700 0.0001 138	-0.66700 0.0001 138
LCPFLR	-0.02417 0.7784 138	0.66043 0.0001 138	0.42419 0.0001 138	0.32881 0.0001 138	0.43721 0.0001 138	0.27063 0.0013 138	0.18892 0.0299 138	0.43817 0.0001 138	-0.13723 0.1085 138	0.14919 0.0001 138	0.42762 0.0001 138	-0.17570 0.0001 138	0.03933 0.138 138
GRMKLN	0.00409 0.9621 137	0.15341 0.0735 137	-0.23790 0.0051 137	0.03197 0.7108 137	0.39420 0.0001 137	-0.06824 0.4282 137	-0.09403 0.2744 137	-0.13381 0.1204 137	-0.19594 0.0688 137	-0.01864 0.8284 137	-0.07099 0.4097 137	0.01893 0.8562 137	0.35129 0.5517 137

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CRHMD	VANDS	VANOB	SHNL	RHMDMD	BLMR	OBBLR	INVLWR	CLLWR	COBLWR	COHMLWR	STLLBR	TFLPLR
INTDRL	0.31536 0.8586 137	0.12538 0.1443 0.3816 137	-0.07534 0.6677 137	0.33700 0.6180 137	0.04337 0.6180 137	0.04242 0.6226 137	-0.13229 0.1233 137	-0.15742 0.0505 137	-0.05482 0.5949 137	-0.06573 0.9376 137	0.05518 0.5219 137	-0.09991 0.2434 137	-0.13181 0.0766 137
LMDRL	-0.11013 0.1972 138	-0.29167 0.0040 138	-0.31244 0.0032 138	0.61631 0.0001 138	0.22117 0.0094 137	-0.10057 0.2604 138	-0.14391 0.0922 138	0.01817 0.8325 138	-0.07331 0.3929 138	-0.03609 0.6743 138	-0.10605 0.2157 138	-0.01266 0.8847 138	0.19719 0.0204 138
MDLNL	-0.01972 0.0185 138	0.10986 0.1995 138	-0.02425 0.7777 138	0.37002 0.8001 138	0.39000 0.0001 138	-0.31368 0.0002 138	-0.27860 0.0009 138	0.10656 0.2135 138	-0.16886 0.0265 138	-0.09442 0.2706 138	-0.25786 0.0021 138	-0.14482 0.0901 138	0.34326 0.0001 138
MDL	0.00620 0.3492 138	0.39200 0.0001 138	0.26842 0.0017 138	-0.27048 0.0001 138	0.20371 0.0170 137	-0.24978 0.0031 138	-0.16658 0.0566 138	0.09201 0.2831 138	-0.13097 0.1257 138	-0.09007 0.4987 138	-0.16642 0.0505 138	-0.16211 0.0575 138	0.19152 0.0244 138
APKAN	-0.0477 0.74616 138	0.22271 0.8795 138	-0.01302 0.8795 138	-0.32568 0.0001 138	-0.19377 0.0233 137	0.08784 0.3283 138	0.10673 0.2128 138	0.02082 0.8005 138	0.06903 0.4211 138	0.12095 0.1590 138	0.12063 0.1587 138	0.07370 0.3903 138	-0.09196 0.2834 138
APKPS	0.13177 0.0735 138	-0.13616 0.3773 138	0.01505 0.8609 138	-0.08148 0.3421 138	-0.11593 0.1773 138	0.02229 0.7953 138	-0.10990 0.9576 138	0.00457 0.0187 138	0.02013 0.8147 138	0.01451 0.8659 138	0.01021 0.9024 138	0.02146 0.8027 138	-0.13895 0.1051 138
BSAN	0.16868 0.0480 138	0.16369 0.0310 138	0.32109 0.0001 138	-0.25100 0.0030 138	-0.27288 0.0013 138	0.24701 0.0035 138	0.08874 0.3007 138	-0.12447 0.1458 138	-0.04514 0.5991 138	-0.09366 0.2756 138	0.00587 0.9455 138	0.10075 0.2397 138	-0.24144 0.0043 138
BSPS	0.14645 0.0536 138	0.05817 0.4980 138	0.29287 0.0005 138	0.26590 0.0016 138	-0.20881 0.0113 138	0.81176 0.0002 138	0.10398 0.2249 138	-0.08288 0.3339 138	0.02978 0.7288 138	0.02672 0.7557 138	0.03590 0.6759 138	0.16942 0.0261 138	-0.19010 0.0255 138
SVINS	-0.00942 0.9990 138	0.83989 0.0001 138	0.17833 0.1669 138	-0.27097 0.0013 138	0.16185 0.0580 138	-0.05396 0.5295 138	0.18797 0.0271 138	0.12679 0.1384 138	-0.14934 0.0804 138	-0.02195 0.7982 138	-0.00945 0.2668 138	-0.08906 0.8009 138	0.06320 0.4413 138
NSCDV	0.13179 0.1231 138	0.28138 0.0008 138	0.19009 0.0809 138	0.23865 0.0092 138	0.28105 0.0045 138	-0.07682 0.3705 138	-0.08701 0.3107 138	0.19820 0.0198 138	-0.01326 0.6773 138	-0.00087 0.3459 138	-0.18516 0.8297 138	-0.01679 0.6584 138	0.23823 0.0049 138
PINSV	0.82430 0.7772 138	0.08970 0.2954 138	-0.02164 0.8011 138	0.09190 0.8837 138	0.26360 0.0019 138	-0.30896 0.0002 138	-0.12291 0.1509 138	0.11201 0.1666 138	-0.29465 0.0003 138	-0.08402 0.3272 138	-0.06746 0.0015 138	-0.16879 0.0018 138	0.33136 0.0001 138
PTLLN	0.19708 0.0658 138	-0.11658 0.1735 138	0.11282 0.1893 138	0.28099 0.0008 138	-0.13264 0.1195 138	0.36423 0.0017 138	-0.00970 0.9101 138	-0.04523 0.5984 138	0.08573 0.3174 138	-0.07838 0.1608 138	0.05967 0.4168 138	0.07855 0.3598 138	-0.16667 0.0504 138
INTLN	0.14053 0.0821 138	0.09434 0.2701 138	-0.06309 0.4628 138	-0.00951 0.2051 138	0.03303 0.7016 138	-0.13877 0.6916 138	-0.02651 0.7576 138	-0.12657 0.1735 138	-0.12867 0.1326 138	-0.11170 0.4428 138	-0.06023 0.4428 138	0.07473 0.1817 138	0.00820 0.9795 138

PEARSON CORRELATION COEFFICIENTS / PROB > 1R1 UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CRHMH0	VANGS	VANGB	SHNL	WHMH0	IDLNR	DBLNR	INVLNR	GRLLNR	CORLNR	CORLHNR	STLLR	TFPLR
NBR	0.83181 0.0017 138	-0.01946 0.0572 138	0.31156 0.0002 138	-0.22192 0.0088 138	-0.75853 0.0001 137	0.71134 0.0001 138	0.23167 0.0053 138	-0.11204 0.1908 138	0.46993 0.0001 138	0.28286 0.0019 138	0.55569 0.0001 38	0.15089 0.0701 138	-0.76183 0.0001 138
IBRL	0.34238 0.0001 138	-0.05088 0.0534 138	0.28217 0.0008 138	-0.08560 0.3179 138	-0.75886 0.0001 137	0.82659 0.0002 138	0.28105 0.0020 138	-0.16313 0.0316 138	0.41204 0.0001 138	0.19842 0.0197 138	0.49920 0.0001 138	0.33607 0.0001 138	-0.31925 0.0001 138
OBRL	0.25032 0.0031 138	-0.06026 0.3484 138	0.09116 0.0005 138	-0.09745 0.2555 138	-0.82135 0.0001 137	0.78913 0.0001 138	0.29001 0.0005 138	-0.52015 0.0001 138	0.46190 0.0001 138	0.24848 0.0038 138	0.86823 0.0001 138	0.31739 0.0001 138	-0.00476 0.0001 138
IBRW	0.38933 0.0001 138	-0.04719 0.3825 138	0.17235 0.0432 138	-0.22562 0.0378 138	-0.53844 0.0001 137	0.11355 0.1846 138	-0.09568 0.2643 138	-0.27815 0.0013 138	0.19886 0.0194 138	-0.36759 0.4309 138	0.23812 0.0049 138	0.82366 0.7633 138	-0.88769 0.0001 138
OBRW	0.22726 0.0074 138	-0.07307 0.3944 138	0.24928 0.0032 138	-0.08934 0.2473 138	-0.74082 0.0001 137	0.59001 0.0001 138	-0.15893 0.0610 138	-0.23617 0.0001 138	0.35997 0.0001 138	0.23227 0.0001 138	0.51388 0.0001 138	0.33665 0.0005 138	-0.76091 0.0001 138
IBHKL	0.32480 0.0001 138	-0.03025 0.7297 138	0.20666 0.0003 138	-0.09759 0.3548 138	-0.80990 0.0001 137	0.78374 0.0001 138	0.28188 0.0043 138	-0.18035 0.0343 138	0.40229 0.0001 138	0.00708 0.0146 138	0.58843 0.0001 138	0.32888 0.0001 138	-0.80403 0.0001 138
IBHGM	0.33595 0.0001 138	-0.07575 0.3772 138	0.25670 0.0030 138	-0.08303 0.3330 138	-0.81272 0.0001 137	0.71164 0.0001 138	0.22052 0.0093 138	-0.46629 0.0001 138	0.31786 0.0001 138	0.12344 0.1492 138	0.44188 0.0001 138	0.95841 0.0001 138	-0.78823 0.0001 138
FMKL	0.30128 0.0044 138	0.01035 0.5941 138	0.28230 0.0009 138	-0.23587 0.0058 138	-0.75043 0.0001 137	0.60810 0.0001 138	0.28562 0.0075 138	-0.16642 0.0511 138	0.58380 0.0001 138	0.28870 0.0001 138	0.50175 0.0001 138	0.22517 0.0079 138	-0.71399 0.0001 138
LBRL	0.25661 0.0024 138	-0.05347 0.5334 138	0.19911 0.0192 138	-0.09803 0.2527 138	-0.63125 0.0001 137	0.56156 0.0001 138	0.16653 0.0462 138	-0.13993 0.1016 138	0.36689 0.0001 138	0.06589 0.4468 138	0.39913 0.0001 138	0.01941 0.0097 138	-0.67543 0.0001 138
IFLOR	0.18437 0.0104 138	-0.10936 0.2188 138	0.08111 0.0001 138	-0.02656 0.7571 138	-0.78881 0.0001 137	0.70626 0.0001 138	0.28773 0.0038 138	-0.38918 0.0001 138	0.36823 0.0001 138	0.31826 0.0101 138	0.50106 0.0001 138	0.39846 0.0001 138	-0.74810 0.0001 138
CORLLH	0.13949 0.1027 138	-0.00008 0.9198 138	0.33442 0.0001 138	-0.21270 0.0123 138	-0.97159 0.0001 137	0.40217 0.0001 138	0.11997 0.1610 138	0.03407 0.6916 138	0.84997 0.0001 138	0.40436 0.0001 138	0.60385 0.0001 138	0.09417 0.2720 138	-0.83117 0.0001 138
CORLWD	0.45182 0.0001 138	0.06131 0.4750 138	0.18547 0.0004 138	-0.14895 0.0992 138	-0.16577 0.0529 137	0.06792 0.4826 138	-0.03715 0.6653 138	-0.06974 0.4163 138	-0.35815 0.0620 138	-0.15828 0.0620 138	-0.11277 0.1879 138	-0.09886 0.0482 138	-0.16154 0.0564 138
CORTWO	0.54780 0.0001 138	-0.11040 0.1996 138	0.22354 0.0064 138	-0.19250 0.0237 138	-0.64404 0.0001 137	0.48372 0.0001 138	0.17955 0.0351 138	-0.19906 0.0193 138	0.25814 0.0022 138	-0.27568 0.0001 138	0.13910 0.1037 138	0.19736 0.0203 138	-0.59432 0.0001 138

PEARSON CORRELATION COEFFICIENTS / $r_{\text{sig}} > |r|$ UNDER $H_0: \rho = 0$ / NUMBER OF OBSERVATIONS

	CRNHW0	VANGS	VANGC	SHNHL	HNNOFND	IPNLR	OBLMR	INVLNR	GRLLMR	CORLMR	CORLHNR	STLLR	TFLPR
LCTPFA	0.05961 0.9879 138	-0.00099 0.9916 138	0.28800 0.0007 138	-0.15811 0.0540 138	-0.70097 0.0001 137	0.68614 0.0001 138	0.16625 0.0270 138	-0.13204 0.1227 138	0.55086 0.0001 138	0.67728 0.0001 138	0.78059 0.0001 138	0.40004 0.0001 138	-0.56388 0.0001 138
INTW	0.08717 0.3093 138	-0.09773 0.2542 138	0.17949 0.0352 138	-0.10007 0.2629 138	-0.79059 0.0001 137	0.62216 0.0001 138	0.11779 0.1889 138	-0.49356 0.0001 138	0.39162 0.0001 138	0.63189 0.0001 138	0.63189 0.0001 138	0.50299 0.0001 138	-0.65286 0.0001 138
INFL	0.21380 0.0058 138	-0.09431 0.8677 138	0.28581 0.0085 138	-0.13779 0.1070 138	-0.71355 0.0001 137	0.71358 0.0001 138	0.23057 0.0050 138	-0.16653 0.0509 138	0.47233 0.0001 138	0.38615 0.0001 138	0.46128 0.0001 138	0.89191 0.0001 138	-0.69534 0.0001 138
PAPPKLN	0.20194 0.0161 138	-0.05474 0.5677 138	0.29818 0.0006 138	-0.15730 0.0656 138	-0.78008 0.0001 137	0.72834 0.0001 138	0.19714 0.0205 138	-0.17861 0.0361 138	0.59238 0.0001 138	0.60226 0.0001 138	0.69645 0.0001 138	0.31562 0.0001 138	-0.81388 0.0001 138
TFLN	0.08451 0.3884 138	-0.00462 0.9571 138	0.27640 0.0010 138	-0.16389 0.0548 138	-0.71043 0.0001 137	0.63611 0.0001 138	0.19323 0.0232 138	-0.13709 0.1089 138	0.59014 0.0001 138	0.54435 0.0001 138	0.75146 0.0001 138	0.39760 0.0001 138	-0.55188 0.0001 138
FNKLN	0.00605 0.9439 138	-0.03555 0.6789 138	0.36872 0.0002 138	-0.20418 0.0163 138	-0.64827 0.0001 137	0.53001 0.0001 138	0.16509 0.0530 138	-0.12013 0.1605 138	0.84105 0.0001 138	0.49323 0.0001 138	0.49979 0.0001 138	0.23704 0.0001 138	-0.50257 0.0001 138
ARKLN	0.18360 0.0311 138	-0.03600 0.6751 138	0.30468 0.0003 138	-0.16732 0.0906 138	-0.64133 0.0001 137	0.58239 0.0001 138	0.21584 0.0056 138	-0.08824 0.3034 138	0.61263 0.0001 138	0.37239 0.0001 138	0.63476 0.0001 138	0.33277 0.0001 138	-0.56740 0.0001 138
STWLN	0.08093 0.3454 138	-0.00051 0.9952 138	0.30529 0.0001 138	-0.17810 0.0366 138	-0.70535 0.0001 137	0.63840 0.0001 138	0.19027 0.0254 138	-0.10503 0.2302 138	0.60180 0.0001 138	0.05309 0.0001 138	0.78956 0.0001 138	0.37827 0.0001 138	-0.58229 0.0001 138
STWLN	0.25867 0.0004 138	-0.07583 0.3883 138	0.20203 0.0175 138	-0.20400 0.0159 138	-0.16402 0.0941 137	0.05357 0.5326 138	0.00402 0.9627 138	0.14586 0.0878 138	0.19430 0.0224 138	0.06555 0.4449 138	0.11318 0.1863 138	-0.69918 0.0001 138	-0.30229 0.0001 138
VACPKLN	0.03201 0.7294 138	-0.06196 0.8491 138	-0.20660 0.0161 138	0.08500 0.5205 138	-0.26829 0.0015 137	0.09837 0.0197 138	0.00667 0.2997 138	-0.15825 0.0001 138	0.38478 0.0001 138	0.04861 0.3713 138	0.12936 0.1325 138	0.36398 0.0001 138	-0.11850 0.1663 138
CRNKLN	0.14927 0.0574 138	-0.01340 0.8761 138	0.33474 0.0001 138	-0.17460 0.0383 138	-0.75531 0.0001 137	0.67593 0.0001 138	0.19840 0.0197 138	-0.12580 0.1415 138	0.63759 0.0001 138	0.54625 0.0001 138	0.77737 0.0001 138	0.33638 0.0001 138	-0.64503 0.0001 138
CRNHW0	0.58953 0.0001 138	-0.11521 0.1784 138	0.17861 0.0361 138	-0.14028 0.1005 138	-0.85678 0.0001 137	0.40065 0.0001 138	0.13958 0.1023 138	-0.15086 0.0627 138	0.21840 0.0191 138	-0.45186 0.0001 138	0.07090 0.4086 138	0.04852 0.5720 138	-0.62827 0.0001 138
CRNHW0	1.00000 0.0000 138	-0.03921 0.6480 138	0.16937 0.2016 138	-0.02100 0.8068 138	-0.20914 0.0182 137	0.17639 0.0305 138	0.06929 0.4194 138	-0.48418 0.5747 138	-0.08738 0.3048 138	-0.38105 0.0001 138	-0.49012 0.0001 138	-0.16983 0.0464 138	-0.30071 0.0001 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

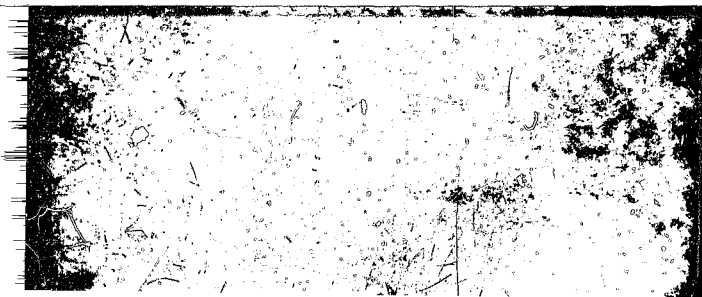
	CRNWD	VANGS	VANDB	SHINL	MINOFND	ISLWR	QBLWR	INVLWR	CALLWR	CORLWR	CORLWR	STLLR	TFLPLR
VANGS	-0.03921 0.6480 138	1.00000 0.0000 138	0.22665 0.0077 138	-0.22259 0.0087 138	0.11725 0.0087 137	-0.04045 0.6376 138	-0.00298 0.9727 138	0.05761 0.4308 138	-0.04869 0.9706 138	0.38153 0.3818 138	-0.00909 0.9157 138	-0.05862 0.4946 138	0.11981 0.1616 138
VANDB	0.10937 0.2916 138	0.22606 0.0077 138	1.00000 0.0000 138	-0.16922 0.0472 138	-0.30383 0.0003 137	0.27104 0.2013 138	0.10128 0.2372 138	0.09480 0.2687 138	0.31279 0.0122 138	0.16542 0.0511 138	0.33321 0.0059 138	-0.00602 0.9481 138	-0.04325 0.0040 138
SHINL	-0.02100 0.3068 138	-0.22259 0.0087 138	-0.16922 0.0472 138	1.00000 0.0000 138	0.11395 0.1889 137	0.03763 0.6613 138	-0.07939 0.3557 138	-0.21836 0.8089 138	-0.11455 0.1810 138	-0.05595 0.5071 138	-0.14623 0.0870 138	0.37724 0.3678 138	0.08423 0.1260 138
MINOFND	-0.20914 0.0142 137	0.11725 0.1724 137	-0.30383 0.0003 137	0.11395 0.1889 137	1.00000 0.0000 137	-0.67528 0.0001 137	-0.20214 0.0178 137	0.16444 0.0001 137	-0.45077 0.0001 137	-0.39811 0.0044 137	-0.52546 0.0001 137	-0.33626 0.0001 137	0.74770 0.0001 137
ISLWR	0.17639 0.0385 138	-0.04045 0.6376 138	0.27104 0.0713 138	0.03763 0.6613 138	-0.67528 0.0001 138	1.00000 0.0000 138	-0.07818 0.0001 138	0.36575 0.4802 138	0.31039 0.0002 138	0.07719 0.0001 138	0.36073 0.0001 138	-0.06073 0.0001 138	-0.06073 0.0001 138
QBLWR	0.06929 0.4194 138	-0.00298 0.9727 138	0.10128 0.2372 138	-0.07939 0.3547 138	-0.20214 0.0178 138	0.39684 0.0001 138	1.00000 0.0000 138	0.12030 0.1277 138	0.18635 0.1397 138	0.36403 0.4556 138	0.12346 0.1491 138	0.07603 0.3754 138	-0.11517 0.1131 138
INVLWR	-0.04818 0.5747 138	0.06761 0.4308 138	0.09480 0.2687 138	-0.01636 0.8489 138	0.36444 0.0001 138	-0.37218 0.4032 138	1.00000 0.0000 138	0.07081 0.4092 138	0.00629 0.9420 138	-0.08700 0.3680 138	-0.30409 0.0003 138	0.30658 0.0003 138	0.30658 0.0003 138
CALLWR	-0.08898 0.3888 138	-0.04869 0.5706 138	0.38153 0.0122 138	-0.11455 0.1810 138	-0.05595 0.0001 138	0.18757 0.0001 138	0.12635 0.1397 138	0.07081 0.4092 138	1.00000 0.0000 138	0.45523 0.0001 138	0.61561 0.0001 138	0.13511 0.1141 138	-0.32393 0.0001 138
CORLWR	-0.38105 0.0001 138	0.08153 0.3418 138	0.16542 0.0511 138	-0.05695 0.5071 138	-0.24213 0.0044 138	0.81039 0.0002 138	0.06403 0.4556 138	0.04625 0.9420 138	0.45523 0.0001 138	1.00000 0.0000 138	0.70410 0.0001 138	0.26122 0.0001 138	-0.08722 0.3091 138
CORLWR	-0.49012 0.0001 138	-0.00909 0.9157 138	0.23321 0.0059 138	-0.16922 0.0472 138	-0.30383 0.0003 138	0.27104 0.2013 138	0.10128 0.2372 138	0.09480 0.2687 138	0.31279 0.0122 138	0.16542 0.0511 138	0.33321 0.0059 138	1.00000 0.0001 138	-0.39175 0.0001 138
STLLR	-0.16903 0.0464 138	-0.05862 0.4946 138	-0.00602 0.9481 138	0.07724 0.3678 138	-0.23628 0.0001 138	0.40073 0.0001 138	0.27603 0.3754 138	-0.30409 0.0003 138	0.13511 0.1141 138	0.26122 0.0001 138	0.18502 0.0001 138	1.00000 0.0000 138	-0.16059 0.0599 138
TFLPLR	-0.30071 0.0003 138	0.11981 0.1616 138	-0.24325 0.0040 138	0.08423 0.1260 138	0.08423 0.1260 138	0.74770 0.0001 138	-0.66219 0.0001 138	-0.13547 0.1131 138	0.30648 0.0003 138	-0.38393 0.3591 138	-0.08722 0.39175 138	-0.16059 0.0599 138	1.00000 0.0000 138
INVLWR	-0.04651 0.5880 138	0.07107 0.4048 138	0.04977 0.5621 138	-0.03183 0.7153 138	0.81361 0.0001 138	-0.80472 0.0001 138	0.14075 0.0996 138	0.78865 0.0001 138	-0.05116 0.3512 138	-0.21708 0.0106 138	-0.30787 0.0002 138	-0.37704 0.0001 138	0.44038 0.0001 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0: RHO=0 / NUMBER OF OBSERVATIONS

[illegible]

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLWR	LRNFRH	ALFMR	LOPFCLR
HSECV	0.26892 0.0014 136	-0.15199 0.0762 137	0.27591 0.0011 138	-0.18802 0.0632 138
PINSV	0.10109 0.2361 136	-0.25831 0.0023 137	0.09227 0.2017 138	-0.05301 0.5369 138
PTLLH	-0.05033 0.5577 136	0.19045 0.0256 137	-0.03775 0.6602 138	-0.08225 0.0226 138
JNTLH	-0.09144 0.2861 136	-0.01907 0.8250 137	0.03679 0.6684 138	-0.05210 0.5839 138
NR	-0.25388 0.0027 136	0.75844 0.0001 137	-0.33513 0.0001 138	0.26357 0.0018 138
IBRL	-0.31660 0.0002 136	0.80390 0.0001 137	-0.24746 0.0034 138	0.27514 0.0011 138
GRRL	-0.43727 0.0001 136	0.79994 0.0001 137	-0.32887 0.0001 138	0.28806 0.0006 138
IBAW	-0.26993 0.0914 136	0.52783 0.0001 137	-0.09153 0.2897 138	0.08410 0.3268 138
GRW	-0.47814 0.0001 136	0.70932 0.0001 137	-0.31666 0.0002 138	0.24380 0.0040 138
IMPKL	-0.33845 0.0001 136	0.61879 0.0001 137	-0.25076 0.0030 138	0.29621 0.0004 138
INMXW	-0.46579 0.0001 136	0.77883 0.0001 137	-0.24176 0.0043 138	0.26633 0.0015 138
PMKL	-0.36170 0.0003 136	0.78151 0.0001 137	-0.28378 0.0005 138	0.19309 0.0233 138
LDRP	-0.28515 0.0036 136	0.63000 0.0001 137	-0.18245 0.0956 138	0.07022 0.3557 138



PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF O. .VARIABLES

	INFLMR	LRNFIR	ALFMRL	LGPFGLR
NFLOR	-0.94698 0.0001 138	0.76176 0.0001 137	-0.23596 0.0051 138	0.28764 0.0006 138
CORLLN	-0.11012 0.1993 138	0.83260 0.0001 137	-0.40353 0.0001 138	0.06557 0.4448 138
CORLWD	-0.07707 0.3689 138	0.12623 0.1461 137	-0.25565 0.0025 138	-0.00415 0.9244 138
CORTWD	-0.20214 0.0178 138	0.61724 0.0001 137	-0.17891 0.0358 138	-0.02417 0.7784 138
LGPFPA	-0.33140 0.0001 138	0.72948 0.0001 137	-0.43814 0.0001 138	0.68043 0.0001 138
INFW	-0.70655 0.0001 138	0.73669 0.0001 137	-0.37032 0.0001 138	0.42439 0.0001 138
INFL	-0.31646 0.0001 138	0.61679 0.0001 137	-0.28757 0.0006 138	0.28324 0.0001 138
PAPNDLN	-0.35786 0.0001 138	0.78510 0.0001 137	-0.38382 0.0001 138	0.32881 0.0001 138
TELLN	-0.31863 0.0001 138	0.74699 0.0001 137	-0.41710 0.0001 138	0.43721 0.0001 138
FMKLN	-0.29751 0.0004 138	0.62542 0.0001 137	-0.80202 0.0001 138	0.27063 0.0013 138
ANXLN	-0.23615 0.0053 138	0.70530 0.0001 137	-0.12155 0.1256 138	0.18492 0.0299 138
STHKLN	-0.29322 0.0005 138	0.74864 0.0001 137	-0.43930 0.0001 138	0.43817 0.0007 138
STHKL0L	0.13311 0.1196 138	0.21265 0.0126 137	-0.07392 0.3689 138	-0.13723 0.1085 138

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLMR	LRNFMR	ALFLMR	LOPFOLR
VAGOLN	-0.33798 0.9001 138	0.82559 0.0080 137	0.04975 0.5623 136	0.14919 0.0307 135
CRKOLN	-0.31610 0.0002 138	0.78152 0.0001 137	-0.43513 0.0001 136	0.42762 0.0001 135
CRNOOD	-0.11752 0.1698 138	0.55357 0.0001 137	-0.06700 0.4349 136	-0.17570 0.0393 135
CRHMD	0.04651 0.5680 138	0.21522 0.0715 137	0.12384 0.1479 136	-0.21936 0.0097 135
YANGS	0.07147 0.4048 138	-0.87308 0.3961 137	0.03549 0.6794 136	0.03081 0.7198 135
YANGB	0.04977 0.5621 138	0.23595 0.0096 137	-0.15031 0.0785 136	0.04722 0.9330 135
BIHL	-0.03133 0.7153 138	-0.07125 0.4050 137	0.14407 0.0918 136	-0.04795 0.5785 135
RNOFMD	0.51561 0.0001 137	-0.86935 0.0001 137	0.39254 0.0001 137	-0.29273 0.0005 137
IBLMR	-0.25972 0.0021 138	0.66885 0.0001 137	-0.28395 0.0007 136	0.29666 0.0004 135
GBLMR	0.14075 0.0996 138	0.22082 0.0095 137	-0.11005 0.1988 136	0.09296 0.2782 135
INVLMR	0.78065 0.0001 138	-0.20791 0.0148 137	0.10438 0.2231 136	-0.16058 0.0599 135
CRLLMR	-0.05116 0.5512 138	0.53122 0.0001 137	-0.24286 0.0041 136	0.04475 0.6022 135
CORLMR	-0.21704 0.0108 138	0.86831 0.0015 137	-0.56483 0.0001 136	0.93695 0.0001 135

PEARSON CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLMR	LNFMHR	ALFMRL	LCPFCLR
CORLMHR	-0.30707 0.0002 138	0.53563 0.0001 137	-0.48679 0.0001 138	0.46608 0.0001 138
STLLBR	-0.37704 0.0001 138	0.31246 0.0002 137	-0.12458 0.1454 138	0.31288 0.0001 138
TFLPLR	0.44038 0.0001 138	-0.65025 0.0001 137	0.20092 0.0139 138	-0.10578 0.2169 138
INFLMR	1.00000 0.0000 138	-0.34051 0.0001 137	0.23083 0.0065 138	-0.30010 0.0003 138
LNFMHR	-0.34051 0.0001 137	1.00000 0.0000 137	-0.31446 0.0002 137	0.28262 0.0008 137
ALFMRL	0.23083 0.0065 138	-0.31446 0.0002 137	1.00000 0.0000 138	-0.30739 0.0002 138
LCPFCLR	-0.30010 0.0003 138	0.28262 0.0005 137	-0.30739 0.0002 138	1.00000 0.0000 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLEN	INTNDLN	LJNDRL	NKLLNL	MMDDL	APKAN	APXPS	BSAN	BSPS	SVINS	NSECV	PINSV	PTLLN
RACHLEN	1.00000 0.0000 137	0.61684 0.0001 137	0.15677 0.0639 137	0.20634 0.0156 137	0.12152 0.2376 137	-0.10157 0.1572 137	-0.09506 0.2692 137	-0.09507 0.2691 137	-0.10432 0.2251 137	-0.11585 0.1776 137	0.07186 0.4040 137	-0.02629 0.7604 137	0.10354 0.0286 137
INTNDLN	0.61684 0.0001 137	1.00000 0.0000 137	0.02993 0.7289 137	0.08990 0.0129 137	-0.02327 0.1783 137	-0.15916 0.0632 137	0.01585 0.8541 137	-0.06847 0.3380 137	-0.10074 0.2415 137	-0.06694 0.8227 137	-0.04060 0.6376 137	0.17537 0.0404 137	0.17537 0.0404 137
LJNDRL	0.15677 0.0639 137	0.02993 0.7285 137	1.00000 0.0000 138	0.43615 0.0001 138	-0.36650 0.0001 138	-0.42678 0.0001 138	0.02823 0.7424 138	-0.53220 0.0001 138	0.02635 0.7590 138	-0.36853 0.0001 138	0.22411 0.0057 138	0.07194 0.4017 138	0.30571 0.0003 138
NKLLNL	0.20634 0.0156 137	0.08990 0.2989 137	0.43615 0.0001 138	1.00000 0.0000 138	0.61195 0.0001 138	-0.25429 0.0026 138	0.05636 0.5114 138	-0.13493 0.1146 138	0.08906 0.2989 138	0.04482 0.6017 138	0.37995 0.0001 138	0.28528 0.0007 138	0.35557 0.0001 138
MMDDL	0.12152 0.2376 137	0.02993 0.7289 137	-0.36650 0.0001 138	0.61195 0.0001 138	1.00000 0.0000 138	0.12780 0.1352 138	-0.04512 0.3982 138	0.30774 0.0002 138	0.08325 0.3317 138	0.36392 0.0001 138	0.40408 0.0001 138	0.02921 0.0008 138	0.12546 0.1825 138
APKAN	-0.10157 0.2376 137	-0.02327 0.7873 137	-0.42678 0.0001 138	-0.25429 0.0002 138	0.12780 0.1352 138	1.00000 0.0000 138	-0.39746 0.0001 138	0.30839 0.5730 138	-0.17605 0.0389 138	0.20244 0.0170 138	-0.10006 0.2430 138	-0.05961 0.4874 138	-0.18592 0.0290 138
APXPS	-0.09506 0.2692 137	-0.15916 0.0632 137	0.02823 0.7424 138	0.05636 0.5114 138	-0.04512 0.3982 138	-0.39746 0.0001 138	1.00000 0.0000 138	0.13036 0.1275 138	0.19678 0.0207 138	-0.02946 0.7316 138	-0.03180 0.7112 138	0.03249 0.7032 138	0.02963 0.7301 138
BSAN	-0.09507 0.2691 137	0.01585 0.8541 137	-0.06847 0.3380 137	-0.10074 0.2415 137	-0.06694 0.8227 137	-0.04060 0.6376 137	0.17537 0.0404 137	1.00000 0.0000 138	0.57422 0.0001 138	0.16101 0.0592 138	0.06657 0.4379 138	-0.02886 0.7360 138	-0.04685 0.5853 138
BSPS	-0.10432 0.2251 137	-0.08247 0.3380 137	0.02635 0.7590 138	0.08325 0.8989 138	-0.17605 0.3317 138	0.19678 0.0389 138	0.57422 0.0207 138	1.00000 0.0000 138	0.00000 0.0000 138	0.90180 0.9833 138	0.24752 0.0034 138	0.01448 0.8661 138	0.16716 0.0500 138
SVINS	-0.11585 0.1776 137	-0.10074 0.2415 137	-0.36653 0.0001 138	0.04482 0.6017 138	0.37995 0.0001 138	0.28528 0.0007 138	0.35557 0.0001 138	0.16101 0.0592 138	-0.00180 0.9992 138	1.00000 0.0000 138	0.23589 0.0053 138	-0.11960 0.1624 138	0.00750 0.9860 138
NSECV	0.07186 0.4040 137	-0.06694 0.4227 137	0.22411 0.0057 138	0.07194 0.4017 138	0.30571 0.0003 138	0.02823 0.7424 138	0.05636 0.5114 138	0.06657 0.4379 138	0.24752 0.0053 138	0.23589 0.0053 138	1.00000 0.0000 138	0.04476 0.6021 138	0.33472 0.0001 138
PINSV	-0.02629 0.7604 137	-0.04060 0.6376 137	-0.04060 0.6376 137	0.07194 0.4017 138	0.30571 0.0003 138	0.02823 0.7424 138	0.05636 0.5114 138	0.06657 0.4379 138	0.24752 0.0053 138	0.23589 0.0053 138	1.00000 0.0000 138	0.04476 0.6021 138	0.33472 0.0001 138
PTLLN	0.10354 0.0286 137	0.17537 0.0404 137	0.17537 0.0404 137	0.04060 0.6376 137	0.07194 0.4017 138	0.30571 0.0003 138	0.02823 0.7424 138	0.05636 0.5114 138	0.06657 0.4379 138	0.24752 0.0053 138	0.23589 0.0053 138	1.00000 0.0000 138	0.04476 0.6021 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

RACHLEN	INTNDLN	LJNDRL	NKLLNL	MMDDL	APKAN	APXPS	BSAN	BSPS	SVINS	NSECV	PINSV	PTLLN
---------	---------	--------	--------	-------	-------	-------	------	------	-------	-------	-------	-------

INTLN	0.20973 0.0139 137	0.10700 0.2133 137	-0.04803 0.573 136	0.21012 0.0134 138	0.28160 0.0028 138	0.01291 0.8870 138	-0.09841 0.2707 138	0.04688 0.5851 138	-0.00147 0.9863 138	-0.05807 0.4987 138	-0.01635 0.8490 138	0.09022 0.2910 138	-0.08871 0.3008 138
NBR	-0.00074 0.9932 137	0.16159 0.0593 137	-0.23909 0.0047 136	-0.31738 0.0001 138	-0.10595 0.2182 138	0.19242 0.0238 138	0.01851 0.8294 138	0.17282 0.0431 138	0.15320 0.0728 138	0.09867 0.2436 138	-0.06770 0.4301 138	-0.32064 0.0001 138	0.23481 0.0956 138
IBRL	-0.03268 0.7046 137	0.08736 0.3100 137	-0.14652 0.0067 138	-0.31082 0.0002 138	-0.16894 0.0476 138	0.02006 0.8154 138	0.14918 0.0808 138	0.32881 0.0001 138	0.34534 0.0344 138	0.06706 0.5883 138	-0.05883 0.5883 138	-0.26776 0.0082 138	0.22200 0.0089 138
OBRL	0.00537 0.9503 137	0.17879 0.0366 137	-0.11335 0.1836 138	-0.21168 0.0127 138	-0.10219 0.2330 138	0.03625 0.4729 138	0.13459 0.1183 138	0.26546 0.0017 138	0.06966 0.0004 138	0.01213 0.8877 138	-0.26671 0.4367 138	-0.29602 0.0005 138	0.23633 0.0049 138
IBRW	0.01074 0.9308 137	0.16212 0.0584 137	-0.27172 0.0013 138	-0.20025 0.0185 138	-0.02877 0.7376 138	0.02638 0.7588 138	0.15075 0.0776 138	0.28637 0.0007 138	0.15374 0.0718 138	0.06729 0.4329 138	-0.08948 0.2966 138	-0.13267 0.1203 138	0.07714 0.3689 138
OBRW	0.01684 0.4081 137	0.20452 0.0165 137	-0.12231 0.1580 138	-0.12156 0.1553 138	-0.00916 0.9157 138	0.02619 0.7608 138	0.08505 0.3213 138	0.23239 0.0061 138	0.19814 0.0190 138	-0.00339 0.9687 138	-0.05835 0.4952 138	-0.25170 0.0029 138	0.28652 0.0007 138
INMKL	0.00799 137	0.16662 137	-0.14829 136	-0.26900 136	-0.11531 138	0.06624 138	0.05191 138	0.28092 138	0.34736 138	0.05545 138	-0.01988 138	-0.29752 138	0.26152 138
INPDW	0.02971 137	0.15779 137	-0.15625 138	-0.31532 138	-0.15319 138	0.02929 138	0.10313 138	0.29810 138	0.35858 138	0.06341 138	-0.07225 138	-0.26592 138	0.07946 138
PMKL	0.04647 0.5897 137	0.19314 0.0237 137	-0.18978 0.0258 138	-0.26807 0.0015 138	-0.03096 0.6417 138	0.21130 0.0329 138	-0.01778 0.0360 138	0.11812 0.1881 138	0.11612 0.1985 138	0.09311 0.2774 138	-0.07509 0.3814 138	-0.30708 0.0002 138	0.20522 0.0157 138
LBRP	0.02990 137	0.17653 137	-0.10017 138	-0.22502 138	-0.07423 138	0.03044 138	-0.02720 138	0.18173 138	0.21918 138	0.11924 138	0.00894 138	-0.20326 138	0.27979 138
NFLOR	-0.00690 0.9362 137	0.15169 0.0768 137	-0.07485 0.3829 138	-0.31527 0.0002 138	-0.21145 0.0717 138	0.08801 0.3087 138	0.12822 0.1339 138	0.20101 0.0161 138	0.32598 0.0001 138	0.03042 0.7232 138	-0.12160 0.1354 138	-0.23310 0.0059 138	0.23680 0.0049 138
CORLLN	-0.19230 0.0756 137	0.09439 0.5273 137	-0.14528 0.0091 138	-0.10953 0.0000 138	-0.03196 0.7098 138	0.08930 0.2976 138	0.01071 0.9007 138	0.00958 0.9139 138	0.04406 0.6878 138	0.31117 0.0005 138	0.00049 0.9955 138	-0.28827 0.0006 138	0.15087 0.0773 138
CORLMD	-0.03812 0.6583 137	0.06007 0.4856 137	-0.3515 0.1140 138	-0.03249 0.7052 138	-0.10948 0.2012 138	-0.01913 0.8837 138	-0.01698 0.8616 138	0.07119 0.4067 138	0.03649 0.6709 138	0.10110 0.2381 138	-0.00038 0.9964 138	0.08848 0.3021 138	0.16268 0.0566 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:R=0 / NUMBER OF OBSERVATIONS

	RACHLN	INTNDLN	LIMDL	IKLNL	MMDL	APKAN	APKPS	BSAN	BSFS	SVINS	NSCV	PINSV	PTLLN
CORTWD	-0.15233 0.0756 137	0.00347 0.2679 137	-0.24446 0.0039 138	-0.26385 0.0018 138	-0.05949 0.4882 138	-0.01280 0.8815 138	0.18576 0.0880 138	0.20511 0.0038 138	0.16242 0.0570 138	0.11551 0.1773 138	-0.12305 0.1438 138	-0.20519 0.0158 138	0.19328 0.0231 138
LGTFFA	-0.05300 0.5385 137	0.10346 0.2289 137	-0.16519 0.0528 138	-0.28722 0.0187 138	-0.07931 0.3551 138	0.07214 0.4004 138	0.10490 0.2208 138	0.14038 0.1005 138	0.18553 0.0594 138	0.02195 0.7980 138	-0.05422 0.5276 138	-0.23341 0.0027 138	0.16985 0.0467 138
INFW	-0.00539 0.9502 137	0.07710 0.3705 137	-0.09720 0.2567 138	-0.22638 0.0076 138	-0.13084 0.1261 138	0.11707 0.1715 138	0.06953 0.2964 138	0.11691 0.2964 138	0.20501 0.0153 138	-0.06827 0.8262 138	-0.10984 0.1997 138	-0.24976 0.0031 138	0.19075 0.0250 138
INFL	-0.00034 0.9969 137	0.13627 0.1123 137	-0.19239 0.0216 138	-0.29183 0.0005 138	-0.10662 0.2806 138	0.08884 0.3091 138	0.05616 0.5130 138	0.20989 0.0021 138	0.28069 0.0009 138	0.04938 0.5652 138	-0.08866 0.5709 138	-0.29471 0.0005 138	0.22762 0.0073 138
PAPKLN	-0.02604 0.7591 137	0.12667 0.1340 137	-0.19547 0.0209 138	-0.24389 0.0039 138	-0.08083 0.2947 138	0.09777 0.5621 138	0.14906 0.0010 138	0.23198 0.0069 138	0.20403 0.0039 138	0.08298 0.3333 138	-0.08722 0.3091 138	-0.25671 0.0004 138	0.19035 0.0253 138
ITLLN	-0.04069 0.6376 137	0.09986 0.2456 137	-0.17050 0.0456 138	-0.19315 0.0238 138	-0.06391 0.4564 138	0.07062 0.4092 138	0.10032 0.2417 138	0.16376 0.0509 138	0.17771 0.0370 138	0.03659 0.6101 138	-0.08947 0.9162 138	-0.07829 0.0012 138	0.19675 0.0017 138
FNKLN	-0.08997 0.2699 137	0.10230 0.2342 137	-0.16827 0.0485 138	-0.18767 0.0273 138	-0.06034 0.4821 138	0.10295 0.2895 138	0.01375 0.8729 138	0.09196 0.2834 138	0.07809 0.3696 138	-0.01817 0.8324 138	-0.10133 0.2370 138	-0.25124 0.0030 138	0.19464 0.0222 138
APKLN	-0.03419 0.6916 137	0.08901 0.3010 137	-0.21941 0.0097 138	-0.16109 0.0591 138	0.02168 0.8007 138	0.09705 0.2573 138	0.09514 0.2381 138	0.07506 0.0911 138	0.27406 0.0011 138	0.12131 0.1904 138	0.05090 0.5518 138	-0.32550 0.0001 138	0.19098 0.0018 138
STPKLN	-0.04215 0.6198 137	0.10533 0.8206 137	-0.17273 0.0428 138	-0.18793 0.0276 138	-0.04662 0.5712 138	0.07368 0.3904 138	0.06630 0.3142 138	0.16027 0.9604 138	0.18318 0.0315 138	0.03180 0.7112 138	-0.00517 0.8500 138	-0.06675 0.0016 138	0.20899 0.0139 138
STPKLOL	-0.07759 0.1675 137	0.18360 0.0941 137	-0.09326 0.2166 138	-0.07569 0.8551 138	0.07017 0.4135 138	-0.00472 0.9562 138	0.00105 0.4703 138	-0.06141 0.7163 138	-0.11980 0.1758 138	0.03661 0.6870 138	-0.01801 0.8339 138	-0.08492 0.3220 138	0.06161 0.1759 138
VACKLN	0.03177 0.7124 137	-0.04984 0.5677 137	0.03357 0.6999 138	-0.11067 0.1656 138	-0.18119 0.0334 138	0.00295 0.9763 138	0.07417 0.3873 138	0.17804 0.1679 138	0.13556 0.1129 138	-0.01791 0.8898 138	-0.04175 0.8268 138	-0.04208 0.6241 138	-0.13356 0.1183 138
CRKLN	-0.05660 0.4994 137	0.08476 0.3247 137	-0.18156 0.0321 138	-0.25128 0.0061 138	-0.07668 0.3840 138	0.06357 0.4988 138	0.11855 0.1810 138	0.15817 0.0486 138	0.19830 0.0197 138	0.03561 0.0784 138	-0.05004 0.5600 138	-0.28809 0.7008 138	0.19534 0.0217 138
CRKMD	-0.05078 0.5556 137	0.09322 0.2786 137	-0.19960 0.0195 138	-0.19342 0.0016 138	-0.02038 0.8124 138	-0.05943 0.6867 138	0.15265 0.0739 138	0.26701 0.0075 138	0.20690 0.0140 138	0.06698 0.5314 138	-0.05373 0.3108 138	-0.22204 0.0056 138	0.29984 0.0004 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLEN	INTROLN	LINDIHL	NOULHL	HOHDL	APKAN	APKPS	USAN	BSFS	SVINS	NSCVY	PINSV	PTLLN
CRHND	-0.00830 0.9233 137	0.01611 0.6518 137	-0.12994 0.1291 138	-0.00760 0.9299 138	0.09803 0.2527 138	-0.06316 0.6618 138	0.13058 0.1269 138	0.11705 0.1715 138	0.16247 0.0569 138	0.12715 0.1372 138	0.11749 0.1699 138	-0.00016 0.6384 138	0.15585 0.0680 138
VANGS	0.11056 0.1988 137	0.11694 0.1736 137	-0.25677 0.0088 138	0.12778 0.1253 138	0.36524 0.0007 138	0.19150 0.0294 138	-0.10605 0.4757 138	0.18968 0.0299 138	0.03619 0.6738 138	0.36890 0.0001 138	0.30280 0.0003 138	0.05335 0.5383 138	-0.00998 0.5008 138
VANDZ	-0.21749 0.0107 137	-0.09517 0.2686 137	-0.20560 0.0037 138	0.02615 0.7431 138	0.21599 0.0053 138	-0.05328 0.5388 138	0.01899 0.4251 138	0.32130 0.0001 138	0.32527 0.0001 138	0.13231 0.1218 138	0.12662 0.1297 138	-0.03945 0.6480 138	0.11076 0.1959 138
SHYRL	0.04305 0.6174 137	0.01846 0.8305 137	0.01405 0.0001 138	0.32999 0.0007 138	-0.33833 0.0001 138	-0.29492 0.0004 138	-0.07879 0.3263 138	-0.25861 0.0022 138	0.25241 0.0028 138	-0.31120 0.0002 138	0.31177 0.0129 138	0.05975 0.5160 138	0.27001 0.0011 138
RWNOFND	0.48097 0.0601 137	0.12527 0.1415 137	0.20763 0.0149 137	0.34105 0.0001 137	0.17766 0.0378 137	-0.15927 0.0610 137	-0.12553 0.7432 137	-0.23166 0.0065 137	-0.23221 0.0063 137	-0.03872 0.6533 137	0.16367 0.0560 137	0.21839 0.0126 137	-0.10651 0.2158 137
IELMR	-0.09878 0.2508 137	0.00392 0.9637 137	-0.07459 0.3886 138	-0.29437 0.0005 138	-0.21988 0.0097 138	0.03285 0.7021 138	0.08982 0.2946 138	0.24173 0.0963 138	0.36036 0.0607 138	0.04078 0.6352 138	-0.07054 0.4710 138	-0.30569 0.1003 138	0.26043 0.0020 138
OBLMR	-0.18007 0.1602 137	-0.10280 0.2812 137	-0.32932 0.1463 138	-0.27289 0.0032 138	-0.17288 0.0034 138	0.05584 0.5194 138	0.03827 0.6559 138	0.05143 0.5492 138	0.13372 0.1759 138	0.11668 0.1759 138	-0.00900 0.2840 138	-0.11402 0.3831 138	-0.02881 0.7727 138
INVLNR	-0.14358 0.0913 137	-0.13722 0.1098 137	0.08166 0.3010 138	0.33620 0.1112 138	0.08412 0.3265 138	0.00287 0.8738 138	-0.10941 0.2185 138	-0.09020 0.8050 138	-0.02079 0.6087 138	0.04611 0.5913 138	0.21809 0.0725 138	0.02555 0.7851 138	0.00155 0.9836 138
GRLLWR	-0.18400 0.0543 137	-0.02998 0.7280 137	-0.12666 0.1451 138	-0.16122 0.0587 138	-0.07537 0.3795 138	0.06606 0.4414 138	0.02459 0.7747 138	0.03145 0.8756 138	0.05847 0.4958 138	-0.06209 0.8637 138	-0.01018 0.9057 138	-0.30706 0.0002 138	0.04839 0.5730 138
CORLNR	0.02645 0.7950 137	0.00943 0.9129 137	0.00262 0.9157 138	-0.02081 0.8005 138	-0.01427 0.2512 138	0.09833 0.8681 138	0.02264 0.7827 138	-0.05290 0.5177 138	0.00554 0.9165 138	-0.01344 0.8570 138	0.00771 0.9205 138	-0.11761 0.1695 138	-0.04658 0.5475 138
CORLWR	-0.05455 0.5266 137	-0.07132 0.4076 137	-0.09719 0.2568 138	-0.20188 0.0168 138	-0.12701 0.1377 138	0.12606 0.1407 138	0.00938 0.9131 138	0.04604 0.5918 138	0.04113 0.6319 138	-0.05715 0.5055 138	-0.14802 0.0832 138	-0.28676 0.0035 138	0.07336 0.3925 138
STLLBR	0.07370 0.3852 137	-0.00819 0.9933 137	-0.01356 0.8658 138	-0.18060 0.0380 138	-0.16183 0.0579 138	0.07837 0.3609 138	0.07662 0.3717 138	0.10721 0.2107 138	0.16519 0.9054 138	-0.01021 0.9054 138	-0.04870 0.5705 138	-0.17079 0.0452 138	0.07821 0.3670 138
TFLPLR	0.06848 0.4269 137	-0.09922 0.2887 137	0.20699 0.0145 138	0.30783 0.0002 138	0.12692 0.1388 138	-0.01696 0.8455 138	-0.18727 0.0278 138	-0.24176 0.0043 138	-0.22808 0.0082 138	-0.09169 0.2848 138	0.19817 0.0198 138	0.29479 0.0005 138	-0.17587 0.0391 138

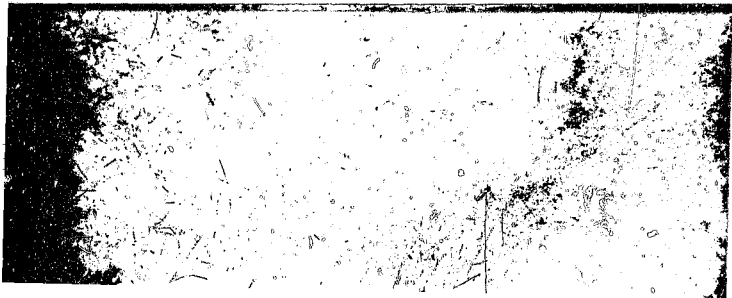
SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	RACHLEN	INTNDLN	LINDRL	MLNL	MOGL	APKAN	APKPS	BSAN	BSPS	SVIHS	NEGV	PINLV	PTLNN
INFLMR	-0.08617 0.3167 137	-0.06049 0.4826 137	-0.1121 0.1871 130	-0.05059 0.5957 138	0.03792 0.6588 138	-0.05163 0.5322 138	-0.06909 0.4207 138	0.10327 0.2216 138	0.10398 0.2249 138	0.17893 0.0363 138	0.16479 0.0535 138	0.03555 0.6789 138	0.02931 0.7329 138
LRNFR	-0.12574 0.1432 137	0.11816 0.1091 137	-0.1421 0.0958 137	-0.00738 0.0003 137	-0.18481 0.0306 138	0.11170 0.1938 137	0.07276 0.3981 138	0.19166 0.0385 138	-0.00232 0.0249 138	-0.16687 0.5093 137	-0.26200 0.0513 137	-0.17120 0.0020 137	0.17120 0.0455 138
ALFHLR	0.12246 0.1240 137	-0.04172 0.8120 137	0.09723 0.2265 138	0.17200 0.0437 138	-0.19886 0.1301 138	-0.09870 0.2592 138	0.02991 0.2275 138	0.07366 0.5916 138	0.09319 0.2773 138	0.11864 0.1658 138	0.00632 0.0162 138	0.00860 0.2499 138	-0.00860 0.3218 138
LCFOLR	0.08211 0.6261 137	0.13371 0.1193 137	-0.01279 0.8817 137	-0.02379 0.7818 138	-0.04379 0.6101 138	0.01694 0.8946 138	0.05890 0.8965 138	0.02634 0.7591 138	0.07215 0.4004 138	-0.00515 0.9582 138	-0.06769 0.1032 138	-0.04271 0.6189 138	-0.01927 0.8525 138
RACHLEN	0.20973 0.0139 137	-0.00074 0.9932 137	-0.03888 0.7088 137	0.00537 0.9503 137	0.01074 0.9026 137	0.01694 0.6427 137	0.00799 0.9261 137	0.02971 0.7303 137	0.04647 0.5897 137	0.02990 0.7287 137	-0.00690 0.9162 137	-0.15230 0.0756 137	-0.03812 0.6283 137
INTNDLN	0.10700 0.2133 137	0.16155 0.0593 137	0.08736 0.3100 137	0.17979 0.0366 137	0.16912 0.0584 137	0.00958 0.0165 137	0.16662 0.0516 137	0.15779 0.0536 137	0.19314 0.0237 137	0.17650 0.0391 137	0.15169 0.0768 137	0.09410 0.5279 137	0.06007 0.4836 137
LINDRL	-0.09803 0.9759 138	-0.23909 0.0087 138	-0.16069 0.0667 138	-0.11335 0.1896 138	-0.27172 0.0013 138	-0.12231 0.1530 138	-0.14829 0.0628 138	-0.15625 0.0672 138	-0.18978 0.0598 138	-0.10017 0.2824 138	-0.07485 0.3923 138	-0.14528 0.0591 138	-0.13515 0.1140 138
MLNL	-0.10102 0.8124 138	-0.31738 0.0001 138	-0.31042 0.0002 138	-0.21168 0.0187 138	-0.20035 0.8185 138	-0.18156 0.1255 138	-0.26900 0.0014 138	-0.31532 0.0038 138	-0.26807 0.0015 138	-0.22503 0.0002 138	-0.31527 0.0002 138	-0.14953 0.0880 138	-0.03249 0.7052 138
MOGL	0.28160 0.0008 138	-0.10995 0.2162 138	-0.16689 0.0476 138	-0.12219 0.2330 138	0.02877 0.7376 138	-0.00916 0.9151 138	-0.11531 0.0728 138	-0.03996 0.6417 138	-0.07533 0.5863 138	-0.21415 0.0717 138	-0.03946 0.0717 138	0.10998 0.7098 138	0.10998 0.2012 138
APKAN	0.01221 0.8070 138	0.19282 0.0238 138	0.02006 0.8154 138	0.03625 0.6789 138	0.02638 0.7588 138	0.02619 0.7604 138	0.06426 0.4001 138	0.02009 0.8133 138	0.21130 0.0129 138	0.03804 0.7221 138	0.06801 0.3207 138	0.09930 0.2276 138	-0.01911 0.8237 138
APKPS	-0.09441 0.8707 138	0.01851 0.8594 138	0.14916 0.0808 138	0.14240 0.1183 138	0.15079 0.0776 138	0.08505 0.3213 138	0.05191 0.5494 138	0.10313 0.2287 138	-0.01778 0.8360 138	-0.02750 0.7468 138	0.12822 0.1159 138	0.01071 0.9087 138	-0.01499 0.0616 138
BSAN	0.04688 0.5851 138	0.17242 0.0431 138	0.32041 0.0001 138	0.26546 0.0017 138	0.28637 0.0007 138	0.23239 0.0001 138	0.26092 0.0004 138	0.23810 0.1881 138	0.11374 0.0329 138	0.18173 0.0181 138	0.20101 0.9939 138	0.00288 0.0067 138	0.07119 0.4067 138
BSPS	-0.01147 0.9863 138	-0.15320 0.0728 138	0.34338 0.0001 138	0.29696 0.0004 138	0.15374 0.0718 138	0.18814 0.0198 138	0.39736 0.0001 138	0.33450 0.0001 138	0.11012 0.1985 138	0.21918 0.0098 138	0.32598 0.0001 138	0.04406 0.6078 138	0.06709 0.6709 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INTLN	NDR	IBRL	OBRL	IBRW	OBRW	INMKL	INMKW	PMXL	LDRP	NFLOR	CORLLN	CONLWD
SVINS	-0.05807 0.4997 138	0.09667 0.2496 138	0.06706 0.4304 138	0.01213 0.8577 138	0.06729 0.8389 138	-0.90352 0.9661 138	0.05595 0.5183 138	0.06581 0.4600 138	0.09311 0.2776 138	0.11924 0.1636 138	0.03082 0.7232 138	0.01117 0.8965 138	0.10110 0.2321 138
NSECV	-0.01635 0.8490 138	-0.06770 0.8301 138	-0.05463 0.5245 138	-0.05674 0.4367 138	-0.08946 0.8966 138	-0.05855 0.4952 138	-0.01968 0.8169 138	-0.07225 0.3997 138	-0.07509 0.3816 138	0.00694 0.9171 138	-0.12160 0.1254 138	0.00039 0.9955 138	-0.00038 0.9954 138
PHNSV	0.09052 0.5916 138	-0.08656 0.0001 138	-0.30716 0.0002 138	-0.29402 0.0025 138	-0.13287 0.1203 138	-0.29170 0.0029 138	-0.29752 0.0016 138	-0.26593 0.0014 138	-0.30700 0.0002 138	-0.28325 0.0009 138	-0.23310 0.0059 138	-0.68027 0.0006 138	0.08986 0.3021 138
PTLLN	-0.00871 0.3008 138	0.23889 0.0056 138	0.22200 0.0089 138	0.23833 0.0049 138	0.07714 0.0049 138	0.28652 0.0007 138	0.26152 0.0019 138	0.27946 0.0009 138	0.20529 0.0157 138	0.27979 0.0009 138	0.23805 0.0049 138	0.15087 0.0773 138	0.16266 0.0556 138
INTLN	1.00000 0.0000 138	-0.02880 0.7988 138	0.85594 0.2926 138	0.83509 0.6429 138	0.13992 0.1017 138	0.06932 0.5657 138	0.06054 0.4806 138	0.05325 0.5350 138	0.02787 0.7509 138	0.05144 0.4741 138	-0.02984 0.7281 138	-0.04819 0.3753 138	0.10297 0.2296 138
NDR	-0.02200 0.7578 138	1.00000 0.0000 138	0.76729 0.0001 138	0.60863 0.0001 138	0.84314 0.0001 138	0.69832 0.0001 138	0.81155 0.0001 138	0.74323 0.0001 138	0.71231 0.0021 138	0.61623 0.0001 138	0.73856 0.0001 138	0.53864 0.0001 138	0.24168 0.0001 138
IBRL	0.04594 0.5926 138	0.76129 0.0001 138	1.00000 0.0000 138	0.85056 0.0001 138	0.85802 0.0001 138	0.76731 0.0001 138	0.94482 0.0001 138	0.87728 0.0001 138	0.69133 0.0001 138	0.74652 0.0001 138	0.79882 0.0001 138	0.47551 0.0001 138	0.16679 0.0506 138
OBRL	0.93509 0.6829 138	0.68659 0.0001 138	0.85056 0.0001 138	1.00000 0.0000 138	0.58822 0.0001 138	0.85654 0.0001 138	0.84490 0.0001 138	0.82613 0.0001 138	0.74120 0.0001 138	0.66366 0.0001 138	0.78088 0.0001 138	0.54709 0.0001 138	0.17700 0.0378 138
IBRW	0.13992 0.1017 138	0.54114 0.0001 138	0.65802 0.0001 138	0.58822 0.0001 138	1.00000 0.0000 138	0.62336 0.0001 138	0.64659 0.0001 138	0.65708 0.0001 138	0.52532 0.0001 138	0.57823 0.0001 138	0.34113 0.0001 138	0.06783 0.0001 138	0.23276 0.0001 138
OBRW	0.04932 0.5657 138	0.69832 0.0001 138	0.76731 0.0001 138	0.85654 0.0001 138	0.62336 0.0001 138	1.00000 0.0000 138	0.76944 0.0001 138	0.72637 0.0001 138	0.70321 0.0001 138	0.20601 0.0001 138	0.89009 0.0001 138	0.25199 0.0001 138	0.23390 0.0001 138
INMKL	0.06054 0.4806 138	0.81155 0.0001 138	0.94482 0.0001 138	0.84490 0.0001 138	0.86559 0.0001 138	0.76944 0.0001 138	1.00000 0.0000 138	0.90594 0.0001 138	0.77609 0.0001 138	0.78235 0.0001 138	0.84904 0.0001 138	0.49559 0.0001 138	0.21566 0.0111 138
INMKW	0.05325 0.5350 138	0.74120 0.0001 138	0.67787 0.0001 138	0.82613 0.0001 138	0.95705 0.0001 138	0.92637 0.0001 138	0.90594 0.0001 138	1.00000 0.0000 138	0.72728 0.0001 138	0.72814 0.0001 138	0.89352 0.0001 138	0.41093 0.0001 138	0.22981 0.0027 138
PMXL	0.02727 0.7509 138	0.74831 0.0001 138	0.69833 0.0001 138	0.74120 0.0001 138	0.82532 0.0001 138	0.70321 0.0001 138	0.17690 0.0001 138	0.72725 0.0001 138	1.00000 0.0001 138	0.69888 0.0001 138	0.70800 0.0001 138	0.62979 0.0001 138	0.22674 0.0075 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > R UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS													
	INTLN	NBR	IBRL	OBRL	IBRW	OBRW	INMKL	INOKW	PNKL	LBKP	NB1LN	CORLLN	CORLWD
LBRP	0.06194 0.9791 138	0.51623 0.0001 138	0.78082 0.0001 138	0.68556 0.0001 138	0.57828 0.0001 138	0.60601 0.0001 138	0.58238 0.0001 138	0.70814 0.0001 138	0.49306 0.0001 138	0.0000 0.0000 138	0.43965 0.0001 138	0.51066 0.0001 138	0.26999 0.0001 138
HFLOR	-0.02986 0.7281 138	0.73866 0.0001 138	0.79862 0.0001 138	0.78082 0.0001 138	0.53478 0.0001 138	0.68975 0.0001 138	0.84908 0.0001 138	0.89552 0.0001 138	0.70800 0.0001 138	0.64965 0.0001 138	1.00000 0.0000 138	0.41619 0.0001 138	0.11727 0.0001 138
CORLLN	-0.08810 0.5753 138	0.33661 0.0001 138	0.47551 0.0001 138	0.54709 0.0001 138	0.36783 0.0001 138	0.55199 0.0001 138	0.49559 0.0001 138	0.81887 0.0001 138	0.42979 0.0001 138	0.51066 0.0001 138	0.41619 0.0001 138	1.00000 0.0000 138	0.18928 0.0001 138
CORLWD	0.10297 0.2294 138	0.24188 0.0003 138	0.16679 0.0906 138	0.17700 0.0375 138	0.23276 0.0050 138	0.23190 0.0058 138	0.21565 0.0111 138	0.22981 0.0067 138	0.72674 0.0014 138	0.25999 0.1707 138	0.11727 0.0262 138	0.18922 0.0000 138	1.00000 0.0000 138
CORTWD	0.06870 0.3233 138	0.31927 0.0001 138	0.68423 0.0001 138	0.66245 0.0001 138	0.63185 0.0001 138	0.58828 0.0001 138	0.66094 0.0001 138	0.69592 0.0001 138	0.59787 0.0001 138	0.64473 0.0001 138	0.56351 0.0001 138	0.01786 0.0001 138	0.39056 0.0001 138
LCTPFA	-0.00518 0.9519 138	0.68347 0.0001 138	0.73492 0.0001 138	0.30928 0.0001 138	0.49480 0.0001 138	0.67456 0.0001 138	0.75223 0.0001 138	0.64526 0.0001 138	0.70377 0.0001 138	0.60029 0.0001 138	0.63906 0.0001 138	0.69844 0.0001 138	0.12967 0.0001 138
IMFW	0.02107 0.8062 138	0.63220 0.0001 138	0.67001 0.0001 138	0.70764 0.0001 138	0.53149 0.0001 138	0.65979 0.0001 138	0.71780 0.0001 138	0.70241 0.0001 138	0.73077 0.0001 138	0.64 0.0001 138	0.73029 0.0001 138	0.60454 0.0001 138	0.16925 0.0001 138
INFL	0.00505 0.5998 138	0.78059 0.0001 138	0.57825 0.0001 138	0.81858 0.0001 138	0.68998 0.0001 138	0.75813 0.0001 138	0.92811 0.0001 138	0.83853 0.0001 138	0.79827 0.0001 138	0.72992 0.0001 138	0.78674 0.0001 138	0.58651 0.0001 138	0.19848 0.0001 138
PAPKLN	0.00487 0.9548 138	0.74928 0.0001 138	0.87228 0.0001 138	0.81509 0.0001 138	0.62564 0.0001 138	0.77316 0.0001 138	0.34173 0.0001 138	0.74015 0.0001 138	0.75587 0.0001 138	0.78029 0.0001 138	0.70101 0.0001 138	0.67775 0.0001 138	0.15321 0.0001 138
TFLLN	0.03570 0.5164 138	0.67490 0.0001 138	0.75283 0.0001 138	0.70975 0.0001 138	0.53626 0.0001 138	0.68761 0.0001 138	0.74881 0.0001 138	0.54565 0.0001 138	0.72665 0.0001 138	0.65000 0.0001 138	0.61882 0.0001 138	0.73726 0.0001 138	0.14976 0.0001 138
FMKLN	0.04852 0.6041 138	0.56829 0.0001 138	0.54834 0.0001 138	0.68144 0.0001 138	0.38232 0.0001 138	0.92051 0.0001 138	0.54367 0.0001 138	0.48278 0.0001 138	0.60028 0.0001 138	0.54011 0.0001 138	0.46379 0.0001 138	0.73884 0.0001 138	0.29902 0.0001 138
AMKLN	0.06551 0.4452 138	0.67635 0.0001 138	0.75632 0.0001 138	0.73631 0.0001 138	0.54272 0.0001 138	0.67869 0.0001 138	0.74879 0.0001 138	0.68129 0.0001 138	0.71184 0.0001 138	0.58151 0.0001 138	0.60802 0.0001 138	0.72346 0.0001 138	0.13569 0.0001 138
STHKLN	0.03543 0.6800 138	0.48449 0.0001 138	0.73994 0.0001 138	0.70631 0.0001 138	0.52784 0.0001 138	0.69291 0.0001 138	0.74339 0.0001 138	0.63815 0.0001 138	0.73983 0.0001 138	0.65607 0.0001 138	0.60953 0.0001 138	0.75589 0.0001 138	0.16616 0.0001 138



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNL'Y Ho: - / NUMBER OF OBSERVATIONS

	INTLN	NBR	IBRL	DBRL	IBRW	DBRW	IRPKL	PKKL	LBRP	NFLOR	GORLLN	GORLND
STPKLRL	-0.02970 0.7295 138	0.26501 0.6001 138	0.19752 0.0202 138	0.17993 0.0402 138	0.27034 0.0013 138	0.24169 0.0043 138	0.20676 0.0150 138	0.11150 0.0002 138	0.30803 0.0082 138	0.82425 0.5772 138	0.86582 0.0001 138	0.10609 0.0212 138
VACHKLN	0.22795 0.0072 138	-0.00710 0.9341 138	0.31856 0.0001 138	0.24489 0.0038 138	0.20624 0.0152 138	0.10626 0.2748 138	0.25741 0.0023 138	0.39029 0.0001 138	0.04085 0.6378 138	0.12720 0.1371 138	0.26689 0.0015 138	-0.23780 0.0038 138
CRVKLN	0.00439 0.3592 138	0.71982 0.0001 138	0.77885 0.0001 138	0.75916 0.0001 138	0.55692 0.0001 138	0.72130 0.0001 138	0.77907 0.0001 138	0.67564 0.0001 138	0.75791 0.0001 138	0.87229 0.0001 138	0.64543 0.0001 138	0.17811 0.0366 138
GRKND	0.09609 0.3154 138	0.52704 0.0001 138	0.67723 0.0001 138	0.62563 0.0001 138	0.66138 0.0001 138	0.57709 0.0001 138	0.65731 0.0001 138	0.67222 0.0001 138	0.57493 0.0001 138	0.67183 0.0001 138	0.51589 0.0001 138	0.39322 0.0001 138
CRKND	0.06483 0.4500 138	0.25301 0.0028 138	0.37189 0.0001 138	0.27786 0.0010 138	0.37717 0.0003 138	0.22823 0.0071 138	0.35154 0.0001 138	0.37121 0.0001 138	0.24164 0.0003 138	0.29964 0.0004 138	0.47072 0.0182 138	0.10910 0.2015 138
VANGS	-0.01872 0.0640 138	0.11381 0.1854 138	0.00273 0.9747 138	-0.04950 0.5642 138	0.00285 0.9772 138	0.22151 0.0023 138	0.03413 0.6911 138	-0.03366 0.6951 138	0.07358 0.3911 138	0.01661 0.8467 138	-0.59885 0.3224 138	0.06437 0.4532 138
VANGS	-0.03167 0.7123 138	0.30453 0.0003 138	0.26983 0.0014 138	0.30206 0.0003 138	0.21054 0.0132 138	0.29839 0.0004 138	0.30169 0.0003 138	0.26514 0.0017 138	0.85690 0.0024 138	0.30435 0.0162 138	0.50525 0.0157 138	0.31062 0.0002 138
SHKLN	-0.09331 0.2711 138	-0.10985 0.0190 138	-0.05373 0.5313 138	-0.08398 0.6096 138	-0.21681 0.0106 138	-0.07939 0.3546 138	-0.85058 0.5550 138	-0.03767 0.6626 138	-0.19269 0.0236 138	-0.07034 0.4123 138	0.03617 0.7080 138	-0.19689 0.0191 138
NWROFND	0.07641 0.3748 137	-0.61824 0.0001 137	-0.71368 0.0001 137	-0.68941 0.0001 137	-0.51051 0.0001 137	-0.61834 0.0001 137	-0.71455 0.0001 137	-0.68498 0.0001 137	-0.56381 0.0001 137	-0.59959 0.0001 137	-0.68475 0.0001 137	-0.57179 0.0001 137
IBLWR	-0.86938 0.4187 138	0.64794 0.0001 138	0.82536 0.0001 138	0.71838 0.0001 138	0.18042 0.0342 138	0.56042 0.0001 138	0.77663 0.0001 138	0.00057 0.0001 138	0.54259 0.0001 138	0.57890 0.0001 138	0.71118 0.0001 138	0.40347 0.0001 138
DBLWR	-0.05395 0.5297 138	0.19897 0.0193 138	0.27881 0.0009 138	0.32227 0.0001 138	-0.02583 0.7637 138	-0.11327 0.1859 138	0.27411 0.0031 138	0.27972 0.0009 138	0.20353 0.0167 138	0.31013 0.0134 138	0.36694 0.0003 138	0.12934 0.1305 138
INVLWR	-0.13232 0.1218 138	0.06779 0.4295 138	0.01607 0.8516 138	-0.08613 0.3152 138	-0.18235 0.0958 138	-0.34829 0.6174 138	0.04838 0.5731 138	-0.29726 0.0004 138	0.00590 0.6324 138	0.04108 0.6324 138	-0.21553 0.0111 138	0.16682 0.0338 138
ORLLWR	-0.09103 0.8852 138	0.37497 0.0001 138	0.35057 0.0001 138	0.40341 0.0001 138	0.83986 0.0046 138	0.36035 0.0001 138	0.33823 0.0001 138	0.26373 0.0010 138	0.45990 0.0001 138	0.35469 0.0001 138	0.30358 0.0002 138	0.82703 0.0001 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	JNTLN	NBR	IBRL	OBRL	IBRW	OBRW	IMMKL	IMMMW	MMKL	LBRP	NFLOR	CORLLN	CORLMD
CORLWR	-0.06200 0.4700 136	0.26781 0.0034 136	0.16581 0.0858 136	0.17135 0.0815 136	-0.07880 0.3682 136	0.18061 0.0340 136	0.18644 0.0510 136	0.05867 0.0067 136	0.22961 0.5615 136	0.05502 0.5615 136	0.18429 0.3005 136	0.39791 0.0001 136	-0.22594 0.0017 136
CORLWR	-0.06271 0.3318 136	0.09789 0.0801 136	0.44847 0.0001 136	0.08862 0.0001 136	0.20940 0.0032 136	0.59857 0.0001 136	0.46427 0.0001 136	0.35207 0.0001 136	0.50475 0.0001 136	0.40918 0.0001 136	0.46864 0.0003 136	0.61555 0.0001 136	-0.11517 0.1786 136
STLLBR	0.06870 0.4233 136	0.13689 0.1104 136	0.36222 0.0001 136	0.38369 0.0001 136	0.11732 0.1706 136	0.30931 0.0002 136	0.35523 0.0001 136	0.38824 0.0001 136	0.25884 0.0022 136	0.25434 0.0026 136	0.45195 0.0007 136	0.10921 0.2794 136	-0.09032 0.2981 136
TFLPLR	0.10054 0.2407 136	-0.88676 0.0001 136	-0.80471 0.0001 136	-0.76228 0.0001 136	-0.57565 0.0001 136	-0.69634 0.0001 136	-0.75502 0.0001 136	-0.70565 0.0001 136	-0.80466 0.0001 136	-0.66351 0.0001 136	-0.68343 0.0001 136	-0.82552 0.0001 136	-0.16260 0.0567 136
INFLMR	-0.06988 0.4180 136	0.09666 0.2504 136	0.14734 0.0846 136	-0.00736 0.9318 136	0.15263 0.0739 136	-0.20714 0.9338 136	0.14700 0.0853 136	0.03171 0.7100 136	-0.35890 0.6091 136	0.04464 0.3517 136	-0.07987 0.3763 136	-0.07621 0.3471 136	0.05169 0.2471 136
LRNFWR	-0.01792 0.8354 137	0.73880 0.0001 137	0.80400 0.0001 137	0.77684 0.0001 137	0.57626 0.0001 137	0.73899 0.0001 137	0.81676 0.0001 137	0.76841 0.0001 137	0.73194 0.0001 137	0.68386 0.0001 137	0.74315 0.0001 137	0.63100 0.0001 137	0.16128 0.0597 137
ALPMLR	0.03993 0.6419 136	-0.27544 0.0011 136	-0.17302 0.0424 136	-0.23048 0.0065 136	-0.46057 0.4804 136	-0.27036 0.0013 136	-0.16061 0.0599 136	-0.13208 0.1225 136	-0.28121 0.0008 136	-0.18088 0.0338 136	-0.14699 0.0854 136	-0.45280 0.0001 136	-0.25172 0.0029 136
LGPFCLR	0.01939 0.6219 136	0.23915 0.0057 136	0.24919 0.0932 136	0.23462 0.0056 136	0.08787 0.3054 136	0.22603 0.0004 136	0.29665 0.0008 136	0.22213 0.0171 136	0.20271 0.2122 136	0.10687 0.0008 136	0.28146 0.0008 136	0.07906 0.3567 136	-0.12231 0.1530 136
CORTLN	0.00397 0.9679 137	0.10346 0.2289 137	0.07710 0.3705 137	0.13627 0.1123 137	0.12867 0.1360 137	0.09986 0.2456 137	0.10230 0.2382 137	0.08901 0.3010 137	0.10533 0.0901 137	0.10360 0.0941 137	-0.04924 0.5677 137	0.08476 0.3701 137	0.09322 0.2766 137
RACHLEN	-0.15233 0.0756 137	-0.05300 0.5385 137	-0.00539 0.9502 137	-0.80034 0.9969 137	-0.32644 0.7591 137	-0.40060 0.6376 137	-0.09897 0.2499 137	-0.03419 0.6916 137	-0.04215 0.6288 137	-0.07759 0.3675 137	0.03177 0.7124 137	-0.05860 0.4964 137	-0.05078 0.5556 137
INTNDLN	0.00397 0.9679 137	0.10346 0.2289 137	0.07710 0.3705 137	0.13627 0.1123 137	0.12867 0.1360 137	0.09986 0.2456 137	0.10230 0.2382 137	0.08901 0.3010 137	0.10533 0.0901 137	0.10360 0.0941 137	-0.04924 0.5677 137	0.08476 0.3701 137	0.09322 0.2766 137
LNMDRL	-0.24446 0.0039 136	-0.16519 0.0528 136	-0.09720 0.0867 136	-0.19539 0.0216 136	-0.19687 0.0209 136	-0.17050 0.0454 136	-0.18827 0.0013 136	-0.21941 0.0097 136	-0.17273 0.0428 136	-0.09326 0.2766 136	-0.03357 0.0959 136	-0.18156 0.0331 136	-0.19860 0.0195 136
MMKLNL	-0.26385 0.3019 136	-0.20722 0.0187 136	-0.22638 0.0616 136	-0.89183 0.0005 136	-0.24369 0.0683 136	-0.19315 0.0232 136	-0.18767 0.0278 136	-0.16169 0.0091 136	-0.18753 0.0076 136	-0.01569 0.0591 136	-0.11867 0.1056 136	-0.22124 0.0091 136	-0.19542 0.0516 136
MMKDL	-0.05949 0.4582 136	-0.07931 0.3501 136	-0.13084 0.1261 136	-0.10562 0.2006 136	-0.08983 0.7997 136	-0.06391 0.4564 136	-0.36034 0.4821 136	0.02188 0.8007 136	-0.04862 0.5712 136	0.07017 0.4135 136	-0.18115 0.0338 136	-0.07668 0.3840 136	-0.02038 0.8124 136

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CORTMO	LCTFFA	INFW	INFL	PAPKLN	TFLN	FMKLN	AMKLN	STNKLN	STMKLN	VACHLN	CRKLN	CRPKLN
APKAN	-0.01280 0.8815	0.07214 0.8004	0.11707 0.7175	0.08884 0.3091	0.04977 0.5621	0.07082 0.4022	0.10295 0.2295	0.07705 0.2575	0.07358 0.3904	-0.00472 0.8562	0.00233 0.9783	0.06357 0.4588	-0.05943 0.4887
APFS	0.14576 0.0860	0.10490 0.2208	0.08953 0.2903	0.35616 0.5130	0.14906 0.0810	0.10032 0.2417	0.08630 0.8729	0.09814 0.2521	0.08630 0.3142	0.00145 0.8465	0.37417 0.3073	0.11455 0.1810	0.15265 0.0739
BSAN	0.24511 0.0038	0.14688 0.1885	0.11981 0.1616	0.28979 0.0031	0.23198 0.0062	0.16376 0.0549	0.09196 0.2834	0.27586 0.0611	0.16027 0.0604	-0.06141 0.4743	0.11804 0.1679	0.16817 0.0486	0.26701 0.0015
BSPS	0.16282 0.0570	0.18553 0.0294	0.30507 0.0158	0.28069 0.0009	0.24403 0.0039	0.17771 0.0370	0.07809 0.3626	0.37446 0.0611	0.18318 0.0315	-0.11590 0.1758	0.13556 0.1129	0.19830 0.0197	0.20609 0.0149
SVINS	0.11951 0.1773	0.02199 0.7980	-0.06827 0.4502	0.04934 0.5652	0.08298 0.3333	0.03659 0.6101	-0.01817 0.8384	0.12131 0.7112	0.03180 0.4870	0.03461 0.6970	-0.01191 0.8988	0.07584 0.0786	0.08698 0.3104
HSECV	-0.12345 0.1491	-0.05422 0.5276	-0.10984 0.1997	-0.08866 0.5709	-0.06947 0.3091	-0.10113 0.9122	-0.10113 0.2370	0.05090 0.5532	-0.00517 0.9520	-0.01801 0.6339	-0.04133 0.6886	-0.05604 0.5600	-0.05373 0.5314
PIKSV	-0.20519 0.0156	-0.25341 0.0027	-0.24976 0.0031	-0.29471 0.0005	-0.29671 0.0004	-0.27229 0.0012	-0.25124 0.0030	-0.32550 0.0001	-0.26675 0.0016	-0.08492 0.3220	-0.04208 0.8241	-0.28249 0.0006	-0.22284 0.0086
FTLN	0.19889 0.0081	0.16965 0.0467	0.19079 0.0250	0.22762 0.0073	0.19035 0.0253	0.19674 0.0282	0.19464 0.0222	0.19098 0.0139	0.20899 0.0139	0.06161 0.9729	-0.13556 0.1183	0.19534 0.0217	0.29984 0.0007
INTLN	0.38470 0.3233	-0.00518 0.9519	0.02107 0.0062	0.04905 0.5958	0.00487 0.9548	0.05570 0.5164	0.04452 0.6041	0.06551 0.4452	0.03943 0.6880	-0.02970 0.7955	0.28795 0.0072	0.00439 0.9932	0.06609 0.3154
NBR	0.51927 0.0001	0.68347 0.0001	0.63220 0.0001	0.76059 0.0001	0.76928 0.0001	0.87490 0.0001	0.56829 0.0001	0.67889 0.0001	0.88449 0.0001	0.88501 0.0001	0.00710 0.9341	0.71982 0.0001	0.52704 0.0001
IBRL	0.68423 0.0001	0.73492 0.0001	0.67001 0.0001	0.87825 0.0001	0.87228 0.0001	0.75283 0.0001	0.54886 0.0001	0.75632 0.0001	0.73994 0.0001	0.19799 0.8062	0.38880 0.0001	0.77889 0.0001	0.67723 0.0001
DBRL	0.66249 0.0001	0.70925 0.0001	0.70166 0.0001	0.81456 0.0001	0.81509 0.0001	0.70916 0.0001	0.58344 0.0001	0.73631 0.0001	0.70631 0.0001	0.17493 0.0462	0.24469 0.0036	0.75916 0.0501	0.62653 0.0001
IBRW	0.63185 0.0001	0.68888 0.0001	0.43149 0.0001	0.62798 0.0001	0.62684 0.0001	0.53626 0.0001	0.38292 0.0001	0.54272 0.0001	0.52748 0.0001	0.87034 0.0013	0.80624 0.0152	0.55602 0.0001	0.66138 0.0001

SPEARMAN CORRELATION COEFFICIENTS / PROD > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CORTWD	LCTPFA	INFW	INFL	PAPMKLN	TFLN	FIXLN	AMKLN	STMKLN	STMKLOL	VACHKLN	CRMKLN	CRMKOD
OBW	0.56884 0.0001 138	0.67956 0.0001 138	0.65979 0.0001 138	0.75813 0.0001 138	0.77316 0.0001 138	0.68761 0.0001 138	0.59051 0.0001 138	0.67859 0.0001 138	0.69291 0.0001 138	0.26169 0.0003 138	0.10626 0.2148 138	0.72330 0.0001 138	0.57709 0.0001 138
INUKL	0.56094 0.0001 138	0.75223 0.0001 138	0.71720 0.0001 138	0.92851 0.0001 138	0.84173 0.0001 138	0.78761 0.0001 138	0.54399 0.0001 138	0.74879 0.0001 138	0.74339 0.0001 138	0.20676 0.0150 138	0.25741 0.0023 138	0.77907 0.0001 138	0.65731 0.0001 138
INNOV	0.09582 0.0001 138	0.64526 0.0001 138	0.70241 0.0001 138	0.63453 0.0001 138	0.74015 0.0001 138	0.64959 0.0001 138	0.48828 0.0001 138	0.58129 0.0001 138	0.53815 0.0001 138	0.11569 0.1786 138	0.34289 0.0001 138	0.67968 0.0001 138	0.67222 0.0001 138
PKL	0.55184 0.0001 138	0.70337 0.0001 138	0.73077 0.0001 138	0.79883 0.0001 138	0.76597 0.0001 138	0.72665 0.0001 138	0.68828 0.0001 138	0.71184 0.0001 138	0.73983 0.0001 138	0.30803 0.0002 138	0.04045 0.6372 138	0.75731 0.0001 138	0.57493 0.0001 138
LRP	0.64473 0.0001 138	0.60029 0.0001 138	0.60771 0.0001 138	0.72992 0.0001 138	0.72025 0.0001 138	0.65000 0.0001 138	0.54401 0.0001 138	0.68151 0.0001 138	0.65607 0.0001 138	0.28829 0.0001 138	0.12720 0.1271 138	0.57229 0.0001 138	0.87163 0.0001 138
FLOR	0.56311 0.0001 138	0.63908 0.0001 138	0.74356 0.0001 138	0.78858 0.0001 138	0.80101 0.0001 138	0.61982 0.0001 138	0.46379 0.0001 138	0.68830 0.0001 138	0.80953 0.0001 138	0.04786 0.5772 138	0.24809 0.0015 138	0.64543 0.0001 138	0.51520 0.0001 138
QRLN	0.61738 0.0001 138	0.69881 0.0001 138	0.60454 0.0001 138	0.59661 0.0001 138	0.67779 0.0001 138	0.73726 0.0001 138	0.73884 0.0001 138	0.72346 0.0001 138	0.72289 0.0001 138	0.48582 0.0001 138	-0.03038 0.6465 138	0.77397 0.0001 138	0.39322 0.0001 138
ORLMD	0.39056 0.0001 138	0.12967 0.0001 138	0.16925 0.0001 138	0.19448 0.0001 138	0.15321 0.0001 138	0.14076 0.0001 138	0.25902 0.0022 138	0.13569 0.0514 138	0.16816 0.0212 138	0.19609 0.0025 138	-0.23780 0.0366 138	0.17811 0.0366 138	0.37352 0.0001 138
ORTWD	1.00000 0.0000 138	0.45365 0.0001 138	0.47557 0.0001 138	0.08977 0.0001 138	0.36088 0.0001 138	0.46142 0.0001 138	0.41645 0.0001 138	0.52863 0.0001 138	0.45199 0.0001 138	0.05684 0.3079 138	0.00074 0.0001 138	0.50427 0.0001 138	0.46196 0.0001 138
CTPFA	0.45365 0.0001 138	1.00000 0.0000 138	0.78496 0.0001 138	0.44776 0.0001 138	0.88082 0.0001 138	0.92440 0.0001 138	0.78265 0.0001 138	0.77447 0.0001 138	0.92963 0.0001 138	0.82300 0.0001 138	0.18121 0.0334 138	0.95654 0.0001 138	0.38936 0.0001 138
INFW	0.47597 0.0001 138	0.73496 0.0001 138	1.00000 0.0000 138	0.80208 0.0001 138	0.76682 0.0001 138	0.80575 0.0001 138	0.67888 0.0001 138	0.76264 0.0001 138	0.80389 0.0001 138	0.18828 0.0826 138	0.25899 0.0001 138	0.80444 0.0001 138	0.39181 0.0001 138
INFL	0.58977 0.0001 138	0.84758 0.0001 138	0.82026 0.0001 138	1.00000 0.0000 138	0.90324 0.0001 138	0.87388 0.0001 138	0.63566 0.0001 138	0.83109 0.0001 138	0.87048 0.0001 138	0.28114 0.0004 138	0.27504 0.0001 138	0.88281 0.0001 138	0.59367 0.0001 138
PAPMKLN	0.56088 0.0001 138	0.88088 0.0001 138	0.79882 0.0001 138	0.90324 0.0001 138	1.00000 0.0000 138	0.91881 0.0001 138	0.72053 0.0001 138	0.88134 0.0001 138	0.91951 0.0001 138	0.36866 0.0001 138	0.21149 0.0128 138	0.90457 0.0001 138	0.87133 0.0001 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CORTWD	LCTFFA	IRFX	IRFLN	FAPKRLN	TFLN	FMKLN	AMKLN	STMKLN	STMKLOL	VACHKLN	CRMKLN	CRMKWD
TFLN	0.46342 0.0001 130	0.92440 0.0001 130	0.80575 0.0001 130	0.87388 0.0001 130	0.97463 0.0001 130	1.00000 0.0001 130	0.79085 0.0001 130	0.87007 0.0001 130	0.99831 0.0001 130	0.94767 0.0001 130	0.94128 0.0001 130	0.96781 0.0001 130	0.48507 0.0001 130
FMKLN	0.81645 0.0001 130	0.74265 0.0001 130	0.67008 0.0001 130	0.63586 0.0001 130	0.72053 0.0001 130	1.79085 0.0000 130	1.00000 0.0000 130	0.66560 0.0001 130	0.80718 0.0001 130	0.41482 0.0001 130	-0.01630 0.8495 130	0.80016 0.0000 130	0.37049 0.0001 130
AMKLN	0.58863 0.0001 130	0.77447 0.0001 130	0.76264 0.0001 130	0.65109 0.0001 130	0.88334 0.0001 130	0.67087 0.0000 130	0.66560 0.0000 130	1.00000 0.0000 130	0.96809 0.0001 130	0.34079 0.0001 130	0.24385 0.0001 130	0.87042 0.0001 130	0.51814 0.0001 130
STMKLN	0.45109 0.0001 130	0.92963 0.0001 130	0.80388 0.0001 130	0.67048 0.0001 130	0.91551 0.0001 130	0.99431 0.0001 130	0.80718 0.0001 130	0.86899 0.0000 130	1.00000 0.0000 130	0.40462 0.0001 130	0.16779 0.0492 130	0.97210 0.0001 130	0.05787 0.0000 130
STMKLOL	0.05584 0.5079 130	0.82300 0.0001 130	0.14026 0.0825 130	0.24111 0.0044 130	0.36666 0.0001 130	0.13478 0.0001 130	0.41482 0.0001 130	0.34074 0.0001 130	0.40462 0.0000 130	1.00000 0.0000 130	-0.38368 0.0001 130	0.29621 J.0001 130	0.37888 0.0451 130
VACHKLN	0.02715 0.0074 130	0.18121 0.0334 130	0.25695 0.0023 130	0.27584 0.0011 130	0.21149 0.0128 130	0.24128 0.0044 130	-0.01630 0.8495 130	0.24389 0.0039 130	0.16779 0.0001 130	-0.33368 0.0001 130	1.00000 0.0000 130	0.16740 0.0497 130	0.10891 0.2035 130
CRMKLN	0.36727 0.0001 130	0.95658 0.0001 130	0.80444 0.0001 130	0.88281 0.0001 130	0.94057 0.0001 130	0.96781 0.0001 130	0.80016 0.0001 130	0.87242 0.0001 130	0.97210 0.0001 130	0.15621 0.0001 130	0.16740 0.0497 130	1.00000 0.0000 130	0.47907 0.0001 130
CRMKWD	0.06196 0.0001 130	0.38936 0.0001 130	0.39157 0.0001 130	0.59367 0.0001 130	0.57133 0.0001 130	0.05907 0.0001 130	0.37040 0.0001 130	0.51814 0.0001 130	0.45207 0.0001 130	0.17088 0.0491 130	0.10887 -3.2035 130	0.47907 0.0001 130	1.00000 0.0000 130
CRMKWD	0.53004 0.0001 130	0.11446 0.1813 130	0.12615 0.1404 130	0.25683 0.0016 130	0.10158 0.0070 130	-0.00087 0.2257 130	0.20994 0.0135 130	0.09983 0.2440 130	0.12071 0.2440 130	-0.01338 0.8496 130	0.16221 0.0573 130	0.53303 0.0001 130	
VANGS	0.77712 J.3687 130	0.04600 0.5921 130	-0.11322 0.1861 130	0.03454 0.6876 130	0.81464 0.8647 130	0.04849 0.6007 130	0.00379 0.9668 130	0.02597 0.7654 130	0.06118 0.4759 130	0.13953 0.1027 130	0.12489 0.0948 130	0.04096 0.6334 130	-0.87630 0.2717 130
VANGS	0.20616 0.0153 130	0.31115 0.0002 130	0.22797 0.0072 130	0.30096 0.0003 130	0.31976 0.0001 130	0.30747 0.0002 130	0.30290 0.0003 130	0.34609 0.0001 130	0.12827 0.0001 130	0.26966 0.0014 130	-0.19930 0.0191 130	0.34824 0.0001 130	0.16190 0.0578 130
SHINL	-0.14689 0.0282 130	-0.17656 0.0383 130	-0.02016 0.2720 130	-0.11799 0.1661 130	-0.13995 0.1018 130	-0.17536 0.0397 130	-0.19315 0.0232 130	-0.16023 0.0472 130	-0.17905 0.0356 130	-0.17571 0.4886 130	-0.17808 0.0886 130	-0.12104 0.1273 130	
HNHOFHD	-0.61229 0.0001 137	-0.87811 0.0001 137	-0.60101 0.0001 137	-0.72535 0.0001 137	-0.70936 0.0001 137	-0.67858 0.0001 137	-0.58170 0.0001 137	-0.65204 0.0001 137	-0.67176 0.0001 137	-0.19129 0.0252 137	-0.26604 0.0020 137	-0.70530 0.0001 137	-0.51518 0.0001 137

SPFARMAN CORRELATION COEFFICIENTS / PROB > [R] UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CORTWD	LCTFFA	INFW	INFL	PAPPKLN	TFLLN	FMKLN	APKLN	STMKLN	STOKLN	VACKLN	GRMKLN	CRMKWD
IBLMR	0.44508 0.0001 138	0.64259 0.0001 138	0.63562 0.0001 138	0.72029 0.0001 138	0.71587 0.0001 138	0.63541 0.0001 138	0.50780 0.0001 138	0.62976 0.0001 138	0.63145 0.0001 138	0.09471 0.2692 138	0.20119 0.0189 138	0.56397 0.0001 138	0.41422 0.0001 138
QBLMR	0.19195 0.0241 138	0.28239 0.0088 138	0.28416 0.0082 138	0.26864 0.0014 138	0.21754 0.0105 138	0.20519 0.0158 138	0.17412 0.0417 138	0.24823 0.0042 138	0.20742 0.0168 138	0.08869 0.2010 138	0.10743 0.2099 138	0.23300 0.0055 138	0.15408 0.0712 138
INVLNR	-0.12690 0.1380 138	0.08304 0.3329 138	-0.10559 0.2177 138	0.06575 0.4436 138	0.04052 0.3478 138	0.07885 0.3580 138	0.08052 0.3478 138	0.04814 0.5750 138	0.10787 0.2079 138	0.30786 0.0002 138	-0.31440 0.0002 138	0.10349 0.2271 138	-0.06512 0.4480 138
GRLLNR	0.22980 0.0058 138	0.58237 0.1401 138	0.47909 0.0061 138	0.45417 0.0001 138	0.55367 0.0001 138	0.61071 0.0001 138	0.59519 0.0001 138	0.61119 0.0001 138	0.61955 0.0001 138	0.35436 0.0001 138	0.06041 0.4815 138	0.68448 0.0001 138	0.21610 0.0109 138
CORLMR	-0.27810 0.0010 138	0.56099 0.0001 138	0.43888 0.0001 138	0.31055 0.0002 138	0.39419 0.0001 138	0.51087 0.0001 138	0.48803 0.0001 138	0.37021 0.0001 138	0.51554 0.0001 138	0.28307 0.0001 138	0.03404 0.6912 138	0.51478 0.0001 138	-0.42423 0.0001 138
CORLMWR	0.14070 0.0989 138	0.75970 0.0001 138	0.69354 0.0001 138	0.59854 0.0001 138	0.67827 0.0001 138	0.71544 0.0001 138	0.70594 0.0001 138	0.31948 0.0001 138	0.78163 0.0001 138	0.27993 0.0011 138	0.10148 0.2363 138	0.76750 0.0001 138	0.11698 0.1718 138
STLLNR	0.24570 0.0037 138	0.39113 0.0001 138	0.48204 0.0001 138	0.42118 0.0001 138	0.33930 0.0001 138	0.38051 0.0001 138	0.28717 0.0148 138	0.32772 0.0001 138	0.35664 0.0001 138	-0.63467 0.0001 138	0.46387 0.0001 138	0.34533 0.0001 138	0.11048 0.1971 138
TFLPLR	-0.63602 0.4607 138	-0.58037 0.5801 138	-0.51955 0.0001 138	-0.67808 0.0001 138	-0.80149 0.0001 138	-0.84400 0.0001 138	-0.41232 0.0001 138	-0.61200 0.0001 138	-0.50819 0.0012 138	-0.27248 0.5012 138	-0.04809 0.5754 138	0.63741 0.0001 138	-0.65712 0.0001 138
INFLMR	0.12039 0.1596 138	-0.05501 0.3216 138	-0.09791 0.0001 138	0.09756 0.2550 138	0.04236 0.4216 138	-0.05032 0.5578 138	-0.18623 0.0287 138	-0.03445 0.6863 138	-0.04426 0.6144 138	0.10097 0.0337 138	-0.12928 0.1308 138	-0.53480 0.6053 138	0.24588 0.0037 138
LRNFMR	0.13802 0.0201 137	0.79089 0.0001 137	0.78387 0.0001 137	0.84449 0.0001 137	0.82483 0.0001 137	0.78880 0.0001 137	0.65487 0.0001 137	0.74524 0.0001 137	0.78393 0.0001 137	0.26112 0.0001 137	0.27076 0.0014 137	0.81889 0.0001 137	0.56403 0.0001 137
ALFMR	-0.12955 0.1299 138	-0.41397 0.0001 138	-0.35782 0.0001 138	-0.23228 0.0001 138	-0.30783 0.0001 138	-0.41410 0.0001 138	-0.79911 0.0001 138	-0.15351 0.0722 138	-0.83367 0.0001 138	-0.29288 0.0005 138	0.19813 0.0198 138	-0.42208 0.0001 138	-0.06713 0.4340 138
LCFFCLR	0.00409 0.3620 138	0.60205 0.0001 138	0.34539 0.0001 138	0.33703 0.0001 138	0.30254 0.0003 138	0.36566 0.3901 138	0.18888 0.0681 138	0.15608 0.0675 138	0.36884 0.6964 138	-0.03351 0.6964 138	0.18229 0.0324 138	0.37369 0.0001 138	-0.10830 0.2041 138
GRNDNR	0.06830 0.9213 137	0.11898 0.8998 137	-0.81789 0.0107 137	0.08305 0.6174 137	0.48097 0.0001 137	-0.09878 0.1622 137	-0.12007 0.0943 137	-0.14353 0.0543 137	-0.16480 0.0543 137	0.02645 0.7590 137	-0.05455 0.5240 137	0.87478 0.2392 137	0.06844 0.8268 137

SPEARMAN CORRELATION COEFFICIENTS / PROB > 1% UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CRMSWD	VANGS	VANGB	SHHL	MMOFHO	IDLWR	OBLWR	INVLR	CRLLWR	CORLWR	CORLWR	STLLR	TFLPLR
INTNDLN	0.01611 0.8518 137	0.11694 0.1735 137	-0.09517 0.2686 137	0.01846 0.8305 137	0.12687 0.1415 137	0.00392 0.9637 137	-0.10060 0.2412 137	0.07132 0.1096 137	-0.02998 0.7280 137	0.00943 0.8129 137	0.07132 0.4676 137	-0.00819 0.9243 137	-0.09922 0.2487 137
LJNDRL	-0.12984 0.1591 138	-0.25677 0.0094 138	-0.24580 0.0037 138	0.81405 0.0001 138	0.20763 0.0180 138	-0.07459 0.3866 138	-0.12032 0.1463 138	0.08166 0.3410 138	-0.12668 0.1491 138	0.00262 0.7737 138	-0.09719 0.2565 138	-0.01456 0.8654 138	0.20699 0.0749 138
PKLNL	-0.00760 0.9299 138	0.12778 0.1353 138	0.02615 0.7431 138	0.32960 0.0001 138	0.34105 0.0001 138	-0.29437 0.0005 138	-0.27249 0.0012 138	0.13620 0.1112 138	-0.16132 0.0587 138	-0.82081 0.8085 138	-0.80188 0.0176 138	-0.18068 0.0340 138	0.00783 0.0002 138
PKHDL	0.09803 0.2527 138	0.36524 0.0001 138	0.83999 0.0053 138	-0.33833 0.0001 138	0.17766 0.0587 138	-0.21948 0.0097 138	-0.17284 0.0434 138	0.08412 0.3266 138	-0.07937 0.3706 138	-0.01827 0.4681 138	-0.12701 0.1777 138	-0.16183 0.1777 138	0.12692 0.1380 138
APKAK	-0.06316 0.4618 138	0.19150 0.0254 138	-0.05326 0.5346 138	-0.29492 0.0004 138	-0.15927 0.0630 138	0.03285 0.7021 138	0.05584 0.5154 138	0.00287 0.0736 138	0.06606 0.4414 138	0.09833 0.2512 138	0.12606 0.1307 138	0.07837 0.3609 138	-0.01696 0.8435 138
APKPS	0.13058 0.1259 138	-0.10605 0.2157 138	0.01899 0.6051 138	-0.07879 0.3993 138	-0.12553 0.1039 138	0.08982 0.2908 138	0.03829 0.6588 138	-0.10711 0.2185 138	0.02459 0.7787 138	0.02264 0.1292 138	0.00938 0.1300 138	0.07653 0.1717 138	-0.18272 0.0678 138
DSAN	0.11705 0.1715 138	0.18968 0.0259 138	0.32130 0.0001 138	-0.25861 0.0022 138	-0.23166 0.0005 138	0.24173 0.0043 138	0.05143 0.5492 138	-0.09068 0.2894 138	0.01345 0.0756 138	-0.05290 0.2377 138	0.04640 0.5918 138	0.10721 0.2107 138	-0.24176 0.0043 138
BSPS	0.16247 0.0549 138	0.03619 0.6739 138	0.32527 0.0001 138	0.25841 0.0028 138	-0.23823 0.0063 138	0.36036 0.3001 138	0.13372 0.1179 138	-0.08079 0.8067 138	0.05847 0.8948 138	0.00554 0.5946 138	0.04113 0.8319 138	0.16919 0.0473 138	-0.22408 0.0082 138
QVNS	0.12715 0.1372 138	0.36690 0.0001 138	0.13238 0.1218 138	-0.31128 0.0008 138	-0.08872 0.8533 138	0.04074 0.3352 138	0.11668 0.1729 138	0.08611 0.8913 138	-0.06269 0.4637 138	-0.01544 0.8574 138	-0.02715 0.5095 138	-0.01021 0.9054 138	-0.09169 0.2846 138
NSECY	0.11749 0.1699 138	0.30240 0.0002 138	0.12982 0.1257 138	0.21117 0.0152 138	0.16561 0.0964 138	0.09200 0.1110 138	0.81209 0.2480 138	-0.01018 0.0128 138	0.00771 0.0057 138	-0.14802 0.5085 138	-0.04870 0.0432 138	0.15817 0.5705 138	0.15817 0.0199 138
PINSV	-0.08916 0.8888 138	0.05335 0.8343 138	-0.03945 0.6460 138	0.05575 0.5160 138	0.21839 0.0104 138	-0.30569 0.0003 138	-0.11452 0.1811 138	0.02555 0.7661 138	-0.30706 0.0002 138	-0.11761 0.1693 138	-0.24676 0.0035 138	-0.17079 0.0452 138	0.29479 0.0004 138
PTLLN	0.15585 0.0460 138	-0.04994 0.5600 138	0.11076 0.1950 138	0.27401 0.0011 138	-0.10651 0.2154 138	0.36043 0.0000 138	-0.02481 0.7727 138	0.00155 0.9534 138	0.04839 0.2730 138	-0.04658 0.3475 138	0.07336 0.3825 138	0.07421 0.3870 138	-0.17587 0.0391 138
INTLN	0.06483 0.4900 138	-0.01472 0.8640 138	-0.03167 0.7123 138	-0.09431 0.2711 138	0.07641 0.3746 138	-0.08939 0.8187 138	-0.05395 0.5297 138	-0.13232 0.1218 138	-0.09163 0.2851 138	-0.06200 0.4760 138	-0.08271 0.3348 138	0.06870 0.4233 138	0.10054 0.2407 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > IRI UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	CANWNO	VANGS	VANGS	SHRL	NWOFNO	BLHR	DBLR	JAYLWR	CALLUR	CORLWR	CORLWR	STLLBR	TFLPLR
NBR	0.25301 0.0028 138	0.11341 0.1654 138	0.30493 0.0003 138	-0.33945 0.0190 138	-0.63224 0.0001 137	0.64794 0.0001 138	0.19497 0.0193 138	0.06779 0.4295 138	0.37497 0.0001 138	0.24741 0.0034 138	0.45749 0.0001 138	0.13673 0.1104 138	-0.66678 0.0001 138
JBR	0.37189 0.0001 138	0.00273 0.9747 138	0.26501 0.0914 138	-0.05373 0.5313 138	-0.71384 0.0001 137	0.82886 0.0009 138	0.27881 0.0009 138	0.01607 0.8516 138	0.35507 0.0001 138	0.16681 0.0958 138	0.24887 0.0001 138	0.16222 0.0001 138	-0.80011 0.0001 138
DBRL	0.27766 0.0010 138	-0.04950 0.5642 138	0.30206 0.0003 138	-0.04384 0.6096 138	-0.68541 0.0001 137	0.71838 0.0001 138	0.32227 0.0001 138	-0.08613 0.3152 138	0.40381 0.0001 138	0.17135 0.0445 138	0.49922 0.0001 138	0.38369 0.0001 138	-0.76288 0.0001 138
BNW	0.87717 0.0001 138	0.00295 0.9772 138	0.21054 0.0132 138	-0.21681 0.806 138	-0.51051 0.0001 137	0.18082 0.8942 138	-0.02583 0.7637 138	-0.18235 0.0958 138	0.23966 0.0006 138	0.24940 0.0532 138	0.11732 0.1705 138	-0.57365 0.0001 138	
GBRN	0.22828 0.0071 138	0.02151 0.8023 138	0.29839 0.0004 138	-0.07939 0.3596 138	-0.01834 0.0001 137	0.30042 0.0001 138	-0.11327 0.1859 138	-0.04289 0.6174 138	0.36435 0.0001 138	0.18051 0.0340 138	0.50857 0.0001 138	0.20931 0.0002 138	-0.69634 0.0006 138
INWKL	0.35154 0.0001 138	0.03813 0.6911 138	0.38169 0.0003 138	-0.05058 0.5958 138	-0.71959 0.0001 137	0.77653 0.0001 138	0.27011 0.0011 138	0.04638 0.5131 138	0.33883 0.0001 138	0.16644 0.0510 138	0.46427 0.0001 138	0.35583 0.0001 138	-0.75982 0.0001 138
INWGW	0.37121 0.0001 138	-0.03366 0.6951 138	0.26514 0.0017 138	-0.03747 0.6626 138	-0.68492 0.0001 137	0.76057 0.0001 138	0.27972 0.0009 138	-0.29726 0.0004 138	0.26373 0.0018 138	0.05967 0.4943 138	0.36287 0.0001 138	0.38824 0.0001 138	-0.70985 0.0001 138
PKKL	0.26164 0.0083 138	0.07358 0.3911 138	0.25090 0.0026 138	-0.19269 0.0236 138	-0.66381 0.0001 137	0.58250 0.0001 138	0.20353 0.0167 138	0.00550 0.9649 138	0.45990 0.0001 138	0.22961 0.0067 138	0.50875 0.0001 138	0.25894 0.0002 138	-0.64866 0.0001 138
LBRL	0.29964 0.0004 138	0.01681 0.8667 138	0.20435 0.0162 138	-0.07034 0.4183 138	-0.59569 0.0001 137	0.54888 0.0001 138	0.21013 0.0134 138	0.04108 0.6328 138	0.35499 0.0001 138	0.65502 0.5215 138	0.40918 0.0001 138	0.25434 0.0002 138	-0.66351 0.0001 138
NFLOR	0.20072 0.0182 138	-0.08486 0.3229 138	0.20525 0.0157 138	0.03217 0.7080 138	-0.68475 0.0001 137	0.71112 0.0001 138	0.36694 0.0003 138	-0.21551 0.0111 138	0.30358 0.0003 138	0.18829 0.0305 138	0.46494 0.0001 138	0.49195 0.0001 138	-0.89313 0.0001 138
CORLLN	0.10940 0.2015 138	0.06437 0.4532 138	0.31062 0.0092 138	-0.19929 0.0191 138	-J.57179 0.0001 137	0.40567 0.0001 138	0.12934 0.1305 138	0.18082 0.0338 138	0.82703 0.0001 138	0.89791 0.0001 138	0.61695 0.0001 138	0.10521 0.2154 138	-0.42552 0.0001 138
CORLMD	0.45615 0.0001 138	0.10840 0.2957 138	0.18219 0.0165 138	-0.11658 0.7713 138	-0.10904 0.5047 137	0.87739 0.3670 138	0.00666 0.5382 138	0.00658 0.9520 138	-0.22332 0.6077 138	-0.22594 0.6077 138	-0.11517 0.1785 138	-0.09032 0.0921 138	-0.16260 0.0567 138
CORHWO	0.53004 0.0001 138	-0.07712 0.3687 138	0.20616 0.0121 138	-0.18689 0.0288 138	-0.61229 0.0001 137	0.48808 0.0001 138	0.19195 0.0241 138	-0.12690 0.1380 138	0.20900 0.0069 138	-0.27810 0.0010 138	0.14670 0.0998 138	0.24570 0.0037 138	-0.63602 0.0001 138

SPEARMAN CORRELATION COEFFICIENTS / PROB > IRI UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CRMMWD	VANGS	VANGC	SHHLL	NMWDHJD	ILBLW	OBLNR	INVLWR	CRLLWR	CORLWR	CORLWR	STLLBR	TFLPLR
LCTPFA	0.11446 0.1013 138	0.04600 0.5921 138	0.61119 0.0062 138	-0.17656 0.0383 138	-0.07811 0.0001 137	0.04259 0.0001 138	0.22219 0.0088 138	0.08304 0.3329 138	0.58237 0.0001 138	0.58899 0.0001 138	0.75978 0.0001 138	0.39113 0.0001 138	-0.58837 0.0001 138
JNFV	0.12615 0.1404 138	-0.11322 0.1861 138	0.22791 0.0072 138	-0.09416 0.2720 138	-0.68101 0.0001 137	0.63562 0.0001 138	0.22415 0.0782 138	-0.10559 0.2177 138	0.47909 0.0001 138	0.43025 0.0001 138	0.62358 0.0001 138	0.00204 0.0001 138	-0.83950 0.0001 138
INFL	0.26383 0.0016 138	0.03454 0.4876 138	0.30096 0.0003 138	-0.17799 0.1681 138	-0.72535 0.0001 137	0.72029 0.0001 138	0.26864 0.4435 138	0.06575 0.0001 138	0.45817 0.0002 138	0.31055 0.0002 138	0.58854 0.0001 138	0.42610 0.0001 138	-0.67808 0.0001 138
PAPMKLN	0.22863 0.0070 138	0.01464 0.8647 138	0.31976 0.0001 138	-0.15995 0.1016 138	-0.70936 0.0001 137	0.71587 0.0001 138	0.21724 0.0105 138	0.08092 0.3478 138	0.55367 0.0001 138	0.39410 0.0001 138	0.67887 0.0001 138	0.35930 0.0001 138	-0.88880 0.0001 138
TFLN	0.10358 0.2267 138	0.04949 0.4007 138	0.30747 0.0002 138	-0.17536 0.0397 138	-0.97858 0.0001 137	0.63541 0.0001 138	0.20519 0.0158 138	0.37885 0.3580 138	0.01071 0.0001 138	0.51087 0.0001 138	0.77544 0.0001 138	0.38031 0.0001 138	-0.54880 0.0001 138
FMKLN	-0.00082 0.9978 138	0.00379 0.9648 138	0.30290 0.0003 138	-0.19315 0.0232 138	-0.58110 0.0001 137	0.50780 0.0001 138	0.17412 0.0411 138	0.08058 0.3478 138	0.45519 0.0001 138	0.44483 0.0001 138	0.20594 0.0001 138	0.20717 0.0188 138	-0.47232 0.0001 138
AMKLN	0.20994 0.0135 138	0.02597 0.7684 138	0.34609 0.0001 138	-0.16923 0.0472 138	-0.63204 0.0001 137	0.62976 0.0001 138	0.24223 0.0082 138	0.04814 0.5750 138	0.61119 0.0001 138	0.37021 0.0001 138	0.61948 0.0001 138	0.32772 0.0001 138	-0.68880 0.0001 138
STMKLN	0.09985 0.2840 138	0.06116 0.4759 138	0.28827 0.0001 138	-0.17905 0.0356 138	-0.47176 0.0001 137	0.63185 0.0001 138	0.20782 0.0186 138	0.19787 0.2079 138	0.61955 0.0001 138	0.51654 0.0001 138	0.78163 0.0001 138	0.35654 0.0001 138	-0.54819 0.0001 138
STMKLOL	0.12071 0.1584 138	0.19953 0.1027 138	0.26966 0.0014 138	-0.17571 0.0393 138	-0.19125 0.0235 137	0.09471 0.0001 138	0.08869 0.3010 138	0.30788 0.0082 138	0.35436 0.0001 138	0.28307 0.0001 138	0.27553 0.0001 138	-0.63488 0.0081 138	-0.27288 0.0081 138
VACMKLN	-0.01138 0.8946 138	-0.14889 0.0995 138	-0.19930 0.0191 138	0.05944 0.4886 138	-0.26204 0.0020 137	0.20119 0.0180 138	0.10743 0.2098 138	-0.31440 0.0002 138	0.06681 0.4815 138	0.03404 0.6918 138	0.10148 0.2363 138	0.48387 0.0001 138	-0.04889 0.0001 138
CRMKLN	0.16221 0.0573 138	0.04096 0.4334 138	0.84626 0.0001 138	-0.17803 0.0367 138	-0.30530 0.0001 137	0.66397 0.0001 138	0.23500 0.0055 138	0.10349 0.2271 138	0.43498 0.0001 138	0.51478 0.0001 138	0.76750 0.0001 138	0.34930 0.0001 138	-0.83741 0.0001 138
CRMKWD	0.58883 0.0001 138	-0.07630 0.3737 138	0.16190 0.0576 138	-0.12104 0.1573 138	-0.51518 0.0001 137	0.41882 0.0712 138	0.15408 0.0712 138	-0.06512 0.4480 138	0.31610 0.0109 138	0.42423 0.0001 138	0.11698 0.1718 138	0.11086 0.1911 138	-0.65712 0.0001 138
CRMKWD	1.00000 0.0000 138	0.03827 0.4559 138	0.12623 0.1401 138	-0.08825 0.9235 138	-0.21065 0.0135 137	0.18802 0.0272 138	0.08130 0.7431 138	-0.01645 0.8483 138	-0.08354 0.3294 138	-0.38138 0.0001 138	0.45477 0.0001 138	-0.13474 0.1151 138	-0.36364 0.0001 138

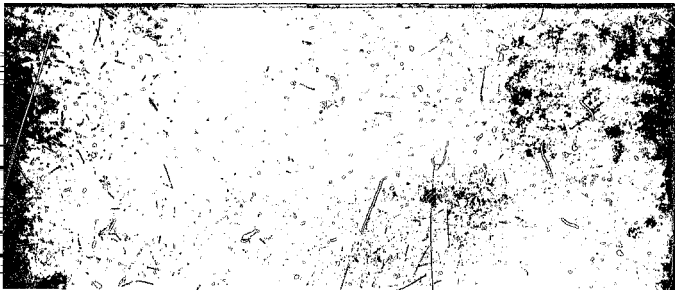
SPACEMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	CRHMD	VANGS	VANGS	RHNL	MMOFHD	IBLNR	OBLNR	INVLNR	CRLLNR	COLLNR	COLLNR	STLLNR	TFLPLR
VANGS	0.0385 0.6559 138	1.00000 0.0080 138	0.28593 0.0007 138	-0.24378 0.0040 138	0.03744 0.6640 137	-0.01685 0.8445 136	-0.01972 0.8184 138	0.02967 0.0549 138	0.00947 0.7659 138	0.02948 0.8457 138	-0.10058 0.7315 138	0.07845 0.2805 136	0.07845 0.0829 138
VANGS	0.12623 0.1401 138	0.28593 0.0007 138	1.00000 0.0000 138	-0.15099 0.0771 138	-0.29198 0.0005 137	0.28190 0.0008 138	0.13811 0.1062 138	0.10655 0.2115 138	0.25513 0.0025 138	0.19741 0.0903 134	0.26796 0.0015 138	-0.03950 0.6456 138	-0.27316 0.0015 138
RHNL	-0.00825 0.0115 138	-0.24378 0.6640 138	-0.15099 0.0771 137	1.00000 0.0000 137	0.09022 0.2945 137	0.05992 0.5147 138	-0.06588 0.4426 138	0.07190 0.8168 138	-0.12631 0.0671 138	-0.06907 0.4269 138	-0.16602 0.0516 138	0.03487 0.6448 138	0.09588 0.2633 138
MMOFHD	-0.21005 0.0115 137	0.07744 0.6640 138	-0.29198 0.0005 137	0.09022 0.2945 137	1.00000 0.0000 137	-0.62316 0.0001 137	-0.24474 0.0039 137	0.05246 0.3427 137	-0.48521 0.5001 137	-0.19900 0.5197 137	-0.09598 0.0001 137	-0.40213 0.0003 137	0.61160 0.0001 137
IBLNR	0.18803 0.0272 138	-0.01685 0.8445 138	0.28190 0.0008 138	0.05592 0.5147 138	-0.62316 0.0001 137	1.00000 0.0000 138	0.40061 0.0001 138	0.08524 0.3202 138	0.33722 0.0001 138	0.28051 0.0009 138	0.47799 0.0001 138	0.39485 0.0001 138	-0.67433 0.0001 138
OBLNR	0.08130 0.3831 138	-0.01972 0.8184 138	0.13811 0.1062 138	-0.06588 0.4426 138	-0.24474 0.0039 138	0.40061 0.0001 138	1.00000 0.0000 138	0.08498 0.3217 138	0.15109 0.0769 138	0.07565 0.3778 138	0.13413 0.1168 138	0.08370 0.3203 138	-0.21798 0.0108 138
INVLNR	-0.07645 0.0971 138	0.16382 0.0549 138	0.10655 0.2125 138	0.01990 0.8168 138	0.05246 0.5427 138	0.08808 0.0001 138	0.08498 0.3217 138	1.00000 0.0000 138	0.18696 0.0281 138	0.15503 0.0694 138	0.09375 0.2741 138	-0.26988 0.0014 138	-0.01269 0.0825 138
CRLLNR	-0.08364 0.3894 138	-0.00367 0.3659 138	0.25513 0.0025 138	-0.19637 0.0071 138	-0.48521 0.0001 138	0.03722 0.0001 138	0.15109 0.0769 138	0.18696 0.0281 138	1.00000 0.0000 138	0.66237 0.0001 138	0.61967 0.0001 138	0.31249 0.1746 138	-0.32676 0.0001 138
CORLNR	-0.08138 0.8001 138	0.09947 0.2457 138	0.19741 0.0203 138	-0.06907 0.4269 138	-0.19900 0.0197 138	0.28051 0.0009 138	0.07565 0.3778 138	0.15503 0.0694 138	0.46631 0.0001 138	1.00000 0.0000 138	0.67621 0.0001 138	0.22356 0.0008 138	-0.07701 0.3693 138
CORLNR	-0.85877 0.0001 138	0.02948 0.7315 138	0.26796 0.0015 138	-0.16602 0.0516 138	-0.40990 0.0001 138	0.47799 0.0001 138	0.13413 0.1168 138	0.09375 0.2741 138	0.01961 0.0001 138	0.67621 0.0001 138	1.00000 0.0000 138	0.37266 0.0001 138	-0.37312 0.0001 138
STLLNR	-0.13474 0.1151 138	-0.10058 0.2405 138	-0.03950 0.6456 138	0.03487 0.6448 138	-0.30213 0.0003 138	0.39485 0.0001 138	0.08370 0.3291 138	-0.26988 0.0014 138	0.11626 0.0084 138	0.22356 0.0001 138	0.37266 0.0001 138	1.00000 0.0000 138	-0.15361 0.0720 138
TFLPLR	-0.16384 0.0001 138	0.07485 0.3889 138	-0.27316 0.0012 138	0.09588 0.2633 138	0.61160 0.0001 138	-0.07433 0.0001 138	-0.21798 0.0102 138	-0.01269 0.0825 138	-0.02616 0.0001 138	-0.07701 0.3693 138	-0.07312 0.0001 138	-0.18367 0.0789 138	1.00000 0.0000 138
INFLNR	0.23162 0.0063 138	0.17039 0.0457 138	0.09126 0.2871 138	0.02115 0.8055 138	0.08951 0.2983 137	0.00779 0.9277 138	0.05670 0.5069 138	0.43726 0.0001 138	-0.05628 0.5124 138	-0.27149 0.0013 138	-0.16298 0.0561 138	-0.26128 0.0020 138	-0.12006 0.1988 138



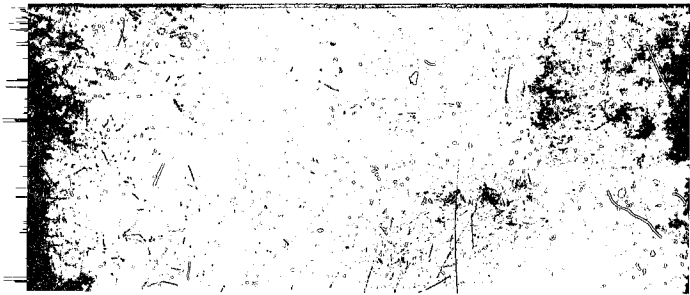
SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	CMHWFO	VANGS	VANGS	SHHL	NWNOFMO	IBLWR	DBLWR	INVLWR	CRLLWR	CORLWR	CORLWR	STLLBR	TFLPLR
LRNFHR	0.24063 0.0046 137	-0.01609 0.8520 137	0.26634 0.0017 137	-0.07522 0.1823 137	-0.90224 0.0001 137	0.87629 0.0001 137	0.23116 0.0066 137	-0.02741 0.7505 137	0.50143 0.0001 137	0.26903 0.0015 137	0.57160 0.0001 137	0.15040 0.0001 137	-0.66517 0.0001 137
ALFHLR	0.12559 0.1422 138	-0.00631 0.9414 138	0.15113 0.0768 138	0.13964 0.1094 138	0.28169 0.0308 137	-0.29430 0.0026 138	-0.09510 0.2982 138	-0.06113 0.4763 138	-0.29886 0.0094 138	-0.34844 0.0007 138	-0.46639 0.0001 138	-0.03101 0.7190 138	0.15681 0.0662 138
LCPPCLR	-0.14326 0.0937 138	0.02942 0.7407 138	0.03268 0.6949 138	-0.06001 0.4845 138	-0.23512 0.0057 137	0.25054 0.0030 138	0.04190 0.6056 138	-0.05258 0.5402 138	0.08826 0.3032 138	0.40615 0.8001 138	0.38821 0.0601 138	0.34861 0.0601 138	-0.11317 0.1863 138
	INFLWR	LRNFHR	ALFHLR	LCPPCLR									
RACHLEN	-0.08117 0.3167 137	-0.12574 0.1432 137	0.12846 0.1240 137	0.04211 0.6231 137									
INTDLEN	-0.06049 0.4826 137	0.11816 0.1691 137	-0.04172 0.6120 137	0.13371 0.1193 137									
LWDRL	-0.11321 0.1861 138	-0.14321 0.0950 137	0.09723 0.8568 138	-0.01279 0.8817 138									
HXLHL	-0.05099 0.5957 138	-0.80738 0.0003 137	0.17260 0.8437 138	-0.02379 0.7818 138									
NWMDL	0.03792 0.8986 138	-0.18481 0.0306 137	0.12948 0.1201 138	-0.04379 0.6101 138									
APXAN	-0.05363 0.9322 138	0.11170 0.1938 137	-0.09470 0.8692 138	0.01684 0.8446 138									
APXPS	-0.06909 0.4907 138	0.07276 0.3981 137	0.02993 0.7275 138	0.85890 0.4926 138									
BSAN	0.10337 0.2276 138	0.17703 0.0183 137	0.07846 0.3918 138	0.02634 0.7591 138									
BSPS	0.10398 0.2249 138	0.19166 0.0249 137	0.09312 0.2773 138	0.07215 0.4004 138									
SVINS	0.17883 0.0363 130	-0.00332 0.9693 137	0.11864 0.1094 138	-0.00915 0.9522 138									



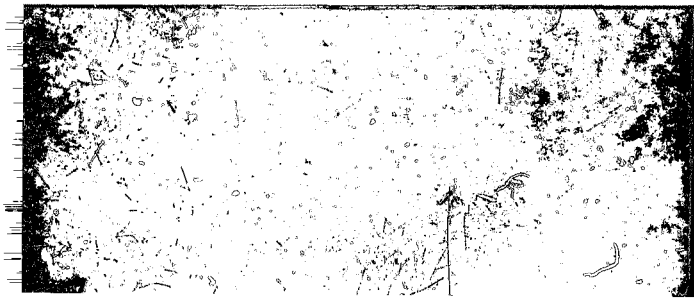
SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLNR	LRNFIR	ALFHLR	LGPFCLR
NSECV	0.16474 0.0535 138	-0.16687 0.0513 137	0.20432 0.0168 138	-0.06769 0.4302 138
PINSEV	0.03555 0.0789 138	-0.26200 0.0020 137	0.09060 0.2499 138	-0.04271 0.6189 138
PTLLN	0.02931 0.7329 138	0.17120 0.0055 137	-0.08496 0.3516 138	-0.01597 0.8525 138
INTLN	-0.06948 0.4180 138	-0.01792 0.8354 137	0.03993 0.6419 136	0.01934 0.8219 138
JBR	0.09686 0.2584 138	0.73840 0.0001 137	-0.27544 0.0511 138	0.23115 0.8057 138
IBRL	0.14734 0.0846 138	0.80400 0.0001 137	-0.17302 0.0424 138	0.24919 0.0032 138
ODRL	-0.00736 0.9318 138	0.77884 0.0001 137	-0.23048 0.0065 138	0.23462 0.0056 138
IBRM	0.15263 0.0739 138	0.57626 0.0001 137	-0.06057 0.4804 138	0.08787 0.3054 138
GBRM	-0.00714 0.9338 138	0.71859 0.0001 137	-0.27035 0.0093 138	0.22603 0.0077 138
INMKL	0.14700 0.0853 138	0.81678 0.0002 137	-0.16061 0.0599 138	0.29665 0.0704 138
INNSM	0.03171 0.7120 138	0.76841 0.0001 137	-0.13208 0.1225 138	0.22213 0.0088 138
PMXL	-0.05850 0.8955 138	0.88188 0.0001 137	-0.08121 0.0008 138	0.20271 0.0171 138
LBRP	0.04464 0.6031 138	0.88188 0.0001 137	-0.18088 0.0318 138	0.10687 0.2122 138



SPACEMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLMR	LRNFHK	ALFMR	LGPFCLR
NFLOR	-0.07987 0.2517 138	0.74315 0.0001 137	-0.14699 0.0054 138	0.28145 0.0008 138
CORLLN	-0.07621 0.3743 138	0.63100 0.0001 137	-0.45280 0.0001 138	0.07906 0.3567 138
CORLWD	0.05169 0.5471 138	0.16128 0.0597 137	-0.28172 0.0029 138	-0.12231 0.1530 138
CORTWD	0.12639 0.1596 138	0.45802 0.0001 137	-0.12955 0.1299 138	0.00409 0.9620 138
LGPFPA	-0.05501 0.5416 138	0.79089 0.0001 137	-0.41307 0.0001 138	0.40205 0.0001 138
INFM	-0.39780 0.0001 138	0.78382 0.0001 137	-0.45722 0.0001 138	0.34539 0.0001 138
INFL	0.97756 0.2550 138	0.84449 0.0001 137	-0.83228 0.0061 138	0.33703 0.0001 138
PAPKLN	0.06236 0.6213 138	0.82483 0.0001 137	-0.78783 0.0002 138	0.30254 0.0003 138
TFLLN	-0.05332 0.5978 138	0.79880 0.0001 137	-0.41410 0.0001 138	0.80566 0.0001 138
FMKLN	-0.18623 0.0267 138	0.68487 0.0001 137	-0.79911 0.0001 138	0.18588 0.0291 138
AKKLN	-0.83445 0.6883 138	0.74624 0.0001 137	-0.15351 0.0722 138	0.18608 0.0675 138
STHKLN	-0.04326 0.6144 138	0.78393 0.0301 137	-0.83367 0.0001 138	0.86884 0.0001 138
STHKLOL	0.18097 0.0337 138	0.24112 0.0045 137	-0.29208 0.0005 138	-0.03351 0.8964 138



SPEARMAN CORRELATION COEFFICIENTS / PROB > |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLWR	LRNFWR	ALFNLR	LCFFCLR
VACMKLN	-0.12924 0.1305 138	0.37076 0.0014 137	0.19813 0.0198 138	0.18229 0.0324 138
CRMKLN	-0.03480 0.6851 138	0.81658 0.0001 137	-0.42208 0.0001 138	0.37369 0.0001 138
CRMDVD	0.24528 0.0037 138	0.1493 0.0001 137	-0.86713 0.4340 138	-0.30830 0.2051 138
CRHMD	0.23162 0.0063 138	0.34063 0.0046 137	0.12559 0.1422 138	-0.14326 0.0937 138
YANGS	0.17039 0.0457 138	-0.81609 0.2520 137	-0.00631 0.9414 138	0.02842 0.7407 138
YANGB	0.09126 0.28771 138	0.76634 0.0017 137	-0.15113 0.0768 138	0.03368 0.8949 138
SHINL	0.02115 0.0055 138	-0.07522 0.3823 137	0.13964 0.1024 138	-0.06001 0.4845 138
NNNOFHD	0.08951 0.2983 137	-0.90224 0.0001 137	0.28369 0.0008 137	-0.23512 0.0057 137
IDLWR	0.00779 0.9277 138	0.67629 0.0001 137	-0.25430 0.0026 138	0.25054 0.9030 138
ODLWR	0.05670 0.5089 138	0.23116 0.0066 137	-0.09530 0.2562 138	0.04190 0.6256 138
INVLWR	0.43726 0.0001 138	-0.02781 0.7505 137	-0.76113 0.4763 138	-0.05258 0.5402 138
CRLLWR	-0.05624 0.5124 138	0.00143 0.0001 137	-0.79886 0.0004 138	0.08828 0.3032 138
CORLWR	-0.27149 0.0013 138	0.36903 0.0015 137	-0.34844 0.0001 138	0.40615 0.0001 138

SPEARMAN CORRELATION COEFFICIENTS / PROB ~ |R| UNDER H0:RHO=0 / NUMBER OF OBSERVATIONS

	INFLMR	LRNFHR	ALFHLR	LOPFCLR
CORLMR	-0.16290 0.0561 138	0.57160 0.0001 137	-0.86639 0.0001 138	0.40821 0.0001 138
STLLBR	-0.26126 0.0020 138	0.35000 0.0001 137	-0.03101 0.7180 138	0.34861 0.0001 138
YFLPLR	-0.11086 0.1988 138	-0.66517 0.0001 137	0.15681 0.0662 138	-0.11317 0.1863 138
INFLMR	1.00000 0.0000 138	-0.06974 0.4181 137	0.25259 0.0028 138	-0.14754 0.0882 138
LRNFHR	-0.06974 0.4181 137	1.00000 0.0000 137	-0.30218 0.0003 137	0.30312 0.0003 137
ALFHLR	0.25259 0.0028 138	-0.30218 0.0003 137	1.00000 0.0000 138	-0.13409 0.1169 138
LOPFCLR	-0.14754 0.0882 138	0.30312 0.0003 137	-0.13409 0.1169 138	1.00000 0.0000 138

0	TYPE	NAME	RACHEN	INTNDLN	LWMDRL	HXLHL	HXMDL	APXAN	APXPB	BSAK	BSPS	SVINS
1	MEAN		53.0019	5.13788	3.13652	87.1807	28.1562	80.0835	3.39754	45.1667	92.2817	1.29559
2	STD		15.1548	1.56251	0.555699	17.7459	5.58131	17.7006	1.26396	11.1549	2.17685	0.66649
3	CORR	RACHEN	137	137	138	138	138	138	138	138	138	138
4	CORR	INTNDLN	0.622982	0.622982	0.21625	0.0721	-0.08761	-10.0004	-137.546	-0.92707	-0.06009	-0.06009
5	CORR	LWMDRL	0.11995	0.045593	0.113777	0.113777	-0.13682	-0.06456	-128619	-0.047024	-0.04675	-126967
6	CORR	HXLHL	0.21625	0.045593	0.113777	0.113777	-0.13682	-0.06456	-128619	-0.047024	-0.04675	-126967
7	CORR	HXMDL	0.09721	0.131777	0.095135	0.131777	-0.13682	-0.06456	-128619	-0.047024	-0.04675	-126967
8	NSKCV	PINSV	PTLLN	INTLN	NBR	IBRL	IBRP	CORW	IMMDL	IMMDW	PKML	
1	18.5656	29.3778	9.60225	10.1667	5.5413	3.90884	1.90623	0.848996	1.03922	6.22877	4.85428	4.71188
2	2.89211	16.9291	2.54822	3.93757	0.917369	1.27856	0.546756	0.157189	0.289635	2.14277	1.74747	1.89027
3	138	138	138	138	138	138	138	138	138	138	138	138
4	0.081105	-0.13091	0.072608	0.21625	-0.04629	-0.04629	-0.04629	-0.04629	0.045201	-0.02338	0.126554	-0.96-04
5	-0.02726	0.068125	0.224654	0.097263	0.159978	0.107756	0.180011	0.138996	0.251361	0.164607	0.162919	0.15175
6	0.228139	0.137633	0.286016	-0.045235	-0.292056	-0.207631	-0.171321	-0.255896	-1.29889	-0.040716	-0.204104	-0.86911
7	0.517108	0.307732	0.161612	0.203769	-0.03981	-0.357519	-0.26665	-0.21201	-1.79228	-0.02068	-0.04355	-0.35962
8	0.383507	0.184673	0.123399	0.258483	-0.153404	-0.188209	-0.147753	-0.031355	-0.061295	-1.045136	-0.176543	-0.072364
0	IBRP	NFLOR	CORLNL	CORLND	CORTWD	LCTPFA	INFW	INFL	PAPMKLN	TFLLN	FKLN	APKLN
1	2.06232	25.2768	1.77826	0.457899	0.931232	3.48159	8.75051	9.81109	4.58167	8.17123	1.53884	2.61196
2	0.592124	12.6125	0.387064	0.078052	0.138182	0.814263	2.5716	2.25902	1.13483	1.38052	0.361158	0.401264
3	138	138	138	138	138	138	138	138	138	138	138	138
4	0.073336	-0.01758	0.163095	0.004457	-0.163006	-0.052172	-0.0251037	-0.006161	-0.02331	-0.05173	-0.115576	-0.039592
5	0.177756	0.157532	0.073114	0.151156	0.058966	0.103865	0.118716	0.171186	0.127172	0.017951	0.125374	0.042538
6	-0.132197	-0.132919	-0.158488	-0.121669	-0.228018	-0.178888	-0.129722	-0.158592	-0.21698	-0.173072	-0.06762	-0.095317
7	-0.19391	-0.383075	-0.221392	-0.04004	-0.285175	-0.293334	-0.269448	-0.327174	-0.11833	-0.266279	-0.09048	-0.207337
8	-0.046287	-0.268259	-0.050005	-0.11936	-0.089001	-0.04332	-0.164742	-0.58376	-0.32959	-0.09223	-0.07144	-0.020887
0	STHXL	STHXL	VACHXL	CRKXKL	CRKXWD	CRKXWD	VANGS	VANGS	SHIHL	HXKXFLD	IBLNR	GBLNR
1	7.69804	0.40529	0.479783	5.99978	0.788493	0.319884	57.5072	58.1014	66.8551	1.25013	4.57823	1.84551
2	1.3023	0.113536	0.155518	1.15702	0.148313	0.0571271	7.66178	12.0667	3.26463	0.407614	1.23997	0.25619
3	138	138	138	138	138	138	138	138	138	138	138	138
4	-0.051899	0.0204625	0.0035446	-0.07785	-0.067096	-0.004095	0.153407	-0.237901	0.0319677	0.394197	-0.06824	-0.094025
5	0.691159	0.281611	-0.090623	0.053108	0.104511	0.015364	0.125178	-0.075343	0.070024	0.0131719	-0.06201	-0.12295
6	-0.189196	-0.180397	0.10337	-0.198515	-0.193047	-0.110234	-0.243666	-0.312441	0.818108	0.221168	-0.100587	-0.145914
7	-0.282113	-0.068941	-0.074967	-0.283875	-0.106337	-0.019716	-0.109884	-0.028248	0.700253	0.398004	-0.131875	-0.278599
8	-0.075753	0.11699	-0.157831	-0.108057	-0.04327	-0.002853	0.3342	0.264919	-0.37048	0.303708	-0.00725	-0.165884
0	INFLNR	CRLLNR	CORLNR	CORLNR	STLLBR	TFLPLR	INFLNR	LRNFRH	ALFNLR	LOPFCLR		
1	1.32458	3.91263	7.71513	15.5406	19.6513	1.83171	1.23734	3.79337	1.79861	0.576373		
2	0.284976	0.780678	1.42935	3.36321	4.4053	0.241286	0.565344	2.27683	0.327792	0.478005		
3	138	138	138	138	138	138	138	138	138	138		
4	-0.133305	-0.155944	-0.018639	-0.070995	-0.0189304	-0.0519337	-0.07443	-0.150663	-0.171884	-0.0947821		
5	-0.167818	-0.067746	0.051761	-0.090991	-0.151625	-0.109653	-0.109653	-0.109653	-0.109653	-0.109653		
6	-0.0161678	-0.073305	-0.036609	-0.106052	-0.012463	0.197191	-0.022382	-0.155469	0.128294	-0.073284		
7	0.106556	-0.188861	-0.094424	-0.257264	-0.144829	0.243256	0.103547	-0.315272	0.259997	-0.137324		
8	0.09201	-0.130972	-0.050668	-0.166815	-0.162113	0.191521	-0.127944	-0.17844	0.136374	-0.072745		

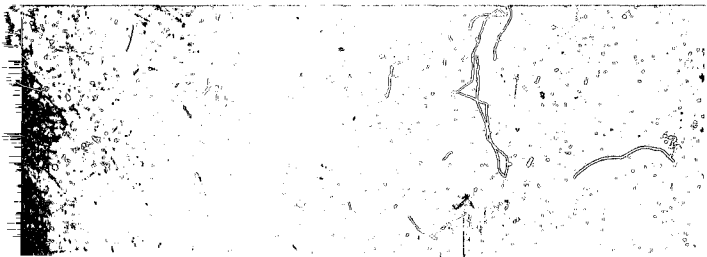
OBS	TYPE	NAME	RACHEN	INTNDLN	LMDRL	NOLRL	MOGDL	APKAN	APKPS	BSAN	SSPS	SVINS
9	CORR	APKAN	-0.00951	-0.009456	-0.009166	-0.265779	0.118036	1	-0.14441	-0.050639	-0.157151	0.243076
10	CORR	APKPS	-0.104004	-0.128619	0.039077	-0.028289	-0.002391	-0.014881	0.166398	0.200131	-0.094923	0.095611
11	CORR	BSAN	-0.137596	-0.077029	-0.494165	-0.157707	0.274712	-0.045039	0.166398	1	0.069915	-0.067477
12	CORR	SSPS	-0.092707	-0.046745	-0.031632	0.119787	-0.0751076	-0.157151	0.200331	0.569815	1	0.067477
13	CORR	SVINS	-0.002034	-0.126067	-0.291833	-0.136623	0.137782	0.261076	-0.094923	-0.095071	1	0.067477
14	CORR	NSECV	-0.081103	-0.02726	-0.228139	0.571798	0.383307	-0.145097	-0.048088	-0.068796	0.222230	0.234102
15	CORR	PINSV	-0.013091	-0.068127	-0.174733	0.377135	0.184673	-0.071864	-0.027317	-0.05073	0.065629	-0.048072
16	CORR	FTLLC	-0.078205	-0.024654	-0.280078	0.361612	0.123599	-0.215289	-0.018796	-0.06163	0.150183	-0.070739
OBS	NSECV	PINSV	FTLLC	INTLN	NB-	IBRL	ODRL	IBRW	ODRW	INXKL	INXW	FXKL
9	-0.146491	-0.071864	-0.215289	0.06601	0.202486	-0.067934	-0.063912	-0.052144	-0.005702	0.108423	-0.081603	0.238786
10	-0.048488	-0.027317	-0.018796	-0.16814	0.0350915	0.123788	0.108383	0.158732	-0.089436	-0.051386	-0.029397	-0.030724
11	-0.0368796	-0.034073	-0.0096912	-0.185136	0.328312	0.251778	0.22818	0.204039	0.282157	0.29519	0.29519	0.127095
12	0.222230	-0.054589	0.150183	0.132091	0.30392	-0.042005	-0.089983	0.182204	-0.259451	0.291654	0.084649	0.084649
13	0.234102	-0.097172	-0.07473	0.187944	-0.05019	-0.028484	-0.141351	-0.110612	-0.191658	-0.06405	-0.124026	-0.067297
14	-0.04512	0.0342082	0.310285	-0.001763	-0.135418	-0.099705	-0.146265	-0.112006	-0.121949	-0.080605	-0.133414	-0.077451
15	0.04512	-0.045518	1	0.123597	-0.398499	-0.116895	-0.135662	-0.261942	-0.107602	-0.046882	-0.06351	0.06351
16	0.04512	1	-0.096032	0.231716	0.221862	0.23231	-0.023412	0.254716	0.254146	0.24855	0.212857	0.212857
OBS	IBRW	ODRW	INXKL	INXW	FXKL	FXW	INFL	PAPMFLN	FTLLC	INXKL	INXW	FXKL
9	-0.146491	0.1229424	-0.071864	-0.0698563	-0.0375772	-0.0856472	0.133978	0.114466	-0.0903437	-0.0988629	0.124008	0.104581
10	-0.048488	0.080701	-0.054589	-0.0322844	0.0533049	0.1014	0.109491	-0.0438025	0.202929	-0.077852	-0.081051	-0.0863004
11	0.133121	0.213698	-0.091336	-0.0715652	0.227576	0.117065	0.1517	0.223854	0.202571	0.130439	0.119715	0.201942
12	0.234102	0.277088	-0.060567	-0.0298407	0.110976	0.195703	0.181897	0.228119	0.192882	0.168805	-0.074481	-0.248339
13	-0.04512	-0.048286	-0.105585	-0.084517	-0.037117	-0.099417	-0.213076	-0.102011	-0.097059	-0.114429	-0.125366	-0.023672
14	0.04512	-0.174011	-0.003266	-0.007978	-0.065311	-0.09044	-0.216416	-0.091485	-0.134419	-0.059466	-0.157561	-0.037723
15	-0.04512	-0.246434	-0.262901	-0.081005	-0.186221	-0.289594	-0.27431	-0.30074	-0.381996	-0.362666	-0.232521	-0.370084
16	0.277088	0.234328	0.192867	0.18665	0.199449	0.164528	0.11734	0.203663	0.194505	0.183051	0.166696	0.18491
OBS	INXKL	INXW	FXKL	FXW	INFL	PAPMFLN	FTLLC	INXKL	INXW	FXKL	FXW	INFL
9	-0.146491	-0.104523	-0.009456	-0.009166	-0.04729	0.22271	-0.1310247	-0.325681	-0.193774	-0.0318381	0.106727	0.106727
10	0.174617	-0.029925	-0.089925	0.10345	0.103598	0.139171	-0.13616	0.150507	-0.081484	-0.119928	-0.022878	0.004566
11	0.129154	-0.071712	-0.089701	0.136831	0.270416	0.185883	0.183687	0.371057	-0.251003	-0.272881	-0.247008	-0.0887381
12	0.152258	-0.114525	-0.098515	0.15115	0.17631	0.126419	0.081689	0.298782	-0.265899	-0.203011	0.131764	0.103984
13	-0.119603	-0.048488	-0.017569	-0.04523	-0.110777	-0.009215	-0.043992	-0.118326	-0.270972	0.161849	-0.053959	0.187968
14	-0.054589	-0.071712	-0.081273	-0.032895	-0.006215	0.131789	0.281389	0.009099	0.234651	0.261053	-0.09119	-0.09119
15	-0.04512	-0.065651	-0.24973	-0.21178	0.0243036	-0.097045	-0.021644	-0.0919012	-0.263596	-0.104962	-0.122914	-0.122914
16	0.107219	0.071712	-0.120716	0.204381	0.26471	0.197031	-0.116515	0.11282	-0.200988	-0.133645	0.264227	-0.00097
OBS	INFL	PAPMFLN	FTLLC	INXKL	INXW	FXKL	FXW	INFL	PAPMFLN	FTLLC	INXKL	INXW
9	-0.04512	-0.120456	-0.120456	0.120653	-0.077033	-0.091956	-0.052834	0.137967	-0.087566	-0.0688039	-0.0688039	-0.0688039
10	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977
11	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977
12	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977
13	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977
14	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977
15	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977
16	-0.04512	-0.081484	-0.081484	0.102144	-0.081622	-0.138562	-0.170224	0.054081	0.0806132	0.0425977	0.0425977	0.0425977

OBS	_TYPE_	_NAME_	RACHLEN	INTNDLN	LHWORL	KOLML	MICOL	APXAN	APXFS	BSAN	BSPS	SVIRS
17	CDRR	INTLN	0.219252	.0997263	-.045235	0.203769	0.258483	0.06501	-.106514	.0096912	.0204815	.0347646
18	CDRR	NBR	-0.046529	0.159978	-.292058	-.403281	-.153408	0.202486	0.035033	0.185116	0.132091	-.005019
19	CDRR	IBRL	-.075935	0.107556	-.207631	-.357539	-.188209	.6773134	0.12398	0.328312	0.303923	-.102894
20	CDRR	ORL	-.035999	0.140011	-.171321	-.286669	-.141753	.9563912	0.107343	0.251772	0.242605	-.747151
21	CDRR	IBRW	-.005244	0.126996	-.255049	-.431201	.0013555	.0521434	0.137312	0.22818	.0099533	-.110612
22	CDRR	ORRW	-.004501	0.251361	-.12898	-.179228	-.061259	.0695702	.0894396	.0204039	.1822204	-.191608
23	CDRR	INMCL	-0.02338	0.166607	-.204019	-.320568	-.146136	0.108802	.0510366	0.238157	0.294411	-.106405
24	CDRR	INMWR	-.0125554	0.189919	-.204104	-.348553	-.178543	.0851603	.0935907	0.259159	0.291654	-.124426
OBS	NESECV	PINSV	PTLLN	INTLN	NBR	IBRL	ORL	IBRW	ORRW	INMCL	INMWR	PKXL
17	-.001763	0.122907	-.094832	0.1900049	0.056034	-.0520645	0.165113	.0813177	.0760014	.0947472	.0562818	
18	-.135418	-.228439	0.231716	1	0.845605	0.809976	0.567983	0.741329	0.889588	0.626129	0.859595	
19	-.099705	-.316955	0.221862	0.886905	0.886123	0.639428	0.785981	0.785981	0.960389	0.901081	0.765802	
20	-.145655	-.119952	0.12421	0.809778	0.885123	0.681113	0.573609	0.865113	0.891353	0.803825	0.8072	
21	-.118086	-.139943	.0224182	.741329	0.567983	0.639428	0.573609	1	0.6734	0.648692	0.653384	.051923
22	-.127819	-.263482	0.254736	.886113	0.741329	0.785981	0.885113	0.6734	1	0.801822	0.800669	.725195
23	-.080605	-.107602	0.254736	0.760014	0.889588	0.960189	0.891353	0.648692	0.801822	1	.925128	.043426
24	-.133414	-.106682	0.248555	.0947472	0.626129	0.901081	0.683245	0.653384	0.800669	.929128	1	.798474
OBS	LBRP	NFLOR	CORLLN	CORLMD	CORTND	LCTPFA	INFW	INFL	PAPRLN	TFLLN	FKXLN	AKXLN
17	.0897837	.0105675	-.059863	0.138234	0.130772	-.001422	.0933161	.0769005	.0482447	.0772307	.0397903	0.115545
18	0.682992	0.616851	.579735	0.265636	0.388556	0.739272	0.659489	0.819238	0.830128	0.728837	0.645175	0.689934
19	0.728555	0.629718	0.534874	0.178511	0.665995	0.750145	0.727975	0.89022	0.900102	0.782163	0.605088	0.74589
20	0.652392	0.646585	.566006	0.175581	0.621133	0.739544	0.78862	0.844171	0.84754	.743673	0.639085	.699657
21	0.519172	0.528439	.54562	0.259708	0.608487	0.669141	0.476998	0.621193	0.611592	0.514611	0.3466	.561178
22	0.670135	0.767717	0.54369	0.250021	0.57057	0.672446	0.739538	0.758408	0.780763	0.675298	0.600947	.615792
23	0.781252	0.677413	0.54658	0.231076	0.675984	0.773864	0.778558	0.902017	0.875251	0.785497	0.615925	.148684
24	0.725688	0.632741	0.4707	0.280282	0.680662	0.687307	0.605228	0.843231	0.812598	0.746571	0.546167	.638247
OBS	STKXLI	STKXLD	VACXKL	CORXKL	CRMXMD	CRMXMD	VANGS	VANGS	SHML	MNNOFHO	IBLWR	OBLWR
17	.054605	.0511263	0.22188	0.016504	0.13536	0.148525	.0945365	-.063066	-.095513	.0330349	-.0.03877	-.626508
18	0.74141	0.816308	.0368128	0.791704	0.500341	0.23918	-.013461	0.311563	-.251295	.759526	.711344	0.21162
19	0.77091	.233459	.028974	0.818746	0.669802	0.349377	-.050878	.028156	-.085944	-.756855	.826596	.261047
20	0.765608	0.215200	.025149	0.791262	0.617239	0.230323	-.080246	.021157	-.097455	-.821343	.747189	.294015
21	0.890808	0.507582	0.348481	0.535107	0.616123	0.389325	-.051725	0.172346	-.256387	-.528439	.513601	.002469
22	0.678592	0.255905	.156076	0.726111	0.560964	0.227256	-.073466	.049276	-.089359	-.880118	.590014	-.159932
23	0.781708	0.275793	0.200994	0.87211	0.65773	0.3248	-.030609	0.056663	0.07524	0.809903	0.781718	0.241637
24	0.694361	0.200498	0.290531	0.739327	0.666453	0.135946	-.077749	.0250701	-.083029	0.81272	.711636	.220352
OBS	INVLWR	CORLWR	CORLWR	CORLWR	STLLWR	STLLWR	INFLWR	LANRHR	ALFLWR	LCFFCLR		
17	-.125659	-.128672	-.0.1137	-.060232	.077431	.0022027	-.091441	-.019066	-.0367887	-.052103		
18	-.112039	0.42993	0.262263	.955695	0.150846	-.701827	-.253877	0.758444	-.339176	.263192		
19	-.183126	0.412031	0.198421	.9499201	0.336066	-.019247	-.116022	0.803597	-.287459	0.275137		
20	-.320148	0.401897	0.304878	0.55021	0.371994	-.000716	-.437266	0.709951	-.328869	0.280595		
21	-.278147	0.198864	0.099291	0.238122	.325063	-.587694	-.889935	0.527833	-.0.07153	.0840991		
22	-.256166	0.325956	0.212271	0.51388	0.290467	-.760911	-.478141	0.709123	-.314655	0.243795		
23	-.180348	0.402285	0.207078	.325152	0.325976	-.604032	-.338445	0.61879	-.220763	0.29821		
24	-.466291	0.31786	0.123638	0.441679	0.368408	-.788928	-.463792	0.778827	-.241756	0.26832C		

DBS	_TYPE	_NAME	_RACHEN	INTNDL	LNDL	MLRL	MSDL	APXAN	APXPB	BSAN	BSFP	SVBS
25	CORR	MMXL	-3.9E-04	0.15175	-0.26913	-0.30562	-0.72356	0.238786	-0.030794	0.127095	0.024649	-0.067697
26	CORR	LWMP	-0.037336	0.177756	-0.132197	-0.179301	-0.054287	0.0630174	-0.038257	0.171121	0.180217	-0.054287
27	CORR	NFLOR	-0.01758	0.157532	-0.132919	-0.134075	-0.256295	0.129404	-0.080701	0.213694	0.27908	-0.148286
28	CORR	CORLLN	-0.105095	-0.171314	-0.150808	-0.221392	-0.054005	0.079008	-0.055499	0.02136	0.005087	-0.105095
29	CORR	CORLLWD	0.0044457	0.151126	-0.121669	-0.040404	0.11936	-0.009573	-0.032804	0.0715582	0.029896	0.0847407
30	CORR	CORLWD	-0.163006	0.026896	-0.28038	-0.09175	-0.09001	-0.031772	0.033049	0.227578	0.118976	-0.03177
31	CORR	LCPTFA	-0.025172	0.103865	-0.178885	-0.259134	-0.104132	0.082672	0.1014	0.177066	0.146703	-0.099417
32	CORR	INFW	0.0251037	0.138716	-0.129722	-0.269644	-0.164742	0.139378	0.109415	0.1517	0.181897	-0.213076
DBS	NSECV	PINSV	PTLLN	INTLN	NSR	IBRL	DBRL	IBRW	DBRW	INMKL	INMKW	PMKL
25	-0.097451	-0.306351	0.212857	-0.0582818	0.859959	0.765842	0.8072	0.551923	0.725196	0.843426	0.790474	1
26	-0.0056226	-0.282887	0.274918	-0.097837	0.682992	0.728955	0.673183	0.51972	0.610133	0.778795	0.72598	0.727101
27	-0.178011	-0.08433	0.238528	0.019575	0.61681	0.804146	0.80565	0.524139	0.787417	0.877413	0.803111	0.772804
28	-0.007266	-0.269406	0.19267	-0.09863	0.397335	0.534274	0.566006	0.326562	0.24283	0.554598	0.4707	0.650287
29	-0.059578	0.081205	0.18605	0.138234	0.264632	0.178531	0.175981	0.249748	0.029701	0.531076	0.234882	0.231919
30	-0.053117	-0.186221	0.199489	0.170772	0.388956	0.669895	0.642133	0.406887	0.2107	0.675994	0.608082	0.607607
31	-0.090044	-0.24924	0.164528	-0.01422	0.735272	0.729145	0.739544	0.669141	0.672446	0.77856	0.687307	0.7069
32	-0.216416	-0.275631	0.165734	0.093161	0.695489	0.727975	0.70482	0.476944	0.719538	0.778550	0.809228	0.742799
DBS	LBFP	NFLOR	CORLLN	CORLWD	CORTWD	LCPTFA	INFW	INFL	PAPMKL	INFLN	PMKL	AMKL
25	0.727101	0.772204	0.652091	0.216919	0.607407	0.7069	0.742799	0.830179	0.809631	0.740091	0.642189	0.712957
26	0.663271	0.663371	0.11471	0.200648	0.602199	0.569911	0.631363	0.716142	0.721179	0.620713	0.513968	0.65646
27	0.663271	1	0.463607	0.138688	0.568495	0.658982	0.810909	0.821659	0.757692	0.658425	0.535669	0.623231
28	0.511471	0.463607	0.174398	0.077362	0.674717	0.534885	0.619005	0.690295	0.725655	0.727107	0.727334	0.727334
29	0.200648	0.138688	0.174398	1	0.301032	0.144025	0.123819	0.197108	0.171344	0.156474	0.232307	0.117104
30	0.602199	0.568495	0.077362	0.381032	1	0.442403	0.889414	0.601263	0.568154	0.471166	0.444925	0.53202
31	0.569911	0.658982	0.674717	0.144025	0.442403	1	0.769127	0.86344	0.87725	0.926305	0.736996	0.750493
32	0.631363	0.810909	0.534885	0.173419	0.483414	0.769127	0.794368	0.87725	0.792463	0.670331	0.728403	0.728403
DBS	STMKL	STMKL	VACMKL	CMKLN	GRMKW	GRMKW	VANOS	VANOS	SHRL	MMNOFD	ILMKR	DBLMR
25	0.754109	0.332829	0.0693131	0.782003	0.608611	0.261237	0.010534	0.282299	-0.235091	-0.750431	0.624097	0.226617
26	0.628952	0.272858	0.107357	0.654033	0.612051	0.25661	-0.051871	0.199119	-0.09503	0.631293	0.561957	0.168534
27	0.639319	0.133808	0.211076	0.697294	0.516532	0.184366	-0.105356	0.221114	-0.026565	-0.788808	0.706664	0.244731
28	0.568114	0.368728	-0.08015	0.740087	0.435254	0.139863	-0.009005	-0.134852	-0.118571	-0.719508	0.642107	0.119972
29	0.727469	0.683314	-0.203315	0.1917	0.369671	0.451018	-0.0611051	0.185473	-0.14095	-0.65775	0.079194	-0.07154
30	0.46397	0.13435	0.218469	0.16153	0.484685	0.547802	-0.1108	0.225337	-0.192946	0.005005	0.441322	0.179953
31	0.942644	0.216471	0.185929	0.956571	0.349336	0.0956102	-9.0E-04	0.280003	-0.198111	0.700973	0.64479	0.168215
32	0.763773	0.0687991	0.302367	0.769423	0.399549	0.6871667	-0.097727	0.719949	-0.100075	-0.790587	0.622158	0.117765
DBS	INVLNR	ORLLNR	CORLWR	CORLWR	STLLR	INFLNR	INFLNR	LRNFR	ALNFR	LCPTCLR		
25	-0.166418	0.501398	0.224705	0.541753	0.225168	-0.713995	-0.301696	0.781512	-0.293782	0.193088		
26	-0.13993	0.56889	0.052867	0.399333	0.21941	-0.679429	-0.205146	0.625999	-0.142634	0.079213		
27	-0.249165	0.368256	0.210652	0.501056	0.390453	-0.446978	-0.742101	0.761764	-0.26959	0.287637		
28	-0.030705	0.849975	0.404361	0.603894	0.0941639	-0.431167	-0.110121	0.638604	-0.035257	0.095266		
29	-0.069738	0.556116	-0.195274	0.112771	0.09659	-0.161587	0.077075	0.124212	-0.06453	0.00819		
30	-0.199025	0.258137	-0.275079	0.139103	0.197361	-0.59432	-0.20214	0.617239	-0.903	0.021466		
31	-0.132036	0.390655	0.617279	0.780688	0.404043	-0.327276	-0.337101	0.725977	-0.41139	0.600434		
32	-0.493561	0.391616	0.413828	0.614194	0.502899	-0.632264	-0.70095	0.736688	-0.730228	0.464393		

OBS	_TYPE	_NAME	RACHLN	INTNDLN	LNDRLL	MXLNLL	MXOZLL	APKXAN	APKPSX	BSAN	BSPS	SVINS
33	CORR	INFL	-006161	0.137146	-0.315852	-0.327174	-0.138376	0.114466	0.034825	0.223934	0.228119	-0.102011
34	CORR	PAPMKLN	-0.042331	0.122712	-0.211398	-0.318031	-0.132929	-0.090347	0.123929	0.202571	0.192882	-0.090769
35	CORR	TFLLN	-0.045173	0.091795	-0.173072	-0.266279	-0.092523	-0.084629	0.070852	0.130439	0.148805	-0.111429
36	CORR	FMKLN	-0.115576	0.125374	-0.205762	-0.269044	-0.079144	0.124008	0.180515	0.115715	0.078484	-0.155306
37	CORR	AMKLN	-0.239256	0.038258	-0.225337	-0.207532	-0.020807	0.180501	0.065004	0.201942	0.242839	-0.022677
38	CORR	STHKOL	-0.051499	0.081159	-0.107166	-0.281113	-0.071753	0.092099	0.074617	0.120254	0.152228	-0.115963
39	CORR	STHKOL	-0.080425	0.241611	-0.180397	-0.068941	0.116559	0.021022	-0.059499	0.073312	-0.034822	-0.026421
40	CORR	VACHKLN	-0.053448	-0.109463	0.10337	-0.074967	-0.157831	-0.094123	0.029895	-0.088971	-0.039523	-0.017269
OBS	NSECV	PISBV	PTLLN	INTLN	NBR	IBRL	OBRL	IDRW	OBRW	INMKL	INMKW	PKPL
33	-0.091485	-0.300594	0.203653	-0.0769005	0.8192236	0.899922	0.844371	0.621193	0.755408	0.942017	0.863231	0.830179
34	-0.134919	-0.321845	0.194505	-0.062047	0.820128	0.900132	0.817954	0.611982	0.780763	0.887521	0.818398	0.802631
35	-0.052426	-0.262068	0.183051	-0.077207	0.728837	0.782163	0.743673	0.516111	0.675298	0.795497	0.70671	0.700097
36	-0.157581	-0.237121	0.168696	-0.0397503	0.605175	0.602088	0.639089	0.3666	0.600547	0.615925	0.564767	0.604189
37	-0.057723	-0.300394	0.18941	0.115545	0.696934	0.180828	0.695657	0.501178	0.615788	0.751848	0.688086	0.713277
38	-0.050337	-0.259982	0.197729	0.0546025	0.74141	0.710701	0.742602	0.499083	0.678892	0.781702	0.694361	0.754409
39	-0.037726	-0.626077	0.071747	0.5111653	0.448104	0.223499	0.512206	0.293903	0.275732	0.284008	0.267562	0.267562
40	-0.031273	-0.06521	-0.120716	-0.28186	-0.0368128	0.298974	0.226149	0.244881	0.156076	0.220044	0.290531	0.693131
OBS	LRRP	NFLOR	CORLKN	CORLGO	CORTWD	LCTPFA	INFM	INFL	PAPKLN	TFLLN	FMKLN	AMKLN
32	0.716142	0.821655	0.619805	0.197108	0.601263	0.86384	0.827237	1	0.92112	0.899779	0.674033	0.82956
33	0.721179	0.757692	0.690295	0.711344	0.568194	0.87729	0.794362	0.92112	0.922845	0.74831	0.855681	0.855681
34	0.580733	0.638455	0.725455	0.156474	0.471466	0.926106	0.792463	0.899779	0.922845	1	0.795049	0.864942
35	0.513668	0.535469	0.727107	0.525207	0.440825	0.730956	0.670331	0.678033	0.74831	0.795049	0.864942	0.864942
36	0.55646	0.625931	0.727134	0.111764	0.34002	0.756943	0.784043	0.82992	0.895581	0.865942	0.695966	0.695966
37	0.525652	0.633819	0.746814	0.172769	0.46397	0.926044	0.781773	0.895137	0.920669	0.994967	0.12223	0.861846
38	0.727258	0.134804	0.364722	0.283214	0.13335	0.216471	0.068791	0.270662	0.3556	0.281012	0.268444	0.286789
40	0.707357	0.211076	-0.078015	-0.203315	0.210169	0.185092	0.302367	0.250022	0.230791	0.289999	0.057274	0.246839
OBS	STPKLN	STHKOL	VACHKLN	CORLKN	CORLGO	CORLWD	VANOS	VANOB	SHLNL	INNOFHD	ILBLR	OBLNR
33	0.892137	0.270562	0.256002	0.903282	0.505575	0.223799	-0.013308	0.268811	-0.137789	0.77435	0.713978	0.232668
34	0.920669	0.3556	0.230791	0.943726	0.577703	0.203493	-0.054743	0.299184	-0.1572	-0.78028	0.754337	0.197138
35	0.774977	0.681012	0.288039	0.963177	0.431406	0.084115	-0.00610	0.276397	0.163888	-0.7503	0.63112	0.328809
36	0.81233	0.266844	0.037741	0.807567	0.346848	0.060502	-0.035946	0.108715	-0.20418	-0.64827	0.530007	0.165086
37	0.461836	0.286789	0.286939	0.84522	0.51907	0.183599	-0.036	0.304603	0.16123	-0.61323	0.273392	0.219819
38	0.299616	0.299616	0.200127	0.950507	0.432296	0.0802959	-5.1E-04	0.305294	-1.78101	-0.70248	0.634397	0.196272
39	0.299616	-0.233447	1	0.124957	0.106392	0.298645	-0.05912	0.202033	-0.04901	-1.04918	0.835077	0.004028
40	0.299616	-0.233447	1	0.124957	0.106392	0.298645	-0.05912	0.202033	-0.04901	-1.04918	0.835077	0.004028
OBS	IMVLR	CALLMR	CORLNR	CORLWR	STLLNR	TFLPLR	INFLNR	LNINFR	ALINFR	ALFLNR	LCGPCLR	
33	-0.16623	0.472329	0.346149	0.641283	0.391513	-0.695337	-0.31962	0.816782	-0.287569	0.38334	0.38334	
34	-0.178612	0.523381	0.402879	0.690653	0.318218	-0.81138	-0.37789	0.785008	-0.31816	0.328809	0.328809	
35	-0.17087	0.590181	0.444349	0.781462	0.397604	-0.551642	-0.37626	0.748597	-0.277997	0.437207	0.437207	
36	-0.12013	0.606822	0.469629	0.646821	0.397604	-0.551642	-0.37626	0.748597	-0.277997	0.437207	0.437207	
37	-0.08237	0.612634	0.372219	0.634764	0.332767	-0.567404	-0.261533	0.70573	-0.21545	0.418921	0.418921	
38	-0.10931	0.601802	0.533085	0.789556	0.378269	-0.522299	-0.293219	0.7466	-0.439301	0.383167	0.383167	
39	-0.145827	0.194333	0.663548	0.131778	0.699105	-0.102231	-0.117906	0.22333	-0.22333	0.131778	0.131778	
40	-0.358254	0.0847703	0.046086	0.128359	0.365983	-0.118502	-0.317994	0.225589	0.047252	0.149189	0.149189	

DBS	_TYPE_	_NAME_	RACHLN	INTNDLN	LIMDRL	MXLNL	HGHDL	APKAN	APXP5	BSAN	BSPS	SVKNS
41	CORR	CRMLKN	0.07785	0.931508	-1.19515	-2.283876	-1.00557	0.966612	0.10345	0.136630	0.157415	-1.04523
42	CORR	CRMKWD	-0.067096	0.104991	-1.193047	-2.10627	-0.04327	-0.00564	0.103698	0.170816	0.176351	-1.10777
43	CORR	CRMKWD	-0.004099	0.153634	-1.119434	-0.197716	-0.002853	-0.04729	0.135711	0.168663	0.164649	-0.00916
44	CORR	VANGS	0.134007	0.125378	-2.263666	0.109804	0.342	0.2271	-0.1616	0.184687	0.561609	0.439892
45	CORR	VANGS	-0.373901	-0.075343	-1.31241	-0.024248	0.264819	0.130247	0.150307	0.321091	0.292872	0.116326
46	CORR	SUHLNL	-0.319677	0.137024	0.818308	0.370623	-0.37048	0.32561	-0.081484	-0.251003	0.258599	-0.70972
47	CORR	BLMFLD	0.396197	-0.04317	0.221169	0.398004	-0.503708	-1.93774	-1.15929	-0.27881	-0.26811	0.161849
48	CORR	BLMFLD	0.06824	-0.042421	-1.00597	-0.313875	-0.249725	-0.043831	0.222878	0.247008	0.313764	-0.053999
DBS	NSCOV	PINSV	PTLLN	INTNDLN	NBR	IBRL	OBRL	IBRN	ODRN	INXKL	IMDOW	PHKL
41	-0.088395	-0.289973	0.204381	0.016504	0.793744	0.818746	0.791262	0.535107	0.726111	0.82711	0.739327	0.782003
42	-0.06215	-0.211718	0.289263	0.13536	0.580341	0.669802	0.612339	0.646173	0.560944	0.66773	0.666459	0.606061
43	0.131788	0.0243036	0.157081	0.148529	0.23918	0.349377	0.250323	0.389235	0.227236	0.3246	0.335945	0.241237
44	0.281384	0.051035	-1.16515	0.095365	-0.18461	-0.050078	-0.000564	-0.07195	-0.73066	-0.002949	-0.75749	0.163514
45	0.180994	-0.021644	0.11262	-0.063056	0.151563	0.282166	0.291157	0.112346	0.249276	0.106863	0.250701	0.282229
46	0.236651	0.919012	0.280548	-0.095513	-0.221925	-0.065644	-0.09455	-0.252432	-0.097594	-0.097594	-0.097594	-0.237706
47	0.241053	0.563296	-1.131645	0.033349	-0.795556	-0.79685	-0.851345	-0.548459	-0.740818	-0.002033	-0.81272	0.750311
48	-0.076823	-0.305962	0.264227	-0.03377	0.711344	0.826586	0.749129	0.113651	0.590014	0.783738	0.711636	0.624097
DBS	LBRP	NFLOR	CORLLN	CORLWD	CORTWD	LCTFFA	INFL	INFL	P ₀ MDLN	TFLLN	APKAN	APXKL
41	0.654073	0.697294	0.769087	0.1917	0.536153	0.956671	0.789683	0.903582	0.943726	0.963127	0.407567	0.85422
42	0.632051	0.516532	0.432584	0.360671	0.865965	0.349336	0.395958	0.560575	0.577703	0.433559	0.368493	0.51086
43	0.25661	0.184366	0.139493	0.518116	0.478002	-0.096102	0.0871667	0.233799	0.203943	0.0845115	0.060502	0.183599
44	-0.053871	-1.05356	-0.090085	0.613061	-0.1108	-0.05404	-0.07727	-0.013308	-0.04743	-0.004818	-0.035946	-0.036
45	0.199115	0.221114	0.334422	0.185473	0.225337	0.284003	0.179494	0.268611	0.259184	0.276397	0.308715	0.304603
46	-0.09803	-0.028565	-0.212697	-0.14099	-1.192498	-1.56114	-1.00075	-1.37789	-0.1572	-1.63188	-0.20418	-1.67323
47	-0.61293	-0.78808	-0.717889	-1.68775	-0.640035	-0.70073	-0.790387	-0.17415	-0.78208	-0.71943	-0.64827	-0.61332
48	0.561557	0.705264	0.442167	0.6579194	0.443722	0.64479	0.622158	0.713978	0.724337	0.636112	0.530007	0.592332
DBS	STMKLN	STMKOLD	VACHKLN	CRMLKN	CRMKWD	VANGS	VANGS	SHLNL	NMDFHD	BLMR	OBMLR	
41	0.960697	0.320317	0.179497	1	0.48013	0.145974	-0.013397	0.334732	-0.1766	-0.75531	0.675929	7.1984
42	0.432296	0.308172	0.126392	0.48013	1	0.509535	-1.15209	0.178614	-1.40379	-0.56791	0.800652	1.39682
43	0.050298	0.298665	0.048012	0.145974	0.589535	1	-0.03921	0.109369	0.021005	-0.209139	0.176385	-0.669826
44	-5.15404	0.759326	-0.64961	-0.01397	-1.15209	0.22606	0.22293	-0.040454	-0.17255	-0.040454	-0.00295	0.00295
45	0.305294	0.292033	-0.204625	0.334732	0.178614	0.105369	0.22606	1	-1.69225	-1.303828	0.271036	0.187672
46	-1.78101	-0.204901	0.083202	-0.1766	-1.40379	-0.021005	-0.22293	-1.69225	1	0.113954	-0.762297	0.079366
47	0.703346	1.64918	-0.68829	-0.75531	-0.56791	-0.01339	0.117258	-0.363628	0.113954	-0.675284	-0.002136	0.396639
48	0.634397	-0.053677	0.198372	0.675929	0.800652	0.176385	-0.040454	0.271036	0.0376297	-0.675284	1	0.396639
DBS	INVLNR	CRLLNR	CORLLNR	CORLMNR	STLLBR	TFLLPR	INFLMR	LRMFR	ALFLMR	LOPFLCR		
41	-1.259803	0.637588	0.562677	0.777371	0.33638	-0.649026	-0.316098	0.781516	-1.355126	0.4827619		
42	-1.58859	0.218405	-0.51881	0.070026	0.0485173	-0.622669	-1.17516	0.253569	-0.07002	-1.175704		
43	-0.048162	-0.087993	-0.387088	-0.970116	-1.69831	-0.206677	0.0405142	0.215221	0.123481	-0.219363		
44	-0.616077	-0.048689	-0.015338	-0.00909	-0.056602	0.119812	-0.718705	-0.07167	0.059494	0.030811		
45	0.994003	0.212786	0.166417	0.233207	-0.060621	-0.243253	0.0497666	0.235449	-1.50313	0.0072024		
46	-0.016362	-1.14945	-0.056945	-1.46233	-0.772387	0.084228	-0.01327	-0.071254	0.140466	-0.047954		
47	0.304446	0.007656	-0.26112	0.52594	-0.352885	0.761702	0.516066	-0.609346	-0.299138	-0.29713		
48	-0.072182	0.387572	0.310394	0.477193	0.400725	-0.662151	-0.259728	0.666692	-0.283594	0.296659		



OBS	TYPE	NAME	RACHLEN	INTHOLN	LINDRLL	MCOLLN	MMOVL	APXAK	APXP5	BSAK	BSP5	BVINS
49	CONR	OLBLN	-.094025	-.132295	-.143914	-.278599	-.162684	0.106727	0.005466	0.087183	0.103984	0.187965
50	CONR	INVLNR	-.133305	-.167418	0.101678	0.109555	0.090231	0.020819	0.199033	0.120417	-.068216	0.126707
51	CONR	CRLLNR	-.155594	-.045828	-.073305	-.158861	-.133072	0.063079	0.020176	0.051334	0.029703	-.149333
52	CONR	STLLNR	-.073305	0.036099	0.036099	0.036099	0.036099	0.120345	0.014063	0.093404	0.026713	-.021963
53	CONR	COLLNR	0.055759	0.055759	0.055759	0.055759	0.055759	0.120345	0.014063	0.093404	0.026713	-.021963
54	CONR	STLLNR	0.019304	-.009991	0.012663	-.242624	-.168113	0.120345	0.021622	0.100776	0.089119	-.069061
55	CONR	INFLNR	0.158303	0.158303	0.158303	0.158303	0.158303	0.120345	0.021622	0.100776	0.089119	-.069061
56	CONR	INFLNR	-.007433	-.140563	-.022382	0.103547	0.127944	-.095938	-.172224	-.106058	-.123329	0.233165
OBS	HSECY	PIHSV	FTLLN	INTLNL	IBRL	IGRL	OSRL	IBRW	ORBW	INSLN	IKNMW	PKML
49	-	0.87012	-.122914	-.00097	-.006506	0.23162	0.261047	0.294015	-.095679	-.115932	0.202522	0.226617
50	-	0.198204	0.112606	-.049225	0.125659	-.112039	-.183126	-.320188	-.278617	-.180348	-.466291	0.166410
51	-	0.131264	-.294649	0.057927	-.186272	0.42993	0.414203	0.441897	0.198944	0.459967	0.402295	0.317786
52	-	0.061764	-.078339	0.117	0.061764	0.117	0.061764	0.117	0.061764	0.117	0.061764	0.117
53	-	0.185198	0.26749	0.069721	0.069232	0.555695	0.499203	0.505041	0.231822	0.31188	0.522152	0.414679
54	-	0.036379	-.168795	0.075848	0.074331	0.150846	0.336066	0.347394	0.025662	0.290647	0.329976	0.368008
55	-	0.268923	0.10109	-.050331	-.091941	-.753877	-.316068	-.347266	-.269935	-.478141	-.338446	-.358708
OBS	LBRP	NFLOR	CORLLN	CORLLN	CORLLN	LCITFFA	INFW	INFL	PAPKKL	FTLLN	FKMLN	APKLN
49	0.168534	0.247731	0.119972	0.037158	0.179553	0.188246	0.117785	0.232666	0.197138	0.193226	0.165006	0.219835
50	-.13993	-.389176	0.034705	0.059730	-.199035	-.123036	-.493561	-.16653	-.176812	-.137087	-.12013	-.088237
51	0.366809	0.368826	0.889975	-.358147	0.251137	0.350835	0.937616	0.472829	0.552381	0.590141	0.541052	0.618234
52	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999	0.068999
53	0.393333	0.501056	0.603854	-.12773	0.139103	0.780888	0.631498	0.681823	0.686857	0.781856	0.699791	0.634764
54	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255	0.31255
55	-.679439	-.42101	0.31167	-.161537	0.59432	0.56376	0.52461	0.95337	0.81338	0.51883	0.43771	0.332767
56	-.265146	-.446978	-.110121	-.077075	-.020214	-.331101	-.10745	-.318462	-.357359	-.318626	-.297514	-.236153
OBS	STMXLN	STMXLN	VACMXLN	CNMXLN	GRPMXN	CRPMXN	VANOB	SHINLN	MMNOFMD	ILBLN	BLMLN	BLMLN
49	0.190272	0.0040258	0.0926715	0.1984	0.139682	0.069286	0.000000	0.101277	0.079386	0.202136	0.396839	0.130095
50	-.105031	0.149857	-.339554	-.125983	-.158859	-.081882	0.000000	0.098003	0.013632	0.364436	0.072182	0.130295
51	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667	0.606667
52	0.553085	0.055588	0.046066	0.566247	-.451881	-.381048	0.051338	0.166417	-.059693	0.292132	0.310799	0.060334
53	0.789556	0.113719	0.128359	0.777371	0.079026	0.490116	0.00909	0.233007	0.16233	0.52596	0.477193	0.12346
54	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291	0.302291
55	-.592291	-.302291	-.116952	0.605026	0.624669	0.300707	0.119812	0.283255	0.089229	0.781792	0.662151	0.115071
56	-.293219	0.133108	-.317984	0.319098	0.117516	0.406514	0.071405	0.497686	0.031327	0.513606	0.259724	0.160752
OBS	INVLNR	CRLLNR	COLLNR	COLLNR	STLLNR	FTLLNR	INFLNR	LRNFRH	ALFLNR	LCPTFLN		
49	0.130295	0.126534	0.060434	0.12346	0.076035	-.135471	0.140452	0.220817	-.110052	0.092296		
50	0.070805	0.070802	0.00625	0.087401	0.304092	0.36648	0.708666	0.207912	0.104181	0.160881		
51	0.00625	0.555229	0.00625	0.70041	0.161688	0.151688	0.091126	0.220817	0.00625	0.555229		
52	-.087401	0.615603	0.00625	0.70041	0.38602	0.391747	0.307071	0.535632	0.448478	0.464077		
53	0.30648	0.323926	0.072119	0.391747	0.160587	0.160587	0.160587	0.377008	0.129481	0.28078		
54	0.30648	0.323926	0.072119	0.391747	0.160587	0.160587	0.160587	0.377008	0.129481	0.28078		
55	0.30648	0.323926	0.072119	0.391747	0.160587	0.160587	0.160587	0.377008	0.129481	0.28078		
56	0.30648	0.323926	0.072119	0.391747	0.160587	0.160587	0.160587	0.377008	0.129481	0.28078		

OBS	TYPE	NAME	NACHLEN	INTNDLN	LSMDRL	MXLNL	MMQDL	APKAN	APKPS	BSAN	BSPS	SVINS
57	CORR	LRNFHR	- .120653	0.109665	- .156469	- .315272	- 0.17814	0.137985	.056081	0.223148	0.204125	- .168413
58	CORR	ALFHLR	0.171884	- .061880	0.128294	0.259997	0.136374	- .087366	.0240612	.0121162	.0742945	0.185862
59	CORR	LCPPCLR	.0047821	.0713817	- 0.07324	- .111295	- .078748	.0686039	.0542597	.0318988	.0638804	- .019984
OBS	NSECV	PINSV	PTLLN	INTLN	NBR	IBRL	OBRL	IBRW	OBRW	1MXKL	1MMKW	PMKL
57	- .151994	- .258313	0.150447	- .019066	0.750444	0.803897	0.799945	0.527833	0.709323	0.81879	0.778827	0.781512
58	0.275911	.0022732	- .037752	.0367887	- .135126	- .287450	- .328859	- 0.09153	- .114656	- .250763	- .281756	- .291702
59	- .148019	- .053011	- .042261	- .052103	0.263572	0.275137	0.288059	.0404961	0.247796	0.25821	0.268326	0.193088
OBS	LBAP	NFLOR	CORLLN	CORLMD	CORTWD	LCTPA	INFW	INFL	PAPMKLN	TFLLN	FKMLN	AMKLN
57	0.629999	0.761764	0.632604	0.128232	0.617239	0.729477	0.736688	0.816782	0.785083	0.746951	0.645422	0.705299
58	- .182454	- .236958	- .003527	- .255653	- .176905	- .834139	- .370328	- .287569	- .341816	- .417097	- .802023	- .121545
59	.0792173	0.287637	.0655662	- 0.00615	- .024166	0.060434	0.424393	0.38824	0.328809	0.437207	0.270627	0.184921
OBS	STKMLN	STKMLQ	VACMKLN	CRMKLN	CRKMD	CRKMD	VANGS	VANGB	SHML	NNKMD	IDLML	OBLML
57	0.746637	0.212653	0.225589	0.781516	0.553569	0.215221	- .073076	0.235449	- .071254	- .869346	0.668652	0.220817
58	- .430301	- .073921	0.049752	- .435126	- .067002	0.123881	.0358948	- .150313	0.148060	0.392535	- .283954	- .110052
59	0.436167	- .137231	0.189189	0.427619	- .175704	- .249363	0.030911	.0075204	- .047754	- 0.52673	0.296659	0.072926
OBS	INULWR	CRLLMR	CORLMR	CORLMR	STLLR	TEFLR	INFLWR	LRNFHR	ALFHLR	LCPPCLR		
57	- .207912	0.531823	0.268305	0.535632	0.315456	- .650569	- .340511	1	- .314457	0.282819	0.282819	
58	0.104181	- .240862	- 0.35403	- 0.44878	- .155591	0.508917	0.230833	- .314457	1	- .307395	- .307395	
59	- .160581	.0447519	0.556951	0.464077	0.412878	- .105777	- 0.3001	0.282819	- .307395			

APPENDIX IIA

Matrix of Distance Values for
150 Female OTUs

IDENTIFICATION:

PAGE 1

COMPUTE DISTANCE

	DTU 039	DTU 042	DTU 043	DTU 045	DTU 047	DTU 049	DTU 050	DTU 053	DTU 054	DTU 057
DTU 039	0.000									
DTU 042	2.052	0.000								
DTU 043	1.602	1.417	0.000							
DTU 045	1.586	1.484	1.118	0.000						
DTU 047	1.776	1.379	1.331	1.069	0.000					
DTU 049	1.751	1.640	1.145	1.353	1.254	0.000				
DTU 050	1.566	1.206	1.468	1.132	1.293	1.365	0.000			
DTU 053	1.789	1.577	1.501	1.207	1.178	1.094	1.492	0.000		
DTU 054	1.617	1.219	1.540	1.282	1.141	1.305	1.293	1.253	0.000	
DTU 057	1.617	1.147	1.291	1.349	1.155	1.377	1.159	1.308	1.132	0.000
DTU 059	1.759	1.130	1.376	1.155	1.103	1.300	1.178	1.234	0.965	0.795
DTU 060	1.632	1.373	1.358	1.256	1.266	1.346	1.223	1.322	1.303	0.968
DTU 061	1.702	1.511	1.376	1.255	1.283	1.312	1.287	1.302	1.379	1.018
DTU 064	1.588	1.423	1.273	1.301	1.216	1.331	1.377	1.422	1.079	1.328
DTU 065	2.231	1.186	1.391	1.040	1.083	1.335	1.036	1.250	1.281	1.113
DTU 066	1.761	1.467	1.275	1.300	1.136	1.063	1.166	1.121	1.425	1.260
DTU 070	1.551	1.649	1.050	1.431	1.277	1.374	1.246	1.163	1.436	1.144
DTU 071	1.759	1.519	1.341	1.236	1.258	1.350	1.361	1.243	1.38	1.003
DTU 076	1.348	1.362	1.135	1.511	1.346	1.500	1.257	1.433	1.241	0.968
DTU 077	1.666	1.730	1.113	1.689	1.437	1.767	1.262	1.778	1.854	1.370
DTU 078	1.581	1.352	1.165	1.454	1.002	1.391	1.205	1.412	1.392	1.008
DTU 080	1.422	1.298	1.033	1.329	1.305	1.468	1.337	1.344	1.393	0.957
DTU 083	1.575	1.360	1.261	1.115	1.140	1.172	1.187	1.115	1.129	0.991
DTU 085	1.585	1.194	1.103	1.403	1.250	1.307	1.171	1.310	1.094	0.927
DTU 086	1.637	1.372	1.105	1.433	1.111	1.241	1.236	1.330	1.288	0.915
DTU 088	1.576	1.843	1.230	1.995	1.628	1.510	1.672	1.760	1.935	1.241
DTU 090	1.231	1.612	1.292	1.497	1.490	1.581	1.681	1.732	1.548	1.873
DTU 091	1.351	1.698	1.004	1.497	1.272	1.277	1.297	1.283	1.622	1.467
DTU 093	2.101	1.469	1.621	1.196	1.621	1.675	1.413	1.499	1.539	1.259
DTU 094	1.235	1.861	1.323	1.799	1.530	1.747	1.663	1.743	1.679	1.650
DTU 097	1.617	1.909	1.320	2.051	1.697	1.903	1.840	2.111	1.931	1.694
DTU 100	1.762	1.350	1.103	1.704	1.290	1.240	1.282	1.287	0.978	0.840
DTU 102	1.189	1.739	1.225	1.640	1.441	1.689	1.585	1.673	1.642	1.672
DTU 104	1.729	1.467	1.391	1.241	1.126	1.255	1.285	1.106	1.269	1.106
DTU 106	2.011	1.517	1.637	1.315	1.107	1.374	1.304	1.353	1.519	1.334
DTU 108	1.628	1.624	1.263	1.575	1.496	1.370	1.361	1.356	1.576	1.154
DTU 110	1.791	1.189	1.113	1.160	1.077	1.125	1.152	1.196	0.996	1.216
DTU 112	1.592	1.523	1.451	1.414	1.671	1.662	1.632	1.265	1.513	1.952
DTU 114	1.943	1.131	1.351	1.130	1.103	1.417	1.029	1.243	1.227	1.103
DTU 115	1.800	1.176	1.158	1.562	1.278	1.241	1.157	1.308	1.305	1.131
DTU 116	1.801	2.099	1.879	2.177	1.863	2.079	1.924	1.990	0.916	1.780
DTU 119	1.305	1.751	1.373	1.241	1.653	1.929	1.802	1.843	1.799	1.793
DTU 120	1.046	2.107	1.828	1.883	1.739	1.857	1.859	1.853	1.939	1.617
DTU 125	1.253	2.021	1.420	2.026	1.641	1.694	1.574	1.892	2.053	1.798
DTU 127	1.858	1.638	1.295	1.469	1.382	1.597	1.276	1.562	1.370	1.289
DTU 128	1.576	1.311	1.299	0.977	1.176	1.456	1.183	1.267	0.967	1.031
DTU 130	1.721	1.302	1.447	1.387	1.083	1.368	1.248	1.266	1.059	1.028
DTU 132	1.466	1.190	1.212	1.401	1.020	1.245	1.353	1.244	1.237	1.125
DTU 135	2.069	1.477	1.651	1.334	1.334	1.403	1.200	1.343	1.328	1.057
DTU 136	1.791	1.220	1.465	1.476	1.175	1.362	1.167	1.295	1.179	1.183

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 2

	OTU 039	OTU 062	OTU 077	OTU 085	OTU 087	OTU 089	OTU 090	OTU 093	OTU 094	OTU 097
OTU 138	2.126	1.458	1.257	1.596	1.130	1.253	1.380	1.566	1.548	1.218
OTU 140	1.720	1.286	1.215	1.376	1.173	1.323	1.255	1.323	1.169	1.051
OTU 143	1.721	1.308	1.379	1.684	1.385	1.367	1.435	1.353	1.447	1.046
OTU 145	1.959	1.068	1.999	1.706	1.208	1.234	1.102	1.377	1.068	0.992
OTU 147	1.632	1.113	1.039	1.415	1.308	1.318	1.184	1.441	1.202	1.090
OTU 149	1.630	1.195	1.290	1.528	1.336	1.238	1.175	1.535	1.338	1.166
OTU 151	1.671	1.312	1.410	1.368	1.298	1.201	1.209	1.839	1.292	1.036
OTU 152	1.656	1.484	1.364	1.632	1.523	1.385	1.216	1.451	1.615	1.292
OTU 153	1.328	1.521	1.265	1.590	1.539	1.465	1.399	1.519	1.442	1.290
OTU 159	1.797	1.130	1.087	1.165	1.190	1.096	1.062	1.161	1.361	1.067
OTU 158	1.569	1.482	1.137	1.773	1.432	1.324	1.464	1.691	1.502	1.474
OTU 159	1.633	1.499	1.200	1.357	1.364	1.156	1.221	1.117	1.370	1.043
OTU 162	2.170	1.173	1.338	1.581	1.590	1.623	1.484	1.647	1.481	1.249
OTU 165	1.743	1.277	1.379	1.823	1.762	1.683	1.567	1.672	1.684	1.297
OTU 166	1.958	1.488	1.524	1.578	1.477	1.215	1.292	1.354	1.694	1.115
OTU 167	1.981	1.506	1.353	1.611	1.457	1.340	1.367	1.880	1.611	1.191
OTU 171	1.740	1.100	1.329	1.174	1.320	1.218	1.178	1.216	1.050	1.095
OTU 177	1.595	1.393	1.346	1.368	1.353	1.258	1.506	1.355	1.127	1.240
OTU 181	1.374	1.476	1.175	1.446	1.279	1.370	1.266	1.408	1.356	0.929
OTU 183	1.654	1.505	1.326	1.180	1.498	1.275	1.209	1.231	1.330	1.322
OTU 186	1.635	1.930	1.207	1.602	1.270	1.223	1.488	1.366	1.429	1.171
OTU 187	1.644	1.136	1.273	1.332	1.161	1.274	1.070	1.355	1.133	1.188
OTU 189	1.634	1.565	1.268	1.484	1.493	1.461	1.342	1.518	1.544	1.107
OTU 191	1.702	1.108	1.166	1.288	1.117	1.219	1.259	1.196	1.239	0.923
OTU 194	1.557	1.275	1.256	1.517	1.235	1.544	1.215	1.445	1.215	0.923
OTU 195	1.778	1.167	1.185	1.337	1.214	1.369	1.192	1.419	1.211	1.144
OTU 197	1.798	1.481	1.411	1.290	1.128	1.522	1.406	1.491	1.339	1.022
OTU 199	1.637	1.210	1.247	1.267	1.267	1.366	1.374	1.262	0.937	1.129
OTU 200	1.693	1.061	1.178	1.573	1.251	1.495	1.321	1.428	1.267	1.085
OTU 202	1.697	1.670	1.367	1.336	1.118	1.174	1.530	1.117	1.287	1.181
OTU 206	1.599	1.362	1.218	1.576	1.290	1.319	1.260	1.416	1.179	1.073
OTU 209	1.705	1.301	1.407	1.198	1.275	1.502	1.401	1.447	0.883	1.235
OTU 210	1.630	1.232	1.404	1.031	1.037	1.531	1.299	1.445	1.093	1.236
OTU 215	1.670	1.118	1.407	1.666	1.271	1.455	1.234	1.604	1.246	1.071
OTU 217	1.170	1.274	1.116	1.066	1.494	1.439	1.479	1.581	1.379	1.429
OTU 218	1.356	1.734	1.187	1.846	1.493	1.601	1.638	1.239	1.672	1.868
OTU 219	1.108	1.609	1.176	1.569	1.219	1.569	1.608	1.255	1.255	1.513
OTU 221	2.174	1.504	1.853	1.775	1.588	1.411	1.555	1.649	1.580	1.005
OTU 222	1.847	1.278	1.354	1.384	1.370	1.237	1.279	1.431	1.276	1.057
OTU 229	1.789	1.416	1.189	1.495	1.204	1.233	1.263	1.393	1.218	1.162
OTU 231	1.866	1.422	1.582	1.425	1.205	1.364	1.250	1.414	1.454	1.110
OTU 234	2.192	1.811	1.912	1.564	1.504	1.425	1.657	1.519	1.515	1.406
OTU 235	1.647	1.485	1.609	1.579	1.322	1.322	1.628	1.479	1.116	1.286
OTU 236	2.013	1.504	1.621	1.289	1.275	1.337	1.359	1.373	1.507	1.280
OTU 239	2.003	1.310	1.803	1.469	1.367	1.367	1.455	1.468	1.231	1.376
OTU 241	1.119	1.512	1.194	1.208	1.508	1.646	1.565	1.590	1.452	1.434
OTU 243	1.041	1.424	1.602	1.625	1.285	1.206	1.449	1.407	1.475	1.198
OTU 244	1.508	1.518	1.689	1.472	1.395	1.087	1.389	1.369	1.265	1.295
OTU 247	2.027	1.355	1.632	1.557	1.306	1.290	1.513	1.504	1.531	1.309
OTU 251	2.076	1.399	1.580	1.341	1.037	1.289	1.171	1.447	1.367	1.061

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 3

	OTU 039	OTU 042	OTU 043	OTU 045	OTU 047	OTU 049	OTU 050	OTU 053	OTU 054	OTU 057
OTU 252	2.323	1.818	1.888	1.849	1.748	1.719	1.773	1.735	1.933	1.686
OTU 254	1.939	1.809	1.814	1.773	1.730	1.699	1.699	1.800	1.941	1.774
OTU 256	1.901	1.345	1.324	1.350	1.211	1.387	1.167	1.381	1.381	0.885
OTU 259	2.042	1.714	1.993	1.375	1.837	1.272	1.941	1.369	1.610	1.588
OTU 260	1.976	1.393	1.397	1.374	1.213	1.174	1.354	1.438	1.425	1.379
OTU 262	1.731	1.470	1.414	1.295	1.217	1.203	1.461	1.351	1.290	1.383
OTU 264	1.563	1.304	1.311	1.225	1.239	1.314	1.310	1.614	1.301	1.189
OTU 266	1.855	1.513	1.402	1.439	1.318	1.149	1.291	1.296	1.431	1.091
OTU 268	1.928	1.287	1.350	1.362	1.218	1.092	1.172	1.223	1.356	1.188
OTU 270	1.844	0.994	1.088	1.383	1.318	1.320	1.161	1.293	1.134	1.050
OTU 272	1.936	1.565	1.467	1.524	1.412	1.097	1.329	1.521	1.349	1.431
OTU 273	1.750	1.258	1.444	1.531	1.183	1.189	1.229	1.413	1.343	1.181
OTU 276	2.093	1.321	1.436	1.704	1.467	1.345	1.340	1.600	1.597	1.105
OTU 278	2.201	1.222	1.490	1.511	1.352	1.442	1.469	1.579	1.411	1.239
OTU 280	1.888	1.366	1.287	1.113	1.144	1.080	1.133	1.225	1.242	1.280
OTU 282	2.042	1.166	1.498	1.812	1.180	1.365	1.303	1.381	1.223	1.313
OTU 283	2.042	1.325	1.097	1.831	1.531	1.463	1.582	1.235	1.452	1.245
OTU 286	1.936	1.439	1.559	1.338	1.256	1.083	1.317	1.319	1.190	1.138
OTU 288	2.028	1.458	1.462	1.553	1.465	1.195	1.285	1.526	1.340	1.354
OTU 289	1.929	1.250	1.492	1.295	1.156	1.333	1.472	1.433	1.376	1.369
OTU 292	1.639	1.345	1.319	1.554	1.237	1.037	1.143	1.382	1.134	1.099
OTU 295	1.824	1.404	1.452	1.576	1.343	1.193	1.206	1.463	1.295	1.044
OTU 296	1.664	1.296	1.425	1.709	1.495	1.698	1.474	1.707	1.280	1.471
OTU 297	1.596	1.334	1.487	1.623	1.516	1.694	1.177	1.718	1.801	1.385
OTU 298	1.154	1.703	1.490	1.787	1.656	1.524	1.617	1.637	1.292	1.570
OTU 301	1.227	1.857	1.413	1.927	1.750	1.651	1.670	1.757	1.567	1.627
OTU 305	1.501	1.172	1.359	2.030	1.743	1.823	1.943	1.835	1.543	1.544
OTU 306	1.569	1.604	1.251	2.068	1.731	1.625	1.631	1.939	1.629	1.555
OTU 308	1.567	1.670	1.313	1.816	1.703	1.822	1.573	1.885	1.773	1.686
OTU 310	1.492	1.551	1.405	1.938	1.705	1.862	1.563	1.872	1.912	1.563
OTU 311	1.537	1.621	1.174	1.759	1.563	1.630	1.491	1.745	1.492	1.406
OTU 313	1.615	1.590	1.187	1.908	1.710	1.814	1.682	1.848	1.618	1.659
OTU 314	1.623	1.260	1.509	1.387	1.529	1.807	1.582	1.773	1.402	1.358
OTU 316	1.832	1.319	1.180	1.564	1.477	1.667	1.331	1.505	1.445	1.273
OTU 322	1.248	1.629	1.446	1.792	1.499	1.651	1.492	1.511	1.319	1.319
OTU 324	1.346	1.579	1.391	1.681	1.476	1.510	1.459	1.473	1.268	1.390
OTU 326	1.388	1.495	1.143	1.561	1.466	1.562	1.334	1.637	1.344	1.379
OTU 327	1.467	1.565	1.432	1.744	1.503	1.466	1.379	1.585	1.541	1.606
OTU 330	1.257	1.621	1.332	1.589	1.507	1.512	1.685	1.590	1.304	1.500
OTU 332	1.325	1.818	1.161	1.640	1.615	1.457	1.607	1.977	1.510	1.564
OTU 333	1.551	1.376	1.197	1.605	1.482	1.609	1.391	1.759	1.467	1.365
OTU 336	1.597	1.828	1.299	1.774	1.746	1.860	1.711	1.978	1.836	1.678
OTU 337	1.591	1.611	1.321	1.829	1.687	1.822	1.854	1.842	1.692	1.559
OTU 339	1.451	1.499	1.115	1.758	1.557	1.694	1.582	1.768	1.444	1.451
OTU 340	1.148	1.726	1.113	1.694	1.553	1.410	1.472	1.550	1.518	1.458
OTU 341	1.440	1.448	1.186	1.704	1.402	1.535	1.345	1.658	1.329	1.275
OTU 342	1.563	1.524	1.223	1.891	1.749	1.714	1.527	1.836	1.522	1.525
OTU 343	1.396	1.669	1.262	1.987	1.948	1.799	1.633	1.929	1.656	1.601
OTU 344	1.581	1.927	1.521	2.116	1.906	1.835	1.835	2.042	1.802	1.801
OTU 345	1.392	1.637	1.091	1.619	1.580	1.736	1.552	1.751	1.606	1.399

IDENTIFICATION:
COMPUTE DISTANCE

PAGE 4

	DTU 059	DTU 060	DTU 061	DTU 064	DTU 066	DTU 05E	DTU 070	DTU 071	DTU 076	DTU 077
DTU 059	0.000									
DTU 060	0.784	0.000								
DTU 061	1.038	1.167	0.000							
DTU 064	1.116	1.292	1.180	0.000						
DTU 066	1.036	0.992	1.338	1.469	0.000					
DTU 068	1.347	1.240	1.424	1.331	1.147	0.000				
DTU 070	1.291	1.192	1.140	1.349	1.421	1.412	0.000			
DTU 071	0.905	0.923	0.970	1.172	1.187	1.458	1.068	0.000		
DTU 076	1.017	1.181	1.117	1.235	1.239	1.605	0.972	1.041	0.000	
DTU 077	1.070	1.243	1.337	1.593	1.710	1.618	1.502	1.600	1.211	0.000
DTU 078	1.041	1.241	0.996	1.313	1.237	1.267	1.361	1.222	1.018	0.910
DTU 080	0.918	0.925	1.108	1.696	1.216	1.430	0.934	0.995	0.729	1.190
DTU 083	0.435	1.042	1.104	1.012	1.160	1.220	0.036	0.366	1.175	1.460
DTU 085	0.807	0.980	0.959	1.129	1.136	1.234	1.049	0.912	0.912	1.414
DTU 086	1.018	1.107	0.944	1.227	1.290	1.257	1.127	1.163	1.149	1.139
DTU 088	1.602	1.600	1.503	1.647	1.683	1.517	1.403	1.777	1.401	1.083
DTU 090	1.389	1.430	1.242	1.306	1.425	1.542	1.394	1.468	1.155	1.222
DTU 091	1.21	1.345	1.323	1.416	1.506	1.461	1.305	1.428	1.206	1.225
DTU 093	0.967	1.040	1.409	1.420	1.327	1.515	1.446	1.302	1.486	1.615
DTU 094	1.687	1.590	1.684	1.682	1.625	1.500	1.680	1.636	1.289	1.381
DTU 097	1.783	1.804	1.676	1.795	1.890	1.155	1.659	1.768	1.809	1.293
DTU 100	0.934	0.961	1.223	1.038	1.230	1.355	0.893	0.917	1.095	1.588
DTU 102	1.589	1.694	1.628	1.599	1.609	1.435	1.468	1.623	1.254	1.326
DTU 104	0.967	1.187	1.050	1.849	1.270	1.200	1.233	1.104	1.294	1.583
DTU 106	1.134	1.186	1.377	1.485	1.162	1.357	1.020	1.383	1.388	1.499
DTU 108	1.143	1.078	1.259	1.614	1.264	1.304	1.023	1.177	1.017	1.335
DTU 110	0.980	1.116	1.266	1.363	0.439	1.060	1.067	1.171	1.346	1.681
DTU 112	1.204	1.394	1.456	1.698	1.274	1.505	1.015	1.496	1.662	1.904
DTU 114	1.040	1.169	1.157	1.317	0.937	1.104	0.005	1.254	1.351	1.519
DTU 119	1.207	1.256	1.111	1.337	1.297	1.272	1.248	1.372	1.183	1.360
DTU 116	1.703	1.752	1.684	1.847	1.848	1.905	1.808	1.614	1.650	1.709
DTU 115	1.115	1.695	1.495	1.646	1.603	1.445	1.619	1.607	1.395	1.496
DTU 122	1.726	1.724	1.913	1.510	1.896	1.693	1.368	1.525	1.291	1.438
DTU 125	1.712	1.685	1.595	1.847	1.867	1.750	1.762	1.693	1.422	1.314
DTU 127	1.205	1.261	1.284	1.391	1.301	1.220	1.231	1.200	0.961	1.478
DTU 129	3.245	1.291	1.062	1.244	1.098	1.287	1.398	1.118	1.021	1.430
DTU 130	0.567	1.312	0.986	1.208	1.210	1.318	1.416	1.086	1.007	1.491
DTU 132	1.050	1.283	1.287	1.056	1.240	1.345	1.486	1.090	1.050	1.812
DTU 135	0.983	1.074	1.129	1.192	1.405	1.094	1.395	1.094	1.306	1.663
DTU 136	1.048	1.333	1.082	1.369	1.171	1.342	1.317	1.275	1.125	1.410
DTU 138	1.366	1.532	1.187	1.243	1.497	1.453	1.737	1.501	1.658	1.708
DTU 140	0.962	1.200	1.028	1.250	1.270	1.277	1.219	1.085	1.118	1.424
DTU 143	1.101	1.275	0.972	1.458	1.464	1.281	1.281	1.213	1.073	1.285
DTU 145	0.820	1.132	1.032	1.201	1.097	1.319	1.461	1.223	1.245	1.672
DTU 147	0.901	1.026	1.047	1.091	1.243	1.272	1.065	1.007	0.976	1.364
DTU 149	1.070	1.287	1.277	1.063	1.32	1.116	1.315	1.315	0.938	1.292
DTU 151	0.993	1.152	1.185	1.324	1.098	1.254	1.454	1.216	1.200	1.512
DTU 152	1.186	1.205	0.590	1.447	1.192	1.483	1.267	1.305	1.118	1.263
DTU 153	1.073	1.268	1.053	1.293	1.210	1.423	0.965	1.144	1.046	1.417
DTU 155	1.030	1.013	1.127	1.224	1.028	1.063	1.223	1.147	1.103	1.350

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 5

	OTU 059	OTU 060	OTU 061	OTU 064	OTU 066	OTU 068	OTU 070	OTU 071	OTU 076	OTU 077
OTU 158	1.342	1.331	1.321	1.266	1.067	1.079	0.412	1.532	1.304	1.097
OTU 159	1.143	1.224	0.785	1.428	1.313	1.292	0.252	1.793	1.045	1.399
OTU 162	1.276	1.257	1.180	1.500	1.318	1.253	1.615	1.405	1.428	1.640
OTU 165	1.267	1.322	1.100	1.639	1.313	1.710	1.189	1.327	1.134	1.450
OTU 166	1.237	1.357	1.046	1.447	1.417	1.261	1.497	1.352	1.470	1.570
OTU 167	1.234	1.402	0.925	1.492	1.564	1.460	1.340	1.316	1.428	1.401
OTU 171	0.706	1.001	1.127	1.928	1.210	1.212	1.202	1.067	1.176	1.562
OTU 177	0.971	1.127	1.255	1.339	1.319	1.430	1.239	1.106	1.233	1.774
OTU 181	1.022	1.071	0.834	1.383	1.201	1.348	0.971	1.029	0.750	1.155
OTU 183	1.278	1.296	1.077	1.087	1.472	1.177	1.055	1.238	1.237	1.695
OTU 186	1.264	1.394	1.129	1.233	1.619	1.371	1.337	1.271	1.226	1.206
OTU 187	1.120	1.355	1.067	1.303	1.116	1.177	1.306	1.220	1.181	1.851
OTU 189	1.121	1.307	0.878	1.397	1.524	1.513	1.152	1.227	1.084	1.241
OTU 191	0.993	1.169	1.121	1.139	1.202	1.320	1.224	1.123	1.112	1.294
OTU 198	0.852	1.105	0.972	1.188	1.387	1.416	1.178	1.015	0.880	1.192
OTU 196	1.054	1.293	1.238	1.310	1.223	1.207	1.245	1.247	1.171	1.333
OTU 197	1.045	1.299	1.208	1.328	1.398	1.494	1.024	1.213	1.192	1.343
OTU 199	1.053	1.263	1.224	0.891	1.452	1.432	1.229	1.079	1.204	1.684
OTU 200	1.040	1.246	1.279	1.273	1.747	1.381	1.508	1.322	1.297	1.361
OTU 202	1.189	1.217	1.053	1.333	1.114	1.230	1.343	1.087	1.305	1.589
OTU 206	1.034	1.138	0.839	1.224	1.252	1.351	1.140	1.064	0.953	1.233
OTU 209	0.932	1.298	1.261	1.096	1.252	1.514	1.442	1.074	1.273	1.779
OTU 210	1.017	1.332	1.344	1.284	1.092	1.401	1.521	1.253	1.270	1.605
OTU 212	1.184	1.475	1.131	1.475	1.388	1.391	1.419	1.410	1.105	1.325
OTU 214	1.354	1.384	1.102	1.292	1.459	1.286	1.136	1.414	1.072	1.412
OTU 216	1.604	1.700	1.474	1.670	1.731	1.513	1.415	1.652	1.185	1.294
OTU 218	1.464	1.608	1.452	1.412	1.675	1.483	1.265	1.554	1.111	1.405
OTU 220	1.508	1.598	1.393	1.639	1.664	1.565	1.799	1.677	1.694	1.877
OTU 227	0.919	1.157	1.056	1.260	1.275	1.456	1.276	1.115	1.285	1.576
OTU 229	0.999	1.169	1.121	1.208	1.369	1.318	1.362	1.236	1.291	1.411
OTU 231	0.993	1.096	1.057	1.398	1.283	1.306	1.537	1.179	1.191	1.390
OTU 234	1.152	1.318	1.394	1.613	1.503	1.659	1.607	1.246	1.734	1.894
OTU 235	1.022	1.318	1.379	1.260	1.549	1.556	1.650	1.296	1.419	1.654
OTU 236	1.054	1.026	1.207	1.370	1.443	1.343	1.154	1.066	1.166	1.680
OTU 239	1.007	1.282	1.298	1.427	1.267	1.508	1.776	1.317	1.521	1.903
OTU 241	1.043	1.099	1.639	1.575	1.226	1.599	1.701	1.300	1.617	1.946
OTU 243	1.057	1.169	1.153	1.489	1.373	1.371	1.650	1.327	1.418	1.425
OTU 244	1.000	1.160	1.095	1.391	1.393	1.308	1.469	1.227	1.447	1.610
OTU 247	1.132	1.255	1.423	1.519	1.269	1.440	1.764	1.467	1.578	1.643
OTU 251	1.032	1.040	1.104	1.369	1.131	1.322	1.611	1.162	1.163	1.402
OTU 252	1.569	1.640	1.616	1.805	1.704	1.793	1.974	1.653	1.930	1.982
OTU 254	1.192	1.114	1.042	1.237	1.237	1.418	1.437	1.418	1.433	1.484
OTU 256	0.868	1.085	0.903	1.408	1.280	1.432	1.332	1.131	1.162	1.318
OTU 259	1.305	1.325	1.683	1.382	1.508	1.352	1.580	1.460	1.717	1.739
OTU 260	1.120	1.006	1.336	1.224	1.237	1.314	1.506	1.201	1.421	1.675
OTU 262	1.094	1.187	1.256	1.011	1.211	1.105	1.394	1.185	1.418	1.513
OTU 264	0.884	1.135	1.016	1.312	1.211	1.336	1.423	1.232	1.156	1.335
OTU 266	1.334	0.865	1.095	1.375	1.247	1.262	1.227	1.177	1.300	1.417
OTU 268	1.059	1.126	1.024	1.343	1.100	1.112	1.393	1.262	1.349	1.500
OTU 270	0.979	1.144	1.279	1.324	1.196	1.269	1.378	1.269	1.216	1.597

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 6

	OTU 059	OTU 060	OTU 061	OTU 064	OTU 066	OTU 068	OTU 070	OTU 071	OTU 076	OTU 077
OTU 272	1.234	1.218	1.240	1.249	1.271	1.256	1.495	1.252	1.459	1.670
OTU 273	1.632	1.263	1.077	1.262	1.360	1.298	1.503	1.318	1.236	1.235
OTU 274	1.199	1.351	1.317	1.423	1.577	1.265	1.610	1.496	1.453	1.468
OTU 278	1.192	1.380	1.402	1.316	1.448	1.466	1.703	1.443	1.604	1.589
OTU 280	0.965	0.972	1.218	1.182	1.052	0.923	1.329	1.100	1.305	1.538
OTU 282	1.002	1.003	1.364	1.217	1.045	1.272	1.604	1.298	1.530	1.384
OTU 283	1.267	1.423	1.386	1.719	1.571	1.487	1.708	1.481	1.528	1.737
OTU 286	1.128	1.230	1.147	1.224	1.315	1.261	1.438	1.201	1.446	1.601
OTU 288	1.224	1.225	1.204	1.358	1.398	1.297	1.416	1.409	1.483	1.560
OTU 289	0.992	1.220	1.308	1.257	1.378	1.336	1.584	1.230	1.470	1.468
OTU 292	1.028	1.220	1.087	1.277	1.222	1.103	1.212	1.253	1.061	1.471
OTU 295	1.038	1.241	0.836	1.414	1.303	1.293	1.278	1.167	1.176	1.484
OTU 296	1.361	1.296	1.630	1.476	1.461	1.438	1.526	1.639	1.333	1.631
OTU 297	1.404	1.497	1.564	1.410	1.404	1.372	1.487	1.557	1.210	1.637
OTU 298	1.455	1.567	1.540	1.463	1.564	1.481	1.316	1.495	1.262	1.487
OTU 301	1.609	1.771	1.533	1.301	1.609	1.584	1.324	1.592	1.201	1.514
OTU 305	1.523	1.614	1.467	1.637	1.597	1.519	1.432	1.582	1.047	1.456
OTU 306	1.544	1.615	1.501	1.615	1.670	1.665	1.393	1.629	1.174	1.433
OTU 308	1.615	1.728	1.693	1.286	1.664	1.591	1.543	1.765	1.320	1.347
OTU 310	1.516	1.649	1.601	1.472	1.661	1.544	1.491	1.693	1.191	1.307
OTU 311	1.370	1.450	1.430	1.339	1.605	1.363	1.261	1.426	1.179	1.294
OTU 313	1.636	1.752	1.730	1.930	1.717	1.652	1.529	1.811	1.427	1.507
OTU 314	1.225	1.458	1.479	1.514	1.402	1.509	1.671	1.522	1.179	1.460
OTU 316	1.221	1.386	1.295	1.467	1.429	1.332	1.155	1.359	1.037	1.278
OTU 322	1.298	1.477	1.292	1.486	1.524	1.336	1.293	1.409	0.892	1.347
OTU 326	1.381	1.519	1.444	1.553	1.439	1.280	1.202	1.429	1.077	1.366
OTU 328	1.431	1.481	1.431	1.284	1.388	1.290	1.183	1.428	1.088	1.478
OTU 327	1.467	1.599	1.419	1.506	1.516	1.222	1.506	1.598	1.331	1.468
OTU 330	1.447	1.567	1.498	1.267	1.435	1.278	1.264	1.456	1.203	1.658
OTU 332	1.594	1.524	1.400	1.373	1.582	1.310	1.095	1.447	1.265	1.584
OTU 333	1.317	1.430	1.501	1.354	1.466	1.384	1.412	1.562	1.146	1.302
OTU 336	1.678	1.736	1.699	1.624	1.696	1.722	1.580	1.800	1.369	1.363
OTU 337	1.578	1.616	1.558	1.226	1.620	1.475	1.246	1.603	1.269	1.313
OTU 339	1.461	1.543	1.591	1.429	1.527	1.460	1.283	1.618	1.191	1.492
OTU 340	1.474	1.484	1.314	1.328	1.569	1.374	0.997	1.380	1.078	1.452
OTU 341	1.354	1.497	1.355	1.237	1.449	1.295	1.303	1.462	0.974	1.259
OTU 342	1.438	1.517	1.617	1.461	1.524	1.411	1.504	1.622	1.245	1.355
OTU 343	1.543	1.589	1.687	1.483	1.675	1.504	1.462	1.686	1.219	1.369
OTU 344	1.972	2.014	1.725	1.672	1.981	1.651	1.756	1.940	1.512	1.387
OTU 345	1.495	1.496	1.501	1.432	1.632	1.599	1.136	1.523	1.006	1.139

IDENTIFICATION:

PAGE 7

COMPUTE DISTANCE

	OTU 078	OTU 080	OTU 083	OTU 085	OTU 086	OTU 088	OTU 090	OTU 091	OTU 093	OTU 094
OTU 078	0.000									
OTU 080	1.036	0.000								
OTU 083	1.078	0.934	0.000							
OTU 085	0.971	0.909	0.919	0.000						
OTU 086	1.029	1.096	1.745	1.034	0.000					
OTU 088	1.196	1.441	1.575	1.518	1.131	0.000				
OTU 090	1.168	1.235	1.401	1.112	1.276	1.153	0.000			
OTU 091	1.084	1.178	1.230	1.344	1.325	1.159	1.216	0.000		
OTU 093	1.409	1.226	1.071	1.227	1.310	1.920	1.781	1.699	0.000	
OTU 094	1.343	1.324	1.533	1.401	1.827	1.403	1.230	1.371	1.512	0.000
OTU 097	1.282	1.572	1.734	1.541	1.524	1.219	1.283	1.250	2.055	1.233
OTU 100	1.295	1.028	0.994	0.992	1.030	1.682	1.360	1.298	1.239	1.562
OTU 102	1.219	1.315	1.342	1.303	1.440	1.369	1.222	0.851	1.838	0.982
OTU 104	1.198	1.189	0.872	1.049	0.989	1.627	1.328	1.052	1.175	1.026
OTU 106	1.229	1.404	1.274	1.381	1.329	1.790	1.432	1.619	1.181	1.741
OTU 108	1.123	0.923	1.143	1.086	1.140	1.419	1.369	1.434	1.350	1.491
OTU 110	1.229	1.119	1.153	1.089	1.264	1.767	1.440	1.506	1.250	1.599
OTU 112	1.563	1.383	1.334	1.385	1.664	2.053	1.677	1.754	1.344	1.751
OTU 114	1.103	1.251	1.027	1.108	1.036	1.611	1.539	1.443	1.200	1.710
OTU 116	1.175	1.255	1.203	1.203	0.917	1.432	1.334	1.441	1.523	1.626
OTU 118	1.682	1.667	1.718	1.791	1.697	1.860	1.568	1.669	2.012	1.730
OTU 119	1.432	1.382	1.524	1.472	1.659	1.586	1.178	1.345	1.288	1.032
OTU 122	1.366	1.350	1.537	1.566	1.680	1.624	1.319	1.160	1.092	1.201
OTU 125	1.309	1.412	1.716	1.608	1.682	1.537	1.608	1.258	1.295	1.150
OTU 127	1.425	1.107	0.989	0.997	1.212	1.488	1.315	1.381	1.404	1.222
OTU 129	1.018	1.194	1.081	1.082	1.081	1.619	1.418	1.396	1.398	1.634
OTU 130	1.088	1.130	1.198	1.031	1.129	1.743	1.504	1.509	1.498	1.659
OTU 132	0.884	0.995	1.110	0.918	1.102	1.454	1.094	1.105	1.426	1.283
OTU 135	1.362	1.269	1.183	1.137	1.271	1.384	1.774	1.827	1.114	1.946
OTU 136	1.096	1.234	1.053	1.113	1.055	1.273	1.409	1.425	1.707	
OTU 138	1.192	1.569	1.510	1.482	1.325	1.704	1.835	1.879	2.132	2.133
OTU 140	1.039	1.104	1.015	0.905	0.777	1.480	1.327	1.241	1.458	1.519
OTU 143	0.916	1.109	1.295	0.974	0.974	1.359	1.318	1.442	1.495	1.602
OTU 145	1.561	1.295	1.197	0.885	1.121	1.712	1.540	1.790	1.289	1.059
OTU 147	1.063	0.923	0.970	0.706	0.990	1.474	1.122	1.345	1.342	1.392
OTU 149	1.075	1.038	1.208	0.950	1.030	1.551	1.212	1.396	1.397	1.414
OTU 151	1.000	1.215	1.109	1.070	1.153	1.717	1.357	1.613	1.255	1.765
OTU 152	1.097	1.178	1.289	1.024	1.165	1.448	1.424	1.523	1.496	1.547
OTU 153	0.989	0.983	1.045	0.955	1.216	1.638	1.219	1.311	1.354	1.540
OTU 155	1.093	1.052	1.154	0.964	1.031	1.506	1.460	1.402	1.144	1.512
OTU 158	1.191	1.362	1.336	1.304	1.107	1.182	1.095	1.376	1.681	1.553
OTU 159	1.061	0.911	1.114	1.077	0.979	1.441	1.514	1.668	1.544	1.541
OTU 162	1.354	1.365	1.476	1.301	1.337	1.812	1.662	1.602	1.527	1.816
OTU 165	1.385	1.050	1.301	1.187	1.156	1.618	1.436	1.639	1.628	1.644
OTU 166	1.195	1.450	1.295	1.274	1.216	1.019	1.602	1.587	1.527	1.939
OTU 167	1.134	1.345	1.289	1.242	1.015	1.436	1.653	1.588	1.509	1.874
OTU 171	1.235	1.095	0.785	0.962	1.027	1.036	1.420	1.481	1.024	1.740
OTU 177	1.181	1.129	0.999	0.960	1.211	1.718	1.381	1.827	1.664	1.511
OTU 181	0.986	0.806	1.111	1.010	0.941	1.304	1.219	1.222	1.398	1.366
OTU 183	1.419	1.292	1.110	1.055	1.219	1.625	1.531	1.653	1.457	1.723

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 8

	DTU 078	DTU 080	DTU 083	DTU 085	DTU 086	DTU 088	DTU 090	DTU 091	DTU 093	DTU 094
DTU 186	1.107	1.079	1.121	1.122	1.013	1.100	1.196	1.208	1.614	1.613
DTU 187	1.079	1.168	1.123	1.112	1.123	1.542	1.430	1.348	1.486	1.532
DTU 189	1.106	1.006	1.247	1.156	1.119	1.443	1.531	1.328	1.359	1.678
DTU 191	1.097	1.007	1.024	0.994	1.007	1.562	1.345	1.292	1.234	1.380
DTU 194	1.063	0.678	0.961	0.839	0.970	1.435	1.170	1.314	1.280	1.454
DTU 197	1.047	1.154	1.164	0.926	1.042	1.417	1.252	1.143	1.415	1.420
DTU 199	1.034	1.205	1.204	1.146	1.155	1.544	1.536	1.134	1.376	1.576
DTU 200	1.319	1.182	1.067	0.986	1.293	1.757	1.354	1.303	1.426	1.667
DTU 202	1.195	1.265	1.258	1.040	1.074	1.630	1.321	1.512	1.378	1.624
DTU 206	1.144	1.351	1.321	1.125	1.312	1.670	1.499	1.431	1.496	1.629
DTU 206	1.017	1.180	1.121	0.916	0.867	1.378	1.035	1.279	1.477	1.497
DTU 209	1.376	1.281	1.003	1.057	1.102	1.997	1.926	1.509	1.378	1.750
DTU 210	1.247	1.252	1.185	1.121	1.351	1.943	1.664	1.355	1.356	1.632
DTU 212	1.002	1.315	1.604	1.055	1.204	1.356	1.323	1.363	1.654	1.608
DTU 213	1.262	1.198	1.210	1.119	1.258	2.048	1.004	1.118	1.608	1.608
DTU 216	1.231	1.313	1.582	1.374	1.401	1.175	1.331	1.006	2.041	1.218
DTU 218	1.292	1.228	1.348	1.190	1.388	1.410	1.099	1.064	1.887	1.078
DTU 220	1.646	1.711	1.646	1.555	1.481	1.817	1.907	2.094	1.687	2.214
DTU 227	1.189	1.212	1.194	0.941	1.011	1.694	1.515	1.545	1.386	1.738
DTU 229	1.256	1.192	1.109	1.154	1.085	1.447	1.436	1.498	1.374	1.674
DTU 231	1.156	1.274	1.246	1.106	1.125	1.550	1.517	1.626	1.251	1.623
DTU 234	1.509	1.617	1.489	1.479	1.250	1.994	1.507	1.940	1.526	2.158
DTU 235	1.484	1.367	1.383	1.234	1.295	1.757	1.501	1.724	1.450	1.816
DTU 236	1.392	1.298	1.201	1.192	1.434	1.868	1.733	1.620	1.117	1.779
DTU 239	1.461	1.471	1.367	1.206	1.487	2.030	1.667	1.860	1.475	1.934
DTU 241	1.634	1.390	1.305	1.364	1.651	2.140	1.818	1.866	1.052	1.885
DTU 243	1.173	1.330	1.418	1.158	1.237	1.486	1.253	1.640	1.396	1.702
DTU 244	1.290	1.369	1.202	1.167	1.258	1.583	1.569	1.758	1.292	1.936
DTU 247	1.175	1.363	1.433	1.296	1.398	1.791	1.508	1.790	1.356	1.474
DTU 251	1.129	1.340	1.350	1.160	1.146	1.719	1.607	1.722	1.298	1.829
DTU 252	1.659	1.892	1.657	1.595	1.697	1.995	1.936	1.955	1.766	2.057
DTU 254	1.201	1.384	1.397	1.267	1.057	1.536	1.342	1.638	1.439	1.728
DTU 256	1.000	1.134	1.156	1.026	1.040	1.545	1.582	1.550	1.138	1.720
DTU 259	1.604	1.498	1.295	1.438	1.454	1.769	1.699	1.676	1.299	1.893
DTU 260	1.359	1.284	1.361	1.258	1.375	1.729	1.659	1.794	1.630	1.784
DTU 262	1.203	1.288	1.022	1.127	1.231	1.593	1.397	1.516	1.150	1.674
DTU 264	1.052	1.076	1.124	0.877	1.188	1.497	1.103	1.518	1.518	1.581
DTU 266	1.282	1.235	1.213	1.028	0.961	1.523	1.394	1.600	1.116	1.601
DTU 268	1.151	1.237	1.150	1.075	1.075	1.571	1.538	1.647	1.281	1.816
DTU 270	1.251	1.191	1.117	0.995	1.185	1.646	1.521	1.614	1.272	1.706
DTU 272	1.387	1.499	1.434	1.205	1.227	1.740	1.620	1.741	1.485	1.764
DTU 273	1.049	1.239	1.307	1.103	1.138	1.443	1.343	1.597	1.366	1.668
DTU 276	1.401	1.396	1.403	1.204	1.156	1.563	1.498	1.816	1.452	1.857
DTU 278	1.346	1.491	1.374	1.260	1.132	1.820	1.617	1.714	1.344	1.919
DTU 280	1.185	1.226	1.071	1.010	1.129	1.565	1.480	1.480	1.160	1.526
DTU 282	1.330	1.391	1.187	1.134	1.045	1.399	1.582	1.711	1.127	1.790
DTU 283	1.510	1.480	1.491	1.364	1.423	1.791	1.738	2.009	1.671	2.030
DTU 286	1.258	1.376	1.216	1.156	1.162	1.620	1.537	1.670	1.251	1.917
DTU 288	1.410	1.377	1.288	1.233	1.120	1.605	1.597	1.820	1.384	1.788
DTU 289	1.198	1.371	1.223	1.156	1.197	1.750	1.507	1.495	1.193	1.671

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 9

	OTU 078	OTU 080	OTU 083	OTU 085	OTU 086	OTU 088	OTU 090	OTU 091	OTU 093	OTU 094
OTU 292	1.076	1.243	1.186	0.868	1.000	1.318	1.151	1.458	1.539	1.472
OTU 295	1.077	1.239	1.246	0.899	1.018	1.477	1.358	1.586	1.530	1.693
OTU 296	1.357	1.461	1.373	1.151	1.466	1.646	1.348	1.324	1.771	1.407
OTU 297	1.332	1.483	1.365	1.160	1.397	1.576	1.225	1.487	1.857	1.476
OTU 298	1.512	1.429	1.350	1.208	1.585	1.632	1.259	1.456	1.507	1.438
OTU 301	1.401	1.442	1.468	1.282	1.536	1.428	1.300	1.243	2.003	1.361
OTU 305	1.322	1.360	1.505	1.232	1.478	1.545	1.112	1.410	1.952	1.368
OTU 306	1.348	1.363	1.538	1.234	1.401	1.477	1.079	1.297	1.977	1.336
OTU 309	1.372	1.366	1.369	1.329	1.568	1.619	1.463	1.231	1.800	1.133
OTU 310	1.333	1.390	1.447	1.233	1.370	1.590	1.234	1.385	1.822	1.375
OTU 311	1.158	1.309	1.297	1.100	1.196	1.335	1.169	1.181	1.611	1.417
OTU 313	1.430	1.451	1.535	1.394	1.475	1.613	1.137	1.495	1.838	1.465
OTU 314	1.197	1.269	1.467	1.112	1.483	1.681	1.166	1.406	1.745	1.473
OTU 316	1.108	0.959	1.093	0.971	1.284	1.438	1.253	1.066	1.468	1.304
OTU 322	1.148	1.200	1.329	1.159	1.338	1.386	1.247	1.293	1.743	1.372
OTU 324	1.279	1.293	1.334	1.072	1.399	1.233	1.322	1.363	1.777	1.554
OTU 326	1.238	1.188	1.214	1.024	1.286	1.432	1.242	1.193	1.686	1.241
OTU 327	1.226	1.412	1.463	1.200	1.477	1.331	1.382	1.267	1.823	1.480
OTU 330	1.350	1.303	1.282	1.078	1.462	1.601	1.256	1.270	1.762	1.261
OTU 332	1.168	1.283	1.329	1.158	1.339	1.417	1.258	1.223	1.779	1.317
OTU 333	1.165	1.262	1.329	1.104	1.240	1.461	1.168	1.221	1.686	1.235
OTU 336	1.398	1.453	1.658	1.501	1.527	1.559	1.373	1.298	1.913	1.445
OTU 337	1.352	1.189	1.410	1.245	1.366	1.442	1.282	1.254	1.752	1.314
OTU 339	1.318	1.254	1.369	1.194	1.368	1.367	1.190	1.236	1.825	1.320
OTU 340	1.290	1.158	1.282	1.090	1.336	1.264	1.118	1.152	1.809	1.181
OTU 341	1.273	1.132	1.329	1.044	1.218	1.265	1.094	1.119	1.760	1.288
OTU 342	1.267	1.407	1.494	1.297	1.379	1.430	1.118	1.248	1.812	1.292
OTU 343	1.390	1.364	1.556	1.297	1.469	1.418	1.270	1.230	1.830	1.267
OTU 344	1.436	1.691	1.967	1.657	1.634	1.604		1.664	2.215	1.652
OTU 345	1.301	1.124	1.359	1.259	1.210	1.111		1.134	1.744	1.283

IDENTIFICATION:

PAGE 10

COMPUTE DISTANCE

	OTU 097	OTU 100	OTU 102	OTU 104	OTU 106	OTU 108	OTU 110	OTU 112	OTU 114	OTU 115
OTU 097	0.000									
OTU 100	1.724	0.000								
OTU 102	1.217	1.425	0.000							
OTU 104	1.841	1.188	1.279	0.000						
OTU 106	2.035	1.409	1.370	1.255	0.000					
OTU 108	1.758	1.209	1.241	1.095	1.824	0.000				
OTU 110	1.793	1.054	1.344	1.108	0.956	1.311	0.000			
OTU 112	2.133	1.507	1.852	1.379	1.270	1.453	1.080	0.000		
OTU 114	1.861	1.125	1.360	1.032	1.177	0.829	1.235	0.000		
OTU 115	1.685	1.111	1.214	1.212	1.377	1.173	1.173	1.732	1.061	0.000
OTU 116	1.827	1.772	1.690	1.707	1.915	1.696	1.697	1.879	1.762	1.769
OTU 117	1.144	1.703	1.106	1.770	1.954	1.648	1.601	1.841	1.802	1.636
OTU 122	1.250	1.609	1.116	1.737	1.948	1.589	1.794	2.161	1.895	1.743
OTU 125	1.518	1.016	1.290	1.665	1.696	1.502	1.783	1.046	1.685	1.723
OTU 127	1.218	1.341	1.170	1.177	1.679	1.321	1.255	1.643	1.375	1.493
OTU 129	1.623	1.222	1.377	1.066	1.324	1.311	1.076	1.411	1.006	1.243
OTU 130	1.732	1.226	1.522	1.110	1.309	1.343	1.115	1.467	1.156	1.155
OTU 132	1.280	1.210	1.038	1.200	1.355	1.450	1.109	1.404	1.112	1.306
OTU 133	2.084	1.124	1.679	1.263	1.195	1.172	1.154	1.371	1.080	1.335
OTU 136	1.812	1.177	1.458	1.155	1.243	1.166	1.079	1.436	0.866	0.919
OTU 138	2.045	1.623	1.945	1.329	1.377	1.528	1.306	1.733	1.045	1.323
OTU 140	1.520	1.055	1.332	0.905	1.415	1.249	1.170	1.527	1.019	1.120
OTU 143	1.583	1.282	1.594	1.075	1.458	1.058	1.323	1.567	1.115	1.124
OTU 145	1.945	1.203	1.606	1.171	1.226	1.316	0.928	1.273	0.867	1.150
OTU 147	1.467	0.911	1.391	1.162	1.019	1.153	1.092	1.417	0.955	1.084
OTU 149	1.635	1.194	1.235	1.184	1.362	1.091	1.114	1.409	0.973	1.068
OTU 151	1.839	1.188	1.695	1.162	1.161	1.156	0.912	1.361	0.852	1.240
OTU 152	1.736	1.365	1.516	1.203	1.461	1.139	1.370	1.788	1.245	2.218
OTU 153	1.679	1.089	1.469	1.122	1.538	0.927	1.328	1.524	1.320	1.176
OTU 155	1.721	1.106	1.499	1.145	0.946	1.189	0.945	1.656	0.869	0.987
OTU 158	1.369	1.311	1.319	1.408	1.878	1.370	1.827	1.755	1.339	1.022
OTU 159	1.741	1.066	1.476	1.068	1.508	0.914	1.258	1.707	1.075	1.039
OTU 160	1.822	1.259	1.695	1.607	1.604	1.52	1.274	1.695	1.165	1.214
OTU 165	1.697	1.377	1.635	1.350	1.713	1.188	1.491	1.788	1.405	1.351
OTU 166	1.671	1.487	1.783	1.665	1.310	1.373	1.259	1.707	1.006	1.272
OTU 167	1.708	1.411	1.771	1.171	1.417	1.366	1.413	1.911	1.172	1.234
OTU 171	1.824	0.880	1.503	1.028	1.241	1.240	0.949	1.176	0.882	1.127
OTU 177	1.750	0.988	1.568	1.213	1.620	1.32	1.101	1.345	1.332	1.443
OTU 181	1.099	1.264	1.079	1.324	0.787	1.229	0.929	1.588	1.120	1.104
OTU 183	1.863	1.193	1.579	1.079	1.650	1.282	1.785	1.812	1.104	1.182
OTU 186	1.561	1.140	1.426	1.294	1.495	1.320	1.393	1.872	1.269	1.128
OTU 187	1.549	1.150	1.303	1.167	1.385	1.267	1.068	1.471	0.858	0.999
OTU 189	1.624	1.183	1.438	1.300	1.563	1.194	1.423	1.741	1.238	1.242
OTU 191	1.471	1.054	1.326	1.167	1.260	1.369	1.091	1.428	1.048	1.070
OTU 196	1.537	1.062	1.380	1.067	1.351	1.143	1.223	1.387	1.135	1.141
OTU 198	1.332	1.023	1.327	1.347	1.330	1.398	1.090	1.497	0.937	1.165
OTU 197	1.502	1.140	1.291	1.250	1.459	1.377	1.616	1.616	1.143	1.359
OTU 199	1.786	0.811	1.424	1.378	1.408	1.551	1.050	1.571	1.187	1.244
OTU 200	1.683	1.191	1.241	1.328	1.090	1.499	1.036	1.546	0.993	1.012
OTU 202	1.748	1.143	1.671	1.226	1.353	1.285	1.104	1.620	1.382	1.359

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 11

	OTU 097	OTU 100	OTU 102	OTU 104	OTU 106	OTU 108	OTU 110	OTU 112	OTU 114	OTU 115
OTU 206	1.187	0.987	1.173	1.216	1.370	1.484	1.071	1.639	1.095	1.959
OTU 209	1.896	1.020	1.876	1.213	1.415	1.595	1.037	1.409	1.175	1.475
OTU 210	1.786	1.164	1.396	1.337	1.340	1.610	1.141	1.489	1.191	1.367
OTU 212	1.426	1.273	1.471	1.414	1.510	1.383	1.293	1.661	1.221	1.307
OTU 213	1.175	1.205	0.978	1.487	1.767	1.383	1.377	1.832	1.461	1.312
OTU 216	1.082	1.506	0.986	1.705	1.532	1.532	1.710	2.025	1.660	1.443
OTU 218	1.256	1.105	0.918	1.546	1.912	1.471	1.957	1.722	1.670	1.451
OTU 220	2.198	1.05	1.177	1.134	1.613	1.658	1.487	1.867	1.232	1.402
OTU 227	1.796	1.096	1.629	1.073	1.339	1.310	1.053	1.528	0.931	1.279
OTU 229	1.702	1.216	1.659	1.711	1.209	1.330	1.186	1.491	1.075	1.219
OTU 231	1.737	1.444	1.677	1.034	1.052	1.316	1.130	1.375	0.997	1.383
OTU 234	2.246	1.590	2.131	1.439	1.218	1.577	1.266	1.966	1.331	1.767
OTU 235	1.967	1.262	1.838	1.244	1.305	1.404	1.145	1.318	1.250	1.406
OTU 236	2.062	1.366	1.963	1.224	1.045	1.320	1.091	1.209	1.143	1.498
OTU 239	2.120	1.384	1.914	1.351	1.201	1.601	0.930	1.268	1.108	1.461
OTU 241	2.166	1.362	2.006	1.441	1.243	1.513	1.051	1.083	1.313	1.763
OTU 243	1.756	1.438	1.788	1.243	0.953	1.319	1.004	1.258	1.112	1.381
OTU 244	1.984	1.347	1.922	1.300	1.137	1.285	1.128	1.485	1.072	1.388
OTU 247	2.016	1.492	1.974	1.422	0.938	1.136	1.039	1.404	1.115	1.433
OTU 251	1.910	1.363	1.849	1.270	0.970	1.345	1.096	1.412	0.950	1.354
OTU 252	2.115	1.457	2.100	1.504	1.599	1.811	1.557	1.885	1.513	1.757
OTU 254	1.772	1.47	1.776	1.278	1.139	1.280	1.132	1.520	1.400	1.264
OTU 256	1.734	1.440	1.695	1.075	1.115	1.213	1.188	1.458	0.941	1.280
OTU 259	1.861	1.323	1.873	1.488	1.005	1.512	1.260	1.477	1.221	1.578
OTU 260	1.915	1.332	1.927	1.419	1.297	1.364	1.196	1.448	1.289	1.367
OTU 262	1.832	1.202	1.361	1.115	0.917	1.353	0.929	1.311	1.038	1.344
OTU 264	1.746	1.263	1.549	1.143	1.067	1.116	1.021	1.148	0.772	1.232
OTU 266	1.810	1.050	1.704	1.099	1.108	1.053	1.010	1.408	1.034	1.171
OTU 268	1.902	1.310	1.702	1.161	1.097	1.175	1.035	1.227	0.739	1.143
OTU 270	1.884	1.197	1.641	1.169	1.280	1.354	1.084	1.503	1.099	1.172
OTU 272	1.801	1.208	1.763	1.353	1.117	1.469	0.863	1.570	1.174	1.297
OTU 273	1.735	1.310	1.640	1.262	1.088	1.299	1.102	1.473	1.105	1.060
OTU 275	1.858	1.432	1.891	1.352	1.173	1.507	1.393	1.545	1.212	1.267
OTU 276	1.909	1.295	1.874	1.286	1.200	1.613	1.137	1.570	0.943	1.234
OTU 280	1.666	1.116	1.541	1.072	1.032	1.268	0.802	1.280	0.693	1.315
OTU 282	1.918	1.219	1.734	1.328	0.958	1.375	0.811	1.285	1.305	1.315
OTU 283	2.172	1.621	2.090	1.389	1.581	1.369	1.450	1.574	1.399	1.481
OTU 286	1.938	1.195	1.837	1.142	1.043	1.368	0.971	1.440	0.908	1.339
OTU 288	1.681	1.218	1.863	1.294	1.278	1.302	1.201	1.820	1.102	1.245
OTU 289	1.765	1.241	1.650	1.190	1.073	1.446	1.075	1.382	1.124	1.417
OTU 292	1.437	1.108	1.450	1.102	1.322	1.201	1.008	1.466	1.116	1.080
OTU 295	1.612	1.231	1.682	1.138	1.367	1.175	1.136	1.506	1.019	1.198
OTU 296	1.371	1.205	1.131	1.645	1.716	1.759	1.355	1.796	1.519	1.373
OTU 297	1.329	1.387	1.238	1.626	1.810	1.679	1.413	1.908	1.537	1.353
OTU 298	1.321	1.284	1.289	1.571	1.895	1.618	1.408	1.878	1.717	1.608
OTU 301	1.375	1.394	1.073	1.622	2.026	1.584	1.685	2.144	1.718	1.537
OTU 305	1.236	1.428	1.210	1.734	2.006	1.459	1.599	2.002	1.686	1.343
OTU 306	1.206	1.322	1.219	1.780	1.995	1.355	1.585	1.977	1.703	1.323
OTU 308	1.448	1.440	1.001	1.837	1.796	1.667	1.633	2.001	1.656	1.544
OTU 310	1.277	1.465	1.035	1.640	1.926	1.638	1.645	2.038	1.666	1.387

PLEASE TURN THE PAGE

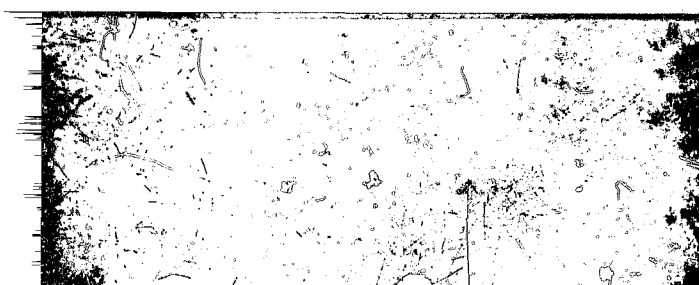
COMPUTE DISTANCE

	OTU 97	OTU 100	OTU 102	OTU 104	OTU 105	OTU 108	OTU 110	OTU 112	OTU 114	OTU 115
OTU 111	1.040	1.258	1.198	1.482	1.780	1.468	1.504	1.955	1.538	1.424
OTU 113	1.318	1.428	1.104	1.802	1.909	1.727	1.633	1.952	1.704	1.462
OTU 114	1.452	1.403	1.317	1.700	1.612	1.534	1.325	1.608	1.524	1.384
OTU 116	1.356	1.212	1.043	1.442	1.602	1.319	1.391	1.072	1.301	1.300
OTU 125	1.283	1.303	1.139	1.447	1.777	1.391	1.066	1.814	1.571	1.389
OTU 124	1.376	1.298	1.216	1.505	1.860	1.355	1.416	1.773	1.558	1.398
OTU 126	1.264	1.179	0.882	1.472	1.700	1.476	1.370	1.766	1.633	1.285
OTU 127	1.302	1.512	1.255	1.633	1.575	1.533	1.415	1.827	1.405	1.463
OTU 130	1.433	1.224	0.948	1.519	1.756	1.573	1.353	1.771	1.536	1.521
OTU 132	1.316	1.226	1.005	1.541	1.459	1.456	1.525	1.946	1.591	1.541
OTU 133	1.145	1.251	0.942	1.633	1.608	1.594	1.428	1.563	1.504	1.338
OTU 136	1.462	1.478	1.216	1.051	1.881	1.624	1.681	2.093	1.762	1.472
OTU 137	1.187	1.387	1.065	1.748	1.897	1.578	1.602	1.953	1.600	1.472
OTU 139	1.133	1.318	1.027	1.705	1.880	1.582	1.584	1.930	1.649	1.429
OTU 140	1.242	1.250	1.027	1.496	1.775	1.446	1.520	2.001	1.595	1.407
OTU 141	1.116	1.204	0.946	1.536	1.700	1.500	1.417	1.085	1.435	1.300
OTU 142	1.080	1.323	1.102	1.747	1.741	1.565	1.375	1.866	1.374	1.335
OTU 143	1.155	1.391	1.070	1.760	1.850	1.570	1.553	1.957	1.735	1.470
OTU 144	1.173	1.832	1.438	2.079	2.147	1.925	1.952	2.442	2.016	1.638
OTU 145	1.235	1.292	1.107	1.624	1.856	1.377	1.684	1.993	1.647	1.265

COMPUTE DISTANCE

	OTU 116	OTU 119	OTU 122	OTU 125	OTU 127	OTU 129	OTU 130	OTU 132	OTU 135	OTU 136
OTU 116	0.000									
OTU 119	1.654	0.000								
OTU 122	1.784	1.163	0.000							
OTU 125	1.697	1.231	1.114	0.000						
OTU 127	1.706	1.197	1.330	1.398	0.000					
OTU 129	1.554	1.643	1.998	1.715	1.095	0.000				
OTU 130	1.776	1.627	1.668	1.709	1.250	0.795	0.000			
OTU 132	1.612	1.302	1.471	1.385	1.017	0.903	1.032	0.000		
OTU 135	1.980	2.022	2.009	2.088	1.930	1.216	1.120	1.460	0.000	
OTU 136	1.654	1.718	1.838	1.815	1.361	0.854	1.030	1.165	1.115	0.000
OTU 138	2.011	2.087	2.034	2.048	1.694	1.229	1.233	1.511	1.380	1.137
OTU 140	1.706	1.573	1.611	1.545	1.073	0.907	0.906	0.930	1.377	1.029
OTU 143	1.742	1.785	1.776	1.609	1.300	1.083	1.039	1.177	1.356	0.975
OTU 145	1.859	1.889	2.008	2.019	1.380	0.980	0.984	1.191	0.987	0.910
OTU 147	1.730	1.328	1.169	1.264	1.000	1.181	1.106	0.983	1.235	1.092
OTU 149	1.976	1.476	1.697	1.566	1.182	0.979	1.077	0.940	1.349	0.968
OTU 151	1.713	1.861	1.807	1.412	1.035	1.012	1.093	0.993	1.087	1.087
OTU 152	1.792	1.673	1.522	1.907	1.262	1.309	1.281	1.316	1.373	1.192
OTU 153	1.536	1.498	1.389	1.472	1.259	1.226	1.253	1.313	1.352	1.201
OTU 155	1.597	1.554	1.634	1.691	1.306	1.235	1.046	1.157	1.156	1.105
OTU 158	1.907	1.379	1.488	1.552	1.393	1.302	1.370	1.193	1.606	1.184
OTU 159	1.733	1.741	1.527	1.631	1.281	1.165	1.178	1.369	1.174	1.052
OTU 162	1.697	1.870	2.007	1.956	1.579	1.474	1.378	1.292	1.474	1.314
OTU 165	1.616	1.605	1.626	1.607	1.310	1.370	1.300	1.330	1.308	1.308
OTU 166	1.968	1.923	1.817	1.900	1.462	1.260	1.191	1.419	1.304	1.118
OTU 167	1.670	1.896	1.693	1.752	1.436	1.294	1.251	1.400	1.326	1.227
OTU 171	1.706	1.701	1.695	1.828	1.208	1.093	1.142	1.113	1.024	1.006
OTU 177	1.703	1.700	1.666	1.228	1.327	1.410	1.270	1.482	1.352	1.352
OTU 181	1.422	1.502	1.373	1.323	1.085	0.887	1.023	1.063	1.180	1.077
OTU 183	1.883	1.701	1.596	1.056	1.189	1.371	1.289	1.467	1.263	1.332
OTU 186	1.704	1.769	1.511	1.516	1.307	1.255	1.161	1.196	1.372	1.244
OTU 187	1.544	1.524	1.630	1.654	1.209	0.874	0.994	1.078	1.305	0.711
OTU 189	1.677	1.765	1.469	1.569	1.348	1.166	1.149	1.238	1.209	1.299
OTU 191	1.678	1.311	1.495	1.618	1.156	0.953	0.993	0.832	1.202	1.175
OTU 194	1.407	1.462	1.587	1.575	1.093	0.813	0.898	0.919	1.112	0.849
OTU 196	1.858	1.463	1.628	1.701	1.227	1.116	1.095	0.992	1.335	1.178
OTU 197	1.632	1.842	1.672	1.684	1.368	1.039	1.161	0.992	1.381	1.283
OTU 199	1.864	1.634	1.593	1.899	1.434	1.181	1.104	1.064	1.287	1.241
OTU 200	1.714	1.531	1.832	1.771	1.450	1.171	1.058	1.022	1.319	1.008
OTU 202	1.638	1.769	1.365	1.495	1.209	0.869	0.865	1.363	1.268	1.415
OTU 206	1.420	1.897	1.443	1.200	1.215	0.899	1.053	0.984	1.295	0.887
OTU 209	1.719	1.751	1.883	1.883	1.065	0.944	0.965	1.025	1.281	0.894
OTU 210	2.023	1.718	1.746	1.774	1.334	1.012	0.978	1.041	1.378	1.256
OTU 212	1.769	1.707	1.700	1.690	1.337	0.887	1.094	1.031	1.377	1.143
OTU 213	1.624	1.625	1.651	1.383	1.095	0.842	0.959	1.130	1.116	1.161
OTU 216	1.061	1.327	1.284	1.349	1.335	1.188	1.249	1.261	1.854	1.540
OTU 218	1.710	1.152	1.132	1.241	1.262	1.428	1.477	1.114	1.866	1.542
OTU 220	2.284	2.276	2.270	2.280	1.769	1.473	1.600	1.662	1.319	1.301
OTU 227	1.801	1.825	1.769	1.713	1.343	1.156	1.086	1.056	1.209	1.145
OTU 229	1.762	1.748	1.735	1.621	1.418	1.112	1.080	1.163	1.097	1.050

PLEASE TURN THE PAGE



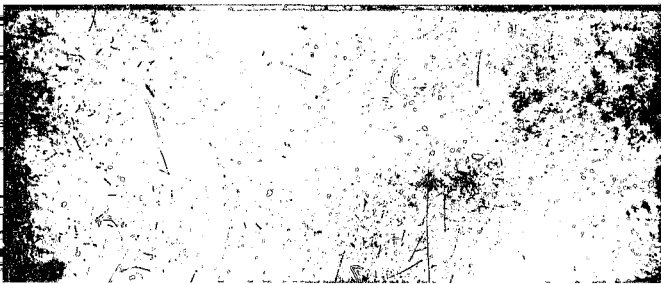
	OTU 116	OTU 119	OTU 122	OTU 125	OTU 127	OTU 129	OTU 130	OTU 132	OTU 135	OTU 136
OTU 231	1.678	1.734	1.812	1.896	1.774	1.013	1.057	1.128	1.130	1.088
OTU 234	1.261	2.252	2.130	2.097	1.818	1.432	1.411	1.531	1.260	1.318
OTU 235	1.804	1.934	1.976	1.887	1.965	1.226	1.137	1.214	1.228	1.191
OTU 236	1.968	1.931	1.944	1.903	1.992	1.409	1.237	1.435	0.925	1.343
OTU 239	1.918	1.990	2.077	1.992	1.963	1.208	1.177	1.279	1.282	1.196
OTU 241	1.975	1.987	2.114	2.069	1.984	1.521	1.656	1.516	1.315	1.561
OTU 243	1.730	1.821	1.888	1.713	1.900	1.232	1.228	1.220	1.258	1.209
OTU 244	1.906	1.980	1.897	1.903	1.920	1.261	1.319	1.496	1.108	1.104
OTU 247	2.004	1.914	2.074	1.993	1.732	1.460	1.329	1.375	1.264	1.341
OTU 251	1.888	1.957	1.963	1.896	1.474	1.065	1.119	1.248	0.969	1.143
OTU 252	2.229	2.185	2.163	2.177	1.820	1.686	1.686	1.687	1.730	1.737
OTU 254	1.962	1.953	1.814	1.734	1.237	1.297	1.271	1.325	1.172	1.291
OTU 256	1.852	1.856	1.800	1.793	1.238	0.909	0.961	1.126	1.011	1.043
OTU 259	2.169	2.025	2.001	2.182	1.744	1.440	1.084	1.612	1.393	1.473
OTU 260	2.032	1.807	1.873	1.911	1.886	1.448	1.337	1.473	1.159	1.367
OTU 262	1.821	1.655	1.639	1.840	1.376	1.203	1.233	1.225	1.246	1.206
OTU 264	1.632	1.626	1.714	1.635	1.310	1.020	1.106	1.103	1.205	0.921
OTU 266	1.725	1.832	1.834	1.761	1.426	1.296	1.396	1.301	1.015	1.182
OTU 268	1.814	1.818	1.805	1.863	1.798	1.203	1.185	1.314	1.141	0.990
OTU 270	2.000	1.740	1.906	1.874	1.249	1.183	1.177	1.222	1.270	1.036
OTU 272	1.866	1.741	1.720	1.870	1.715	1.393	1.233	1.365	1.288	1.388
OTU 273	1.830	1.726	1.756	1.716	1.533	1.106	1.028	1.203	1.365	0.905
OTU 276	1.913	1.934	2.113	2.083	1.563	1.314	1.239	1.288	1.220	1.097
OTU 278	2.080	1.994	2.075	2.013	1.630	1.402	1.306	1.217	1.382	1.274
OTU 280	1.797	1.617	1.650	1.683	1.190	1.164	1.197	1.125	1.191	1.201
OTU 282	1.984	1.731	1.916	1.957	1.472	1.292	1.308	1.195	1.274	1.212
OTU 283	2.030	2.072	2.250	2.103	1.683	1.197	1.329	1.450	1.265	1.236
OTU 286	1.923	1.972	1.889	2.005	1.336	1.123	1.207	1.323	1.115	1.183
OTU 288	1.981	1.652	1.919	2.008	1.494	1.422	1.429	1.450	1.223	1.179
OTU 289	1.869	1.729	1.770	1.717	1.425	1.221	1.280	1.182	1.360	1.212
OTU 292	1.695	1.542	1.621	1.703	1.100	1.000	1.061	1.105	1.289	1.006
OTU 295	1.774	1.747	1.746	1.787	1.258	0.910	0.964	1.187	1.195	1.066
OTU 296	1.952	1.312	1.684	1.776	1.239	1.315	1.415	1.114	1.798	1.357
OTU 297	1.776	1.889	1.676	1.773	1.071	1.218	1.453	1.199	1.774	1.329
OTU 298	1.812	1.399	1.388	1.623	1.246	1.408	1.379	1.340	1.836	1.254
OTU 301	1.819	1.511	1.262	1.525	1.279	1.428	1.560	1.344	1.928	1.497
OTU 305	1.628	1.191	1.412	1.430	1.197	1.432	1.491	1.112	1.814	1.462
OTU 306	1.686	1.241	1.432	1.483	1.421	1.558	1.572	1.265	1.892	1.511
OTU 308	2.019	1.849	1.434	1.583	1.710	1.605	1.609	1.481	1.814	1.627
OTU 310	1.832	1.305	1.315	1.534	1.160	1.376	1.316	1.152	1.703	1.465
OTU 311	1.720	1.344	1.292	1.445	1.060	1.361	1.554	1.165	1.701	1.488
OTU 313	2.035	1.805	1.574	1.723	1.174	1.608	1.609	1.353	1.816	1.612
OTU 314	1.653	1.276	1.685	1.571	1.384	1.320	1.247	1.016	1.649	1.368
OTU 316	1.711	1.142	1.309	1.478	1.078	1.259	1.275	1.101	1.555	1.345
OTU 322	1.572	1.269	1.362	1.370	0.995	1.063	1.193	1.181	1.587	1.177
OTU 324	1.811	1.305	1.470	1.541	1.098	1.261	1.392	1.341	1.628	1.349
OTU 326	1.703	1.184	1.283	1.571	1.072	1.210	1.371	1.018	1.648	1.370
OTU 327	1.946	1.399	1.475	1.572	1.321	1.305	1.344	1.281	1.670	1.394
OTU 330	1.753	1.278	1.325	1.657	1.381	1.303	1.465	1.147	1.708	1.457
OTU 332	1.817	1.310	1.145	1.257	1.187	1.449	1.277	1.326	1.765	1.249

PLEASE TURN THE PAGE



COMPUTED DISTANCE

	OTU 116	OTU 119	OTU 122	OTU 125	OTU 127	OTU 129	OTU 130	OTU 132	OTU 135	OTU 136
OTU 333	1.817	1.185	1.449	1.515	1.143	1.335	1.461	0.987	1.620	1.408
OTU 336	1.863	1.305	1.253	1.511	1.676	1.692	1.655	1.341	1.926	1.690
OTU 337	1.799	1.024	1.308	1.606	1.245	1.252	1.607	1.300	1.851	1.976
OTU 339	1.923	1.129	1.390	1.616	1.156	1.452	1.254	1.217	1.809	1.537
OTU 340	1.764	1.252	0.973	1.489	1.085	1.453	1.487	1.343	1.749	1.521
OTU 341	1.794	1.861	1.299	1.502	1.100	1.180	1.236	0.931	1.619	1.364
OTU 342	1.257	1.109	1.428	1.451	1.326	1.437	1.261	1.107	1.779	1.041
OTU 343	1.671	1.145	1.345	1.415	1.328	1.546	1.594	1.188	1.865	1.619
OTU 344	1.971	1.432	1.533	1.699	1.596	1.799	1.726	1.558	2.106	1.868
OTU 345	1.701	1.254	1.308	1.466	1.266	1.431	1.576	1.299	1.802	1.491



	OTU 138	OTU 140	OTU 143	OTU 145	OTU 147	OTU 149	OTU 151	OTU 152	OTU 153	OTU 155
OTU 138	0.000									
OTU 140	1.285	0.000								
OTU 143	1.196	0.854	0.000							
OTU 145	1.047	1.059	1.024							
OTU 147	1.367	0.892	0.957	0.999						
OTU 149	1.440	0.991	0.985	1.112	1.059	0.000				
OTU 151	1.127	1.148	1.052	0.846	1.168	0.971	0.000			
OTU 152	1.299	1.153	1.013	1.233	0.974	1.113	1.290	0.000		
OTU 153	1.492	1.127	1.139	1.782	0.981	1.127	1.262	1.120	0.000	
OTU 155	1.109	1.099	1.066	0.993	0.998	1.027	0.903	1.039	1.245	0.000
OTU 158	1.310	1.250	1.315	1.381	1.167	1.071	1.241	1.342	1.174	1.181
OTU 159	1.262	1.070	0.968	1.188	1.065	1.170	1.174	0.856	1.085	1.065
OTU 162	1.461	1.334	1.517	1.256	1.260	1.234	1.099	1.606	1.560	1.113
OTU 165	1.483	1.098	0.999	1.289	1.055	1.062	1.277	1.090	1.127	1.262
OTU 166	0.827	1.125	0.983	1.019	1.269	1.400	1.057	1.216	1.360	1.046
OTU 167	0.981	1.001	1.098	1.213	1.114	1.427	1.290	0.391	1.363	1.079
OTU 171	1.263	1.009	1.213	0.663	0.668	1.159	0.985	1.162	1.048	0.994
OTU 177	1.647	1.130	1.239	1.210	0.966	1.394	1.420	1.351	1.213	1.374
OTU 181	1.379	0.939	0.916	1.164	1.062	0.905	1.028	1.062	0.861	1.150
OTU 183	1.429	1.281	1.374	1.280	1.099	1.255	1.399	1.130	1.124	1.191
OTU 186	1.368	1.066	1.085	1.362	1.176	1.352	1.183	1.519	1.221	1.184
OTU 187	1.035	0.971	1.073	0.956	1.329	0.968	0.053	1.161	1.103	0.993
OTU 189	1.322	1.151	1.130	1.291	1.186	1.193	1.138	1.053	1.015	1.176
OTU 191	1.469	0.995	1.232	1.106	0.920	1.169	1.169	1.312	1.209	0.959
OTU 194	1.389	0.846	0.914	0.981	0.696	0.905	1.103	1.111	0.905	1.132
OTU 196	1.449	0.697	1.134	1.131	0.898	1.141	1.126	1.309	1.287	0.938
OTU 197	1.592	1.057	1.213	1.339	1.276	1.306	1.160	1.435	1.300	1.282
OTU 199	1.518	1.209	1.410	1.143	1.038	1.295	1.180	1.480	1.245	1.162
OTU 200	1.374	1.082	1.149	1.028	1.066	1.042	1.046	1.342	1.345	0.851
OTU 202	1.525	1.313	1.291	1.366	1.288	1.516	1.219	1.417	1.398	1.216
OTU 206	1.322	0.876	0.931	1.044	0.917	0.927	1.016	1.043	1.013	1.103
OTU 209	1.553	1.063	1.407	1.109	1.140	1.237	1.149	1.439	1.291	1.327
OTU 210	1.607	1.109	1.450	1.281	1.272	1.233	1.260	1.553	1.437	1.153
OTU 212	1.387	0.860	1.079	1.116	1.212	1.131	1.110	1.273	1.265	1.307
OTU 213	1.794	1.237	1.369	1.519	1.182	1.203	1.441	1.402	1.148	1.392
OTU 216	1.863	1.307	1.457	1.748	1.450	1.412	1.713	1.479	1.467	1.538
OTU 218	1.990	1.248	1.491	1.697	1.225	1.258	1.615	1.406	1.174	1.550
OTU 220	1.182	1.340	1.518	1.027	1.538	1.718	1.274	1.697	1.610	1.364
OTU 227	1.102	0.795	0.988	0.891	0.889	1.121	0.850	1.013	1.206	0.973
OTU 229	1.212	1.061	1.156	0.911	1.099	1.443	1.043	1.336	1.163	1.081
OTU 231	1.028	1.014	0.995	0.877	0.992	0.211	0.066	1.073	1.327	0.986
OTU 234	1.279	1.420	1.657	1.211	1.513	1.728	1.190	1.598	1.587	1.393
OTU 235	1.322	1.171	1.124	0.931	1.195	1.388	1.072	1.426	1.315	1.229
OTU 236	1.701	1.409	1.317	1.304	1.503	1.507	1.068	1.365	1.388	0.967
OTU 239	1.234	1.210	1.271	0.760	1.237	1.356	0.989	1.446	1.455	1.197
OTU 241	1.752	1.621	1.692	1.283	1.327	1.626	1.374	1.660	1.561	1.395
OTU 243	1.111	0.829	0.990	0.942	1.168	1.006	1.369	1.406	1.406	1.082
OTU 244	1.077	1.273	1.124	0.914	1.190	1.496	1.103	1.199	1.298	1.115
OTU 247	1.317	1.478	1.331	0.991	1.297	1.420	1.062	1.581	1.553	1.044
OTU 251	1.004	1.213	1.170	0.903	1.171	1.119	0.960	1.240	1.307	0.978

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 17

	OTU 128	OTU 130	OTU 133	OTU 135	OTU 147	OTU 149	OTU 151	OTU 152	OTU 153	OTU 155
OTU 252	1.648	1.612	1.583	1.613	1.658	1.601	1.551	1.550	1.856	1.568
OTU 254	1.182	1.177	1.274	1.074	1.134	1.158	1.067	1.913	1.361	1.076
OTU 256	1.066	0.977	0.897	0.819	1.061	1.196	0.974	1.046	1.247	0.968
OTU 259	1.82	1.591	1.593	1.056	1.414	1.661	1.366	1.629	1.528	1.138
OTU 260	1.839	1.450	1.423	1.127	1.079	1.536	1.216	1.446	1.443	1.012
OTU 262	1.224	1.240	1.354	1.145	1.134	1.256	1.059	1.371	1.187	0.799
OTU 264	1.223	1.157	0.929	0.893	1.049	0.930	0.961	1.129	1.039	1.043
OTU 266	1.360	1.166	1.060	1.029	1.032	1.159	0.952	1.125	1.205	0.795
OTU 268	0.876	1.145	1.074	0.879	1.087	1.194	0.889	1.094	1.329	0.769
OTU 270	1.240	1.095	1.084	0.909	1.061	1.136	1.135	1.181	1.322	0.840
OTU 272	1.292	1.277	1.411	1.096	1.101	1.342	1.084	1.312	1.433	0.987
OTU 273	0.996	1.177	0.994	0.857	1.042	1.154	1.023	1.089	1.182	0.889
OTU 276	1.254	1.222	1.031	0.908	1.148	1.201	1.186	1.418	1.430	1.117
OTU 278	1.307	1.159	1.272	1.087	1.115	1.438	1.117	1.476	1.563	1.031
OTU 280	1.257	0.991	1.207	0.999	0.930	1.119	1.013	1.204	1.261	0.857
OTU 282	1.334	1.250	1.450	1.584	1.060	1.296	1.137	1.458	1.497	0.932
OTU 283	1.448	1.470	1.168	1.161	1.428	1.550	1.377	1.415	1.603	1.641
OTU 286	1.061	1.168	1.191	0.869	1.170	1.428	0.990	1.331	1.309	1.053
OTU 288	1.173	1.288	1.249	1.014	1.005	1.365	1.096	1.297	1.329	0.990
OTU 289	1.395	1.145	1.229	1.156	1.097	1.383	1.120	1.363	1.364	1.084
OTU 292	1.273	0.918	0.989	0.907	0.953	1.040	1.060	1.133	1.205	1.066
OTU 295	1.071	0.842	0.830	0.771	0.946	1.132	0.924	1.089	1.162	1.071
OTU 296	1.896	1.253	1.563	1.483	1.254	1.238	1.610	1.620	1.526	1.408
OTU 297	1.846	1.111	1.525	1.487	1.267	1.229	1.565	1.610	1.525	1.506
OTU 298	1.983	1.420	1.629	1.633	1.359	1.435	1.623	1.571	1.303	1.633
OTU 301	1.710	1.360	1.455	1.755	1.440	1.410	1.624	1.498	1.308	1.640
OTU 302	1.957	1.422	1.462	1.660	1.269	1.574	1.581	1.429	1.346	1.576
OTU 306	2.021	1.368	1.502	1.699	1.206	1.193	1.625	1.501	1.338	1.567
OTU 308	2.036	1.337	1.684	1.801	1.490	1.246	1.513	1.580	1.334	1.406
OTU 310	1.978	1.341	1.495	1.691	1.360	1.127	1.586	1.560	1.429	1.540
OTU 311	1.811	1.462	1.400	1.647	1.157	1.304	1.457	1.421	1.272	1.415
OTU 313	1.070	1.563	1.744	1.800	1.351	1.356	1.772	1.609	1.594	1.543
OTU 314	1.816	1.346	1.399	1.219	1.055	1.400	1.400	1.515	1.430	1.391
OTU 316	1.736	1.184	1.367	1.474	1.086	1.061	1.400	1.278	1.079	1.189
OTU 322	1.727	1.208	1.405	1.495	1.319	1.134	1.425	1.392	1.150	1.504
OTU 324	1.663	1.324	1.391	1.516	1.258	1.289	1.567	1.433	1.279	1.493
OTU 326	1.783	1.153	1.487	1.501	1.138	1.056	1.391	1.407	1.243	1.293
OTU 327	1.991	1.285	1.400	1.402	1.375	1.344	1.422	1.402	1.382	1.201
OTU 330	1.869	1.340	1.489	1.576	1.313	1.211	1.451	1.560	1.365	1.406
OTU 332	1.845	1.319	1.529	1.696	1.259	1.367	1.482	1.590	1.319	1.451
OTU 333	1.830	1.244	1.550	1.561	1.152	1.110	1.491	1.445	1.452	1.333
OTU 336	2.093	1.611	1.701	1.893	1.587	1.284	1.515	1.727	1.497	1.562
OTU 337	1.982	1.266	1.709	1.759	1.222	1.289	1.595	1.595	1.388	1.410
OTU 339	1.970	1.375	1.633	1.670	1.248	1.327	1.684	1.655	1.439	1.488
OTU 340	1.894	1.320	1.469	1.694	1.197	1.372	1.627	1.287	1.270	1.360
OTU 341	1.713	1.183	1.366	1.477	1.189	1.096	1.346	1.302	1.161	1.309
OTU 342	1.902	1.426	1.594	1.642	1.225	1.195	1.468	1.550	1.417	1.437
OTU 343	2.022	1.469	1.613	1.758	1.350	1.179	1.522	1.608	1.326	1.493
OTU 344	2.075	1.735	1.813	2.030	1.666	1.519	1.855	1.737	1.609	1.711
OTU 345	1.997	1.404	1.463	1.760	1.274	1.230	1.634	1.494	1.232	1.466

IDENTIFICATION:
COMPUTE DISTANCE

PAGE 18

	OTU 158	OTU 159	OTU 162	OTU 165	OTU 166	OTU 167	OTU 171	OTU 177	OTU 181	OTU 183
OTU 158	0.000									
OTU 159	1.358	0.000								
OTU 162	1.380	1.410	0.000							
OTU 165	1.298	1.079	1.843	0.000						
OTU 166	1.295	1.104	1.363	1.337						
OTU 167	1.284	0.997	1.240	1.174	0.834	0.000				
OTU 171	1.216	1.050	1.218	1.253	1.052	1.155	0.000			
OTU 177	1.264	1.190	1.205	1.430	1.202	1.225	1.090	0.000		
OTU 181	1.211	0.795	1.617	0.959	1.264	1.187	1.123	1.221	0.000	
OTU 183	1.395	1.020	1.626	1.411	1.320	1.307	1.041	1.270	1.202	0.000
OTU 186	1.210	1.084	1.298	1.449	1.148	1.144	1.204	1.443	1.031	1.337
OTU 187	1.121	0.988	1.176	1.265	1.091	1.147	1.018	1.246	1.003	1.206
OTU 189	1.335	0.822	1.323	1.126	1.083	1.216	1.082	1.104	0.764	1.191
OTU 191	1.335	1.209	1.201	1.285	1.364	1.263	1.002	1.324	1.018	1.230
OTU 194	1.231	1.117	1.359	1.092	1.286	1.182	0.956	1.234	0.810	1.188
OTU 195	1.255	1.191	1.173	1.351	1.257	1.164	1.079	1.249	1.180	1.433
OTU 197	1.264	1.182	1.270	1.516	1.408	1.376	1.177	1.314	1.062	1.494
OTU 199	1.347	1.264	1.221	1.479	1.288	1.447	0.952	1.186	1.255	1.234
OTU 200	1.187	1.404	1.159	1.358	1.247	1.261	0.977	1.480	1.289	1.440
OTU 202	1.525	1.108	1.324	1.643	1.334	1.405	1.300	1.181	1.197	1.316
OTU 206	0.946	0.934	1.804	0.990	1.112	1.084	0.866	1.176	0.774	1.262
OTU 209	1.554	1.310	1.516	1.484	1.504	1.510	0.930	1.111	1.196	1.398
OTU 210	1.589	1.418	1.374	1.668	1.513	1.563	1.185	1.316	1.285	1.486
OTU 212	1.278	1.218	1.502	1.481	1.261	1.218	1.327	1.366	0.974	1.511
OTU 213	1.032	1.233	1.495	1.351	1.461	1.527	1.246	1.199	1.044	1.292
OTU 216	1.424	1.356	1.708	1.597	1.726	1.590	1.665	1.584	1.149	1.602
OTU 218	1.349	1.464	1.693	1.419	1.739	1.681	1.456	1.340	1.162	1.668
OTU 220	1.706	1.471	1.627	1.777	1.127	1.383	1.348	1.661	1.516	1.493
OTU 227	1.336	1.034	1.220	1.072	1.030	0.919	0.857	1.153	1.075	1.316
OTU 229	1.212	1.254	1.376	1.319	0.999	1.061	0.972	1.334	1.161	1.363
OTU 231	1.382	1.215	1.671	1.259	0.962	1.035	1.041	1.375	1.116	1.331
OTU 234	1.719	1.341	1.661	1.700	1.146	1.310	1.299	1.509	1.520	1.796
OTU 235	1.042	1.465	1.535	1.427	1.225	1.277	1.067	1.276	1.328	1.551
OTU 236	1.445	1.392	1.507	1.576	1.236	1.370	1.130	1.342	1.378	1.351
OTU 237	1.516	1.470	1.592	1.401	1.162	1.396	1.095	1.203	1.430	1.622
OTU 241	1.858	1.667	1.668	1.762	1.719	1.785	1.181	1.197	1.573	1.751
OTU 243	1.312	1.324	1.447	1.388	1.077	1.238	1.172	1.271	1.212	1.547
OTU 244	1.421	1.105	1.481	1.409	0.819	1.075	0.943	1.255	1.296	1.351
OTU 247	1.443	1.605	1.471	1.631	1.300	1.526	1.262	1.476	1.482	1.701
OTU 251	1.519	1.253	1.437	1.563	1.154	1.188	1.198	1.433	1.212	1.484
OTU 252	1.905	1.735	1.402	1.974	1.624	1.551	1.585	1.862	1.789	1.604
OTU 254	1.285	1.209	1.616	1.371	1.157	1.065	1.189	1.856	1.183	1.438
OTU 256	1.036	1.405	1.505	1.362	0.980	0.912	0.900	1.092	0.992	1.383
OTU 259	1.610	1.608	1.700	1.902	1.456	1.582	1.244	1.537	1.653	1.648
OTU 260	1.440	1.391	1.431	1.613	1.330	1.360	1.248	1.337	1.422	1.406
OTU 262	1.152	1.392	1.489	1.566	1.090	1.211	0.975	1.320	1.320	1.283
OTU 264	1.131	1.223	1.414	1.273	1.144	1.307	1.032	1.161	1.047	1.329
OTU 266	1.289	1.064	1.368	1.264	1.224	1.207	1.013	1.198	1.061	1.304
OTU 268	1.043	1.066	1.715	1.268	0.636	0.995	0.900	1.192	1.192	1.202
OTU 270	1.396	1.188	1.254	1.383	1.128	1.237	0.956	1.214	1.271	1.288

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 19

	OTU 158	OTU 159	OTU 162	OTU 165	OTU 166	OTU 167	OTU 171	OTU 177	OTU 181	OTU 183
OTU 272	1.182	1.384	1.523	1.461	1.512	1.299	1.121	1.437	1.368	1.376
OTU 273	1.133	1.222	1.350	1.428	1.039	1.121	1.093	1.352	1.187	1.343
OTU 276	1.332	1.478	1.350	1.372	1.182	1.238	1.191	1.275	1.391	1.501
OTU 278	1.516	1.505	1.280	1.620	1.251	1.279	1.070	1.475	1.519	1.545
OTU 280	1.265	1.245	1.380	1.397	1.011	1.147	0.879	1.103	1.219	1.286
OTU 282	1.370	1.507	1.329	1.573	1.292	1.419	0.981	1.275	1.502	1.516
OTU 283	1.747	1.317	1.760	1.607	1.392	1.507	1.182	1.493	1.410	1.523
OTU 286	1.428	1.271	1.532	1.570	0.970	1.138	0.950	1.299	1.262	1.366
OTU 288	1.250	1.264	1.469	1.404	1.142	1.116	1.069	1.421	1.383	1.390
OTU 289	1.412	1.414	1.450	1.591	1.273	1.301	1.045	1.227	1.403	1.573
OTU 292	0.997	1.123	1.463	1.249	1.119	1.130	1.057	1.145	1.074	1.234
OTU 293	1.335	1.028	1.397	1.118	0.806	0.894	1.090	1.223	0.995	1.317
OTU 296	1.339	1.605	1.505	1.633	1.694	1.702	1.372	1.424	1.494	1.602
OTU 297	1.256	1.550	1.534	1.625	1.636	1.092	1.398	1.485	1.395	1.495
OTU 298	1.347	1.460	1.605	1.591	1.132	1.728	1.428	1.195	1.319	1.495
OTU 301	1.356	1.386	1.725	1.568	1.645	1.638	1.523	1.453	1.287	1.505
OTU 305	1.201	1.389	1.509	1.384	1.725	1.689	1.526	1.511	1.234	1.517
OTU 306	1.122	1.405	1.495	1.303	1.188	1.667	1.568	1.307	1.293	1.656
OTU 308	1.412	1.577	1.509	1.680	1.805	1.794	1.573	1.762	1.402	1.667
OTU 310	1.263	1.555	1.527	1.545	1.739	1.745	1.470	1.606	1.337	1.510
OTU 311	1.130	1.320	1.523	1.469	1.948	1.442	1.329	1.345	1.528	1.442
OTU 313	1.335	1.634	1.580	1.743	1.910	1.874	1.549	1.648	1.589	1.537
OTU 314	1.269	1.550	1.310	1.435	1.297	1.709	1.348	1.498	1.313	1.673
OTU 316	1.269	1.238	1.383	1.328	1.495	1.421	1.204	1.414	1.103	1.302
OTU 322	1.268	1.258	1.460	1.386	1.499	1.547	1.365	1.450	0.937	1.373
OTU 324	1.440	1.213	1.704	1.569	1.652	1.668	1.434	1.200	1.199	1.314
OTU 326	1.153	1.333	1.496	1.389	1.566	1.516	1.260	1.420	1.167	1.329
OTU 327	1.301	1.420	1.648	1.625	1.285	1.416	1.446	1.577	1.272	1.526
OTU 330	1.280	1.391	1.586	1.566	1.690	1.714	1.362	1.347	1.292	1.392
OTU 332	1.283	1.252	1.674	1.435	1.587	1.590	1.377	1.322	1.220	1.256
OTU 333	1.173	1.406	1.447	1.528	1.672	1.571	1.347	1.377	1.292	1.522
OTU 336	1.214	1.640	1.496	1.845	1.893	1.846	1.677	1.618	1.500	1.788
OTU 337	1.253	1.527	1.692	1.439	1.778	1.651	1.526	1.631	1.363	1.500
OTU 339	1.259	1.511	1.690	1.550	1.766	1.730	1.873	1.393	1.306	1.450
OTU 340	1.250	1.223	1.756	1.402	1.566	1.481	1.385	1.336	1.170	1.189
OTU 341	1.113	1.324	1.436	1.439	1.470	1.487	1.326	1.484	1.106	1.329
OTU 342	0.950	1.258	1.497	1.511	1.497	1.659	1.430	1.592	1.170	1.329
OTU 343	1.044	1.649	1.544	1.512	1.789	1.773	1.519	1.659	1.327	1.626
OTU 344	1.362	1.777	1.756	1.667	1.925	1.784	1.952	2.180	1.586	1.817
OTU 345	1.238	1.390	1.633	1.514	1.612	1.678	1.503	1.541	1.145	1.449

COMPUTE DISTANCE

	OTU 186	OTU 187	OTU '89	OTU 191	OTU 194	OTU 196	OTU 197	OTU 199	OTU 200	OTU 202
OTU 186	0.000									
OTU 187	1.152	0.000								
OTU 189	0.953	1.109	0.000							
OTU 191	1.166	1.033	1.089	0.000						
OTU 194	1.123	0.939	1.007	0.833	0.000					
OTU 196	1.105	1.045	1.160	0.777	1.020	0.000				
OTU 197	0.904	1.211	0.998	0.953	1.073	0.971	0.000			
OTU 199	1.190	1.084	1.230	0.896	1.118	0.995	1.130	0.000		
OTU 200	1.208	1.014	1.804	0.832	0.937	0.912	1.301	1.019	0.000	
OTU 202	1.096	1.337	1.291	1.289	1.381	1.256	1.194	1.151	1.398	0.000
OTU 206	0.965	0.924	0.979	1.022	0.858	0.959	1.086	1.017	0.986	1.168
OTU 209	1.090	1.105	0.987	1.062	1.133	1.077	0.843	1.227	1.328	1.328
OTU 210	1.349	1.099	1.305	0.962	1.182	0.967	0.926	0.962	1.166	1.313
OTU 212	1.080	1.055	1.099	1.193	0.988	0.911	1.091	1.230	1.205	1.298
OTU 213	1.217	1.178	1.210	1.275	1.209	1.149	1.317	1.188	1.402	1.373
OTU 216	1.245	1.340	1.266	1.310	1.308	1.173	1.291	1.229	1.566	1.997
OTU 218	1.264	1.333	1.313	1.276	1.239	1.217	1.355	1.290	1.476	1.528
OTU 220	1.189	1.200	1.367	1.481	1.576	1.609	1.512	1.600	1.593	1.593
OTU 227	1.117	1.040	1.099	1.086	1.054	1.021	1.148	1.113	1.091	1.284
OTU 229	1.062	1.099	1.032	0.936	1.029	1.205	1.057	1.075	1.382	1.382
OTU 231	1.295	1.126	1.251	1.127	0.922	1.192	1.278	1.443	1.119	1.341
OTU 234	1.445	1.471	1.599	1.605	1.445	1.543	1.536	1.519	1.498	1.359
OTU 235	1.290	1.288	1.469	1.255	1.040	1.328	1.386	1.289	1.122	1.458
OTU 236	1.452	1.345	1.443	1.245	1.298	1.373	1.447	1.379	1.286	1.199
OTU 239	1.453	1.144	1.487	1.354	1.252	1.318	1.441	1.224	1.185	1.411
OTU 241	1.478	1.256	1.737	1.447	1.485	1.344	1.614	1.486	1.504	1.248
OTU 243	1.303	1.284	1.348	1.302	1.160	1.256	1.389	1.438	1.165	1.218
OTU 244	1.308	1.221	1.369	1.446	1.222	1.335	1.464	1.402	1.285	1.287
OTU 247	1.552	1.424	1.619	1.361	1.388	1.357	1.586	1.434	1.177	1.442
OTU 251	1.315	1.216	1.366	1.215	1.155	1.247	1.257	1.278	1.179	1.230
OTU 252	1.401	1.797	1.846	1.607	1.607	1.631	1.626	1.771	1.612	1.748
OTU 254	1.282	1.311	1.273	1.258	1.311	1.196	1.440	1.319	1.355	1.355
OTU 256	1.233	1.113	1.074	1.032	0.910	1.030	1.062	1.296	1.150	1.286
OTU 259	1.205	1.325	1.773	1.543	1.535	1.466	1.636	1.465	1.409	1.244
OTU 260	1.467	1.319	1.945	1.344	1.365	1.381	1.573	1.355	1.329	1.285
OTU 262	1.122	1.156	1.443	1.219	0.974	1.243	1.437	1.140	1.136	1.260
OTU 264	1.209	1.032	1.234	1.235	0.880	1.205	1.304	1.229	1.037	1.264
OTU 266	1.182	1.257	1.241	1.206	1.121	1.209	1.341	1.222	1.151	1.200
OTU 268	1.234	0.991	1.228	1.215	1.208	1.184	1.344	1.293	0.109	1.285
OTU 270	1.363	1.001	1.393	1.130	1.063	1.111	1.342	1.156	0.960	1.392
OTU 272	1.395	1.316	1.503	1.323	1.408	1.272	1.613	1.259	1.189	1.243
OTU 273	1.124	0.938	1.266	1.188	0.900	1.155	1.343	1.267	0.916	1.277
OTU 276	1.323	1.290	1.435	1.202	0.971	1.208	1.489	1.419	0.969	1.645
OTU 278	1.310	1.260	1.254	1.054	1.299	1.110	1.454	1.294	0.922	1.460
OTU 280	1.283	1.116	1.158	1.155	1.183	1.006	1.305	1.216	1.164	1.164
OTU 282	1.567	1.236	1.298	1.159	1.322	1.151	1.499	1.126	0.966	1.339
OTU 283	1.566	1.406	1.407	1.578	1.309	1.483	1.724	1.489	1.674	1.674
OTU 286	1.236	1.160	1.374	1.243	1.209	1.315	1.174	1.156	1.181	1.181
OTU 288	1.408	1.221	1.498	1.347	1.256	1.297	1.589	1.440	1.286	1.259
OTU 289	1.260	1.237	1.467	1.298	1.819	1.121	1.160	1.317	1.141	1.327

PLEASE TURN THE PAGE

	OTU 186	OTU 187	OTU 189	OTU 191	OTU 194	OTU 196	OTU 197	OTU 199	OTU 200	OTU 202
OTU 292	1.230	1.035	1.328	1.216	0.992	1.002	1.358	1.253	1.088	1.270
OTU 295	1.194	1.035	1.139	1.200	0.971	0.974	1.249	1.278	1.167	1.253
OTU 296	1.564	1.220	1.595	1.182	1.208	0.966	1.838	1.209	1.104	1.686
OTU 297	1.556	1.235	1.646	1.310	1.223	1.177	1.529	1.306	1.240	1.638
OTU 298	1.340	1.351	1.607	1.506	1.396	1.413	1.658	1.272	1.198	1.513
OTU 301	1.221	1.325	1.606	1.549	1.328	1.354	1.409	1.405	1.585	1.601
OTU 305	1.055	1.313	1.380	1.432	1.282	1.305	1.259	1.468	1.471	1.621
OTU 306	1.419	1.413	1.427	1.380	1.322	1.206	1.555	1.400	1.406	1.681
OTU 308	1.362	1.464	1.329	1.327	1.430	1.182	1.365	1.365	1.423	1.718
OTU 310	1.474	1.348	1.474	1.305	1.231	1.256	1.422	1.459	1.323	1.752
OTU 311	1.247	1.362	1.338	1.341	1.256	1.083	1.312	1.370	1.387	1.430
OTU 313	1.610	1.474	1.611	1.376	1.472	1.301	1.652	1.441	1.425	1.769
OTU 314	1.477	1.297	1.368	1.153	1.125	1.112	1.411	1.202	1.093	1.563
OTU 316	1.303	1.169	1.055	0.973	1.027	0.903	1.209	1.123	1.204	1.477
OTU 322	1.250	1.222	1.182	1.289	1.013	1.222	1.309	1.419	1.418	1.403
OTU 324	1.418	1.199	1.383	1.367	1.287	1.190	1.433	1.174	1.392	1.305
OTU 326	1.324	1.197	1.262	1.109	1.112	0.939	1.266	1.120	1.258	1.535
OTU 327	1.271	1.213	1.242	1.340	1.291	0.975	1.393	1.354	1.309	1.483
OTU 330	1.390	1.233	1.417	1.313	1.286	1.186	1.417	1.095	1.397	1.436
OTU 332	1.361	1.348	1.310	1.395	1.387	1.255	1.460	1.269	1.580	1.395
OTU 333	1.374	1.276	1.407	1.441	1.196	0.990	1.308	1.266	1.183	1.631
OTU 336	1.283	1.549	1.403	1.484	1.553	1.387	1.476	1.475	1.574	1.691
OTU 337	1.554	1.385	1.422	1.242	1.307	1.156	1.616	1.405	1.383	1.744
OTU 339	1.496	1.377	1.489	1.240	1.305	1.133	1.480	1.302	1.399	1.644
OTU 340	1.330	1.340	1.319	1.313	1.290	1.234	1.477	1.270	1.466	1.601
OTU 341	1.198	1.198	1.194	1.104	1.106	0.963	1.180	1.138	1.225	1.403
OTU 342	1.369	1.318	1.468	1.302	1.308	1.121	1.501	1.359	1.247	1.610
OTU 343	1.379	1.461	1.459	1.367	1.313	1.251	1.565	1.419	1.347	1.700
OTU 344	1.610	1.656	1.584	1.585	1.634	1.538	1.777	1.609	1.638	1.938
OTU 345	1.324	1.407	1.369	1.284	1.267	1.254	1.405	1.433	1.414	1.624

IDENTIFICATION:

PAGE 22

COMPUTE DISTANCE

	OTU 206	OTU 209	OTU 210	OTU 212	OTU 213	OTU 216	OTU 218	OTU 220	OTU 227	OTU 229
OTU 206	0.000									
OTU 209	1.030	0.000								
OTU 210	1.735	0.893	0.000							
OTU 212	0.898	1.285	1.255							
OTU 213	0.897	1.315	1.365	0.000						
OTU 216	1.279	1.630	1.402	1.168	0.000					
OTU 218	1.114	1.401	1.426	1.236	0.776	0.947	0.000			
OTU 220	1.501	1.713	1.728	1.463	1.625	1.993	2.081	0.000		
OTU 227	0.736	1.008	1.261	1.154	1.023	1.618	1.460	1.362	0.000	
OTU 229	1.006	1.278	1.305	1.115	1.353	1.529	1.469	1.181	1.025	0.000
OTU 231	1.116	1.296	1.362	1.223	1.529	1.679	1.724	1.211	0.513	0.924
OTU 233	1.486	1.487	1.652	1.538	1.918	2.128	2.057	1.957	1.193	1.159
OTU 235	1.225	1.238	1.058	1.337	1.662	1.812	1.716	1.234	1.009	0.883
OTU 236	1.461	1.466	1.423	1.540	1.769	1.990	1.920	1.261	1.193	1.033
OTU 239	1.207	1.099	1.265	1.328	1.636	1.964	1.781	1.292	0.939	1.059
OTU 241	1.583	1.329	1.523	1.797	1.805	2.172	1.970	1.788	1.393	1.416
OTU 243	1.119	1.415	1.543	1.803	1.527	1.751	1.795	1.301	1.062	1.052
OTU 244	1.169	1.383	1.562	1.329	1.532	1.862	1.829	1.054	1.082	0.960
OTU 247	1.421	1.549	1.529	1.505	1.761	1.957	1.972	1.546	1.284	1.140
OTU 249	1.184	1.322	1.317	1.224	1.596	1.791	1.880	1.207	1.060	1.033
OTU 252	1.653	1.756	1.804	1.852	2.000	2.124	2.091	1.950	1.461	1.523
OTU 254	1.114	1.051	1.495	1.234	1.344	1.639	1.652	1.365	0.934	0.889
OTU 256	1.033	1.202	1.293	1.027	1.229	1.591	1.659	1.266	0.827	0.939
OTU 259	1.568	1.595	1.669	1.748	1.767	2.065	1.926	1.572	1.435	1.225
OTU 260	1.439	1.580	1.540	1.547	1.672	1.855	1.884	1.334	1.303	1.190
OTU 262	1.212	1.327	1.337	1.405	1.378	1.827	1.622	1.480	1.192	1.093
OTU 264	0.959	1.192	1.294	1.091	1.262	1.600	1.482	1.386	1.116	1.072
OTU 266	0.957	1.159	1.264	1.008	1.133	1.501	1.318	1.218	0.988	1.007
OTU 268	1.049	1.354	1.365	1.331	1.813	1.774	1.694	1.153	0.939	1.005
OTU 270	1.771	1.274	1.255	1.269	1.424	1.650	1.568	1.248	1.017	1.178
OTU 272	1.110	1.311	1.495	1.415	1.711	1.846	1.729	1.525	1.011	1.294
OTU 273	1.052	1.369	1.334	1.107	1.440	1.589	1.595	1.092	1.123	0.948
OTU 276	1.225	1.570	1.605	1.288	1.658	1.810	1.810	1.148	0.200	0.839
OTU 278	1.280	1.341	1.389	1.460	1.737	1.892	1.880	1.248	0.990	1.178
OTU 280	1.093	1.197	1.216	1.285	1.318	1.662	1.550	1.402	0.964	0.961
OTU 282	1.212	1.182	1.210	1.493	1.341	1.961	1.794	1.322	1.120	1.172
OTU 283	1.473	1.692	1.910	1.495	1.87	2.114	1.989	1.471	1.471	1.363
OTU 286	1.137	1.179	1.402	1.208	1.299	1.810	1.773	1.075	0.997	0.972
OTU 289	1.237	1.339	1.559	1.464	1.585	1.862	1.754	1.089	0.945	0.945
OTU 289	1.158	1.181	1.394	1.505	1.799	1.638	1.551	1.086	1.084	1.084
OTU 292	0.870	1.261	1.351	0.942	1.163	1.354	1.344	1.396	1.091	1.050
OTU 295	0.457	1.012	0.873	0.873	1.465	1.375	1.485	0.805	0.947	0.947
OTU 296	1.227	1.307	1.141	1.239	1.058	1.196	1.099	1.986	1.519	1.520
OTU 297	1.139	1.379	1.413	1.220	0.929	1.206	1.165	1.083	1.571	1.595
OTU 298	1.201	1.319	1.348	1.298	0.814	1.375	0.921	1.986	1.527	1.560
OTU 301	1.162	1.493	1.349	1.245	0.789	1.090	0.763	1.982	1.557	1.551
OTU 305	1.075	1.599	1.580	1.256	0.688	1.150	0.916	2.071	1.610	1.644
OTU 306	1.038	1.610	1.601	1.251	0.911	1.171	0.829	2.190	1.595	1.588
OTU 308	1.360	1.578	1.323	1.375	1.112	1.121	0.997	2.177	1.613	1.645
OTU 310	1.192	1.492	1.423	1.356	0.874	1.208	0.921	2.048	1.608	1.635

PI FASE TURN THE PAGE

CONTINUATION OF
COMPUTE DISTANCE

PAGE 23

	OTU 206	OTU 209	OTU 210	OTU 212	OTU 213	OTU 216	OTU 218	OTU 220	OTU 227	OTU 229
OTU 311	1.037	1.446	1.404	1.221	0.766	1.275	1.001	1.965	1.422	1.471
OTU 313	1.449	1.483	1.558	1.577	1.061	1.288	1.100	2.178	1.781	1.775
OTU 314	1.129	1.347	1.292	1.189	1.208	1.312	1.204	2.006	1.435	1.501
OTU 316	1.095	1.237	1.182	1.192	0.943	1.073	0.881	1.940	1.364	1.362
OTU 322	1.054	1.380	1.389	1.028	0.872	1.009	0.954	1.846	1.513	1.441
OTU 324	1.174	1.391	1.375	1.158	0.883	1.066	0.975	1.851	1.566	1.555
OTU 326	1.068	1.205	1.155	1.158	0.780	0.985	0.762	1.998	1.352	1.375
OTU 327	1.191	1.484	1.350	1.000	1.025	1.001	1.185	1.725	1.453	1.327
OTU 330	1.188	1.223	1.280	1.276	0.737	1.199	0.878	1.888	1.495	1.525
OTU 332	1.150	1.411	1.486	1.405	0.643	1.139	0.928	2.030	1.503	1.554
OTU 333	1.159	1.370	1.262	1.195	0.902	1.058	0.912	1.983	1.437	1.430
OTU 336	1.429	1.737	1.593	1.454	1.105	1.313	1.024	2.240	1.699	1.664
OTU 337	1.284	1.618	1.530	1.469	0.957	1.156	1.030	2.169	1.679	1.589
OTU 339	1.291	1.525	1.393	1.344	0.816	0.952	0.949	2.032	1.656	1.551
OTU 340	1.115	1.445	1.449	1.344	0.704	1.002	0.908	1.950	1.492	1.505
OTU 341	1.000	1.322	1.239	0.953	0.759	0.842	0.850	1.814	1.379	1.367
OTU 342	1.069	1.540	1.525	1.340	0.913	1.213	0.957	2.056	1.511	1.464
OTU 343	1.208	1.620	1.576	1.326	0.881	1.197	0.847	2.142	1.614	1.561
OTU 344	1.509	2.010	1.887	1.544	1.375	1.533	1.410	2.285	1.912	1.934
OTU 345	1.163	1.592	1.536	1.378	0.872	1.069	0.954	2.032	1.694	1.554

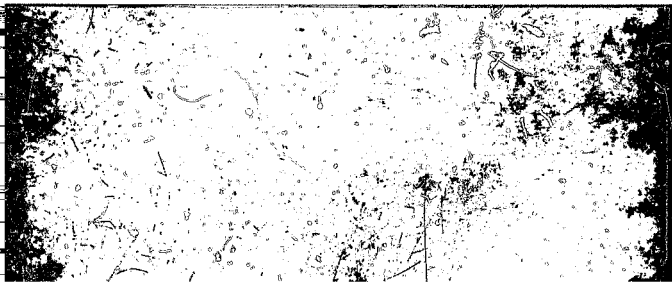
COMPUTE DISTANCE

	OTU 231	OTU 234	OTU 235	OTU 236	OTU 239	OTU 241	OTU 243	OTU 244	OTU 247	OTU 251
OTU 231	0.000									
OTU 234	1.098	0.000								
OTU 235	0.983	1.109								
OTU 236	0.959	1.087	0.000							
OTU 239	1.037	1.041	0.910							
OTU 241	1.344	1.343	1.226	0.066						
OTU 243	0.770	1.118	0.933	0.995	0.995	1.297	0.000			
OTU 244	0.865	0.889	0.951	0.931	1.030	1.244	0.812	0.000		
OTU 247	1.123	1.263	1.079	0.960	1.081	1.232	0.761	1.048	0.000	
OTU 251	0.749	1.050	1.088	0.847	1.076	1.295	0.882	0.938	1.015	0.000
OTU 252	1.458	1.619	1.666	1.641	1.519	1.765	1.090	1.559	1.671	1.466
OTU 254	1.614	1.317	1.143	1.100	1.236	1.496	1.008	1.087	1.104	0.927
OTU 256	0.690	1.167	1.107	1.028	1.118	1.395	0.949	0.953	1.230	0.818
OTU 259	1.173	1.307	1.279	1.150	1.434	1.769	1.121	1.211	1.276	1.217
OTU 260	1.146	1.267	1.183	0.804	1.250	1.300	1.155	1.085	1.070	0.914
OTU 262	1.084	1.185	1.209	1.030	1.172	1.292	1.143	0.982	1.100	1.090
OTU 264	0.911	1.261	1.037	1.079	0.987	1.347	0.804	0.904	0.961	1.034
OTU 266	0.978	1.227	1.043	1.002	1.181	1.236	0.937	0.962	1.165	0.954
OTU 268	0.933	1.192	1.270	1.049	1.086	1.394	1.063	0.777	1.047	0.949
OTU 270	1.078	1.370	1.205	1.229	1.115	1.388	1.200	1.085	1.305	1.171
OTU 272	1.169	1.392	1.216	1.164	1.162	1.480	1.098	1.135	1.122	1.017
OTU 273	0.690	1.255	0.948	1.002	1.061	1.499	0.892	0.860	0.947	0.849
OTU 276	0.935	1.445	0.937	1.105	1.222	1.650	1.030	1.135	1.121	1.093
OTU 278	1.147	1.411	1.091	1.104	1.203	1.440	1.177	1.216	1.121	1.088
OTU 280	0.830	1.141	1.103	0.884	1.005	1.082	0.968	0.862	1.071	0.946
OTU 282	1.114	1.308	1.199	1.043	0.990	1.288	1.122	1.115	1.039	1.034
OTU 283	1.202	1.486	1.274	1.315	1.425	1.629	1.111	1.065	1.355	1.268
OTU 286	0.874	0.953	0.977	1.000	1.062	1.233	0.921	0.668	0.636	0.851
OTU 288	1.057	1.308	1.119	1.051	1.225	1.411	1.149	0.955	1.162	1.039
OTU 289	0.992	1.174	1.034	1.039	1.091	1.235	1.097	1.018	1.209	1.032
OTU 292	1.021	1.430	1.127	1.318	1.182	1.516	1.002	1.053	1.293	1.152
OTU 295	0.904	1.241	1.129	1.213	1.023	1.604	0.962	0.967	1.232	0.981
OTU 296	1.638	2.035	1.701	1.896	1.629	1.869	1.700	1.773	1.812	1.793
OTU 297	1.587	2.008	1.759	1.911	1.683	1.911	1.673	1.694	1.861	1.703
OTU 298	1.790	1.916	1.696	1.915	1.637	1.809	1.707	1.644	1.925	1.877
OTU 301	1.790	2.037	1.789	2.000	1.819	1.963	1.753	1.708	2.108	1.937
OTU 305	1.741	2.168	1.844	1.969	1.812	2.046	1.749	1.650	1.989	1.886
OTU 306	1.817	2.169	1.838	2.026	1.817	2.071	1.792	1.920	1.921	1.904
OTU 308	1.623	2.195	1.930	1.969	1.809	2.099	1.948	1.942	2.042	1.895
OTU 310	1.709	2.206	1.855	2.021	1.869	2.096	1.817	1.887	2.009	1.897
OTU 311	1.549	1.935	1.737	1.810	1.777	1.844	1.596	1.594	1.840	1.690
OTU 313	2.305	2.327	1.975	2.013	2.003	2.085	2.006	2.005	2.005	2.005
OTU 318	1.540	1.901	1.596	1.755	1.492	1.799	1.432	1.740	1.547	1.649
OTU 316	1.508	1.913	1.700	1.684	1.646	1.761	1.598	1.636	1.716	1.655
OTU 322	1.436	1.870	1.695	1.784	1.699	1.909	1.557	1.509	1.861	1.680
OTU 324	1.620	1.995	1.758	1.777	1.737	1.841	1.649	1.605	1.878	1.732
OTU 326	1.542	1.937	1.678	1.784	1.667	1.854	1.679	1.709	1.802	1.702
OTU 327	1.417	1.760	1.684	1.711	1.743	1.843	1.468	1.633	1.629	1.688
OTU 330	1.663	1.972	1.736	1.814	1.694	1.876	1.698	1.712	1.844	1.781
OTU 332	1.670	1.999	1.833	1.845	1.857	1.952	1.723	1.679	1.942	1.816

PLEASE TURN THE PAGE

COMPUTE DISTANCE

	OTU 231	OTU 234	OTU 235	OTU 236	OTU 239	OTU 241	OTU 243	OTU 244	OTU 247	OTU 251
OTU 333	1.583	1.994	1.723	1.833	1.715	1.840	1.658	1.744	1.787	1.639
OTU 335	1.953	2.215	1.971	2.057	1.955	2.191	1.894	2.051	1.963	1.986
OTU 337	1.752	2.222	1.907	1.913	1.929	1.982	1.834	1.869	1.913	1.878
OTU 339	1.748	2.148	1.855	1.918	1.935	1.977	1.793	1.831	1.878	1.827
OTU 340	1.585	2.008	1.776	1.795	1.832	1.936	1.645	1.610	1.856	1.755
OTU 341	1.491	1.936	1.650	1.764	1.681	1.957	1.546	1.559	1.730	1.596
OTU 342	1.666	1.957	1.706	1.879	1.738	1.867	1.624	1.785	1.780	1.766
OTU 343	1.751	2.116	1.775	1.955	1.868	2.011	1.735	1.900	1.881	1.904
OTU 344	1.973	2.443	2.212	2.250	2.242	2.513	2.017	2.209	2.216	2.078
OTU 345	1.734	2.195	1.834	1.926	2.007	2.009	1.795	1.820	1.924	1.785



COMPUTE DISTANCE

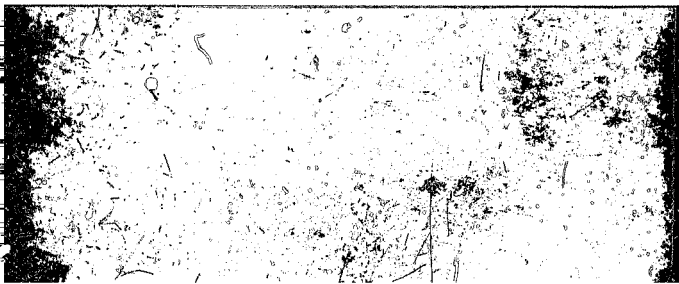
	OTU 252	OTU 254	OTU 256	OTU 259	OTU 260	OTU 262	OTU 264	OTU 266	OTU 268	OTU 270
OTU 252	0.000									
OTU 254	1.614	0.000								
OTU 256	1.477	0.967								
OTU 259	1.691	1.314	1.457	0.000						
OTU 260	1.709	1.129	1.208	1.205						
OTU 262	1.575	1.19	1.199	0.900	1.126	0.000				
OTU 264	1.646	1.195	1.003	1.345	1.197	0.929	0.000			
OTU 266	1.545	0.862	0.992	1.084	1.120	1.062	1.016	0.000		
OTU 268	1.530	1.033	0.968	1.200	1.116	0.950	0.778	1.013	0.000	
OTU 270	1.621	1.401	1.050	1.337	1.204	1.171	1.049	1.124	0.957	0.000
OTU 272	1.566	0.919	1.380	1.314	1.198	0.932	1.181	1.013	1.068	1.328
OTU 273	1.618	1.080	0.934	1.268	0.994	0.959	0.744	1.036	0.960	0.979
OTU 276	1.679	1.179	1.008	1.035	1.224	1.297	1.046	1.081	1.160	1.178
OTU 278	1.536	1.258	1.179	1.216	1.136	1.180	1.287	1.199	1.061	1.156
OTU 280	1.541	0.936	1.020	1.096	1.053	0.808	1.050	0.907	0.859	1.089
OTU 282	1.574	1.189	1.189	1.148	1.116	0.898	1.092	1.066	1.034	1.080
OTU 283	1.719	1.519	1.253	1.677	1.382	1.605	1.296	1.288	1.288	1.299
OTU 286	1.506	1.000	0.946	1.028	1.150	0.837	1.049	0.975	0.863	1.118
OTU 288	1.503	0.917	1.100	1.019	0.931	1.020	1.127	0.860	0.939	1.129
OTU 289	1.487	1.157	1.071	1.102	1.221	0.948	1.078	1.077	1.120	1.187
OTU 292	1.529	1.013	1.012	1.475	1.226	1.140	0.908	1.024	1.086	1.072
OTU 295	1.503	0.928	0.774	1.520	1.241	1.173	0.923	1.013	0.962	1.163
OTU 296	1.970	1.736	1.558	1.901	1.809	1.580	1.433	1.665	1.626	1.316
OTU 297	1.989	1.781	1.582	1.921	1.719	1.553	1.397	1.612	1.582	1.308
OTU 298	2.092	1.762	1.722	1.847	1.704	1.522	1.332	1.559	1.691	1.482
OTU 301	2.101	1.854	1.688	1.982	1.962	1.647	1.501	1.667	1.684	1.557
OTU 305	2.194	1.824	1.711	2.193	1.876	1.770	1.464	1.652	1.672	1.559
OTU 306	2.505	1.717	1.737	2.080	1.886	1.744	1.469	1.603	1.711	1.647
OTU 308	2.131	1.792	1.729	1.938	1.969	1.668	1.561	1.706	1.697	1.632
OTU 310	2.074	1.894	1.689	2.029	1.750	1.634	1.449	1.689	1.675	1.475
OTU 311	1.921	1.631	1.506	1.766	1.790	1.856	1.377	1.450	1.513	1.489
OTU 313	2.229	1.915	1.868	2.002	1.881	1.675	1.609	1.749	1.764	1.573
OTU 314	2.025	1.704	1.804	2.008	1.724	1.593	1.201	1.617	1.575	1.481
OTU 316	1.852	1.596	1.358	1.738	1.687	1.409	1.288	1.491	1.410	1.289
OTU 322	2.078	1.667	1.390	1.986	1.761	1.251	1.268	1.347	1.567	1.412
OTU 324	2.131	1.703	1.562	1.905	1.718	1.603	1.350	1.511	1.575	1.404
OTU 326	1.916	1.569	1.485	1.793	1.722	1.408	1.349	1.532	1.481	1.388
OTU 327	1.683	1.487	1.410	1.716	1.702	1.421	1.289	1.563	1.344	1.378
OTU 330	2.029	1.714	1.630	1.774	1.774	1.379	1.351	1.530	1.545	1.481
OTU 332	2.106	1.620	1.630	1.812	1.753	1.464	1.377	1.515	1.513	1.267
OTU 333	1.993	1.594	1.538	1.799	1.680	1.499	1.404	1.492	1.549	1.366
OTU 336	2.290	1.815	1.674	2.031	2.005	1.693	1.601	1.701	1.702	1.604
OTU 337	2.223	1.742	1.702	1.913	1.816	1.575	1.549	1.668	1.643	1.607
OTU 339	2.135	1.742	1.689	1.942	1.739	1.680	1.525	1.696	1.647	1.496
OTU 340	2.039	1.601	1.578	1.812	1.716	1.481	1.319	1.515	1.499	1.409
OTU 341	1.997	1.356	1.444	1.856	1.700	1.453	1.319	1.577	1.441	1.375
OTU 342	2.064	1.611	1.669	1.847	1.703	1.552	1.498	1.587	1.625	1.565
OTU 343	2.156	1.741	1.760	1.925	1.692	1.577	1.473	1.565	1.735	1.611
OTU 344	2.428	2.009	1.938	2.411	2.115	1.940	1.846	1.963	1.944	1.926
OTU 345	2.194	1.746	1.669	1.838	1.769	1.603	1.456	1.548	1.675	1.570

COMPUTE DISTANCE

	OTU 272	OTU 273	OTU 276	OTU 278	OTU 280	OTU 282	OTU 283	OTU 286	OTU 288	OTU 289
OTU 272	0.000									
OTU 273	1.119	0.000								
OTU 276	1.390	0.903								
OTU 278	1.162	1.072	1.101							
OTU 280	0.808	1.044	1.287	1.074						
OTU 282	0.965	1.053	1.245	0.980	0.000					
OTU 283	1.632	1.238	1.252	1.588	1.441	1.604	0.000			
OTU 286	0.902	0.911	1.171	0.921	0.860	0.958	1.117	0.000		
OTU 288	1.095	0.925	0.964	1.108	0.972	1.069	1.403	1.004	0.000	
OTU 289	1.162	0.949	1.265	0.968	0.803	0.886	1.623	0.979	1.099	0.000
OTU 292	1.009	0.996	1.037	1.383	0.957	1.210	1.311	1.070	1.022	1.156
OTU 295	1.077	0.946	1.018	1.196	0.986	1.224	1.291	0.954	0.983	1.128
OTU 296	1.653	1.495	1.633	1.626	1.464	1.459	1.960	1.700	1.725	1.945
OTU 297	1.647	1.488	1.610	1.721	1.499	1.568	1.783	1.673	1.657	1.636
OTU 298	1.597	1.626	1.885	1.982	1.486	1.661	1.889	1.631	1.729	1.696
OTU 301	1.521	1.591	1.630	1.925	1.624	1.913	1.997	1.766	1.790	1.668
OTU 305	1.721	1.594	1.793	1.936	1.632	1.809	1.856	1.921	1.810	1.799
OTU 306	1.646	1.626	1.725	1.834	1.641	1.759	2.035	1.905	1.768	1.767
OTU 308	1.781	1.652	1.893	1.839	1.669	1.776	2.196	1.915	1.876	1.751
OTU 310	1.807	1.587	1.700	1.763	1.697	1.724	1.997	1.857	1.774	1.698
OTU 311	1.551	1.671	1.641	1.629	1.342	1.258	1.895	1.598	1.545	1.367
OTU 313	1.602	1.654	1.818	1.818	1.705	1.669	2.080	1.930	1.790	1.759
OTU 314	1.573	1.611	1.533	1.647	1.542	1.502	1.757	1.730	1.799	1.611
OTU 316	1.634	1.826	1.580	1.625	1.379	1.495	1.793	1.599	1.609	1.511
OTU 322	1.678	1.410	1.650	1.868	1.052	1.752	1.509	1.645	1.739	1.624
OTU 324	1.698	1.469	1.777	1.853	1.469	1.667	1.612	1.650	1.705	1.615
OTU 326	1.542	1.502	1.636	1.691	1.384	1.547	1.939	1.633	1.597	1.516
OTU 327	1.534	1.384	1.607	1.687	1.298	1.604	1.739	1.485	1.626	1.535
OTU 330	1.578	1.528	1.760	1.814	1.437	1.573	1.920	1.650	1.685	1.594
OTU 332	1.571	1.638	1.335	1.862	1.414	1.553	1.994	1.653	1.668	1.612
OTU 333	1.560	1.554	1.606	1.651	1.405	1.470	1.932	1.691	1.591	1.565
OTU 336	1.773	1.697	1.898	1.925	1.760	1.851	2.263	1.990	1.912	1.790
OTU 337	1.708	1.624	1.729	1.816	1.560	1.649	2.086	1.837	1.701	1.717
OTU 339	1.734	1.609	1.740	1.802	1.563	1.668	1.982	1.773	1.750	1.733
OTU 340	1.499	1.542	1.774	1.803	1.401	1.691	1.881	1.633	1.665	1.646
OTU 341	1.498	1.405	1.548	1.425	1.413	1.615	1.502	1.657	1.588	1.588
OTU 342	1.558	1.598	1.640	1.720	1.459	1.543	1.962	1.766	1.624	1.564
OTU 343	1.635	1.589	1.718	1.825	1.572	1.715	2.075	1.895	1.759	1.702
OTU 344	1.650	1.768	1.946	2.077	1.571	2.077	2.153	2.005	2.107	1.957
OTU 345	1.773	1.518	1.697	1.797	1.615	1.761	1.915	1.781	1.673	1.657

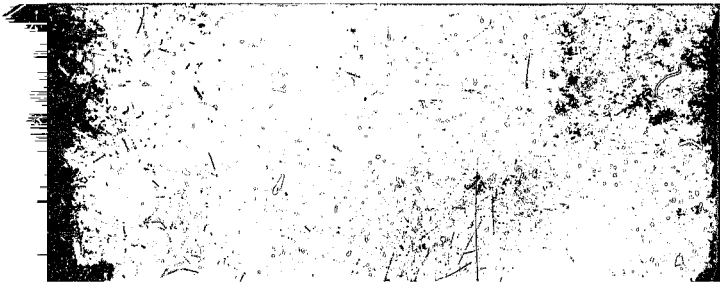
COMPUTE DISTANCE

	OTU 292	OTU 295	OTU 296	OTU 297	OTU 298	OTU 301	OTU 305	OTU 306	OTU 308	OTU 310
OTU 292	0.000									
OTU 295	0.649	0.000								
OTU 296	1.163	1.065	0.000							
OTU 297	1.098	1.007	0.725	0.000						
OTU 298	1.205	1.081	1.139	1.004	0.000					
OTU 301	1.305	1.064	1.180	1.103	0.289	0.000				
OTU 305	1.305	1.082	1.111	0.954	1.121	1.001	0.000			
OTU 306	1.308	1.063	1.105	1.116	1.184	1.103	0.620	0.000		
OTU 308	1.557	1.678	1.122	1.351	1.430	1.134	1.130	1.080	0.000	
OTU 310	1.354	1.559	0.928	0.809	1.201	0.900	0.857	0.990	0.940	0.000
OTU 311	1.197	1.356	1.195	1.004	1.122	0.944	0.955	1.010	1.178	0.856
OTU 313	1.467	1.746	0.974	1.058	1.356	1.287	1.066	1.105	1.022	0.832
OTU 316	1.296	1.027	0.966	1.089	1.397	1.044	0.974	0.973	1.128	1.108
OTU 318	1.321	1.350	0.977	1.127	1.236	1.129	0.982	1.066	0.847	0.942
OTU 322	1.104	1.291	1.104	0.974	1.087	0.958	0.847	1.100	1.238	0.928
OTU 324	1.195	1.377	1.072	0.962	0.955	1.015	0.905	1.183	1.320	1.058
OTU 326	1.158	1.387	0.773	0.908	1.011	0.900	0.979	0.860	0.806	0.802
OTU 327	1.178	1.232	1.063	1.175	1.296	1.139	1.228	1.323	1.116	1.237
OTU 330	1.209	1.032	0.908	0.924	0.797	0.833	1.065	1.143	0.969	0.913
OTU 332	1.258	1.001	1.211	1.172	1.079	0.954	1.170	1.197	1.175	1.102
OTU 333	1.201	1.046	0.760	0.792	1.124	1.102	0.937	0.887	0.826	0.729
OTU 336	1.624	1.700	1.017	1.079	1.067	1.213	1.091	0.928	0.757	1.050
OTU 337	1.428	1.593	1.084	1.141	1.308	1.264	1.037	0.965	1.010	0.956
OTU 339	1.272	1.561	0.818	0.846	1.132	1.134	1.037	1.045	1.062	0.871
OTU 340	1.166	1.410	1.166	1.12	0.934	0.902	1.079	1.116	1.162	1.089
OTU 341	1.107	1.294	0.921	0.864	1.095	0.911	0.861	0.899	0.827	0.777
OTU 342	1.260	1.515	0.984	0.949	1.169	1.170	0.761	0.699	1.025	0.954
OTU 343	1.379	1.600	1.060	1.066	1.136	1.054	0.834	0.766	0.816	0.802
OTU 344	1.653	1.775	1.500	1.427	1.695	1.469	1.109	1.124	1.210	1.170
OTU 345	1.363	1.566	1.260	1.106	1.288	1.070	0.969	0.987	1.101	0.829



COMPUTE DISTANCE

	OTU 311	OTU 313	OTU 314	OTU 316	OTU 322	OTU 324	OTU 326	OTU 327	OTU 330	OTU 332
OTU 311	0.000									
OTU 313	1.086	0.000								
OTU 314	1.295	1.261	0.000							
OTU 316	0.978	1.010	0.966	0.000						
OTU 322	1.023	1.249	1.092	0.963	0.000					
OTU 324	1.085	1.093	1.870	1.021	0.770	0.000				
OTU 326	0.904	0.960	1.057	0.597	0.917	0.971	0.000			
OTU 327	1.177	1.412	1.204	0.963	1.019	1.067	0.955	0.000		
OTU 330	1.010	1.291	1.211	0.931	0.990	0.887	0.592	1.069	0.000	
OTU 332	0.948	1.057	1.463	1.025	1.074	0.956	0.703	1.188	0.696	0.000
OTU 333	0.900	0.798	0.985	0.884	1.066	1.082	0.671	1.094	0.890	1.052
OTU 336	1.155	1.225	1.234	1.143	1.306	1.454	1.081	1.413	1.184	1.316
OTU 337	0.963	0.776	1.217	0.791	1.154	1.133	0.798	1.234	0.998	0.914
OTU 339	1.015	0.734	1.162	0.924	1.012	0.982	0.708	1.133	0.863	0.851
OTU 340	0.976	1.181	1.371	1.024	1.054	0.975	0.818	1.068	0.825	0.666
OTU 341	0.882	1.002	0.930	0.852	0.812	0.981	0.613	0.890	0.772	0.930
OTU 342	0.863	0.969	0.935	1.051	1.099	1.170	0.695	1.213	1.070	1.184
OTU 343	0.895	0.946	0.996	0.954	1.004	1.196	0.806	1.182	0.962	1.096
OTU 344	1.306	1.201	1.168	1.349	1.354	1.532	1.288	1.498	1.417	1.442
OTU 345	0.678	0.598	1.333	0.957	1.033	1.065	0.599	1.324	1.101	1.065

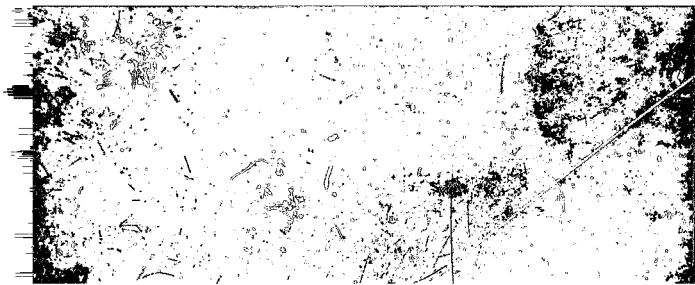


IDENTIFICATION:

PAGE 70

COMPUTE DISTANCE

	OTU 333	OTU 336	OTU 337	OTU 339	OTU 340	OTU 341	OTU 342	OTU 343	OTU 344	OTU 345
OTU 333	0.000									
OTU 336	1.060	0.000								
OTU 337	0.810	1.178	0.000							
OTU 339	0.692	1.268	0.726	0.000						
OTU 340	0.999	1.328	0.950	0.881	0.000					
OTU 341	0.667	1.005	0.929	0.739	0.817	0.000				
OTU 342	0.695	0.946	0.947	0.951	1.168	0.859	0.000			
OTU 343	0.765	0.785	0.887	0.893	1.117	0.795	0.593	0.000		
OTU 344	1.145	1.191	1.067	1.281	1.334	1.045	1.160	1.092	0.000	
OTU 345	0.889	1.094	0.821	0.886	0.965	0.916	1.011	0.928	1.265	0.000



APPENDIX IIB

Matrix of Correlation Values for
150 Female OTUs

IDENTIFICATION:

PAGE 1

COMPUTE CORRELATIONS

OTU 039	OTU 042	OTU 043	OTU 045	OTU 047	OTU 049	OTU 050	OTU 053	OTU 055	OTU 057
OTU 039	1.000								
OTU 042	-0.346	1.000							
OTU 043	0.112	0.049	1.000						
OTU 045	-0.138	0.118	0.160	1.000					
OTU 047	-0.084	0.083	0.086	0.506	1.000				
OTU 049	0.051	-0.225	0.129	0.175	0.191	1.000			
OTU 050	-0.341	0.323	-0.137	0.261	0.113	0.098	1.000		
OTU 053	0.047	-0.044	-0.119	0.402	0.350	0.451	-0.002	1.000	
OTU 055	-0.168	0.328	-0.228	0.361	0.336	0.223	0.157	0.336	1.000
OTU 057	-0.255	0.327	-0.035	0.200	0.200	-0.010	0.202	0.177	0.343
OTU 059	-0.300	0.293	-0.334	0.304	0.136	-0.113	0.061	0.121	0.423
OTU 060	-0.217	0.011	-0.072	0.194	0.021	-0.061	0.147	0.004	0.070
OTU 061	-0.122	-0.213	-0.171	-0.079	0.003	0.054	0.013	0.125	-0.121
OTU 064	0.185	-0.001	0.133	0.185	0.158	0.024	-0.019	-0.006	0.428
OTU 066	-0.290	0.326	-0.030	0.519	0.352	-0.006	0.442	0.166	0.173
OTU 068	-0.044	-0.062	0.134	0.189	0.270	0.381	0.284	0.382	0.199
OTU 070	0.162	-0.241	-0.415	0.198	-0.207	0.142	0.067	0.213	-0.054
OTU 071	-0.055	-0.184	-0.032	0.326	0.084	-0.022	-0.044	0.262	0.295
OTU 076	0.217	0.025	0.162	0.034	-0.114	-0.181	0.032	0.039	0.045
OTU 077	0.112	-0.229	0.206	-0.112	0.077	-0.289	-0.106	-0.222	-0.617
OTU 078	-0.014	-0.031	0.095	-0.013	0.376	-0.107	0.071	-0.040	-0.243
OTU 080	0.246	0.072	0.314	0.165	-0.102	-0.254	-0.126	-0.068	-0.201
OTU 083	0.089	0.086	-0.012	0.362	0.136	-0.189	0.120	0.321	0.164
OTU 085	-0.112	0.159	-0.163	-0.110	-0.217	-0.153	-0.012	-0.028	0.152
OTU 086	-0.186	-0.065	0.202	-0.037	0.186	0.103	0.024	-0.055	-0.036
OTU 088	0.329	-0.254	0.289	-0.328	-0.059	0.210	-0.128	-0.081	-0.520
OTU 090	0.506	-0.113	0.138	-0.572	-0.128	-0.142	-0.441	-0.292	-0.190
OTU 091	0.406	-0.212	0.543	0.290	0.023	0.280	0.152	-0.247	-0.233
OTU 093	-0.332	0.098	-0.183	0.373	0.036	-0.377	0.127	0.010	-0.007
OTU 094	-0.232	-0.273	0.206	-0.068	0.005	-0.128	-0.107	-0.057	-0.110
OTU 097	0.268	-0.225	0.376	-0.318	-0.039	-0.194	-0.252	-0.436	-0.389
OTU 100	-0.170	0.014	0.239	0.390	-0.047	0.156	-0.037	0.166	-0.223
OTU 102	0.562	-0.218	0.324	0.114	0.102	-0.110	-0.026	-0.213	-0.521
OTU 104	-0.460	-0.103	-0.093	0.248	0.251	0.108	0.080	0.383	0.145
OTU 106	-0.260	-0.034	-0.340	0.191	0.402	0.010	0.219	0.106	-0.083
OTU 108	0.080	-0.255	0.136	-0.061	0.046	0.093	0.023	0.178	-0.288
OTU 110	-0.037	0.215	-0.283	0.264	0.030	0.179	0.187	0.191	0.470
OTU 112	-0.046	0.159	-0.354	0.245	0.225	-0.145	-0.037	0.073	0.177
OTU 114	-0.082	0.310	-0.146	0.366	0.220	0.112	0.365	0.170	0.122
OTU 115	-0.217	-0.308	0.213	-0.147	0.047	0.217	-0.218	0.163	0.339
OTU 116	0.200	-0.275	-0.126	-0.167	-0.007	-0.247	-0.132	-0.073	-0.141
OTU 119	0.530	-0.086	0.278	-0.298	-0.066	-0.162	-0.174	-0.166	-0.231
OTU 122	0.630	-0.517	0.460	-0.084	-0.119	-0.027	-0.275	-0.109	-0.376
OTU 125	0.583	-0.321	0.307	-0.196	0.079	-0.160	-0.174	-0.096	-0.484
OTU 127	-0.265	-0.066	0.039	0.066	-0.063	-0.314	0.132	-0.031	-0.114
OTU 129	-0.163	0.109	-0.449	0.375	0.494	-0.102	0.32	0.105	-0.306
OTU 130	-0.199	0.123	0.159	0.164	0.154	0.025	0.310	0.369	0.70
OTU 132	0.151	0.216	0.000	0.056	0.332	-0.441	-0.207	-0.307	0.014
OTU 135	-0.065	0.015	-0.337	0.255	0.078	0.028	0.303	0.174	0.177
OTU 136	-0.266	0.268	-0.136	0.001	0.168	0.012	0.189	0.194	-0.027

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE CORRELATIONS

PAGE 2

OTU 039	OTU 042	OTU 043	OTU 045	OTU 047	OTU 049	OTU 050	OTU 053	OTU 054	OTU 057
OTU 138	-0.350	0.150	-0.170	0.019	0.085	0.330	0.186	0.022	-0.001
OTU 140	-0.296	0.151	-0.019	0.138	0.106	0.027	-0.039	0.115	0.052
OTU 143	-0.155	0.052	-0.155	-0.708	-0.129	0.078	-0.208	0.168	0.017
OTU 145	-0.475	0.401	-0.561	0.052	-0.056	0.115	0.285	-0.004	0.361
OTU 157	-0.134	0.245	0.226	-0.194	-0.324	-0.225	-0.011	0.322	-0.001
OTU 149	-0.073	0.259	-0.081	-0.078	-0.120	-0.316	0.125	-0.200	-0.702
OTU 151	-0.359	0.067	-0.250	0.063	-0.070	0.029	0.070	-0.104	0.021
OTU 152	0.024	-0.088	-0.035	-0.167	-0.286	0.035	-0.129	0.035	-0.392
OTU 153	0.382	-0.199	0.046	-0.156	-0.402	-0.129	-0.129	-0.122	-0.182
OTU 155	-0.361	0.245	0.220	0.206	0.001	0.155	0.269	0.179	-0.239
OTU 150	0.130	-0.104	0.261	-0.472	-0.182	0.057	-0.141	-0.313	-0.234
OTU 159	-0.026	-0.165	0.122	0.226	-0.107	0.396	0.129	0.463	-0.097
OTU 162	-0.505	0.416	0.168	0.071	-0.113	-0.119	0.000	-0.071	0.016
OTU 165	-0.017	-0.005	0.063	-0.280	-0.511	-0.228	-0.205	-0.129	-0.349
OTU 166	-0.316	-0.015	-0.228	-0.109	-0.176	0.260	0.153	0.153	-0.123
OTU 167	-0.354	-0.099	0.044	-0.702	-0.115	0.344	0.154	0.026	-0.299
OTU 171	-0.240	0.191	-0.233	0.220	-0.287	-0.024	0.066	0.111	0.332
OTU 177	0.139	0.073	-0.030	0.237	0.001	0.211	0.197	0.191	0.350
OTU 181	0.252	-0.299	0.032	0.080	-0.084	-0.010	0.035	0.053	-0.273
OTU 183	0.094	-0.052	0.097	0.062	-0.157	0.195	0.261	0.193	0.152
OTU 186	-0.011	-0.368	0.154	-0.071	0.102	0.359	-0.253	0.168	-0.149
OTU 187	-0.137	0.000	-0.118	0.003	0.137	0.095	0.267	0.043	0.175
OTU 189	-0.041	-0.141	0.070	0.166	-0.192	0.051	0.006	-0.007	-0.351
OTU 191	-0.201	0.314	0.077	0.186	0.161	-0.437	0.004	-0.076	0.010
OTU 194	-0.067	0.122	-0.194	-0.171	-0.005	-0.519	-0.026	-0.159	-0.026
OTU 196	-0.404	0.250	0.114	0.172	0.001	-0.103	0.049	-0.092	-0.012
OTU 197	-0.230	-0.023	0.042	0.494	0.292	-0.049	-0.122	0.083	0.040
OTU 199	0.001	0.248	0.063	0.293	0.034	-0.010	-0.108	0.083	0.502
OTU 200	-0.352	0.397	-0.188	-0.265	0.051	-0.321	-0.072	-0.083	0.062
OTU 202	0.053	-0.304	0.052	0.241	0.336	0.313	-0.202	0.444	0.183
OTU 206	-0.145	-0.227	-0.178	-0.191	-0.251	-0.008	-0.190	-0.128	-0.015
OTU 209	-0.033	0.072	-0.415	0.449	0.123	-0.059	-0.044	0.064	0.592
OTU 210	-0.190	0.280	-0.054	0.466	0.461	-0.090	0.135	0.108	0.389
OTU 212	-0.167	0.110	0.348	-0.112	0.169	0.101	0.181	-0.244	0.177
OTU 213	0.249	-0.255	0.278	-0.137	-0.287	0.004	0.063	0.181	-0.469
OTU 216	0.574	-0.171	0.475	-0.023	0.180	0.233	-0.191	0.409	-0.204
OTU 218	0.237	-0.234	0.344	-0.192	-0.174	-0.107	-0.269	-0.111	0.343
OTU 220	-0.292	0.216	0.294	-0.072	0.027	0.269	0.104	0.106	0.250
OTU 227	-0.342	0.110	-0.155	0.051	-0.201	0.119	-0.004	-0.088	0.030
OTU 229	-0.235	-0.103	-0.209	0.281	0.072	0.162	0.038	0.061	0.303
OTU 231	-0.229	-0.074	-0.500	-0.028	0.104	-0.091	0.090	-0.053	-0.197
OTU 234	-0.303	-0.197	-0.440	0.710	0.091	0.194	-0.057	0.120	0.785
OTU 235	-0.100	-0.067	0.366	-0.112	0.090	0.161	-0.318	0.028	0.195
OTU 236	-0.299	-0.051	-0.324	0.179	0.126	0.003	0.129	0.077	-0.093
OTU 239	-0.287	0.262	0.592	0.069	-0.092	0.018	0.041	0.041	0.314
OTU 241	-0.205	0.167	-0.264	0.345	0.057	-0.190	0.062	0.003	0.279
OTU 243	-0.178	-0.014	-0.469	-0.295	0.046	0.194	-0.148	0.007	-0.143
OTU 244	-0.132	-0.139	-0.472	-0.078	-0.107	0.337	0.083	0.223	0.068
OTU 247	-0.250	0.228	-0.247	-0.139	0.170	0.162	-0.097	-0.049	-0.014
OTU 251	-0.507	0.052	-0.348	0.159	0.403	0.112	0.283	-0.017	0.095

PLEASE TURN THE PAGE

CONTINUATION OF

PAGE 3

COMPUTE CORRELATIONS

	OTU 039	OTU 042	OTU 043	OTU 045	OTU 047	OTU 049	OTU 050	OTU 053	OTU 054	OTU 057
OTU 252	-0.252	-0.018	-0.123	-0.022	0.011	0.051	0.025	0.081	-0.105	0.168
OTU 254	-0.289	-0.226	-0.096	-0.020	0.160	0.396	0.178	-0.032	-0.206	0.059
OTU 256	-0.119	0.081	-0.534	0.161	0.103	-0.059	0.189	0.043	-0.119	-0.439
OTU 259	-0.140	-0.184	-0.018	0.193	0.097	0.295	0.040	0.328	0.006	-0.082
OTU 260	-0.236	0.125	0.062	0.083	0.249	0.258	0.117	-0.032	0.058	0.293
OTU 264	-0.034	-0.269	-0.229	0.088	0.028	0.012	0.072	-0.095	0.108	-0.117
OTU 266	-0.060	0.008	-0.595	-0.287	-0.060	-0.098	-0.131	-0.191	-0.076	-0.107
OTU 268	-0.298	-0.271	-0.060	-0.119	-0.122	0.184	-0.092	0.075	-0.189	0.118
OTU 270	-0.548	0.094	-0.114	-0.005	-0.131	0.260	0.184	0.116	-0.060	0.047
OTU 272	-0.277	0.531	-0.225	-0.095	-0.071	0.000	0.210	0.202	0.279	0.259
OTU 274	-0.299	-0.210	-0.129	-0.171	-0.131	0.350	0.095	-0.176	0.119	-0.157
OTU 276	-0.177	0.118	-0.335	-0.272	0.076	0.126	0.060	-0.117	-0.083	-0.008
OTU 278	-0.238	0.223	-0.338	-0.335	-0.090	-0.151	-0.094	-0.190	-0.144	0.238
OTU 280	-0.276	0.368	-0.363	-0.041	0.069	-0.062	-0.034	-0.192	-0.103	0.287
OTU 282	-0.365	-0.145	-0.106	0.083	0.065	0.187	0.182	0.070	0.057	-0.267
OTU 284	-0.512	0.282	-0.292	0.206	0.201	-0.166	0.108	-0.049	0.336	-0.015
OTU 286	-0.146	0.153	-0.823	-0.167	0.042	0.185	0.036	0.822	0.216	0.391
OTU 288	-0.328	-0.053	-0.334	0.094	0.066	0.323	0.749	0.101	0.286	0.244
OTU 290	-0.408	-0.042	-0.114	-0.563	-0.242	0.173	0.162	-0.215	-0.207	0.045
OTU 292	-0.306	-0.287	-0.210	0.153	0.223	-0.049	-0.199	-0.044	0.018	-0.151
OTU 294	-0.135	-0.087	-0.294	-0.316	0.075	0.399	0.114	-0.040	0.169	-0.040
OTU 296	-0.376	-0.092	-0.385	-0.224	-0.161	0.240	0.090	-0.117	-0.041	0.191
OTU 298	0.057	0.341	0.003	-0.019	-0.034	-0.165	0.065	-0.124	0.232	-0.261
OTU 299	0.131	0.263	-0.103	-0.216	-0.078	-0.165	0.115	-0.194	0.331	-0.121
OTU 300	0.590	-0.199	-0.013	-1.116	-0.220	0.119	-0.152	0.034	0.271	-0.302
OTU 301	0.579	-0.378	0.125	-1.205	-0.339	0.096	-0.229	-0.044	-0.084	-0.465
OTU 303	0.275	0.097	0.170	-0.451	-0.381	-0.214	-0.057	-0.227	-0.099	-0.170
OTU 306	0.205	0.022	0.336	-0.598	-0.352	-0.297	-0.179	-0.191	-0.201	-0.343
OTU 308	0.046	-0.029	0.287	-0.031	-0.196	-0.206	-0.011	-0.239	-0.033	-0.394
OTU 310	0.278	0.061	0.091	-0.312	-0.304	-0.382	-0.092	-0.317	-0.099	-0.27
OTU 311	0.166	-0.218	0.266	-0.251	-0.280	-0.221	-0.156	-0.329	-0.157	-0.2
OTU 313	0.179	0.129	0.313	-0.513	-0.184	-0.223	-0.314	-0.189	-0.040	-0.5
OTU 314	0.087	0.376	-0.161	-0.341	-0.117	-0.410	-0.124	-0.260	0.044	-0.10
OTU 316	0.233	0.194	-0.730	-0.007	-0.272	-0.434	-0.620	-0.021	-0.227	-0.193
OTU 322	0.522	-0.249	-0.188	-0.522	-0.171	-0.124	-0.124	0.032	-0.201	-0.201
OTU 324	0.193	-0.090	0.000	-0.017	-0.097	0.088	-0.051	0.191	0.216	-0.193
OTU 326	0.098	-0.100	0.264	-0.092	-0.212	-0.006	-0.219	-0.023	-0.343	-0.283
OTU 327	0.254	-0.087	-0.076	-0.142	-0.118	0.170	0.061	0.003	-0.207	-0.424
OTU 330	0.474	-0.186	0.070	0.049	-0.152	0.006	-0.117	0.013	0.195	-0.394
OTU 332	0.463	0.440	0.349	0.022	-0.263	0.143	-0.246	-0.005	-0.099	-0.428
OTU 333	0.125	0.133	0.021	-0.135	-0.094	-0.289	0.038	-0.371	-0.081	-0.220
OTU 336	-0.060	-0.060	0.368	-0.189	-0.192	-0.169	-0.121	-0.283	-0.315	-0.290
OTU 337	0.190	-0.039	0.437	-0.188	-0.280	-0.350	-0.078	-0.295	-0.279	-0.296
OTU 339	0.308	0.084	0.823	-0.095	-0.120	-0.099	-0.108	-0.213	0.028	-0.161
OTU 340	0.572	-0.365	0.358	-0.114	-0.287	0.164	0.281	0.012	-0.177	-0.327
OTU 341	0.307	0.027	0.247	-0.202	-0.102	-0.092	-0.033	-0.271	-0.027	-0.241
OTU 348	0.166	0.006	0.253	-0.376	-0.169	-0.263	-0.133	-0.285	-0.111	-0.387
OTU 349	0.178	-0.118	0.239	-0.418	-0.246	-0.389	-0.203	-0.254	-0.244	-0.608
OTU 349	0.105	-0.068	0.295	-0.429	-0.268	-0.268	-0.036	-0.425	-0.361	-0.203
OTU 349	0.366	-0.116	0.553	-0.186	-0.190	-0.232	-0.128	-0.181	-0.221	-0.117

IDENTIFICATION:

PAGE 4

COMPUTE CORRELATIONS

	OTU 059	OTU 060	OTU 061	OTU 064	OTU 066	OTU 068	OTU 071	OTU 073	OTU 076	OTU 077
OTU 059	1.000									
OTU 060	0.519	1.000								
OTU 061	0.136	0.125	1.000							
OTU 064	0.081	-0.082	-0.156	1.000						
OTU 066	0.269	0.196	-0.070	-0.246	1.000					
OTU 068	-0.358	-0.160	-0.211	-0.069	0.285	1.000				
OTU 071	-0.045	0.291	0.200	0.076	-0.031	-0.021	1.000			
OTU 073	0.180	0.476	0.389	0.000	0.192	-0.259	0.371	1.000		
OTU 076	0.195	0.257	0.012	0.178	0.136	-0.163	0.402	0.311	1.000	
OTU 077	-0.211	-0.132	0.067	-0.131	-0.348	-0.110	-0.103	-0.241	0.176	1.000
OTU 080	0.036	0.082	0.208	-0.111	0.019	-0.003	0.019	-0.007	0.067	0.599
OTU 083	0.266	0.267	0.069	-0.089	0.062	-0.338	0.457	0.317	0.621	0.231
OTU 085	0.466	0.179	0.123	0.765	0.099	-0.096	0.387	0.131	0.161	-0.142
OTU 086	0.300	0.221	0.152	0.039	0.042	-0.175	0.196	0.290	0.177	-0.281
OTU 088	0.060	0.117	0.255	-0.003	-0.090	-0.050	0.191	0.008	-0.082	0.322
OTU 089	-0.148	-0.199	-0.051	-0.072	-0.040	0.119	-0.105	-0.176	-0.002	0.561
OTU 090	-0.269	-0.102	-0.065	0.164	-0.131	-0.201	0.001	-0.172	0.155	0.328
OTU 091	-0.245	-0.142	-0.380	0.196	-0.168	0.090	0.161	-0.017	-0.029	0.342
OTU 093	0.211	0.429	0.079	-0.055	0.145	-0.205	-0.165	0.211	0.085	0.070
OTU 094	-0.048	-0.066	-0.313	-0.137	-0.043	0.127	0.099	-0.146	0.223	0.300
OTU 097	-0.451	-0.237	-0.199	-0.082	-0.298	-0.069	-0.052	-0.226	0.009	0.425
OTU 100	0.257	0.297	-0.104	0.348	0.056	-0.162	0.516	0.435	0.154	-0.351
OTU 102	-0.445	-0.350	-0.425	0.218	-0.120	0.169	-0.012	-0.271	0.043	0.263
OTU 104	0.250	0.052	0.305	0.021	0.034	0.101	0.203	0.299	-0.076	-0.167
OTU 106	0.201	0.170	0.010	-0.291	0.306	-0.038	-0.300	0.016	-0.253	0.179
OTU 108	0.099	0.347	0.111	0.431	0.153	0.050	0.445	0.205	0.366	0.178
OTU 110	0.115	0.013	-0.194	-0.169	0.840	0.267	-0.318	0.048	-0.289	-0.403
OTU 112	0.358	0.120	-0.184	-0.282	0.345	0.010	-0.239	0.030	-0.046	-0.202
OTU 114	0.040	0.002	0.050	-0.171	0.439	0.185	-0.183	-0.064	-0.318	-0.179
OTU 115	-0.127	0.008	0.161	-0.045	0.033	0.005	0.099	-0.179	-0.018	0.081
OTU 116	-0.025	0.062	0.029	-0.016	-0.027	-0.095	-0.043	0.192	-0.026	0.146
OTU 119	-0.435	-0.198	-0.253	-0.059	-0.001	0.160	-0.012	-0.138	0.165	0.226
OTU 122	-0.419	-0.214	0.061	0.205	-0.332	-0.038	0.313	0.110	0.320	0.300
OTU 125	-0.238	-0.007	0.007	-0.182	-0.209	-0.038	-0.114	0.077	0.177	0.846
OTU 127	-0.080	0.107	-0.106	0.071	0.051	0.183	0.138	0.106	0.363	-0.077
OTU 129	0.219	-0.099	0.129	0.128	0.257	0.053	-0.296	0.179	0.013	-0.164
OTU 130	0.269	-0.111	0.225	0.158	0.151	0.051	0.353	0.225	0.197	-0.178
OTU 132	-0.311	-0.216	-0.351	0.314	0.004	-0.183	-0.513	-0.230	-0.004	0.176
OTU 135	0.001	0.245	0.333	-0.053	0.056	-0.065	0.085	0.175	0.134	-0.149
OTU 136	-0.111	-0.191	0.196	-0.139	0.186	-0.086	-0.219	-0.072	-0.105	-0.049
OTU 138	-0.046	0.159	0.367	-0.111	-0.010	0.022	-0.283	-0.044	-0.265	-0.087
OTU 140	0.173	-0.173	0.122	0.004	0.038	-0.043	0.069	0.153	-0.228	-0.005
OTU 141	0.075	0.008	0.328	-0.311	-0.179	-0.237	0.003	0.068	0.257	0.139
OTU 145	0.442	0.100	0.281	-0.103	0.248	-0.129	-0.252	0.018	-0.064	-0.415
OTU 147	0.104	0.083	0.049	0.140	-0.185	-0.294	0.193	0.187	0.211	-0.160
OTU 149	0.091	0.016	-0.148	-0.200	0.162	-0.058	-0.129	-0.248	0.181	0.077
OTU 151	0.157	0.055	0.005	-0.152	0.295	0.027	-0.272	0.008	-0.030	-0.170
OTU 152	-0.008	-0.009	0.426	-0.162	-0.219	0.191	0.119	-0.006	0.169	0.246
OTU 153	0.113	0.057	0.233	0.029	-0.332	-0.294	0.496	0.175	0.191	-0.017
OTU 159	-0.131	0.091	0.000	-0.221	0.219	0.061	0.046	-0.018	-0.038	0.918

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE CORRELATIONS

PAGE 5

	DTU 059	DTU 060	DTU 061	DTU 064	DTU 066	DTU 068	DTU 070	DTU 071	DTU 076	DTU 077
DTU 158	-0.178	-0.297	-0.150	0.000	-0.223	0.093	-0.115	-0.426	-0.178	-0.200
DTU 159	-0.032	0.068	0.598	-0.206	0.002	0.044	0.488	0.236	0.150	-0.028
DTU 162	0.977	0.706	-0.149	-0.000	0.218	-0.202	0.030	0.030	-0.190	-0.997
DTU 165	0.207	0.148	-0.300	-0.286	-0.077	-0.408	0.304	0.189	0.111	0.004
DTU 166	-0.061	-0.095	0.374	0.166	-0.061	0.191	-0.142	-0.092	-0.130	-0.082
DTU 167	-0.022	-0.120	0.507	-0.187	-0.273	-0.231	0.088	0.055	-0.267	0.159
DTU 171	0.496	0.159	0.002	0.384	-0.082	-0.187	0.081	0.108	-0.085	-0.294
DTU 177	0.521	0.250	0.004	0.901	0.055	-0.138	0.201	0.277	0.070	-0.449
DTU 181	0.072	0.316	0.431	-0.289	0.128	-0.158	0.263	0.287	0.375	-0.214
DTU 183	-0.108	0.022	0.352	0.361	-0.151	0.269	0.455	0.111	0.122	-0.261
DTU 186	-0.185	-0.145	0.184	0.227	-0.474	0.001	-0.058	-0.011	-0.223	0.262
DTU 187	-0.163	-0.351	0.061	-0.120	0.219	0.155	-0.212	-0.108	-0.367	-0.137
DTU 189	0.131	0.051	0.490	-0.015	-0.268	-0.230	0.282	0.106	0.018	0.213
DTU 191	0.070	0.091	-0.013	0.127	0.036	-0.199	-0.051	0.101	-0.075	0.066
DTU 194	0.339	0.058	0.196	0.087	-0.222	-0.423	-0.028	0.232	0.151	0.194
DTU 196	-0.057	-0.139	-0.318	-0.159	0.015	0.053	-0.096	-0.176	-0.368	-0.060
DTU 197	0.291	0.127	0.037	0.164	0.016	-0.130	-0.168	0.171	-0.167	-0.097
DTU 199	0.113	-0.048	-0.047	0.252	0.024	-0.252	0.109	0.250	-0.079	-0.457
DTU 200	0.028	-0.104	-0.188	-0.061	0.013	-0.250	-0.396	-0.187	-0.283	0.051
DTU 202	0.081	0.146	0.359	0.036	0.087	0.187	0.085	0.436	-0.052	-0.158
DTU 206	-0.026	0.065	0.367	-0.001	-0.097	-0.328	-0.030	0.068	-0.170	-0.009
DTU 209	0.339	0.032	-0.002	0.326	0.173	-0.204	-0.152	0.316	-0.312	-0.502
DTU 210	0.343	0.029	-0.116	0.174	0.418	-0.001	-0.236	0.122	-0.106	-0.329
DTU 212	0.004	-0.303	0.062	-0.155	-0.006	0.051	-0.342	-0.305	-0.289	0.023
DTU 213	-0.410	-0.126	-0.215	0.193	-0.171	0.164	0.222	-0.260	0.008	-0.037
DTU 216	-0.443	-0.315	-0.195	-0.069	-0.231	0.231	0.095	-0.328	0.014	0.321
DTU 218	-0.121	-0.280	-0.258	0.184	-0.304	0.067	0.182	-0.276	0.098	0.088
DTU 220	-0.036	-0.053	0.264	-0.069	0.032	-0.176	-0.176	-0.111	-0.198	-0.195
DTU 227	0.273	0.054	0.194	-0.036	-0.032	-0.333	-0.199	0.196	-0.269	-0.306
DTU 229	0.142	0.082	0.109	0.337	-0.201	-0.107	-0.100	-0.035	0.241	-0.114
DTU 231	0.193	0.161	0.270	-0.197	-0.022	-0.102	-0.360	0.107	-0.190	0.082
DTU 234	0.135	0.246	0.241	-0.110	0.083	-0.176	-0.225	0.401	-0.251	-0.196
DTU 235	0.334	-0.014	-0.040	0.120	-0.232	-0.323	-0.119	0.081	-0.194	-0.199
DTU 236	0.135	0.367	0.284	-0.131	0.137	-0.053	-0.100	0.163	0.041	-0.106
DTU 239	0.390	0.078	0.117	-0.076	0.180	-0.201	-0.403	0.101	0.015	-0.501
DTU 241	0.592	0.479	-0.109	-0.152	0.392	-0.187	-0.047	0.364	0.160	-0.260
DTU 243	0.166	0.104	0.207	-0.256	-0.099	-0.147	-0.459	-0.053	-0.233	0.105
DTU 244	0.290	0.118	0.360	-0.192	0.109	-0.089	-0.081	0.160	-0.113	-0.122
DTU 247	0.256	0.120	0.035	-0.254	0.195	-0.197	-0.402	-0.080	-0.115	0.021
DTU 251	0.246	0.322	0.303	-0.101	0.084	-0.074	0.294	0.294	-0.077	0.103
DTU 252	0.109	0.066	0.179	-0.114	-0.046	-0.096	-0.199	0.122	-0.253	-0.002
DTU 254	-0.020	0.097	0.304	-0.226	-0.009	0.063	-0.039	-0.159	0.237	0.054
DTU 254	0.193	0.282	0.416	-0.235	-0.009	-0.274	0.092	0.193	0.030	0.067
DTU 259	-0.040	0.104	-0.277	0.058	-0.053	0.103	0.097	0.082	-0.180	0.016
DTU 260	0.162	0.399	0.108	-0.028	0.183	-0.009	-0.015	0.282	0.129	-0.103
DTU 262	-0.080	-0.153	-0.015	0.261	-0.031	0.196	-0.065	-0.092	-0.235	-0.051
DTU 264	0.250	-0.005	0.203	-0.239	-0.070	-0.281	-0.325	-0.111	-0.049	0.046
DTU 266	0.074	0.443	0.208	-0.308	-0.097	0.168	0.082	-0.082	-0.112	0.050
DTU 268	-0.001	0.046	0.325	-0.259	0.211	0.143	-0.123	-0.069	-0.228	-0.102
DTU 270	0.212	0.097	-0.119	-0.123	0.174	-0.027	-0.097	-0.046	-0.002	-0.273

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE CORRELATIONS

PAGE 6

	DTU 059	DTU 060	DTU 061	DTU 064	DTU 066	DTU 068	DTU 070	DTU 071	DTU 076	DTU 077
DTU 272	-0.159	0.024	0.162	0.037	0.071	0.043	-0.100	0.118	-0.144	-0.199
DTU 273	0.037	-0.205	0.175	-0.110	-0.233	-0.171	-0.395	-0.210	-0.093	0.562
DTU 276	0.090	-0.019	0.061	-0.064	-0.263	-0.206	-0.235	-0.179	-0.159	0.120
DTU 278	0.097	-0.116	-0.021	0.044	-0.096	-0.187	-0.154	-0.089	-0.369	0.016
DTU 280	0.062	0.189	-0.123	-0.120	0.203	0.343	-0.101	0.122	-0.236	-0.277
DTU 282	0.272	0.129	-0.092	-0.096	0.377	-0.107	-0.366	-0.001	-0.320	-0.264
DTU 283	0.577	0.181	0.213	-0.243	0.014	0.102	-0.111	0.103	0.199	-0.025
DTU 286	0.194	-0.033	0.266	0.046	-0.039	-0.013	-0.083	0.135	-0.273	-0.163
DTU 288	-0.109	-0.009	0.095	-0.246	-0.154	-0.065	0.061	-0.150	-0.169	0.012
DTU 289	0.263	-0.012	-0.030	-0.003	-0.136	-0.130	-0.338	0.099	-0.305	0.063
DTU 292	-0.049	-0.160	-0.061	-0.162	-0.033	0.170	0.022	-0.206	-0.080	-0.288
DTU 293	0.065	-0.065	0.461	-0.295	-0.070	-0.052	-0.093	0.054	-0.193	-0.232
DTU 296	-0.077	-0.286	-0.549	0.066	0.057	0.127	-0.176	-0.393	-0.219	-0.272
DTU 297	-0.179	-0.073	-0.434	0.195	0.135	0.219	-0.129	-0.256	-0.004	-0.220
DTU 298	-0.167	-0.163	-0.255	0.165	-0.031	0.094	0.290	-0.056	-0.111	-0.380
DTU 301	-0.428	-0.405	-0.371	0.217	-0.090	0.076	0.204	-0.184	0.244	-0.064
DTU 305	-0.301	-0.139	-0.280	-0.061	-0.050	0.146	0.004	-0.277	0.258	0.073
DTU 306	-0.310	-0.122	-0.525	-0.029	-0.163	-0.112	0.009	-0.273	0.090	0.139
DTU 308	-0.394	-0.277	-0.445	-0.130	-0.098	0.047	-0.048	-0.412	-0.005	0.229
DTU 310	-0.292	-0.288	-0.414	0.150	-0.193	0.037	-0.067	-0.419	0.046	0.168
DTU 311	-0.270	-0.193	-0.489	0.131	-0.286	0.066	0.137	-0.146	-0.036	0.202
DTU 313	-0.305	-0.323	-0.406	0.085	-0.174	0.193	0.049	-0.018	0.022	0.163
DTU 314	0.144	-0.016	-0.308	-0.028	0.066	-0.175	-0.466	-0.220	0.012	0.046
DTU 316	-0.135	-0.193	-0.223	-0.007	-0.163	0.063	0.186	-0.179	0.021	0.132
DTU 322	-0.090	-0.110	-0.104	-0.018	-0.141	0.112	0.002	-0.121	0.399	0.081
DTU 324	-0.198	-0.167	-0.097	-0.131	0.043	0.623	0.191	-0.093	0.121	-0.162
DTU 326	-0.272	-0.296	-0.422	0.201	-0.005	0.195	0.161	-0.273	-0.043	-0.148
DTU 327	-0.407	-0.346	-0.294	-0.232	-0.103	-0.399	-0.221	-0.410	-0.317	-0.051
DTU 330	-0.288	-0.224	-0.378	0.237	-0.004	-0.295	0.174	-0.164	-0.017	-0.290
DTU 332	-0.450	-0.167	-0.127	0.159	-0.184	0.355	-0.466	-0.083	-0.056	-0.120
DTU 333	-0.233	-0.122	-0.549	0.102	0.000	0.056	-0.111	-0.422	0.002	0.174
DTU 336	-0.249	-0.174	-0.314	0.077	-0.090	-0.087	-0.003	-0.342	0.056	0.326
DTU 337	-0.424	-0.245	-0.083	0.001	-0.150	0.043	0.204	-0.236	0.060	0.085
DTU 339	-0.298	-0.134	-0.437	0.137	-0.038	0.215	-0.195	-0.330	0.077	0.020
DTU 340	-0.458	-0.172	-0.263	0.176	-0.232	0.107	-0.475	-0.204	0.061	0.006
DTU 341	-0.439	-0.253	-0.400	-0.102	-0.182	-0.252	-0.079	-0.400	0.077	0.007
DTU 342	-0.328	-0.144	-0.350	0.031	-0.089	0.111	-0.195	-0.393	-0.060	0.205
DTU 343	-0.156	-0.156	-0.557	0.102	-0.228	0.011	-0.014	-0.391	0.075	0.107
DTU 344	-0.332	-0.331	-0.616	-0.027	-0.271	0.007	-0.022	-0.277	0.081	0.434
DTU 345	-0.332	-0.049	-0.284	0.141	-0.210	0.022	0.371	-0.170	0.344	0.435

IDENTIFICATION:

PAGE 7

COMPUTE C 'RELATIONS

	OTU 078	OTU 080	OTU 083	OTU 085	OTU 086	OTU 088	OTU 090	OTU 091	OTU 093	OTU 094
OTU 078	1.000									
OTU 080	0.091	1.000								
OTU 083	0.092	0.328	1.000							
OTU 085	0.009	0.177	0.199	1.000						
OTU 086	0.107	0.019	0.112	-0.094	1.000					
OTU 088	0.324	0.013	-0.071	-0.694	0.174	1.000				
OTU 090	0.130	0.064	0.000	-0.124	-0.010	0.469	1.000			
OTU 091	0.301	0.226	0.284	-0.239	-0.017	0.469	0.296	1.000		
OTU 093	0.002	0.293	0.367	0.187	0.118	-0.291	-0.246	-0.003	1.000	
OTU 094	0.141	0.128	-0.067	-0.071	-0.278	0.136	0.404	0.277	-0.264	1.000
OTU 097	0.310	-0.261	-0.233	-0.168	0.018	0.322	0.406	0.114	-0.291	0.530
OTU 100	-0.190	0.155	0.318	0.267	0.192	-0.282	-0.088	0.126	-0.164	-0.164
OTU 102	0.161	0.074	0.128	-0.225	-0.129	0.291	-0.122	0.665	-0.196	0.672
OTU 105	0.109	0.348	0.446	0.130	0.132	-0.087	-0.222	0.067	0.278	-0.094
OTU 106	0.272	-0.029	-0.028	-0.172	-0.005	-0.121	-0.170	0.058	0.346	-0.104
OTU 108	0.155	0.452	0.175	0.106	0.147	0.172	0.030	-0.002	0.231	0.092
OTU 110	-0.175	-0.155	-0.155	-0.122	-0.178	-0.059	-0.217	-0.161	0.077	-0.086
OTU 112	-0.039	0.217	0.165	0.113	-0.284	-0.284	-0.002	0.050	0.264	0.023
OTU 114	0.074	-0.199	0.147	-0.132	0.160	-0.169	-0.389	-0.066	0.220	-0.137
OTU 115	-0.029	-0.149	-0.012	-0.266	0.191	0.098	0.002	-0.100	-0.101	-0.163
OTU 116	-0.033	0.655	0.028	-0.320	-0.005	0.005	0.252	0.133	-0.062	0.196
OTU 119	0.082	0.123	0.017	-0.092	-0.261	0.198	0.402	0.373	-0.170	0.666
OTU 122	0.185	0.261	0.049	-0.163	-0.232	0.263	0.376	0.535	-0.268	0.253
OTU 125	0.347	0.240	-0.145	-0.188	-0.091	0.204	0.352	0.474	-0.180	0.611
OTU 127	0.079	0.145	0.220	0.182	-0.146	0.031	0.017	0.061	0.046	0.374
OTU 129	0.091	-0.138	0.209	-0.182	0.666	-0.346	-0.298	-0.254	0.219	-0.359
OTU 130	0.087	0.028	-0.025	0.013	-0.014	-0.441	-0.348	-0.319	-0.045	-0.278
OTU 132	0.286	-0.033	0.004	-0.034	0.059	-0.069	0.233	0.268	-0.028	0.277
OTU 135	-0.080	0.074	0.112	0.160	0.042	-0.285	-0.481	-0.144	0.438	-0.344
OTU 136	0.031	-0.170	0.206	-0.158	0.137	-0.166	-0.185	-0.292	0.032	-0.259
OTU 138	0.102	-0.282	-0.246	-0.302	0.144	0.026	-0.403	0.163	-0.092	-0.565
OTU 140	-0.020	0.271	0.202	0.100	0.080	-0.145	-0.133	0.001	-0.040	-0.177
OTU 143	0.080	-0.086	-0.163	0.134	0.302	0.147	-0.021	-0.206	0.024	-0.177
OTU 145	-0.203	-0.169	-0.114	0.145	-0.009	-0.617	-0.354	-0.315	-0.119	-0.268
OTU 147	-0.100	0.199	0.068	0.403	0.038	-0.121	-0.168	-0.105	-0.148	-0.031
OTU 149	-0.004	0.130	-0.092	0.100	-0.141	-0.201	0.082	-0.205	0.137	0.050
OTU 151	-0.078	-0.126	-0.151	-0.084	-0.038	-0.359	-0.320	-0.448	0.177	-0.031
OTU 152	0.167	0.665	-0.091	0.178	0.077	0.113	-0.082	-0.177	0.003	-0.004
OTU 153	-0.224	0.173	0.287	0.042	-0.092	0.075	0.160	0.033	0.185	-0.091
OTU 155	-0.029	0.045	-0.303	-0.014	-0.035	-0.068	-0.066	-0.067	0.111	0.100
OTU 156	-0.009	-0.291	-0.276	-0.441	0.136	0.432	0.416	0.058	-0.352	-0.029
OTU 159	0.003	0.131	0.112	-0.007	0.279	0.035	0.359	-0.108	0.032	-0.252
OTU 162	-0.021	-0.012	-0.175	-0.063	0.020	-0.217	-0.241	-0.099	0.118	-0.201
OTU 165	-0.163	0.178	-0.047	0.039	0.256	-0.037	0.009	-0.259	-0.003	-0.047
OTU 166	-0.110	-0.327	-0.085	-0.213	0.064	0.156	-0.313	-0.117	-0.101	-0.503
OTU 167	0.192	-0.128	-0.031	-0.136	0.361	0.185	-0.362	-0.119	-0.060	-0.406
OTU 171	-0.153	-0.036	0.415	0.000	-0.066	-0.324	0.303	-0.233	0.174	0.544
OTU 177	-0.199	0.187	0.225	0.367	-0.167	-0.028	0.088	0.056	0.010	0.043
OTU 181	0.028	0.461	0.061	-0.192	0.238	0.105	-0.035	-0.066	0.186	0.043
OTU 183	-0.260	-0.016	0.220	0.239	0.077	-0.023	-0.140	-0.224	0.019	-0.159

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE CORRELATIONS

PAGE 8

OTU 078	OTU 080	OTU 083	OTU 085	OTU 086	OTU 088	OTU 090	OTU 091	OTU 093	OTU 094
OTU 185	0.059	-0.181	-0.190	-0.122	0.285	0.230	-0.119	0.172	-0.118
OTU 187	-0.075	-0.190	-0.019	-0.364	-0.111	-0.234	-0.357	-0.163	-0.129
OTU 189	0.060	0.302	0.031	-0.159	0.133	0.035	-0.359	-0.033	0.386
OTU 191	-0.081	0.126	0.122	-0.069	0.109	-0.259	-0.173	0.077	0.340
OTU 194	-0.177	0.280	0.279	0.149	0.116	-0.184	0.031	-0.238	0.308
OTU 196	-0.161	-0.204	-0.116	0.022	0.016	-0.049	-0.255	0.162	0.160
OTU 197	0.224	0.018	0.174	-0.069	0.118	-0.161	-0.322	0.269	0.407
OTU 199	-0.232	-0.035	0.178	0.136	-0.261	-0.817	-0.051	0.019	0.017
OTU 200	-0.130	-0.249	-0.255	-0.077	0.080	-0.240	-0.025	-0.265	-0.022
OTU 202	0.184	-0.141	-0.109	0.095	-0.097	-0.112	-0.115	0.077	-0.217
OTU 206	-0.190	-0.319	-0.113	-0.132	0.291	-0.123	0.216	-0.311	-0.051
OTU 209	-0.310	-0.084	0.275	0.138	-0.530	-0.713	-0.220	-0.749	0.214
OTU 210	-0.049	-0.066	0.167	0.056	-0.187	-0.602	-0.437	0.074	0.303
OTU 212	-0.173	-0.181	-0.362	-0.095	-0.091	0.094	-0.053	-0.278	-0.069
OTU 213	-0.240	-0.055	0.033	-0.123	-0.109	0.285	0.629	0.256	-0.259
OTU 216	0.143	0.122	-0.163	-0.214	-0.020	0.518	0.217	0.512	-0.404
OTU 218	-0.090	0.115	0.069	0.020	-0.162	0.167	0.121	-0.395	-0.329
OTU 220	-0.158	-0.256	-0.211	-0.156	0.019	0.028	-0.303	-0.445	-0.019
OTU 227	-0.128	-0.183	-0.127	-0.165	0.188	-0.311	-0.369	-0.316	-0.210
OTU 229	-0.283	-0.094	0.021	-0.266	0.070	0.071	-0.211	-0.199	-0.018
OTU 231	0.083	-0.176	-0.159	-0.064	0.060	-0.020	-0.281	-0.135	0.428
OTU 234	-0.236	-0.152	-0.042	-0.072	-0.079	-0.211	-0.348	-0.275	0.098
OTU 235	-0.382	-0.102	-0.211	-0.046	-0.009	-0.159	-0.097	-0.267	-0.003
OTU 236	-0.081	0.088	-0.148	0.181	-0.257	-0.266	-0.403	-0.311	0.100
OTU 239	-0.228	-0.241	-0.133	0.005	-0.306	-0.247	-0.271	-0.466	-0.003
OTU 241	-0.155	0.229	0.182	0.172	-0.285	-0.415	-0.209	-0.071	0.316
OTU 243	-0.119	-0.174	-0.181	-0.046	0.040	0.144	0.280	-0.243	-0.026
OTU 244	-0.018	-0.196	-0.021	0.005	-0.030	-0.061	-0.219	-0.378	0.091
OTU 247	-0.076	-0.087	-0.295	0.010	-0.077	-0.002	0.087	-0.167	0.246
OTU 251	0.223	-0.147	-0.247	-0.001	0.152	-0.172	-0.259	-0.357	0.157
OTU 252	-0.003	-0.268	-0.002	0.078	-0.009	-0.005	-0.126	-0.087	0.418
OTU 254	-0.038	-0.218	-0.338	-0.210	0.298	0.104	-0.177	-0.220	-0.059
OTU 256	0.217	0.029	0.006	0.030	0.133	-0.097	-0.072	-0.333	0.439
OTU 259	-0.177	-0.021	0.115	-0.076	-0.008	0.108	-0.073	-0.261	0.183
OTU 260	0.016	0.106	-0.231	-0.018	-0.123	-0.035	-0.198	-0.270	-0.116
OTU 262	0.037	0.238	0.102	-0.111	-0.175	-0.007	-0.055	-0.033	0.109
OTU 264	0.060	0.028	-0.105	0.205	-0.224	-0.065	-0.207	-0.330	0.112
OTU 266	-0.230	-0.136	-0.207	0.067	0.316	0.022	-0.084	-0.287	0.287
OTU 268	-0.039	-0.095	-0.095	-0.038	0.119	-0.097	-0.358	-0.387	0.507
OTU 270	-0.128	-0.035	0.048	0.205	-0.095	-0.196	-0.308	-0.351	0.161
OTU 272	-0.163	-0.467	-0.478	-0.047	0.040	-0.191	0.281	-0.394	-0.213
OTU 273	-0.155	-0.209	-0.388	-0.177	-0.048	0.039	-0.095	-0.376	-0.079
OTU 276	-0.146	-0.120	-0.195	0.044	0.227	0.105	-0.024	-0.426	0.031
OTU 278	0.022	-0.271	-0.168	0.028	0.102	-0.192	-0.171	-0.184	0.102
OTU 280	-0.251	-0.275	-0.105	-0.039	-0.112	-0.117	-0.309	0.012	0.094
OTU 282	-0.006	-0.296	-0.099	0.082	-0.234	-0.498	-0.185	-0.287	0.204
OTU 283	-0.112	-0.038	-0.016	0.110	0.103	0.004	-0.195	-0.638	-0.013
OTU 286	-0.030	-0.280	-0.099	-0.052	0.082	-0.039	-0.223	-0.282	0.135
OTU 288	-0.112	-0.182	-0.205	-0.094	0.204	0.095	-0.166	-0.400	-0.119
OTU 289	0.099	-0.256	-0.102	-0.024	0.031	-0.238	-0.159	0.053	0.214

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE CORRELATIONS

PAGE 9

	OTU 078	OTU 080	OTU 083	OTU 085	OTU 086	OTU 088	OTU 090	OTU 091	OTU 093	OTU 094
OTU 292	-0.099	-0.402	-0.252	0.135	0.078	0.180	0.122	-0.365	-0.367	-0.095
OTU 295	0.001	-0.256	-0.225	0.189	0.149	-0.060	-0.194	-0.325	-0.199	-0.396
OTU 296	-0.165	-0.267	0.036	0.133	-0.271	-0.113	0.122	-0.115	-0.127	0.332
OTU 297	-0.113	-0.321	0.039	0.101	-0.155	-0.025	0.271	-0.125	-0.256	0.183
OTU 298	-0.307	-0.095	0.183	0.136	-0.371	-0.003	0.308	0.090	-0.316	0.280
OTU 301	-0.157	-0.113	0.071	0.025	-0.277	0.214	0.299	0.237	-0.340	0.349
OTU 305	-0.060	-0.011	-0.115	0.069	-0.222	0.033	0.368	-0.026	-0.295	0.319
OTU 306	-0.070	0.011	-0.118	0.051	-0.028	0.188	0.569	0.165	-0.319	0.363
OTU 306	0.002	0.080	-0.193	0.013	-0.247	0.030	0.087	0.327	-0.012	0.195
OTU 310	-0.049	-0.060	-0.004	0.065	-0.011	0.051	0.308	0.064	-0.118	0.101
OTU 311	0.076	-0.115	0.008	0.085	0.079	0.239	0.281	0.267	-0.024	0.168
OTU 313	-0.006	0.013	-0.068	0.094	-0.028	0.118	0.291	0.178	-0.107	0.328
OTU 318	0.078	0.040	-0.175	0.161	-0.351	-0.195	0.131	-0.031	-0.100	0.135
OTU 316	0.010	0.336	0.270	0.164	-0.286	0.011	0.066	0.318	0.167	0.282
OTU 322	0.020	0.093	0.049	-0.083	-0.211	0.124	0.158	-0.036	-0.052	0.214
OTU 324	-0.191	-0.034	0.047	-0.057	-0.229	-0.006	0.192	0.308	-0.196	0.205
OTU 326	-0.229	-0.023	0.100	0.098	-0.212	-0.033	0.102	0.240	-0.190	0.338
OTU 327	-0.018	-0.268	-0.228	-0.064	-0.397	0.249	0.010	0.140	-0.363	0.179
OTU 330	-0.244	-0.071	0.070	0.161	-0.368	-0.086	0.188	0.169	-0.227	0.139
OTU 332	-0.180	0.032	0.056	0.096	-0.059	0.190	0.228	0.269	-0.214	0.305
OTU 333	0.032	-0.067	-0.168	0.044	-0.221	0.060	0.207	0.186	-0.162	0.307
OTU 336	0.080	0.060	-0.157	-0.177	-0.030	0.131	0.274	0.322	-0.098	0.321
OTU 337	-0.038	0.261	0.014	0.057	0.030	0.213	0.101	0.294	-0.092	0.167
OTU 339	-0.083	0.116	0.054	-0.076	-0.068	0.255	0.131	0.260	-0.260	0.137
OTU 340	-0.128	0.098	0.066	0.125	-0.137	0.329	0.356	0.317	-0.283	0.442
OTU 341	-0.040	-0.160	-0.146	0.017	-0.111	0.246	0.317	0.197	-0.215	0.273
OTU 342	-0.029	-0.200	-0.291	-0.202	-0.147	0.159	0.386	0.213	-0.268	0.346
OTU 343	-0.137	-0.014	-0.232	-0.061	-0.185	0.220	0.440	0.235	-0.170	0.410
OTU 348	0.188	0.037	-0.378	-0.115	0.066	0.261	0.294	0.060	-0.286	0.448
OTU 349	-0.045	0.308	0.076	-0.059	0.192	0.332	0.444	0.338	-0.068	0.375

IDENTIFICATION:

PAGE 10

COMPUTE CORRELATIONS

	OTU 097	OTU 100	OTU 102	OTU 104	OTU 106	OTU 108	OTU 110	OTU 112	OTU 114	OTU 115
OTU 097	1.000									
OTU 100	-0.280	1.000								
OTU 102	-0.470	-0.075	1.000							
OTU 104	-0.269	0.072	-0.114	1.000						
OTU 106	-0.338	-0.079	-0.162	0.096	1.000					
OTU 108	-0.177	0.076	-0.180	0.143	0.056	1.000				
OTU 110	-0.299	0.185	-0.132	0.059	0.403	-0.089	1.000			
OTU 112	-0.209	0.063	-0.061	0.168	0.369	0.221	0.491	1.000		
OTU 114	-0.434	0.013	-0.212	-0.256	0.385	0.146	-0.402	0.306	1.000	
OTU 115	-0.150	0.141	-0.151	0.109	0.050	0.190	0.052	-0.246	0.246	1.000
OTU 116	0.130	-0.096	0.163	0.138	0.041	0.130	-0.177	0.210	-0.018	-0.243
OTU 119	0.634	-0.290	0.606	-0.284	-0.259	-0.053	-0.132	-0.017	-0.444	-0.116
OTU 122	0.545	-0.087	0.549	-0.146	-0.275	0.056	-0.361	-0.374	-0.517	-0.224
OTU 125	0.508	-0.341	0.429	0.081	-0.091	0.213	-0.430	-0.117	-0.402	-0.127
OTU 127	0.449	-0.223	0.339	0.200	-0.432	-0.006	-0.263	-0.052	-0.249	-0.329
OTU 129	-0.293	-0.173	-0.189	0.369	0.274	-0.119	0.308	0.350	0.353	-0.113
OTU 130	-0.305	-0.110	-0.255	0.263	0.199	-0.116	0.168	0.180	0.074	0.093
OTU 132	0.312	-0.210	0.417	0.009	0.011	-0.451	0.047	0.290	0.033	-0.300
OTU 135	-0.507	0.305	-0.465	0.115	0.289	0.335	0.165	0.260	0.119	-0.051
OTU 136	-0.436	-0.031	-0.139	0.172	0.276	0.127	0.204	0.201	0.437	0.424
OTU 138	-0.305	-0.318	-0.408	0.161	0.169	-0.013	0.100	-0.071	0.474	0.205
OTU 140	-0.493	0.084	-0.078	0.534	-0.061	-0.083	-0.005	0.041	0.222	0.036
OTU 143	-0.232	-0.190	-0.387	0.362	0.096	0.317	-0.181	0.078	0.189	0.160
OTU 145	-0.546	-0.041	-0.653	0.069	0.151	-0.007	0.335	0.201	0.440	0.131
OTU 147	0.111	0.251	-0.129	-0.133	-0.447	0.021	-0.207	-0.026	-0.333	0.034
OTU 149	-0.224	-0.118	0.130	0.127	0.174	0.238	0.155	0.280	0.189	0.185
OTU 151	-0.424	-0.043	-0.160	0.076	0.245	0.178	0.352	0.192	0.452	-0.043
OTU 152	-0.178	-0.220	-0.100	0.178	-0.019	0.277	-0.231	-0.275	0.015	0.099
OTU 153	-0.163	0.162	-0.104	0.269	-0.211	0.491	-0.235	0.266	-0.156	0.097
OTU 155	-0.281	-0.032	-0.186	-0.112	0.377	0.032	0.066	-0.168	0.311	-0.201
OTU 156	0.315	-0.197	0.189	-0.214	-0.130	-0.075	-0.058	-0.292	-0.190	0.349
OTU 159	-0.118	0.172	-0.174	0.304	-0.132	0.498	-0.084	-0.187	0.226	-0.276
OTU 162	-0.132	0.166	-0.164	-0.254	-0.057	-0.048	0.177	0.025	0.339	0.270
OTU 165	-0.129	-0.079	-0.191	0.127	-0.224	0.369	-0.214	-0.082	-0.069	0.088
OTU 166	-0.267	0.360	-0.406	0.078	0.151	0.010	-0.080	-0.215	0.315	0.044
OTU 167	-0.060	-0.211	-0.410	0.253	0.069	0.024	-0.266	-0.433	0.179	0.141
OTU 171	-0.497	0.386	-0.033	0.143	-0.092	-0.059	0.103	0.021	0.304	-0.045
OTU 177	-0.129	0.296	-0.104	0.192	-0.333	0.054	0.161	0.308	-0.125	-0.216
OTU 181	-0.083	-0.055	-0.104	0.331	-0.024	0.658	-0.129	0.131	0.043	0.039
OTU 185	-0.232	0.160	-0.052	0.306	-0.179	0.158	-0.226	-0.304	-0.042	0.231
OTU 186	-0.037	0.104	-0.089	0.071	0.016	-0.023	-0.247	-0.380	-0.023	0.188
OTU 187	-0.296	-0.111	0.052	0.075	0.044	-0.110	0.316	0.101	0.160	0.305
OTU 189	-0.151	0.040	-0.131	0.090	-0.056	0.241	-0.069	-0.109	0.067	0.014
OTU 191	0.064	0.075	0.019	0.023	0.110	-0.269	0.018	0.308	0.113	0.135
OTU 194	-0.208	-0.065	-0.181	0.254	-0.043	0.045	0.247	0.290	-0.063	-0.081
OTU 196	0.207	0.096	-0.077	-0.119	0.067	-0.807	0.077	0.037	0.154	-0.073
OTU 197	-0.101	0.159	-0.049	0.238	0.203	-0.065	-0.003	0.153	0.286	-0.142
OTU 199	-0.225	0.359	-0.069	-0.275	-0.039	-0.457	-0.210	-0.011	0.006	-0.028
OTU 200	-0.169	-0.067	-0.223	-0.213	0.369	-0.420	0.160	-0.078	0.093	0.299
OTU 202	-0.100	0.212	0.137	0.197	0.126	0.137	0.245	-0.029	-0.075	-0.103

PLEASE TURN THE PAGE

CONTINUATION OF
COMPUTE CORRELATIONS

PAGE 11

	OTU 097	OTU 101	OTU 102	OTU 104	OTU 106	OTU 108	OTU 110	OTU 112	OTU 114	OTU 115
OTU 204	-0.111	0.009	-0.260	-0.085	0.033	-0.011	0.141	-0.282	0.000	0.284
OTU 209	-0.398	0.337	-0.037	0.191	0.091	-0.398	0.383	0.293	0.151	-0.301
OTU 210	-0.244	0.159	0.076	0.049	0.171	-0.393	0.283	0.241	0.174	-0.090
OTU 212	0.034	-0.252	-0.476	-0.105	0.181	-0.219	0.200	0.116	0.130	-0.192
OTU 213	0.432	-0.036	0.484	-0.298	-0.531	-0.154	-0.206	-0.299	-0.427	-0.143
OTU 216	0.607	-0.226	0.385	-0.286	-0.565	-0.085	-0.348	-0.175	-0.235	-0.025
OTU 218	0.385	0.019	0.593	-0.126	-0.494	-0.101	-0.257	-0.201	-0.563	-0.171
OTU 220	-0.337	-0.136	-0.552	0.048	0.023	-0.020	0.016	-0.104	0.396	0.260
OTU 227	-0.364	0.006	-0.193	0.219	-0.021	-0.381	0.112	-0.062	0.385	-0.132
OTU 229	-0.182	-0.106	-0.385	-0.065	0.103	-0.107	-0.136	0.057	0.118	-0.017
OTU 231	-0.159	-0.471	-0.259	0.237	0.310	-0.025	-0.009	0.156	0.260	-0.242
OTU 234	-0.465	0.019	-0.528	0.108	-0.413	0.053	0.252	0.169	0.220	-0.257
OTU 235	-0.329	0.095	-0.394	0.123	0.134	-0.116	0.178	0.310	0.056	-0.092
OTU 236	-0.405	-0.024	-0.554	0.095	0.335	0.217	0.139	0.344	0.202	-0.144
OTU 239	-0.535	-0.062	-0.491	0.004	0.225	-0.246	0.291	0.378	0.295	-0.142
OTU 241	-0.276	0.252	-0.269	0.027	0.229	0.130	0.458	0.566	0.209	-0.352
OTU 243	-0.102	-0.347	-0.446	0.022	0.385	-0.050	0.261	0.322	0.150	-0.119
OTU 244	-0.408	-0.124	-0.590	0.089	0.240	0.147	0.049	0.001	0.235	-0.102
OTU 247	-0.244	-0.158	-0.471	-0.154	0.305	0.088	0.304	0.487	0.312	0.024
OTU 247	-0.217	-0.159	-0.519	0.020	0.510	0.000	0.161	0.199	0.415	-0.255
OTU 252	-0.041	-0.209	-0.197	0.253	0.173	-0.022	0.115	-0.001	0.196	-0.001
OTU 254	-0.084	-0.092	-0.364	0.005	0.296	0.444	0.096	-0.006	0.242	0.099
OTU 256	-0.265	-0.187	-0.519	0.264	0.414	0.094	-0.036	0.131	0.317	-0.109
OTU 259	-0.360	0.301	-0.092	-0.028	0.409	0.114	0.076	0.119	0.286	-0.066
OTU 260	-0.150	0.018	-0.476	-0.214	0.049	0.136	-0.019	0.099	-0.060	0.060
OTU 262	-0.252	0.003	-0.017	0.044	0.390	-0.092	0.172	0.084	0.140	-0.195
OTU 264	-0.355	-0.304	-0.309	0.022	0.331	0.174	0.080	0.444	0.260	-0.128
OTU 265	-0.246	0.257	-0.424	0.135	0.267	0.162	0.124	0.019	0.100	0.170
OTU 268	-0.459	-0.258	-0.428	0.023	0.233	0.181	0.070	-0.149	0.270	0.152
OTU 270	-0.434	-0.019	-0.326	0.056	0.073	-0.100	0.093	-0.203	0.100	0.100
OTU 272	-0.168	0.149	-0.228	-0.164	0.248	-0.134	0.450	-0.139	0.080	0.077
OTU 273	-0.127	-0.314	-0.383	-0.159	0.285	-0.069	-0.049	-0.036	0.025	0.264
OTU 274	-0.168	-0.165	-0.484	-0.052	0.077	-0.115	-0.205	0.016	0.161	0.146
OTU 278	-0.166	-0.101	-0.182	0.062	0.232	-0.264	0.157	-0.034	0.496	0.255
OTU 280	-0.088	0.016	-0.189	0.050	0.217	-0.068	0.338	0.151	0.300	0.000
OTU 282	-0.280	0.117	-0.281	-0.243	0.376	-0.421	0.072	0.180	0.285	0.105
OTU 283	-0.370	-0.157	-0.499	0.202	0.050	0.285	0.434	0.213	0.144	0.028
OTU 284	-0.391	0.000	-0.539	0.358	0.558	-0.334	0.268	0.069	0.430	-0.071
OTU 288	-0.173	-0.034	-0.459	-0.069	-0.035	0.160	-0.134	-0.117	0.195	0.188
OTU 289	-0.086	0.019	-0.169	0.072	0.311	-0.121	0.104	0.128	0.119	-0.205
OTU 292	-0.086	-0.072	-0.254	0.109	-0.021	0.023	0.152	-0.010	-0.252	0.079
OTU 295	-0.152	-0.202	-0.618	0.152	0.016	0.099	0.033	0.057	0.213	-0.019
OTU 296	-0.281	0.042	0.396	0.303	-0.114	0.562	0.151	0.010	-0.218	-0.054
OTU 297	0.325	-0.108	0.270	-0.281	-0.304	-0.429	0.025	-0.199	-0.267	0.037
OTU 298	0.186	0.141	0.295	-0.108	-0.408	-0.204	0.081	-0.149	-0.427	-0.270
OTU 301	0.295	0.010	0.487	-0.007	-0.499	-0.156	0.297	-0.308	-0.451	-0.178
OTU 305	0.442	-0.104	0.310	-0.354	-0.584	0.009	-0.074	-0.232	-0.454	0.111
OTU 306	0.458	0.113	0.274	-0.422	-0.397	-0.275	-0.108	-0.166	-0.447	0.162
OTU 309	-0.268	-0.064	-0.381	-0.435	-0.663	-0.211	-0.111	-0.171	-0.299	-0.109
OTU 310	0.397	-0.159	0.514	-0.199	-0.408	-0.275	-0.327	-0.317	-0.411	0.037

PLEASE TURN TO PAGE

COMPUTE CORRELATIONS

	OTU 097	OTU 100	OTU 102	OTU 104	OTU 106	OTU 108	OTU 110	OTU 112	OTU 114	OTU 115
OTU 311	0.538	0.009	0.292	-0.167	-0.433	-0.168	-0.355	-0.426	-0.427	-0.199
OTU 312	0.497	0.069	0.527	-0.172	-0.401	-0.232	-0.214	-0.213	-0.451	0.070
OTU 314	0.111	-0.163	0.154	-0.450	0.059	-0.290	0.185	0.259	-0.295	-0.055
OTU 316	0.204	-0.063	0.402	-0.239	-0.192	-0.059	-0.264	-0.025	-0.237	-0.160
OTU 322	0.308	-0.256	0.293	-0.008	-0.289	0.104	-0.203	-0.050	-0.527	-0.209
OTU 324	0.249	-0.011	0.265	-0.107	-0.460	0.054	-0.031	-0.013	-0.375	-0.110
OTU 326	0.123	0.030	0.586	-0.236	-0.333	-0.320	-0.144	-0.140	-0.339	-0.272
OTU 327	0.240	-0.463	0.214	-0.374	0.073	-0.247	-0.025	-0.121	-0.091	-0.235
OTU 330	0.201	0.089	0.468	-0.198	-0.343	-0.213	-0.002	-0.089	-0.380	-0.336
OTU 332	0.156	0.147	0.335	-0.164	-0.463	-0.061	-0.261	-0.309	-0.800	-0.693
OTU 333	0.490	-0.010	0.254	-0.482	-0.221	-0.421	-0.208	-0.216	-0.386	-0.083
OTU 336	0.106	-0.045	0.335	-0.343	-0.116	-0.044	-0.140	-0.226	-0.323	0.101
OTU 337	0.342	-0.009	0.217	-0.456	-0.339	0.153	-0.376	-0.280	-0.416	-0.077
OTU 339	0.529	0.040	0.215	-0.401	-0.420	-0.224	-0.299	-0.219	-0.652	-0.074
OTU 340	0.407	0.041	0.388	-0.161	-0.383	-0.111	-0.347	-0.273	-0.507	-0.145
OTU 341	0.494	-0.137	0.209	-0.401	-0.315	-0.439	-0.292	-0.272	-0.380	-0.154
OTU 342	0.568	-0.020	0.424	-0.258	-0.231	-0.249	0.042	-0.173	-0.371	0.066
OTU 343	0.518	-0.059	0.488	-0.439	-0.276	-0.157	-0.163	-0.211	-0.368	-0.091
OTU 344	0.620	-0.217	0.345	-0.411	-0.250	-0.231	-0.294	-0.473	-0.444	0.104
OTU 345	0.429	0.077	0.431	-0.246	-0.364	0.083	-0.518	-0.215	-0.453	0.171

IDENTIFICATION:

PAGE 13

COMPUTE CORRELATIONS

	OTU 116	OTU 119	OTU 122	OTU 125	OTU 127	OTU 129	OTU 130	OTU 132	OTU 135	OTU 136
OTU 116	1.000									
OTU 119	0.305	1.000								
OTU 122	0.188	0.604	1.000							
OTU 125	0.284	0.579	0.655	1.000						
OTU 127	0.045	0.442	0.328	0.298	1.000					
OTU 129	0.159	-0.230	-0.300	-0.256	0.156	1.000				
OTU 130	-0.111	-0.148	-0.170	-0.168	-0.044	0.214	1.000			
OTU 132	0.067	0.261	0.054	0.242	0.238	0.263	0.130	1.000		
OTU 135	-0.083	-0.577	-0.415	-0.651	-0.513	0.269	0.362	-0.290	1.000	
OTU 136	0.064	-0.299	-0.447	-0.334	-0.242	0.444	0.224	-0.115	0.323	1.000
OTU 138	-0.080	-0.453	-0.311	-0.260	-0.231	0.357	0.323	-0.148	0.190	0.429
OTU 140	-0.113	-0.172	-0.293	-0.021	0.134	0.221	0.313	0.170	-0.081	0.111
OTU 143	-0.065	-0.325	-0.334	-0.020	-0.113	0.067	0.221	-0.118	0.059	0.417
OTU 145	-0.147	-0.259	-0.384	-0.601	-0.323	0.409	0.475	-0.086	0.493	0.400
OTU 147	-0.117	0.189	0.045	-0.032	0.229	-0.264	-0.057	0.039	-0.054	-0.046
OTU 149	0.126	0.037	0.280	-0.008	0.012	0.170	0.093	0.223	0.000	0.271
OTU 151	0.012	-0.536	-0.429	-0.273	-0.317	0.275	0.296	-0.061	0.439	-0.165
OTU 152	-0.038	-0.121	0.120	0.191	0.054	-0.164	-0.051	-0.233	0.055	0.004
OTU 153	0.242	0.067	0.254	0.195	-0.013	-0.114	-0.090	-0.338	0.315	-0.005
OTU 155	-0.324	-0.223	-0.176	-0.168	-0.277	-0.191	0.195	-0.215	0.138	0.042
OTU 158	0.314	0.242	0.206	0.136	-0.180	-0.127	-0.229	-0.033	-0.406	0.078
OTU 159	-0.048	-0.320	0.060	-0.049	-0.087	-0.073	-0.065	-0.321	0.297	-0.198
OTU 162	-0.042	-0.223	-0.364	-0.239	-0.230	-0.201	0.009	0.050	0.088	0.099
OTU 165	0.212	0.063	0.058	0.122	0.099	-0.152	0.044	0.072	-0.044	0.032
OTU 166	-0.180	-0.430	-0.204	-0.249	-0.183	0.060	0.185	-0.116	0.148	0.176
OTU 167	-0.077	-0.320	-0.044	-0.060	-0.139	-0.018	0.082	-0.283	0.065	0.110
OTU 171	-0.112	-0.412	-0.285	-0.430	-0.059	0.128	-0.004	-0.105	0.218	-0.231
OTU 177	-0.065	-0.187	-0.075	0.038	0.147	-0.058	-0.209	-0.080	-0.110	-0.119
OTU 181	0.291	-0.077	0.161	0.293	0.085	0.176	0.073	-0.157	0.298	-0.026
OTU 183	-0.038	-0.091	0.104	-0.103	0.241	0.068	0.059	-0.380	0.211	-0.023
OTU 186	-0.056	-0.357	0.090	0.119	-0.056	-0.232	0.091	-0.114	0.083	-0.079
OTU 187	0.115	-0.082	0.218	-0.185	0.099	0.208	0.181	-0.099	0.502	0.585
OTU 189	0.021	-0.320	0.135	0.041	-0.162	-0.057	0.079	-0.292	0.363	-0.108
OTU 191	-0.009	0.160	-0.113	-0.089	0.017	0.061	0.273	0.369	0.133	-0.124
OTU 194	0.317	-0.037	0.328	0.138	0.106	0.312	0.274	0.113	0.316	0.295
OTU 196	-0.388	-0.004	-0.248	-0.301	-0.171	-0.193	-0.034	0.109	-0.075	-0.200
OTU 197	-0.175	-0.405	-0.186	-0.013	-0.139	0.113	0.095	0.288	0.208	-0.105
OTU 199	-0.191	-0.136	-0.024	-0.418	-0.278	-0.020	0.152	0.119	0.100	-0.091
OTU 200	0.020	-0.016	-0.425	-0.238	-0.413	-0.011	0.203	0.161	-0.013	0.267
OTU 202	-0.026	-0.194	0.122	0.163	-0.177	-0.023	0.156	-0.191	0.373	-0.191
OTU 205	0.277	-0.167	-0.033	-0.074	-0.331	0.042	-0.116	-0.129	-0.030	0.269
OTU 209	0.033	-0.218	-0.181	-0.302	-0.029	0.096	0.287	0.277	0.136	0.054
OTU 210	-0.344	-0.150	0.156	-0.119	-0.022	0.133	0.411	0.271	0.113	0.021
OTU 212	-0.233	-0.327	-0.325	-0.256	-0.260	0.277	0.096	0.112	0.159	0.021
OTU 213	0.016	0.818	0.500	0.272	0.288	-0.314	-0.567	-0.029	-0.255	-0.345
OTU 216	-0.132	0.215	0.441	0.481	0.150	-0.105	-0.168	0.069	-0.352	-0.399
OTU 218	0.043	0.585	0.579	0.488	0.172	-0.443	-0.344	0.212	-0.561	-0.461
OTU 220	-0.219	-0.528	-0.452	-0.346	-0.203	0.203	0.216	0.210	0.373	0.390
OTU 227	-0.112	-0.493	-0.122	-0.190	-0.211	0.011	0.154	0.097	0.155	0.044
OTU 229	-0.038	-0.353	-0.284	-0.308	-0.341	0.126	0.182	-0.083	0.303	0.215

PLEASE TURN THE PAGE

CONTINUATION OF

PAGE 14

COMPUTE CORRELATIONS

	OTU 116	OTU 119	OTU 120	OTU 125	OTU 127	OTU 129	OTU 130	OTU 132	OTU 135	OTU 136
OTU 231	0.138	-0.209	-0.319	-0.048	0.142	0.402	0.289	0.070	0.272	0.222
OTU 234	0.091	-0.213	-0.304	-0.192	-0.340	0.267	0.237	-0.195	0.412	0.181
OTU 235	0.088	-0.395	-0.773	-0.166	-0.119	0.251	0.217	0.146	0.256	0.244
OTU 236	-0.025	-0.416	-0.292	-0.148	-0.104	0.145	0.347	-0.176	0.610	0.112
OTU 239	-0.036	-0.442	-0.492	-0.285	-0.272	0.317	0.390	0.075	0.216	0.265
OTU 241	0.139	-0.214	-0.286	-0.131	0.003	0.265	-0.105	0.240	-0.309	0.030
OTU 243	0.126	-0.335	-0.003	-0.003	-0.273	0.134	0.106	0.011	0.181	0.116
OTU 246	-0.060	-0.266	-0.322	-0.299	-0.236	0.191	0.021	-0.367	0.342	0.349
OTU 247	-0.034	-0.302	-0.437	-0.194	-0.184	0.100	0.280	0.047	0.235	0.183
OTU 251	-0.069	-0.213	-0.435	-0.244	-0.219	0.436	0.300	-0.003	0.509	0.246
OTU 252	-0.062	-0.209	-0.135	-0.095	-0.060	0.143	-0.067	0.032	0.080	0.012
OTU 254	-0.132	-0.345	-0.162	-0.110	-0.351	0.003	0.042	-0.131	0.276	0.026
OTU 256	-0.192	-0.516	-0.259	-0.272	-0.011	0.406	0.344	-0.016	0.459	0.218
OTU 259	-0.146	-0.350	-0.179	-0.260	-0.392	-0.044	-0.238	-0.232	0.158	0.127
OTU 260	-0.135	-0.197	-0.178	-0.135	-0.096	0.024	0.144	-0.263	0.329	0.053
OTU 262	0.034	-0.148	0.010	-0.253	-0.189	0.300	0.087	-0.065	0.092	0.099
OTU 264	0.112	-0.229	-0.297	-0.070	-0.235	0.222	-0.065	-0.066	0.063	-0.139
OTU 266	0.086	-0.485	-0.281	-0.156	-0.314	-0.116	-0.256	-0.305	0.391	0.056
OTU 268	-0.245	-0.467	-0.333	-0.330	-0.264	0.084	0.076	-0.341	0.215	0.277
OTU 270	-0.362	-0.294	-0.490	-0.365	0.216	0.058	0.075	-0.155	0.084	0.277
OTU 272	0.027	-0.169	-0.026	-0.141	-0.262	-0.023	0.171	-0.170	0.103	-0.107
OTU 273	-0.132	-0.240	-0.298	-0.138	-0.373	0.167	-0.273	-0.174	0.131	0.437
OTU 276	-0.052	-0.370	-0.565	-0.439	-0.259	0.092	0.194	0.030	0.292	0.173
OTU 278	-0.20	-0.397	-0.485	-0.295	-0.346	0.060	0.165	0.223	0.061	0.190
OTU 280	-0.1	-0.226	-0.150	-0.091	0.120	0.198	-0.041	-0.120	0.000	-0.086
OTU 282	-0.15	-0.206	-0.462	-0.340	-0.237	0.229	0.080	0.104	0.051	0.231
OTU 283	-0.026	-0.311	-0.484	-0.231	-0.066	0.231	0.297	-0.266	0.441	0.382
OTU 285	-0.133	-0.216	-0.361	-0.457	-0.392	0.369	0.194	-0.192	0.309	0.200
OTU 288	-0.125	-0.235	-0.338	-0.381	-0.213	-0.034	-0.139	-0.346	0.186	0.304
OTU 289	-0.040	-0.310	-0.160	0.011	-0.169	0.204	0.044	-0.102	-0.066	0.132
OTU 292	-0.069	-0.141	-0.217	-0.276	0.072	0.104	0.048	-0.184	-0.044	0.130
OTU 295	-0.143	-0.405	-0.333	-0.341	-0.120	0.186	0.281	-0.235	0.204	0.116
OTU 296	-0.217	-0.407	-0.033	-0.116	0.103	0.113	-0.170	0.242	-0.025	0.261
OTU 297	-0.012	0.426	-0.031	-0.119	0.408	0.025	-0.249	0.160	-0.342	-0.027
OTU 298	0.029	0.336	0.352	0.191	0.253	-0.134	-0.321	-0.017	-0.388	-0.275
OTU 301	-0.041	0.265	0.307	0.232	0.217	0.316	-0.360	-0.002	-0.171	-0.217
OTU 305	0.179	0.605	0.530	0.323	0.322	-0.382	-0.201	-0.041	-0.341	-0.168
OTU 306	0.121	0.546	0.513	0.272	-0.001	-0.261	0.392	0.078	-0.453	-0.295
OTU 308	-0.104	0.333	0.346	0.204	-0.053	0.473	-0.258	0.268	-0.240	-0.356
OTU 310	-0.16	0.446	0.306	0.197	0.349	-0.225	-0.281	0.246	-0.507	-0.179
OTU 311	0.030	0.318	0.383	0.250	0.321	-0.305	0.548	0.094	-0.530	-0.406
OTU 313	0.030	0.543	0.230	0.115	0.193	-0.391	-0.348	0.114	-0.390	-0.206
OTU 314	0.124	0.438	-0.054	0.122	-0.051	-0.192	0.072	0.361	-0.174	-0.118
OTU 316	-0.089	0.520	0.321	0.141	0.164	0.217	-0.048	0.084	-0.252	-0.337
OTU 322	0.154	0.480	0.329	0.326	0.485	0.069	0.035	-0.050	-0.150	-0.193
OTU 324	-0.089	0.397	0.190	0.144	0.290	-0.120	-0.209	-0.228	-0.170	-0.119
OTU 326	-0.041	0.492	0.263	0.018	0.274	-0.225	-0.263	0.166	-0.391	-0.362
OTU 327	-0.278	0.382	0.189	0.102	0.012	-0.207	-0.130	-0.125	-0.260	-0.299
OTU 330	-0.046	0.401	0.253	0.008	0.224	-0.159	-0.222	-0.117	-0.358	-0.313
OTU 332	0.030	0.389	0.245	0.162	0.299	-0.370	-0.458	-0.117	-0.384	-0.400

PLEASE TURN THE PAGE

Author Haines David William

Name of thesis A Numerical Taxonomic Study Of The Brachylaena Discolor-uniflora Species Complex (compositae). 1988

PUBLISHER:

University of the Witwatersrand, Johannesburg

©2013

LEGAL NOTICES:

Copyright Notice: All materials on the University of the Witwatersrand, Johannesburg Library website are protected by South African copyright law and may not be distributed, transmitted, displayed, or otherwise published in any format, without the prior written permission of the copyright owner.

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.