

https://dspace.org/

The effect of social interactions on the production of mandubular gland signals in female african honeybees (apis mellifera adansoni)

Jackson, Michael Ernest

2015-06-26
http://hdl.handle.net/10539/18014

Downloaded from a DSpace repository. https://dspace.org/

Appendix Table 9d. A summary of the social activities of workers in Cage No. 4 (February 1980).

Social activity		Bee Number 1	2	3	4	5
Bee offers to others	(A)	17	27	40	24	10
Others accept offering	(B)	1	1	1	4	1
Others offer to bee	(C)	16	28	29	24	21
Bee accepts offering	(D)	1	4	2	0	1
Bee begs from others	(E)	8	10	4	5	6
Others give in response	(F)	4	6	3	1	4
Others beg from bee	(G)	5	4	6	14	4
Bee gives in response	(H)	4	1	3	8	2
Total times others feed bee	(D+F)	5	10	5	1	5
Opportunities bee had of feeding from others	(C+E)	24	38	33	29	27
Total times bee feeds others	(B+H)	5	2	4	12	3
Opportunities bee had of feeding others	(A+G)	22	31	46	38	14
Degree of Subordination		0.23	0.16	0.09	0.32	0.21
Degree of Dominance		0.21	0.26	0.15	0.03	0.19
Social Index		0.92	4.08	1.74	0.11	0.86
Age at death (days)		9	8	8	9*	9*

* Bees killed on ninth day

Appendix Table 9e. A summary of the social activities of workers in Cage No. 5 (February 1980).

Social activity		Bee Number 1	2	3	4	5
Bee offers to others	(A)	7	11	37	23	21
Others accept offering	(B)	1	1	6	3	4
Others offer to bee	(C)	24	20	25	18	12
Bee accepts offering	(D)	8	9	25	15	10
Bee begs from others	(E)	18	6	29	30	8
Others give in response	(F)	8	6	10	10	4
Others beg. from bee	(G)	15	3	20	15	39
Bee gives in response	(H)	6	1	7	6	17
Total times others feed bee	(D+F)	14	6	15	13	4
Opportunities bee had of feeding from others	(C+E)	42	26	54	48	21
Total times bee feeds others	(B+H)	7	2	13	9	21
Opportunities bee had of feeding others	(A+G)	22	14	37	38	60
Degree of Subordination		0.32	0.14	0.23	0.24	0.35
Degree of Dominance		0.33	0.23	0.28	0.27	0.19
Social Index		1.03	1.62	1.22	1.14	0.34
Age at death		9*	6	9*	9*	9*

*Bees killed on ninth day

Appendix Table 9f. A summary of the social activities of workers in Cage No. 6 (February 1980).

Social activity		Bee Number				
		1	2	3	4	5
Bee offers to others	(A)	5	9	18	18	9
Others accept offering	(B)	0	2	5	1	0
Others offer to bee	(C)	18	12	5	7	17
Bee accepts offering	(D)	3	2	0	1	2
Bee begs from others	(E)	5	5	3	1	11
Others give in response	(F)	2	3	2	0	8
Others beg from bee	(G)	4	7	4	5	5
Bee gives in response	(H)	2	5	3	4	1
Total times others feed bee	(D+F)	5	5	2	1	10
Opportunities bee had of feeding from others	(C+E)	23	17	8	8	28
Total times bee feeds others	(B+H)	2	7	8	5	1
Opportunities bee had of feeding others	(A+G)	9	16	22	23	14
Degree of Subordination		0.22	0.44	0.36	0.22	0.07
Degree of Dominance		0.22	0.29	0.23	0.12	0.36
Social Index		0.98	0.67	0.69	0.58	3.00
Age at death		9	9*	7	9	9*

*Bees killed on ninth day

Appendix Table 9h. A summary of the social activities of workers in Cage No. 8 (February 1980).

Social activity		Bee Number				
		1	2	3	4	5
Bee offers to others	(A)	16	56	66	28	23
Others accept offering	(B)	2	2	8	7	3
Others offer to bee	(C)	41	45	35	33	37
Bee accepts offering	(D)	2	7	5	5	3
Bee begs from others	(E)	4	1	26	7	5
Others give in response	(F)	4	10	9	5	3
Others beg from bee	(G)	3	7	13	23	3
Bee gives in response	(H)	5	3	9	12	2
Total times others feed bee	(D+F)	6	17	14	10	6
Opportunities bee had of feeding from others	(C+E)	45	66	61	40	42
Total times bee feeds others	(B+H)	7	5	17	19	5
Opportunities bee had of feeding others	(A+G)	31	63	81	51	28
Degree of Subordination		0.23	0.08	0.21	0.37	0.18
Degree of Dominance		0.13	0.26	0.23	0.10	0.14
Social Index		0.59	3.25	1.09	0.67	0.80
Age at death		6	6	9*	9*	7

*Bees killed on ninth day

Appendix Table 9i. A summary of the social activities of workers in Cage No.9 (February 1980).

Social activity		Bee Number				
		1	2	3	4	5
Bee offers to others	(A)	53	30	27	38	50
Others accept offering	(B)	7	4	3	0	3
Others offer to bee	(C)	36	39	24	43	36
Bee accepts offering	(D)	1	1	3	10	2
Bee begs from others	(E)	5	11	10	20	12
Others give in response	(F)	1	1	8	11	1
Others beg from bee	(G)	10	14	11	10	13
Bee gives in response	(H)	3	7	6	1	3
Total times others feed bee	(D+F)	2	2	11	21	3
Opportunities bee had of feeding from others	(C+E)	41	50	34	63	68
Total times bee feeds others	(B+H)	10	11	9	1	8
Opportunities bee had of feeding others	(A+G)	63	44	38	48	63
Degree of Subordination		0.16	0.25	0.24	0.02	0.13
Degree of Dominance		0.05	0.04	0.32	0.33	0.04
Social Index		0.31	0.16	1.37	16.00	0.38
Age at death		9*	9*	9*	9*	8

*Bees killed on ninth day

Appendix Table 9j. A summary of the social activities of workers in Cage No. 10 (February 1980).

Social activity		Bee Number 1	2	3	4	5
Bee offers to others	(A)	44	36	22	23	21
Others accept offering	(B)	3	4	2	1	1
Others offer to bee	(C)	24	30	30	33	29
Bee accepts offering	(D)	1	2	1	5	2
Bee begs from others	(E)	8	11	10	5	12
Others give in response	(F)	0	6	3	3	5
Others beg from bee	(G)	9	16	10	1	10
Bee gives in response	(H)	2	8	3	0	4
Total times others feed bee	(D+F)	1	8	4	8	7
Opportunities bee had of feeding from others	(C+E)	32	41	40	38	41
Total times bee feeds others	(B+H)	5	12	5	1	5
Opportunities bee had of feeding others	(A+G)	53	52	32	24	31
Degree of Subordination		0.09	0.23	0.16	0.04	0.16
Degree of Dominance		0.03	0.20	0.10	0.21	0.17
Social Index		0.33	0.85	0.64	3.09	1.06
Age at death		9*	8	8	4	9*

*Bees killed on ninth day

Author Jackson M E
Name of thesis The effect of Social Interactions on the production of Mandibular Gland Signals in Female African Honeybees (Apis Mellifera Adansonii L.) 1982

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.

Author Jackson M E
Name of thesis The effect of Social Interactions on the production of Mandibular Gland Signals in Female African Honeybees (Apis Mellifera Adansonii L.) 1982

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.