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# THE BPI – 50 YEARS OF PALAEONTOLOGICAL ACTIVITY

by

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**ABSTRACT**

The Bernard Price Institute for Palaeontological Research at the University of the Witwatersrand was established from an endowment made by Bernard Price in 1945. Now, a mere 50 years later, the Institute ranks as a prominent palaeontological research centre in Africa. It curates large collections of fossils including Karoo reptiles, mammals from the Makapansgat valley and other Plio-Pleistocene sites, invertebrates from the Bokkeveld and Zululand, and has a large palaeobotany herbarium. The Institute produces the journal *Palaeontologia africana*, the only journal in Africa dedicated to the publication of palaeontological papers. The BPI is closely affiliated to the Department of Palaeontology and Palaeoenvironmental Studies, the only department of palaeontology at a South African University. During the 50 years of its existence the BPI has played an important role in the advancement and dissemination of palaeontological knowledge in southern Africa.

KEYWORDS: Bernard Price Institute, University of the Witwatersrand

## INTRODUCTION

On 26 October 1995 the Bernard Price Institute celebrated 50 years of palaeontological endeavour, a milestone that owes its origins to the infectious enthusiasm of one of South Africa's greatest scientists combined with the foresight of a generous Johannesburg philanthropist. "*In 1897 there arrived in Cape Town the man who was to change the face of South African palaeontology. Robert Broom, a medical doctor intensely interested in fossil mammal-like-reptiles, had come to South Africa*" (Cluver & Barry 1977 p325). Broom changed the face of South African palaeontology in many ways. In 1945, while employed at the Transvaal Museum, he presented a lecture at the University of the Witwatersrand stressing the need for the collection and preservation of Karoo fossils. Fortuitously, Bernard Price, at that time Managing Director of the Victoria Falls Power Company, was present and responded to Broom's plea by agreeing to provide £2000 annually, on condition that the fossil material collected be curated by the University of the Witwatersrand. Immediately a small "Committee of Palaeontology" was established under the chairmanship of Professor C.J. van der Horst, Head of the Department of Zoology. This led to the "Bernard Price Foundation for Palaeontological Research" in 1946, and ultimately in February 1949, the Bernard Price Institute for Palaeontological Research, which was administered by a Board of Control with Professor van der Horst as both Chairman and Honorary Director of the Institute. After the death of Bernard Price in 1948 his son Bernard (Bobby) was elected a member of the Board of Control and still serves in that capacity to this day. On the sudden death of Professor van der Horst he was succeeded as chairman by the Head of the Department of Geology, Professor T.W. Gevers, and Dr S.H. Haughton (a member of the Board since 1947) became the Honorary Scientific Director. Dr Basil Cooke, now a geologist and palaeontologist of international repute, was also involved in the initial setting up of the Institute, later serving as Chairman of the Board of Control.

Figure 1: Dr Bernard Price – benefactor of the Institute.

Broom not only planted the seed that led to the establishment of the BPI, but also staffed it with one of

his protégés. In 1912 he had met up with Croonie Kitching, an overseer of road construction in the Graaff-Reinet and Nieu Bethesda districts, and together they collected fossils in that area. Croonie in turn encouraged three of his sons (James, Ben and Scheepers) in this skill. Following Broom's advice, on 26 October 1945 the young James Kitching, recently returned from military service in Italy, was appointed as the first member of staff of the BPI in the joint capacity of Field Officer and Laboratory Technician. Such was the drive and enthusiasm of Kitching to collect fossils that five days later, on 1 November, he set off by train to the Graaff-Reinet district where he had grown up and which he knew intimately. Despite being rationed to only 45 litres of petrol per month and having to use his mother's car, Kitching succeeded in collecting more than 200 well-preserved fossils during the first trip. Since then the BPI and James Kitching have been synonymous and he has undertaken many more field trips to the Karoo. From records at the BPI it is evident that James has spent some 216 months in the field in the Karoo alone, a cumulative period of more than 18 years (Table 1). In addition James Kitching spent many months at Makapansgat excavating the Cave of Hearths, and collecting fossil mammals from the Limeworks site.

Until the early 1940s the most important

**TABLE1.**
**Some collecting trips of J W Kitching (from 1952 to 1989 he was accompanied by R Huma)**

| | |
|---|---|
| Nov 1945 - March 1946 | Graaff-Reinet with B J Kitching. 200 therapsid skulls. |
| Oct 1946 - Feb 1947 | Karoo with B J, S C Kitching. 474 therapsid skulls. |
| Nov 1948 - Feb 1949 | Murraysburg, Graaff-Reinet. |
| March 1949 | Bethulie, Burgersdorp, Murraysburg, Beaufort West with D M S Watson (London University). |
| 1950 -1958 | Regular trips of 3-4 months to Beaufort Group. |
| 1954 | Harrismith and eastern Free State. Dinosaurs collected. |
| 1955 (3.5 months) | Burgersdorp, Murraysburg, Graaff-Reinet, Beaufort West, Aberdeen, Victoria West. 300 specimens. |
| July 1956 | Bergville, Estcourt. *Lystrosaurus, Thrinaxodon* specimens. |
| Oct - Nov 1956 | Burgersdorp, Cathcart, Leeu-Gamka, Beaufort West, Victoria West, Murraysburg, Aberdeen, Morgan Bay, Bulwer and Impendhle. 360 specimens. |
| 1957 | Harrismith, Oliviershoek, Golden Gate. |
| Sept - Oct 1958 | Impendhle, Bulwer, Dordrecht, Burgersdorp, Murraysburg with Manten (geologist from Utrecht, Holland). On one farm in the Murraysburg district a slab containing 40 amphibian skulls and skeletons was unearthed. |
| June 1958 | Oliviershoek Pass, Bergville, Harrismith. |
| Jan - Feb 1959 | Murraysburg with A S Brink, Stebbins (University of California). 50 amphibian skulls. |
| July - Oct 1963 | Upper Luangwa Valley Zambia with A R Drysdall. |
| 1961 (3 months) | Throughout Karoo with N. Hotton III (Smithsonian Institute, Washington). 200 skulls. |
| 1961 (4 months) | Luangwa Valley Zambia with A R Drysdall. |
| 1962 (1 month) | Lesotho (Elliot & Clarens Formations) with E Jarvik (Sweden), K A Kermack (University College, London). |
| 1962 (2 months) | Beaufort Group with E Jarvik (Sweden), D Sigogneau (Institute de Paleontologie, Paris). 98 specimens. |
| 1962 | Traverse through Karoo with E H Colbert (American Museum of Natural History, New York). 100 specimens. |
| June - Aug 1963 | Upper Luangwa Valley Zambia. Combined expedition of the Natural History Museum and University of London (J Attridge, A Charig, B Cox). |
| Sept 1963 | Bergville with E P Plumstead, Haas (Jerusalem). |
| 1964 (2 months) | Karoo excursion with R Parrington (Cambridge University), N Hotton III, (Smithsonian Institute, Washington). |
| May 1964 | Graaff-Reinet, Middelburg with N Hotton III (Smithsonian). |
| 1964 | Springfontein. |
| Aug - Oct 1965: | Gariep Dam. 410 Karoo vertebrates, 800 mammals from archaeological excavations. Material placed in National Museum, Bloemfontein. |
| 1966 (2 months): | Van der Kloof Dam. 553 specimens. |
| 1967 | Victoria West, Richmond, Gariep Dam with C S Churcher. |
| 1970 (6 months) | Antarctica. |
| 1971 | Harrismith, Clarens, Thaba N'chu. |
| 1972 | Graaff-Reinet, Aliwal North, Rouxville. 20 specimens. |
| 1973 | Graaff-Reinet, Pearston with R Carroll (Redpath Museum, Canada). 28 skulls. |
| Oct 1973 | Harrismith, Bergville with 4 Japanese geologists. |
| 1974 (2 weeks) | Etjo Mountain & Otjiwarongo, Namibia with A R I Cruikshank, A W Keyser. 30 well preserved therapsids and archosaur fragments. |
| 1974 (Sept - Oct) | Victoria West, Pearston, Graaff-Reinet, Rouxville with M Kitching. 180 specimens. |
| 1975 (May) | Harrismith, Oliviershoek Pass with A R I Cruickshank, J Cosgriff (Wayne State University) |
| 1975 (Nov) | Pearston with J Brown, B Turner. |
| 1978 | Bethlehem, Fouriesburg with J A Hopson, A Busbey (University of Chicago), J W A van Heerden, M J Nyaphuli (National Museum, Bloemfontein). |
| 1980 | Ficksburg, Clocolan. |
| 1982 | Prince Albert with B Rubidge, M J Nyaphuli (National Museum, Bloemfontein). |
| 1983 | Clocolan, Ladybrand with M A Raath & B S Rubidge (National Museum, Bloemfontein). |
| 1984 (2 months) | Barkly East, Lady Grey with C E Gow, F Durand. |
| 1990 | Kestel, Paul Roux, Senekal with J P Welman (National Museum, Bloemfontein), G Groenewald (Golden Gate National Park). |
| 1990 | Maclear with M A Raath (Port Elizabeth Museum), R Shone,G Rossouw (University of Port Elizabeth). |
| 1991 | Laingsburg with B S Rubidge & M J Nyaphuli (National Museum, Bloemfontein), M A Raath (Port Elizabeth Museum), R M H Smith, A Crean, P October (S A Museum, Cape Town). |
| 1992 (1 week) | Aliwal North, Burgersdorp, Sterkstroom with P J Hancox, B S Rubidge. |
| 1992 (8 weeks) | Laingsburg. |
| 1993 (4 weeks) | Laingsburg, part of the time with L Freeman, E Latimer, R Lewis, P Mukanela, J Nyaphuli, B Rubidge. |
| 1993 (6 weeks) | Murraysburg, Aberdeen |
| 1994 | Senekal, Zastron, Aliwal North, Burgersdorp with M Shishkin, (Palaeontological Institute, Moscow), B S Rubidge, P J Hancox. |

palaeontological collections in South Africa were housed at the South African Museum in Cape Town, the Albany Museum in Grahamstown, the National Museum in Bloemfontein and the Transvaal Museum in Pretoria. Today however the BPI is also an important palaeontological centre in South Africa. From initial accommodation in a small army hut, the Institute has continued to expand and has outgrown three different buildings through the years. Today the BPI houses a large collection of fossils including Karoo reptiles and amphibians, invertebrates from the Bokkeveld, Zululand and the Sundays River Valley, and mammals from Kalkbank and the Makapansgat Limeworks and Cave of Hearths sites. It also has the largest palaeobotany herbarium in Africa, and a comparative collection of modern vertebrates.

## Plio-Pleistocene Research

Price was so impressed by the large number of fossils collected by James Kitching during the first six months of operation that, with the prompting of Professor Raymond Dart, he doubled the fund of £2000 to broaden the scope of research to include the Plio-Pleistocene fossils from the Makapansgat caves near Potgietersrus.

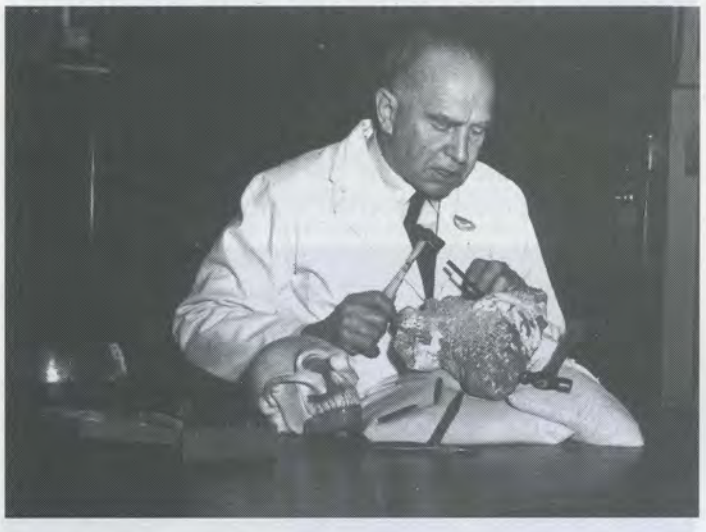

Figure 2: Raymond Dart preparing fossils. *Photo: A.R. Hughes*

As this operation required more manpower, James' brothers, Ben and Scheepers, were appointed initially to assist with the excavation of the Cave of Hearths archaeological site and later to undertake the huge task of sorting through dumps of fossiliferous breccia left by the limeworkers. From discoveries at the Limeworks site, Dart pioneered taphonomic studies in South Africa and developed his famous theory of the "osteodontokeratic (O.D.K) culture" of the australopithecines, an idea that was to play an important part in the development of modern ideas of cave taphonomy (see Brain this volume). Since 1945 the BPI has been involved with research on the various cave sites on the farm "Makapansgat". Members of staff such as Brian and Judy Maguire have made important scientific contributions in the development of this site.

Figure 3: Sorting through limeworker's dumps at Makapansgat in search of fossils in 1949.

Archaeological sites were also researched by the Institute. In 1946 James and Ben Kitching assisted B D Malan with excavations at the Stone Age site of Rose Cottage Cave at Ladybrand, and in 1957 more than 3200 bone specimens (associated with Middle Stone Age lithic artefacts) from an open site at Kalkbank near Pietersburg were prepared and studied by Dart and Kitching. Bone breakage patterns from this Middle Stone Age site and the Makapansgat Limeworks osteodontokeratic material were compared. At one time the Kalkbank accumulation was considered to confirm Dart's osteodontokeratic hypothesis.

During 1947 it became necessary to establish a collection of modern vertebrate skulls and skeletons which could be used as a framework of comparison for the study of fossils. Although numerous specimens had been added to this collection in the formative years, largely through the efforts of Kitching while on his extended field excursions, the first serious attempt to build up this collection was undertaken in 1957 by Kitching and Alun Hughes of the Medical School when they paid a visit to the Zaka district of Zimbabwe. Here they collected skeletons of crocodiles, waterbuck, kudu, buffalo and elephant which were being culled under government authority. At a later stage a large collection of leopard, hyena, baboon and rhebok skulls and other material was collected through the efforts of Brian and Judy Maguire, with the co-operation of the Morea Estates, a private nature reserve near Klaserie in the

Figure 4: Initiation of the building of the research house at Makapansgat, November 1947.

Figure 5: Stalwarts of Makapan, Alun Hughes (left), Gordon Peppercorn (centre), James Kitching (right), reminiscing at the retirement function for James Kitching in 1990.

eastern Transvaal. Today this collection, which includes skeletal material of numerous rare mammals and reptiles, is a most useful asset and is used extensively by archaeologists, palaeontologists, palaeo-anthropologists and zoologists for a variety of research projects.

**SIDNEY H HAUGHTON – DIRECTOR 1949-1974**

In 1949, Sidney Haughton, the recently retired Director of the Geological Survey of South Africa and member of the Board of Control of the Institute, was appointed honorary director. During the latter half of the same year A S (Ian) Brink, who had recently obtained his doctorate at London University, was appointed as the Institute's first scientific officer. He published extensively on the morphology and taxonomy of Karoo fossils.

Figure 6: Sidney Haughton – first director of the Institute.

Because of the ever-expanding fossil collections gathered from both the Karoo and various sites at Makapansgat, storage space became an increasing problem in the little wooden military hut on the corner of Yale and Jorissen Streets. In 1952 the Institute moved into two larger huts which had previously been occupied by the Oral and Dental Hospital of the University. The BPI was again later to outgrow its premises and accommodation problems were overcome in 1963 when the University offered Douglas Smit House, which had formerly been a student residence. The Institute now had ample space for the storage of growing collections, a library, laboratories, lecture rooms, and the nucleus of a museum which served the dual interests of students and the public.

One of the most time-consuming and important tasks in palaeontology is the careful preparation of fossil material from the surrounding rock so that it can be researched. Initially this was undertaken largely by the Kitching brothers themselves. In 1946 Piet Huma, who had previously prepared fossils for Broom, was appointed as the first full time preparator at the BPI. The following year he was joined by his son Regent (Lukas) who later accompanied James Kitching on all his collecting expeditions to the Karoo, loyally serving the Institute in this capacity for 42 years until his retirement in 1989. As the amount of fossil material in the collections increased, swelled in particular with fossils

Figure 7: Brian Maguire photographed at the Makapansgat research house in 1960. *Photo: A.R. Hughes*

Figure 8: The old "milk van", the first field vehicle of the BPI with James Kitching "rebooting" behind.

from the Makapansgat Limeworks, a growing need for even more assistance with fossil preparation arose. In the early 1950s Dart obtained money from the Wilkie Foundation and the CSIR and employed up to ten preparators to extract fossil bones from the growing collection of Limeworks material. The increased number of preparators eased the bottleneck of unprepared material and allowed for speedier access to fossils by researchers.

Dart retired from the Chair of Anatomy at the Medical School in 1957 and was offered rooms and a laboratory at the BPI to continue his work. Later, during 1965, Drs Edna P Plumstead, a palaeobotanist of international repute, and George F Hart, a micropalaeontologist, transferred from the Geology Department to the BPI, and so the research interests of the Institute were broadened to include: Karoo vertebrates (A S Brink), palaeobotany (E P Plumstead), micro-palaeontology (G F Hart), and Quaternary research (R A Dart).

Until this stage, palaeobotanical research had not been undertaken by the BPI, but with Plumstead and the large palaeobotanical collection from the Geology Department, this field of research became an important function, and Brink's dream of uniting all branches of palaeontology under one roof were realised.

The fossil plant collections inherited from the Geology Department included a large collection donated by the late Dr T L Leslie, and the much larger Le Roux collection from the rocks of the Ecca Group near Vereeniging. At the BPI this collection was maintained and extended by Plumstead and her students Ann Anderson, John Anderson and Heidi Anderson (nee Schwyzer), Anna Malleson (nee Beneke), Judy Maguire, Shirley Smithies, and Rosemary Falcon. From 1975-1977 the herbarium was curated by Dr J T Brown, a graduate from the University of Montana, who was the palaeobotanist. During the 1980s this task was undertaken by Dr R J Rayner, with the assistance of his students Marion Bamford, Ian McKay and Saskia Waters. During this time extensive collections of fossil plants and insects from Cretaceous crater lake deposits at Orapa, Botswana were made.

Plumstead was invited to study the first plant fossils collected in Antarctica by members of the British Trans-Antarctic expeditions of 1955-1958: she demonstrated that identical plant fossils were found in Antarctica, South America, South Africa, India and Australia, and so convinced a still-sceptical scientific community that the ancient continent of Gondwana had indeed once existed.

Hart resigned in 1966 to take up a post at the University of Louisiana in the USA, and was succeeded by Dr R J Davey of Nottingham and Sheffield Universities, who was appointed as a CSIR Fellow. After Ian Brink resigned to assume the Directorship of the Museums of Man and Science in Johannesburg in 1965, Arthur Cruickshank, a graduate of Cambridge University, was appointed deputy director in 1967. In the same year John Anderson joined the staff as a palynologist to examine borehole cores for SOEKOR, who were then involved in petroleum exploration in the Karoo. Judy Maguire was appointed part time lecturer and undertook taphonomic research at Makapansgat. Soon afterwards Chris Gow was appointed research officer, and undertook research initially on *Milleretta* and later on early diapsids. Brian Turner became the sedimentologist on the staff, and pioneered modern sedimentological techniques on the rocks of the Karoo.

In 1970 South Africa hosted the second meeting of the I.U.G.S. Sub-commission on Gondwana Stratigraphy and Palaeontology, and the BPI staff played a prominent role in the organisation of this event. Many international scientists took part and participants from all over the world still recall the unique week-long geological and palaeontological excursion across the Karoo attended by 150 delegates.

Kitching's reputation as a fossil hunter spread far and wide. One of the highlights of his illustrious career was being invited in 1970 to accompany the United States Antarctic Research Group. Here he discovered numerous fossils of *Lystrosaurus* Zone age – thus providing corroborative palaeontological evidence for the close correlation between Antarctica and South Africa during Gondwanan times. At this stage James Kitching was still very active with fieldwork in the Karoo, and his son Matthew, who was also gifted with the talent of spotting fossils in the field, joined the

Figure 9. James Kitching (left) and Ian Brink sharing famous Kitching field cuisine on Hoeksplaas, Murraysburg, in 1952.

Figure 10: Chris Gow examining the second *Megazostradon* specimen discovered near Clocolan.

Institute in 1974 as a field assistant to his father, a position he filled with distinction until he transferred to the Geology Department in 1976.

With growing numbers of staff and students in the late 1960s and resultant increased research activity, the collections grew rapidly and accommodation once again became a problem. In 1971 building extensions to Douglas Smit House commenced to include a laboratory for SOEKOR researchers, and stores for Karoo fossil reptiles, Makapansgat material, and a palaeobotanical herbarium.

## STANLEY P JACKSON – DIRECTOR 1974-1978

Sidney Haughton retired as director in 1974, and was succeeded by Stanley Jackson as the first full-time director. Professor Jackson, who had retired as Deputy Vice-Chancellor the previous year, and had previously been head of the Geography Department, was thoroughly familiar with the innermost workings of the University. He established a formal teaching and research structure at the Institute, and integrated the activities of the BPI with those of other departments on campus.

During Jackson's directorship the Institute joined the University interdepartmental programme on coal research, and Dr Rosemary Falcon was appointed to establish a coal petrography laboratory. The palaeontology section of SOEKOR moved into the ground floor of the Douglas Smit Building in 1974, thus providing yet another area of expertise. This mutually beneficial arrangement lasted until 1986 when SOEKOR moved its headquarters to Cape Town.

During 1977 the Institute hosted a two day symposium on Karoo Palaeontology, attended by delegates from South Africa and Zimbabwe. At this gathering, one of the few palaeontological meetings organised in South Africa up until that stage, the idea of establishing a Palaeontological Society of Southern Africa took root. The idea had been conceived by Dr Jacques van Heerden of the National Museum, Bloemfontein, and the 1977 symposium gave it the impetus needed to become a reality. The PSSA has since gone from strength to strength and over the years various members of the BPI staff have played leading roles in it.

## MICHAEL A RAATH – DIRECTOR 1978 - 1987.

In 1978 Mike Raath was appointed Director and at the same time Head of the newly established Department of Palaeontology and Palaeoenvironmental Studies, the only Department of this type at a South African University.

Up to that time most Karoo research done by the BPI had centred on mammal-like-reptiles and plants. The arrival of Raath, whose primary research interest was dinosaurs, stimulated research on these creatures and a field programme to collect fossils from the "Stormberg" rocks in the Free State and Eastern Cape was launched and maintained by Kitching.

Under Raath's guidance the BPI emerged as an important teaching department at the University. He was also involved in establishing a unified School of Earth Sciences, of which he was the first chairman. Raath brought out from Paris Professor Armand de Ricqlès, a palaeo-bone histologist of international repute, in order to set up a bone histology laboratory.

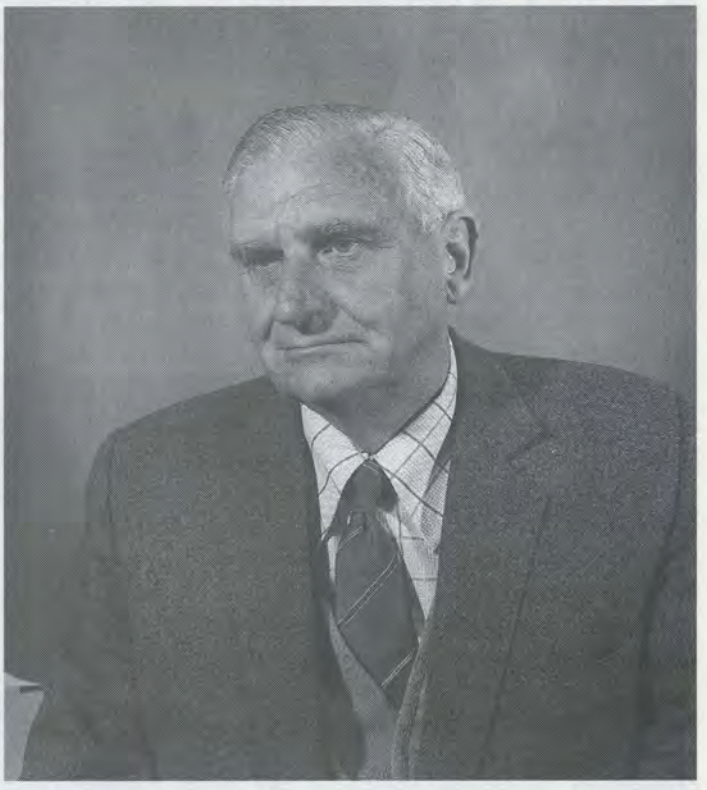

Figure 11: Stanley Jackson, second director of the Institute

In 1983 Dr R J (Dick) Rayner, a graduate of the University College of Cardiff, was appointed palaeobotanist to curate the large and important palaeobotanical herbarium. Soon afterwards the BPI was approached by the Orapa Mine in Botswana to study the rich fossil flora from the Cretaceous crater-lake deposits at the mine. Rayner encouraged several students to research the remarkable fossil flora and arthropod fauna from this locality.

Early in the 1980s the University acquired the Showgrounds of the Witwatersrand Agricultural Society when they moved premises to NASREC in Johannesburg. This solved some major accommodation

Figure 12: James Kitching (left), Edna Plumstead, Raymond Dart and Mike Raath at the combined celebration of Dart's 90th birthday and the 60th anniversary of his announcement of the discovery of *Australopithecus*.

problems on the old "East Campus" as many of the exhibition halls could now be occupied by University departments. The building vacated by the Maintenance Department on the East Campus was allocated to be shared by the Archaeology Department and the Bernard Price Institute (Palaeontology). The task of planning for this move landed on Raath's shoulders while he was on sabbatical leave, forcing him to return to duty. With the assistance of James Kitching the plans were put into effect and the move successfully carried out with almost no damage to any of the thousands of fossils in the huge collections.

The building into which the Institute moved in 1985, since named the van Riet Lowe Building, was co-incidentally situated on the site of the original army hut where the BPI Palaeontology had started four decades earlier. The Institute had gone full circle, but now it returned with more staff and a large collection of priceless fossils. Because of the large size and the sheer weight of the fossil collections, let alone their delicate nature, this move was extremely disruptive to research and teaching activities. Although the Institute now had less space for its various activities, the new location on the East Campus next to the BPI Geophysics building ensured that it was more centrally positioned and accessible to students.

## JAMES W KITCHING – DIRECTOR 1987-1990.

Professor James Kitching, who had been Deputy Director since 1979, became Acting Director when Mike Raath resigned to take up the directorship of the Port Elizabeth Museum and Oceanarium in 1987. Kitching was able to consolidate the BPI in its new premises in the van Riet Lowe Building because, although the Institute had been physically moved by the time Raath left, there was still a great deal of sorting out of the collections to do. The re-establishment of these collections was a priority and occupied much of Kitching's time. Even so, he was able to fulfil his teaching obligations and undertake some fieldwork. During this period he and Johann Welman of the National Museum in Bloemfontein established that the *Cynognathus* Zone, the youngest biozone of the Beaufort Group, was present in the northern part of the Karoo Basin, and not restricted only to the south. This discovery had important implications for interpreting the depositional history of the rocks of the upper Beaufort Group (Hancox & Rubidge, this volume).

During the directorship of Kitching several projects were completed. Anusuya Chinsamy, now a palaeo-bone histologist, completed her PhD study initiated under Raath to study the bone histology of the South African dinosaurs *Massospondylus* and *Syntarsus*. This was the first time that histological studies had been carried out on dinosaur bone in South Africa.

## BRUCE S RUBIDGE – DIRECTOR 1990-

James Kitching retired in May 1990 after 45 years of dedicated service to the University. Bruce Rubidge, previously Head of the Palaeontology Department of the National Museum in Bloemfontein, was appointed his successor as Director of the Institute and at the same time Head of the Department of Palaeontology and Palaeoenvironmental Studies. Kitching was allocated working space at the BPI and appointed Honorary Research Professorial Fellow. Retirement to Kitching made no difference to his great palaeontological productivity and in the five years that he has been retired he still diligently works in his office and on the collections every day.

Since 1990, South Africa has emerged from political isolation, making it possible once more to set up

collaborative programmes with palaeontologists from other countries and so increase the research productivity of the Institute. In 1993 and 1994 Dr David Dilkes, recently graduated from the University of Toronto, spent 18 months at the Institute as a postdoctoral fellow researching fossil rhynchosaurs from the Beaufort Group. Dr Michael Shishkin from the Palaeontological Institute in Moscow spent five months at the BPI as a W D Wilson travel Fellow researching fossil amphibians from the *Lystrosaurus* and *Cynognathus* Zones of the Beaufort Group.

Dr Anusuya Chinsamy was appointed to a contract lecturing position in the Department of Palaeontology and Palaeoenvironmental studies for two years. Because of the demand for contract research work to be undertaken for industry, Drs Marion Bamford (palaeobotanist) and Ann Cadman (palynologist) also joined the staff. The number of postgraduate students has increased, and so too the number of research projects the Institute has been able to undertake.

Two facilities which were present in the Douglas Smit building were set up in the van Riet Lowe Building. The re-establishment of the palynology laboratory in 1991 has proved its worth in the number of contract research projects undertaken from this laboratory, as well as a training facility for postgraduate students. In 1993 the Palaeontology Museum was re-established under the guidance of principal technician Richard Lewis and artist Imogen Berry, recently retired from the Transvaal Museum. This facility has been a great asset in creating an awareness of, and interesting students in, the palaeontological wealth of South Africa.

During 1992 the BPI hosted the 8th Biennial Conference of the Palaeontological Society of Southern Africa. Despite the important involvement of the Institute in the establishment of this Society, largely through the efforts of Raath and Kitching, this was the first meeting of the Society to be hosted by the Institute. More than 70 delegates attended, making this the largest gathering of the PSSA to be held to date.

Apart from its research and teaching legacy, "the strengths of the Institute lie in the fields in which it has worked since its inception. Its collections are known and respected in palaeontological circles around the world; they undoubtedly provide an international scientific resource of considerable standing and significance" (Raath 1986, p18). The steady stream of visiting scientists since 1949 to undertake research on specimens in the various collections bears testimony to their international importance. Recently, with the assistance of student helpers Grigor Aitken, Heidi Fourie, John Hancox, Elizabeth Latimer and Michael Raum, much attention has been given to the curation of, the remarkable collections, and great progress has been made in transcribing the catalogues onto computer database.

The BPI has now reached its half century; apart from its research activities, it has become a valuable teaching department in the University, and curates a fine collection of fossils. It has also distributed high quality casts of important specimens to institutions worldwide. In addition it produces the only African journal dedicated to the publication of palaeontological papers. *Palaeontologia africana* first appeared in 1953 under the editorship of Sidney Haughton and continued under Mike Raath. More recently produced under the guidance of an editorial panel with Bruce Rubidge as editor and Chris Gow and Dick Rayner as associate editors and a panel of international consulting editors, it is now into its 32nd volume.

## CONCLUSION

This brief summary of activities of the BPI highlights the important role that the staff and students of the Institute have played in the advancement and dissemination of palaeontological knowledge in southern Africa. This is illustrated by the fact that four scientists who have been employed by the Institute; Sidney Haughton, Edna Plumstead, James Kitching and Rosemary Falcon, have been awarded the Draper Memorial Medal of the Geological Society of S.A. - The highest award of this society for contributions to the development of Earth Sciences in South Africa.

During its 50 years of existence the Bernard Price Institute for Palaeontological Research has achieved international standing as an important centre of active palaeontological teaching and research. It is also the custodian of a large part of the palaeontological heritage of South Africa.

### ACKNOWLEDGEMENTS

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