

Standing on the shoulders of colourful giants: 50 years of zoological research in southern Africa

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On the occasion of a symposium celebrating the 50th anniversary of the Zoological Society of Southern Africa (ZSSA), the history of the Society is outlined in terms of its different 'growth stages' under different political dispensations and geographical headquarters, of its 34 organized symposia and of the 34 outstanding zoologists who have been awarded the Society's highest honour, the Gold Medal. The office bearers of the ZSSA Council from its inception to the present are documented. Changes to the Society's journal and newsletter are briefly discussed. It is concluded that the Society faces 'midlife' with a solid foundation and positive future, but complacency should be avoided. In particular, the Society's journal requires invigoration and enthusiastic commitment, particularly from high-ranking members, to submit excellent manuscripts to the journal, so as to boost its impact factor and allow it to become globally competitive.

Key words: Zoological Society of Southern Africa, Gold Medal, symposia, zoology, history.

INTRODUCTION

This article is based on a plenary talk delivered at the 50th Anniversary Symposium of the Zoological Society of Southern Africa (ZSSA) held at Illovo, KwaZulu-Natal from 22–25 July 2009 and hosted by the University of KwaZulu-Natal. Erasmus (1984) summarized the history of zoological research in southern Africa during the first 25 years of the ZSSA, from 1959 to 1984, in terms of organized symposia, ZSSA Council membership, Gold Medal winners and the journal and news bulletin. In this article, these aspects are updated. Both the Society and zoology in southern Africa generally have benefitted from the considerable international stature and dedication of those who served on Council over the past 50 years and those who were the recipients of the Society's highest award of honour, the Gold Medal. We stand strong today on the shoulders of these giants. Interesting personalities and eccentricities (and often extraordinary kindness, courage and humility) of these 'colourful' giants have enriched the history of our Society. We briefly outline the Society's history in terms of 'growth stages' associated with different political dispensations and geographical headquarters. In terms of the academic boycott, racial

policies and a strong anti-evolutionary emphasis, the apartheid era had a negative impact on the development of zoology in South Africa, but the ZSSA progressed regardless. Certain perennial issues of identity (geographical, linguistic and thematic) are also discussed.

The Society has established a vibrant website (www.zssa.co.za), as well as a complete set of archives formerly housed at the Cory Library of Rhodes University but relocated to the Durban Natural Science Museum in 2004. These archives were enriched during the process of researching this article by numerous donations of information, anecdotes and over 70 historical photographs. A selection of these historical photographs can be viewed on the above-mentioned website. A range of early documentation (mostly pre-1980), including minutes of Council meetings, AGMs and correspondence is housed in the archive store of the Transvaal Museum (Northern Flagship Institution).

BIRTH & 'CHILDHOOD' OF THE ZSSA: 1959–1978

Zoology in southern Africa before 1959

Although vibrant zoological research in southern Africa long pre-dated the birth of the ZSSA in

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March 1959, the time was certainly ripe in 1959 for a society to champion and unify the discipline. A founding member of the ZSSA, C.A. Du Toit provided a useful review of zoological research in South Africa at that time (Du Toit 1961), a time where classical zoology was being invigorated by 'modern' new techniques (such as electron microscopy). Du Toit (1961) emphasized the role of the South African Museum (founded in 1825), which provided some of the founding fathers of zoological research in fields such as entomology (Trimen, Péringuey), mammalogy (Smith, Sclater) and marine biology (Barnard). Other early South African zoological giants included Gilchrist (first chair of Zoology at the South African College, later University of Cape Town, from 1905 to 1926) and Broom (first professor of Zoology at Victoria College, later Stellenbosch University, from 1903 to 1910) in the Cape; Fantham, Van der Horst, Balinski, Dart and Tobias at Wits University (founded in 1921); Broom, Von Som, V.F.M. Fitzsimons, Roberts and Brain at the Transvaal Museum (founded in 1892 as the 'State Museum'); F.W. Fitzsimons at the Port Elizabeth Museum and Snake Park; Duerden at the Albany Museum (founded in 1855); J.L.B. and M.M. Smith, Omer-Cooper and Ewer at Rhodes University (founded in 1905); Warren, Lawrence and Pringle at the Natal Museum (founded in 1904); Chubb and Clancey at the Durban Natural Science Museum (founded in 1887); and S.F. Bush, Head of Zoology from 1931 to 1967 at Natal University (founded in 1910 as 'Natal University College') (see Du Toit 1961; FitzSimons & Brain 1972; Quickelberge 1987; Brain 1992; Brown 2003; Hodgson & Craig 2005; Grobler 2006; Guest 2006; Hedge & Taylor 2008).

The birth and early period of the ZSSA

The Society was founded on 11 March 1959 in Cape Town. It is worth repeating a quotation from the first secretary, Frank Talbot, cited by Erasmus (1984):

A few of us dreamed up the idea of the Society in Cape Town in 1958/59 and persuaded John Day to be the first president [but see below]. If I remember correctly, I was the first secretary, and Mary Kraft edited the newsletter. Mary Kraft and I wrote the constitution, trying to make the Society truly southern, not south, and struggling to be representative, both disciplinarily and geographically. We had a cover printed for the newsletter and then Sydney Kennemeyer (a technical aide of the South African

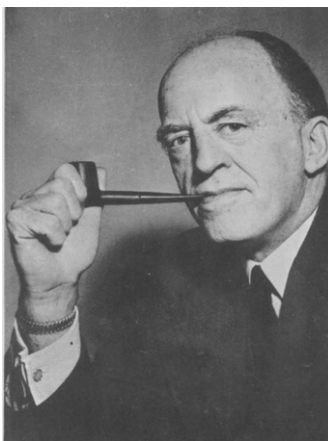


Fig. 1. The first president of the ZSSA, the late entomologist S.H. Skaife (from *ZSSA News Bulletin* 1(1)).

Museum and still there) and I roneed it after hours on a machine in the Marine Biology Department's Fish Collection at the Museum (where I was Assistant Director and Head of the Marine Biological Department). This was then stapled to the cover sheet and sheared—a crude hand job, but which served us for many years.

The Society was thus formed with the aim of promoting zoology (through conferences and a journal) across all subdisciplines and across all of southern (not South) Africa (extended to include countries such as the Congo, Malawi and Zambia). The first president was the distinguished entomologist, S.H. Skaife (Fig. 1), not J.H.O. Day as indicated erroneously in the quotation above (Table 1). He was followed by B.I. Balinski (1961/2) and C.A. Du Toit (1962–1965) before J.H.O. Day (Fig. 2) took over from 1966–1969 (after serving as Vice President



Fig. 2. A young John Day FRSSAf (Vice President 1964–1966; President 1966–1969; Gold Medal winner in 1972) with students at a University of Cape Town Zoology Department student field trip to Langebaan Lagoon in the 1950s. (© UCT Zoology Department).



Fig. 3. C.K. Brain FRSSAf, renowned palaeoanthropologist and past president of the ZSSA (1974/5) and Gold Medal winner in 1979 (© Northern Flagship Institution: Transvaal Museum Library).

from 1962–1964). The Headquarters of the ZSSA remained in the Cape for almost 20 years, from 1959–1978. Other Council stalwarts during this period (many of whom were later awarded Gold Medals and went on to achieve world acclaim) included Brain (Fig. 3), Broekhuysen, Brown (Fig. 4), Hallet, Kraft, Jarvis (Fig. 5), Louw (Fig. 6), Millard, Nel and Penrith (Table 2). One of the more eccentric founding members was the UCT estuarine ecologist turned ornithologist, Gerry Broekhuysen. Like John Day he served in the Second World War, surviving a Japanese prisoner of war camp by studying the flower spider *Thomisus* and making paintings of it using a paintbrush



Fig. 4. A young A.C. Brown FRSSAf (third from left; shown in 1956 about to embark on a field trip to the Orange River Estuary), renowned marine biologist and Gold Medal winner in 1986 (© UCT Zoology Department).



Fig. 5. Two founder members of the Society, J.U.M. Jarvis FRSSAf (Secretary 1972–1977; Gold Medalist 1996) and J.H.M. David (© UCT Zoology Department).

made from his own hair.

The enigmatic aardvark has served as the Society logo throughout its history; the original logo was designed by Miss A. Scheiser. The first *News Bulletin* was produced by Mary Kraft (Editor: 1959–1963) and comprised 46 pages put together by 19 correspondents from South Africa, Namibia, Zambia and the Democratic Republic of Congo. Noteworthy topics included plans for a research centre in the Namib Desert (later established under the Transvaal Museum to become the Namib Desert Foundation at Gobabeb, which became famous under the directorship of ZSSA Gold Medalist, Mary Seely, FRSSAf (Fig. 7)), the impacts on fauna of flooding caused by the building of



Fig. 6. G.N. Louw FRSSAf, renowned physiologist and Gold Medal winner in 1983 (© UCT Zoology Department).



Fig. 7. M.K. Seely FRSSAf (centre), renowned Director of the Desert Research Foundation and Gold Medal winner in 1997 (© Northern Flagship Institution: Transvaal Museum Library).

Kariba Dam in Zimbabwe (ZSSA Gold Medalist, Reay Smithers (Fig. 8) raised international funds to assist in rescuing animals from the flooded islands and personally assisted with the operations), and the purchase of a research vessel (the *J.D. Gilchrist*) for the UCT Zoology Department. In the second issue, a review by A.W. Crompton (South African Museum) bemoaned the stasis in the number of zoologists employed by the South African Museum (which had remained at 32 during the past two decades). Some growth in museums occurred subsequently, and new museum buildings were erected in the early 1960s at Port Elizabeth (ZSSA *News Bulletin* 2(2)) and at Bulawayo and erstwhile Salisbury and Umtali in the then Rhodesia (ZSSA *News Bulletin* 3(3)). Picking up the same theme four decades later, Herbert (2001) reported a decline in



Fig. 8. R.H.N. Smithers, former Director of National Museums of Zimbabwe and Gold Medal winner in 1978 (© Northern Flagship Institution: Transvaal Museum Library).

the number of South African museum zoologists from ± 60 in 1991 to ± 40 in 2001.

The *News Bulletin* changed its name to *The Aardvark* in 1990 and in 2006 became fully electronic. The various editors are listed in Table 1. A full set of the *News Bulletin* and *The Aardvark* are available in the Council Archives, housed by the Durban Natural Science Museum.

The Society's first conference on 'Causes & Problems in Animal Distribution' was held at Port Elizabeth Museum in July 1961 (Table 2), and the proceedings later published in *Annals of the Cape Provincial Museums* 2, 1962. After an intensive study commissioned by the CSIR (Council for Scientific and Industrial Research), the need for a journal of zoology was demonstrated. The first issue of *Zoologica Africana* appeared in 1965 and comprised 25 papers from the proceedings of the Society's second symposium on 'African Mammals', held in Salisbury (now Harare) in Rhodesia (now Zimbabwe). The editors of this volume (Talbot and Rowan) bemoaned the delay of this issue due to 'delays in inter-African posts'. From Council archives, it was already apparent by 1973 that the journal was imposing an unsustainable financial burden on the Society and there was talk then of centralization of South African journals.

In its first few years, the Society's membership grew steadily to 270 (by 1960) eventually reaching just under 500 members (e.g. 472 in 1975; 458 in 1979; 496 in 1982). This figure seemed to remain stable over much of the history of the Society, although it has declined somewhat in the past decade to a current figure of 275 paid-up members (and 500 unpaid-up members).

There was some uncertainty during the latter part of this period surrounding the envisaged 'take-over' of the Society's journal by the South African Bureau of Scientific Publications. Since the major aim of the Society was to produce a journal, the Society was concerned about the perceived loss of this role. The Society was also concerned about the formation of 'societies catering for the specialized interests of certain workers in the field of zoology *sensu lato*'. Growing from these concerns, a questionnaire survey was conducted amongst members during the latter part of this Cape Town era. This revealed some dissatisfaction amongst members concerning the organization of the Society at the time (56 out of 89 respondents felt that the Society's organization should not remain as it was at present). The majority of respondents felt that the Society should be reorganized, either

Table 1. Executive members of the Council of the Society, 1960 to 2009.

Year	President	Vice President	Secretary	Treasurer	Editor (Journal)	Editor (Newsletter)
1960/61	S.H. Skaife	B.I. Balinsky	F.H. Talbot	A.W. Crompton	–	M K Kraft
1961/62	B.I. Balinsky	F.H. Talbot	N.A.H. Millard	F.W. Gess	–	M K Kraft
1962/63	C.A. du Toit	J.H. Day	N.A.H. Millard	A.C. Brown	–	M K Kraft
1963/64	C.A. du Toit	J.H. Day	N.A.H. Millard	A.C. Brown	F.H. Talbot	J M Goldsmid
1964/65	C.A. du Toit	B.I. Balinsky	N.A.H. Millard	J. Heeg	M K Rowan	J A.J. Nel
1965/66	D.H.S. Davis	T H Barry	N.A.H. Millard	J. Heeg	M E Malan	J A.J. Nel
1966/67	J.H. Day	T H Barry	N.A.H. Millard	M-L. Penrith	M E Malan	J A.J. Nel
1967/68	J.H. Day	J A.J. Meester	N.A.H. Millard	M-L. Penrith	M E Malan	A F.H.allet
1968/69	J.H. Day	G. Broekhuysen	N.A.H. Millard	M-L. Penrith	M E Malan	A F.H.allet
1969/70	G. Broekhuysen	C.K. Brain	N.A.H. Millard	M-L. Penrith	M E Malan	A F.H.allet
1970/71	G. Broekhuysen	C.K. Brain	N.A.H. Millard	P.A. Hulley	M E Malan	A F.H.allet
1971/72	R.C. Bigalke	C.K. Brain	N.A.H. Millard	P.A. Hulley	M.E. Malan	Nel & Rautenbach
1972/73	R.C. Bigalke	C.K. Brain	J.U.M. Jarvis	P.A. Hulley	N.A.H. Millard	Nel & Rautenbach
1973/74	R.C. Bigalke	J A.J. Nel	J.U.M. Jarvis	J.H.M. David	N.A.H. Millard	Nel & Rautenbach
1974/75	C.K. Brain	N. Fairall	J.U.M. Jarvis	J.H.M. David	N.A.H. Millard	J A.J. Nel
1975/76	R.C. Bigalke	N. Fairall	J.U.M. Jarvis	J.H.M. David	N.A.H. Millard	A.E. Louw
1976/77	G.N. Louw	J.D. Skinner	J.U.M. Jarvis	J.H.M. David	N.A.H. Millard	A.E. Louw
1977/78	G.N. Louw	J.D. Skinner	N. Fairall	A. Cruickshank	N.A.H. Millard	E.S. Vrba
1978/79	J.D. Skinner	J.A.J. Meester	N. Fairall	P.R. Condy	J.D. Skinner	G. de Graaff
1980	J.D. Skinner	J A.J. Meester	T J Robinson	P.R. Condy	J.D. Skinner	G de Graaff
1981	J.A.J. Meester	J.A.J. Nel	F le R Fourie	P.R. Condy	J.D. Skinner	G de Graaff
1982	J.A.J. Nel	T. Erasmus	F. le R. Fourie	P.R. Condy	J.D. Skinner	G. de Graaff
1983	T. Erasmus	J.U.M. Jarvis	J.F.K. Marais	J.P. Furstenberg	J.D. Skinner	P. Swanepoel
1984	T. Erasmus	J.U.M. Jarvis	J.F.K. Marais	J.P. Furstenberg	H.R. Hepburn	P Swanepoel
1985	T. Erasmus	M.N. Bruton	G. Rossouw	J.P. Furstenberg	H.R. Hepburn	P Swanepoel
1986	B.R. Allanson	M.N. Bruton	G. Rossouw	J.P. Furstenberg	H.R. Hepburn	P. Swanepoel
1987	T. Erasmus	A.J. Reinecke	G. Rossouw	J.P. Furstenberg	H.R. Hepburn	P Swanepoel
1988	B.R. Allanson	A.J. Reinecke	G. Rossouw	J.P. Furstenberg	H.R. Hepburn	P Swanepoel
1989	J.D. Skinner	A.J. Reinecke	G Rossouw	J.P. Furstenberg	H.R. Hepburn	P Swanepoel
1990–91	J.D. Skinner	T.J. Robinson	S. Viljoen	H. van Hamburg	H.R. Hepburn	P. Swanepoel
1992–93	A.J. Reinecke	J.A.J. Nel	S. Viljoen	H. van Hamburg	S W Nicolson	P. Swanepoel
1994–95	T.J. Robinson	R Crewe	A. Channing	J.H. van Wyk	S.W. Nicolson	P. Swanepoel
1996–97	R.T.F. Bernard	A. Payne	N. Pillay	J.H. van Wyk	S.W. Nicolson	A.S. van Jaarsveld
1998–99	A.S. van Jaarsveld	G.I.H. Kerley	N Pillay	C. Downs	Hodgson & Bernard	N.C. Bennett
2000–1	G.I.H. Kerley	A N Hodgson	C Baker	C. Downs	Hodgson & Bernard	N.C. Bennett
2002–3	A.N. Hodgson	N.C. Bennett	C Baker	C. Downs	Hodgson & Bernard	C.T. Chimimba
2004–5	N.C. Bennett	C.A. Matthee	S. Maree	C. Downs	Griffiths & Bronner	C.T. Chimimba
2006–7	C.A. Matthee	M. Hamer	S. Maree	C. Downs	Griffiths & Bronner	Simon & v. Vuuren
2008–9	M. Hamer	P.J. Taylor	S. Maree	C. Downs	Griffiths & Bronner	Simon & v. Vuuren

on a regional basis, or into specialized groups. However, this did not happen, although some attempts were later made to establish a provincial chapter of the Society in Natal (led by J.A.J. Meester), and a specialized Ethology Group of the Society did prosper for some time in the early 1990s.

Zoological specialist subdisciplines and societies

Table 3 lists a selection (not complete) of South African societies and institutions established from subdisciplines of zoology such as entomology, ornithology, herpetology, limnology, ichthyology, marine biology and systematics. Some organizations predated the formation of the ZSSA, whilst

most were formed after the ZSSA. The potential effects of this fragmentation of the discipline of zoology on the ZSSA is an ongoing theme discussed by successive Councils. Several joint symposia between the ZSSA and other societies have helped to maintain the profile of zoology as a whole. Many ZSSA Gold Medalists have also been independently honoured by more specialized societies.

REACHING 'MATURE ADULTHOOD' IN ACADEMIC ISOLATION: 1978–1994

In 1978/9 J.D. Skinner (Fig. 9) from University of Pretoria took over as President, and the Society



Fig. 9. J.D. Skinner FRSSAf, renowned mammalogist and long-standing Council member (Journal Editor 1978–1983; VP 1978–80; President 1979–80, 1989–91) and Gold Medal winner in 1985 (© R. Van Aarde).



Fig. 10. B.R. Allanson FRSSAf (right) receiving his Gold Medal in 1987 from the longest-serving President, T. Erasmus (© Rhodes University Zoology & Entomology Department).

moved its headquarters to Pretoria. As recorded by the outgoing president, G.N. Louw, in his address at the 1978 AGM, this move proved highly successful for the Society. The move coincided with an agreement with the South African Bureau of Publications to fund and publish the Society's journal under the name *South African Journal of Zoology*, which first appeared in 1979 (as Volume 14, Number 1). In her report as outgoing Editor of *Zoologica Africana*, N.A.H. Millard wrote:

It is with mixed feelings that I hand over the editorship of the journal to the new editor. There is inevitably a feeling of sadness that this 'baby' of the Society, which we have nurtured to maturity and come to see taking its place among the international journals of the world, will be no more as such. On the other hand the Society will feel considerable relief from the financial burden which has grown out of all proportions.

A cost of this change was the need to change the name to *South African Journal of Zoology*, which contravened the Society's original objective of being continental in scope. Skinner took over as the new Editor, with Millard remaining as Deputy Editor. Skinner served in a number of different roles in the Society during a long period stretching from 1976 to 1991 (Table 1) and played an important role in its continued success during this period.

In 1982 the Society's headquarters moved to the Eastern Cape, where it remained until 1989 under the long-standing Presidency of T. Erasmus and B.R. Allanson (Fig. 10). It then moved to Potchefstroom from 1990–1992 under the Presi-

dency of J.D. Skinner and A.J. Reinecke before moving to Stellenbosch from 1993–1995 under the Presidency of T.J. Robinson.

It is impossible to divorce the history of the Society from the wider society in which it operated. The impact of apartheid on the ZSSA and the development of zoology in South Africa was keenly felt, most noticeably through the worldwide academic boycott and through segregation policies, which excluded Blacks from mainstream universities, relegating them to the under-resourced and so-called National Universities (Erasmus 1984 provides some data on the outputs and budgets of White and Black universities at the time). Many academics, including zoologists, opposed apartheid policies. As pointed out by Brown (2003), G.N. Louw and W.R. Siegfried (both ZSSA Gold Medalists) founded the Progressive Federal Party in Stellenbosch at a time when it was strongly dominated by the National Party. Another Gold Medalist, J.H.O. Day, head of Zoology at UCT from 1947 to 1974, was known for his stand against segregation, as noted by Brown (2003):

He was also deeply concerned for the welfare of his students. A man of the highest principles, nothing would make him deviate from a course of action he believed to be correct and he displayed the courage of his convictions on numerous occasions. Just one example: during the apartheid era, students frequently held silent protests regarding poor black education and particularly against the law that excluded black matriculants from the University of Cape Town. It was a stand with which most members of staff agreed. In June 1972, riot police with

Table 2. Symposia organized by the Society since its foundation

Year	Theme	Venue
1961	Causes and Problems in Animal Distribution	Port Elizabeth Museum
1963	African Mammals	Harare Zimbabwe
1967	Ecology	University of Pretoria
1971	Animal Behaviour	Durban
1973	Ichthyology Herpetology and Behaviour	Kruger National Park
1975	Springbok	Kimberley
1977	Small Mammals	University of Pretoria
1978	Systematics	Transvaal Museum
1979	Animal Communication	University of Cape Town
1980	Invertebrates	Potchefstroom University
1981	Environmental Physiology, Zoogeography and Speciation	University of Durban-Westville
1982	Utilization of Natural Resources	University of Transkei
1983	Zoology of Arid and Semi-Arid Environments	Swakopmund, Namibia
1984	25 Years of Zoological Research in Southern Africa	Potchefstroom University
1985	Competition and Coexistence	Natal University
1986	General	Rand Afrikaans University
1987	Alternative Life Histories	Rhodes University
1988	Predator:Prey Relationships	Pretoria University
1989	Savannah Fauna Migration & Movements	Etosha National Park, Namibia
1990	The Influence of Water Availability and Water Movement in Animal Ecology	University of Port Elizabeth
1991	Animals in their Changing World	University of Stellenbosch
1992	Animal Populations	Kimberley
1993	Taxonomy	Transvaal Museum
1994	Contemporary Zoology in Southern Africa	University of Natal, Pietermaritzburg
1995	Zoological & Aquatic Sciences in Southern Africa	Rhodes University
1996	Integrating Zoology: Subdisciplines and the Subcontinent	University of Pretoria
1997	Zoology & Human Welfare	University of Cape Town
1998	A Zoological Odyssey	University of Durban-Westville
1999		University of the North
2001	A South African Odyssey	Port Elizabeth
2003	Wet 'n Wildlife: Current Trends in Limnology and Zoology in Southern Africa ZSSA/SASAqS	University of Cape Town
2005	Celebrating 100 years of Zoology & Entomology at Rhodes ZSSA/ESSA/SASQA	Rhodes University, Grahamstown
2007	The Sixth Extinction – Conserving Zoological Biodiversity	North-West University, Potchefstroom
2009	50 Years of Zoological Research: Reflection and Insights (ZSSA/SASSB)	Illovo Beach, University of KwaZulu-Natal

whips and dogs invaded the campus and confronted students holding placards on the steps of the Jameson Hall. Things were beginning to turn nasty when John Day arrived on campus from a Council meeting. John made off towards the trouble as quickly as his artificial leg would allow – ‘must support my students’, he was heard to say – and took his stand, fearlessly, on the steps. ‘Disperse now’, said the police officer in charge. ‘You have one minute to get away from here.’ No one moved. Before the minute was up, the police attacked. John, standing rigidly to attention, was bitten by a police dog – but fortunately on his artificial leg! He stayed to help those students who had been beaten and then returned to his Department, satisfied that he had

behaved well. Indeed he had; the rest of us had watched proceedings from the windows of our building.

A less obvious impact of the Apartheid government’s policies was the prevailing anti-evolutionary stance. The fact that evolution has only recently been introduced into school curricula is possibly a legacy of this. Some zoologists who openly promoted evolution (including at least two ZSSA Gold Medalists) were directly or indirectly prejudiced. As long ago as 1912, the great Robert Broom, first Head of Department of Zoology at Stellenbosch University, was fired for his belief in evolution (Du Toit 1961). The late J.A.J. Meester was forced to

leave the Transvaal Museum after refusing an order from the Board at the time to take down a Museum exhibition he had installed on the topic of evolution.

Former ZSSA President and Gold Medalist, B.R. Allanson (pers. comm.) described the following 'apartheid consequences':

I am reminded of an occasion when I was called to adjudicate a new Prof of Zoology at a South African university. There were two applicants. One was a highly distinguished physiologist. The Rector ... was in the chair and during the interview I was astounded to hear him comment adversely upon the views of Julian Huxley who had recently visited SA and his lectures on Evolution. And by the way, the long hair of Albert Einstein would not be allowed on this campus!! When the applicant responded positively to Dr Huxley's views, it lost him the job! Needless to say I was very disappointed and noted this to the registrar ... but the heavy hand of apartheid lay upon that institution.... Another apartheid consequence was an article in *The New Scientist*, published in London that was very critical of the way in which SA scientists were supposed to be coming to terms with the requirements of apartheid. I happened to be in the UK at the time and met with the editor and drew his attention to the real facts re SA science and the difficulties we were working under – minimal international contact etc. He listened carefully and while not apologising, no further criticism came from that quarter. I felt I had struck a blow for SA Science and its continuing independence of spirit.

In spite of the political isolation, the Society prospered during this time, thanks to the hard work of Council members, many of whom served long periods with much dedication (Table 1, Fig. 11).

Healthy adulthood: 25th Anniversary Symposium

A high point of this era was the Society's 25th anniversary (Silver Jubilee) symposium, organized in 1984 at Potchefstroom by A.J. 'Koot' Reinecke and his organizing committee. This was the Society's 14th conference (20 have been held since). The highly successful meeting attracted some 127 participants (Fig. 12) who made some 65 poster and paper presentations. Registration cost a princely R30. Organization of the symposium cost the Society R11 000 with a profit declared of R1500. The Symposium was attended by the Society's first Secretary, Frank Talbot, who was then Director of the California Academy of Sciences. In a letter addressed later (dated September 5, 1984)

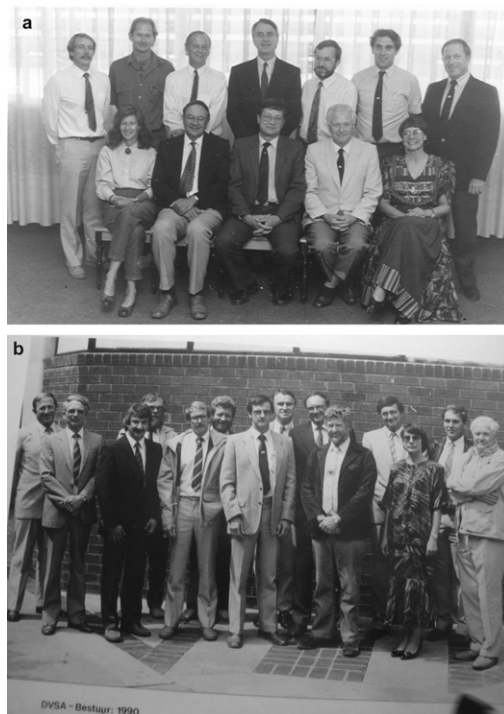


Fig. 11. Previous Councils in 1984 (a) and 1990 (b) (scans supplied by J.D. Skinner)

to A.J. Reinecke, Talbot wrote: 'I found the meetings extremely worthwhile, and the arrangements excellent. It is rare to get such a thorough update after 20 years away from an area. The Society is now a healthy adult!'

An important product of the Silver Jubilee Symposium was a commemorative, 118-page proceedings volume, which featured 12 articles summarizing the history and state-of-play of different subdisciplines (Reinecke 1984). An article by Reinecke summarized responses to a questionnaire sent to zoology departments at both White and Black South African universities. This survey revealed the disparity in the resources and output of Black and White universities and also revealed the relatively low student numbers of zoology departments (these numbers have escalated exponentially since 1994).

REACHING 'MIDDLE AGE' DURING THE DEMOCRATIC ERA: 1994–2009

After a brief period in Stellenbosch (1992–1995) the Society's headquarters moved to Wits University (1996–1999), under the Presidency of R.T.F.



Fig. 12. Delegates from the Silver Jubilee (25th Anniversary) symposium in Potchefstroom in 1984 (original supplied by A.J. Reinecke).

Bernard and A.S. van Jaarsveld, then to Kwa-Zulu-Natal (2000–2003) under the Presidency of G.I.H. Kerley and A.N. Hodgson. The headquarters moved in 2004 to Pretoria, but with the advent of the electronic age, there was a decreasing need for the Society to maintain a physical headquarters. The current Secretary is based in Pretoria, while the Treasurer is based at UKZN (Table 1). Although much of the Society's business is conducted by e-mail and electronic meetings, an attempt has been made to maintain and update an archives facility. The Archives were held for many years at the Cory Library at Rhodes University, but moved recently to the Durban Natural Science Museum. Largely through the efforts of past President, C.A. Mathee, the Society has an active website (www.zssa.co.za), which is a useful vehicle for advertising symposia and promoting zoology. The website contains a popular careers page. From its early days, the Society has disseminated information on zoological careers, including a brochure which has been recently updated. A recent analysis of the website revealed 1750 visits to the front and careers pages; only 7% of these online visitors were academic ('.ac'), indicating that the website is attractive to non-academics.

Perhaps the most important development in this recent period of the Society's history was the regained financial control of its journal, under the name *African Zoology* (from Volume 35, Number 1,

April 2000), once again reflecting the Society's original intention of having a continental scope. It is necessary to charge page charges to fund the costs of production of the journal. In recent years the journal became available electronically under the Sabinet portal. Recent contracts with BioOne and Sabinet Gateway will further enhance the online profile of the journal, both for current and archival content (the latter initiative will make available all back copies of the journal dating back to the first issue of *Zoologica Africana*).

While zoology as a whole appears to have flourished in recent years at major universities such as UCT (Brown 2003), Wits (Hanrahan, *in litt.*) and Rhodes (Hodgson & Craig 2005), zoological capacity, particularly in the field of systematics, has declined at museums in recent years (Herbert 2001). Museum scientists were important in the foundation of zoology in South Africa and continue to be relevant (Du Toit 1961; Brain 1992; Guest 2006; Hedge & Taylor 2008). Museum zoologists dominated during the formation and early years of the Society, as evidenced by the fact that four of the first seven Gold Medallists (between 1971 and 1979) were employed at natural history museums (none have been awarded since then). Given the importance of natural history collections to zoological research and biodiversity conservation, natural history museums are receiving high-level attention from the South African government, the National Research Foundation and the South African

Table 3. List of some South African societies and institutions for zoological subdisciplines.

Discipline	Society/Institution	Scope	Year formed	Notes
Ornithology	South African Ornithological Society (SAOS), now BirdLife South Africa (BLSA) (from 1996)	South Africa	1930	6000 members in 40 bird clubs
Ornithology	Percy FitzPatrick Institute of African Ornithology	Africa	1960	
Herpetology	Herpetological Association of Africa (HAA)	Africa	1967	Grew from Rhodesian Society formed in 1957
Ichthyology	JLB Smith Institute, now South African Institute for Aquatic Biodiversity (SAIAB)	South Africa	1968	
Ichthyology	Natal Sharks Board	South Africa		
Entomology	Entomological Society of Southern Africa (ESSA)	Southern Africa	1937	Journal African in scope
Limnology	Southern African Society of Aquatic Scientists	Southern Africa	1964	Journal African in scope
Marine biology	Sea Fisheries Institute (Marine & Coastal Management)	South Africa		
Marine biology	South African Association for Marine Biological Research(SAAMBR)	South Africa	1951	
Palaeontology	South African Society for Quaternary Research	South Africa	1969	
Palaeontology	Palaeontological Society of Southern Africa	Southern Africa	1976	
Parasitology	Parasitological Society of Southern Africa		1971	
Medical zoology	Medical Ecology Centre (SAIMR)	South Africa	1946	
Wildlife management	Southern African Wildlife Management Association (SAWMA)	Southern Africa	1970	Journal southern African in scope
Physiology & Biochemistry	Physiological Society of Southern Africa (PSSA)	Southern Africa	1971	
Systematics	Southern African Society of Systematic Biology	Southern Africa	1999	

National Biodiversity Institute (SANBI), with the appointment in January 2009 of a Director of Animal Systematics at SANBI, and a national audit of natural history collections commissioned in 2009.

Globalization generally and the fragmentation of zoology, with the formation of numerous societies for specialized subdisciplines (see earlier discussions and Table 3), have doubtlessly had an impact on the Society. These factors may be partly responsible for the decline in paid-up membership to 275 (from close to 500 in the 1980s and 1990s) as well as to the decline in submissions to the Society's journal.

ZOOLOGISTS AT WORK AND PLAY: THE SYMPOSIA

A total of 34 symposia were held between 1961 and 2009, representing a wide range of themes and venues (Fig. 13, Table 2). All but three conferences (two in Namibia and one in Zimbabwe) were held in South Africa. Although all conferences accommodated the full range of zoological topics, all but eight were given particular themes; these were

dominated taxonomically by mammals and across subdisciplines by ecology (Fig. 13). A few conferences were held in association with specialist societies, such as the Southern African Society of Aquatic Scientists (SASAqS), the Entomological Society of Southern Africa (ESSA) and the Southern African Society of Systematic Biology (SASSB). Further analysis of zoological trends revealed by ZSSA conferences is provided by Hamer & Taylor (2009).

THE HALL OF FAME: MEDALS AND AWARDS

The Gold Medal and Stevenson Hamilton Medal

Both medals are awarded annually, or less frequently if suitable candidates are not forthcoming. The Society's highest honour, the Gold Medal is awarded for outstanding achievements in zoology (not necessarily restricted to scientific endeavours). Since 1971, 34 Gold Medals have been awarded to zoologists from a wide variety of institutions and subdisciplines (Table 4, Fig. 14). The relatively high number of mammalogists is

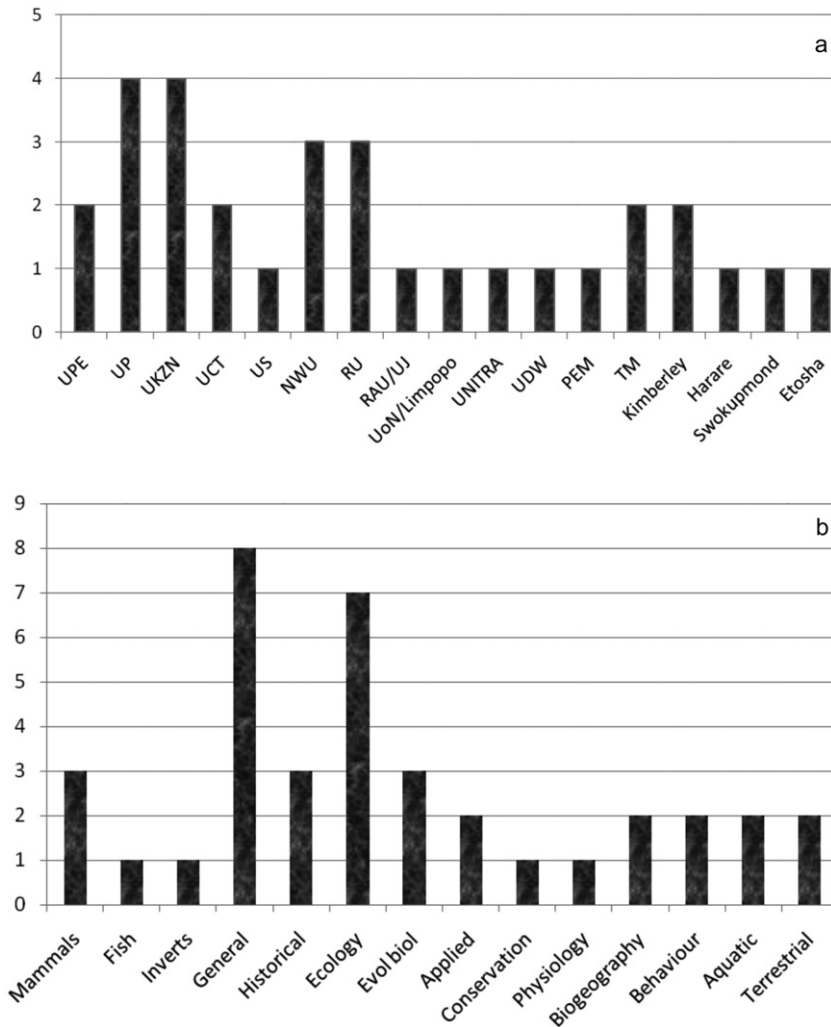


Fig. 13. Bar charts summarizing frequency of venues (a) and topics (b) for 34 symposia organized by the ZSSA.

partly due to the fact that mammalogy is one of the few subdisciplines which have not yet established their own society in South Africa. A mark of the distinction of the Gold Medal award is the fact that 23 of the 34 recipients are, or were, recognized as Fellows of the Royal Society of Southern Africa (FRSSAf) and many are, or were, world leaders in their fields. Apart from one exception (M.J. Coe from Oxford University, who made outstanding contributions to savanna ecology in Africa) all Gold Medal winners are Africans. The first Gold Medal was awarded to the late D.H.S. Davis (Fig. 15), pioneering plague biologist and mammalogist based at the South African Institute for Medical Research. The first woman to receive the Gold Medal (in 1975) was the late R.F. 'Griff'

Ewer, an eccentric, pipe-smoking and warm-hearted ethologist of world fame, best known for her classic books, *Ethology* (1968) and *The Carnivores* (reprinted 1998) (Fig. 16). Based for some time at Rhodes University, her habit of keeping her study animals as pets led to a rabid meerkat running loose on the University campus, which resulted in staff members requiring rabies inoculations (Hodgson & Craig 2005). Photographs of all the Gold Medal winners are featured on the ZSSA website (www.zssa.co.za).

The Stevenson Hamilton Medal is awarded for public promotion of zoology. Until recently the latter award was restricted to 'amateurs' in zoology; however, given the difficulties in defining an 'amateur', the Stevenson Hamilton

Table 4. Gold Medal (since 1971), Stephenson Hamilton Medal (since 1988) and Lawrence Memorial Grant (since 1991) awards made by the Society. Abbreviations: SAIMR = South African Institute for Medical Research (now NICD = National Institute for Communicable Diseases); UCT = University of Cape Town; NMZ = National Museums of Zimbabwe (previously National Museums of Rhodesia); PUCHE = Potchefstroom University for Christian Higher Education (now NWU = North-West University); UP = University of Pretoria; SUN = Stellenbosch University; BPI = Bernard Price Institute (of the University of Witwatersrand); PFIAO = Percy FitzPatrick Institute of African Ornithology (UCT); DRF = Desert Research Foundation.

Year	Gold Medal	Institution (Gold Medal)	Discipline (Gold Medal)	Stephenson Hamilton Medal
1971	D.H.S. Davis, FRSSAf	SAIMR/NICD	Medical ecology	
1972	J.H. Day, FRSSAf	UCT	Marine invertebrates	
1973	R.F. Lawrence, FRSSAf	Natal Museum	Arthropods	
1974	–			
1975	R.F. Ewer	Rhodes	Ethology	
1976	–			
1977	C.J. Skead	Kaffrarian Museum	Mammalogy	
1978	R.H.N. Smithers	NMZ	Mammalogy	
1979	C.K. Brain, FRSSAf	Transvaal Museum	Palaeontology	
1980	N.A.H. Millard, FRSSAf	UCT	Marine invertebrates	
1981	–			
1982	–			
1983	G.N. Louw, FRSSAf	UCT	Physiology	
1984	J.A. van Eeden	PUCHE/NWU	Malacology/bilharzias	
1985	J.D. Skinner, FRSSAf	UP	Mammalogy/ecology	
1986	A.C. Brown, FRSSAf	UCT	Marine invertebrates	
1987	B.R. Allanson, FRSSAf	Rhodes	Limnology	
1988	–			K. Newman
1989	M.J. Coe	Oxford	Ecology	V.C. Carruthers
1990	J.A.J. Nel	SUN	Ecology/mammalogy	
1991	B.I. Balinsky, FRSSAf	Wits	Embryology	
1992	G.M. Branch, FRSSAf	UCT	Marine ecology	
1993	J.W. Kitching, FRSSAf	BPI (Wits)	Palaeontology	
1994	J.A.J. Meester	UP/UKZN	Mammalogy	
1995	W.R. Siegfried	PFIAO (UCT)	Ornithology	E.L. Pringle
1996	J.U.M. Jarvis, FRSSAf	UCT	Mammalogy	M. Cumming
1997	M.K. Seely, FRSSAf	DRF	Desert ecology	
1998	P. Best, FRSSAf	UP	Marine mammals	
1999	H.R. Hepburn, FRSSAf	Rhodes	Entomology	
2000	D. Mitchell, FRSSAf	Wits	Physiology	M. Branch
2001	R. Crewe, FRSSAf	Wits	Entomology	
2002	N. Owen-Smith, FRSSAf	Wits	Ecology/mammalogy	
2003	T.J. Robinson, FRSSAf	SUN	Molecular systematist	
2004	J. Field, FRSSAf	UCT	Marine ecology	C.R. Tillbury
2005	A.S. van Jaarsveld, FRSSAf	UP	Conservation biology	
2006	C. Griffiths	UCT	Marine invertebrates	W.R. Tarbton
2007	A. Hodgson, FRSSAf	Rhodes	Limnology	Dave Peplar
2008	N. Bennett, FRSSAf	UP	Mammalogy/physiology	Phil Hockey
2009	S. Chown, FRSSAf	SUN	Conservation biology	Richard Rubidge

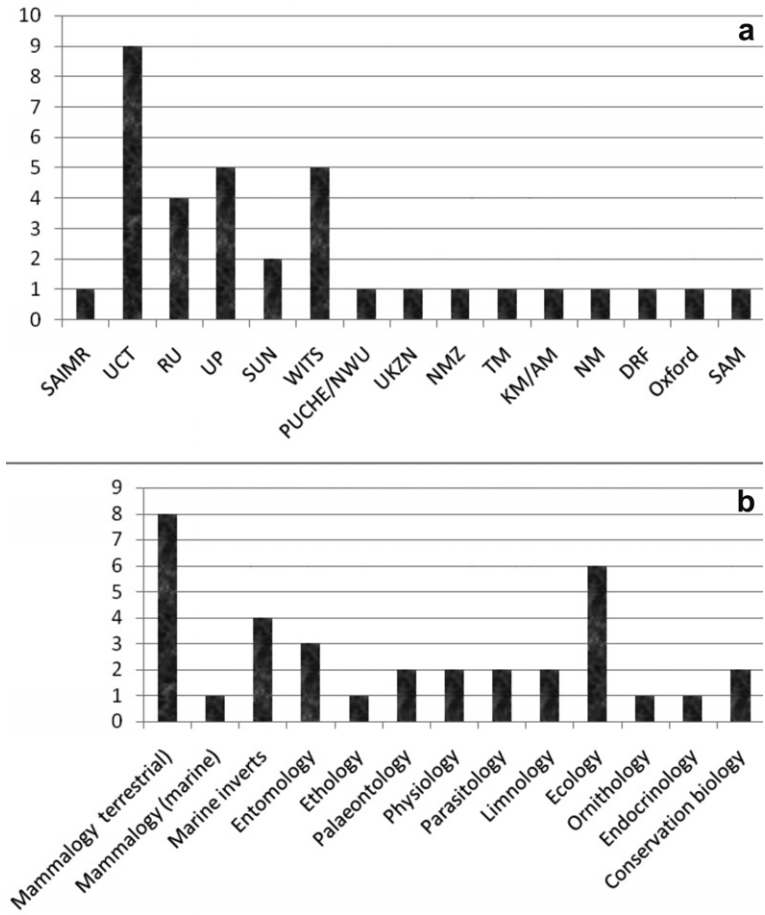


Fig. 14. Bar charts summarizing frequency of home institutions (a) and research fields (b) of 34 Gold Medal winners of the ZSSA.



Fig. 15. The ZSSA's first Gold Medal winner in 1971, the late D.H.S. Davis FRSSAf, of the Medical Ecology Centre (from Malan 1988).



Fig. 16. The late R.F. 'Griff' Ewer FRSSAf, winner of the Gold Medal in 1975 (© Rhodes University Zoology & Entomology Department).

Medal is no longer restricted to amateurs and professional zoologists may qualify. Since 1988, the Medal has been awarded to 10 recipients (Table 4).

Other awards

Awards for the best student papers and posters at the Society's Scientific Meetings were instituted in 1994. Certificates of merit have been awarded annually since 1991 to the best third-year and Honours students in zoology at each Southern African university. Nominations are made by the Heads of Zoology/Biology Departments and approved by the President of the Society, on behalf of Council. A certificate and one year free membership accompanies the award.

Since 1990, based on a sum bequeathed by the renowned entomologist and ZSSA Gold Medal winner of 1973, F.W. Lawrence, the Society has also offered the Lawrence Memorial bursary for students working on the invertebrates of the forest floor.

MIDLIFE CRISIS OR CAUSE TO CELEBRATE: CONCLUDING REMARKS

The discipline of zoology in general, and the ZSSA specifically, have flourished over the past half-century, in spite of numerous political changes in South Africa and throughout the region of southern African. This has been largely due to the enormous dedication and loyalty of successive generations of ZSSA general members and Council members and the strong international profile of southern African zoologists, including many who were awarded the Gold Medal of the ZSSA. Apartheid (and its many consequences, which included racial segregation policies and a strong anti-evolutionary stance) had a negative impact on the development on zoology in South Africa generally and was resisted by many academics, including notable zoologists. Democracy brought a number of changes to the Society (e.g. a change from bilingualism to unilingualism and a journal with a broader African name and scope) and to zoology generally (e.g. renewed international collaboration and much higher student numbers of all races enrolled and graduating from South African university zoology departments). Globalization has had both positive and negative effects, with the recent decline in the number of submissions to the Society's journal being one possible example of the latter. The Society was formed originally to have the broadest possible representation geo-

graphically and across different subdisciplines. The subsequent formation of many specialist societies from zoological subdisciplines presents a major challenge for the Society in the future. The Society will need to engage these subdisciplines (e.g. through joint symposia) and to focus on cross-cutting 'big questions' to survive into the future. Pressing national and international priorities, such as the current biodiversity extinction crisis, climate change, global zoonotic threats, invasive species and agricultural pests offer no shortage of opportunities for zoologists to move away from conducting only pure research and engaging also in applied aspects which benefit society at large. A major task for the Society in the near future will be to evaluate the impact of and continued need for its journal and, if the need exists, to strategize ways to define its niche, market it better and to improve its Impact Factor (which is currently at 0.437).

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