

MIKE BINGHAM: IN MEMORIAM

4 September 1936–4 January 2019

You may wonder why the *Journal of East African Natural History* should publish an obituary for a naturalist who was born in South Africa and spent almost his entire professional life in Zimbabwe and Zambia. The reason is that, in my personal opinion, Mike has had an indirect, but nevertheless important, impact on conservation in East Africa, and Tanzania in particular. I will explain.

I first met Mike in Harare in 1997 during a symposium organised by the Zimbabwe Orchid Society to celebrate their 50th anniversary. That is where I heard for the first time about "*chikanda*" and how the Zambian crave for *chikanda* was quickly depleting Zambian ground orchid populations. *Chikanda* is a savoury snack made of cooked, grounded peanuts and chillies that is turned into a cake or polony by adding pounded orchid tubers. The peculiar starches in the orchid tubers help to solidify the cake as it cools off. The tubers mostly come from the orchid genera *Disa*, *Satryrium* and *Habenaria*, but other genera of orchidoid orchids are also used. The harvesting the tubers is a destructive activity as it will kill the particular orchid plant.

Historically, *chikanda* was only consumed on a local scale in northern Zambia. However, it became a popular snack in the bars of Lusaka and from there spread throughout the country. *Chikanda* is now sold by street vendors all over Zambia. As a result, the demand for orchid tubers gradually increased and soon tubers were also being harvested from suitable areas in the Tanzania, DR Congo, Angola and Malawi.

Mike was aware of the increasing destructive effect that the harvesting of *chikanda* tubers had on orchid populations in central and east Africa and started spreading the message through lectures, popular articles and personal contacts with conservationists. Indeed, this is how I came to know about it. The information also reached Drs. Davenport and Ndangalasi, who did a study on the harvesting and trade of orchid tubers in Tanzania. In 2001, they published a report in which it was estimated that 3 million tubers, weighing 60 metric tonnes, were being harvested for the Zambian market from the southern highlands of Tanzania, particularly from the Kitulo Plateau near Mbeya. The shock and outrage on the devastating effect of the orchid tuber trade that this report created, prompted the government of Tanzania to declare the Kitulo Plateau as a National Park in 2005.

While Mike was certainly not directly involved in the establishment of the Kitulo National Park, he was at the forefront of spreading the message about how the unsustainable harvesting of orchid tubers was depleting orchid diversity hotspots in Africa. Indirectly thus, he contributed to conservation in East Africa and in this regard, I believe our readership will be interested in the legacy of this great naturalist.

Benny Bytebier, Editor-in-Chief

MIKE BINGHAM 1936–2019



Coming from the great tradition of collector-naturalist, Mike Bingham was possibly Zambia's premier botanist of recent years. He was the main source of knowledge on plant identity and distribution across the country and a prolific collector with over 14,000 numbers. A trained entomologist—he had a particular fascination with termites—Mike was in essence an ecologist, his interest and understanding being more with where plants grew and how they fitted into their local environment, rather than on just putting names to specimens.

Mike started plant collecting in what was then Rhodesia (now Zimbabwe) in the early 1960s, where he was employed by the Tsetse Department to carry out tsetse surveys and help in the understanding of that insect's ecology and habitat. But the great majority of his collections are from Zambia. Many were initially deposited at the Harare Herbarium (SRGH), and

collections were also sent to Kew (K) and Missouri (MO). Unfortunately, the various Zambian herbaria in the 1980–90s were not, he felt, adequately able to look after his specimens owing to lack of resources.

Michael Graham Bingham was born in Ladysmith in what was then Natal Province of South Africa on 4th September 1936, the youngest of five children. As his brother has said, his parents were a normal middle-class, non-scientific couple. His mother had come to Ladysmith from UK in 1907 while his father was born in Harrismith in the Free State, arriving in Ladysmith at the outbreak of the Anglo-Boer war in 1900. Mike did his schooling in Ladysmith and had an early interest in both geology and botany, collecting rocks that ended up being stored in the family garage and introducing numerous local indigenous plants into the garden.

In 1955 he went to the University of Natal at Pietermaritzburg to study Chemistry and Zoology, graduating with a BSc in 1957. He continued at the same institution gaining an Honours in Zoology and was much influenced there by Prof Kath Gordon-Gray, who taught him to collect and press plants. However, both Mike and his wife, Patricia (Trish) Shepherd—they had married in 1959 after meeting at a Workcamp Association camp involved with rural communities—were very politically-aware and did not like the increasing levels of apartheid and the clamp-down on political activity in South Africa; it was also a period of restrictions on the South African Liberal Party of which they were active members. After three years (1959–1961) as a lecturer in Pre-Medical Zoology at the University of Natal's Wentworth Campus in Durban, Mike and Trish drove up in 1961 to what is now Zimbabwe to start afresh there.

Here, Mike got a job with the Tsetse Department as a field entomologist under the then-Southern Rhodesian Department of Agriculture based in southern Gokwe, a rural area some hours' drive from the nearest town of Kwekwe. The area was then so remote that Trish had to grow vegetables and raise chickens for their food, and they made weekly treks to Kwekwe

by Landover to buy supplies and collect the post. Their daughter, Alison, was born in Kwekwe in 1962 during this posting. After three years in Gokwe, Mike moved to Tsetse Control's Rekomitje Research Station near Mana Pools in the Zambezi valley for a few months, and then later to Salisbury (now Harare) where their son John was born in 1965. Soon after this they moved to the Matopos Research Station near Bulawayo—a long-held ambition for Mike—but as he got his transfer in November 1965, Rhodesia announced its Unilateral Declaration of Independence (UDI). Following this, Mike and Trish decided to emigrate to Zambia as they did not like the increasing racism and did not feel they fitted in to that lifestyle.

It was during the time in Gokwe, spending much time in the field, that Mike first began to systematically collect plants. His first collections are dated March 1962 and most of those from 1962 to 1965 were from the Charama plateau area in southern Gokwe District, an area of undeveloped mid-altitude bush on the margins of the Zambezi valley that was being opened up to resettlement. In addition to plants, Mike always had a great interest in termites, and although their study was not a formal part of his duties, he spent much time collecting and identifying them.

On moving to Lusaka in the newly-independent Zambia in May 1966, driving up from Bulawayo with two young children, Mike became a science teacher with the Zambian Department of Education at what was then the David Kaunda Secondary School for Boys. For practical lessons, he would collect caterpillars and allow the students to learn about food plants as well as the life cycle of insects. Their third child, Lewis, was born in 1966. Mike later joined the Ministry of Education's Curriculum Department but in 1975 moved to the Department of Agriculture as Conservation Biologist, working mostly with rural farmers to try and improve agricultural practices. However, by 1981 he had chosen to become a self-employed consultant and small-scale farmer, occupations in which he remained until he died.

In Zambia, Mike threw himself enthusiastically into exploring and documenting the Zambian flora, particularly around Lusaka, building on the large collections made earlier by such people as Colin Trapnell and Dennys Fanshawe. Although he did not formally publish much (see appendix), Mike wrote and documented a good deal, often in the form of environmental reports (including contributions to numerous environmental impact assessments) and popular articles. Later, his compiled but unpublished checklist of Zambian plants acted as the basis for the Flora of Zambia website (www.zambiaflora.com/), part of the group of linked national botanical websites including the Flora of Zimbabwe and Flora of Mozambique (Hyde *et al.* 2019a,b) that have proved invaluable to botanists. The *magnum opus* that Mike had talked about for many years—a guide to Zambian trees with illustrations by Trish—unfortunately was never completed.

Mike had a very broad (albeit eclectic at times) and scientific knowledge of the country, its plants and ecology, hence he was often in demand to assess the botany and significance of areas affected by development—whether roads, mines, tourism, forestry, bee-keeping or tsetse control. However, in later years he did have a tendency to write or re-write his terms of reference for such jobs to cover what he thought was more interesting, something that was appreciated by some, but not by others. His understanding of plants and ecology increased greatly over this period and he developed a particular interest in the Barotse floodplains, the lower Zambezi valley and parts of North-Western Province.

His plant collections built up rapidly over this period—his last numbers at Kew are around 14,230 in September 2012. From the identifications provided by Bob Drummond at the Harare Herbarium (SRGH), Dan Harder and others at Missouri (MO), Inger Nordal and co-workers at Oslo (O) and various specialists at Kew he started to compile a comprehensive

checklist of the plants of Zambia in 2002. Unfortunately, this remained incomplete and electronic only, always awaiting additions and modifications, although later, with the help of Mark Hyde and Annette Willemen, it became the backbone of the Flora of Zambia website (Bingham *et al.* 2019). The value of Mike's collections is shown by the many specimens that have been cited in various parts of Flora Zambesiaca as well as in other accounts of genera and species.

There are two plant species named after Mike—*Crinum binghamii* Nordal & Kwembeya (Amaryllidaceae; Nordal & Kwembeya 2004) and *Habenaria binghamii* G. Will. (Orchidaceae; Williamson 2005). In addition, there are five species originally described from one of his specimens—*Emiliella luwiikae* D.J. Hind & Frisby (Asteraceae, based on *Bingham & Luwiika 10718*, Mongu, Zambia, 8.xii.1995), *Gloriosa sessiliflora* I. Nordal & M.G. Bingham (Colchicaceae, based on *Bingham & Luwiika 10752*, Mongu, Zambia, 9.xii.1995), *Euphorbia spissiflora* S. Carter (Euphorbiaceae; based on *Bingham 1158*, Gokwe, Zimbabwe, 6.iii.1964), *Ficus ottonifolia* (Miq.) Miq. subsp. *macrocyce* C.C. Berg (Moraceae; based on *Berg & Bingham 1421*, Solwezi, Zambia, 26.xi.1982) and *Crepidorrhopalon mutinondoensis* Eb. Fisch. & I. Darbysh. (Linderniaceae; based on *Bingham 12899*, Mutinondo, Zambia, 9.iii.2005). In addition, Mike has a termite species named after him (*Mimeuterms binghami*; Sands 1968), a subspecies of butterfly (*Charaxes ethalion* subsp. *binghami*; Henning 1982) and two fig pollinating wasps (Agaonidae)—*Alfonsiella binghami* and *Platyscapa binghami* (Wiebes 1988 and Wiebes & Abdurahim 1980, respectively).

Perhaps the two discoveries that gave him most pleasure were *Gloriosa sessiliflora* and *Crinum binghamii*, both found and photographed by him on the Barotse floodplains of western Zambia and that he recognised immediately as being different.

Mike was also a prolific photographer of both plants and insects. A number of his photos, particularly of Lepidoptera, have been used in books and articles (see the Zambia Flora website https://www.zambiaflora.com/speciesdata/person-display.php?person_id=173).

One aspect of Mike's botanical activities that may be overlooked, although not by those that knew him in Zambia, was their smallholding at Leopard's Hill, east of Lusaka. Here, in addition to growing vegetables and fruits that Trish would sell in Lusaka, Mike would plant from seed, bulbs or roots many species that he found on his travels across the country. These he would observe closely over many years, seeing how sometimes what had been regarded as one species showed significant regional or ecological differences, and how each grew and survived in different soils. Unfortunately, Mike never systematically recorded these observations and this wonderful store of knowledge is perhaps now lost.

Often opinionated and not afraid to speak out, Mike felt very strongly politically and socially and didn't take kindly to corruption or unthinking destruction. Although this sometimes alienated him from decision-makers in government and the larger NGOs, his freely-given knowledge left a strong botanical legacy for Zambia in particular. It helped keep the country on the botanical map during the period from 1980 to 2010 when there was much less botanical activity and the herbaria were struggling for lack of resources. And although he didn't leave a large number of formal scientific publications, his collections and the memories of his botanical enthusiasm and findings will live on.

Mike Bingham died in Pietermaritzburg, South Africa on 4th January 2019 after a series of heart attacks. Patricia, his wife, died earlier in February 2015; they had been married for 55 years. Mike leaves a daughter, Alison, and two sons, John and Lewis, seven grandchildren and one great-grandchild.

ACKNOWLEDGMENTS

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APPENDIX: LIST OF PUBLICATIONS

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- He also wrote occasional articles and book reviews in *Productive Farming* and *The Zambian Farmer* between 1980 and 1997.

Jonathan Timberlake & Paul Smith, July 2019