**CITATION: VINCENT CRAIG CARRUTHERS**

Vincent Carruthers is a natural history intellectual of the highest order who has made an immense contribution over the past 40 years. He is dedicated to producing excellent scholarship that enhances both professional science and public knowledge and awareness. His meticulous work in the fields of zoology, ecology, and the region’s natural and human history has earned him a high reputation in academic and public circles. His amphibian work has gained him international recognition which has ensured southern African amphibian studies a place within a difficult and emerging field that has significance in our era of global change. His long publication list attests to his written contributions and to his foregrounding in the production of accessible scientific knowledge about Johannesburg and its environs as well as about South Africa’s natural history in general. In the early 1970s Vincent’s amphibian research brought him into contact with the University of the Witwatersrand and his relationship with this university has continued into the present. In recent years he has been engaged in assisting with many of the structures of the university, including the Institute for Human Evolution, the Evolutionary Studies Institute and the Cities Institute.

Vincent Carruthers was born in Johannesburg and educated at King Edward Primary School, and at Cordwalles and Michaelhouse in KwaZulu-Natal. By profession, Carruthers is a company director and consultant with training from the University of Cape Town, although he did not fully complete his commerce degree. Living in Johannesburg in the mid-1960s he renewed his interest in the natural world and, unusually for an amateur biologist (who are usually more focused on birds or mammals) came to realize the unrecognized wealth of amphibian fauna in urban Johannesburg. Forming a close partnership with Neville Passmore, then a postgraduate student at Wits, the two collaborated in producing the first reliable, scientifically valid, and beautifully and clearly illustrated field guide to the frog fauna of South Africa. Entitled *South African Frogs*, this book, published by the University of the Witwatersrand Press in 1979, set a world standard. As explained by Professor Roy Siegfried, one of the country’s most eminent scientists, Carruthers’s contribution has been immense.

Frogs are studied by relatively few biologists because they are so difficult to find and to research. Before this detailed and authoritative book appeared, the distribution of the amphibian fauna of the country was extremely patchy and many species were known only from isolated museum specimens. Very few had been studied in the field, distribution patterns were unknown, many vocalizations had never been heard or recorded, and many morphological distinctions required more elucidation. Given his demanding professional life, it was on weekends and vacations that Carruthers, often with Neville Passmore, travelled throughout South Africa, tracing and tracking frogs by night, studying their behavior, maintaining careful records and notes of their habits, biology and habitats. In addition, Vincent photographed them extensively. When Suikerbosrand Nature Reserve was being established in the 1970s he conducted a survey of the amphibians that would be fully deserving of a M.Sc. degree. Owing to Vincent Carruthers’s work, South Africa’s frogs became better known to scientists, but they were also presented as attractive and fascinating creatures to lay people. Had Vincent been in an academic environment, his contribution would almost certainly have earned him a PhD degree.

There is no doubt that his expert scientific knowledge paired with his responsibility to impart that knowledge to non-specialists, including municipal administrations in Gauteng, has contributed to the conservation of amphibians in Southern Africa through his actions and through many and varied publications in addition to *South African Frogs*. Vincent Carruthers has maintained an active interest in amphibian fauna, often working closely with protected area managers and academic specialists. He has remained at the forefront of South African herpetology, more recently collaborating with Professor Louis du Preez of North West University in the *Complete Guide to Frogs of Southern Africa* (2009).

Moreover, Carruthers was one of the few people who early recognised the role of amphibians as biological indicators of climate change and wetland health and in his current profession as an environmental consultant he continues research in this field. Unusually for an ‘amateur’, he is a registered Professional Natural Scientist under the Natural Scientific Professions Act.

Carruthers has contributed to South African society and the natural environment by engaging his professional skills in a variety of ways. He is an outstanding facilitator and has assisted a number of organizations, including the University of the Witwatersrand, South African National Parks and the former Transvaal Division of Nature Conservation, with management, research, and structural issues. Under his leadership as Executive Director (1982-1985), the Wildlife Society of Southern Africa experienced its peak years as a player in the environmental arena. Recognizing the value of responsible tourism, Carruthers and his partners established STRISA, the Sustainable Research Institute of Southern Africa (1998). STRISA focusses on community-driven small and medium enterprise projects in rural areas, with emphasis on Limpopo Province.

During the course of his long career in environmental matters, Carruthers has received awards that recognize his leadership. These include the Chancellor’s Medal from North-West University (2013); the Stevenson-Hamilton Medal for his exceptional amateur scientific endeavours from the Zoological Society of South Africa (1989); the Paul Harris Fellowship from the Rotary Foundation (2009); Certificate of Merit from the Transvaal Herpetological Association (1990) and honorary life memberships of, to give just one example, the Mountain Club of South Africa.

Through meticulous research, scholarship, and outreach, as a citizen scientist Vincent Carruthers has made a valuable and outstanding contribution to our knowledge and understanding of many aspects of the South African natural environment. He is surely deserving of the University Gold Medal for his remarkable work, achievements and his influence.