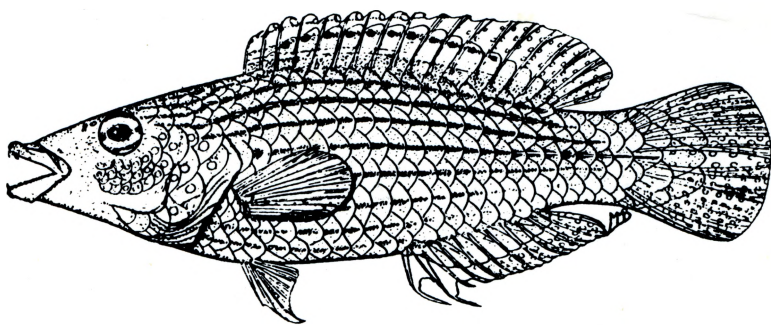


THE LIFE AND WORK
OF
MARGARET M. SMITH



Pseudocheilinus margaretae

“This exceptionally beautiful creature is named as a small tribute to my wife, whose contribution to all phases of our work is probably greater than my own.” – J.L.B. Smith, 1955.

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PROFESSOR MARGARET M. SMITH is one of South Africa's leading ladies of science, as well as an ambassador extraordinary and an outstanding humanitarian. This brochure, and the accompanying exhibition, commemorates one phase of her life and sets the scene for the next.

Early years

Margaret Mary Macdonald was born on the 26th September 1916 in Indwe, Cape Province, a small village on the border of Transkei. Her parents were William Chisholm Macdonald M.D., F.R.C.S. (E.), born in New Zealand of pioneering stock, and Helen Evelyn Macdonald née Zondagh, a descendant of the Voortrekker leader Johannes Jacobus Uys, and the first woman mayor in the Cape Colony.

Mary Macdonald was educated at the Indwe High School, where she was Head Girl and Head Scholar, as well as chairman of the debating society, captain of netball and tennis, and holder of the tennis shield for girls from 1929 to 1932.

She was an accomplished singer and musician and at the Wodehouse Eisteddfod in 1933 she won eight medals for singing (soprano and mezzo soprano), for violin in trio, for recitation, and for composing a sonnet, an English essay and a poem. At the East London Eisteddfod the same year she was awarded the gold medal for singing (girls under 17). During these years she was also awarded music certificates for piano and harmony by the University of South Africa.

Mary Macdonald attended Rhodes University College in Grahamstown from 1934 to 1937, and was an active member of numerous committees. She was awarded her B.Sc. degree in 1936, majoring in physics and chemistry (with distinction), and became a senior demonstrator in chemistry in 1937. She also attended the Grahamstown Training College School of Music and obtained her U.T.L.M. for singing in 1936.

For many years afterwards she tutored students in physics and chemistry and in 1945 she taught physics at St. Andrew's College and chemistry at Rhodes University College.

Marriage to J.L.B. Smith

An awesome figure was in charge of organic chemistry at Rhodes University during Mary Macdonald's training there. James Leonard Brierley Smith had taught chemistry at the University since 1923, and was a strict but inspiring teacher. Initially she was terrified of him, and it was only in her third year (1936) that she realised that he was human.

In 1937 he followed her to Johannesburg and informed her that she was going to marry him. She then discovered that their birthdays were on the same day, and eventually capitulated.

Mary Macdonald and J.L.B. Smith were married on the 14th April 1938 in Florida, Transvaal. She explained that Mary Macdonald sounded good, but that Mary Smith is grim! Hence, from her marriage on she was known as Margaret. At the age of 21 she was catapulted into a ready-made family. J.L.B. Smith's two teenage children by an earlier marriage, Robert (Bob) and Cecile (Pats), were 7 and 8 years younger than she was. J.L.B. insisted that she be a mother to them, and she often remarked that being a step-mother was one of the easiest of her motherly duties. J.L.B. was so strict that she acted as a buffer and relates how once when the two children were stopped from going somewhere she heard one of them say "that's the worst of these old fogies – they've forgotten what it's like to be young!"

She claims that as a result of handling her stepchildren, she had an inflated opinion of her ability as a mother. The birth of her own child, William Macdonald Smith, on 25th June 1939, changed that opinion. 'William arrived two weeks early and has been in a hurry ever since!' He is at present a successful educationist responsible for tutoring many thousands of young matriculants all over South Africa.

The first coelacanth

Besides his professional interests in chemistry, J.L.B. Smith had since 1930 developed a keen interest in ichthyology, the study of fishes. His young wife soon became involved in his hobby and accompanied him on fishing trips and collecting expeditions. Eight months after their wedding they were presented with one of the outstanding scientific finds of the century – the living coelacanth, later named *Latimeria chalumnae* by J.L.B. Smith. From January to June 1939 the Smiths worked furiously on the description of this



Margaret and J.L.B. Smith collecting fishes on the Pinda Reef in northern Mozambique in 1951. The Arab dhow used by the ichthyologists can be seen in the background.

remarkable fish, and the manuscript was finally submitted to a scientific journal four days before William was born. It was a baptism by fire for the young wife, and the prelude to 30 years of hard work and absolute dedication as assistant to J.L.B. Smith.

Establishment of the Department of Ichthyology and early research

In 1946 the Department of Ichthyology was established at Rhodes University and J.L.B. and Margaret Smith were able to devote all their energies to the production of an authoritative book on the sea fishes of southern Africa. One of their greatest problems was a lack of suitable illustrations. Margaret Smith, in typical pioneering style, took on the task. By sheer hard work, and without prior artistic training, she produced a fine series of colour paintings of our marine fishes. She is now recognised as one of the most accomplished fish illustrators in the world, and has trained a host of new artists, including Hilda M. Jubb and Elizabeth M. Tarr.

The Smiths mounted numerous fish collecting expeditions to the coasts of South Africa and southern Mozambique from 1938 to 1949. The first edition of 'The Sea Fishes of Southern Africa', published in 1949, contained 685 illustrations (from a total of about 1 320) by Margaret Smith, and was acclaimed worldwide.

Further research and the second coelacanth

A series of major expeditions was organised to northern Mozambique, Tanganyika, Kenya and the islands of the western Indian Ocean between 1951 and 1956. During these expeditions pamphlets were distributed offering a reward for the capture of a second coelacanth. The drama which unfolded in 1952, leading to the recovery in December of the second coelacanth from Anjouan Island, left a lasting impression on Margaret Smith: "It was the most exciting moment in a life full of interest. For days after returning to Grahamstown we seemed to walk on air until we came down to earth with a bump when we realized how much there was still to do."

During the East African expeditions Margaret Smith became firmly established as an ichthyologist in her own right. Besides organizing the domestic affairs on the expeditions, a not inconsiderable task in remote parts of tropical Africa, she was responsible for many of the collections, as well as for the analysis and illustration of many of the species collected. She became a competent underwater diver and developed several new collecting techniques. It was a tough and exacting life, but the many new discoveries made the hardships more than worthwhile.

After the 1956 expedition, Margaret Smith set about illustrating in colour the bewildering array of East African fishes which they had collected, many of them new to science. In addition to being co-author, she produced 938 figures, 344 in colour, for the book 'Fishes of the Seychelles', and many of these magnificent colour illustrations were added to later editions of 'The Sea Fishes of Southern Africa'. She also co-authored and produced 233 colour paintings for the book 'Fishes of the Tsitsikama Coastal National Park', as well as figures for J.L.B. Smith's famous books 'Old Fourlegs' and 'Our Fishes' and for articles on fishes in the 'Standard Encyclopaedia of South Africa' and the 'Afrikaanse Woordboek'. One of her first major solo works was the description and illustration of the common marine fishes of South Africa in the 'Ensiklopedie van die Wêreld'.



After the East African expeditions Margaret Smith set about the monumental task of illustrating the fishes collected (1956).

J.L.B. Smith often paid tribute to his wife's work. In the acknowledgements to the 'Sea Fishes' book, he states "My wife has been my full-time partner from the beginning and has been artist, adviser, buffer, critic and secretary, and is one of the most skilful collectors of fishes with many devices of her own. She has shared with me many hardships and sustained me when my courage has failed. But for her spirit, energy and unflagging enthusiasm this work could hardly have reached completion in any reasonable time."

During her travels, Margaret Smith became fluent in Portuguese, and, in addition, learnt to read French, Italian, Spanish and Nederlands. She has given numerous radio talks in English and Afrikaans in South Africa, and in Portuguese in Mozambique, Brazil and Portugal. She has also appeared on television in Portugal, United States of America, New Zealand and Réunion, and in several television documentaries in South Africa.



Sorting fishes in the laboratory of the old Department of Ichthyology after the East African expeditions (1956).

The establishment of the JLB Smith Institute of Ichthyology and recent research

After the death of J.L.B. Smith in January 1968, Margaret Smith continued her ichthyological research in Grahamstown. By now, the Department of Ichthyology had acquired several additional staff members and a massive collection of fishes and fish publications. The old military building housing the Department was bursting at the seams, and it was obvious that new accommodation would have to be found.

At the end of 1968 the South African Council for Scientific and Industrial Research and Rhodes University decided to establish the J.L.B. Smith Institute of Ichthyology in a specially-designed modern building in Somerset Street. The task of supervising the transition from the old Department to the new Institute fell on Margaret and she took to it with renewed vigour. To this end, she undertook a seven month world tour in 1969 visiting ichthyological



Margaret and J.L.B. Smith examining colour plates of parrotfishes prepared for the first Bulletin of the Department of Ichthyology (1956).

research institutes and museums in Europe, America, Hawaii, Japan, New Caledonia, New Zealand, Australia and Mauritius. She investigated the design of laboratories, libraries, collection rooms etc. and submitted a comprehensive set of specifications for a specialist research institute to the architects. Work on the new building began in 1973, and was completed in July 1975. The building was officially opened in September 1977 on the 80th anniversary of the birth of J.L.B. Smith and on Margaret's 61st birthday. Today, the J.L.B. Smith Institute of Ichthyology is regarded as one of the best equipped and most modern buildings of its kind in the world, and is a fitting tribute not only to the scholarship of J.L.B. Smith but also to the talents and planning abilities of his remarkable wife.

Margaret Smith was appointed the first director of the new Institute and the next few years were joyous ones — arranging the fish collection in an extensive new museum, establishing and expanding the library, making new staff appointments and increasing



Margaret Smith examining a model of the coelacanth (1970).

collaboration with ichthyologists around the world. Despite a huge administrative load, she continued her own research work, publishing a series of scientific papers on the classification of southern African fishes. In 1978 she initiated a complete revision of the 'Sea Fishes' book. This massive international project, which will be published in two volumes, involves 69 collaborators from 12 different countries, and is under her overall editorship. Field work was not ignored either and in 1973, 1976, 1977 and 1979 expeditions were organized to northern Mozambique and northern Zululand. On these excursions Margaret Smith insisted on sharing even the most arduous duties and it was not unusual to see her helping to launch the boat or working late into the night on specimen identifications.

The remarkable expansion of the Ichthyology Institute, and the quality of its collections and research publications, led in April 1980 to its establishment by the South African government as a National Museum. Margaret Smith was the driving force behind the move, which made the Institute an autonomous body, independent of and yet retaining close ties to Rhodes University. In collaboration with

her staff she then played a predominant role in the establishment of the new Department of Ichthyology and Fisheries Science at Rhodes University, a development which was necessitated by the new status of the Institute. She always displayed an active interest in the work of students in the Department, and her kind and generous nature helped many students through tight spots.

Margaret Smith served on the Senate and Faculty of Science of the University from 1968 to 1982 and was appointed an associate professor in 1980 and a full professor in 1981. In fourteen short years she had seen the transition of the Institute from a classical taxonomic research unit to an Institute integrally involved in national and international research programmes on biological systematics, zoogeography, morphology, ecology and fisheries management and fish culture.

On 30th April 1982 Margaret Smith retired as director, leaving behind her a vigorous and growing Institute, containing the largest collection of southern African marine fishes in the world, and a thriving new Department of Ichthyology and Fisheries Science.

Civic involvements and honours

Mary Macdonald's mother had always hoped that she would enter parliament! Her early training and her natural generosity and public-spiritedness resulted in her involvement in many civic bodies.

As a young married woman she worked in the Child Welfare Society, becoming honorary treasurer until ichthyology claimed her. After her husband's death she became involved with many societies *inter alia* South African Association of University Women, National Council of Women, Soroptomists, St. John Ambulance Brigade, South African Society for the Advancement of Science, Royal Society of South Africa, Southern African Museums Association, Limnological Society, Barologia, South Eastern Areas Development Association, and was made Patroness, Patron Member, Honorary Vice President, and honorary member of numerous angling and underwater unions and clubs. In 1977 and in 1980 the South African Angling Union awarded her their silver medal, and in 1980 she was granted the merit award of the Public Relations Institute of South Africa for her services to the Eastern Cape.

Professor Margaret Smith has also served on numerous government and provincial commissions which have investigated ichthyological matters. She is a Trustee of the Albany Museum,

honorary curator of fishes of three of the Eastern Cape Museums and serves on the Council of Kingswood College and the Grahamstown School Board.

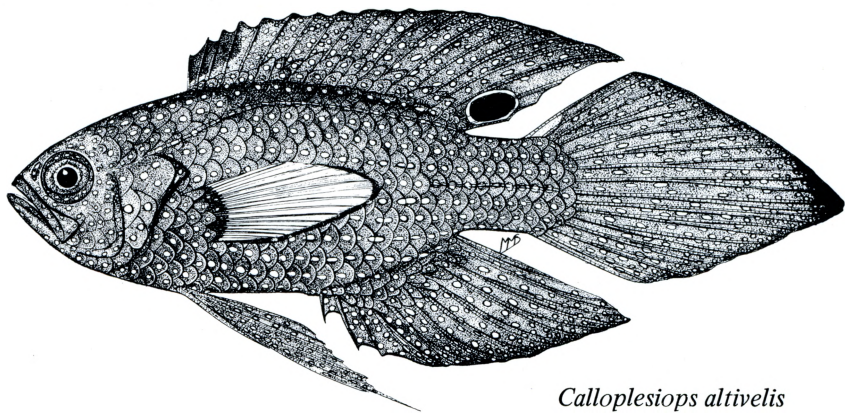
Conclusion

During her remarkable scientific career, Margaret Smith has progressed from lecturer to technician, artist and taxonomist, and now enters a new phase in retirement as the senior editor of the revision of her husband's book 'The Sea Fishes of Southern Africa'.

Up until the end of 1981, she had co-authored three books, edited three books and authored or co-authored 35 scientific papers and numerous popular articles. She had produced about two thousand colour and black and white illustrations of the fishes of southern Africa and the Western Indian Ocean. Four fish species have been named for her — *Simochromis margaretae* from Lake Tanganyika, *Pseudocheilinus margaretae* from Aldabra Island, *Canthigaster smithae* and *Chlidichthys smithae* from Mauritius and *Trachurus margaretae* from Durban.

She has established a network of collaborating ichthyologists which is probably unique and which has resulted in the Ichthyology Institute in Grahamstown becoming a mecca for researchers in the field. Her infectious enthusiasm for fishes has also inspired a generation of anglers, naturalists, students, scholars and, especially, children in South Africa and abroad.

We all salute this great lady, an accomplished musician, mother, artist, scientist, patriot, humanitarian, and above all, a humble and generous friend — Margaret Mary Smith.



Callopleysiops altivelis



The new building of the JLB Smith Institute of Ichthyology in Somerset Street (see p.9).