SPEECH FOR THE LAUNCHING OF "SMITHS' SEA FISHES"
DR D S HENDERSON SEPTEMBER 16, 1986

As I was preparing to come today, I was faced with a dilemma normally encountered only by the well-dressed lady about town - I couldn't decide which hat to wear. I still don't know if I am wearing my Rhodes University Vice-Chancellor's hat, my Chairman of the Council of the J L B Smith Institute of Ichthyology hat, or the one that goes with the office of Chairman of the Sea Fishes Trust.

Probably all three are in evidence, because the Sea Fishes Trust, of which I am a very new boy, has, since the invaluable contributions of the Le May family, starting with Hugh and continued through his son Basil, had a long association with both the present book and its predecessors.

Secondly, Rhodes University is proud of its long association with both marine and freshwater fish research. The importance of this work to the university is highlighted by the growth of the J L B Smith Institute of Ichthyology.

From rather threadbare beginnings as the research Department of Ichthyology in a tumbledown little building at Rhodes, to the magnificent purpose-built home where the staff now work, and the proclamation of the Institute as a National Museum in 1980, ichthyological research at Rhodes has maintained a high level of excellence which has brought it renown throughout the world.

Although the Institute itself was only founded in 1968, its genesis was in the scholarship of Professor J L B Smith. His wife, Professor Margaret Smith has, since his death, continued his work and drawn around her a group of able and dedicated ichthyologists. Her talent, both as a scientific researcher and as an artist is, in large measure, the reason why we are here today to celebrate the launch of the new "Smith's Sea Fishes".

Fishes are the most abundant and yet the most poorly-known group of vertebrates. With some 2 200 species, the southern African fish fauna makes up about 15 percent of the total number of marine fish species in the world, so this book will not only be of importance to southern African scientists, commercial fishermen, anglers and amateur ichthyologists - it will be valuable to researchers throughout the world.

Since 1949, when "Smith's Sea Fishes of Southern Africa" first appeared, material has been added in appendices each time it was reprinted. These appendices were used to accommodate material on extra species because any other method would have been too expensive. The second edition had very few

changes, but the third edition had an additional index and several textual changes. For the fifth edition, the final appendix included a list of the fishes new to South Africa, the increases in distribution, and nomenclatorial changes.

Ichthyological research has proceeded at such a rapid rate, however, that soon after the publication of the fifth edition it became apparent to Professor Margaret Smith that the book needed to be thoroughly revised.

She had long been collecting material for this revision and, in 1978 she and Dr Phil Heemstra began work on the project in earnest. The sciences generally have become extremely specialized in the past 36 years, and ichthyology is no exception. No two ichthyologists could hope to cover the work required for this book on their own, so ichthyologists throughout the world who are experts on the various families of marine fishes represented in the book were enlisted to help. This team effort, with 77 experts from 15 countries has now culminated in the production and publication of this authoritative and comprehensive book.

These contributors are based in a wide spread of countries - Australia, the United States of America, England, Israel, Denmark, New Zealand, South Africa, Sweden, Germany, Panama, Canada, Portugal, the USSR, Japan and Thailand - and several have contributed more than one family account to the book.

Some statistics will give you an idea of the huge task tackled by the two editors. In the last edition of J L B Smith's book, published in 1961, there were descriptions of about 1 400 species. The new, 1 212-page, revision has 2 150 species descriptions. About 1 500 species are illustrated in colour and there are also more than 1 500 black and white illustrations in the text. The classification of more than half of the original 1 400 species has altered in the light of research over the years

For example, in the rockcod family (Serranidae), J L B Smith recognized 40 species - in the new book there are 77. In the kingfish family (Carangidae) there were 45 species in the old book - only 28 will be recognizable in the new, and 25 more species have also been added. The deep-sea lantern fish (Myctophidae), have jumped from 17 species in the old book to 125 in the new.

The identification of new species and the reclassification of others will, no doubt continue. As Mark Pattison (1813 - 1884) wrote in "Isaac Casaubon" in

1875: "In research the horizon recedes as we advance, and is no nearer at sixty than it was at twenty. As the power of endurance weakens with age, the urgency of the pursuit grows more intense...And research is always incomplete"

It might seem churlish, on an occasion like this, to say that the work is incomplete, but I know that our two editors will agree that magnificent as their effort has been, in due time this book will also need extensive revision as ever more sophisticated collecting and research techniques reveal new and wonderful species of marine fishes.

Research done in South Africa has been supported by the Council for Scientific and Industrial Research and work on the book at the J L B Smith Institute was also funded by the Department of National Education and the Sea Fishes Trust. The expenses of visits by ichthyologists from other parts of the world were defrayed by a grant from the John S Schlesinger Foundation.

A work of the magnitude of "Smiths' Sea Fishes" requires the dedication of more workers than the editors and their expert contributors. The backroom boys and girls at the Institute have been part of the team throughout the years and have shown the same enthusiasm and excitement about the creation of this book. All of them, from secretaries to technicians, seem to be completely engrossed in their fishy business.

One thinks first of the artists - not least of whom is Margaret Smith herself, who has combined the trained eye of the scientist with the talent of the artist to produce the bulk of the illustrations. Over more than thirty years she has spent hours in boats or on shore taking colour notes and doing quick watercolour paintings of fresh specimens. Elizabeth Tarr and David Voorvelt, under her experienced eye, have produced a vast number of colour and black and white drawings and David Voorvelt's design was used for the cover illustration.

The artwork is the product of a rigorous and demanding modern approach to natural history illustration that requires hours of painstaking study, both in the field and the laboratory, and regular consultations between the artists and the scientists to ensure accuracy of form, shape, feature and hue.

Photographers, too, have made their contribution. Foremost among them is Dr John E Randell, who is not only a respected ichthyologist with a vast knowledge of coral-reef fishes, but is also a skilled photographer who has probably had more colour photographs of fishes published than any other

photographer in the world. In addition to his work, there are are also several excellent pictures taken by Robin Stobbs, the Institute's Senior Technical Officer.

The practical value of the illustrations is obvious: they lead to quick recognition of species and focus attention on distinctive features, thus aiding identification. In fact, without the illustrations and photographs, the book would lose much of its value.

Research assistants, collections managers, secretaries and typists, collection boat skippers, and technicians have all made their contribution, both to the research behind the book and to the physical production of the material.

The information explosion has had its effect here too - the first drafts were prepared on an electric typewriter, using correction fluid for changes, but word-processors have since increased the speed and efficiency of the production of the work.

The man in the street, or rather the man on the beach and the man in the water, has also played his role. Several of the new species in the book were found by sharp-eyed beachcomers, SCUBA divers, anglers or schoolboys and sent to the Institute for identification.

I think of the six-gill stingray found washed up on the beach in Port Elizabeth by Dave Bickell. This was so different from all previously known stingrays (with five pairs of gills and gill openings), that it was necessary to create a new genus, family and suborder for it.

Margaret Smith described a new species of fingerfin (Cheilodactylus pixi) related to, but quite distinct from, the common intertidal redfingers (Cheilodactylus fasciatus). It was originally known from one specimen caught off Port Alfred and was later found to be one of the most abundant fishes of rocky reefs at depths of 10 - 20 metres along the southeastern coast of the Cape Province. Because it is not readily taken by anglers, it was not noticed until ichthyologists found it while collecting subtidal fishes.

A new species of pufferfish was found alive in a tidepool at Port Alfred, and a new dwarf pelagic species of triggerfish was found washed up on the beach at Van Staden's River mouth. SCUBA divers in Natal found a new species of angelfish. The list could probably go on...

It will be clear from what I have said, that while Professor Smith and Dr Heemstra have steered this book through years of work, they have had help from many individuals, not least Mr D Mitchell, Managing Director, and Mr B van Rooyen, Editorial Director, of Macmillan SA. They have also had the unfailing support of Professor Mike Bruton, Director of the J L B Smith Institute, and their Editorial Committee.

The quality of the work produced by Cape and Transvaal Printers is also highly commendable. They have gained experience in work of this nature over many years because they printed the first edition of "Smith's Sea Fishes of Southern Africa", faithfully reproducing the colours of the numerous paintings of fishes. It is obvious that their standards have remained the same over the years.

To make the book easy to use, it has been carefully divided into four sections. The first of these is a general introduction to sea fishes, their anatomy and biology; the dangers of the sea; scientific nomenclature and classification; common names; the oceanography of the southern African region; and the development of ichthyology in South Africa.

The Systematic section forms the core of the book. Some 900 pages of text and line illustrations cover details of the classes, orders, families, genera and species of the fish populations of the Southern Atlantic and Indian Oceans. The details provided include diagnostic features, colour, size, geographic and depth distribution, biology and abundance. Notes of interest to anglers are set in a larger type than that used for material of interest to the scientist only.

The appendices provide a comprehensive literature list, with a numerical main key for the identification of all the fishes in the book. A glossary explains all scientific terms used in the book and a conversion list is provided for those who wish to compare the numbers used in this book with those used in the orginal "Sea Fishes" book.

There are three indices: one for scientific names, one with English common names and the third for Afrikaans common names.

We may look at fishes in a number of ways: as objects for scientific study; as beautiful creatures to be protected; as a vital food source for many thousands of people; but however we look at them they seem to retain their mystery as they glide through the depths, multi-coloured or drab; large and powerful; or

tiny and darting.

This large catch, "Smiths' Sea Fishes", has finally been landed, after many years of toil, and the anxiety so many of us felt over Margaret Smith's illness last year. It is a tribute to the work begun by J L B Smith and the standards maintained by Margaret Smith, Phillip Heemstra and all their fellow workers.