

# MARINE ENVIRONMENTAL EDUCATION AT SEAWORLD, DURBAN: A REVIEW AND UPDATE

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The South African Association for Marine Biological Research (SAAMBR), established in 1957, has played an important role primarily in coastal research, through the Oceanographic Research Institute (ORI) and as a public education centre through Seaworld, comprising the aquarium and dolphinarium.

During the last twelve years education facilities have been developed for school groups, and in particular for the senior primary level. These facilities include volunteer guides, tours, educational material and field courses. More recently the emphasis has moved to include resources for the secondary school level, part of an attempt to broaden the base of the user group.

## INTRODUCTION

The South African Association for Marine Biological Research (SAAMBR), a registered association not for gain, was founded in the late 1950's by a group of concerned individuals who felt that a research effort and public attention should be focused upon the marine resources of our coast, bearing in mind particularly the possible food resources of our seas. Natal's marine resources were then already being exploited by various sectors of the population, and this pressure has increased over the years. Consequently the biology of exploited or threatened organisms, exploitable limits and management strategies aimed at maintaining sustainable yields have been intrinsic to the research initiatives of the Oceanographic Research Institute (ORI), the research arm of SAAMBR.

In order to fund this research an aquarium was built which had a two-fold purpose. On the one hand the profits could be channelled to fund research while on the other hand visitors could become acquainted with the marine environment. The educational role of SAAMBR was thus written into its objectives.

The years following the establishment of the first aquarium building and the ORI have witnessed expansion on all fronts of SAAMBR's activities. During 1976 the dolphinarium was built and extension of the aquarium facilities included a large shark tank, a shell room and many other smaller permanent and rotating displays, in addition to the original 38 000 litre main tank. More recently, in 1984, the name SEAWORLD was adopted to encompass the aquarium and dolphinarium activities of SAAMBR. This was found to be advisable as a means of clarifying the fact that the aquarium and dolphinarium were one and the same organisation.

Concurrent with the developments in ORI and SEAWORLD there has been an increasing awareness of the educational role that SAAMBR has to play. Stimulation of public interest and environmental awareness must certainly occur through visiting the complex. However, a resource such as SEAWORLD has the potential to be used with

much greater effect than that of the simple impact of a casual recreational visit. The realisation of this potential began in a small but significant way when, in 1975, the first voluntary guides were recruited and trained to take school groups through the aquarium. The objectives of this exercise were quite simply that visiting school groups should derive maximum benefit from exposure to such a valuable resource.

The appreciation of a guided as opposed to an unguided visit was great and the value obviously immense. Ensuing years consequently saw more guides being recruited as school groups rapidly sought to take advantage of a more enriching visit to the aquarium.

Until 1983 education remained under a fairly informal structure. It was at this point that an Education Officer was employed for the first time and new objectives set for our role as a marine environmental education centre.

## DEVELOPMENT OF EDUCATIONAL FACILITIES

The broad educational aims of SAAMBR were clear. Already, the schools programme had begun with the guiding of children through the aquarium. The Education Officer's first task, therefore, was to set objectives for a more directed programme of activities. Employing a full-time educationist meant that existing facilities could be better geared to meet the requirements of schools and also that other means of disseminating marine environmental education could be explored. The problem was how to address these realistically in terms of the available staff and space.

Senior primary school children were chosen as the target group for the development of additional educational programmes. Of school groups using SEAWORLD they are proportionally the largest. It was felt that they were relatively unhindered by very specific syllabus and examination requirements, while also being at an impressionable age where a sense of environmental awareness could have far reaching effects as they develop into environmentally sensitive adults.

## SCHOOL PROGRAMMES

Since their inception guided tours have continued to be the major avenue through which schools use SEAWORLD as a learning experience. Although the user group shows a preponderance of junior and senior primary school pupils, it is a valuable resource for the whole range of the school-going population as well as tertiary educational institutions, such as teacher training colleges and university zoology classes.

Worksheets and lesson plans have been developed for use in conjunction with guided

tours. SEAWORLD offers a unique educational opportunity because representatives of marine invertebrate phyla and aquatic vertebrate adaptations can be observed in the various displays. Information pamphlets on popular topics such as dolphins, sharks, fishes and oceanographic careers have been written. These meet a constant demand for information on these subjects, much sought after for school projects.

One of the most exciting developments has been that of field courses for senior primary school children aimed at giving the pupils a more intimate understanding of the marine environment. They were initiated by Dr. Sue Marinier, Education Officer until October 1985. Although run on a limited scale (approximately 400 children participate per year) they have been, since their inception, much in demand.

The courses are run over a four day period for classes of up to 30 children. The children report to SEAWORLD each day and are then taken on excursions to the rocky shore and mangrove swamp. These are but two of the items of a multi-disciplinary programme. The emphasis is on an active learning experience while being in a relaxed yet stimulating environment. In 1987, as a means of broadening participation in such a learning event, two day and one day courses were introduced. All of these use SEAWORLD as a base with audiovisual presentations and field excursions to convey a message of environmental awareness.

Project supervision, talks and career information are further avenues through which the Education Officer (both past and present) has disseminated information on the marine environment.

#### HOLIDAY COURSES

During 1986 entertaining and instructive one day holiday courses were introduced. Initially these were only for 10 - 13 year olds, but subsequently, due to demand, courses for older children have also been held. These courses continue to be held during each school holiday. Based at SEAWORLD the course content is aimed at being fun while still carrying a conservation message.

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better place to teach ecology and environmental conservation than in a zoo? As it becomes increasingly more expensive to transport large numbers into the wild areas, ways must be found to stop the alienation of man from nature and wildlife. I am not suggesting that the zoo offers the total answer, but for the urban child whose life is centred in the city's 'concrete jungle' it is a very useful point of departure.

#### ACKNOWLEDGEMENTS AND REFERENCES

The information used in this article was obtained from notes or audio tapes made during interviews and from literature supplied by the zoos. The compilation of this survey would not have been possible without the help of the following staff of zoos, to whom I owe my thanks for giving freely of their time to discuss their work, and for the supply of literature on their educational programmes:

#### VOLUNTARY GUIDES

The volunteer guides underpin the success of environmental education at SEAWORLD. Aquarium guiding, field and holiday courses are areas where guides play a particularly crucial role in assisting the Education Officer. The guides are men and women who give freely of their time as a result of their interest in conservation/the sea/education/children/their own stimulation or simply wishing to make a contribution to the community.

In order to meet the demands of giving guided tours and running field courses, guides are required to successfully complete a training course including an examination. The content of the course includes basic biology, taxonomy, ecology, skills in tour delivery and a number of other aspects important in the successful execution of the various education programmes.

#### THE FUTURE

Mention has been made of the need to broaden the basis of participation, in terms of both numbers and the school level catered for. There is much scope for the development of new avenues. It would be pleasing if, for example, SEAWORLD were to be used by most, if not all, schools at least in the greater Durban area.

Political circumstances and cost are two factors which have prevented many schools from having access to SEAWORLD. We have attempted to address the latter by holding our educational concession entrance fee at a relatively low level in spite of inflation pressures which have forced entrance fees to rise.

Reference was made earlier in this article to the constraints of a small staff and limited space. We look forward to a future which holds the possible development of facilities capable of meeting the needs of a much larger user group than we are able to cater for at present. Effective environmental education implicitly suggests reaching a much wider proportion of the population than we are seeing at SEAWORLD at present.

Bristol Zoo:	Don Packham
Johannesburg Zoo:	Roy Wilkinson, Chris Cronje, Ferdie Schoeman, Rynette Coetzee, Phillip Cronje, Mary Geddes, Maretha Henning and Sally Rutherford.
London Zoo:	Henrietta Lehmann
Pretoria Zoo:	Annemarie Viljoen
San Diego Zoo:	Chip Kamber (former P.R.O.)
Whipsnade Park:	Michael Ricketts.

The Tunisian Oryx story was extracted from Zoo News. Summer and Autumn/Winter 1987.

Quotations by Jeremy Cherfas, Baba Dioum and Henry Riley were taken from the official guide of Bristol Zoo, Bristol Zoo Gardens from pages 31, 27 and 3 respectively.

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