



FOREWORD

BY DR. ASTRID JARRE

*Marine Research Institute and Zoology Department, University of Cape Town, Private Bag X3,
Rondebosch 7701, Cape Town, South Africa, Email: ajarre@gmail.com*

This special volume on the “I Brazilian Workshop on Ecological Modelling Applied to Fisheries” represents a timely and well-composed effort to give an overview of the many dedicated and skilful studies carried out in Brazilian aquatic ecosystems, aiming to contribute to improved management of fisheries. As so often, it rests on the dedicated efforts and skills of the editorial team, and in this case, the organisers of the workshop of the same title, carried out in São Paulo in March 2007. Congratulations to Gonzalo Velasco, Júlio Neves de Araújo, Ronaldo Angelini and Carmen Lucia Del Bianco Rossi Wongtschowski for the initiative, and to Gonzalo, Júlio and Carmen for making it happen! Thank you, Ronaldo, for sharing your ideas while in South Africa. Thank you, Maria Cristina Oddone, Daniel Loebmann and Alexandre Miranda Garcia for supporting Gonzalo in getting this volume together!

In fact, to tell the truth, much of the work reported here would not have seen the light of day without the efforts and foresight of Professora Carmen Lucia Del Bianco Rossi Wongtschowski of the Oceanographic Institute of the University of São Paulo (IO-USP). Prof^a. Carmen combines the professional virtue of uncompromising scientific rigour with a lifetime of accumulated experience, synthesized into wisdom. But above all, her outstanding personal skills get people motivated, activated and willing to continue no matter what obstacles need to be cleared from the way forward.

In 1994, I had the privilege of meeting Prof^a. Carmen, when she invited me to teach a course to advanced students and interested scientists, on “New approaches in marine ecology: Construction and analysis of trophic flow networks” in June. I keep the fondest memories of this course, not only because of the skills and enthusiasm of the participants, as well as the extraordinarily kind welcome that I was granted, but also because the participants taught me two lessons for life: Firstly, and in notable contrast to many huge cities, São Paulo *can* be free of traffic jams (in fact, free of traffic) in the late afternoon. It just takes a good soccer match. Secondly, in Brazil, modelling and soccer can readily be integrated into a higher entity. It is tremendously rewarding now, a good dozen years later, to see so many course participants actively working towards improving fisheries management using ecological and integrative models. Four of them obtained their PhDs applying the methodology introduced in this course to problems in fisheries ecology. Six of them are co-authors of contributions in this volume! So many obstacles have emerged... and been cleared from the way. Prof^a. Carmen, what would we do without you?

Also in 1994, South African citizens participated in the first democratic elections in their country, and this development made scientific co-operation possible for everyone. Since the early 1980s, the “Benguela Ecology Programme” has aimed “to provide scientific information on the structure and functioning of constituent ecosystems, to complement the knowledge that is required for the management of the renewable natural resources of the Benguela Current region”. Due to the foresight of its leaders, and notably Prof. John G. Field of the University of Cape Town (UCT), worthy counterpart to

Prof^a. Carmen, a workshop had been conducted early in this research programme, using the same methodology of trophic flow budgets about which I had been teaching in São Paulo, to integrate knowledge of the trophic functioning of Benguela ecosystems. Using the newly gained freedom, Dr. Coleen Moloney of the University of Cape Town (UCT) and I teamed up to complete this workshop's report that had been lying unfinished - an effort which turned out to be the start of many years of fruitful co-operation.

In reviewing the Benguela Ecology Programme, it has been emphasised that one of its strengths has been the application of a whole suite of techniques to tackle complex problems, and the ability of the programme leaders to maintain a broad view of possibilities to achieve its goal: to establish a scientific basis for the management of living resources of the Benguela (Moloney 2002, Moloney *et al.* 2004, Shannon *et al.* 2004). Much of the state-of-the-art knowledge on the Benguela from a natural sciences point of view is summarized in a recent volume of the "Large Marine Ecosystem" Series (Shannon *et al.* 2006).

Time has gone on, and our methods portfolio has widened greatly, both in South Africa and Brazil. Also, transatlantic bridges are being built! Dr. Ronaldo Angelini (now of the State University of Goiás) and I both enjoy the privilege of being guest researchers during 2006/2007 in Dr. Moloney's laboratory at UCT, while Dr. Adriana Carvalho, also of the State University of Goiás, worked at UCT's Environmental Evaluation Unit as guest researcher in socio-economic problems in fisheries management (oh yes, incidentally, something else that began in 1994!).

South-South co-operation is of overriding importance in addressing the problems of southern countries. The coasts of Brazil and South Africa both span the range from temperate to tropical waters. If I were to submit a wish, it would be that Brazilian and South African researchers, each building on their far-sighted and successful past, strengthen their links and work together to assimilate and discover new methodology, with the joint goal of improving the management of the human activities in their aquatic ecosystems that not only are exposed to high pressure by ever changing human impacts, but also are under the pressures of global climate change.

The present volume is a very good start. May many more follow!

References

- Moloney, C. 2002. The Benguela Ecology Programme during 1981-2001: lessons learnt. p. 32-33. *In: Jarre, A. (Ed.) "Ecosystem West Greenland" Workshop Proceedings, Greenland Institute of Natural Resources, Nuuk, 29 November - 03 December 2001: A stepping stone towards an integrated marine research programme. INUSSUK, Arctic Research Journal*, 1: 99 p.
- Moloney, C. L., van der Lingen, C. D., Hutchings, L. & Field, J. G. 2004. Contributions of the Benguela Ecology Programme to pelagic fisheries management in South Africa, **African Journal of Marine Science**, 26: 37-51.
- Shannon, L. J., Cochrane, K. L. & Pillar, S. C. 2004. Ecosystem approaches to fisheries in the southern Benguela. **African Journal of Marine Science**, 26: 328 p.
- Shannon, L. V., Hempel, G. Malanotte-Rizzoli, P. Moloney, C. L. & Woods J. (Eds.) 2006. **Benguela: Predicting a large marine ecosystem**. Elsevier, Amsterdam, 410 p.