

## Introduction

Right whales, genus *Eubalaena*, were once highly important commercially. They were the 'right' whales to catch because they were slow swimming, floated when dead and yielded great quantities of valuable oil and baleen. By the time 'modern' whaling began (ca 1865), right whales were rare in all oceans and they figure little in modern catches, apart from recently revealed illegal catches by the USSR (e.g. Tormosov *et al.*, 1998; Brownell *et al.*, 2001). Right whales (including bowheads, Greenland right and pygmy right) were the first whales to be protected internationally (in 1935) and their protected status has been continued by the International Whaling Commission since its founding in 1946 (Donovan, 1992). However, until recently there has been generally less interest in their status than in that of other, commercially more significant species, at least in the Commission's deliberations. Until 1982, when it adopted a moratorium on all commercial whaling (to take effect from the 1985/86 pelagic season), the Commission largely concerned itself with currently exploited species.

By 1981, two other species, humpbacks and blue whales, had been afforded official protection from commercial whaling throughout the world for 15 years (from 1966), whilst the gray whale had been protected from 1937. In 1981, the Commission (IWC, 1982) asked its Scientific Committee to assess the extent to which Commission actions in protecting species had led to their intended recovery (at that time, only two stocks, eastern North Pacific gray whales and South African right whales, had shown demonstrable recovery). The Scientific Committee decided that right whales were an appropriate choice for initial analysis for a number of reasons:

- data were available from several stocks worldwide;
- they are closely related to the bowhead (*Balaena mysticetus*) - a species depleted but subject to aboriginal whaling;
- the North Atlantic right whale was the first to be regularly caught commercially (by the Basques in the 12<sup>th</sup> century);
- although they were among the first to be protected internationally right whales were still among the rarest of large whales - they appeared to represent an extreme example of the inability of whale stocks to recover from excessive depletion.

That was the background to an international Symposium and Workshop held under the Commission's auspices in Boston, Massachusetts, in 1983 (IWC, 1986). Its major conclusion was that while there were signs of increase in at least two Southern Hemisphere populations (Argentina and South Africa), data were inadequate to demonstrate anything similar for Northern Hemisphere stocks. That was, however, a time of increasing research activity on a number of right whale stocks worldwide; high priority for the future was therefore given, *inter alia*, to ongoing and long-term photo-identification studies (then a relatively new research technique for right whales), and to systematic long-term standardised surveys.

By 1997, given considerable new information accrued in the 14 years since the Boston meeting, the Committee agreed

it was time to undertake a Comprehensive Assessment of right whales worldwide (IWC, 1998). A striking aspect of the understanding of right whales then, as foreshadowed in Boston, was a recent documented increase in Southern Hemisphere stocks and a corresponding lack of any detectable increase in Northern Hemisphere stocks. Plans were drawn up for a Workshop to undertake the assessment. Two important aims, given the almost inevitably iterative nature of such work, were to identify gaps in knowledge and recommend ways they could be addressed. A major focus was to attempt to explain the contrast between Northern and Southern Hemisphere populations

The Workshop took place in Cape Town, South Africa, over six days, March 19-25, 1998. As before, it was preceded by a two-day public Symposium, at which 24 papers were presented on the results of recent work. Convened and organised locally by Best and colleagues from the Mammal Research Institute, University of Pretoria, and chaired by Bannister, the Workshop attracted 38 participants, from ten countries. Given the concerns over the situation in the western North Atlantic (e.g. Kraus, 1990), the United States was well-represented (16 participants). Local South African interest was also strong (ten participants). The organisers were specially pleased to welcome a Russian representative, in view of the recent disclosure of major illegal catches by Soviet fleets up to the early 1970s, including southern right whales (Yablokov, 1994). In addition to biologists working on a number of stocks, geneticists, mathematicians and modellers took part.

Data and analyses were presented from stocks as widely spread as the Auckland/Campbell Islands and the Okhotsk Sea, South Africa and the western North Atlantic, Australia and South America. Included on the agenda were systematics, stock identity, historical and modern catches, biological parameters, abundance and trends, worldwide comparison of population status, factors potentially affecting recovery and whalewatching. As far as possible, discussions dealt with individual stocks or regions; inevitably, as in the case of much historic catch data, that was not always possible.

The Workshop's many recommendations focussed on areas of special interest to the Commission, i.e. the trend and condition of stocks, and measures for their conservation. It confirmed recent increases in several Southern Hemisphere populations, despite the relatively large previously unreported Soviet catches, but not for the western North Atlantic. It emphasised the importance of maintaining research to investigate status and biological parameters, particularly from long-term photo-identification studies and surveys, and (equally important) of processing and analysing the resulting data. Most particularly, it expressed serious concern about the status of western North Atlantic right whales, strongly emphasising the need for research leading directly to a reduction in non-natural mortality such as ship strikes and entanglements in fishing gear. Serious concern was also expressed over the status of eastern North Pacific right whales because of the extremely small population and a lack of information on current human-related threats.

One gratifying consequence of the Workshop was that all its recommendations were endorsed by the full Scientific

Committee and the Commission (IWC, 1999). A further Workshop was held at Woods Hole, Massachusetts, over four days, 24-27 October 1999, specifically to address status and trends in the western North Atlantic stock. In its turn, that Workshop formulated a set of detailed recommendations, in line with those from Cape Town, and emphasised the absolute urgency of making every effort to reduce non-natural mortality to zero in that stock. Once again, the Commission endorsed all the recommendations (IWC, 2001); it is greatly to be hoped that management actions can now be taken, sufficiently and in time, to prevent what some models predict to be that stock's inevitable fate - a slow decline to extinction.

The question of the nomenclature of right whales was raised at the meeting in 1983 and most recently at the Scientific Committee's meeting in Adelaide in 2000 (IWC, 2001). This Introduction is not an appropriate place to discuss this issue in detail but merely to report that we have followed the accepted nomenclature agreed by the Scientific Committee in this volume i.e. to retain the generic name *Eubalaena* for right whales and to recognise the three species *E. glacialis*, the North Atlantic right whale, *E. australis*, the southern right whale, and *E. japonica*, the North Pacific right whale. Interested readers are referred to IWC (2001), Rice (1998) and Rosenbaum *et al.* (2000).

This Special Issue of the Journal contains the Reports of the Cape Town and Boston Workshops, together with peer-reviewed papers, many of which originated as papers submitted to the Workshops. The papers are arranged by species and stocks, with a further category for techniques applicable generally. The Editors wish to thank the many scientists who undertook the time-consuming but essential task of reviewing the manuscripts. These included: J.L. Bannister, P.B. Best, P. Brodie, M.W. Brown, R.L. Brownell Jr, S.T. Buckland, S.R. Burnell, C. Carlson, H. Caswell, P. Clapham, J.G. Cooke, P. Corkeron, D. DeMaster, G.P. Donovan, N. Friday, A. Hall, P.K. Hamilton, P. Hammond, A.R. Hiby, E.E. Hofmann, L. Hutchings, T. Kasuya, S. Katona, G.P. Kirkwood, A. Knowlton, S.D. Kraus, J.L. Laake, O. Lindquist, M.K. Marx, C.A. Mayo, S. Mizroch, K. Ralls, P. Record, R.R. Reeves, S.B. Reilly, R. Richards, G.J.B. Ross, V. Rowntree, E.R. Secchi, C.T. Tynan, L.G. Underhill, B. Würsig and A. Zerbini.

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leading to the successful outcomes of both Workshops and the publication of this volume.

Finally, we would like to dedicate this volume to the memory of A.A. Berzin, W.H. Dawbin and J.H. Prescott.

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