

Minke Whales

RESEARCH UPDATE

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INFORMATION SHEET NO. 4

Researchers from the Minke Whale Project have reported yet another record field season in 2000, with hundreds of dwarf minke whales observed in over forty encounters, providing a wealth of biological and behavioural information. Many hours of video and thousands of still photographs have provided the data for a detailed identification catalogue that is now beginning to reveal patterns of distribution in space and time and providing insight into the social structure of the whales. Work is continuing throughout the summer analysing the results of the 2000 season.

Highlights from our six-week season aboard *Undersea Explorer* in 2000 include around 90 hours of underwater observation in 41 encounters with over 200 whales. While many interactions occurred while moored at reef sites, we covered around 125 km while tethered on the end of our ropes behind the drifting vessel. We were able to collect enough data to identify about 100 of these animals, and have so far been successful in confirming re-sightings of more than 20 of these within the season at both greater maximum time intervals (19 days) than 1999 and greater maximum distances apart (60 km). This season, for the first time ever, we successfully re-sighted several animals (three so far) from the 1999 season, using PODPIC (our Portable Digital Photo Identification Catalogue) to match individuals filmed in the field with digital video. As far as we know, this is the first documented case of year-to-year site fidelity for an oceanic rorqual in tropical wintering grounds in the world. Another highlight was the sighting of a single Antarctic minke whale (*Balaenoptera bonaerensis*) during an encounter with dwarf minkes (*Balaenoptera acutorostrata*) at the southern end of Ribbon Reef No.5 in the fifth week of our field season. This is the first ever recorded sighting of *B. bonaerensis* in the GBR Marine Park, the first record of a mixed group of what are now recognised as two different species and is as far as we know, the first underwater footage of this species.

The Project has received growing support from Ribbon Reefs live-aboard dive operators over the past few years. During the 2000 season almost 100 Whale Sightings Sheets were completed and submitted by operators. We would like to thank everybody who has supplied us with Sightings Sheets, photographs and video footage of minke whales during the season. These data have been extremely useful in mapping, identifying and re-sighting individual whales as our PODPIC and sightings databases continue to grow. Your continued support and contributions are greatly appreciated.

Data entry, coding and preliminary analyses of passenger questionnaires (MWQ99 & 2000) are now complete, revealing some very interesting results. With the combined efforts of the crews of each vessel we have now gathered together a database of 527 completed questionnaires from the 1999 and 2000 minke seasons. This information will allow us to understand more about divers' experiences with minke whales and help

improve these experiences whilst minimising impacts on the whales. We have so far found many interesting results from the passenger questionnaires, including a very high mean passenger satisfaction rating for their minke whale experience(s) (9.0 out of 10), which is the highest we have seen for any tourist satisfaction study. Another interesting result was that the most frequently mentioned detracting experience for passengers (apart from the weather) was seeing whales being chased away by other divers swimming towards them. This result makes clear the incentive for passengers and operators to follow the Code of Practice and not pursue or swim towards the whales. Summaries of results for individual vessels will be distributed in confidential reports to operators who participated in the research.

Results of the passenger questionnaires and industry member interviews (following the 1999 season) have contributed greatly to our understanding of the experiential and operational issues involved in ensuring sustainably managed human-wildlife interactions. These results have also consistently shown how powerful the effects of encounters with minke whales are on tourists' experiences. Feedback from passengers and staff of participating vessels has been critical to the development and improvement of the Code of Practice for swimming with the whales. This feedback has also been used to develop interpretive material provided to the industry.

It is intended that a workshop between industry and researchers be held before the beginning of the 2001 minke season to present our latest research findings and discuss passenger and industry feedback from the proposed Code of Practice for swimming with the whales.

A report on the progress of the Minke Whale Project prior to the 2000 season was made at the International Whaling Commission (IWC) annual meeting in June, held in Adelaide. The issue of commercial swim programs with whales raised some concern among the Whalewatching Group of the Scientific Committee, which recommended that swim-with programmes be assessed on a case-by-case basis and that such programmes be further evaluated for effects on cetaceans. One of the research foci of the Minke Whale Project will be to continue monitoring the effects of human interactions on the whales to help ensure the long-term sustainability of these interactions.

Future goals of the Minke Whale Project are: to develop, in collaboration with the industry and management agencies, a management framework for sustainable dwarf minke whale tourism; to provide operators with up-to-date research findings and interpretive material; to continue photo-identification studies to improve our understanding of the biology and behaviour of this minke population; genetic studies using skin samples (frequently sloughed by the whales and found drifting during encounters); and to implement a large-scale sightings network.

We would again like to express our sincere thanks to all participating Cairns section live-aboard dive operators, their crew and staff members, whose contributions to the Project have assisted its many discoveries and successes. We hope that further outcomes of the Project continue to be of use to the industry and lead to the long-term sustainability of

human-dwarf minke whale interactions. Our current funding ends before the start of the next minke season. We are very keen to continue this long-term study into the biology, behaviour and management of this unique GBR resource and are therefore actively seeking funds for the 2001 field season. We will no doubt be looking for all the support we can get (especially from the industry) in this endeavour over the next six months.

Members of the research team for the 2000 season included Dr Peter Arnold (Museum of Tropical Queensland); Dr Alastair Birtles (CRC Reef Chief Investigator), Peter Valentine, Matt Curnock, Vimoksalehi Lukoschek and Liam Smith (all James Cook University), and Andy Dunstan and Monique Matthews (Undersea Explorer).

For further information please contact:

Dr Peter Arnold, Museum of Tropical Queensland, 78-102 Flinders St, Townsville QLD 4810

Ph: 07 4726 0615

Fax: 07 4721 2093

Email: petera@mtq.qld.gov.au

Dr Alastair Birtles, c/- Tourism Program, James Cook University, Townsville QLD 4811

Ph: 07 4781 4736

Fax: 07 4725 1116

Email: alastair.birtles@jcu.edu.au

Peter Valentine, c/- Dept. of Tropical Environment Studies and Geography, James Cook University, Townsville QLD 4810

Ph: 07 4781 4441

Fax: 07 4781 4020

Email: Peter.Valentine@jcu.edu.au

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