

MINKE WHALE PROJECT



RESEARCH UPDATE, 28 NOVEMBER 2003 (INFORMATION SHEET # 6)

2003 season a success

The Minke Whale Project team had a very successful field season over June and July 2003, its eighth consecutive year of researching the unique dwarf minke whale-swim tourism industry in the northern Great Barrier Reef. During our six-weeks of fieldwork aboard the live-aboard diving and research vessel *Undersea Explorer* we had 69 encounters with over 200 whales, and 32 in-water interactions with over 150 whales. During the season we re-sighted our old friend 'Kinky Minke' on several occasions, who was recognised by her damaged (and kinked) right tail fluke. Several other between-season and many within-season re-identifications were documented, adding to our growing database of re-sightings. Additionally this season, Susan Sobotzick (University of Rostock, Germany), working with Andy Dunstan, Peter Arnold and Alastair, used underwater video and a portable range finder to measure lengths of the whales interacting with swimmers. Her initial results are most interesting and we look forward to sharing these with you in the next update and pre-season workshops.



Photo by Matt Curmook

Project researcher and videographer Susan Sobotzick shooting video for length measurements and ID's, drifting on a rope behind *Undersea Explorer*.

Members of the research team and JCU masters students involved in the project also had the opportunity to study the whales from onboard *Nimrod Explorer*, *Mike Ball's Super Sport* and *Taka II*, enabling improved data collection in 2003. The ability to collect data from multiple platforms combined with the increasing contributions of sightings information, digital photos and video by crew from all boats is greatly improving our re-sighting records and will benefit longer-term studies of the cumulative effects of these encounters on the whales. This minke season has been one of our best for industry data returns, with a total of 190 Whale Sighting Sheets, 403 passenger questionnaires and 87 completed logs from the Encounter Log Books received by the end of October. We are very grateful to all of the managers, office staff and crew of each operator who assisted our research this season.

New permits for industry in 2003

This year nine new swim-with-whales permits were issued to operators by the Great Barrier Reef Marine Park Authority (GBRMPA), making this the first fully permitted whale-swim industry in the world. On the 16th of May a workshop was held in Cairns to update continuing operators, and introduce new permittees to the Minke Whale Project research program, the Code of Practice for sustainable interaction with whales, details of interpretive materials and opportunities for participation in the research for the 2003 season.

Conditions of the new permits include following the Code of Practice developed by the Minke Whale Project team, and completing Whale Sighting Sheets (WSS) for each sighting and encounter with whales. Operators were asked by GBRMPA to submit their WSS's to the Minke Whale Project research team (c/- Dr. Alastair Birtles, address below) to assist our research into the whales' local distribution and abundance in GBR waters. Copies of these WSS's were forwarded to GBRMPA as part of the permit condition. With funding anticipated from GBRMPA, the Minke Whale Project will analyse and report findings from the WSS's to GBRMPA over the next six years (2003-2008) and summaries of findings will be provided back to operators.

International recognition for Minke Whale Project

Alastair Birtles, the CRC Task Leader of the Minke Whale Project, was an invited participant to the International Whaling Commission Scientific Committee Meeting in Berlin for two weeks in May/June of this year. The Meeting was attended by more than 200 scientists from over 40 countries. Most were representing their national governments with some additional invited participants. He presented the paper: "Sustainability indicators and other information needed to assess ecological sustainability of dwarf minke whale-swimmer interactions." The paper and the overall work of the Project team were very well received. A worldwide review of swim-with-whales tourism also presented during the sessions of the Whalewatching Sub-committee concluded that the GBR minke tourism was the best studied in the world and should serve as a model for other areas.

One major outcome of the work of the Whalewatching Sub-committee is that there is to be a Scientific Management of Whalewatching Workshop in South Africa in 2004. Alastair was elected as Chair of a Scientific Advisory Group to help with the organisation of this Workshop. This is operating as an Intersessional Correspondence Group of the WW Sub-committee. The Brazilian Government and the Brazilian Right Whale Research Group (also involved in the organization of the workshop) invited and hosted Alastair at a preliminary planning meeting during September in Brazil.

While in Brazil, Alastair visited their humpback and turtle research near Salvador in the northeast, as well as their right whale research in the south in Santa Catarina State, and shared insights and new ideas about management of wildlife tourism in another southern hemisphere country that has many parallels with Australia.

Identifying minkes made easier

The identification of individual whales was made easier this year with the help of a new Minke Whale Identification Guide Booklet and CD-ROM, which were developed for the industry by Jackie Hasling as part of her JCU Masters project. *Take a Closer Look: A Dwarf Minke Whale Identification Guide* is an interactive resource focusing on identifying individual whales. The Guide also contains a description and brief history of six well-known individual whales and interesting stories about them. The Guide was based on a forthcoming paper by the Minke Whale Project team on the colour patterns and contains many of Alastair's photos.

The Identification Guide can be used on board vessels to enhance passengers' experiences by recognizing individual whales. The Guide has also been useful in improving data returns for identifying whales, helping passengers and crew with underwater cameras take better photographs for whale identification.

Copies of the Identification Guide Booklet and CD-ROM, as well as updates to existing interpretive material, were presented to the industry at the Pre-Season Minke Workshop held on the 16th of May in Cairns.



One of the 2003 season's cast of characters 'taking a closer look'.

Photo by Alastair Birtles

'Mystery of the Minkes' documentary

Towards the end of 2002, National Geographic released the new TV documentary 'Mystery of the Minkes', which has since been featuring regularly on National Geographic Channel worldwide. The 50-minute documentary was co-produced by the Natural History Unit of TVNZ and *Digital Dimensions* of Townsville, and was shot over the 1999-2001 seasons aboard *Undersea Explorer*. The film features Minke Whale Project researchers Dr Alastair Birtles and Dr Peter Arnold as well as acoustic researcher Jason Gedamke, and provides a fascinating account of the whales' biology, aspects of the research and current threats to the whales, all illustrated with spectacular footage. The film is available for purchase on DVD and VHS from *Digital Dimensions* (Tel: 07 4771 5116; Fax 07 4771 5156). *Digital Dimensions* and NHNZ are donating 10% of the net proceeds from the sale of this video towards the continuing research of the Minke Whale Project (although we have been warned that this doesn't usually amount to very much!).

New papers and conference presentations

The past 18 months have been very productive for the Minke Whale Project team, with several new research papers published and conference presentations made. Recent Minke Whale Project papers include:

Birtles, R.A., Arnold, P.W. & Dunstan (2002). Commercial swim programs with dwarf minke whales on the northern Great Barrier Reef, Australia: some characteristics of the encounters with management implications. *Australian Mammalogy*, 24, 23-38.

Valentine, P., Birtles, A., Curnock, M., Arnold, P. & Dunstan, A. (*In press*). Getting closer to whales – passenger expectations and experiences, and the management of swim with dwarf minke whale interactions in the Great Barrier Reef. *Tourism Management*. Available online: <http://www.sciencedirect.com/> (30 October 2003).

Conference presentations:

Arnold, P.W., Birtles, R.A., Matthews, M & Dunstan, A. (2002). Gulping behaviour of rorquals: preliminary underwater observations and their relevance to evolution of feeding in mysticete whales. Delivered at *International Conference on Secondary Adaptation to Life in Water*, Dunedin, New Zealand, 9-13 December, 2002.

Birtles, A., Barnett B., Arnold, P.W., Valentine, P.S. & Dunstan, A. (2002). Minkes in control? The pathway to self-regulation by the swim-with-whales ecotourism industry on the northern Great Barrier Reef. In *Final program and abstracts, 2002 Ecotourism Australia International Conference: Ecotourism – a world of difference, 21-25 October 2002*. p.43.

Birtles, R.A., Arnold, P.W., Valentine, P.S., Barnett B. & Dunstan, A. (2003). Sustainability indicators and other information needed to assess ecological sustainability of dwarf minke whale-swimmer interactions. *International Whaling Commission 55th Scientific Committee Meeting*, May-June 2003, Berlin.

Birtles, R.A., Arnold, P.W., Dunstan, A. & Valentine, P.S. (2002). Information needs for the ecologically sustainable management of swim-with-dwarf minke whale ecotourism on the Great Barrier Reef. Presentation at *Ecology 2002* (joint meeting of the Ecological Societies of Australia and New Zealand), Cairns, December 2002 (abstract only).

Four Masters students join the team in 2003

This year the Minke Whale Project was joined by four JCU Master of Tourism students: Jackie Hasling (USA), Devon Hawthorn (Canada), Gina Sjursæther (Norway) and Thomas Vintges (Netherlands). Jackie's project (entitled: "Meet the Minkes: creating an interpretation package which emphasizes personal connections between humans and whales") focused on interpretation for the industry, resulting in her developing the Minke Whale Identification Guide (see above). Gina's project ("Involving tourism operators in the ecologically sustainable management of their industry: developing a sightings network for the GBR minke whale ecotourism industry") looked at the tourism industry's involvement in the sightings network. Devon's project ("Exploring the practical application of Sustainability Indicators for nature-based tour operators: a case study in interpretation and the swim-with-dwarf minke whale industry on the northern Great Barrier Reef") investigated interpretation as a sustainability indicator, while Thomas ("Passenger involvement in monitoring the behaviour of the dwarf minke whale *Balaenoptera acutorostrata*: a study on the commercial swim-with-whales program in the northern section of the Great Barrier Reef") investigated aspects of minke whales' behaviour utilising data collected from the 2003 Encounter Log Books. They were each given the opportunity to experience a trip on a live-aboard dive boat during the season and assisted in data collection for the Project. Many thanks to *Undersea Explorer*, *Explorer Ventures*, *Taka Dive* and *Mike Ball Dive Expeditions* for providing the students with in-kind berths during the season to help their research projects.

What to expect in 2004

In 2004 we will host a Pre-Season Industry and Management Workshop, currently proposed for Friday 14th May. While it is important that the owners, managers and operations staff of each operator attend, it is also critical that as many boat crew as possible are present at the workshops. Vessel crew provide the key link to managing passengers in minke whale encounters and their contributions to our research have proven invaluable over past seasons. At the workshop operators will be updated on the latest research findings and will be provided with new interpretive materials for their passengers.

In 2004 we will also be trialling new data collection tools for minke encounters including revised passenger questionnaires, log books and ways of collecting industry effort data. These research instruments, in addition to the now-compulsory Whale Sighting Sheets, will be critically important for studying many aspects of the whales as well as in determining the long-term sustainability of the industry.

Funding Opportunities

Since successfully completing our Natural Heritage Trust project for Environment Australia in 2001 (based on development and assessment of the Code of Practice and interpretation for the industry) we have been seeking funds to continue research into the biology of the whales and the sustainability of the industry, both of which remain largely unknown. In 2002 we were awarded some funds from CRC Reef but were partially self-funded for both the 2002 and 2003 field seasons. We are currently negotiating a contract with GBRMPA to analyse Whale Sightings Sheets from the 2003 field season and conduct a post-season workshop, with the understanding that this would be likely to be extended to cover the remaining five years of the permits (2004-2008).

We are applying for a grant from the Australian Research Council (ARC-Linkage; to be submitted in April 2004) to substantially expand our research over the years 2005-2007. The objectives are to support two PhD studies on the sustainability of the industry and the biology of the minke (especially an expanded photo-ID study), to continue our fieldwork on minke behaviour and to undertake tracking studies using VHF and satellite tagging techniques. Linkage applications require a minimum of 20% cash upfront and as much in-kind as possible from Industry and other partners. It is hoped that the GBRMPA funding (to 2007) would contribute to this and a very positive initial response has been received from CHARROA members.

Thanks

The Minke Whale Project team are profoundly grateful to the owners, managers, crews and office staff of the live-aboard dive boats *Undersea Explorer*, *Super Sport*, *Nimrod Explorer* and *Taka II* who assisted greatly with the research again this year and gave our researchers, students and volunteers vessel access to help study these marvellous animals and the sustainable management of tourism associated with them. We also thank some of the more recently permitted vessels for their growing involvement in our research. We welcome your continued contributions for the 2004 season, without which this research would not be possible.

The Minke Whale Project team

Members of the Minke Whale Project include Dr Alastair Birtles (Project Leader, JCU), Dr Peter Arnold (Museum of Tropical Queensland), Peter Valentine (JCU School of TESAG), Andy Dunstan (*Undersea Explorer*), Susan Sobtzyck (University of Rostock, Germany), Matt Curnock (JCU), Louise Goggin and Bryony Barnett (CRC Reef Research Centre), Dean Miller (PhD Tourism student) and Jos Hill (TESAG).

For further information please contact:

Dr. Peter Arnold
Museum of Tropical Queensland
70-102 Flinders St.
Townsville 4810
Ph: (07) 4726 0615
Fax: (07) 4721 2093
Email: petera@mtq.qld.gov.au

Dr. Alastair Birtles
Tourism Program
James Cook University
Townsville 4811
Ph: (07) 4781 4736
Fax: (07) 4725 1116
Email: Alastair.Birtles@jcu.edu.au

Peter Valentine
School. of Tropical Environment
Studies and Geography
James Cook University
Townsville 4811
Ph: (07) 4781 4441
Fax: (07) 4781 4020
Email: Peter.Valentine@jcu.edu.au

The Minke Whale Project is a combined initiative of James Cook University, the Museum of Tropical Queensland and *Undersea Explorer*. The Project has been partially funded by the CRC Reef Research Centre 2002-2003. It would not be possible without the support of *Undersea Explorer* and other members of the Cod Hole and Ribbon Reefs Operators Association.



www.reef.crc.org.au/aboutreef/wildlife/minkewhale.html