

NBP02-02  
9 April – 21 May 2002

SO GLOBEC  
International Whaling Commission  
Cetacean Visual Survey Cruise Report



Humpback whales off the bow of the Nathaniel B. Palmer. Digital photo by Ana Sirovic

**Observer - Debra Glasgow**

**Methods**

Standard IWC methodology for multidisciplinary studies will be used throughout all GLOBEC collaborative cruises. This will involve experienced cetacean researchers conducting line transect sighting surveys throughout daylight hours in acceptable weather conditions. Data are recorded on a

laptop based tracking program (Winacruz), and photo and video records are also obtained for species identification, group size verification, feeding (and other behaviour), ice habitat and individual identification.

During this cruise, observations were made from the ice tower by a single observer (Debra Glasgow). When conditions permitted, the observer was outside along the cat-walk of the ice tower, otherwise observations were made from the inside. Effort was focused 45° to port and starboard of the bow ahead of the vessel, while also scanning to cover the full 180° ahead of the vessel. In ice the method was adjusted to include searching behind in the vessel's wake as well, in order that cetaceans and seals hidden by ice would be detected more readily. The observer used a combination of eye and binocular searching (7x50 Fujinon). Effort would commence when the following conditions allowed: appropriate daylight, winds less than 20 knots or Beaufort sea state less than 5-6, visibility greater than 1 nautical mile (measured by the distance a minke whale blow could be seen with the naked eye as judged by the observer) and the ship actually steaming. An Incidental watch was kept in borderline conditions or in variable visibility such as fog and snow squalls. Subjective weather data was recorded to keep track of the changing conditions e.g. Beaufort sea state, cloud cover, glare, ice, sightability etc.

Sightings were recorded on a laptop based Winacruz Antarctic program which also logged GPS position, course, ship speed, and a suite of other environmental and sightings conditions automatically. Visual observations were made both during the station-transect portion of the trip, as well as during transit. When possible, photographic and/or video documentation was made of each sighting for later use in individual identification, species confirmation, and habitat description.

## Results

Generally, sighting conditions were poor, particularly during the first half of the cruise. The appropriate combination of environmental and ship conditions were not conducive to good sighting conditions. 184 hours, 16 minutes of On Effort and Incidental survey effort were made during the entire cruise.

A total of 54 cetacean sightings of 112 animals were made (Table 1, figure 1).

These include 21 sightings of 49 humpback whales, *Megaptera novaengliae* and 10 sightings of 25 'like' humpback whales (figure 2); 5 sightings of 7 minke whales, *Baleanoptera acutorostrata* and 3 sightings of 3 'like' minke (figure 3); 2 sightings of 7 killer whales, *Orcinus orca* (figure 4); 1 sighting of a 'like' blue whale *Baleanoptera musculus musculus* (figure 5); 8 sightings of 12 various unidentified whales (figure 6); 1 sighting of 3 'like' sei whales (figure 7.); 1 sighting of 1 Commerson's dolphin, *Cephalorhynchus commersonii* and 2 sightings of 4 unidentified dolphins (figure 8.).

Photo identification photos/video were obtained from at least six groups of humpbacks (WOS#10,13,19,20,50,52) and digital images of habitat, sea and ice conditions were taken. On 17<sup>th</sup> May 2002 as we steamed through Gerlache Strait, some ship time was made available to obtain ID photographs. One group of 3 humpback whales (WOS#52) was extremely cooperative - swimming to the ship and remaining within 10 to 30 metres of the vessel for over half an hour, even following the ship briefly as we left, allowing good images to be taken (examples - cover photo and enclosed digital photographs 1 to 7).

On 17 April 2002 a 'like' blue whale body was sighted underwater to port, swimming away from the vessel and Ana Sirovic was recording good blue whale sound from a sonobuoy at that time.

### **Preliminary Findings/Discussion**

Sightings data from this cruise show mainly humpback (*Megaptera balaenoptera*), minke (*balaenoptera acutorostrata*), and killer whales (*Orcinus orca*) present in the study region in the austral fall and beginning of this winter.

Humpback sightings were particularly numerous along the mid shelf area just outside Marguerite Bay, along the continental shelf and near the frontal boundary formed as the coastal current exits the bay. There was also a group of humpbacks near the ice edge off Alexander Island associated with a patch of krill recorded by the Biomaper team. Minke sightings were more widespread but seemed to be associated closer to the ice edge and to the coastal frontal boundaries. Killer whales were seen within the ice edge on both occasions in areas where large numbers of seals were recorded.

### **Acknowledgements**

Thanks must go to the Captain and crew of the Nathaniel B. Palmer, the cruise leader - Peter Wiebe, and to the scientists and support staff on board for their expert help and friendship. Thanks also to the bird observers Erik Chapman and Matt Becker for extra help in gathering data and to Suzanne O'Hara for mapping work.

### **References**

Related US SO GLOBEC reports for previous cruises 1,2,3 – and particularly NBP01-03 1<sup>st</sup> cruise (survey cruise) – US Southern Ocean GLOBEC Report No.2

Friedlander A.S., Thiele D., Hoffman E., MacDonald M., Moore S., Pirzl R.  
A preliminary analysis of baleen whale distribution around the western Antarctic Peninsula in the Austral fall and winter.

Website for IWC cetacean summaries by cruise, cruise reports, and technical US SO GLOBEC reports

<http://www1.npm.ac.uk/globec/> this site provides a direct link to the CCPO site by clicking on SO GLOBEC

**Total cetacean sightings and number of animals  
NBP02-02 9<sup>th</sup> April – 21 May 2002**

| <b>Species</b>                  | <b>Number of sightings</b> | <b>Number of animals</b> |
|---------------------------------|----------------------------|--------------------------|
| Minke                           | 5                          | 7                        |
| Like minke                      | 3                          | 3                        |
| Like blue                       | 1                          | 1                        |
| Like sei                        | 1                          | 3                        |
| Humpback                        | 21                         | 49                       |
| Like humpback                   | 10                         | 25                       |
| Orca – killer whale             | 2                          | 7                        |
| Commerson's dolphin             | 1                          | 1                        |
| Unidentified dolphin            | 2                          | 4                        |
| Unidentified large whale        | 1                          | 1                        |
| Unidentified small cetacean     | 2                          | 2                        |
| Unidentified large baleen whale | 1                          | 1                        |
| Unidentified baleen whale       | 1                          | 3                        |
| Unidentified whale              | 2                          | 4                        |
| Unidentified small whale        | 1                          | 1                        |
| <b>Totals</b>                   | <b>54</b>                  | <b>112</b>               |