



SCANS II 2005

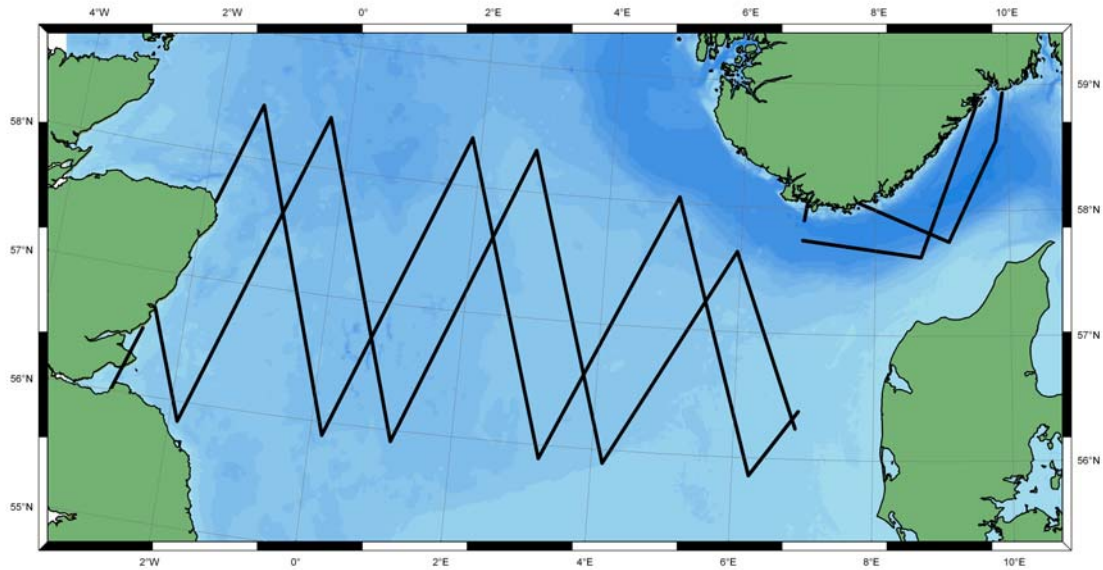
Gorm Cruise report

Area V

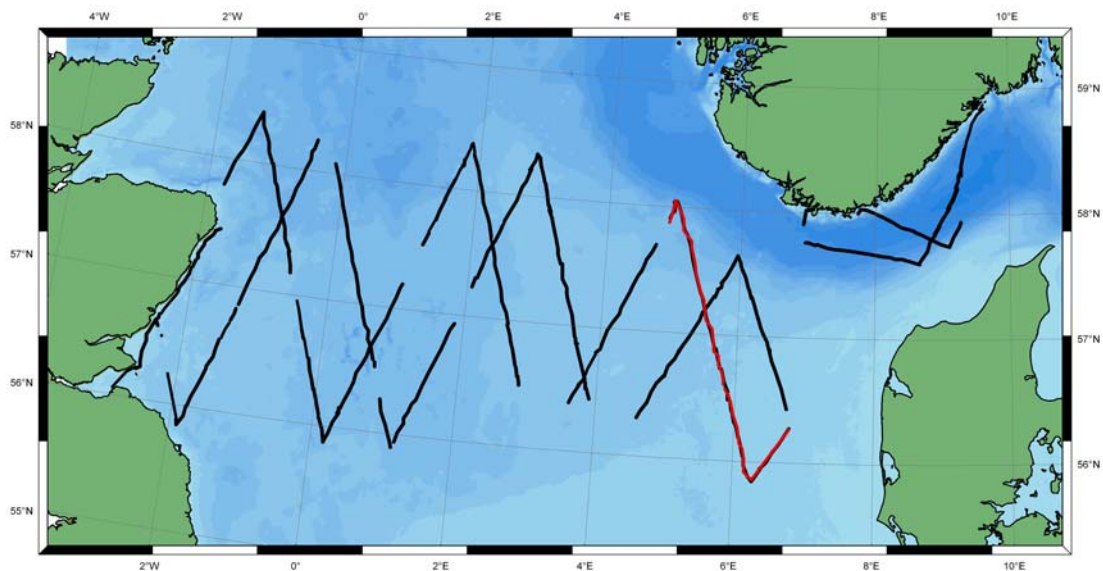
Henrik Skov 4th August 2005

Effort

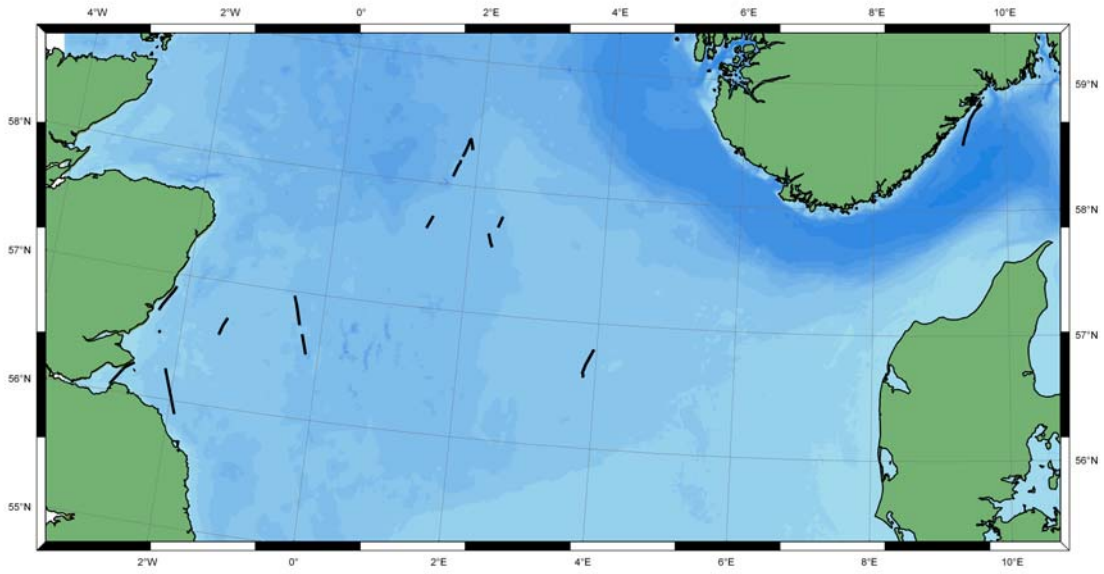
Due to the weather conditions effort was reduced by approximately 15 % throughout the survey area. We surveyed 3170 km, of which the 29th and 30th of June were in single platform mode (331 km - see data files for details). The areas of excellent, good, moderate and poor sightability for porpoises were met with in the whole survey area.



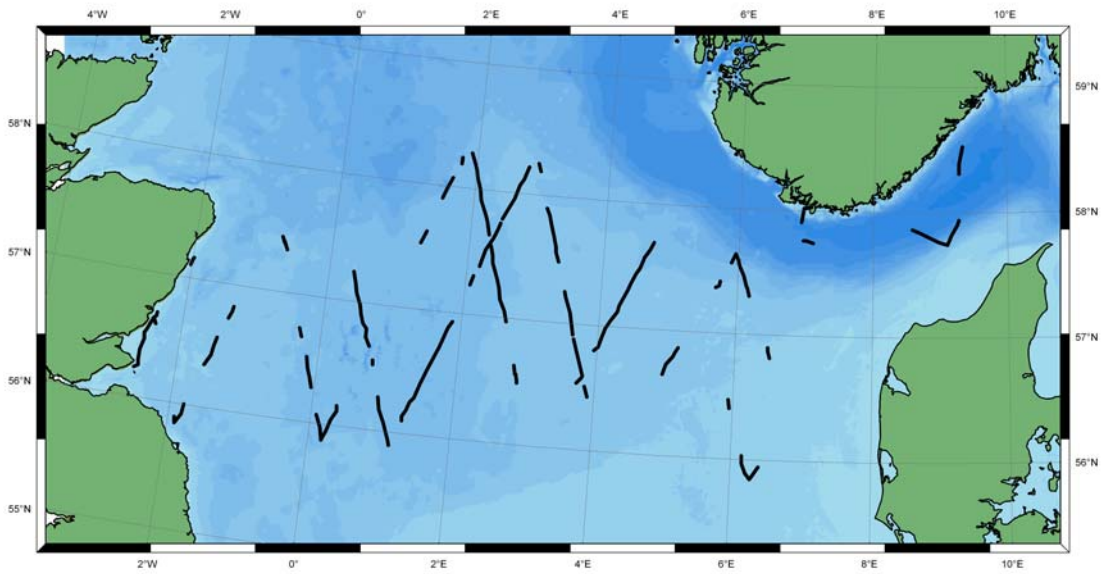
Map 1. Planned effort.



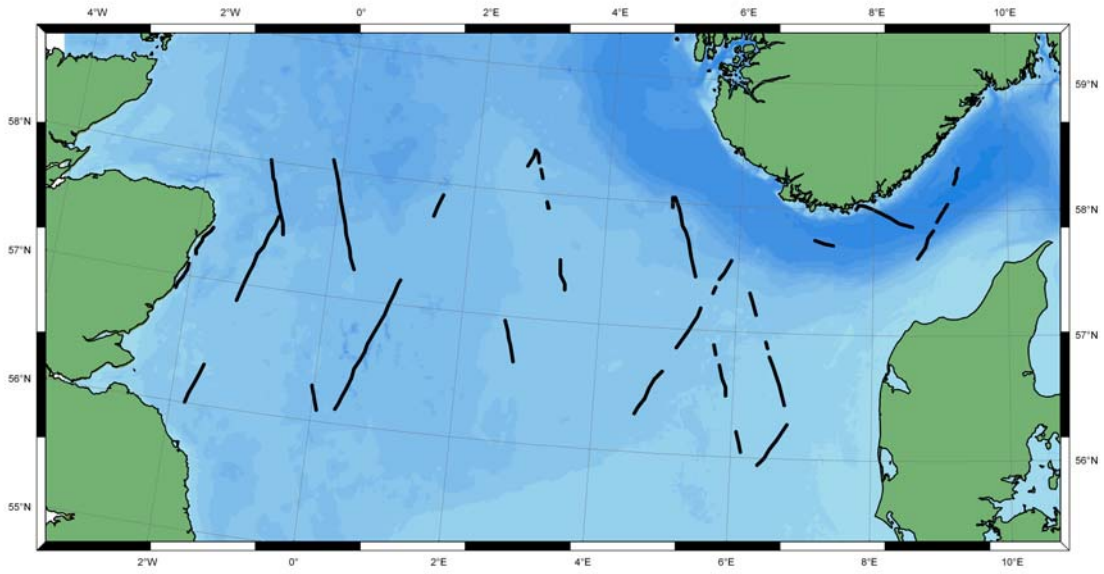
Map 2. Executed effort. Single platform mode is indicated in red.



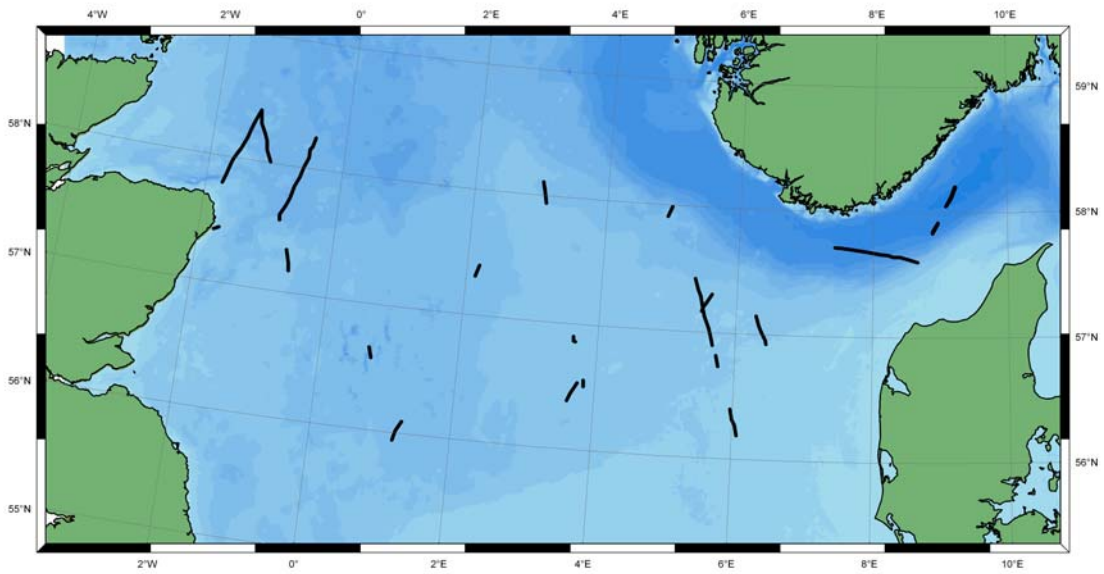
Map 3. Effort during excellent sightability conditions for porpoises.



Map 4. Effort during good sightability conditions for porpoises.



Map 5. Effort during moderate sightability conditions for porpoises.



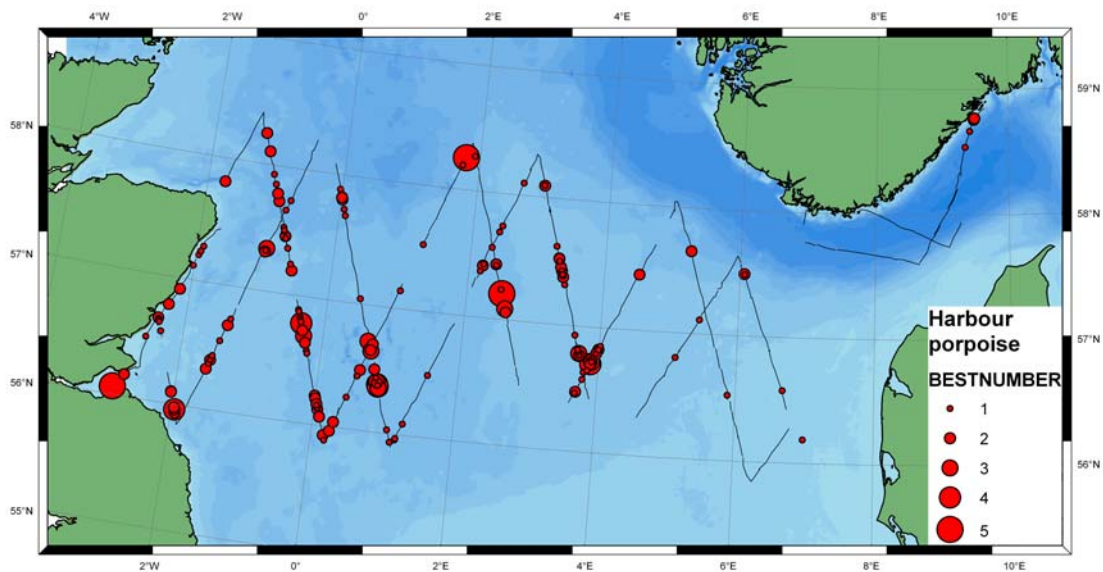
Map 6. Effort during poor sightability conditions for porpoises.

Sightings

Harbour porpoise

A total of 177 sightings of 281 animals were recorded by both Primary and Tracker observers. The total number of tracked groups was 56, of which 16 were duplicates. The average school size was 1.8.

Most porpoises were observed west of 5° E, but no high-density areas were crossed. No animals were observed in waters deeper than 100 m.

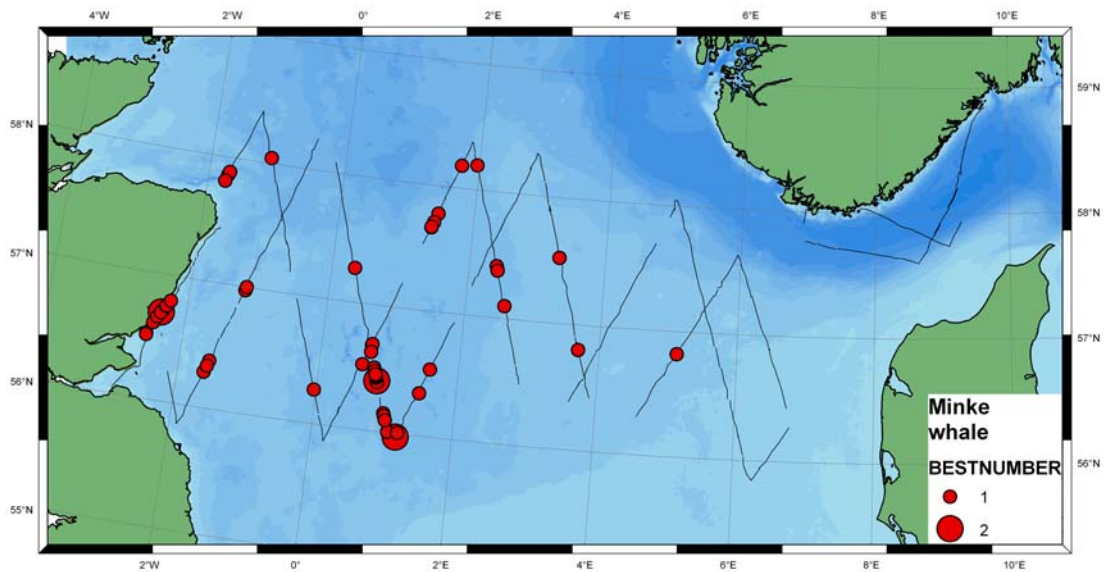


Map 7. Primary and Tracker sightings of porpoises.

Minke whale

A total of 57 sightings of 60 animals were recorded by both Primary and Tracker observers. The total number of tracked animals was 19, of which 8 were duplicates.

The minke whales were distributed west of 6° E with notable concentrations around Devils Hole and in the coast area south of Aberdeen.

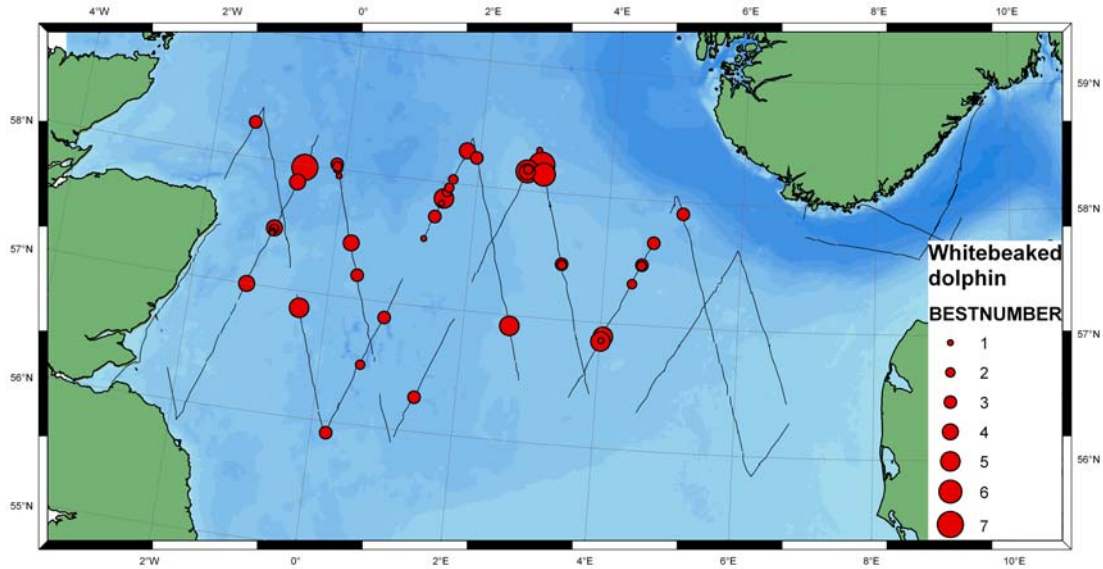


Map 8. Primary and Tracker sightings of minke whales.

White-beaked dolphin

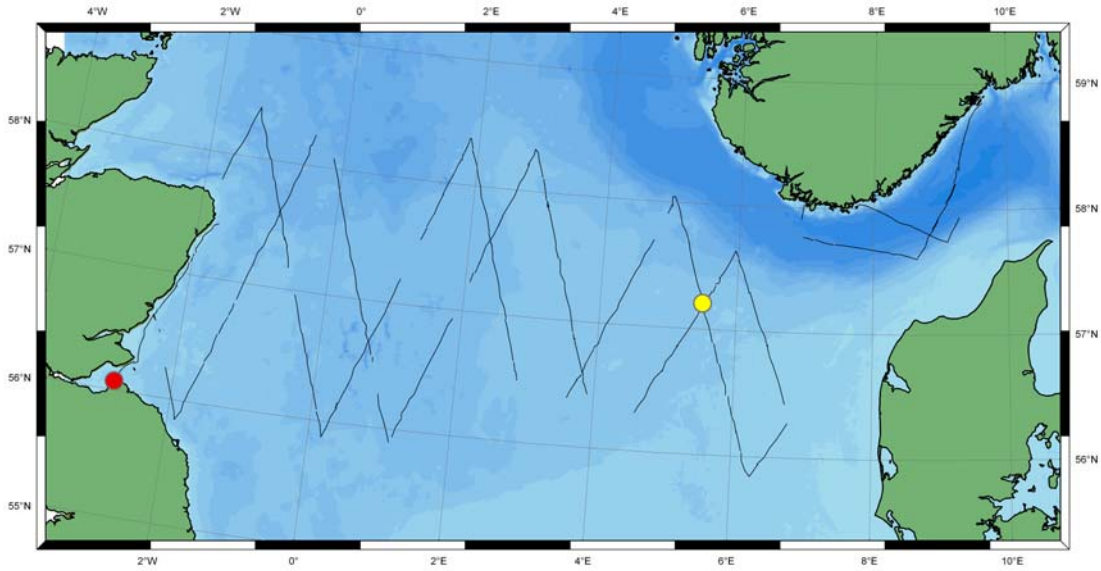
A total of 45 sightings of 139 animals were recorded by both Primary and Tracker observers. The total number of tracked groups was 29, of which 12 were duplicates. The average school size was 4.0.

The white-beaked dolphins were observed widespread west of 6° E with a tendency for a higher frequency of observations in the northern part of the area.



Map 9. Primary and Tracker sightings of white-beaked dolphins.

Other species



Map 10. Primary and Tracker sightings of bottlenose dolphins (red dot) and killer whales (yellow dot).

Data files

The first two days of effort (29-30. June) there were problems with bmd box (disconnection), buttonbox (bad connection) and gps (unable to read usb port). Thus, observations were collected in primary mode, and time and positions were taken manually. The data have been stored to Gorm_29-30June.mdb.

Big eye/ 7 x 50 positions were shifted due to the design of the tracker platform. Accordingly, the ValidationSettings file was updated.

All observations from Tracker platform were carried out sitting – thus, the eye height of 7x50 and big eye were identical.

Changes made in Gorm.mdb

03/07/2005

1. New Access database created for data recorded on the 29th and 30th of June (only PRIMARY, positions, effort and sightings recorded manually). Two columns added in Effort table for latitude and longitude. Field GPStime renamed as Time.
Location C:\scansII\Logger\Gorm29-30june.mdb
2. Two excel sheets created for positions recorded manually on the 29th and 30th of June
Location C:\scansII\Logger\position29-30june.xls
C:\scansII\Logger\decimalposition29-30june.xls

14/07/2005

1. Button reference number (301) put into Tracker Sighting table for sighting no 106 (index no 105). Originally that sighting had no code (?)
2. Same line (index no 105) STS changed to PTS (unknown reason for mistake)
3. Record number 146 added – change made to the put resighting (butt. Ref no 312) into sighting table.
4. (index no 137) STS changed to PTS (unknown reason for mistake) both in Tracker Sighting and Buttons tables
5. Button reference number (414) put into Tracker Sighting table for sighting no 140 (index no 139). Originally that sighting had no code (?)

14/07/2005

1. Sighting no. 202 and 203 are changed to subsequent resightings of sighting no. 201

16/07/2005

1. Sighting no 67 is a resighting of no. 66. No. 67 in Primary Sighting table changed to mistake. New record for no.67 added in Primary Resighting table.
2. Effort 13-7 0630-0730 corrected to match sightings for trackers.
3. Button reference number (414) added into Tracker Sighting table for sighting no 140 (index no 139). Originally that sighting had no code (?)

19/07/2005 Problems occurred during the validation of data collected by MM

1. **17/07/2005** - sighting number 245 (ref.but. no 665) – a total number of 5 resightings are not displayed during the validation – unknown reason. Validation was made directly in database (Tracker Resighting table). None of recordings (audio, webcam etc) were processed;
2. **16/07/2005** - button reference number (683) added into Tracker Sighting table for sighting no 214. Originally that sighting had no code (unknown reason of mistake). Two resightingS of that sighting does not appear during validation. Some additional data added directly into database. None of recordings (audio, webcam etc) were processed for additional data (audio cue time, etc.)

19/07/05

1. New record added into PrimarySighting table for sighting number 107. This did not appear during validation. However, the Buttons table has one record (index 555) corresponding both to time of sighting (as recorded by primaries) and side of observer, indicating that the sighting button has been pressed. Data for that sighting were added directly into PrimarySighting table using the sightings form filled by primaries and data in the Buttons table for index 555.
2. Two new records added into PrimaryResighting table for two resightings of sighting number 107. Originally these resightings were recorded as sightings number 108 and 109 rather than resightings. Data for these two resightings were added directly into the PrimaryResighting table (Index 58 and 59).

21/07/2005

1. Two columns added into IncidentalSighting table (Latitude and Longitude) for positions of observations recorded without seconds.

25/07/2005

1. Resighting nr 136 not linked to sighting in validation programme. Have added aspect 85, species MW, checked by UW and changed initial observer from SB to UW directly in database.

03/08/2005

1. Button reference number (1122) put into Tracker Sighting table for sighting no 341. Originally that sighting had no code (?)

Evaluation of cruise

Gorm is not a particularly useful survey ship for cetaceans. It's a very short ship for its beam, which means that it almost behaves as a piece of cork in the sea. This makes it difficult to use strong binoculars as well as to use videos for range estimations. As a consequence, we decided to base all tracking on 7x50 binoculars, and had to skip using the big-eyes. Further, a fair bit of the video footages were not easy to use as a basis for distance calculations. Apart from the movements, the boat and platform designs functioned well, and the crew was very cooperative.

In general, the dual platform operation worked very well, although the equipment could have been a more robust kit, fitted for offshore work. No equipment was missing, however disconnections in the BMD and Primary button box caused some delay of the survey work (thanks to Russel and Dough for excellent support during the problematic early stage of the cruise). The firestores and their connecting cables were shaky and often staled. Web-cams did work, but were too sensitive to strong light. The radios and microphones were not of sufficient quality for offshore work, which created much trouble during recordings between Primary and Tracker platforms. As a result, communication between the two platforms was less than satisfactory. Primary observers felt that tape recorders would have been preferable to written records, especially when crossing higher densities. In higher density areas P observers were virtually carrying out single-observer effort, leaving one observer for writing.

I was blessed with a strong and motivated team of observers participating in all aspects of the work, which made life easy as a cruise leader. The cruise weather was rather bad for the season in the North Sea, with fog prevailing during high pressure (first week) and windy conditions during the rest of the period. These conditions made it difficult to cover both legs in their entirety, and we had to reduce effort by 10-20% on all transects. Further, a seven-day period of strong northerly winds post-boned the first distance and angle experiment session, and made it impossible to find the time to carry out a second session at the end of the cruise.

The corporation between the visual and the acoustics data collection went well. The computer equipment was set up on the bridge leading to approximately 20 meters of cable on deck. High levels of noise were often recorded, due to electrical disturbances as well as environmental. Some of the electrical noise was removed by grounding the power supply to the ship, but some still remained. Probable cause of environmental noise was the shallow placement of the hydrophones in the water column. Average depth was three to four meter and swell was a big influence in noise levels. Attaching a two kg weight did not change results. During the surveys second week the software showed problems, neither Logger nor Rainbow Click could be opened correctly. Only working solution was to remove the high frequency tape recorder, and set the Input Device in Rainbow Click directly to PCI-6250.

The two birders worked parallel to the Primary and Tracker observations, and did not cause any interference with these. In general, the corporation with the birders went well.

Diary, with a focus on (visual) equipment failures

27-28 June: Hanstholm waiting for survey weather (NW 10-13 m/sec)

29 June: Transport to first way point of leg 1 – survey 12-22 . Survey in primary mode due to disabled GPS, BMD box and Button box.

30 June: Survey 430 to 2100. GPS and BMD box still disabled, so all observations in primary mode. White-beaked dolphins and minkes on L Fisher Bank.

1 July: GPS, BMD box and button box enabled. Stand by on Eigersund Bank due to poor weather conditions (SE 4-5, rain). Distance and angle training session.

2 July: Eigersund Bank. Foggy in first half of day, observations during afternoon. White-beaked dolphins and minke whales. Acoustics software malfunctioning in late evening.

3. July: Great Fisher Bank. Foggy in first half of day, observations during afternoon. Acoustics problems still not solved.

4-5. July: Thyborøn. Stand by due to bad weather (E gale).

6. July: Jutland Reef. Acoustics running satisfactorily. Big-eye replaced by DI 7x50, amendments to ValidateSettings table made. Effort during 60% of day with < 4 Beaufort. Few animals.

7. July: Little Fisher Bank. Effort during 60% of day with < 4 Beaufort. Few sightings – killer whales and minke whale.

8. July: Stand by east of Dogger Bank due to fog.

9. July: Stand by east of Dogger Bank due to fog. Transit to Skagerrak late afternoon.

10. July: Survey of Skagerrak deep part and fjord near Kristansand. Few porpoises in coastal area. Much noise on acoustics, probably due to strong swell

11. July: Survey of Skagerrak deep part and fjord near Egersund. No porpoises. Transit late afternoon to leg 205 in central North Sea.

12. July: Engine problem initially caused transit towards Hanstholm for repair, but problem was solved by crew and Gorm arrived leg 205 late afternoon. Survey for a few hours before fog stopped the effort.

13. July. Full day survey around Great Fisher Bank – porpoises and minkes and lots of white-beaked dolphins. Canon camera periodically malfunctioning due to loose fire wire cable.

14. July. Beaufort 4-5 and stand by at Dogger. Transit to coastal area off Scotland.

15. July. Survey morning and afternoon-evening off Aberdeen and Firth of Forth. Canon camera malfunctioning due to disabled fire wire cable. Minke whales and few dolphins and porpoises.
16. July. Canon camera fire wire cable repaired. Morning and afternoon-evening survey on Forties. Low numbers of minkes, wb dolphins and porpoises.
17. July. Full day survey Forties. Very few sightings. Frequent noise on acoustics.
- 18-19. July. Stand-by Aberdeen due to bad weather (strong westerly).
- 20-21. July. Stand-by Firth of Forth due to bad weather (strong westerly).
22. July. Distance and angle experiment and training sessions.
23. July. Full day survey East Scottish coast. Few bottlenose and white-beaked dolphins, many minke whales.
24. July. Full day survey west Forties. Very few animals.
25. July. Stand by Forties due to strong northerly wind.
26. July. Full day survey Forties. Low numbers of white-beaked dolphins and minke whales. Starboard fire-store malfunctioning.
27. July. Full day survey northern Forties. Quite a few white-beaked dolphins and minke whales.
28. July. Full day survey Devil's Hole. Large numbers of minke whales. Transit to Hanstholm in the evening.
29. July. Arrival Hanstholm in the evening.