

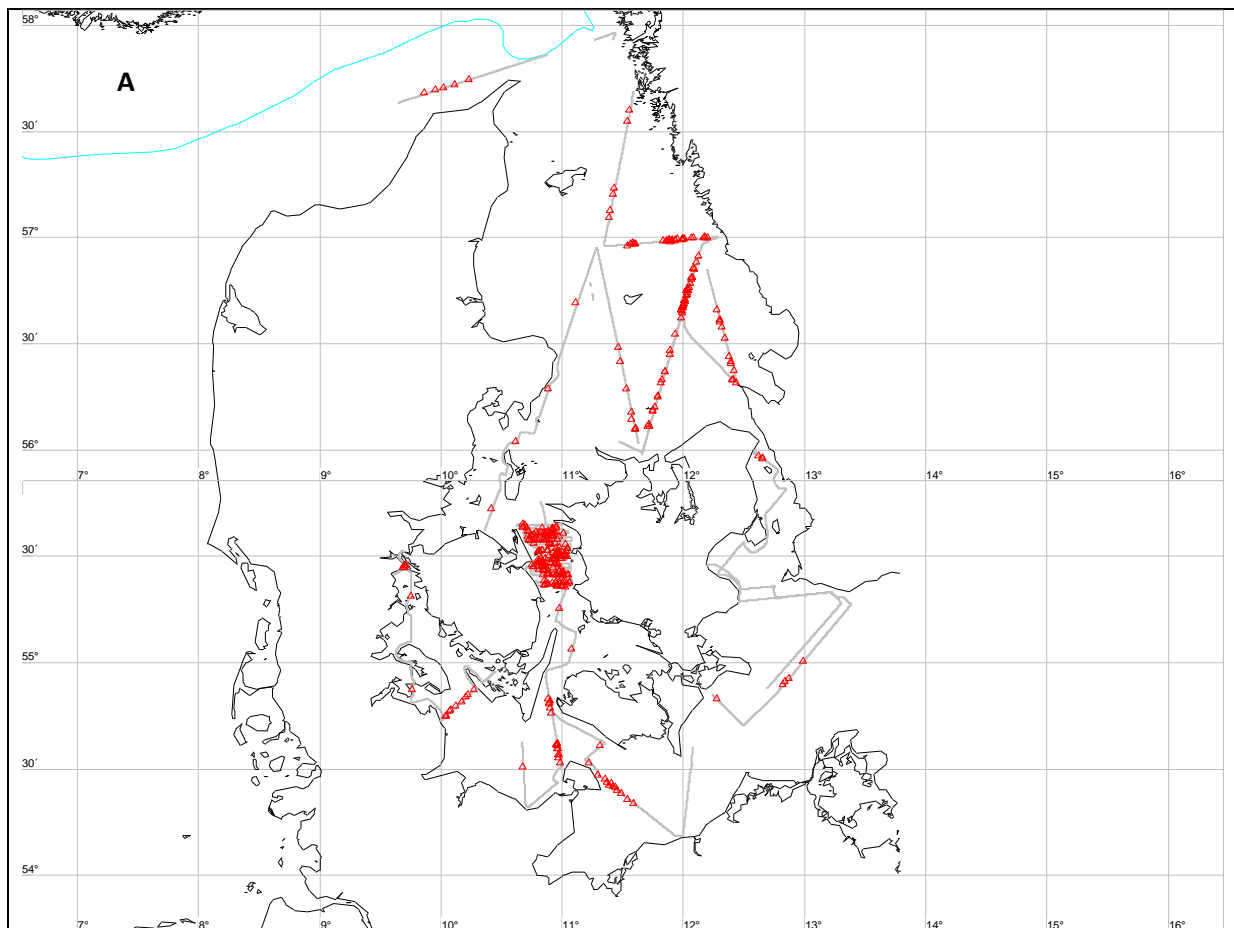
# SCANS III cruise report for the Danish vessel "Aurora" 4-24 July 2016

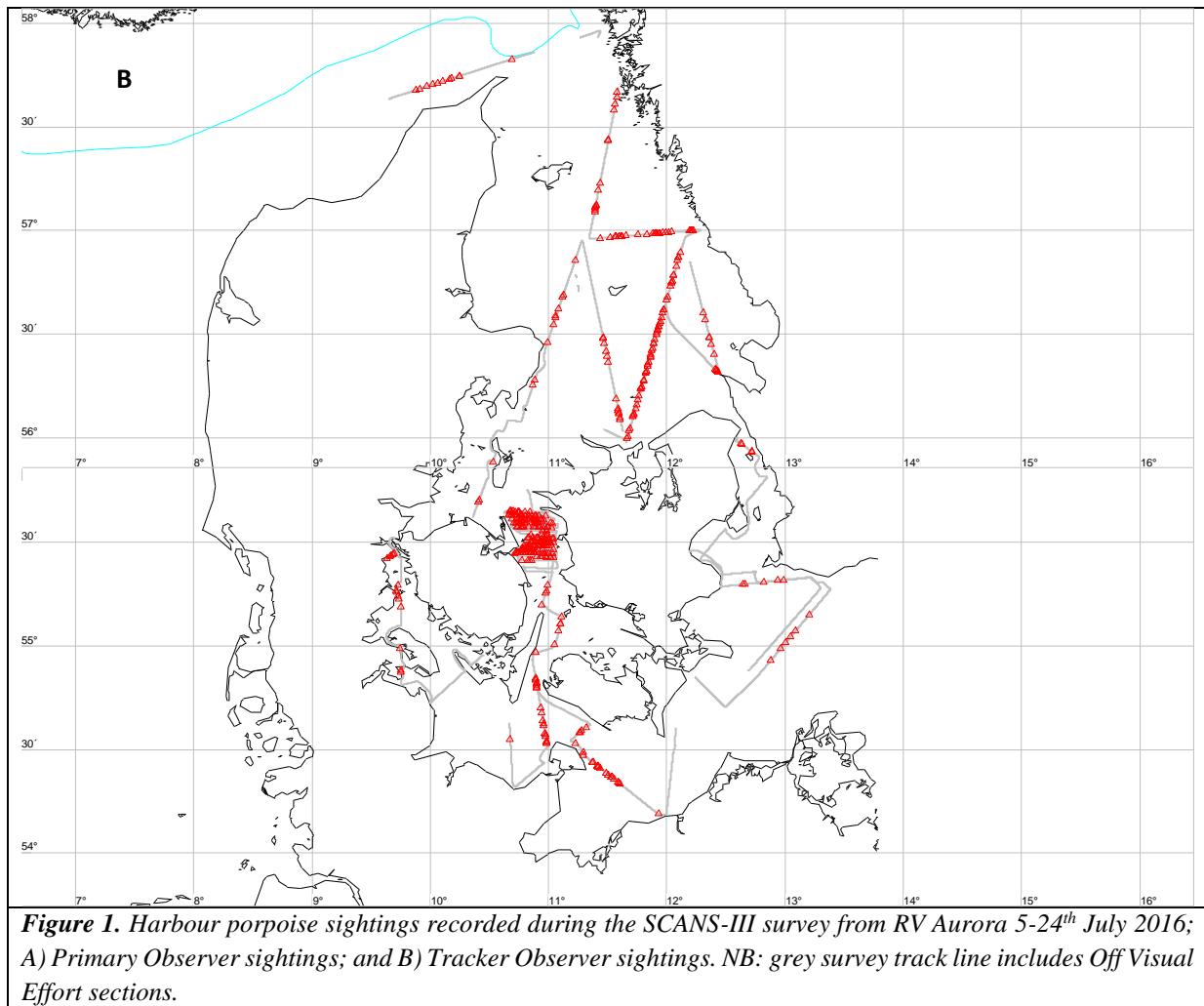
Cruise leaders: Jonas Teilmann and Signe Sveegaard

## Summary of effort from R/V Aurora

### HARBOUR PORPOISE SIGHTINGS

An overview of the locations of the harbour porpoise sightings observed by the Primary Observers and the Tracker Observers are provided in Figure 1. It was planned to go into Norwegian waters, but the weather was never good enough and instead the area was covered by airplane.





## Daily Schedule

4 July 2016

We boarded the vessel "Aurora" from Aarhus University 4 July in Kalundborg harbour, Denmark.

With some phone and email support we managed to set up all the equipment during the first day. Lots of ship and equipment modifications to fit everything to carry out the first sighting survey on this very new ship (built in 2014). The people that prepared both the visual and acoustic equipment in SMRU did a great job.

We took in the late evening and deployed 19 C-PODs during the night in the Great Belt as part of a method comparison project, which is linked to SCANS III.

5 July 2016

During the day we tested all the equipment and trained the observers. Fortunately we had some harbour porpoise sightings while we were on transit to the north hunting for better weather. The acoustic was out all day.

6 July 2016

We sailed all night to Skagen (northern tip of Denmark) and started transect 123 from west going east at sunrise. Half way the wind increased and we had to stop for the day. We moved to Skagen harbour and waited for the wind to calm down again. The acoustic was out all day with good recordings except for a few fall outs where the system had to be restarted.

7 July 2016

Still too much wind everywhere in our survey area. During the evening we departed from Skagen to go south during the night. The acoustic system was out all night.

8 July 2016

The weather was not as good as expected, so we could not start until the afternoon on transect 224 going north. Still the weather was not good and the rain was coming in from the south. Therefore we abandoned transect 224 midway and moved to the southern end of 225 (the last bit south of Kullen was closed to us by the Swedish navy). The weather here was perfect and we managed to survey 2/3 of the transect before the rain caught us and we stopped for the day.

9 July 2016

In an optimistic moment we hoped to be able to survey the eastern bit of transect 123 (that we started 6 July). It was nice when we started at sunrise (4:30), but after an hour we had to abandon due to increasing wind. The forecast gave no more hope in the north, so we moved south again. On the way south we retrieved 10 acoustic stations from another project and continued south through the Great Belt during the night. The acoustic system was running the whole time with no problem as long as we restarted the program every 3 hours.

10/7 2016

The wind calmed down during the afternoon in the southern Great Belt and we could start in good conditions on transect 434 going south. When getting to the end in Rügen in Germany, we continued on the southern part of transect 425 followed by 424 going north. While lightning was all over the sky to the north, we managed to take 2/3 of the transect before the sun went down (22:00). Went into harbor (Bagenkop) for a crew change and calmer weather.

11/7

No good weather anywhere so we stayed in harbor all day, validating all the great sightings from yesterday.

12/7

A small chance for some calm evening hours around Samsø, so we departed Bagenkop at 10 heading north. No calm weather was found and we anchored at Fyns Hoved to be ready for the calm day tomorrow in the Great Belt.

13/7

First brilliant day, with survey from 5 in the morning to 21:45 in the evening. We managed to survey parts or all of line 354, 324, 355, 434, 425, 553 and 524 going forth and back between Denmark and Germany in the western Baltic Sea. Lots of sightings in periods. Great day!

14/7

Started at 8 on line 624, but when the seastate turned 4 we stopped and moved to line 633 with little luck. Due to traffic separation we had to move to the eastern point of transect 623 where the seastate was perfect. Due to nice weather we continued on effort while passing to Køge harbour. In Køge we have a change of cruise leader and Signe took over from Jonas.

15/7

Bad weather, so we spend the day relocating to Århus, where the weather was supposed to be better later in the week.

16/7

Bad weather. Docked in Århus.

17/7

Finally better weather. We began in Little belt at 5 am on transect 421. Arrived a bit late due to current so we decided to survey transect 421 twice – both forth and back, It is noted in the database. Then we continued to 422 and 423 and completed both. This means that we are finished with Block in Little belt. Great! We docked in Korsør to be prepared for next day with good weather.

18/7

Bad weather. Docked in Korsør. We are now up to date with validation, but we have several problems with the web cams bearing imaged during validation.

19/7

Finally great weather almost all day. Began at 5 am North of Funen on transect 322. Moved on to 243 and finished at 10 pm on transect 223. Spend the night anchored at the southern end of transect 224.

20/7

The great calm weather continued to we began at 5 am on transect 224, then 125 and 124. The plan was to continue towards Oslo and try and do some of transect 121 and 122 Thursday, but the weather report was simply too poor. So we relocated towards Helsingør.

21/7

To much wind. Arrived in Helsingør at 10 am and stayed there. We spend all day validating. Primaries and effort was finished but only one of the trackers finished (almost). The web cam and videos are still giving us a lot of problems. Had lovely BBQ on the deck at night.

22/7

Great weather again. We began in Helsingør at 5 am with transect 631, followed by 622, 633, 634 and about half of 525. Tonight we move to the Great Belt to conduct the comparison study tomorrow.

23/7

A great day again. Surveyed the method comparison study transects in the Great Belt from 5 to 22 and all effort was in sea state 0-1. We had over 250 sightings, so very busy day. We are now very behind with validation but we are still prioritizing getting as much survey time as possible before the end!!! The aerial observer team and the digital video plane flew the transect from 9-12 and we have had 19 CPODS deployed in a systematic grid in the area since the 5<sup>th</sup> of July. It will be so exciting to get the abundance results from all methods

24/7

Last day of survey. Began at 7 am with the last two transects in the comparison study followed by two SCANS-III transects in the great belt 323 and 363. Finished in Kalundborg Harbour at 2 pm.