

**PROJECT
RUGVIN**



ANNUAL REPORT 2006



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1. Introduction

Most inhabitants of the Netherlands are unfamiliar with the fact that several whale species live in the Dutch North Sea. Even though research has been conducted into these populations, many aspects still have to be investigated. This was the reason that in 2005 Project Rugvin was initiated.

When initiating the project we were struggling with questions like: how many porpoise, dolphin and whale species, usually called cetaceans, are present in the Dutch North Sea? Are they abundant enough to make a monitoring program worthwhile? How are the conditions at sea to conduct any research? To answer these questions a literature study was carried out and a feasibility study for setting up a monitoring program was started to gain insight in the species diversity and population dynamics of cetaceans of the Dutch North Sea. After the positive outcome of the feasibility study in 2004 it was decided to start monitoring, to set up an educational programme and to find financial support.



Witsnuitdolfijn (Lagenorhynchus albirostris; witsnuitdolfijn)

For the monitoring part we decided to observe cetaceans from the bridges of the Stena Line ferries from Hook of Holland (NL) to Harwich (UK) and on board of small(er) motor vessels from Scheveningen harbour. On the smaller vessels, the so called ambassadors were invited to join the crew to learn about dolphins and porpoises and

to communicate their findings to other people (e.g. their colleagues, at schools etc.). Other data and experiences gained at sea would be spread through communication channels, like “Zeemail, the Noordzee Natuur Krant and the website of Stichting De Noordzee and press releases. With the help of the WWF/AVGN-fund and the VSB fund, costs of boat rental, travel expenses and other costs were covered. Stena Line took care of 100% hospitality on board of their ships.

This is the annual report of the second year of Project Rugvin. In this report we will explain the used research methods and one will read about the most important results and conclusions. Also we look back at the outcome of our communication activities with the ambassadors and the use of different media.

2. Research

2.1 Methodology on the Stena Line ships

On the bridges of the Stena Hollandica and the Stena Britannica of the Stena Line ferry company, the monitoring of cetacean species was conducted by two observers. One was observing at port board and the other at starboard side. One of the project coordinators, either Frank Zanderink or Nynke Osinga, was always present as observer. One survey consists of two days observing; the first day on the Stena Hollandica travelling from Hoek van Holland to Harwich and the second day on the Stena Britannica travelling from Harwich to Hoek van Holland. The total travel time



De Stena Hollandica

each day was approximately seven hours. The surveys were conducted once a month on the bridge of Stena Line ships. The bridges of the Stena Hollandica and Stena Britannica are situated at a height of respectively 32 and 35 metres. The observers scan ahead each 45° of the course line.

During the surveys two record forms were filled in. One form included all the environmental data, including parameters like date, time, weather conditions, speed,

course and position of the ship. Each half an hour these parameters were updated. The second form was filled in when cetaceans were observed. Again, time, position and weather conditions were noted as well as the details of the sighting like species, distance and angle and in some cases behaviour.

The data recording files and observing methods were in accordance with those of other ferry monitoring programs operative in other European waters. All these monitoring programs are part of the Atlantic Research Coalition (ARC) (www.iwdg.ie/ShipSurveys/?cat=54&search). Before starting Project Rugvin, Nynke joined an ARC meeting in 2004 on board of the P&O ship Pride of Bilbao, shipping between Portsmouth (UK) and Bilbao (Spain). Several meetings with other ARC members followed at the European Cetacean Society (ECS) conferences in La Rochelle, France and Gdynia, Poland.

Sightings were not only done during the surveys, also the Stena line crew kindly recorded their sightings on the Rugvin observation forms available at the bridge. It turned out that the crew saw even more animals than the “Rugvin” team, as they spend more hours watching at sea.



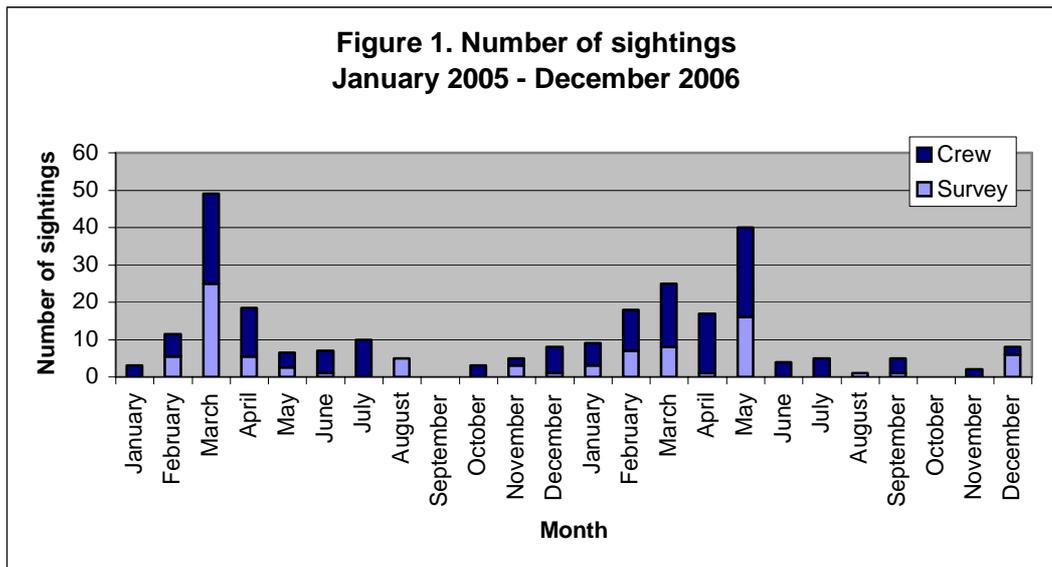
Nynke Osinga at the bridge of the Hollandica

2.2 Results Stena Line surveys

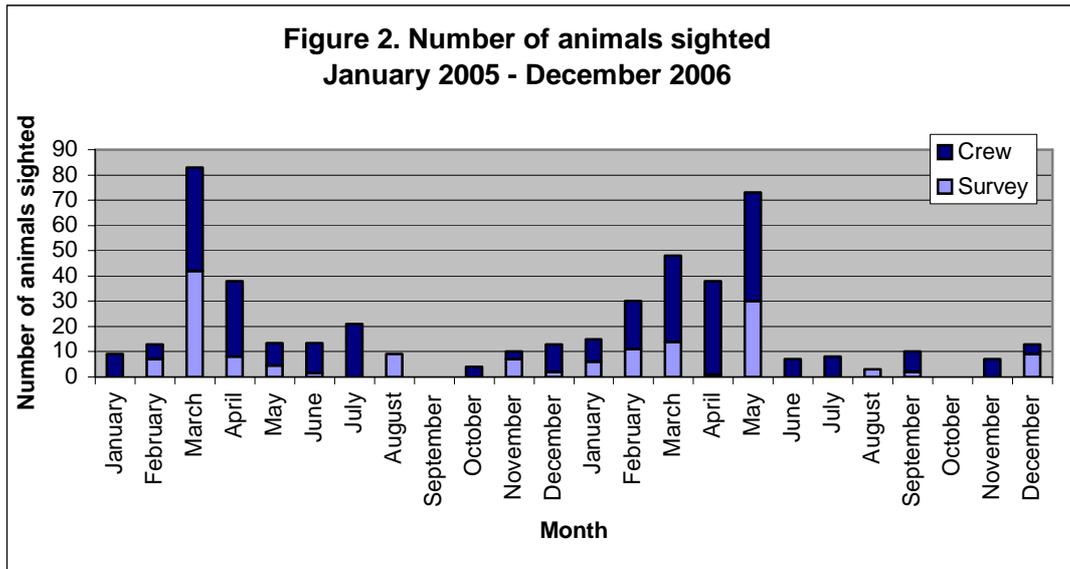
The results, in the figures here under, are given from January 2005. In this period, exactly 300 sightings of cetaceans were done, see figure 1. One sighting can content one individual animal as well as a group of animals. The total number of sightings includes the sightings done by the crew. During the period January-June 2005 surveys were carried out twice a month, therefore the counted numbers during surveys for this period were divided by two. The November survey of 2006 was cancelled due to continues stormy weather in this month.



Frank Zanderink at the bridge of the Britannica

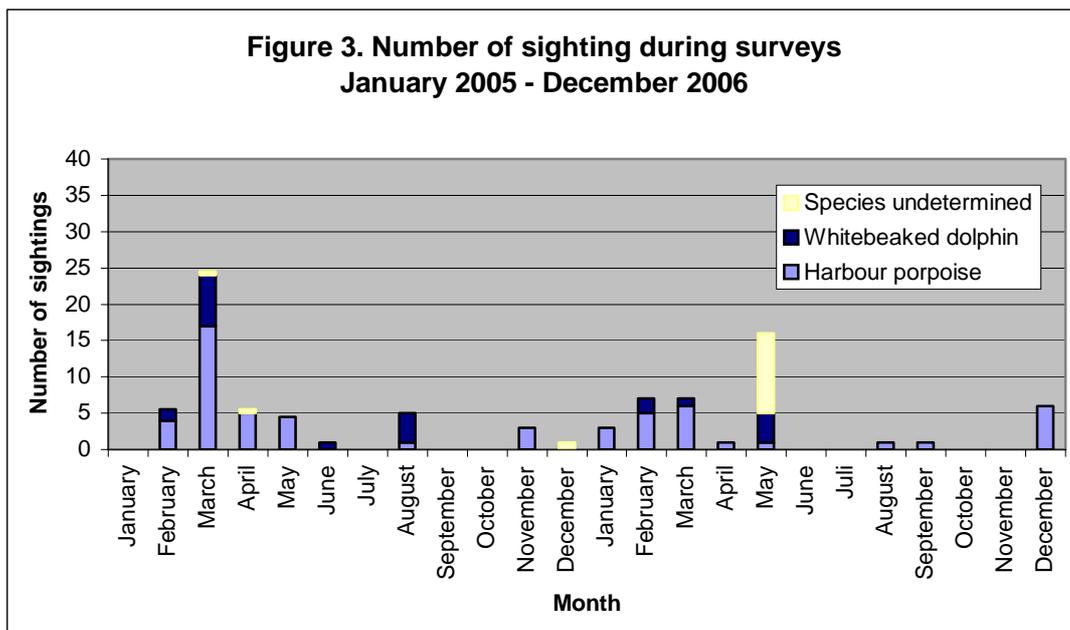


Within the 300 sightings in total 542 cetaceans were spotted, see figure 2. The average group size for harbour porpoises is 1.6 individuals and for whitebeaked dolphins 1.7 individuals.



The numbers of sightings of the different species are used for analyses. Only the sightings recorded during surveys were used (so excluding the recordings by crew members).

The most frequent observed species are the harbour porpoise (*Phocoena phocoena*) and the white beaked dolphin (*Lagenorhynchus albirostris*), see figure 3. In some cases the species could not be determined. Other species of dolphins were thought to be observed, however the sightings were usually very short and the species could not be determined with certainty. These sightings are therefore grouped in the category 'species undetermined'. The seasonal variation in number of sightings of whitebeaked dolphins is the same as for the harbour porpoises. Both species were most common in spring. In summertime very few cetaceans were observed. However, during autumn and winter the number of sightings increases.



Although the seasonal trends are very clear, it is difficult to determine the factor causing these variations. Very likely fish distribution and abundance is an important factor determining cetacean distribution. However, other factors like water temperature and water currents could also have an effect.



Harbour porpoise (Phocoena phocoena; Bruinvis)

2.3 Methods on motor yachts

Parallel to the surveys at the Stena ships, surveys on smaller vessels were also conducted. From the harbour of Scheveningen (the most central harbour in the Netherlands with easy access to sea) boats were rented from three different owners. Most surveys were held at the M.S. Dickson from Daan Wouwenaar. The first year, 2005, a transect line with fixed coordinates was set out at sea. Every journey we followed this transect line.

In 2006 we decided to change the strategy in order to increase the chance of spotting animals by sailing to the places at sea with the highest chances of result. For example if animals were recently seen by the Stena crew at the line Hook of Holland – Harwich, we set sail to this area. Or we tried the hypothesis of following the “tide race” (Ned: tijnaad).



Tide race

A tide race is where sweet water from rivers collides with seawater. Due to turbulence and water temperature differences there is more food, thus more fish and this might increase the sightings of cetaceans. Furthermore, we followed a virtual line of wrecks at the sea bottom, also places from which it is known that they attract fish and therefore porpoises and dolphins.

2.4 Results from surveys with motor yachts

The change of strategy in 2006 resulted in more sightings, a higher total number of animals and more spectacular days at sea. This second year we encountered 29 marine mammals, being 3 grey seals, one possible bottlenose dolphin (*Tursiops Truncatus*) and 25 porpoises.

So in total over two years we encountered 47 porpoises, one possible bottlenose dolphin and 3 grey seals, several dead porpoises and one dead Minke Whale. The numbers of sightings varied greatly between surveys, with many surveys with no sightings and a few surveys with spectacular numbers of animals.



Daan the skipper and Anita, one of the volunteers, on board of the Dickson.

2.5 Additional sightings

Coast guard

During one of the surveys on the Dickson in 2006, the coast guard crew came onboard for a routine inspection. The coast guard crew got enthusiastic about our project and decided to record all their sightings of animals as well. Although these sightings were not included in the total overview of sightings, they were very helpful in getting insight in the distribution and abundance of the cetacean species. This was also used to decide the routes followed during the small boat surveys.

Furthermore, people living near the sea or regular visitors, who started to learn about our project, spontaneously send in details about sightings they did during their time at sea.

Other animals

Although during the surveys the focus was on harbour porpoises and dolphin species, occasionally we also saw other marine mammals such as the grey seal.

Seabird species were observed in great abundance. Next to gulls and terns we very regularly saw gannets, razorbills, guillemots and cormorants. These are all species which could possibly indicate the presence of cetacean species. Also worth mentioning are the observations of skua species and the three observations of the sea eagle near the former REM- Island.



Grey seal (Halichoerus grypus; grijze zeehond)

In summertime with wind coming from the land, we often observed different kinds of insects but also many times song bird species as robin and thrush. Watching the water surface we also encountered different kind of algae which often coloured the water brightly, jelly fish and unfortunately also quite some garbage.



Algae near the m.s. Frank

3. Education and information

One of the main goals of Project Rugvin was to inform the public about the presence of cetaceans in the North Sea and to make them aware of the importance of protecting the marine life of the North Sea. A few strategies were applied to fulfil this goal, first media attention was looked for, secondly ambassadors from different companies and organisations were invited during surveys and the media channels of Stichting De Noordzee as the 'Noordzee Natuur Krant' and the 'Zeemail' were used.

3.1 Media

A press release was written and widely spread in July 2005 (see annual report 2005). Another press release will be released in February 2007, based on this report and will be sent to different kinds of media (radio, newspapers, websites etc.).

3.2 Ambassadors

In total, 8 ambassadors have joined the surveys at sea in 2006. More were invited, but unfortunately some surveys had to be cancelled because of bad weather conditions.



Mr. Hub Bemelmans, one of the ambassadors.

The ambassadors, including the ones who didn't go on a survey, have passed the knowledge and experience they gained about cetaceans forward to their own organisation, school or company. This proved to be very successful, for instance teachers used their experience in class, one company director held a talk during a coffee-break, students held a talk at their year clubs or at lectures, an education worker of De Kleine Aarde is currently writing an article for their summer 2007 issue of their quarterly magazine 'De Kleine Aarde'. In this way the ambassadors reached and will reach more than several thousand listeners and readers.

But also the crew and volunteers of Rugvin acted like ambassadors as well. Many responses from them tell that their families, colleagues and friends were also good informed about the project and its goals.

3.3 Noordzee Natuur Krant and Zeemail

De 'Noordzee Natuur Krant' is a yearly issue of St. De Noordzee. In the issue of winter 2006, an article is written on Project Rugvin and the results and general information about the whale species (biology and their habitats). This magazine is published with an edition of 7.500 copies and is send to their members and other interested parties like for instance several high schools in the Netherlands.

'Zeemail' is a free digital newsletter with short news on North Sea subjects. Regularly items about Rugvin were laced with some linkages. It has 2500 subscriptions. The news about Rugvin in Zeemail 23 (April 2006) can be read at www.noordzee.nl/organisatie/zeemail.html.

3.4 Website

The aim and results of Rugvin, interviews with the coordinator, pictures and some special reports are available at the website from St. De Noordzee at the following address: <http://www.noordzee.nl/natuur/zeezoogdieren/projectrugvin.php>

3.5 Poster students

At the European Cetacean Society (ECS) conference in Poland 2006 (<http://www.ecs2006gdynia.univ.gda.pl/>), a scientific poster was presented about harbour porpoise monitoring in The Netherlands. Nynke Osinga travelled to the conference for her work at the Seal Rehabilitation and Research Centre in Pieterburen (www.zeehondencreche.nl). There she presented her poster with the results of the RIKZ harbour porpoise monitoring program as well as the Stena Line monitoring program. At the ECS meeting the results were discussed and compared with information of researchers from other countries.

Colinda Vergeer, one of the volunteers, decided to do a study on cetaceans during her master Biology, due to contact with Rugvin. This resulted in a poster presentation at the University of Leiden. It will also be presented at the next ECS conference in San Sebastian (Spain) in 2007.

4. Evaluation

4.1 Project organisation

The project was started with the assistance of Leiden University and conducted as a project of St. De Noordzee.

Volunteers.

In total 33 volunteers joined one or more survey trips on the North Sea. Many of them were trained in observing at the CRRU centre in Gardenstown in Scotland, some worked as volunteers for the porpoise rehabilitation centre, SOS Dolfijn, of the Dolfinarium in Harderwijk and others were interested students from several universities or academies or were in contact with St. De Noordzee.



Volunteers meeting at the office of Stichting De Noordzee.

4.2 Planning and organisation

General and long term weather forecasts told us that on the Stena ships it would be possible to monitor year round, excluding the days when the wind would reach Bft. 6 or higher. For the smaller boats we planned shorter seasons. Winter, part of autumn and early spring are times that it simply too cold and most of the time also too windy to go for a monitoring trip. The rest of the year, between April and October we planned to go for monitoring trips with the exclusion of days when the wind was Bft 4 or higher. With stronger winds the height of waves were simply too high to find porpoises or dolphins in the water. Also the circumstances on board were too bumpy to be there. This resulted in a cancelling of more than 50 % of the planned trips. Flexibility of crew and volunteers was high but it proved to be difficult to plan trips on a short term. Therefore, we planned some extra trips in advance. Although we planned around 25 trips, after one project year we only had 11 trips conducted on the smaller vessels. Thanks to the VSBfonds and WNF/AVGN we were able to add a

second project year to carry out the rest of the trips. In the season of 2006 we were indeed able to increase the number of trips. At the end of two years we fulfilled in total 25 monitoring trips on the smaller vessels.

5. Summary of results 2006

- 14 trips conducted at small vessels (Dickson, Frank and Miranda)
- 11 surveys on the ships Stena Hollandica and Stena Britannica were made.
- 33 volunteers were involved.
- 134 sightings of porpoises or dolphins were reported.
- 252 animals; harbour porpoises and white beaked dolphins (one common dolphin and one bottle nose dolphin were not confirmed).
- Harbour porpoises and white beaked dolphins are the most common observed species.
- The crew of the Stena ferries is highly involved and very enthusiastic.
- Volunteers and their relatives and friends are informed about the project and the presence of cetaceans in the North Sea.
- Crew from the Coast Guard vessels “Zeearend” and “Visarend” are also highly involved and every time they observe a cetacean they notify us by email or regular mail.
- 8 ambassadors joined the small boat surveys.
- 2 Meetings with volunteers were organised in order to inform them as well as to evaluate the project.
- Several web pages/sites (> 10) show information on project Rugvin.
- With these publications we reached more then several hundred thousands of people.
- Study reports were given to several research institutes such as Sea Marco, RIKZ, CRRU, ARC and Naturalis.

6. Conclusion and future

There were more animals seen than anybody could predict at forehand. The observations from the Stena ferries proved to be suitable for a monitoring program, providing valuable information about the status of cetaceans in the southern North Sea. The high human pressure on the population makes careful monitoring of their abundance absolutely necessary. It is concluded that it is very important to continue the monitoring project started as a two years study into a structural monitoring program. Monitoring over a longer time span will give us the opportunity to gain more insight in these populations which is relevant for their conservation.

We think the project is not only interesting in a biological point of view. Most people we (volunteers, crew and ambassadors) told about our findings and project were very surprised to hear that there are porpoises and dolphins and occasionally a big whale in the Dutch North Sea. So the general public in the Netherlands is not aware enough about the whale species that live in our North Sea. We started to inform the Dutch public about the unknown presence and we reached several thousands of people.

In January 2007 we, Nynke Osinga, Ruben Huele and Frank Zanderink, will start Stichting Rugvin (Rugvin being the Dutch name for dorsal fin) in order to continue

the work which was carried out formerly within Project Rugvin. A scientific article will be written and a press release will be made.

7. Acknowledgements

First of all, we would like to thank the people of Stena Line. The crew and management, who made it possible to do our research on board of the ferries Stena Hollandica and Stena Britannica. Their hospitality and their assistance in spotting the animals were of great value. Then we would like to thank Daan Wouwenaar, Frank van der Veen and Jan Hermans for their hospitality and enthusiasm when we chartered their ships for surveys.

We also would like to thank the scientists of Leiden University for their advice in setting up this project and we are very grateful to the researchers of the Atlantic Research Coalition (ARC) for advising us based on their experiences of monitoring programs on ferries in other European waters. For monitoring advice we thank Kevin Robinson of the Cetacean Research and Rescue Unit in Gardenstown (UK) who also helped us in finding volunteers already trained in observing in Gardenstown, Scotland.

We are very grateful to the people of Stichting De Noordzee who helped us in the organisation of the project and fulfilling the goals of Project Rugvin.

And of course we could not have done this project without the financial contributions of VSBfonds and the AVGN-fund of Dutch WWF office.

And last but certainly not least we would like to thank the volunteers who joined us onboard during the surveys. Their enthusiasm and their patience in quiet times are highly appreciated.

Drs. Nynke Osinga
Ir. Frank Zanderink
January 2007

Appendix Verslag Rugvintrip

De meeste zullen het mailtje van Wouter Jan al hebben gelezen. Hij schreef echter niet hoeveel dieren we gezien hebben, wel dat laat ik ook nog even in het midden. Ik doe een kort (?) relaas van deze dag.

Na het uitvaren, met enige vertraging (diverse wetten van Murphy volgens Wouter Jan), kwamen we de eerste bruinvis al tegen in de haven van Scheveningen. Helaas een dood jong dier dat al enige dagen geleden gestorven was zo te zien. Het miste alle vinnen, de kop en de staart. Na de melding zou het dier worden opgehaald door de Dierenambulance uit Den Haag.

Wij; Wouter Jan, Renske, Susan Weening, Daan en ik zetten koers naar de plek waar Nynke en de bemanning van de Stena boten al enige dagen geleden voor meerdere dagen veel dolfijnen zagen. Dit lag op zo'n dik twee uur varen met dubbele snelheid vanuit Scheveningen. Wouter Jan ziet een kleine jager (roofmeeuw) voorbijvliegen. Ik vertel aan Susan dat dit een zeer agressieve vogel is die het conflict met andere meeuwen niet uit de weg gaat. En inderdaad hij vliegt plots omhoog, valt een mantelmeeuw aan die iets in haar bek heeft, deze laat wat vallen en ziet dat de kleine jager dit uit zee oppikt. Een klein drama (voor de mantelmeeuw) op zee.

Eenmaal op de plek aangekomen was het tijd voor de lunch, het anker uitgegooid, dik 30 meter diep was het daar. Een tiental Noordse stormvogels komt naast de boot liggen, wachtend op visafval, wat wij niet hebben. Wel brood maar dat lusten ze niet. Binnen een paar boterhammen worden vervolgens de eerste bruinvissen opgemerkt. Een tweetal rustende (slapende) dieren die ruim 20 minuten lang prima te volgen zijn. We kregen een uitgelezen mogelijkheid om het dier in haar ritme te volgen en te observeren; 3-4 snel (3-5 sec.) na elkaar boven komen en dan voor weer ruime tijd onder; 20 -30 seconden soms iets langer. 20 minuten later weer een bruinvis en een kwartier later weer een, misschien twee, dit keer minder goed te zien.

Dan zie ik een dier dat geen bruinvis kan zijn, een grote rugvin en grijsbruine kleur die mij aan mijn ontmoetingen met tuimelaars in de Moray firth doet denken. Het dier laat zich echter niet weer zien om enige zekerheid te krijgen.

Dan weer een bruinvis. Aan boord wordt het lastig noteren, iedere keer dat we de observaties willen gaan verwerken op papier, wordt weer een dier gezien. Geweldig!

12.45 uur zagen we de eerste dieren. Nu is het een uur later en is het 5 verschillende ontmoetingen later, een dolfijn (?) en 6 bruinvissen later. 14.00 uur weer twee bruinvissen! En dan nu een zeehond? Nee, een stuk drijfhout. Nu dan, een zeehond? Nee een blauwe fles in de vorm van een hondenkop. Driemaal is scheepsrecht en daar is de grijze zeehond. Weer laten we de boot stilliggen. De verwachting is dat het dier wel naar de boot toe komt. Ja, daar is ze weer aan bakboord, nu wat verder van de boot! Weer gaat ze onder, komt ze nu dan dichterbij? Een krachtige pffff klinkt van de stuurboordkant van de boot. We kijken om. Een bruinvis aan de oppervlakte, nog geen 10 meter naast de boot. Ze zwemt langs de boot en blaast nog een keer haar adem uit door het gat op haar hoofd. Vervolgens duikt ze weer onder en komt ze op zo'n 70 m. van de boot weer boven. Lange tijd kunnen we ook dit dier volgen.

We zetten onze tocht voort tot het uiterste punt dat we gepland hadden en komen verlaat maar zeer opgetogen terug in de haven van Scheveningen. Die dag zien we in totaal 21-22 bruinvissen en wellicht een tuimelaar, een grijze zeehond en opmerkelijke beelden van de zeevogels. Nog nooit zoveel bruinvissen, zo rustig en van zo dichtbij kunnen zien!

Nynke zag in het door ons doorkruiste gebied, ruim 20 dolfijnen en een bruinvis, wij zagen precies het omgekeerde. Gezamenlijk met de vele zeevogels, Jan van Genten, stormvogels duidt het op veel vis in het water. Opmerkelijk is dat we geen enkele boot in de buurt hebben gezien. Woensdag gaan we hopelijk weer.