

Occurrence and hunting of killer whales in Greenland

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ABSTRACT

Information on killer whales (*Orcinus orca*) in Greenland was extracted from published and unpublished sources. Using a questionnaire survey about one third of Greenland's hunters and fishermen were requested to forward information on recent observations and catches of killer whales. Seven percent (143) responded, reporting either that they had (93, 65%) or had not (50, 35%) seen killer whales. Killer whales are observed annually in Greenlandic waters. The reported observations have concentrated in the Avanersuaq District, in Disko Bay, off Nuuk and in the Qaqortoq District. However, killer whales have been observed in almost all areas of Greenland except the Northeast. A minimum of 70 has been killed and landed since 1960, but official reported catches underestimate the actual kill to an unknown extent, because whales struck but lost are usually not reported. Meat from killed whales is sometimes used for human consumption but is not considered valuable. In districts north of Sisimiut it is sometimes used for dog food. Killer whales use almost all other species of whales and several species of seals as food items in Greenland. Sometimes, fish and squid are also found in killer whale stomachs in Greenland.

INTRODUCTION

"Every Inuit hunter returning from kayak hunting with a narrative of a meeting with killer whales will find an attentive audience around the evening meat pots. The experience, retold widely, is gratefully accepted to satisfy the everyday need of mysticism and excitement" (Vibe 1981).

Most people in Greenland are acquainted with killer whales (*Orcinus orca*, known in West Greenland as *aarluk* and in East Greenland as *napaatilik*), though few have actually seen them. Those who have seen killer whales are likely to be certain about the species determination and will remember the encounter(s) many years after. This makes it worthwhile to question local inhabitants in Greenland about their observations.

In most areas of Greenland, killer whales are unwanted because they are thought to scare seals and whales from the hunting

grounds and to feed on the marine mammals sought by human hunters. Furthermore, they are considered dangerous to humans, and kayak hunters will return to shore or enter an ice floe when killer whales are nearby.

Although the killer whale is fairly well known in Greenland, only sporadic accounts of its occurrence have been published. The most extensive compilation of information is that by Winge (1902), who summarized observations prior to 1900. The present study summarizes data available from published literature, recent whaling logbooks, unpublished documents and the results of a questionnaire survey. The overall aim of the study was to identify regions and seasons with conspicuous numbers of killer whales, to summarize the recent history of exploitation and conflicts with fisheries and to present new information on the biology of the species in Greenland.

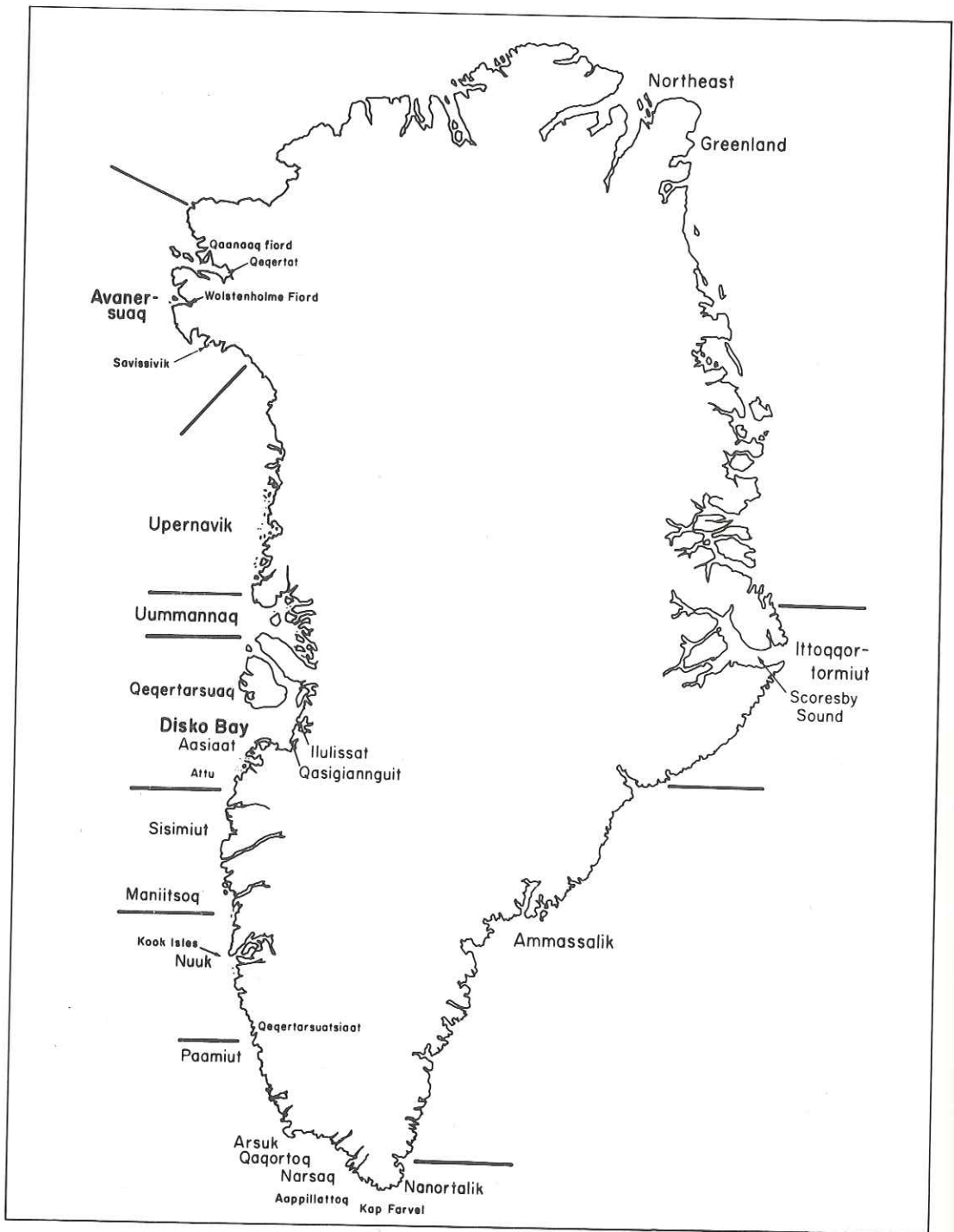


Fig. 1. Map of Greenland with names of districts, settlements and localities referred to in the text.

MATERIALS AND METHODS

Most of the scientific literature, and some "popular" accounts, containing information about marine mammals in Greenland were consulted. Logbooks of Norwegian whaling vessels which operated in Greenlandic waters from 1968 to 1985 (see Øien 1988 - this volume) and reports of various field expeditions to Greenland were surveyed. Information on killer whales in these sources is rather scarce. Therefore, it was decided that further information should be collected through inquiries to Greenlanders. For this purpose, a bilingual circular, including a questionnaire, was forwarded to approximately 2,070 hunters and fishermen and to 40 others in Greenland and Denmark thought likely to have information on this species in Greenland. The circulars were distributed in January 1987 with the request that replies be returned before May 1987.

The circular — written in Greenlandic and Danish — consisted of two parts:

- An *information section*, describing the project, specifying the information desired and including photos of killer whales.
- A *questionnaire*, presented as a postcard which could be removed for mailing. On the back of the postcard, the receiver was asked to provide information about killer whales observed. Further, he was asked if he had any photographs of killer whales, if he had participated in hunting killer whales and if he wanted more observation sheets. The postcard was pre-addressed to DANBIU and prestamped to facilitate mailing. Each bore a reference number used to identify the file and assure respondents' anonymity.

Receivers of the circular were asked to return the postcard even if they had no information about the species.

There are approximately 50,000 inhabitants of Greenland; about 6,000 of them are hunters and fishermen (Anon. 1984b). Of these 6,000, some 2,000 were included, by name

and addresses on lists available to Danbiu; these received mailed circulars. This was considered a reasonable subset of the population. The cost of issuing the circular was a consideration as well. Circulars were sent to the following groups of persons and institutions using the guidelines for selecting the recipients described below (see Fig. 1 for names of localities, districts and settlements):

- Almost all hunters and fishermen in Avanersuaq, Upernavik, Uummannaq and Ittoqqortormiut districts known from address lists collected during previous expeditions by DANBIU.
- Almost all of the exceptionally many hunters in two settlements in mid Greenland and Southwest Greenland (Attu and Aappilattoq) already on DANBIU address lists.
- In all fishing towns in West Greenland, hunters and fishermen selected by persons acquainted with them.
- In all towns and settlements, local authorities and hunter's and fishermen's associations.
- Selected Danish scientists, authorities, fishermen and expedition participants.

All names and addresses of those receiving circulars were stored by reference numbers on DANBIU's computer for later entry of replies. The coverage of the different districts is given in Table 1.

Following the issuing of the circulars, newspaper articles were published in most of the Greenlandic newspapers and information was given in radio broadcasts. Also, a 6 min. video tape of killer whales, accompanied by a description of the project, was broadcast on Greenland television more than ten times in support of the questionnaire survey.

DANBIU biologists visited the districts of Ammassalik, Nuuk, Qeqertarsuaq, Uummannaq, Upernavik and Avanersuaq and asked locals for information on killer whales.

In the following discussion, Greenlandic names are used exclusively for districts, towns and settlements, but for some localities, Danish names are used as preferable.

TABLE 1
Distribution of circulars requesting information on killer whales in different districts in Greenland and Denmark.

| District | Inhabitants ¹⁾ | Number of recipients | Respondents | Positive replies |
|-----------------------------|---------------------------|----------------------|-------------|------------------|
| GREENLAND | | | | |
| Avanersuaq | 787 | 140 | 20 | 11 |
| Upernavik | 2,186 | 327 | 18 | 9 |
| Uummannaq | 2,546 | 129 | 6 | 6 |
| <i>Disko Bay:</i> | | | | |
| Qeqertarsuaq | 1,033 | 42 | 7 | 5 |
| Ilulissat | 4,284 | 183 | 3 | 1 |
| Qasigiannnguit | 1,861 | 50 | 1 | 0 |
| Aasiaat | 3,504 | 165 | 10 | 7 |
| Kangaatsiaq | 1,299 | 34 | 2 | 2 |
| Total | 11,981 | 474 | 23 | 15 |
| Sisimiut | 4,634 | 130 | 4 | 2 |
| Maniitsoq | 4,126 | 168 | 5 | 3 |
| Nuuk | 10,468 | 109 | 12 | 11 |
| <i>Southwest Greenland:</i> | | | | |
| Paamiut | 2,834 | 74 | 1 | 0 |
| Arsuk | 368 | 36 | 1 | 1 |
| Narsaq | 2,144 | 34 | 3 | 2 |
| Qaqortoq | 3,217 | 148 | 16 | 10 |
| Nanortalik | 2,851 | 128 | 6 | 3 |
| Total | 11,414 | 420 | 27 | 16 |
| <i>Southeast Greenland:</i> | | | | |
| Ammassalik | 2,776 | 103 | 12 | 8 |
| Ittoqqortormiut | 510 | 69 | 1 | 0 |
| Total | 3,286 | 172 | 13 | 8 |
| <i>Northeast Greenland:</i> | | | | |
| | — | 1 | 0 | 0 |
| DENMARK | — | 40 | 15 | 12 |
| OVERALL | — | 2,110 | 143 | 93 |

¹⁾ From Anon. (1984b).

RESULTS

Evaluation of the questionnaire survey

A total of 143 questionnaires was returned by the end of October 1987. Of these, 93 (65%) contained information on killer whales. Several of the larger towns (more than 2,500 inhabitants) were under-represented both in numbers of circulars received and number of

persons responding (Table 1). However, it is likely that a relatively smaller proportion of the population in these towns was in contact with killer whales than in small settlements.

Many of the replies contained detailed information. The people were usually able to remember the date, or at least the month, of their killer whale observations, even after

many years. Most replies were considered reliable, though in some cases it was necessary to write to the person to obtain more detailed information, e.g. about the length of killed whales. Some of the information about numbers of whales must be used carefully because it is often difficult to estimate numbers accurately when the whales are not watched for that purpose. In a few cases, the specified numbers were rejected because they were considered unrealistically high.

Recipients of the circulars were asked to return them even if they had not observed killer whales. Undoubtedly, many people who did not return the questionnaire did not understand the rationale behind returning a blank questionnaire.

The data obtained from respondents do not allow any quantitative assessment of density or abundance of killer whales by area. North and East Greenland received poor coverage due to the small number of inhabitants, and even in West Greenland the coverage differed among districts.

Occurrence by season

The seasonality of observations of killer whales in West Greenland is shown in Table 2. From north of Disko Bay to Avanersuaq, observations can be expected to be rather

scarce during the winter months from November to April, due to darkness and ice coverage. South of Qeqertarsuaq to Nanortalik, open water and daylight prevail during winter; these factors may account for the larger number of sightings in these districts than further north.

It is obvious that killer whales are most frequently observed during the summer months, from June to August, in all areas of Greenland (Table 2).

Occurrence by district

Except for the settlements visited by DAN-BIU biologists, most replies (both positive and negative) were received from the Qaqortoq, Aasiaat and Narsaq Districts. Observations of pods of killer whales in Greenland are given in Appendix 1, depicted in Figure 2 and described below by districts.

Avanersuaq District. The hunters in Avanersuaq are well acquainted with killer whales. Two hunters claim that they are less frequently observed today or have disappeared entirely from the District (Obs. 5, 14, see Appendix 1). At least nine records of killer whales in Avanersuaq exist since 1952, and it is obvious that these whales still occasionally occur in Qaanaaq fjord (i.e. Inglefield Bay

TABLE 2
Sightings of pods of killer whales by season in West Greenland and catches in all districts (including killed-but-lost whales) 1950-1986.

| | <i>Avanersuaq to Disko Bay</i> | <i>Disko Bay</i> | <i>Disko Bay to Nuuk</i> | <i>Southwest Greenland</i> | <i>Catches 1950-1986</i> |
|---------------------|------------------------------------|----------------------|------------------------------|--------------------------------|------------------------------|
| January | 0 | 0 | 0 | 1 | 0 |
| February | 0 | 0 | 1 | 0 | 0 |
| March | 0 | 1 | 1 | 1 | 1 |
| April | 0 | 0 | 1 | 0 | 0 |
| May | 0 | 3 | 0 | 1 | 0 |
| June | 0 | 2 | 6 | 4 | 14 |
| July | 4 | 7 | 12 | 12 | 22 |
| August | 14 | 1 | 7 | 8 | 2 |
| September | 6 | 5 | 2 | 4 | 5 |
| October | 0 | 4 | 1 | 6 | 3 |
| November | 0 | 2 | 0 | 0 | 3 |
| December | 0 | 1 | 0 | 0 | 0 |
| Total | 24 | 26 | 31 | 37 | 50 |

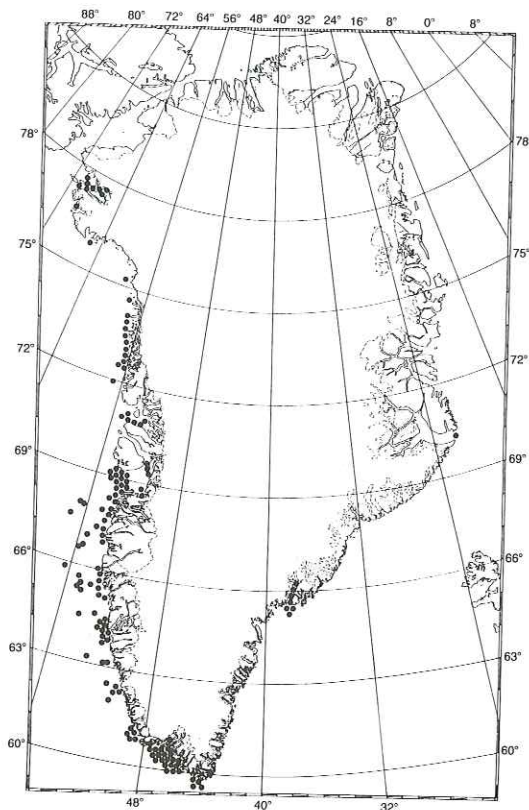


Fig. 2. Observations of pods of killer whales in inshore waters of Greenland and in the Davis Strait after 1950 (see Appendix 1 for further details).

and adjacent fjords), although one hunter mentions that they were more common in this particular fjord 30 years ago (Obs. 8). Few observations exist from Savissivik, Wolstenholme Fjord and other parts of the Avanesuaq District, indicating that Qaanaaq fjord is the most important area for killer whales.

Killer whales have been observed chasing narwhals, *Monodon monoceros*, at least four times close to Qeqertat, at the head of Qaanaaq fjord. On one occasion 10–15 killer whales attacked seven narwhals with calves (Obs. 17); on another occasion killer whales attacked a harpooned narwhal but left it without eating it (Obs. 16). In September 1983, a pod of about 15 killer whales was observed to

drive approximately 20–40 narwhals so close to the coast at Qeqertat that Inuit hunters could harpoon the narwhals from the shore (Obs. 11). After that attack, *muktuk* (narwhal skin) was seen floating on the surface in the area where the attack had occurred. No killer whales were shot or harpooned by hunters because it was considered dangerous to go out in kayaks. This is said to be the most recent incident of killer whales disturbing hunting in Avanesuaq.

Upernavik District. The earliest recorded observation of killer whales is from August 1898, when 8–9 killer whales were seen north of Upernavik (Reeves and Mitchell 1988 – this volume). Since 1940, 15 reports of killer whales in Upernavik District exist, including four from the 1970's and three from the 1980's. The most recent was from July 1987, when a rather dispersed pod was seen from a trawler approximately 10 naut. miles west of the southern part of Upernavik District (Obs. 35).

Two hunters state that killer whales were occasionally observed in the 1930's (Obs. 36, 37) when kayaks were used for hunting, but that today they have abandoned Upernavik District.

Uummannaq District. In the western part of Uummannaq Fjord, a pod of killer whales was once observed chasing a walrus (*Odobenus rosmarus*), which was seen to hit a whale with its tusks (Winge 1902).

According to two of the locals, killer whales are scarce in Uummannaq District (Obs. 41, 49). Four reports were received of observations in the 1970's and 1980's, but some of the observations may have been of the same pods.

In 1985 three killer whales were observed close to shore in 10 fathoms of water in the southern part of Uummannaq District (Obs. 44). According to the hunter who saw the whales, they might have been chasing white whales (*Delphinapterus leucas*). In 1986 two killer whales were seen at the entrance of Uummannaq fjord, and in 1987 a helicopter pilot saw a pod of 17 in Uummannaq Fjord

(Obs. 45, 46). All observations from Uummannaq District are from August, except for one in September 1986.

Disko Bay and Aasiaat District. Killer whales are frequently observed in the Disko Bay area. In the past they have been observed throughout the winter and at *savssats* (ice entrapment of whales) (Obs. 53 and 55).

For the years 1940 to 1987, we received 28 reports of sightings of killer whales from Disko Bay, including four sightings in the 1970's, 11 in the 1980's. The majority of the observations are from the opening of Disko Bay between Qeqertarsuaq and Aasiaat Districts. Qeqertarsuaq and Aasiaat Districts are also better represented with respondents to the questionnaire than are Qasigiannuit and Ilulissat Districts (Table 1). Nevertheless, killer whales were reported to have been observed annually from 1985 to 1987 near Ilulissat in September (Obs. 78, 80, 89) and in 1972 near Qasigiannuit (Obs. 71).

In July 1987, two killer whales were seen three times chasing three fin whales (*Balaenoptera physalus*) off Qeqertarsuaq (Obs. 84, 85, 86).

Two hunters claim that killer whales were more abundant in Disko Bay in the period 1940–1970 than currently and that now the whales are farther offshore (Obs. 95, 96). The many recent observations suggest that killer whales still visit the area annually.

Sisimiut and Maniitsoq Districts. Both historical information and recent observations indicate that killer whales are frequently found off the coast of Sisimiut and Maniitsoq Districts. However, so many fewer replies have been received from inshore areas of these districts than from other districts that killer whales may well be more common in these inshore areas than reflected by the survey (Table 1). Previously, when bowhead whales (*Balaena mysticetus*) and white whales were common in spring at Sisimiut and Maniitsoq, killer whales were seen chasing whales along the coast (Winge 1902; Degerbøl and Nielsen 1930). Inshore observations from

1985–1987 and offshore observations confirm that killer whales still migrate along this coastline. Four killer whales were killed here in 1986 (Obs. 113, 114; Fig. 7C).

Nuuk. In the autumn of 1756, some killer whales were killed at Nuuk, and on 11 February 1809 many killer whales were observed in Nuuk fjord (Winge 1902).

A stranded female killer whale was found in 1844 at Qeqertarsuaq, 200 km south of Nuuk. In early September 1983, many killer whales were observed off Nuuk, and sei whales (*Balaenoptera borealis*) were apparently so scared by killer whales that they did not enter the fjord (Anon. 1983b).

In recent years killer whales have been observed frequently off the Kook Isles, at the mouth of Nuuk fjord; on July 23 1986 three pods, each of approximately 30 whales, were observed 6 naut. miles off the entrance to Nuuk fjord. The killer whales were chasing 8–10 humpback whales (*Megaptera novaeangliae*). Thirteen killer whales were killed by hunters; three whales were retrieved (Obs. 129; Fig. 7B). Earlier in the same year a single killer whale was observed in the same area (Obs. 128). The observation of approximately 90 killer whales off Nuuk in 1986 is the largest number observed in the 1980's in Greenland. In July 1987, on three successive days, a large pod (30–50) was observed off the Kook Isles (Obs. 130, 131, 132). Together, the observations suggest a northward movement past Kook Isles, but it is uncertain whether the same pod of whales was involved on each occasion.

Southwest Greenland. In addition to historical information about killer whales in Paamiut fjord, there are seven recent (1959–1986) observations of killer whales in Paamiut and Arsuk Districts, indicating that killer whales are still rare but regular visitors in these districts. Some of the records indicate large pods of between 20 and 70 animals (Obs. 141, 142, 144, 170).

There is no historical information about killer whales in the districts from Qaqortoq

and to Kap Farvel, but 26 observations were made in these areas between 1956 and 1987. From these it appears that killer whales are frequently observed between May and October. In July 1966, 75–100 killer whales were seen off Qaqortoq (Obs. 145), representing the largest number observed in the 1960's in Greenland. However, most of the observations between Qaqortoq District and Kap Farvel involved one or two animals; on a few occasions they were as many as 20–30 (see Appendix 1).

Two local respondents from Nanortalik stated that killer whales are often observed when hooded seals (*Cystophora cristata*) arrive in this area during spring (Obs. 139, 166).

Davis Strait. Offshore (>12 naut. miles from land) observations of killer whales in the Davis Strait are concentrated in the area between Aasiaat and Qeqertarsuaq. Most of the observations are in water shallower than 200 m, but distribution of observations is probably an artifact of observation effort. One observation (Obs. 187) from March 1981 is from a local fishing vessel; the others are from oil drilling platforms, foreign whalers or research vessels.

Northeast Greenland. There are no permanent residents in the areas north of Avanersuaq and Ittoqqortormiut. The only inhabitants are the employees of a weather station, the headquarters of the dogsledge patrol and an airstrip. All these stations are situated on the east coast north of Ittoqqortormiut.

Literature surveys of the marine mammals in Northeast Greenland, carried out by Dietz and Andersen (1984) and Dietz *et al.* (1985), found no information on killer whales. Inquiries of several people from the dogsledge patrol and the weather stations gave no indications of killer whales in Northeast Greenland.

Southeast Greenland. Killer whales were observed off the pack-ice belt of Southeast Greenland in June 1888 and in 1898–99, and a Danish expedition to Ammassalik was in-

formed that killer whales were sometimes seen and caught there in the 19th century (Winge 1902).

On 25 August 1925, before Ittoqqortormiut was inhabited by Inuit hunters, Pedersen (1926) observed a large pod of killer whales entering Scoresby Sound. The fjord was free of ice and the whales were swimming in a long row. Born (1983) refers to an observation by Inuit hunters of a pod of killer whales in Scoresby Sound in June 1983. These are the only observations of killer whales in the district. The scarcity of the species is confirmed by the Ittoqqortormiut District Council, which returned an empty questionnaire, the only one returned from the district.

There were eight observations of killer whales in Ammassalik District in the period 1942–1984. Four locals state that killer whales were frequently observed during summer months in the 1950's and 1960's (Obs. 198, 208, 209, 210).

Greenland Sea. The low number of observations of killer whales in the Greenland Sea

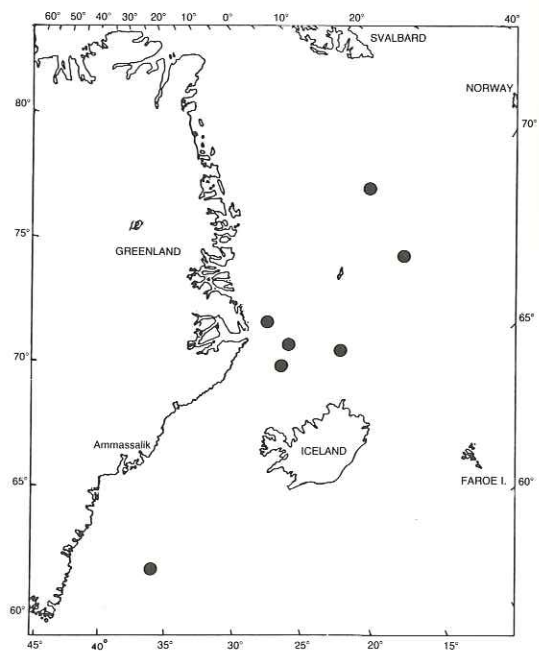


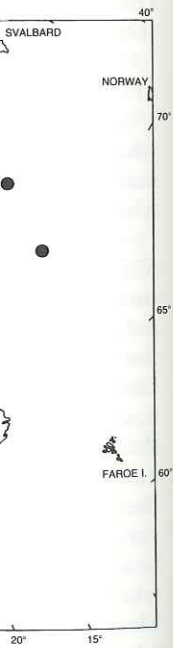
Fig. 3. Observations of killer whales east of Greenland, 1891–1985 (see Appendix 1 for further details).

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probably simply reflects the low level of human activity in this area (Appendix 1; Fig. 3).

Distribution of recent observations

Records from 1985, 1986 and 1987 must be considered the most reliable, although exact dates are missing for some (Appendix 1). It is interesting that the localities of the observations often coincide for the three years and that certain districts with comparable levels of human activities are devoid of observations, i.e. Upernavik, Ittoqqortormiut and Ammassalik (Fig. 4).

Pod sizes

The respondents to the questionnaire often included information about numbers of killer

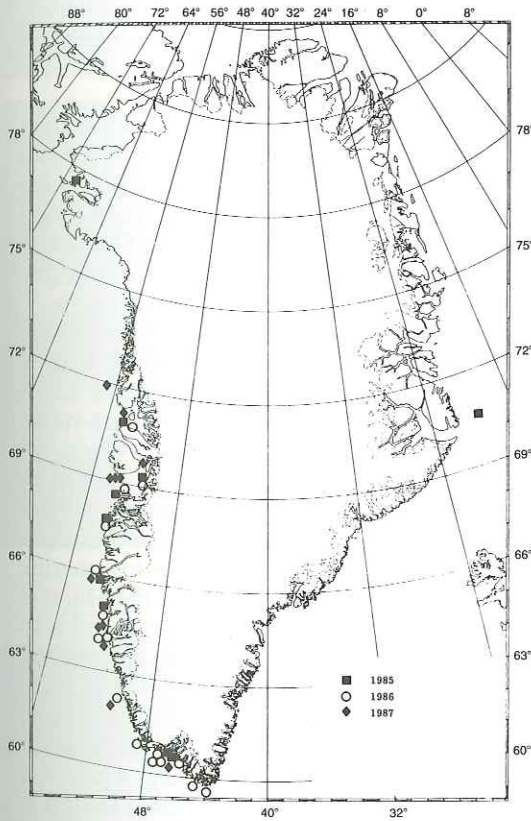


Fig. 4. Observations of pods of killer whales at Greenland in 1985, 1986 and 1987 (see Appendix 1 for further details).

whales they observed. However, in some cases it is uncertain whether the whales belonged to one or several pods. In such cases information on pod size has been rejected. If pod size was given as a range, the mean number was used.

It is obvious from the distribution of pod sizes (Fig. 5) that most (76%) of the killer whale observations in Greenland involved more than one animal. It is not known whether this is due to the fact that several whales are easier to see than single individuals or whether it reflects the actual pod sizes of killer whales in Greenland.

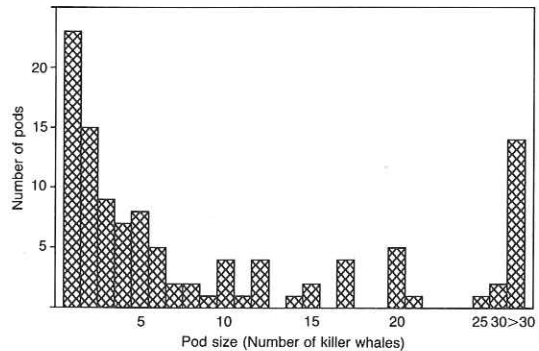


Fig. 5. Distribution of pod sizes according to respondents to the questionnaire survey.

Hunting

A bounty on killer whales was introduced in 1960 in Greenland because of complaints from hunters and fishermen. By law, hunters were paid 200 kr (from 1970, 750 kr) for each whale landed; even so, not more than 10 whales were presented for payment from 1960 to 1975, when the bounty system was suspended (Anon. 1978). Nevertheless, complaints about killer whales continued, and recently a plan to intensify action against killer whales in Avnersuaq District has been suggested to the Provincial Council in Greenland (Anon. 1985). To sustain life, the Inuit hunters in Avnersuaq depend seasonally on catches of narwhals and white whales. Many Inuit hunters have reported that killer whales scare and attack these species; recently, an attack on

narwhals in the Canadian Arctic was described in detail (Steltner *et al.* 1984).

In 1960, concurrent with the establishment of the bounty system, the Greenland Provincial Council decided that all boats belonging to public institutions should carry rifles and free ammunition for use against killer whales (Anon. 1960). Although this directive is still in force, few are aware of its contents, and shooting of killer whales is today probably not practiced from institutional boats.

Hunters and fishermen in Greenland claim that killer whales disturb their subsistence hunting of marine mammals, either because they reduce the number of marine mammals available to the hunters ($n > 10$), or because they scare away seals and whales from the hunting grounds ($n > 20$). Furthermore, killer whales are considered dangerous to hunters in kayaks (Obs. 1; Bruemmer 1971). Therefore, hunters will often kill the whales without proper effort to retrieving the bodies. Killer whales can be killed by rifles from small skiffs, but it is often a difficult task to harpoon and secure the whale from such boats (Obs. 114, 139, 144, 147; Fig. 7C). Furthermore, in many districts, killer whale meat is not considered useful. Nevertheless, in both 1986 and 1987, killer whale meat was sold for human consumption in Nuuk (Obs. 129, 133). In the districts north of Sisimiut, where dogs for dogsledges are allowed, killer whale meat is occasionally used for dog food (Obs. 71).

Not all killer whales are taken from skiffs; an unknown proportion is caught from the same small whaling vessels, equipped with harpoon cannons, used for minke whaling (Fig. 7A). The technique is to shoot in front of the killer whale with rifles to scare it towards the vessel, from which it will be harpooned and dragged to shore (Obs. 129).

The annual catch of killer whales by region and month is reported in the Hunters List of Game (Anon. 1960–1984). However, not all catches are reported and reports do not include animals killed-but-lost. The kill-and-loss rate may be especially high with killer whales, as they have a thin blubber layer and are likely to sink when killed (Obs. 147).

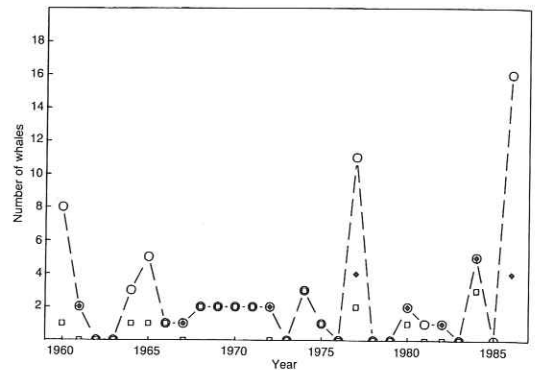
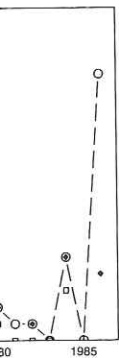


Fig. 6. Catches of killer whales near Greenland from 1960 to 1986. Open squares indicate reported catches from the Hunters List of Game (Anon. 1960–1984). Filled diamonds indicate retrieved catches (with the reported catches added), as determined from data obtained from respondents to the questionnaire and open circles indicate total kill, the sum of reported catches, unreported but retrieved catches and unreported struck-but-lost killer whales.

From the questionnaire survey, some data on unreported kills and killed-but-lost whales were obtained. In Figure 6 catches from 1960 to 1986 are shown, both as the uncorrected numbers from the Hunters List of Game and as the corrected numbers obtained during this compilation.

The reported catches for the years 1960–1984 (Fig. 6, open squares) never exceed three killer whales a year, and for 12 of the 24 years (1984 is the last year for the catch statistics) no catches were reported. When retrieved but unreported catches are added to these figures, the maximum annual kill increases to four whales and there are only eight years without catches. Killed-but-lost marine mammals are rarely reported in the Hunters List of Game. When such figures are added to the total catches reported in this paper, the maximum annual kill increases to 16 in 1986; only 4 of the 16 were retrieved. The total corrected catch from 1960 to 1986 is 70 killer whales. In 1987, at least one killer whale was killed off Nuuk (Appendix 1: Obs. 133); it is not included in Figure 6.

From questionnaire surveys, kills are most likely to be realistically estimated for the pre-



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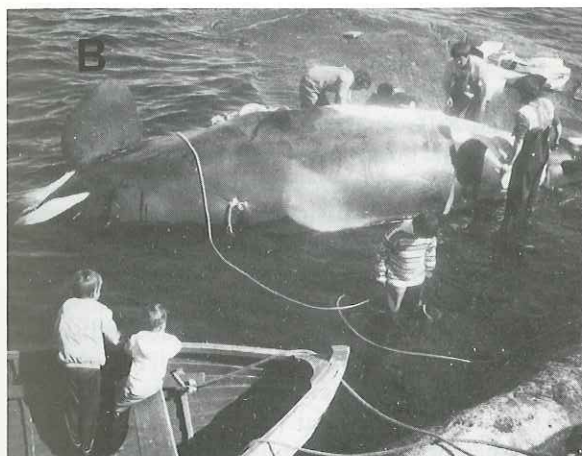


Fig. 7. Killer whales caught by Inuit hunters in West Greenland: A. Greenlandic whaling vessel equipped with harpoon cannon; B. Killer whale taken off Nuuk from a small whaling vessel, July 1986; C. Fiberglass skiffs with outboard motor towing a killer whale off Maniitsoq, August 1986; D. Flensing of killer whale; E. Dorsal fin (1.5 m) of female killer whale; and F. 1.5 m fetus of killer whale from August. (Photos: A. Erik Smidt; B. Lars Frederiksen; C-F. Gerth Skifte).

TABLE 3
Catch of killer whales by district during 1950–1986, including killed-but-lost whales.

| District | Number of whales caught |
|-------------------------------|-------------------------|
| Avanersuaq | 0 |
| Upernavik | 2 |
| Uummannaq | 1 |
| Qeqertarsuaq | 16 |
| Ilulissat | 0 |
| Qasigiannuit | 2 |
| Aasiaat | 2 |
| Sisimiut | 7 |
| Maniitsoq | 4 |
| Nuuk | 26 |
| Paamiut | 6 |
| Arsuk | 1 |
| Narsaq | 2 |
| Qaqortoq | 1 |
| Nanortalik | 2 |
| Ammassalik | 3 |
| Ittoqqortormiut | 0 |
| Northeast Greenland | 0 |
| Total | 75 |

ceding year, for which most hunters will remember the catches. It is, therefore, possible that the yearly kill between 1960 and 1985 was similar to that in 1986.

There is no information about any catches of killer whales in Avanersuaq District, Northeast Greenland or Ittoqqortormiut District in recent years. Winge (1902) wrote that in the 19th century killer whales were sometimes caught in Ammassalik District and information from the questionnaire survey indicates that one and two killer whales were killed there in 1980 and 1984, respectively; none were recovered (Obs. 203, 206).

The distribution of catches of killer whales by district is shown in Table 3 for the period 1950 through 1986. It is obvious that most whales were taken between Nuuk and Qeqertarsuaq and that almost all whales were taken between June and September (Table 2).

Length data

Information on killer whale length is scarce and to some extent unreliable, because length is typically estimated rather than measured.

However, for 10 animals, approximate lengths are known. This sample includes 1 animal of 5–6 m, 1 of 6–7 m, 5 of 7–8 m, 2 of 8–9 m and 1 of 9 m. Judging from this size distribution, primarily adult animals are taken in Greenland (Jonsgård and Lyshoel 1970).

One 6 m long female caught in October 1967 in Arsuk District had a 1.5 m fetus (Obs. 146), and another 8–9 m long female caught in Maniitsoq District in August 1986 had a 1.5 m fetus (Obs. 114; Fig. 7F).

Feeding habits

Second-hand information on the feeding habits of killer whales was obtained from the hunter's examinations of stomach contents or observations of killer whales chasing their prey.

The prey items of killer whales are generally well known to hunters in Greenland, and as most hunters are seriously interested in the feeding of killer whales, information on prey items is considered to be fairly reliable. In a few cases, information from hunters is supported by information from scientific parties.

The following was extracted from Winge (1902) and from the respondents:

In Southwest Greenland, i.e. from Nuuk southward, killer whales are reported to attack humpback whales, fin whales, minke whales (*B. acutorostrata*), pilot whales (*Globicephala melaena*), harp seals (*Pagophilus groenlandicus*) and hooded seals (Obs. 129, 139, 146, 165, 166, 172, 173). Examination of stomach contents confirms that killer whales eat harp seals, and squids (Cephalopoda) were found in one stomach (Winge 1902). In mid-West Greenland, from Sisimiut to Nuuk, killer whales are reported to attack humpback and minke whales and, formerly, bowhead and white whales (Winge 1902; Degerbøl and Nielsen 1930). From Disko Bay, they are reported to attack fin, minke, humpback and white whales and harp seals (Obs. 54, 56, 57, 63, 74, 77, 79, 80). Examination of stomach contents showed white whale, hooded seal and unspecified seal and fish remains (Obs. 61, 65, 75). Killer whales attack minke and white whales in

Uummannaq (Obs. 42, 44) and seals and narwhals in Upernavik and Avanersuaq (Obs. 4, 11, 26; Bruemmer 1971).

There is no information on feeding habits in East Greenland.

DISCUSSION

The feasibility of questionnaire surveys of marine mammals in Greenland can hardly be evaluated from this study. For that purpose, a questionnaire seeking information on more common and widespread species would have been preferable. The relatively low number of respondents more likely indicates a scarcity of killer whales than any reluctance to participate in this study.

For the period 1960–1987, with the exception of one year (1961), there were annual reports of killer whales observed or killed in Greenlandic waters.

North of Sisimiut, complete darkness prevails during the winter months, and the coast is usually blocked with fast ice for several months. From Sisimiut to Kap Farvel there is open water throughout the year. At Kap Farvel there are at least ten hours of daylight during winter. Both ice coverage and hours of daylight influence the probability of observing killer whales; hence, it is not known whether the species occurs in high Arctic regions during the dark period. This may explain why most observations are from summer months. However, it is noteworthy that there are a few observations in Disko Bay during winter months.

From the observations reported from West Greenland, four areas appear to be visited frequently by killer whales: the Avanersuaq District, Disko Bay, the area off Nuuk and the area off Qaqortoq-Kap Farvel. All four are well known for their richness of marine mammals and, with the exception of Avanersuaq, even for their large fish stocks. However, killer whales are far from restricted to these areas. They have occasionally been observed in almost all parts of West Greenland, including annual sightings in 1985 to 1986 in Uummannaq District.

Information on feeding habits of killer whales in Greenland indicates that marine mammals are major prey item, and the occurrence of killer whales is probably correlated with abundance of other marine mammals.

In the Avanersuaq District, the majority of observations are from the Qaanaaq fjord, a well documented summering area for narwhals (Born 1986). In Disko Bay, killer whales are usually found in the mouth of the bay, where baleen whales and seals are numerous during the summer period and where rich fish stocks are found (Hansen and Hermann 1953; Kapel and Petersen 1982). The area off Nuuk fjord is famous for concentrations of large whales — especially humpbacks — during the summer and autumn (Whitehead *et al.* 1982). Southwest Greenland is visited by large numbers of harp seals and hooded seals in early summer and later by various baleen whales (Kapel and Petersen 1982). The fish stocks in Southwest Greenland consist mainly of cod (*Gadus morhua*), capelin (*Mallotus villosus*) and herring (*Clupea harengus*) (Hansen and Hermann 1953).

The lack of observations of killer whales in Northeast Greenland could be due simply to the low level of human activity there. However, marine mammals are generally scarce in this area, compared to West Greenland, because all marine life is heavily influenced by the cold polar current flowing south along the east coast of Greenland (Hansen and Hermann 1953; Dietz *et al.* 1985). Generally, reports of killer whales are rare on the east coast of Greenland. The usually heavy pack ice along East Greenland probably prevents killer whales from entering inshore waters. In addition, the lack of fish resources and large marine mammals probably make the area unattractive to the whales.

Ice conditions are also expected to influence the distribution of killer whales in West Greenland. Except for two winter observations from Disko Bay and Davis Strait, killer whales have not been reported in new ice, from fast-ice edges, in pack-ice or in leads or cracks in drifting pack ice, although a large

part of the hunting activity in Greenland takes place from the fast ice or in ice remnants. Scanning a few diaries from bowhead whalers (Livingstone-Learmonth 1888; Kinnear 1907; Scoresby 1980) and expedition reports from the Greenland Sea (Hammer 1982; Vinje 1984) confirms that killer whales were not reported in the pack ice, where bowheads and narwhals were previously chased by the whalers. Also, all killer whale observations from the Eastern Canadian Arctic presented by Reeves and Mitchell (1988 – this volume) are from the open water season. This obviously differs from the situation in the Antarctic, where killer whales are often seen in icy seas (Budylenko 1981; Mikhalev *et al.* 1981), and Alaska, where killer whales prey on ice associated pinnipeds and walrus in ice habitats (Lowry *et al.* 1987). The differences between killer whales in the Antarctic and Alaska and those in the Arctic North Atlantic are probably explained either by the inability of Atlantic killer whales to chase Arctic marine mammals in icy waters or by the killer whales' preference for open water, where they would have access to the pagophilic marine mammals as well as to harp seals, hooded seals and several species of baleen whales.

There are no population estimates for Greenland killer whales, past or present. However, locals often reported, particularly in the hunting districts, that killer whales are less frequently observed today than during the period 1930–1970. Some hunters believe that this reduction was due to the change from kayak-hunting to motorized skiffs, with the result that the whales are scared by the underwater noise produced by outboard motors.

In 70% of the sightings reported in Greenland, there were less than 11 animals; 24% of the sightings were of solitary individuals. This distribution is similar to that from the Pacific (Dahlheim *et al.* 1982) but differs from that for the Antarctic, where single animals accounted for only 7% of all sightings (Mikhalev *et al.* 1981).

Official catch statistics seriously underestimate the actual kill of killer whales. As with some other species of marine mammals, a cer-

tain — yet unquantified — proportion of the catch is not reported. Killer whales are usually considered to be pests and of relatively low commercial value; efforts to retrieve killed whales are often insufficient.

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APPENDIX 1

Sightings of pods of killer whales by season in West Greenland and catches in all districts (including killed-but-lost whales) 1950-1986. Numbers given under 'Reference' refer to record no. in DANBIU ApS. files.

| <i>Observation number</i> | <i>Year</i> | <i>Month</i> | <i>Day</i> | <i>Number of whales</i> | <i>Locality</i> | <i>Comments</i> | <i>Reference</i> |
|----------------------------|-------------|--------------|------------|-------------------------|------------------------|---|--------------------------|
| AVANERSUAQ DISTRICT | | | | | | | |
| 1 | 1952 | — | — | Some | Avanersuaq district | A kayak hunter approached by killer whales | 101704 |
| 2 | 1973 | 9 | — | 10-15 | Academy Bay-Qaanaaq f. | | 101341 |
| 3 | 1976 | 8 | 22 | 1 (2) | Qaanaaq fjord | Between Herbert Isle and Qaanaaq | 103190 |
| 4 | 1976 | 8 | — | Some | Qeqertat | Chasing narwhals | Durham 1979 |
| 5 | 1976 | 8 | — | 8 | | Previously observed every summer in August | 102522 |
| 6 | 1977 | 8 | — | 10 | Avanersuaq District | Killing whales (probably narwhals) | 102522 |
| 7 | 1977 | 8 | — | 5-10 | Academy Bay-Qaanaaq f. | | 101341 |
| 8 | 1978 | 8 | — | 15 | Qeqertat | Often at and near Qeqertat 30 years ago | 102522 |
| 9 | 1978 | 8 | — | 3 | Savissivik | 3 killer whales observed off Savissivik | 101317 |
| 10 | 1981 | 9 | 13 | 10-15 | Qeqertat | No observations since 1981 (?; could be same as Obs. 11) | 101343 |
| 11 | 1983 | 9 | 13 | 15 | Qeqertat | Chasing 20-40 narwhals 2 km and less off Qeqertat | 101347 |
| 12 | 1985 | 8 | 15 | 1 | MacCormick Fjord | North of Qaanaaq fjord | 102308 |
| 13 | 1985 | 9 | 23 | 20 | West of Wolst. Fjord | Disturb hunting and scare whales (probably narwhals) and seals | 101337 |
| 14 | — | — | — | — | Qaanaaq fjord | Until 1980 app. 20 were annually observed in the fjord, eating whales (probably narwhals) | 101325 |
| 15 | — | — | — | 30 | 5 km from Qeqertat | Attacking whales (probably narwhals), year and date unknown | 101343 |
| 16 | — | — | — | 1 | Avanersuaq District | Attacked a harpooned whale (probably a narwhal) but disappeared without eating whale | 101704 |
| 17 | — | — | — | 10-15 | Avanersuaq District | 7 whales (probably narwhals) with calves attacked, some survived | 101704 |
| 18 | — | — | — | ? | Qaanaaq fjord | Some killer whales in the 60's or 70's off Qaanaaq | 101330 |
| 19 | — | — | — | ? | Wolstenholme Fjord | Between Moriussaq and Dundas | 10011 |
| 20 | — | — | — | — | Qaanaaq fjord | Narwhals and kayak hunters avoid killer whales that visit the area during the summer | Bruemmer 1971 |
| UPERNAVIK DISTRICT | | | | | | | |
| 21 | 1898 | 8 | 5 | 8-9 | North of Upernavik | | Reeves and Mitchell 1988 |
| 22 | 1940 | — | — | Pod | Off Upernavik | | 101567 |
| 23 | 1948 | — | — | 5-6 | Aappilattoq | Observed from kayak | 101567 |
| 24 | 1952 | — | — | 9 | Upernavik District | Observed from kayak; 3 animals together in 3 pods, 1 killed but sank | 101567 |
| 25 | 1952 | — | — | 1 | Aappilattoq | Stayed in the fjord for more than one month, finally killed; 7 m long | 103053 |
| 26 | 1954 | 8 | 7 | 6 | ? | Chased, unsuccessfully, a seal 100 m from beach | 101549 |
| 27 | 1959 | 7 | 10 | ca. 100 | Nunatarsuaq | | 101549 |
| 28 | 1966 | 8 | 10 | ca. 50 | Kullorsuaq | | 101549 |
| 29 | 1970 | 9 | — | 3 | Nuussuaq | 1 (8 m long) of killed, 2 whales support the one that was killed | 103128 |
| 30 | 1971 | 8 | 10 | ca. 60 | Karusulik | Killer whales do not eat female narwhals | 101549 |
| 31 | 1973 | 7 | 15 | 5 | Kukifilik? | | 101549 |
| 32 | 1975 | — | — | 1 | | Killed | 100021 |
| 33 | 1976 | 7 | — | 3 | Tugtulissuaq | Ringed seals stayed on ice floes | 103128 |
| 34 | 1980 | 8 | 17 | ca. 30 | ? — Upernavik District | | 101549 |
| 35 | 1987 | 7 | — | A pod | Off Svartenhuk | Observed 10 naut. miles west off Svartenhuk | 102492 |

Appendix 1 (continued)

| Observation number | Year | Month | Day | Number of whales | Locality | Comments | Reference |
|--------------------------------|------|-------|-----|------------------|----------------------------|--|------------|
| 36 | — | — | — | | Aappilattoq | Often met with in the 1930's when kayaks were used for hunting | 102492 |
| 37 | — | — | — | 0 | Tasiussaq | No killer whales in recent years, occasionally observed in the 1930's | 103117 |
| 38 | — | — | — | Some | Tasiussaq | Some in the 60's in July–September, no recent obs., 2 killed since 1950 | 103113 |
| 39 | — | 7 | 15 | 200 | Tugsap eqane? | Year: either 1985 or 1986, bad for seal hunting | 103079 |
| 40 | — | 8 | — | 100 | Tussaag | Many at the outer coast and sometimes at Tussaag | 103060 |
| UUMMANAQ DISTRICT | | | | | | | |
| 41 | 1975 | — | — | 8–10 | Uummannaq District | Year uncertain, second hand information, scarce in the district | 101858 |
| 42 | 1976 | 8 | 17 | Pod | Uummannaq fjord | Attacking minke whales | 101394 |
| 43 | 1979 | 8 | 15 | 4–5 | Uummannaq fjord | | 101857 |
| 44 | 1985 | 8 | 15 | 3 | Qaarsut | May be hunting white hhales, swimming close to beach at 10 fathoms depth | 102026 |
| 45 | 1986 | 9 | 15 | 2 | Opening of Uummannaq f. | | 102026 |
| 46 | 1987 | 8 | 20 | 17 | Uummannaq fjord | Helicopter pilot saw the whales for sveral days | 103199 |
| 47 | 1987 | 8 | — | ? | Uummannaq District | | 102492 |
| 48 | — | — | — | 5 | Illorsuit | In the 1970's, June or July, 1 killed but sank | 101853 |
| 49 | — | — | — | — | Illorsuit | Very rare, not every year | 101852 |
| 50 | — | — | — | Pod | Nuussuaq | Chasing a walrus that hit a killer whale with its tusks | Winge 1902 |
| DISKO BAY AND AASIAAT DISTRICT | | | | | | | |
| 51 | 1827 | — | — | Pod | | Following white whales into bay | Winge 1902 |
| 52 | 1840 | — | — | Many | | | Vibe 1981 |
| 53 | 1840 | — | — | Pod | | In 'savssat' | Winge 1902 |
| 54 | 1940 | 5 | — | 14 | Ikerasak-Attu | Chasing humpback? | 101246 |
| 55 | 1940 | — | — | — | | Observations throughout the winter, also at 'savssat' | 100001 |
| 56 | 1942 | 12 | — | Some | | Following white whales | 100001 |
| 57 | 1950 | 5 | — | 4–5 | | Following harp seals | 100001 |
| 58 | 1958 | 9 | 1 | 2 | Kitsissut at Attu | 2 large whales | 101685 |
| 59 | 1959 | 3 | 15 | 15–20 | Uummannaq? | (unknown locality) | 101685 |
| 60 | 1960 | 7 | — | 1 | Kronprinsens Ejland | 1 killed end July | 100021 |
| 61 | 1961 | — | — | 30–40 | | 2 caught, 5 and 7 meter, stomach cont.: white whales, seals and fish | 101614 |
| 62 | 1964 | 6 | 22 | 1 | Disko Bay | 1 killed: 7 m female | 100021 |
| 63 | 1964 | — | — | 40–50 | | Killed a minke whale | 101614 |
| 64 | 1964 | — | — | 2 | Disko Bay | Both killed and sank | 102074 |
| 65 | 1965 | 11 | 7 | 1 | Upernaviup | 1 killed: 7 m male, hooded seal in stomach | 100021 |
| 66 | 1966 | 7 | — | 1 | | 1 killed | 100021 |
| 67 | 1966 | — | — | 1 | South of Aasiaat | During summer | 100003 |
| 68 | 1968 | 9 | — | 2 | | Both killed | 100021 |
| 69 | 1969 | 10 | — | 1 | | 1 killed | 100021 |
| 70 | 1970 | 9 | — | 2 | | 1 killed | 100021 |
| 71 | 1972 | — | — | 2 | | 1 large shot with rifles from cutter, hand-harpooned, used for dog food | 101862 |
| 72 | 1977 | 6 | — | 9 | | 2 killed and 5 struck but lost | 100021 |
| 73 | 1978 | 10 | 20 | Pod | 68°56'N 53°07'W | | IWC 1981 |
| 74 | 1983 | 9 | — | 4–5 | Nivaq | Attacking a fin whale | 101862 |
| 75 | 1984 | 7 | 14 | 6 | Southwest of Disko | 1 killed, stomach content: white whale | 102395 |
| 76 | 1985 | 10 | — | 1 | 15 naut. miles W of Rifkol | | 101862 |

Appendix 1 (continued)

| Observation number | Year | Month | Day | Number of whales | Locality | Comments | Reference |
|----------------------------------|------|-------|-----|------------------|---------------------------|---|----------------------------|
| 77 | 1985 | 11 | 3 | Some | | Attacking a humpback whale | 101682 |
| 78 | 1985 | — | — | Some | | | 102043 |
| 79 | 1986 | 8 | 17 | 8-10 | 68°40'N 53°20'W | Attacking fin whales | 101958 |
| 80 | 1986 | 9 | 26 | 6 | Pakitsoq | Attacking a minke whale | 101923 |
| 81 | 1986 | 10 | — | 2 | Aqigsserniaq — Attu | Early October, one with large dorsal fin | 101862 |
| 82 | 1987 | 7 | 1 | 2 | Off Qeqertarsuaq | Chasing 3 fin whales (<i>infd</i>) | 102399 |
| 83 | 1987 | 7 | 2 | 2-4 | Off Qeqertarsuaq | Chasing 3 fin whales (<i>infd</i>) | 102399 |
| 84 | 1987 | 7 | 8 | 2 | Off Qeqertarsuaq | Attacking fin whales | 100023 |
| 85 | 1987 | 7 | 10 | 2 | Off Qeqertarsuaq | Attacking fin whales | 100023 |
| 86 | 1987 | 7 | 11 | 2 | Off Qeqertarsuaq | Attacking fin whales | 100023 |
| 87 | 1987 | 9 | 20 | 1 | Off Qeqertarsuaq | (<i>infd</i>) | 102399 |
| 88 | 1987 | 9 | 23 | 1 | Off Qeqertarsuaq | (<i>infd</i>) | 102399 |
| 89 | 1987 | 9 | 23 | Some | Near Oqaatsut | (Reported at third hand from a fisherman) | 100009 |
| 90 | 1987 | 9 | — | A pod | Near Oqaatsut | A pod observed at Rode Bay (reported through others) | 100009 |
| 91 | 1987 | 10 | 3 | 1 | Off Qeqertarsuaq | (<i>infd</i>) | 102399 |
| 92 | 1987 | 10 | 14 | 1 | Off Qeqertarsuaq | (<i>infd</i>) | 102399 |
| 93 | 1987 | 10 | 24 | 2-4 | Off Qeqertarsuaq | (<i>infd</i>) | 102399 |
| 94 | — | — | — | — | — | Common during the summer, it is claimed that they scare the harp seals | Porsild and Ostermann 1921 |
| 95 | — | — | — | — | Niaqornaarsuk | Common in the fjord 1940-60, now further off the coast | 101215 101215 |
| 96 | — | 6 | — | — | Kitsissuarsuit | Common at the islands in June in the 1950's | 101211 |
| 97 | — | — | — | ? | — | Autumn? white whales disappear | Winge 1902 |
| 98 | — | 7 | 15 | 1000 | Kronprinsens Ejland | Chasing humpback with young (<i>infd</i>) | 101246 |
| 99 | — | — | — | — | Kitsissuarsuit | Rare in this area | 101951 |
| 100 | — | — | — | — | — | 2-3 animals observed almost every year from 1967-1972 | 101862 |
| 101 | 1823 | — | — | Pod | — | Chasing bowhead whale | Winge 1902 |
| 102 | 1830 | — | — | Pod | Napasog | Killed a humpback | Winge 1902 |
| 103 | 1841 | — | — | Pod | — | Chasing seal | Winge 1902 |
| 104 | 1908 | 7 | 6 | 2 | — | — | Reeves and Mitchell 1988 |
| 105 | 1922 | — | — | Pod | Kangaamiut | Spring, killing white whales | Degerbøl and Nielsen 1930 |
| 106 | 1945 | — | — | 100 | — | Observed spring, summer and autumn along the coast | 102007 |
| 107 | 1960 | — | — | 7 | — | Killed, all sank | 103198 |
| 108 | 1974 | 9 | 2 | 6 | 67°02'N 53°55'W | — | 100022 |
| 109 | 1978 | 10 | 21 | Pod | 65°34'N 53°37'W | — | IWC 1981 |
| 110 | 1985 | 7 | — | 1 | South of Umanarsuk | — | 100002 |
| SISIMIUT AND MANIITSOQ DISTRICTS | | | | | | | |
| 111 | 1985 | — | — | ca. 20 | 64°53'N 52°35'W | Two pods of 10 animals | 101718 |
| 112 | 1985 | — | — | 1 | 64°44'N 52°25'W | Chasing a whale | 101718 |
| 113 | 1986 | 8 | — | 2 | Off Kangerlussuaq | 2 killed both sank, observed close to shore | 102074 |
| 114 | 1986 | 8 | — | 20 | Off Maniitsoq | 2 killed 1 struck but lost; 1 female of 8-9 m (tooth sample), 1.5 m fetus | 104498 |
| 115 | 1987 | 8 | 19 | 1 | 1 naut. miles N of Kingaq | Jumping out of the water | 100002 |
| 116 | — | — | — | — | — | Occasional visito | Bendixen 1921 |
| 117 | — | — | — | 1 | South of Maniitsoq | 1 killed in fjord | 104001 |
| 118 | — | — | — | Some | — | Often seen off Kangaamiut when hunting white whales | Degerbøl and Nielsen 1930 |

Appendix 1 (continued)

| Observation number | Year | Month | Day | Number of whales | Locality | Comments | Reference |
|----------------------------------|------|-------|-----|------------------|----------------------------|--|---|
| 161 | 1984 | 8 | 16 | 5 | Aappilattoq-Kap Farvel | 1 of them was large, every summer observed between Qaqortoq and Kap Farvel | 102436 |
| 162 | 1985 | 7 | 21 | 6 | 3 naut. miles from Saarloq | | |
| 163 | 1985 | 7 | — | 1 | Sermersuut | | 103378 |
| 164 | 1985 | 10 | 3 | 1 | Alluitsup Paa | At Alluitsup Paa | 101184 |
| 165 | 1986 | 3 | — | 1 | Qaqortoq | 1 chasing pilot whales off Qaqortoq | 101827 |
| 166 | 1986 | 6 | 13 | 1 | Nanortalik | Often observed during the period with hooded seal hunting in the area | 100020 102257 |
| 167 | 1986 | 7 | 11 | 2 | Kobberminebugten | Following baleen whale, not certain about species determination | 100006 |
| 168 | 1986 | 7 | — | 2 | Off Qaqortoq | | 102208 |
| 169 | 1986 | 7 | — | 20-30 | Kap Farvel | Observed from airplane south of Kap Farvel | 102291 |
| 170 | 1986 | 9 | — | 20? | Paamiut Isblink | Several — maybe 20 — off Paamiut Iceblink | 100012 |
| 171 | 1986 | 10 | — | Pod | SW of Simiutaq | Attacking fin whale | 102539 |
| 172 | 1987 | 10 | — | 1 | Qaqortoq fjord | Obs. close to boat, others have seen attack on minke whale 2 days earlier | 102535 |
| 173 | — | 8 | — | 2 | Alluitsup Paa | Eat seals and whales (minke) | 102535 |
| 174 | — | — | — | Some | Ikeq fjord | In 1964-65 Sept.-Oct. | 102326 |
| 175 | — | — | — | Some | Kitsissut — Kap Farvel | Some times observed at this locality | 104002 |
| 176 | — | — | — | 1 | Bottom of Bredefjord | 1978 or 1979 in July or August — maybe erroneous species determination!! | 104002 102539 102539 |
| DAVIS STRAIT — BAFFIN BAY REGION | | | | | | | |
| 177 | 1833 | 9 | 6 | 1 | ca. 62°48'N | Off SW Greenland | Reeves and Mitchell 1988 |
| 178 | 1893 | 4 | 22 | A few | 64°N 54°44'W | Bottlenose whales also seen in vicinity | Reeves and Mitchell 1988 |
| 179 | 1963 | 6 | 28 | 1 | 63°12'N 51°28'W | | Reeves and Mitchell 1988 |
| 180 | 1963 | 7 | 29 | 2-4 | 63°08'N 51°40'W | | Reeves and Mitchell 1988 |
| 181 | 1963 | — | — | ? | 63°N | In June-July | Reeves and Mitchell 1988 |
| 182 | 1977 | 7 | 7 | 3 | 67°52'N 56°42'5"W | | Reeves and Mitchell 1988 |
| 183 | 1977 | 7 | 14 | 3 | 67°51'N 57°11'W | | Biokon 1977 |
| 184 | 1980 | 7 | 10 | 20-30 | 67°33'N 57°39'W | | Biokon 1977 |
| 185 | 1980 | 8 | 11 | 1 | 65°57'N 56°29'W | Hunting pilot whales | Anon. 1980 |
| 186 | 1980 | 8 | 16 | 3 | 62°57'N 51°41'W | | 100008 |
| 187 | 1981 | 3 | — | ca. 20 | 64°20'N 54°00'W | In ice, 1 killed but sank | 100008 |
| 188 | 1981 | 7 | 1 | 5 | 65°49'N 54°19'W | | 102577 |
| 189 | 1982 | 8 | 27 | 2 | 65°27'N 54°30'W | | Perkins <i>et al.</i> 1982 |
| 190 | 1983 | 6 | 14 | 10-12 | 66°27'N 55°34'W | | Anon. 1982 |
| 191 | 1983 | 6 | 24 | 1 | 65°12'N 53°55'W | | Anon. 1983a |
| 192 | 1983 | 6 | 25 | 4 | 66°56'N 54°55'W | 3 females and 1 male | Anon. 1983a |
| 193 | 1983 | 6 | 28 | 4 | 66°30'N 55°37'W | 3 females and 1 male | Anon. 1983a |
| 194 | 1983 | 7 | 20 | 4 | 63°13'N 52°27'W | 1 male, 2 female, 1 juv. | Anon. 1983a Perkins <i>et al.</i> 1983 |
| 195 | 1984 | 7 | 15 | 4 | 65°09'N 54°11'W | | 1983 |
| 196 | 1987 | 10 | 19 | > 10 | 62°13'N 50°36'W | Observed for half an hour | Anon. 1984a 103200 |

