

LAPTEV WALRUSES

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Some authors believe that regarding walruses inhabiting the Laptev Sea (fig. 1) as an independent subspecies (Гептнер и др. 1976) is erroneous (e.g., Fay 1981, 1982, 1985: after Born et al. 1995). True enough, the level of discreteness of the Laptev population is not completely understood. At the same time, there is well-defined hiatus in the distribution of the Atlantic and Laptev walruses (fig. 2), which gives grounds to treat the status of those populations separately.

WINTER DISTRIBUTION

Data available on the habitats of the Laptev walrus in winter are scanty. Chapsky (Чапский 1940), on the basis of interview data, reports that in the winter 1938 during the drift of the ice-breaker Lenin in the central Laptev Sea many walruses were sighted. The sightings of single walruses or small groups of walruses in the open Laptev Sea had been also observed by Chapsky's interviewees. In the May 1991 and in the April 1994 when polar bears were being marked, we sighted single and groups of 2-3 walruses at the edge of a polynia beyond the shore ice, extending along the northeastern coast of the Taimyr Peninsula.

According to data obtained by Aerial Reconnaissance of Sea Ice (ARSI) in winter (November-June) walruses were sighted beyond the shore ice zone within the Laptev Sea, but their largest number was recorded in the northern, eastern and western parts of the sea and north of the Novossibirsk Islands in the regions of recurrent beyond the shore ice polynias (fig. 3). In the northern Laptev Sea (north of the 100 m isobath) walruses occurred only rarely (Горбунов и Беликов 1990). An exception was the situation in the April 1988, when ARSI was conducted, in addition to observer hydrologists, biologists were involved, who monitored polar bears and marine mammals. During flights in the northwestern Laptev Sea, walruses were also most frequently sighted in the water area where depths considerably exceeded the 100-m isobath.

SUMMER DISTRIBUTION

There are by far more data available on the distribution of walruses in the Laptev Sea for summer and early fall compared with winter, when observations are prevented by the polar night and harsh weather (fig. 4). Amundsen (1929) in the course of his drift in the Maud ship in the mid-September 1919 observed large stocks of walruses off the Faddey Islands. During the subsequent years a body of data on the Laptev walrus gradually accumulated. Those data essentially concerned the distribution, abundance and dates entry into and departure from the of haul outs. A number of researchers (Шерешевский 1960, Попов 1960) stressed that ice conditions are the most important factor for the distribution of the Laptev walrus.

A specific feature of the Laptev Sea is a wide distribution of the shore ice, which is formed both off the mainland shore and around the island, including the islands Begichev, Peter, Andrew, Faddey, the Komsomolskaya Pravda Archipelago and the Novossibirskie Islands. From October to late June, those regions where walruses feed in summer and in fall become inaccessible to them. Also inaccessible are regions where shore ice occasionally remains for several years. That explains why

walrus do not make coastal haul outs. The dates of arrival and departure of walrus from the haul outs are loosely associated with data of breaking and formation of the shore ice and also the general ice conditions in a particular year. Normally, walrus appear near the shore in mid-summer (late July – early August) when the shore ice is broken and open water areas appear, and they leave the region concerned as young ice starts developing, i.e., in late September – early October.

Shereshevsky (Шерешевский 1960) provides the following data on the haul outs of the first half of the 1930s. Two walrus haul outs were situated on Andrew Island (a total of 200 individuals), in Maria Pronchishcheva Bay (up to several hundred individuals). Some small haul outs were on Begichev Island and on the islands in the mouth of the Lena River, (up to 1000 individuals) on Vstrechny Island, on Belkovsky Island (up to 300 individuals), and at Cape Anisii on the northern coast of Kotelnyi Island (up to 500 individuals).

Chapsky (Чапский 1940) based walrus distribution in the Laptev Sea in the 1920s-1930s on the interviews of hunters and winterers of polar stations. In the southwestern Laptev Sea only some single walrus individuals occasionally reached Khatanga Bay. Individual walrus or some small groups were occasionally sighted off the southern coast. Walrus are the most numerous in the western part of the sea off the eastern coast of Taimyr. They are fairly common off the northern and western coasts of the Novossibirsk Islands, far less frequent in the region adjacent to the Lena River and are quite few east of the river mouth to the Laptev Strait. The largest haul outs are situated in Pronchishcheva Bay, the Preobrazhenia and Begichev Islands, on some islands of the Lena River delta (the islands Belkovskiy and Kotelnyi). The bulk of the walrus make seasonal migrations within the Laptev Sea.

Data available on the East-Siberian Sea are still scantier. Walrus were only common in the region of the De Long Archipelago, where they dwell all the year round. The haul outs were recorded on the Bennett and Vilkitsky islands. Off the southern sea coast, including the mouth of the Kolyma River, walrus were sighted very rarely and only in summer and in fall. In the region of the Medvezhy Islands they appeared every year, if only in small numbers.

In 1953 and 1954 on a sealing boat, coastal haul outs were examined in the western and southwestern Laptev Sea (Попов 1960). An aerial survey of the southern part of the sea was conducted and a poll was run, particularly, in the eastern part of the sea.

During the navigation of the coast in the late August – early September 1954, walrus were occasionally sighted in the Vilkitsky Strait. They were absent near the shore and on the land of the Komsomlaskaya Pravda Islands, where in the 1930s, they were recorded in during the winter-spring season (Чапский 1940). However, near Faddey Island there were two walrus haul outs of mixed composition, 60-70 individuals on the southern side and 90-100 on the eastern side of the island. About 50 individuals were sighted on Andrew Island, and in the water off the island there was a stock of about 350 individuals. A walrus haul out of 130-140 individuals was found on a spit in the northern Peter Island. Near the southern extremity of the island, groups of walrus of 100-200 individuals were sighted. It is suggested that the animals had left the haul out on account of the presence there of 3 polar bears.

At the haul out in Pronchishcheva Bay, where in 1933 there were over 400 individuals (Попов 1939), some walrus were present in the late summer 1953-54, but their number was not clear as the mist prevented from approaching the haul out. At the haul out, in the southern extremity of Preobrazhenia Island, where in 1934-35, there were no more than 1300 individuals (Кошкин 1940), and by the late August 1953, about 100-120 walrus. In examining the islands in the early September 1954, a small number of animals were only sighted on the ice and in the water. At the shore, shore ice still remained. According to the information obtained from members of the polar station over the preceding 5-6 years, the number of walrus at the haul out rarely exceeded 100-150 individuals.

On the southern coast of Bolshoi Begichev Island in the September 1934, there was another relatively large walrus haul out (400-500 individuals); and at the eastern, 5 somewhat smaller (from 100 to 200 individuals) (Жошкин 1940). A boat-based survey of the island by the end of August-early September 1953-54 failed to reveal walrus haul outs. During that time, shore ice still remained around the island. On Malyy Begichev Island, an aerial survey revealed no walrus haul out on 9.09.1954. In contrast, on Peschany Island in the early September 1953, there were 2 of them: one at the southern extremity of the island (1500-1600 individuals); and the other, at the northern extremity (1000-1200 individuals) (Попов 1958). In 1955, the ice was broken off the islands earlier than usual: and on August 23 on the shore of the southern extremity of the island, a large walrus herd was found.

An aerial survey of the mainland coast and the nearest islands, and also the Lena River delta revealed no haul outs, although a fairly large walrus haul out was found in the latter region in 1951 (Белоусов 1952). According to the interview data, walrus haul outs occur in the delta of the Lena River on the islands Kuba (up to 700 individuals) and Dunai. In the southeastern Laptev Sea, walrus do not make haul outs, and, only some individual walrus occur in the sea. According to the information obtained from the Yakutian VNIRO Branch, in Novossibirskie Islands, walrus haul out at Cape Anisii (Korelny Island). The abundance of walrus in different years ranged from 220 to 250 individuals. On Belkovsky Island, in some years there was a haul out of 200 walrus.

On the basis of data obtained, L.V. Popov (Попов 1960) distinguishes three major regions where walrus haul outs are formed:

1. At the eastern coast of Taimyr Peninsula (in Maria Pronchishcheva Bay) and on the coast-nearest islands of Faddey and Peter, and also on the islands Preobrazheniya, Bolshoi Begichev, and Peschany. Popov believes that the region concerned hosts up to 70-80% walrus hauling out in the Laptev Sea.
2. In the Lena River Delta, on the islands Kuba and Dunai, several hundred walrus haul out.
3. In the Novossibirskie Islands, walrus haul out but their number is small (on Belkovskii Island there are several dozen individuals on Kotelny Island, up to 200 to 250 individuals).

Information available for other regions of the Laptev Sea is very scanty. In the 1960s, some fairly large walrus haul outs were recorded on Vilkitsky Island (near the DeLong Islands): on the southeastern of the island: about 400 individuals; on the eastern side, 200 individuals (Павлинов 1966). The entry of walrus to the Novaya Sibir Island (the Novossibirskie Islands) was also recorded (Гуков 1999).

Popov (Попов 1960) believes that in addition to the above mentioned haul outs, there formerly existed a number of other haul outs, but they disappeared in the course of harvest. He emphasizes that all the walrus haul outs in the Laptev Sea are formed on sand or sand-gravel spits on the seaward side. Seabed areas examined near some of the haul outs were distinguished by rich benthos fauna, mainly consisting of mollusks and other invertebrate. The seabed comprised gray silt, sand and gravel. Walrus normally were foraging not far from the shore at moderate depths, preferring small straits, lagoons, and wind-protected spits. Similar to many other Arctic regions, walrus only appear on the shore in the absence of the nearshore ice, and the sooner the ice disappears at the shore, the sooner the haul out starts forming. The composition of groups of walrus at the haul out is mixed.

The aerial surveys in the Laptev Sea and East-Siberian Sea conducted during the third ten day of September 1980 revealed two groups of walrus: the western – off the eastern coast of Taimyr and the eastern – in the Novossibirskie Islands region (including the DeLong Archipelago) (Федосеев 1984). The western group comprised 4 ice gatherings and two shore haul outs of walrus on Peschany Island (200 and 400 individuals); and the eastern, consisted of walrus rookeries on Belkovsky Island (150-200 individuals) and on Cape Anisii of Kotelnyi Island (350-400 individuals). About 600 individuals were recorded on the ice in the western East-Siberian Sea off

the islands Vilkitsky and Zhokhov. A survey of the coastal waters from Khatanga Bay to the mouth of the Lena River revealed no walruses, although they had been recorded there before at the haul outs in the Lena River mouth (the islands Dunai and Kuba).

Fedoseev (Федосеев 1984) suggested that in summer walruses from the western group may migrate through the Vilkitsky Strait to reach the Severanaya Zemlya Archipelago. Ice survey hydrogeologists reported to Fedoseev that in the August-September 1981, they sighted a walrus herd of 50-70 individuals on Voronin Island. It is also suggested that the existence of three spatial groups of the Laptev walrus, i.e., the western, eastern, and southern, is a function of ice conditions, primarily, hydrological conditions in winter. Walruses prefer remaining in those regions where there are constant zones of thin ice. In such regions some small groups of walruses find shallow sites rich in forage (benthos). ~~In the western Laptev Sea a forage-rich zone results from the effect of the runoff of the rivers Lena, Yana and Indigirka.~~

The body of evidence accumulated over the last 25 years indicate that walruses continue making haul outs in Maria Pronchishcheva Bay on the southeastern coast of Peschany Island, on the northern extremity of Belkovsky Island, on Cape Anisiy (Kotelny Island), on the islands Vikitsky, Faddey, Andrew, Peter, Ppreobrazheniya, Bolshoi Begichev (Vishnevskaya 1989, Gorbuniv and Belikov 1990, Bychkov 1991, Gukov 1999, observations by ARSI). The most abundant walrus haul out in the second part of the summer is formed on the spit Morzhovaya in Maria Pronchishcheva Bay (up to 600 individuals). At each of the other haul outs, the number of walruses normally does not exceed several dozens; or at some haul outs, 200 to 300 individuals.

Fig. 5 shows the proposed range of the Laptev walrus basing on analysis of available data.

HARVEST AND ABUNDANCE

The greatest damage to the population of the Laptev walrus was exerted by the commercial harvest of the 1930s-1950s until the harvest was banned in 1956. Walruses were harvested at haul outs, in particular on the islands Bolshoi Begichev, Preobrazhenia, in Maria Pronchishcheva Bay, in the Lena River mouth, and on the Nobossibirskie Islands. No official harvest data have been available over that period. Some information on the number of harvested animals is presented by V.E. Sokolov (Соколов 2001) and A.Yu. Gukov (Гуков 1999). The number of walruses harvested on some particular haul outs attained several thousand. In fact, during the first half of the 1950s on the Bolshoi Begichev and Preobrazhenia islands alone at least 4000; and in Maria Pronchishcheva Bay, over 5000 individuals were taken.

Commercial harvest was extremely detrimental to the population. Walruses became extinct or their numbers dwindled in the majority of the haul outs. Data obtained in the 1980s, (Кузьмин 1991) indicate that haul outs disappeared from the Lena River (the islands Kuba-Aryta, Dunai Aerosyemki). Walruses emerged at the haul outs at the Preobrazhenia and Begichev islands only very rarely. However, in the mid-1990s, there appeared some sings of the recovery of walrus abundance at some particular haul outs. In fact, during the first half of the 1990s, the Dunai haul out was populated by single individuals, in 1995 their number was over 150 (Гуков 1999). It is not yet clear whether the above fact accounts for improvement of the population condition.

The Laptev walrus appears to have always been small in number. According to Chapsky (Чапский 1940), the Laptev Sea in the 1930s was home to 6-10 thousand walruses. During the first half of the 1950s, the abundance of the Laptev walrus was estimated at 6-7 thousand (Попов 1960); and in the mid-1970s at в 4-5 thousand individuals (Федосеев 1984). According to the aerial surveys conducted in 1992, by members of the Ust-Lena Reserve, the abundance of the Novossibirsk group of walruses was estimated at 1.5-2 thousand; and that of the Taimyr group, at 2.5-3 thousand (Кузьмин 1991). Thus, the total estimate of the abundance of the population of 4-5 thousand, does not appear to have changed over the almost twenty-year period after the mid-1970. However, it

should be taken into account that the above population estimates were based on incomparable and far from perfect census techniques.

PROTECTION AND MANAGEMENT OF THE POPULATION

In Russia wildlife is managed by the federal laws «On the Environmental Protection» (2001), «On the Wildlife» (1995), «On the Continental Shelf of the Russian Federation» (1995), «On the Exclusive Economic Zone of the Russian Federation» (1998), «On Inland Marine Waters, Territorial Sea and Adjacent Zone of the Russian Federation» (1998), and also legislative and regulatory documents adopted by the subjects of the Russian Federation.

The Laptev walrus subspecies has been included in Category 3 (rare taxon) in the Red Data Book of the Russian Federation (2001). The Red Data Book is an official document, reflecting the state policy in the environmental protection and recovery of rare and endangered species on the territory of Russia.

The Laptev walrus and its habitats are under special protection in the National Nature Reserve Ust-Lensky and in other protected areas. The protection regime there is determined by the federal law «On Protected Nature Areas» (1995) and a Regulation on each particular protected area.

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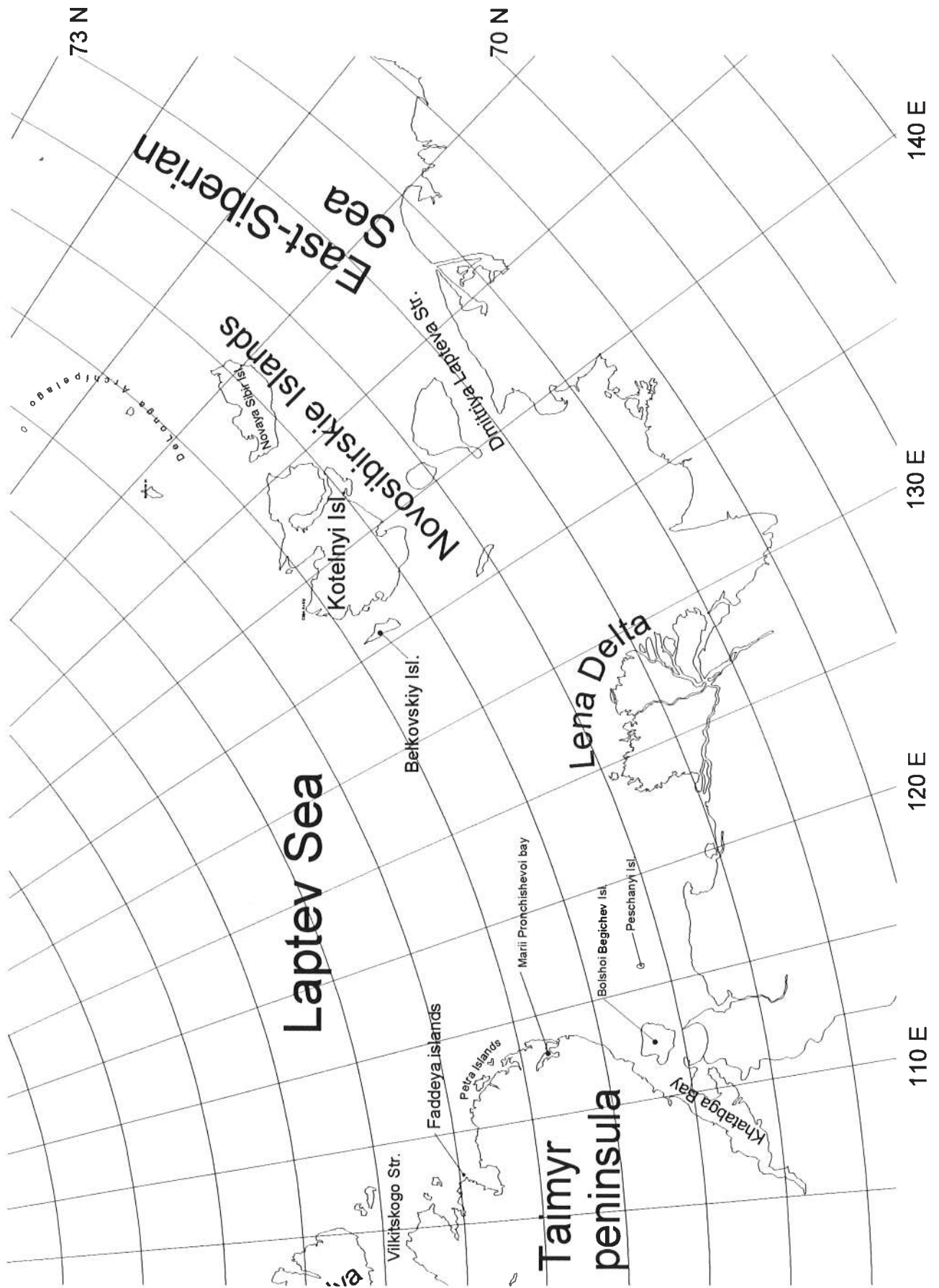


Fig. 2. ARSI sightings of walrus in the Laptev Sea and adjacent waters (1957-1995)

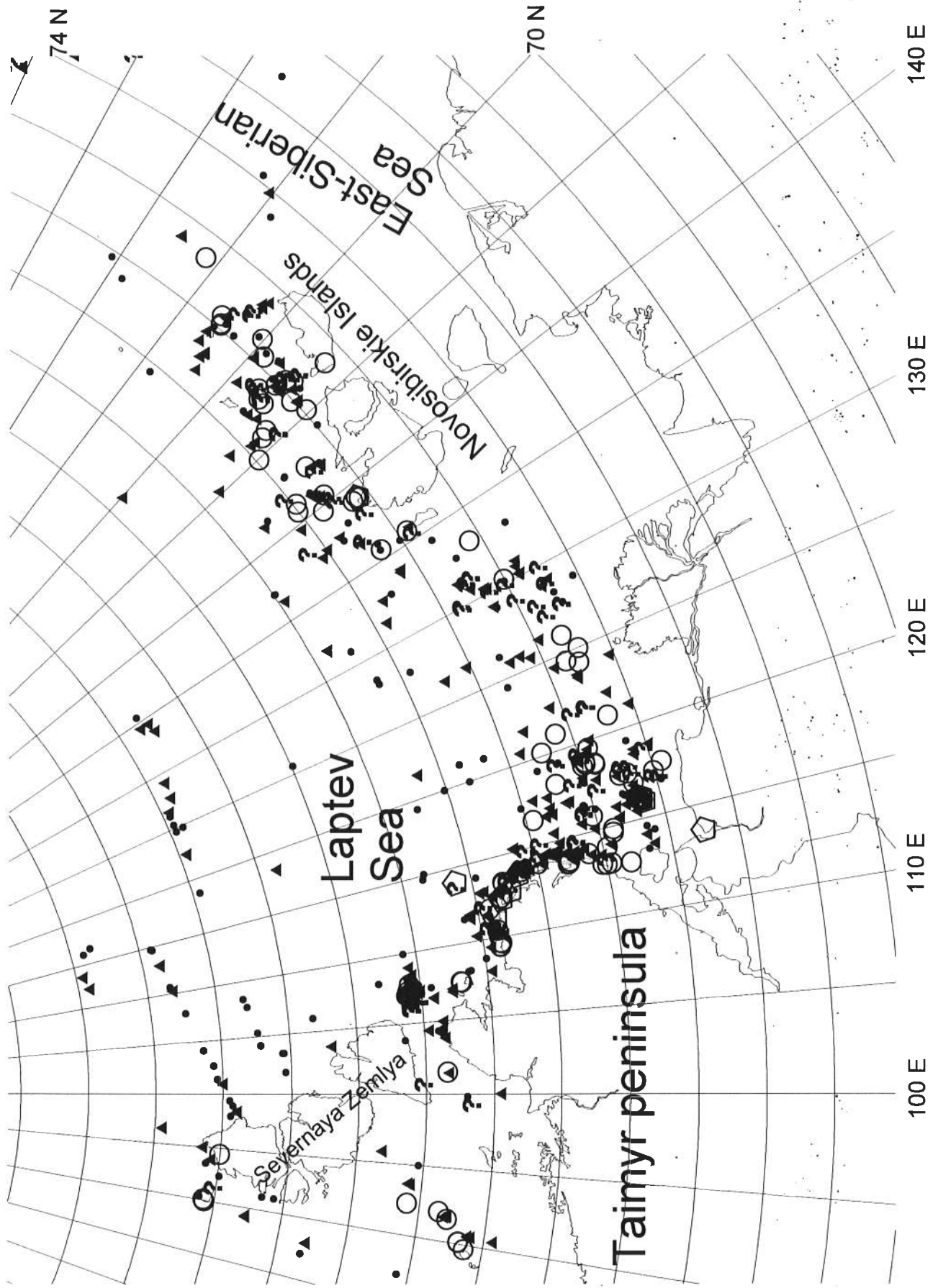




Fig. 3. ARSI sightings of walrus in the Laptev Sea and adjacent waters in November - June (1957-1995)

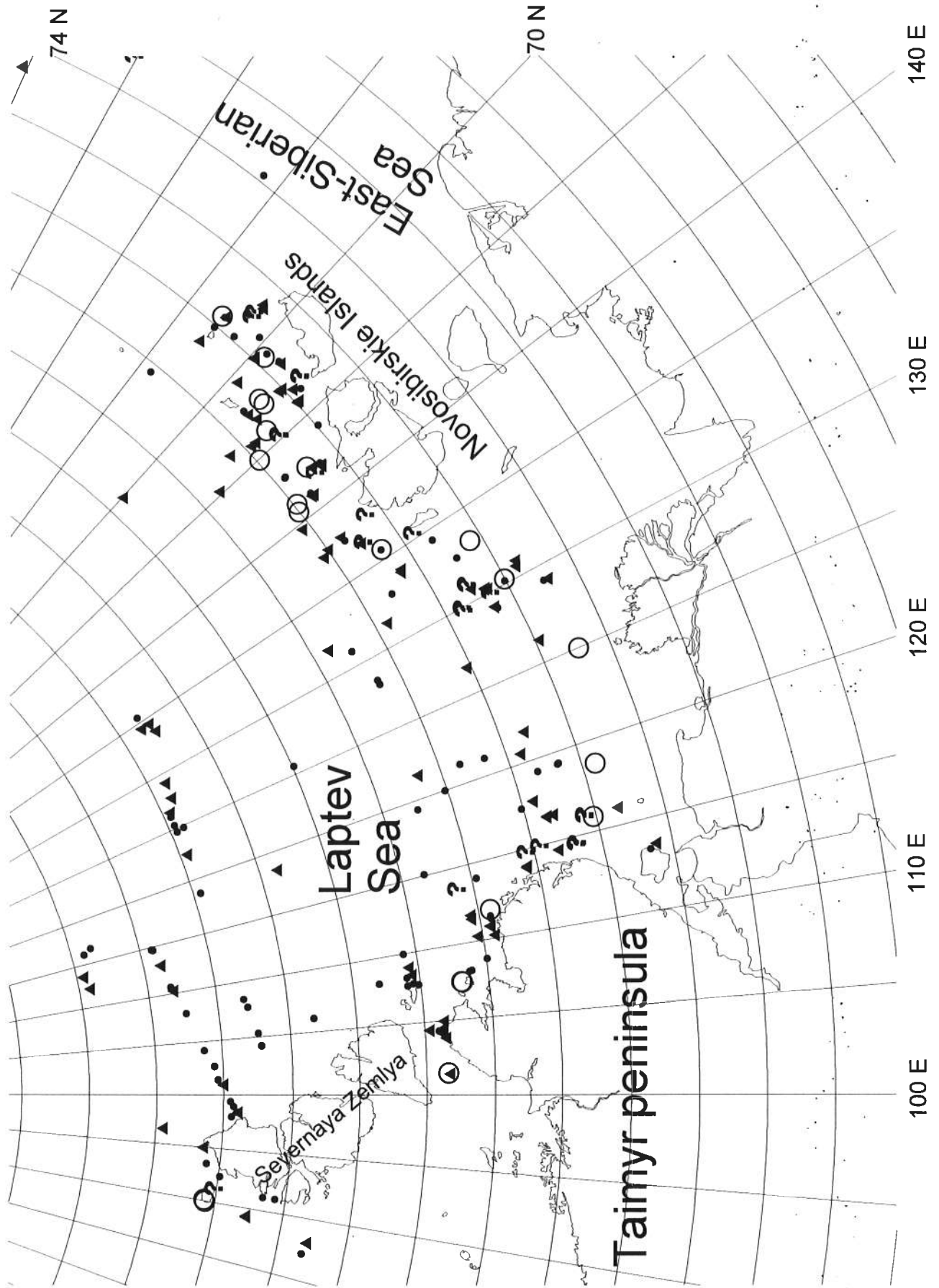


Fig. 4. ARSI sightings of walrus in the Laptev Sea and adjacent waters in July - October (1957-1995)

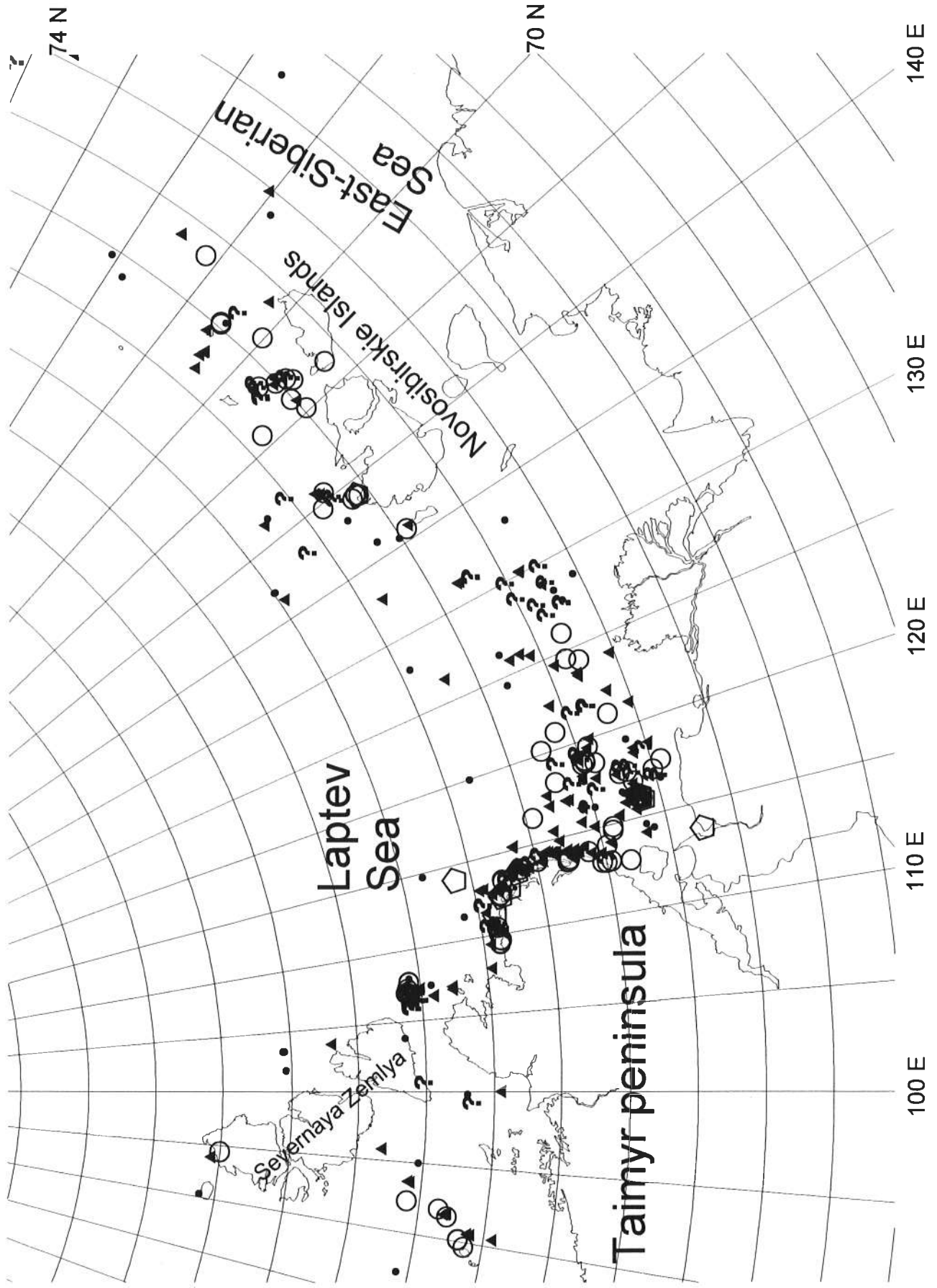


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