

Kibal'chich, A. A. 1978. Observations on Arakamchechen of a herd of walruses. Pages 148-149 in G. B. Agarkov et al. (eds.), Marine Mammals: Abstracts of reports VII all-union conference, Simferopol'. Tsniiteirkh, Moscow. (Trans. by F. H. Fay, 1990)

Observations of the biology, ecology, and ethology of walruses on the haulout at Arakamchechen Island took place from 20 August to 10 October 1977. The animals lay on the southeastern end of the island, on the sandy, gravelly, and muddy beach under the precipitous coast of Cape Kagynin. The haulout is functional annually, primarily from the middle of July to November, i.e., until the shore ice is formed. In 1977, the first walruses emerged onto the shore on 15 July. Until 29 August, the animals were observed to approach from the south, but after that time, they came in from all directions to the haulout. Males of all age groups predominated on the haulout, and 95% of them were adults. During the whole time of observation, not more than ten females with calves and a few more single females were recorded. The maximal area per animal on the measured control plot on different days amounted to 1.34 m^2 ; the minimum was 1 m^2 . The highest number of walruses on the haulout by our records was 36,500.

There was a clearly marked dependence between air pressure and the number of walruses on the haulout. With falling pressure, the walruses abandoned the island and went out to sea, leaving the haulout empty; with rising pressure, they again returned to the beach. Measurements of the temperature of the beach after the departure of the animals showed that the pebbles under the walruses were warmed to a depth of 1 to 1.3 m and had a surface temperature of 24 to 27.5°C ; at a depth of 0.8 m, the temperature was 14 to 15°C . Animals returning to the haulout endeavored to go far from the waterline and lie down in the "warm places" created by their fellows.

As a result of marking 14 walruses with dye and watching animals with natural markers, it was determined that the animals stayed on the haulout for 24 to 72 hours in fair weather, remaining in place or moving up to 150 m from the place where they were marked; after that, they descended into the sea for feeding.

In the 50 days on the haulout, 66 walruses died. These ranged in age from 4 to 31 years, and among them were 2 females. More than half of the animals were in the age range of 14 to 19 years. Sick and weakened animals usually were seen at the sides of the haulout. They were contrastingly thin, had apathetic behavior, and their breathing was arrhythmic. For example, the interval between breaths in mature, resting, healthy animals was normally 27 to 30 sec, whereas in the sick they varied from 8 to 30 sec. Inhalation-exhalation in those and in the others lasted 5 sec. Bacteriological samples were taken for determination of the cause of death of the animals.

Observations of the behavior of the walruses and recordings of their underwater sounds and the signals produced in air showed that the "stamping machine" sounds are made even by animals 3 to 4 years old and are produced by tapping the lower jaw against the upper.

The Arakamchechen haulout has been functioning constantly in recent years and is a basic sanctuary for the males when ice is absent from the Bering Sea.