

Arctic - Mammals

Combined Seal and Polar Bear Aerial Survey on Ice in the Western Chukchi Sea and Eastern Part of the East Siberian Sea, Spring 2016

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In the framework of the Chukchi – East Siberian Survey (ChESS) project a Russian team completed an aerial survey of ringed and bearded seals and polar bears in the eastern East Siberian Sea and the western Chukchi Sea. To collect comparable data and combine survey results, the survey was conducted using procedures that were coordinated with American colleagues, who conducted a similar survey simultaneously in the eastern Chukchi Sea. The Russian survey was conducted aboard the research aircraft AN-26 “Arktika” on 18-26 April (4 flights) and 12-18 May (4 flights), 2016. Survey transects (12,800km length) were bounded by the Chukotka coast in the South, and by the Exclusive Economic Zone of Russia in the East and North. The typical flight altitude was 250m, or as low as 150m under low cloud conditions. The flight speed was 270-320km/h. The animals were surveyed by instruments: an IR-scanner “Malachite-M” and Nikon D800 digital color cameras. When the IR-scanner detected a “hot spot”, digital cameras were triggered automatically to provide visual images for subsequent species ID. Visual observations through the aircraft bubble windows complemented instrumental surveying and were carried out by four observers, two on each side of the aircraft. The visual observation strip width was about 1000m; the IR-scanner, about 500m. Preliminary data analysis indicated that the density of seals on ice was higher in May than in April. The highest ringed seal density was in Kolyuchinskaya Bay. Thirty-four polar bears were detected during the survey. A large amount of supplementary data (sea ice characteristics, seal water access holes and polar bears tracks) was collected. The observers detected and photographed over 2000 polar bear tracks. Detection of seals and polar bears, both visual and instrumental, will allow estimation of the number