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## TESTING A POWERED PARAGLIDER FOR ABUNDANCE COUNTS AND PHOTOID OF COASTAL BELUGA (*DELPHINAPTERUS LEUCAS*) AGGREGATIONS IN THE WESTERN SEA OF OKHOTSK, RUSSIA

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In summer, Okhotsk Sea belugas concentrate in shallow waters and estuarine areas. Aerial abundance surveys are expensive and in some places of Russian Far East are impossible due to logistics. Boat survey data are less reliable: belugas often travel in tight formations, and some animals, especially calves, cannot be seen from a boat; whales are scared of engines and seldom allow an approach closer than 100-200m. PhotoID for this reason is also limited if not impossible. We tested a powered paraglider (paramotor) with a double-seat trike and one with a lighter construction (double-seat foot launch) for abundance counts and photoID of belugas summering along Chkalova and Baydukova Islands in Sakhalinsky Bay. The team consisted of a pilot and an observer/photographer. We used a Nikon D700 camera with a 80-200mm/f2.8 lens. A motor-boat with rescue equipment followed 500m behind. Flying speeds varied from 20 to 70 km/h depending on wind direction. Maximum “working” wind speed was 8m/sec. The launch/landing area was a gravel-and-grass surface of the island or wet sandy beach. The paramotor flew track-lines for beluga abundance counts and circles over beluga groups for photography at GPS-controlled altitudes of 30, 50, 100, 200, and 300m. When possible, counts from the boat were also made. We made 9 flights over 4 continuous days for a total of 8 hours. The abundance estimate from the paramotor was up to 10 times higher than the estimate from the boat. Photos taken from 30-50m altitude were usable for photoID. Minimum altitude that did not disturb belugas was 100m when they were feeding, and  $\geq 200$ m - when traveling. We consider both constructions of the paramotor a promising tool for abundance/age class/photoID studies of coastal cetacean herds and, probably pinnipeds on haul-outs, but we prefer the trike which is more suitable for photography.