

AERIAL CENSUS OF PINNIPEDS IN THE ELEPHANT ISLAND, SOUTH SHETLAND, ANTARCTICAE.C. Ferreira, M.M.C Muelbert*LMM-DOc./PPGOB - FURG, Rio Grande, Brazil*

The accuracy of aerial censuses in estimating absolute density of wildlife populations varies widely. However, despite the controversy about the best methodology to provide accurate estimates, aerial surveys may provide gross estimates of species distribution and preferred areas of concentration. The occurrence and temporal and spatial distribution of pinnipeds at Elephant Island (EI, 61°05'S; 055°20'W), South Shetlands, Antarctica, during the austral summer has not been systematically estimated. The present study aims to identify and to quantify the pinniped species that occur at Elephant Island during the austral summer and to verify tendencies emerging from their distribution along the study area. An aerial census was conducted around Elephant Island on November, 25th 2005 as an attempt to estimate the number of pinnipeds present. Counts of adults, juvenile and pups were made from photographs taken from an helicopter flying at low speed. Total effort comprised a total of 4 hours of direct observations and covered the whole island. The survey area was divided into several sub-areas which corresponded to GPS bearings of conspicuous and recognizable features. The images were obtain with a digital video recorder (mini-DV), with optic zoom of 12x equipped with 0,5x wideangle lenses and a digital photographic camera, with optic zoom of 12x. One hundred and twenty minutes of footage and 210 pictures were obtained. As expected at least 4 pinniped species were identified, of which southern elephant seals (*Mirounga leonina*) were the most abundant, followed by Antarctic fur seals (*Arctocephalus gazella*), Weddell seals (*Leptonychotes weddelli*), and in rare occasions leopard seals (*Hydrurga leptonyx*). It was possible to determine that seal species used specific land sites around Elephant Island and indicated some preference for substrate. To our knowledge this is the first attempt to perform a full aerial survey of this area. It is important that additional surveys be performed in order to enable future comparisons and a more detailed analysis of the efficiency and viability of the methods.