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MEMORANDUM FOR: The Record

FROM: Rod Towell and Rolf Ream

SUBJECT: 2011 northern fur seal pup production estimate on
 Bogoslof Island, Alaska.

Numbers of northern fur seal, *Callorhinus ursinus*, pups were estimated using a mark-recapture method, shear-sampling, on Bogoslof Island (Figure 1) during August 2011. We estimated that 22,905 (SE = 921.5, Table 1) pups were born on Bogoslof Island. Dead pups were counted on all breeding areas of Bogoslof Island resulting in an observed pup mortality rate of 2.6%. The 2011 pup production estimate for Bogoslof Island is 30.3% greater than the estimate in 2007 (Figure 2). Since the first pup was observed on Bogoslof Island in 1980 pup production has increased at an annual rate of 38.2% (SE = 2.60) and at an annual rate of 11.7% (SE = 0.90) since 1997.

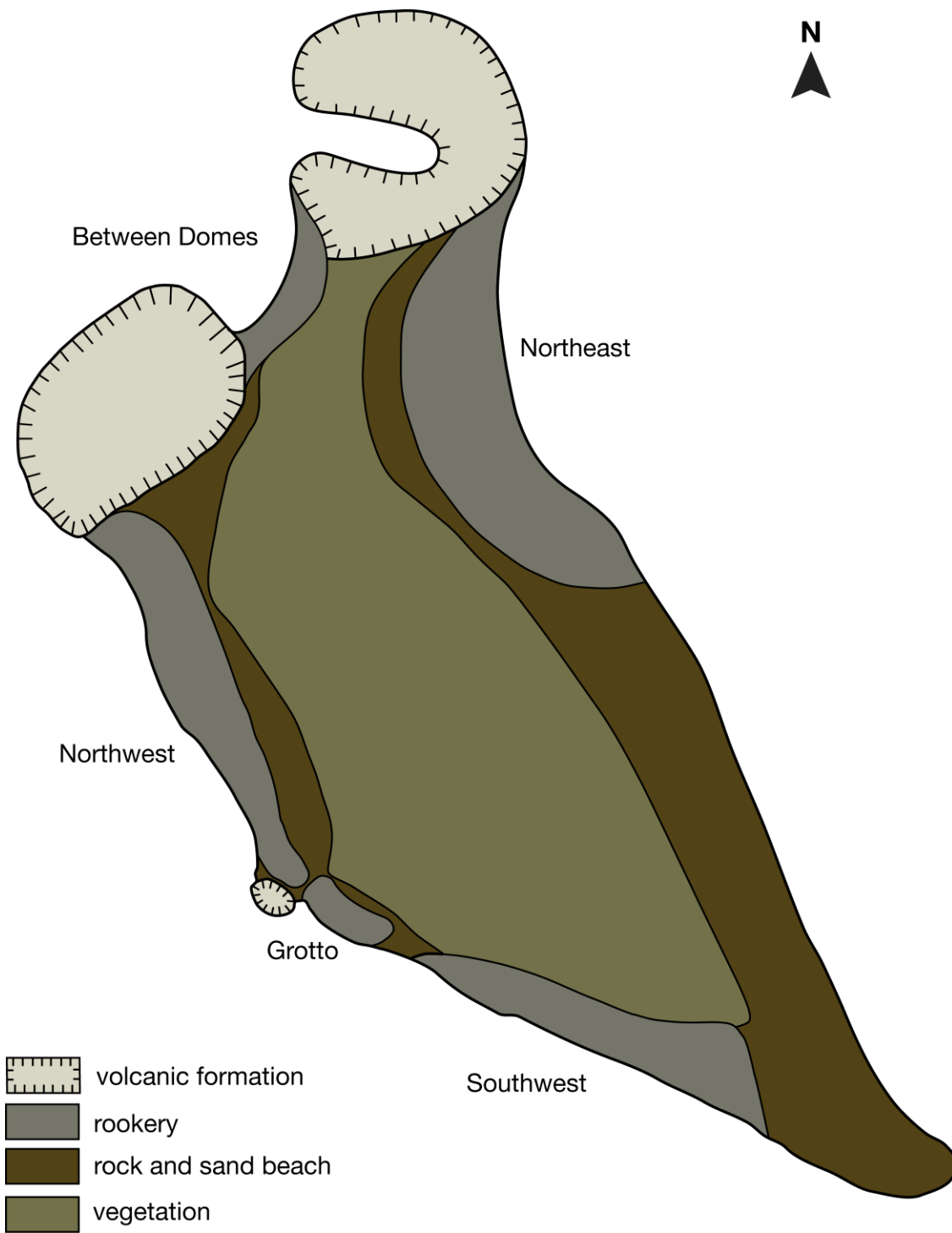


Figure 1. – Rookery areas of Bogoslof Island.

Table 1: Numbers of northern fur seal, *Callorhinus ursinus*, pups born on Bogoslof Island, Alaska during 2011 by rookery area. Estimates are shown for the numbers alive at the time of shearing and the estimated total number of pups born.

Rookery	Live	Dead	Born	SE	Mortality
Southwest	3,520	112	3,632	19.5	3.08
Northeast	9,778	260	10,038	687.0	2.59
Between Domes	954	21	975	79.5	2.15
Northwest	7,060	185	7,245	599.5	2.55
Grotto	992	23	1,015	105.5	2.27
Total	22,304	601	22,905	921.5	2.62

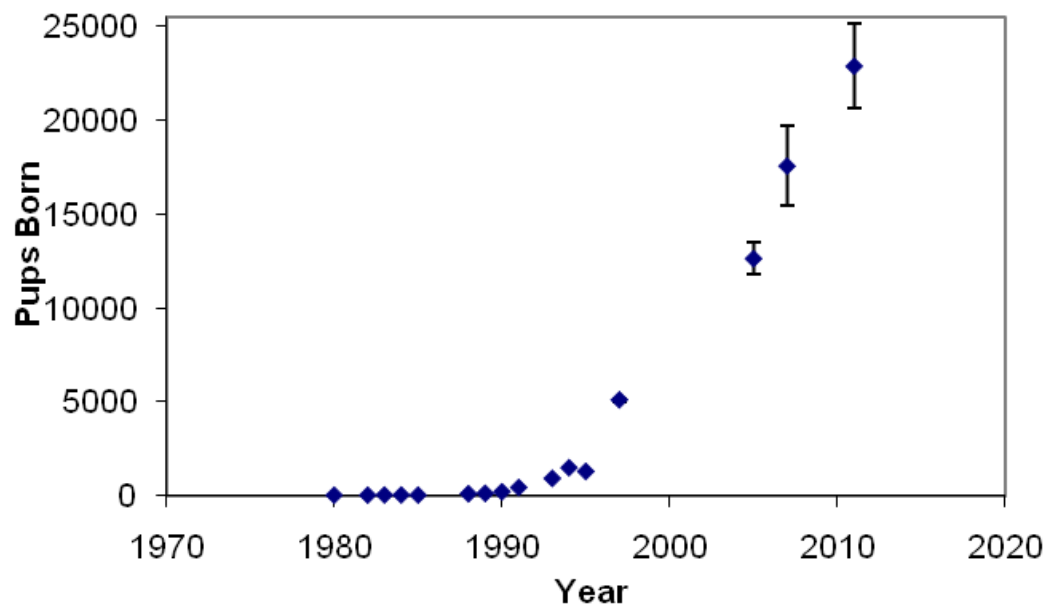


Figure 2. – Northern fur seal pups born on Bogoslof Island 1980-2011. Error bars are approximate 95% confidence intervals.