



Letters

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SOUTHERN SEA LIONS

While my paper entitled "The Breeding Cycle of the Southern Sea Lion, *Otaria byronia*" (MARINE MAMMAL SCIENCE 1(3):210-218, 1985) was in press, new data for the 1985 breeding season were obtained at Punta Norte, Argentina.

The pattern of arrival to the breeding area, and the peak numbers of males and females in the breeding colony, did not differ from previous years. About 430 pups were born between 14 December and 4 February, dates on which the first and the last births were recorded, respectively. Births peaked between the second and third weeks of January. Copulations peaked one week later. The first and the last copulations were recorded on 18 December and 10 February, respectively. The ratio of adult males to adult females at peak season was 1:4.1.

These findings reconfirm the trends and patterns already described for previous seasons.

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A LINEAR DECREASE OF HARBOR SEAL NUMBERS

Aerial censuses of haul-out sites were conducted during autumn 1984 to examine fluctuations of harbor seal (*Phoca vitulina concolor*) numbers. Five flights were conducted between 17 October and 19 December, using a single-engine, overwing Cessna 172 and two or three experienced observers. Flights were centered near low tide and between 0900 and 1600 h. Seals were counted from altitudes of 50-100 m. Large groups were usually photographed. The New Brunswick coast and adjacent islands in the Bay of Fundy, southwest of Saint John, were surveyed. The Wolves and Grand Manan Islands could not be reached.

Air temperatures, corrected for wind chill (see Boulva and McLaren 1979), were all above -1°C . No grey seals (*Halichoerus grypus*) were identified. The numbers of seals and groups observed were regressed with the survey date (17 October is considered to be day 0 and other flights, days 13, 30, 44 and 63).

Where S = number of seals, G = number of groups and D = survey date, the equations for the regressions are: $S = 1031 - 11.83D$, S.E. = 51.3, $r = -0.98$, $F = 26.3$, $P < 0.01$, $G = 42.04 - 0.521D$, S.E. = 3.2, $r = -0.96$, $F = 12.8$, $P < 0.025$.

The 17 October count of 979 seals does not represent the total number present that day. An unknown number were in the water. Boulva and McLaren (1979), using data from questionnaires, bounty kills and interviews with fisheries officers and fishermen, estimated there were 778 harbor seals in southwestern New Brunswick (including the Wolves and Grand Manan Islands) in 1973.

Data from Kriebler and Barrette (1984) also indicated a linear decrease in seal groups from mid-summer to mid-October. Assuming this linear relationship is true, it may be useful in developing population size indices. If surveys were conducted during summer