

Observations of a newborn Ross seal pup (*Ommatophoca rossi*) near the Antarctic Peninsula

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A Ross seal mother and male pup (*Ommatophoca rossi*) were sighted on 14 November 1978 in Dallmann Bay near the Antarctic Peninsula. This is believed to be the first documented observation of a newborn Ross seal. Behavioral observations and standard measurements taken from this pup enhance the small amount of information known about the early life of the species.

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Une mère phoque *Ommatophoca rossi* et son petit, un mâle, ont été vus le 14 novembre 1978 dans la baie Dallman, près de la péninsule Antarctique. Il s'agit là de la première observation certaine d'un phoque nouveau-né de cette espèce. Des observations sur le comportement et des mesures étalons de ce petit viennent s'ajouter au peu d'information que nous possédions de la vie des petits de cette espèce.

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Introduction

On 14 November 1978 from aboard the United States National Science Foundation's Research Vessel *Hero*, a Ross seal pup (*Ommatophoca rossi*) was sighted in six octas of pack ice in Dallmann Bay (latitude 64°21.5' S, longitude 62°47.4' W). The only other documented observations of Ross seal pups are those of Solyanik (1964), who reported a female and pup on the South Sandwich Islands (latitude 56°00' S, longitude 26°30' W) on 6 December 1950, and Tikhomirov (1975), who collected eight females and their pups about 96 km south of the Scott Islands (latitude 67°24' S, longitude 179°55' W) between 18 and 21 November 1968. All of these animals were of unknown age, although Tikhomirov (1975) estimated the pups to

be between 5 and 15 days old. The earliest reported fetal collection was on 23 September 1964 by Øritsland (1970). Six additional fetuses were collected by Øritsland near the South Orkney Islands (latitude 60°35' S, longitude 45°30' W) from 3 to 29 October 1964.

Materials and methods

The Ross seal mother and pup were observed under good visibility with binoculars from the crow's nest and pilot house for 30 min as the ship worked through the pack ice to their floe. We approached the final distance in a small boat and disembarked on the approximately 10 m by 10 m floe. The mother was restrained with a bag pulled over her head and foreflippers (Stirling 1966). Standard measurements and a series of photographs were taken of both seals, and the pup was weighed. Both seals received rear flipper tags.

When the female was unbagged, she left the floe, and was not seen again. We returned to the ship, and after cruising in the area searching for other seals, the floe was relocated 90 min later. The mother was not present. The pup was collected from brash ice beside the original floe, and the entire pup and the afterbirth on the floe were preserved in 10% formalin. Standard measurements (Table 1) were checked on this specimen, as described by Scheffer (1967). The pup is now deposited in the Smithsonian Institution, Washington, D. C. (specimen No. 504907).

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FIG. 1. Female and pup Ross seal (*Ommatophoca rossi*) showing striped throat pattern of both and afterbirth behind pup. Insert (from another photo) characterizes head-up posture of Ross seals.

TABLE 1. Summary of body measurements of a newborn Ross seal pup

Condylbasal length	17.8 cm
Zygomatic width	15.2 cm
Neck girth	41.9 cm
Axillary girth	55.9 cm
Standard length (nose to tail, direct)	96.5 cm
Nose-hind flipper length (direct)	116.8 cm
Live weight	16.8 kg

Results and discussion

This is believed to be the first observation of a newborn Ross seal. We believe that the pup was newborn because of the dampness of the lanugo, the presence of a soft, bleeding, 4-cm-long umbilical stump, and an unfrozen afterbirth which was not yet eaten by circling seabirds (Fig. 1).

The upper and lower canines and incisors were visible, but not erupted. Nails were obvious on both front and rear flippers. The lanugo pelage was

generally dark on the dorsal body surface, light on the ventral surface, and exhibited a striping pattern on the throat similar to the adult pelage (Fig. 1).

The pup appeared precocious. He exhibited the characteristic head-up "singing" posture of the adults (Hofman et al. 1973). Actual suckling was not observed, but the pup gave bawl vocalizations and readily crawled around the floe. Twice we watched the pup move to an adjacent floe, through brash ice, which necessitated coordinated swimming, closing of the nares, and total submergence of the body.

The male pup weighed 16.8 kg, which was markedly lower than the weights of 40 to 75 kg reported by Tikhomirov (1975) and the predicted newborn weight of 27 kg made by King (1969). Table 1 shows body measurements collected from this pup. The mother's length was 188 cm.

October fetal lengths reported by Øritsland (1970) varied from 90 to 100 cm, with the Sep-

tember 23rd fetus measuring 101 cm in length. King (1969) estimated the newborn Ross seal length at 120 cm. The standard length of pups taken in November varied between 109 and 138 cm (Tikhomirov 1975). The mid-November length of this newborn Ross seal pup was 96.5 cm, which is less than that predicted by King (1969), but is intermediate between Øritsland's (1970) and Tikhomirov's (1975) findings. These measurements were taken about 16 days after the latest fetal collection made by Øritsland (1970). Therefore, this record of a newborn Ross seal pup supports Tikhomirov's assignment of the peak of pupping as sometime between 3 and 18 November.

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