



## Resumption of Nursing in "Weaned" Hawaiian Monk Seal Pups

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It is not uncommon for Hawaiian monk seal (*Monachus schauinslandi*) pups to be nursed by mothers other than their own, and a mother may nurse two pups simultaneously (Johnson and Johnson 1978, 1981). Weaning by monk seal pups is determined to have occurred when the mother, usually emaciated from having nursed a pup for approximately five weeks without herself feeding, leaves her pup and swims to sea to feed.

However, pups already weaned from their natural mother have not been heretofore reported to resume suckling on another mother. During the spring of 1982 two such incidents were observed in the Northwestern Hawaiian Islands, one on Lisianski Island, and the other on neighboring Laysan Island. The former incident lasted only a few days, but the latter extended for an entire additional nursing period.

### LISIANSKI ISLAND

At Lisianski Island in March 1982, one of us (JRH) observed a weaned male pup resumed suckling on a foster mother two days after the pup's weaning. The weaning had appeared normal, and after the mother returned from the sea, she was regularly seen the remainder of the field season. This pup had been weaned within 25 meters of its future foster mother on the same day that the foster mother pupped. For two days the female repeatedly rebuffed the weaned pup's attempts to suckle, but then acquiesced, and nursed it along with her own pup for two days.

The initial nursing period of the weaned pup is not known, but it may have been considerably less than normal, as the pup was somewhat underweight and had completed only 10% of its pup molt, which is normally finished prior to weaning.

### LAYSAN ISLAND

On 18 March 1982, one of us (DJA) observed a female pup during the first 1982 Laysan Island seal census. The pup was with an adult female, and was estimated to be at least two weeks old based on its black pelage and size. Thereafter, the mother-pup pair was observed daily (with the exception of two days) until the pup was weaned on 6 April. The size of the pup was normal at weaning, thus supporting the initial age estimate. The first nursing period for this pup was therefore estimated at a minimum of 33 days.

This weaned Laysan pup appeared to actively search for a mother for 7-8 days before it was adopted by an adult female whose pup had died. The weaned pup was then nursed by its foster mother for 34-45 days. The rest of this section describes the adoption, second nursing period, and second weaning of this pup.

The pup stayed at the first weaning site for three days, then moved west approximately 85 meters. At that time it was following an adult female who had temporarily lost her pup during a pup

exchange. The weaned pup stayed within 1.5 meters of this female and even rested against her once, although she ignored the weaned pup and vocalized loudly. The next afternoon the female and her pup were observed to be reunited, but the weaned pup continued to follow the mother-pup pair and remained close to them for the next two days.

On 12 April the weaned pup was observed near a mother with a dead pup. The death had occurred during birth on 11 April (p.m.) or 12 April (a.m.) On 13 April the dead pup was removed for a necropsy while the mother was asleep. When the mother awoke, she vocalized while looking around, then moved toward the area of the weaned pup. Later that afternoon the mother of the dead pup was seen 18 meters east of the death site, following the weaned pup. They were together on 14 April, and on 15 April was observed.

To verify that the "weaned" pup was still with its foster mother and was suckling, observations were made daily between 15 April and 18 May, with the exception of four days. Although extensive observations were not made, the nursing activity appeared normal; the longest single nursing bout recorded was 21 min on 28 April.

The last verified nursing bout was on 17 May. The second nursing period was therefore at least 34 days, and probably extended the entire 35 days the pup and foster mother were seen together. This makes the combined number of days the pup was nursed by both mothers an estimated 67-68 days, which is about



Fig. 1. Laysan pup with foster mother; after 53 days of nursing by a natural mother, and then a foster mother, the pup was unusually large.

Photo by D. Alcorn

twice the average nursing period of 35-36 days, and much longer than the range of 27-50 days reported for monk seals on Laysan (Johnson and Johnson 1978, 1981).

This pup was moderately long a second weaning, measuring roughly 138 centimeters from nose to tail tip. However, it mainly differed from the other newly weaned pups in its immense girth (Fig. 1). When last seen on 29 June before the Laysan research camp was terminated, it was still unusually fat.

#### CONCLUSIONS

These two cases are unique because the pups had already been weaned before being nursed by another mother. The Laysan occurrence is of special interest because of the combined length of the nursing periods.

Several factors probably contributed to the initiation and duration of the Laysan event: (1) The pup was persistent in attempting to locate a new mother after it was first weaned; (2) it was in the right place at the right time; i.e., near a mother who had lost a pup, and (3) it did not become aggressive towards the female nursing it, unlike some Laysan pups approaching weaning age. It is not known whether the foster mother would have adopted this weaned pup if her own dead pup had not been removed for necropsy. However, the observation at Lisianski of temporary nursing of a weaned pup by a female whose own pup was alive indicates that females do accept such pups despite the presence of the natural pup.

The fact that a nursing Hawaiian monk seal will accept a pup other than its own may have adaptive advantages. The greater fat reserves gained by the adopted Laysan pup due to extra nursing gave it an advantage in surviving the long weaning period when pups live off fat reserves while learning to catch prey. Older age at final weaning meant the pup was protected by an adult female for a extended period of time, and was more experienced, thus perhaps better able to cope with sharks, advances of adult males, or other hazards of the postweaning period. The extra two days' nursing by the Lisianski pup may have helped compensate for what was possibly an abnormally short nursing period.

There were no obvious disadvantages in these two adoption cases. However, in general it could be disadvantageous to a foster mother's natural pup if it were abandoned or received less nourishment because of a foster pup.

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#### LITERATURE CITED

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#### ERRATUM

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The Editors apologize for the errors which appeared in Doris J. Alcorn and John R. Henderson's paper entitled "Resumption of Nursing in 'Weaned' Hawaiian Monk Seal Pups". The paper appeared in the August 1984 issue of 'Elepaio (Vol. 45, No. 2).

On page 11 of the August 1984 issue, after the 5th paragraph under the Laysan Island section, a paragraph was inadvertently omitted. The missing paragraph follows:

"The second weaning occurred during the night of 18 May; at 0649 hr, 19 May, the pup was seen alone in the water. The weaning appeared to be normal, and was not due to mortality of the foster mother, as she was re-sighted on 25 May."