

Mother-pup bond of the common seal (*Phoca vitulina*) during the lactation period in the Dutch Wadden Sea

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Introduction

The Seal Rehabilitation and Research Centre (SRRRC) in Pieterburen rehabilitates approximately 60 common seal pups per year. The SRRRC has consistently found that common seal pups are never left alone by their mothers. When sandbanks become submerged during high tide, the pups accompany their mothers into the water. The SRRRC has conducted a research to compare observations of the mother-pup bond of common seals in the Wadden Sea, as well as in other common seal habitats at different locations around the world.



Figure 1: The Wadden Sea area; a tidal area between the northern coast of the Netherlands and the Dutch islands



Photo 1: At low tide sandbanks appear in the Wadden Sea. They are completely submerged during high tide.

Within species variability in mother-pup bond

This study revealed a variability within species with respect to the mother-pup bond; only in some populations was this bond temporarily broken while the mother went on a feeding trip. A continuous bond was reported for the Dutch Wadden Sea area by Van Wieren (1980) and Doornbos (1980). This corresponds with observations that were made in the southern part of the Humboldt Bay, California, USA (Knudston, 1975), the Shetland Islands, UK (Venables & Venables, 1954) and New Foundland, Canada (Renouf et al, 1982). However, common seals pups in Maine, USA were temporarily left alone on the haul-out side during the second half of lactation (Wilson, 1978). For the population at Sable Island, Canada, Boness et al (1992) initially identified a temporarily broken bond. Later Bowen et al (1999) observed that a continuous bond had developed within the same population.

The Factors of influence on the mother-pup bond

On the basis of the available research and observations, we conclude that the geo-physical properties of the area are an important factor for determining the mother-pup bond during lactation. Firstly, the availability of the haul-out site is important, given that it is imperative to know whether the haul-out side is submerged during high tide. Furthermore, both the strength of the sea currents and the possible presence of predators are thought to influence the mother's behaviour.



Photo 2: Mother and pup always stay in close proximity to each other

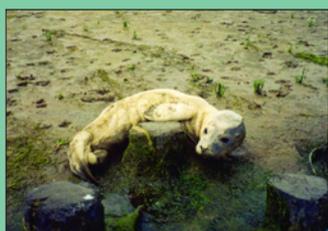


Photo 3: An orphaned pup found alone during the lactation period

Mother-pup bond in the Wadden Sea

The Wadden Sea is a shallow sea with strong currents and sandbanks, which are submerged during high tide. There are no possibilities for the pup to temporarily be left behind. Additionally, the strong currents render it necessary for the mother and pup to remain in close proximity all the time. Pups found alone in the Wadden Sea area during the lactation period are, therefore, orphaned pups in need of rehabilitation.



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