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Variation in pup vocalisations and mother-pup behaviour between harp seal whelping patches: effects of climate or geography?

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Harp seals breed in pack-ice, a substrate which can vary substantially between whelping patches depending on differing environmental and oceanographic conditions. This study demonstrates clear site differences in pup vocalizations and mother pup behaviour between Northeast (Greenland Sea) and Northwest (Canadian Front) Atlantic harp seal populations. Classification trees showed a distinctive split between Front and Greenland Sea pup vocalisations. No clear sex differentiation in vocalizations was present for pups at the Front; 42% (n = 12) of male and 38% (n = 13) of female calls could be attributed to a given individual. In the Greenland Sea, 55% (n = 42) of female vocalisations were attributed to individuals compared with only 8% for males (n = 47). In addition behavioural observations of mother pup pairs were conducted (Front, n = 58; Greenland Sea, n = 78). Greenland Sea pups were found to nurse more, and were more alert than Front pups. Female attendance patterns also differed between sites: females at the Front were more likely to attend their pups than those in the Greenland Sea. This marked difference in female presence between sites could have several origins such as variability in ice conditions, predation pressure, or female condition.