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Abstracts

SHORT COMMUNICATIONS

LOW FREQUENCY OF EXTRA-PAIR PATERNITY AND HIGH FREQUENCY OF ADOPTION IN BLACK-LEGGED KITTIWAKES

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Abstract. We studied the timing and frequency of extra-pair copulations and extra-pair fertilizations in the Black-legged Kittiwake (*Rissa tridactyla*), a socially monogamous seabird that breeds in dense colonies. We recorded 313 copulations by 82 marked pairs in 25 000 nest-hr over three years. We recorded only two extra-pair copulations, both of which were obtained by opportunistic males that disrupted pair copulations in progress. Pairs performed a mean of 14 copulations per clutch suggesting that males may copulate relatively frequently for paternity assurance. Our parentage analysis based on 8 microsatellite markers did not detect any extra-pair paternity in 119 offspring from 86 broods; however we did detect three cases of adoption caused by chicks moving to adjacent nests. The between-nest movement of a minimum of 8% of chicks suggests that escaping siblicide may be an adaptive strategy for some nestlings, despite the risk of falling into the sea and drowning (observed in 11 of 21 chicks).

Key words: adoption, Black-legged Kittiwake, extra-pair copulation, extra-pair paternity, paternity assurance, *Rissa tridactyla*, within-pair copulation.