

Letters to the editors

RECRUITMENT TO THE BREEDING GROUP IN THE BLACK-LEGGED KITTIWAKE RISSA TRIDACTYLA

In their recent paper, Rothery, Harris, Wanless & Shaw (2000), *Atlantic Seabirds* 4: 17-28, use the assumption that the Black-legged Kittiwakes breeding on Fair Isle are an inbreeding, isolated group or population and that the recruits to this breeding group are all or mainly produced from within that small island. This assumption is almost certainly incorrect.

While many Kittiwakes, particularly males, are philopatric and return to breed where they hatched, an appreciable proportion of both sexes move considerable distances and breed elsewhere (Coulson & Neve de Mevergnies 1992, *Ardea* 80:187-197). For example, at the study colony at North Shields, northeast England, two ringed breeding birds were reared in Norway, two hatched at Dunbar, east Scotland and several were from the Farne Islands, northeast England. Chicks from North Shields and the Farne Islands subsequently bred in Sweden, Helgoland, Scilly Isles, southwest England and France, and there are many other records of similar movements. At North Shields, fewer than 40% of the recruits to the breeding group were hatched there. In another colony being currently studied, philopatric breeding birds comprise fewer than 10% of the total number nesting. This dispersal behaviour is not restricted to the Kittiwake and similar patterns are known from studies on *Larus* gulls. This dispersal of young from the natal area is of great importance in developing management policies for colonies of large *Larus* gulls. It also moderates local, poor breeding performance.

The size of the recruitment of new breeding Kittiwakes to a colony is only partially affected by the breeding success in that colony a few years previously. We need to know what factors attract the dispersing recruits. How do these birds select the colony in which they eventually breed? One factor is likely to be the numbers of potential recruits produced within a large geographical area, and others may be the size of and conditions for breeding within the colony under consideration, including the state of feeding areas that can be reached from it. Thus it is inappropriate to assume in a model that poor young production in a particular colony will reliably and realistically measure and predict recruitment rates there in future years.

If in the next few years Kittiwakes decline dramatically on Fair Isle, as is predicted for the future by Rothery *et al.*, this is likely to be but coincidence since the authors have not used an appropriate and realistic population model to arrive at their predictions. Increased adult mortality rates should not be ruled out

as a cause of decline. It has already been implicated in a major decline of Kittiwakes elsewhere (Coulson & Strowger 1999; *Waterbirds* 22:3-13).

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