

RAZORBILLS *ALCA TORDA* SUCCESSFULLY  
REARING YOUNG COMMON GUILLEMOTS  
*URIA AALGE*

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Harris M.P. & Wanless S. 2001. Razorbills *Alca torda* successfully rearing young Common Guillemots *Uria aalge*. *Atlantic Seabirds* 3(2): 89-93. *Two cases of Razorbills Alca torda successfully raising young Common Guillemots Uria aalge to departure from the colony are documented. Both cases apparently resulted from inter-species competition for nest-sites.*

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Attempted matings between a male Razorbill *Alca torda* and female Common Guillemot *Uria aalge* and a highly probable intergenetic hybrid have been observed on Great Island, Newfoundland (Walsh *et al. unpubl. data*; Wilhelm *et al.* 2001). We have not seen anything similar in 21 seasons of intensive study of these two species in a mixed colony in Scotland, but here we document two instances where pairs of Razorbills raised young Common Guillemots to the stage where they left the colony.

Between 1984 and 2000 we made at least daily checks from before the first egg was laid to after the departure of the latest chick of all Razorbill and Common Guillemot nest-sites in five delimited areas of the auk colonies on the cliffs of the Isle of May (56°11'N, 2°34'W; Firth of Forth, SE Scotland). The positions of all sites used during the period were marked on large-scale photographs (which included areas adjacent to the colony where birds could nest) and checks were made from permanent hides in order to prevent observer disturbance.

Most Razorbills on the Isle of May nest at relatively low density among broken rock at the top, bottom and lateral edges of Common Guillemot colonies. The numbers of Razorbills that laid eggs in the study areas increased from 72 pairs in 1984 to 149 pairs in 2000, mostly by the colonisation of new sites dispersed up to 8-10 m away from the core seabird colony. The numbers of breeding Common Guillemots increased at a rather slower rate over the same period, from 454 pairs to 643 pairs, mainly by a gradual expansion from the core area that brought the species into direct

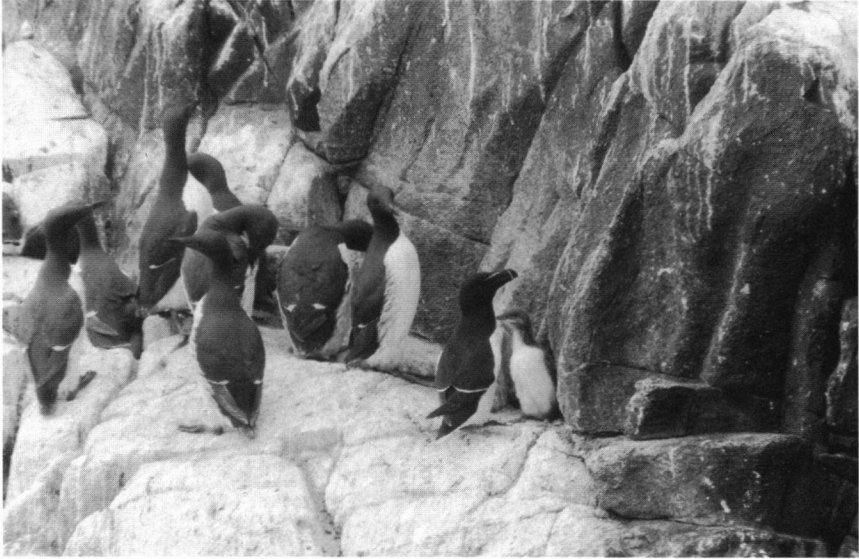
competition with Razorbills for nest sites. In total, 258 different breeding sites were used by Razorbills and 829 by Common Guillemots. Of these, 31 were used by both species; in 27 (87%) of such cases, the site was originally used by Razorbills and later by Common Guillemots, supporting our impression that Common Guillemots were displacing Razorbills. In only two instances was there an obvious change in the physical characteristics of the site between occupancy by the two species; in both cases movements of stones made the site more open and apparently less suitable for Razorbills (see below).

In 1993 and 1994 we noted frequent fights between the occupants of a Razorbill site that had successfully fledged a chick each season since its first occupation in 1989, and at least two pairs of Common Guillemots that appeared to be attempting to breed at the edge of an established group of five other pairs. None of the birds involved was individually identifiable. This Razorbill site was on a ledge and was much more open (Fig. 1) than is typical of sites on the Isle of May because a large stone, behind which the pair originally nested, had fallen off the ledge in early 1992. In 1993, Razorbills lost their egg during a fight with Common Guillemots. The site was occupied by Razorbills throughout the 1994 season but we did not record an egg.

In 1995, despite very frequent fighting with Common Guillemots, the Razorbills laid an egg on 11 May and commenced incubation. On 16 May, a Common Guillemot laid an egg immediately next to the incubating Razorbill. This resulted in a ferocious fight, between both Razorbills and two Common Guillemots (assumed to be the owners of the egg), during which the Razorbill egg was knocked off the ledge and the guillemot egg rolled a few centimetres to the Razorbill site. The Razorbills retained and incubated the egg until it hatched on 18 June (after the normal incubation period of 33 days). The Razorbills brooded and fed the chick and it left for the sea with one of the adults on the evening of 7 July when aged 19 days old, which is well within the normal range of fledging ages of both Razorbills and Common Guillemots. Razorbills successfully reared a chick at this site in 1996 but Common Guillemots then bred there each season from 1997 to 2000.

Earlier, in 1993, a pair of Razorbills breeding just outwith one of the study plots also fledged a Common Guillemot chick. We have only limited data on this, although Razorbills had bred there in previous years. We had, however, noted repeated fights there between the two species in 1993, and the site was occupied by Common Guillemots in subsequent seasons.

We have a further four records of Common Guillemot eggs being laid at sites occupied by Razorbills but have not recorded the reverse. None



*Figure 1. A Razorbill with a 12-day old young Common Guillemot that it reared from a newly laid egg in 1995. Eight pairs of Guillemots had bred on this ledge; five young were reared but three had fledged before this photograph was taken. (M.P. Harris).*

*Figuur 1. Een Alk met een twaalf dagen oud jong van een Zeekoet dat het had uitgebroed en tot dusverre had groot gebracht van een vers gelegd ei in 1995. In totaal hadde acht paren Zeekoeten op deze richel gebroed en waren vijf jongen uitgebroed. Drie jongen hadden de kolonie inmiddels verlaten, juist voordat deze foto werd gemaakt (M.P. Harris).*

of these eggs were incubated by the Razorbills. At the start of each season there was considerable competition for sites between Razorbills and Black-legged Kittiwakes *Rissa tridactyla*, which laid slightly later than did Razorbills, and we have three records of Razorbills laying in Black-legged Kittiwake nests. In each instance the kittiwakes retained the site; two eggs disappeared but in one case the Razorbill egg was incubated by the kittiwakes for three weeks before being lost.

Razorbills and Common Guillemots breed in close proximity in many places in the North Atlantic. Although the former appears to prefer more enclosed sites such as under boulders, in niches or cracks in cliffs or

even in the entrance to rabbit burrows and the latter prefers more open ledges, there is much potential for competition (Fisher & Lockley 1954). Seabird colonies may appear to be stable with each species having its preferred habitat (Lack 1971); this is rather illusory, however, as long-term studies, such as ours, show considerable inter-specific competition for nest-sites. The ledge shown in Figure 1 was regularly visited by Northern Fulmars *Fulmarus glacialis* and in one season was used by European Shags *Phalacrocorax [stictocarbo] aristotelis*. Although Northern Fulmars, European Shags and Razorbills regularly win individual aggressive encounters with Common Guillemots (pers. observ.), on the Isle of May during our study the three species tended to compete poorly in the longer term due to the tenacity of Common Guillemots and the competitive advantage afforded by their greater numbers. Over a 21-year period these three species were ousted from this ledge by Common Guillemots.

The imprinting of young birds on foster parents of a different species is well-documented (Heinroth 1910) and experimental studies have shown that, at least in gulls *Larus* spp., this can result from cross-species fostering (Harris 1970). Interspecific matings and/or hybridisation have been documented between Common Guillemot and both Brünnich's Guillemot *U. lomvia* and Razorbill (Tschanz & Wehrin 1968; Birkhead 1993; Wilhelm *et al.* 2001), species that breed in mixed colonies and have similar breeding strategies. Interspecies fostering such as described in this note, and the erroneous imprinting of chicks, could explain the very few documented case of hybridisation among auks.

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#### ALKEN *ALCA TORDA* BRENGEN MET SUCCES KUIKENS VAN ZEEKOETEN *URIA AALGE* GROOT

*Tussen 1984 en 2000 werden op Isle of May (Firth of Forth, ZO-Schotland) in het broedseizoen dagelijks waarnemingen verricht op vijf vaste studieplots in de broedkolonies van Alken Alca torda en Zeekoeten Uria aalge. De waarnemingen werden verricht vanaf het moment voor het eerste ei werd gelegd tot op het moment dat het laatste jong de kolonie verlaten had. De studiegebieden werden (op foto's) precies afgebakend, regelmatig gefotografeerd en vanuit permanente schuilhutjes bestudeerd om verstoring zoveel mogelijk tegen te gaan. De meeste Alken broeden tussen gevallen rotsen en in rotsspleten aan de randen van dichtbezette Zeekoetenkolonies. Het aantal broedvogels nam toe van 72 paar in 1984 tot 149 paar in 2000, met name door het bezetten van nieuwe broedplaatsen op 8-10 m afstand van de traditionele koloniedeelten. Het aantal Zeekoeten nam langzamer toe, van 454 paar in 1984 tot 643 paar in 2000, met name door een geleidelijke uitbreiding van de drukt bezette klifrichels. Deze*

Zeekoeten raakten daardoor geleidelijk aan steeds nadrukkelijker met Alken in conflict over de beschikbare ruimte. In totaal waren 258 broedplaatsen door Alken bezet en 829 door Zeekoeten, daarvan werden 31 locaties door beide soorten gebruikt. In 27 gevallen (87%) ging het daarbij om broedplaatsen die aanvankelijk door Alken, maar later door Zeekoeten werden benut, hetgeen de indruk ondersteunde dat Zeekoeten Alken van geschikte plekken verdreven. Op één zo'n locatie werden in 1993 en 1994 gevechten tussen beide soorten waargenomen om een plek waar Alken sinds 1989 succesvol hadden gebroed. Eenmaal verloren de Alken hun ei, maar behielden zij de broedplaats. Ondanks frequente burenruzies met opdringende Zeekoeten legden de Alken in 1995 op 11 mei een ei, dat ze begonnen te bebroeden. Op 16 mei legde een Zeekoet een ei vlak naast dat van de Alken, waarna felle gevechten uitbraken. In de strijd ging het ei van de Alken verloren, maar rolde het ei van de Zeekoeten dichterbij de broedplaats van de Alken toe. De Alken confisqueerden dat ei, bebroedden het de 'voorgeschreven' periode van 33 dagen en het kwam uit op 18 juni. De Alken brachten het jong met succes groot en vertrokken op 7 juli met het kuiken naar zee. Alken wisten in 1996 met succes op dezelfde locatie te broeden, maar sindsdien is de broedplaats door Zeekoeten bezet.

In 1993 werd al vastgesteld dat een paar Alken een Zeekoetenjong had grootgebracht, maar omdat dit buiten de studiegebieden plaatsvond bestaant daarover weinig concrete gegevens. Van vier gevallen waarin eieren van Zeekoeten op de broedplaatsen van Alken terecht kwamen is bekend dat de Alken ze negeerden. Er is geen geval van het omgekeerde bekend (een Alkenei op de Zeekoetenrichel). Aan het begin van elk broedseizoen is er ook intensieve competitie om nestgelegenheid tussen Alken en Drieteenmeeuwen. De auteurs stelden in drie gevallen vast dat Alken een ei in het nest van een Drieteenmeeuw legden, waarna het ei door laatstgenoemde soort werd opgeëist. Twee van die eieren verdwenen spoorloos, maar het derde ei werd eerst gedurende drie weken door de meeuwen bebroed.

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