

# Movement of Birds within a Guillemot (*Uria aalge*) Colony

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## Introduction

At colonies of Guillemots *Uria aalge* during the breeding season, there is an almost continuous daytime movement of birds into and from the breeding sites. Numbers of individuals present at a colony during the incubation and early chickfeeding periods vary with time of day according to factors which are not yet clearly established.

Following some observations at Fair Isle in 1980, we suggest a pattern for the background bird movement and activity at some of the island's numerous Guillemot colonies.

## Methods

Safe vantage points were found for observing three Guillemot colonies at Fair Isle, two on the north coast and one on the east side. Using binoculars to scan the colony, we watched an individual Guillemot and followed it as it left the colony; its subsequent behaviour was noted in terms of whether the bird flew out to sea, came down on the sea surface immediately from the colony, or flew back up onto another ledge or locality within the colony. Choice of bird was not statistically random, but no conscious choice was made – another bird was looked for as soon as notes had been entered for the previous one. Observations were made on 311 birds at the three sites in the period between 0830 and 1430 hrs. GMT on 18 and 21 June 1980. On both days, visibility was good without rain; for two counts on 18 June, wind was N. W. force 1–4, whilst on 21st it was S. E. force 5.

## Results

Remarkably few birds flew directly out to sea, and the great majority either flew down onto the water or circled and came back to the site. The latter percentage was very low at the Lericum colony, perhaps indicating a reluctance to alight amongst the boulders; however, the combined categories of »down to water« and »circling« was between 75% and 85% in all three examples. The higher percentage of circling at the Sheep Craig was perhaps due to the strongish on-shore wind – on other occasions this feature seems to induce frequent high-flying near a colony (own observations).

## Discussion

Since only 7% of departures (in our sample) led to birds flying directly out to sea, and 35% directly down onto the sea below the colony, it was evident that a consi-

Table 1. Activities of Guillemots leaving ledges at three sites on Fair Isle, Shetland (figures for activities are in percentages). – Aktivitäten individuell beobachteter Trottellummen nach Verlassen des Felsbandes; drei Kolonien auf Fair Isle, Shetland (die Aktivitäten sind in % angegeben)

colony / Kolonie	Kristal Kame	Sheep Craig	Lericum	overall Summe
habitat / Habitat	cliff Klippe	cliff	boulders Felsblöcke	
nos. of birds observed / Anzahl Vögel	111	100	100	311
activity / Aktivität %				
directly out to sea / direkt seewärts	13	3	7	7
down onto water / auf See einfallend	28	8	70	35
circling, back to ledges / kreisend, zurück auf ein Felsband	47	77	9	44
others / andere Aktivitäten	12	12	14	13

derable proportion of the buzz of activity at the study sites was due to birds circling and coming back to ledges. Closer examination of the behaviour of these birds showed that most seemed to be prospecting: when they landed at a ledge which already held breeding birds and chicks, they would usually be attacked and harried until they left; usually to circle before landing at an unoccupied ledge which they would perhaps inspect before either quickly flying away again or sitting there for some time. The »prospectors« thus accounted for 47% and 77% of flying activity at two cliff sites, though only 9% at the boulder site (where such prospecting may perhaps be more difficult). Out of 77 birds which circled before coming back to a ledge at Sheep Craig, only 18 came back and landed directly; the remainder circled and passed close to the cliff between two and six times before finally setting.

Without marked birds it was obviously not possible to be certain of the age and social status of the birds we watched, but we suggest that many of them were prospectors (and therefore perhaps pre-breeders) because (a) many of them were attached and left when they landed on occupied breeding ledges; and (b) many landed on unoccupied ledges, sometimes after rebuffs from occupying birds on breeding ledges; (c) none was ever seen to come in with a fish for a young bird. We suggest that much of the »background noise« of activity at a Guillemot colony is due to these apparently prospecting birds which might mainly represent the non-breeding (and perhaps particularly the pre-breeding) section of the population.

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## Zusammenfassung

Flugaktivitäten innerhalb einer Trottellummenkolonie.

Am 18. und 21.06.1980 wurden Flugbewegungen von Trottellummen aus 3 Kolonien auf Fair Isle (Shetlands) protokolliert. Von 311 individuell verfolgten Vögeln verschwanden lediglich 7% im Direktflug in Richtung auf die offene See, während 75 bis 85% vor dem Brutfelsen auf See niedergingen oder nach z. T. mehrfachem Kreisen wieder im Felsen landeten (Tab. 1). Es wird vermutet, daß der überwiegende Anteil der Flugaktivität vor einer Kolonie von Nichtbrütern (bzw. prospektiven Brutpaaren) stammt, da die vor dem Brutfelsen kreisenden Vögel beim Landen innerhalb dicht besetzter Kolonieteile meist heftig attackiert wurden, daher oft auf unbesetzte Felsbänder ausweichen mußten und auch in keinem Fall futtertragend beobachtet wurden.

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\*) We dedicate this paper to Dr. G. Vauk, Helgoland, on the occasion of his 60. birthday on 5 October 1985

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