Predation of migrant birds by gulls

S. M. Macdonald and C. F. Mason

Gulls *Larus* have a very diverse feeding ecology, but vertebrates form a significant part of the diet of some species (Tinbergen 1953). They are well known for their depredations on the eggs and young of colonial seabirds; they also attack and kill injured or sick birds as large as Curlew *Numenius arquata* (Tinbergen 1953) and American Wigeon *Anas americana* (Presnall 1968), and congeners such as Little Gull *L. minutus* (Dr J. van Impe in litt.). Great Black-backed Gulls *L. marinus* have been known to kill swimming Lesser Scaup *Aythya affinis* and Slavonian Grebe *Podiceps auritus* (Mansueti 1961). There are a number of scattered reports of gulls attacking migrants in flight over the sea (Dickens 1958, Colston et al. 1959, Gamble 1959, Rushforth 1959, Håkonsson 1964, Rogers 1968, Dyck 1969 and Halle 1972). Our observations in the autumn of 1972 suggested that this behaviour is frequent. We therefore published a request for information in *British Birds* and *BTO News*, and this paper summarises the reports received together with the records cited above.

Typical of the reports were the observations made by S.M.M. from a fishing vessel one kilometre off Great Yarmouth, Norfolk, on 22nd October 1972. Large numbers of Starlings *Sturnus vulgaris*, Redwings *Turdus iliacus* and Blackbirds *T. merula* were noted flying towards the coast between 09.00 and 12.00 hours GMT. The weather was clear and the wind westerly force 5. Many of the birds were flying singly or in small flocks of ten to twenty about 5-7 metres above the waves, but a number of others, apparently exhausted, were flying considerably lower than this, and it was these that were falling prey to Herring Gulls *L. argentatus* and Great Black-backed Gulls. One gull would start the attack by giving chase to a migrant, causing it to lose height and zig-zag in evasion. Other gulls of both species would join the pursuit, dive-bombing the victim until it fell into the sea to be torn to pieces. It was not determined whether any of the corpses were eaten. One Starling was caught in mid-air by a Herring Gull and carried for some three minutes before it escaped and found refuge on a near-by fishing boat. During three hours' sporadic observations, four Starlings, one Blackbird and one Redwing were seen to be killed by the gulls. The skipper of the fishing vessel said he had often observed such behaviour in the same area.

The majority of the other reports also came from the east coast of England, ranging from Hartlepool, Co. Durham, to the Thames estuary. Two referred to the south coast of England, one to Wales and one to south-west Ireland. In addition there were instances
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from Jutland, the Stockholm archipelago, the Baltic Sea, Portugal, and the Mediterranean area (three observations). The behaviour thus appears to be widespread in Europe, and the abundance of gulls makes it seem likely that they are the most important avian predators of many species of small migrants.

Of the reports received, together with those in the literature, 23 referred to the autumn period (September-November) and nine to the spring (March-May), with one observation each in January, February and July. Where details of weather were recorded, strong headwinds were mentioned in nine cases, calm conditions in three. On two of these calm days there was poor visibility with fog, and on the only calm, clear day reported all the attacked birds escaped. Snow was recorded in one instance.

The species of migrants attacked by gulls, together with the number of attacks, are shown in table 1. (Many reports did not state the number of migrants involved, especially during heavy migration, and in such cases only one attack per species is included in the table.) Thrushes and Starlings were the most frequently attacked; in every case where their condition was reported the victims were described as exhausted and flying low over the water. There was only one report of a flock of birds being attacked: these were Redwings. Herring Gulls (involved in 22 incidents) and Great Black-backed Gulls (15 incidents) were the most frequent predators. Common Gulls *L. canus* took part in attacks on four occasions, Lesser Black-backed Gulls *L. fuscus* twice and Black-headed Gulls *L. ridibundus* once. On only two occasions were single gulls involved (Great Black-backed and Herring); typically, one bird initiated the attack and was rapidly joined by others. Attacks were seen to take place at distances of 100 metres to 1½ kilometres from the shore; once a migrant had reached land it was safe.

Various methods of capture were observed. In 14 cases the victim was forced into the sea by continual harrying, and in six it was knocked into the water by the gulls' beating wings or feet. On three occasions the victims were directly attacked by the gulls. The species of migrants attacked by gulls, together with the number of attacks, are shown in table 1.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of attacks</th>
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<tbody>
<tr>
<td>Merlin <em>Falco columbarius</em></td>
<td>1</td>
<td>Wheatear <em>Oenanthe sp.</em></td>
<td>1</td>
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<tr>
<td>Quail <em>Coturnix coturnix</em></td>
<td>1</td>
<td>Willow Warbler/Chiffchaff</td>
<td>1</td>
</tr>
<tr>
<td>Hoopoe <em>Upupa epops</em></td>
<td>1</td>
<td>Goldcrest <em>Regulus regulus</em></td>
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<tr>
<td>Skylark <em>Alauda arvensis</em></td>
<td>2</td>
<td>Dunnock <em>Prunella modularis</em></td>
<td>1</td>
</tr>
<tr>
<td>Blue Tit <em>Parus caeruleus</em></td>
<td>1</td>
<td>Meadow Pipit <em>Anthus pratensis</em></td>
<td>2</td>
</tr>
<tr>
<td>Fieldfare <em>Turdus pilaris</em></td>
<td>1</td>
<td>Song Thrush <em>Turdus philomelos</em></td>
<td>4</td>
</tr>
<tr>
<td>Redwing <em>Turdus iliacus</em></td>
<td>9</td>
<td>Starling <em>Sturnus vulgaris</em></td>
<td>9</td>
</tr>
<tr>
<td>Blackbird <em>Turdus merula</em></td>
<td>14</td>
<td>Linnet <em>Acanthis cannabina</em></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reed Bunting <em>Emberiza schoeniclus</em></td>
<td>1</td>
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</table>
occasions the migrant was resting on the sea when it was attacked. There were seven instances of capture in mid-air, in some of which a gull repeatedly dropped its victim and caught it again while it was falling, while in others a second gull swept in and caught the falling migrant. There is also a record of a bat being caught in mid-air by a gull (Cleeves 1969). The fate of many of the attacked birds was in doubt; 13 observers reported them as being eaten, while in two instances the gulls lost interest after drowning their quarry.

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SUMMARY
Published records, and reports received in response to an appeal for information, suggest that gulls frequently attack migrating birds over the sea, especially during the autumn passage. Great Black-backed Gulls *Larus marinus* and Herring Gulls *L. argentatus* are mainly involved, and their prey appears chiefly to be thrushes *Turdus* and Starlings *Sturnus vulgaris*. Exhausted migrants are particularly vulnerable, and several gulls usually participate in harrying the victim. The abundance of gulls makes it reasonable to propose that they are the most important avian predators of migratory songbirds.

REFERENCES


MANSUETI, R. J. 1961. 'Waterfowl predation by and records of the Great Black-backed Gull in Chesapeake Bay during winter and spring'. *Chesapeake Sci.*, 2: 102-104.


