

SHORT NOTE

Black-billed gulls hawking cicadas over shrubland

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On 7 occasions between 15 January and 20 February 2000 I observed aggregations of black-billed gulls (*Larus bulleri*) flying over 2 small saddles in the broad axial ridge that separates the Havelock (Kaituna) Estuary and the Mahakipawa Arm of the inner Pelorus Sound. The saddles are c.180 m a.s.l. (NZMS 260 P27 25761 59923), near Havelock, and c.1.5 km east of the principal high tide roost in the Havelock Estuary, used frequently by the gulls.

Upon closer observation it was apparent that the birds were hawking a particular large insect, the cicada (*Amphipsalta* sp; Homoptera). The gulls typically soared across the ridge at 1-10 m above the shrub canopy, making steep turns and with rapid wing beats in attempting to catch the cicadas. At least 12 times, individual gulls were observed to catch and consume an insect on the wing, and in all but 1 instance, the insect taken was seen to be a cicada. Several failed attempts to catch a cicada on the wing were also observed. The gulls occasionally hovered over a bush, and once a gull plucked a cicada off the top of the vegetation.

Cicadas were very common in the general area (*pers. obs.*) and where the gulls were observed foraging, which is regenerating shrubland (1-5 m high) in the Mahakipawa Hill Scenic Reserve. Cicadas were frequently observed to fly out from the shrubs, and I disturbed at least 12 from 1 small manuka (*Leptospermum scoparium*) tree when I approached it.

Up to 40 (minimum 22) black-billed gulls were observed foraging in this way at any one time. The number of gulls foraging above the saddles was a major proportion of the population in the inner Pelorus Sound estuarine areas at that time of year (maximum c.60 birds Jan-Mar).

Thirteen visits of about 20 min each, between 1000 h and 1500 h were made to the site, about once every 3 days. The birds appeared to adopt the hunting pattern on 7 days with generally sunny, warm, and calm conditions, and were not seen at the site on 6 days during

the same period with rain, low cloud, or strong winds. Absence of hunting behaviour may relate to reduced activity of the cicadas or to the birds having more difficulty in 'soaring' during such conditions, or a combination of both. The gulls hunted at various stages of the tide, so the behaviour was not solely related to high tides preventing normal foraging within the estuary. Such behaviour was not observed at any other locations around the estuary in concurrent observations, despite the widespread abundance of the prey. This suggests that the flying conditions at this site were uniquely suitable for this foraging strategy, at least within the immediate area.

At times, up to 5 black-fronted terns (*Sterna albobriata*) were seen amongst the feeding gulls and appeared to be adopting a similar hunting pattern, with some success. Several southern black-backed gulls (*Larus dominicanus*) were also seen flying over the site, though no pursuits of cicadas or successful captures were observed.

Despite large numbers of cicadas being present through late February and March, the feeding strategy was not observed after 20 February. The cicadas, while still numerous and audibly active, were not flying as much in the later period, which may have contributed to the cessation of gull foraging at the site.

I believe the behaviour displayed by the black-billed gulls was deliberate, taking advantage of a seasonally-abundant terrestrial food source near their more typical post-breeding estuarine feeding habitat. References have been made to black-billed gulls being "adept at hawking above flowing water for aquatic invertebrates on the wing" (Heather & Robertson 1996). Gurr (1985) made passing reference to the gulls being "competent aerial insect feeders", and Oliver (1955) recorded that "insects, for example moths and beetles, are often taken on the wing". Evans (1982) recorded black-billed gulls were seen "to hawk for insects...over or beside nearby stands of trees" though he states "tree sites were never seen to attract large aggregations of active foragers". The species has also been observed in association with red-billed gulls (*Larus novaehollandiae scopulinus*) hawking midges (O'Donnell & West 1991). Sandager (1889) recorded a similar behaviour for red-billed gulls, which 'drove'

cicadas from ngaio (*Myoporum laetum*) bushes. However, I have found few specific references to black-billed gulls taking large insects over shrub- or forest-land.

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