

PREDATION BY THE YELLOW-LEGGED GULL *LARUS CACHINNANS* ON STORM PETRELS *HYDROBATES PELAGICUS* ON FILFLA

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Abstract

The predation by Yellow-legged Gulls *Larus cachinnans* on Storm Petrels *Hydrobates pelagicus* on Filfla is higher than previously thought. Gulls nesting below the cliffs, where the petrels' nest sites are found, are those which predate mostly on the petrels. From an analysis of pellets collected in summer, it seems that migratory birds form a major part of the gulls' diet during the spring migration.

Introduction

The breeding population of the Yellow-legged Gull *Larus cachinnans* in the Maltese Islands has been estimated to be ca. 150 pairs, 80% of which are found on Filfla (Borg & Cachia-Zammit 1988). The colony on Filfla has been on the increase since the early 1970's, when its use for target-bombing ceased. The colony is mainly restricted to the inaccessible plateau surface, and only ca. ten pairs breed on the upper parts of the screes beneath the cliffs (Sultana & Gauci 1970).

The Yellow-legged Gull is well known as a predator and a scavenger. Cramp & Simmons (1982), who include the *cachinnans* group with the *argentatus*, state that these gulls take almost anything available of suitable size and texture. The aggressiveness of the gulls on Filfla has been noted on various occasions. Sultana & Gauci (1970) describe how 6 gulls chased a Storm Petrel when it left to sea during daylight and Vassallo (1980) recounts how the gulls mobbed and chased away a flock of migrating Grey Herons *Ardea cinerea* which tried to alight on the islet.

The Storm Petrel is a very common breeding visitor, breeding in very large numbers in the boulder and rubble slopes of Filfla (Sultana & Gauci 1982). There have been no observations at night on Filfla before May and it has been presumed that the petrels return to the colony in late March or early April (Sultana & Gauci 1982) and, more likely, by the end of February and early March (Borg 1989). The young leave the colony by mid-August (Sultana & Gauci 1982) but some unfledged chicks are still present in the nest site in September (Sultana & Borg in prep.). Sultana & Gauci (1982) estimated the colony around 10,000 pairs. Massa & Sultana (1990-91) stated that the colony is probably decreasing due to the washing away of some of the rubble screes below the cliffs during storms. These screes are no longer supplemented by rubble as bombing practices have ceased. Presently the colony is estimated at about 5000-8000 pairs (Sultana & Borg in prep.). Storm Petrels' remains are frequently found in the gulls' pellets (Sultana & Gauci 1982) and Borg & Cachia-Zammit (1986-87) found 4 specimens of *H. pelagicus* from a sample of 11 gull pellets.

Method of collecting

The plateau surface of Filfla, where the main colony of the Yellow-legged Gull is found, is thickly vegetated. This makes it difficult to search for food remains there, unless located within the nest itself or its immediate surroundings. Furthermore no Storm Petrels breed on the plateau surface. Searches were therefore made at and around ten accessible gulls' nests which were located amongst the boulder and rubble screes below the cliffs, where much less vegetation is present. The material, consisting of whole pellets and remains, was collected during four visits in May 1986, May 1989, June 1990, and June 1992 respectively.

Results

79 food items, 43 of which consisted of Storm Petrels' remains, were found in the material collected. Some of the petrels remains were of ringed birds. Table 1 lists 8 rings found in the remains with the dates of ringing and recovery respectively.

Table 1

Ring No.	Ringing Date	Recovery Date
2114074	10.07.71	24.05.86
2126075	28.06.73	06.06.92
S3910	24.05.86	06.06.92
S5906	15.07.89	06.06.92
S5676	15.07.89	06.06.92
S6747	09.06.90	06.06.92
S6233	15.07.89	06.06.92
S4264	24.05.86	06.06.92

About 18 species of birds have been identified altogether in the material collected. The majority of these are trans-saharan migrants. Table 2 lists these species found in the material collected with their respective number of birds and percentages.

Table 1

Species	No. of birds	%age of the material collected
<i>Hydrobates pelagicus</i>	43	59.7
<i>Coturnix coturnix</i>	1	1.4
<i>Gallinula chloropus</i>	1	1.4
<i>Gallinago gallinago</i>	1	1.4
<i>Larus ridibundus</i>	1	1.4
<i>Apus apus</i>	5	6.9
<i>Hirundo rustica</i>	1	1.4
<i>Upupa epops</i>	1	1.4
<i>Merops apiaster</i>	1	1.4
<i>Anthus trivialis</i>	2	2.7
<i>Luscinia megarhynchos</i>	3	4.2
<i>Phoenicurus phoenicurus</i>	1	1.4
<i>Phylloscopus sp.</i>	1	1.4
<i>Ficedula albicollis</i>	1	1.4
<i>Oriolus oriolus</i>	1	1.4
<i>Sturnus vulgaris</i>	1	1.4
<i>Passer hispaniolensis</i>	2	2.7
<i>Carduelis carduelis</i>	1	1.4
Unid. Passeriformes	4	5.6

Discussion

It appears that during spring birds form a good part of the diet of the Yellow-legged Gulls breeding on Filfla. A total of 48 pellets and remains were collected from an area of 20m² below the cliffs, where there were about 8 gulls' nests situated near the entrances of petrels' burrows. This sample contained 32 remains of Storm Petrels.

Ten pellets containing remains of petrels were collected from only one nest. It seems that the Yellow-legged Gulls breeding below the cliffs amongst the Storm Petrel burrows appear to have acquired the habit of taking the petrels as prey. This behavior by the gulls was noted elsewhere (Walmsley, 1986). This is probably done during moonlit nights. Gulls have been observed on Filfla to be quite active during moonlit nights, calling and flying about continuously.

One of the pellets contained a downy Storm Petrel chick. Sultana & Gauci (1970) stated that gulls take those young petrels which venture to the entrance of the burrows to exercise their wings. Although this could be the case in other countries, this is unlikely to occur on Filfla, as gulls abandon the colony by late June, well before the young Storm Petrels leave their nest sites. The chick found in the sample must have been taken by the gulls from an accessible shallow nest site.

In other Mediterranean and North Atlantic colonies, *L. cachinnans* and *L. argentatus* respectively are to blame for the decline and sometimes the total extermination of seabird colonies (Warham, 1990). One such case was observed at Ile Plane (Archipel de Riou - France), where the population of *H. pelagicus* started declining during the same period when the colony of *L. cachinnans* started to increase, while other smaller populations ceased to exist due to the predation by gulls (Walmsley, 1986). The decline in numbers as already mentioned by Massa & Sultana (1990-91) may also partly be attributed to the increase of the gull colony on Filfla.

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~~SHORT NOTES~~

~~First breeding records of the Starling *Sturnus vulgaris*~~

~~The Starling *Sturnus vulgaris* is a very common autumn migrant and winter visitor, arriving in mid-September and staying until mid-March. Sometimes a few appear as early as the beginning of August and as late as the end of April or even May. A few birds have also been recorded in June and July, particularly in recent years, but no breeding was recorded (Sultana & Gauci 1982; Gauci 1986-87; Coleiro 1988, 1989 & 1990-91).~~

~~An adult bird in summer plumage was observed singing in a public garden at Floriana on 2 May 1994 at 08.30hrs (pers. obs.), while another adult was noted gathering food at St. Francis Ravelin (Floriana) on 19 May at 16.00hrs (J.Sultana pers. comm.). On 8 June, 5 were seen at the nearby football pitch. Four birds were seen walking with half open, quivering wings, towards another which had landed nearby (S. Scicluna pers. comm.). Unfortunately no notice of the age of the birds was taken.~~

~~The area was visited again on 10 June at 17.00hrs, but only one adult was seen, feeding on the ground for several minutes, after which it took off with a worm in its beak. On visiting the area again on 15 June at 16.45hrs, 3 fully fledged juvenile birds were observed for several minutes, feeding on the ground and perching on a wire, always together and calling each other.~~

~~The birds must have nested in some building in Floriana or Valletta and they were using the football pitch as one of the feeding areas.~~

~~Starlings have also bred and raised young on the island of Comino both in 1993 and 1994, after the local farmer had released some adult birds which he had kept in captivity. In 1993 at least one pair nested successfully and in 1994 two pairs bred and raised young. A group of 11 birds (4 adults and 7 fully fledged young) were present on Comino on 15 May 1994 (pers. obs.).~~

~~In nearby Sicily, the Starling was first recorded breeding in 1979 but probably had been breeding since 1974 (Iapichino & Baglieri 1979).~~

~~Reference~~

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