

## SOME OBSERVATIONS ON WHITE-FRONTED TERNS AND SKUAS

By A. T. EDGAR

---

A nesting colony of White-fronted Terns (*S. striata*) on a rock at the south end of Bethells beach on the west coast of Auckland was under observation from January 16-24, 1951. On January 16 there were only 35 non-flyers left on the rock, plus two adults still brooding. The balance of the young birds could fly, and a few of the more advanced individuals were already seeking food for themselves, but the majority were still being fed by the parents, and spent their time either on the rock ledges, swimming in rock pools and shallow water, or squatting on the beach. Between fishing expeditions most of the adults rested on the rock or on the sand. On four separate occasions during a four-hour watching period, all the birds on the rock except the non-flying young took wing as if by order; the collection of birds on the beach carried out one similar flight during the same period. As far as could be seen there was no suggestion of alarm or disturbance, and the voluntary flights appeared to be in the nature of an exercise in which adults and young joined. The adults rose high in the air and circled for a few minutes on each occasion, and the young birds carried out similar evolutions, generally at a lower level; all then gradually dropped back to their original positions on the rock or the beach.

Black-backed Gulls (*L. dominicanus*) are a menace to rock colonies of White-fronted Terns. At Bethells and at Whatipu (where hatching started on 26/12/50) these gulls hanging around in the air over the colonies were frequently mobbed by terns and driven off or forced to settle on the water. At Bethells there was a gull nest on the pinnacle of the tern rock, at which sat a non-flying young gull. While one of the exercise flights was in progress an adult gull landed on the lower rock ledge and walked slowly towards the small congregation of non-flying young terns, but several of the adults broke off their circling flight to attack it and drive it away.

For the first few days of the period most of the fishing was well out to sea and 1½-2 miles or more north of the colony. On January 22 and 23 there were strong easterly winds, the shoals of fish were offshore from the southern half of Bethells beach, and the large congregation of gannets, shags, shearwaters, gulls, terns and skuas could be more easily watched, though visibility was still limited by distance and windblown spray.

About 80 Gannets (*S. serrator*) were present at the shoal, and provided a fine exhibition of vertical diving. When the hunt was at its height they flew to and fro low over the water and engaged in shallow diving, entering the water at an angle of about 45 degrees. After each period of intense feeding activity many of the Gannets rested on the water; subsequent takeoff was a laboured operation, accompanied by strong wing-flapping and paddling with the feet.

Spotted Shags (*S. punctatus*) were constantly on the move between the shoal and Ihumoana at the north end of the beach, in singles and small parties of up to six birds. When the fishing was at its best

the number of shags present at the shoal usually varied from 50-100 at any one time.

On January 22 and 23 the concentration of skuas numbered at least twenty. Most of the time they worked on the main body of fishing terns, and only occasionally came closer inshore while chasing a tern that was flying back towards the rock. Periods of intense activity alternated with periods of rest, during which a good proportion of the skuas sat on the water, sometimes fairly close to the beach, usually singly, though on two occasions I saw four skuas swimming together, once with a fifth bird nearby. Normal flight is graceful, with a good deal of gliding; on one occasion twelve skuas were seen to fly line ahead low over the water, followed at some distance by a thirteenth. When in pursuit, flight was accelerated to an extraordinary degree, both wings and tail being used to the limit in following every turn and twist of the hunted tern; the feet of the skua, normally held close to the body, were frequently dropped during the chase. Single skuas circling in the air usually attacked from above; skuas which had been swimming and rose from the water to return to the hunt were seen to attack both from above and from below. Frequently two, sometimes three, and once four, skuas attacked a single tern; usually only one skua dropped to retrieve the fallen fish but on one occasion two skuas swooped down and appeared to be squabbling for possession, on the water. Usually the chase was pursued with great persistence until the tern dropped its fish, but on January 22 and 23 when there was the greatest profusion of fish, the skuas seemed inclined to give up the chase much more easily if the tern was agile enough to escape in the early stages of the attack. At one time on the 23rd when most of the terns were resting and the shoal was attended mainly by gannets and shearwaters, some skuas were observed to join in the fishing and catch fish for themselves.

Roughly two-thirds of the skuas were in light phase plumage; several in adult dress with dark cap, some with and some without darkish pectoral band, and with varying amounts of barring on upper and under tail coverts. One younger bird (probably second winter) had a brownish crown, whitish face with darker lores, dark wings and tail and fairly definite barring on the underparts, strongest on the breast; another (perhaps first winter) appeared altogether a greyer bird with underparts continuously but more obscurely barred and the head and neck whitish but much tinged with brown.

One dark bird had a general appearance of mixed brown and light brown; a second was much darker brown, with small pale tips to the wing quills and underparts below the breast obscurely barred brown and greyish white; this bird was on two occasions observed to fly down and pat the water with its feet. Most of the skuas were undoubtedly Arctic (*S. parasiticus*) but of the remaining dark birds on which little or no barring was noticeable one, watched for a considerable time sitting on the water close to another dark bird, both birds in the same field of my binoculars, was so markedly larger than its companion that I think it must have been Pomarine (*S. pomarinus*), although the diagnostic projecting tail feathers were not visible from my observation point. In flight the skuas showed varying amounts of white on the wing quills but what with the extreme activity, the distance and the driving spray I was unable to make any very useful notes on this point.