

The earlier birds were much larger, with a vastly different flight pattern and with a much larger black cap coming right down in line with the bill. After comparing the field notes on both types, I feel that my original tentative identification of *gravis* must stand.

The most numerous species seen on this passage through the Kermadecs was *nigripennis*; up to a hundred of these birds could be seen about the ship throughout the day. That large numbers stayed with the ship all night cannot be doubted as their distinctive calls could be heard from the bridge throughout the hours of darkness. At 0700 hours on 19/1/70 in position 33° 37' S, 179° 29' W; wind N 13 knots; air 73°; sea 73°, there were still about 40 *nigripennis* accompanying the vessel. This number gradually declined through the day until at 1830 hours in position 35° 40' S, 179° 37' E; wind S 13 knots, air 71°; sea 71°, there were seven of them still following. On 20/1/70 at first light the vessel was on the New Zealand coast south of East Cape and no more *nigripennis* were seen.

It was most interesting to notice the different behaviour of these Kermadec birds from that of *nigripennis* about the north of New Zealand. The New Zealand birds can be relied upon to give a good display of their high flying chases, as described in the Field Guide. The Kermadec birds not only did this but flew close up to the ship, above the bridge and masts more in the fashion of gulls than petrels. The chasing of one bird by two or three others occurred continuously, the birds calling throughout the chase.

— JOHN JENKINS



LITTLE BLACK SHAGS AT GISBORNE

There have been no recorded occurrences of the Little Black Shag *Phalacrocorax sulcirostris* from the Gisborne-East Coast area; but in 1967 and 1968 I suspected that flocks of shags numbering up to 28, flying high overhead to and from the upper reaches of the Waimata River, might be of this species. Confirmation came in March and April 1969, when a feeding flock travelled daily up the river, the maximum count being 41 birds. Usually they progressed rapidly on the deeper far side, feeding on shoals of sprats (yellow-eyed mullet); but sometimes they used the near side with its gently sloping bank, and fed on small flounder, about two inches long. On these occasions, excitement in the flock was even more intense than when a shoal of sprats was encountered, many birds stranding themselves on the bank during dives; and none appeared to fail in catching a flounder at every dive. It is interesting to note that the feeding habits of *P. sulcirostris* are precisely the same as those of the Guanay *P. capensis bougainvillei* of the Peruvian Guano Islands. Nelson (1968) in "Galapagos: Islands of Birds," describes how this species travels in an irregular mass, diving almost in unison, with the rearmost birds continually leap-frogging and landing ahead of the main flock. He expresses the opinion that communal hunting is unlikely to be a specially important mechanism, and goes on to say "It would be fascinating to know more about the precise schooling behaviour of *anchovetas* and what effect hunting Guanays have on

their behaviour." As the feeding habits of the two species are very similar, it would follow that *anchovetas* react in a manner similar to sprats; that is to say, they scatter wildly giving each bird of the feeding flock the opportunity of taking its prey, which it rarely fails to do. Thus it would seem that communal hunting is in fact of advantage to both species.

R. W. S. Cavanagh (*unpub.*) observed Little Black Shags in Hawkes Bay in 1961 at Lakes Purimu, Runanga, Rotoehu, and Hurumoana. He found a nesting colony on Lake Hurumoana, off the Hastings-Taihape Road, and suspected that birds were also nesting on an island in Lake Purimu in company with shags of other species. Sibson (*in litt*) observed four birds at the Tukituki Estuary on 18/5/53, and he states that the species is now numerous at Westshore and the Ahuriri Lagoon.

— A. BLACKBURN



NOTES ON CALLING AND BEHAVIOUR OF THE STEWART ISLAND KIWI

During the period 20 September to 29 October 1969 I was a member of a Wildlife Service survey party based at Port Pegasus, Stewart Island. Kiwis *Apteryx australis lawryi* are plentiful throughout this area and were occasionally seen or heard during daylight hours.

The following observation was made at 16.45 hours on 22/10/69 in tall mixed rata forest about 50 yards from the coast of Pegasus Passage, Port Pegasus. As no published account of *lawryi* calling in the wild appears to exist the following may prove of interest.

I heard a male begin calling about 50 yards away, so hurried to the place. By the time I had located the male a female had started her answering call. Both birds were within five yards of me and the female was in full view. The male was obscured by low fern at about three yards from the female.

The male ceased calling about half a minute after my arrival, then began to chase the female which also immediately ceased calling. They appeared quite indifferent to my presence and the chase continued in small circles, reaching a climax when the male seized the female by the middle of the back. At this point the female broke away and unfortunately crashed into my legs. This brought an abrupt end to the proceedings.

Visibility at the time in the dark bush was poor. The female was the only one of the pair I actually saw calling. She began her low rasping call with head and neck extended and beak fairly wide open pointing upwards. During the actual call, which was repeated several times, she lowered her head slowly until the lower beak-tip was almost touching the ground. As the head was lowered the beak was wagged from side to side, giving a quavering effect to the sound.

The very "scratchy" lower volume sound seemed to come when the bird was breathing in as it lifted its head for the repeat call.

— K. P. HORGAN