WHITE-WINGED BLACK TERNS NEAR AUCKLAND.

By R. B. Sibson, Auckland.

In the late afternoon of 14/2/53, F. M. Brookfield, G. W. Gummer and I found an obvious marsh-tern of the genus Chlidonias, flitting tirelessly over the shallow man-made pools which lie a short distance back from the beach at Miranda. Although the black-fronted tern (**S. albostriatus**) has not yet been recorded in the Firth of Thames, we were at first inclined to assume that the bird which we had before us was an **albostriatus** in some sort of puzzling immature or transitional plumage; but the longer we watched the more we doubted this identification, and we began to wonder if this bird might not be a white-winged black tern in winter plumage. It was flying low over the water into the fresh wind, dipping lightly to pick food off the surface with a quick downward movement of the bill. Not once was it seen to plunge and break the surface with a splash. On reaching the windward shore of the pool it swung back to the other end and worked steadily upwind again. The local stilts disliked its low-flying tactics and darted at it.

Both F.M.B. and I have had some experience of **C. albostriatus** in the south. Our reasons for doubting if this bird was **albostriatus** were:—

(a) Its underparts from chin to tail were quite white and generally it was not dusky enough.

(b) The rump was not markedly white but was of the same pale grey as back and tail.

(c) The tail, though in fact slightly forked, usually looked almost square and was sometimes bluntly fanned.

(d) The dark markings on the fore edge, tips (primaries) and part of the rear edge (secondaries) of the wings made too great a contrast with the light grey of the rest of the wings and back. (v. Sketch A.)

(e) The shape of the wings and the bird's manner of flight and feeding did not accord with what we remembered of the black-fronted tern.

Further points noted on its first appearance were that the bill was small and dark; the face and forehead were white; there was a patch of black on the back of the crown and nape, extending down to a thin wedge behind each eye, but because of the bird's restlessness the exact shape of the black was difficult to determine; the lower neck was white, so that the observer gained the impression of a white collar; the legs were dark red; there were no brown mottlings to indicate that it was a juvenile; finally, as one of the watchers remarked, "the pattern of the wings was almost prionlike."

On the following morning the bird could not be found, but in the afternoon it revisited the pools and was watched for some time by H. R. McKenzie and Miss N. Macdonald. Neither had ever seen a tern like it.

What had made me hesitate to identify it as a white-winged black tern was the uniform grey of the back, rump and tail. (v. Alexander, Birds of the Ocean, p. 189.) On this point, however, The Handbook of British Birds (vol. 5, p. 9) says: "In adults in winter rump tends to be rather paler than back, but this is very indefinite and quite worthless as a field character." Further observations in the next two months were to show that it was indeed a specimen of **C. leucopterus**, a species not previously reported from the North Island.

On 22/2/53 Mr. and Mrs. J. Prickett took me to Miranda. We were at the mouth of the creek when the "mystery" tern appeared suddenly and settled out of sight among godwits, stilts and gulls. Later it was watched over the pools, and I carefully noted that the rump was of much the same shade of grey as the back and tail. N.M. secured some photographs.

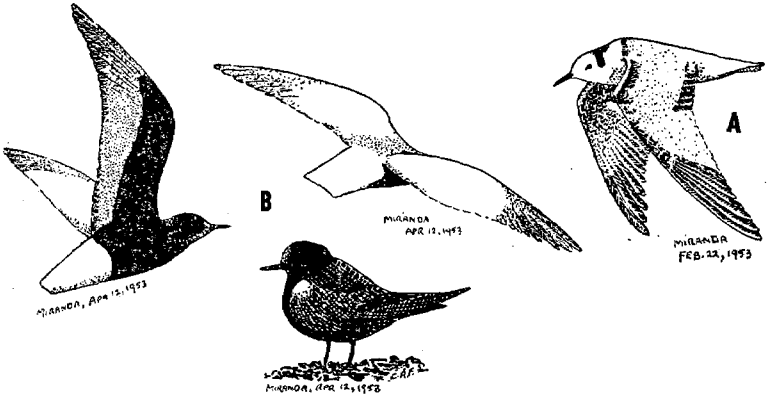
On 28/2/53, D. Brathwaite and D. A. Urquhart and I had the opportunity of watching it again. The pattern of the upper surface of the wing was, if anything, more striking than before, but as yet there was no

hint of the remarkable changes which were to alter the whole appearance of the bird. Away from its favourite pools it spent some time flying up and down Miranda Creek and over the mangroves, apparently hawking flies. We spent the night at Miranda. Next morning at 7 o'clock a sharp unknown call made me look up, and there were two of these terns. After they had spent some time hawking over the creek, one headed off for the pools and the other flew northwards up the coast. I did not see the two together again, but Mr. John Jonson, of Kaiaua, writing in May, reported that two birds "which seem to be a pair and are about the size of a pigeon, are flying about one of the water-holes this side of Miranda. They are catching flies or insects and are very interesting to watch."

The next report comes from H.R.McK., who, on 19/3/53, found the tern resting with stilts in a patch of salicornia. There was now no doubt that it was a white-winged black tern assuming breeding plumage. According to H.R.McK.'s notes, "the underwing was so heavily mottled with black as to be nearly all black; the sides of the body under the wing were also blackening; across the shoulders ran a thin dark line below the white of the neck; the upper surface of the wing was quite dark with a lighter panel over the shoulder as in the adult W.W.B.T.; the extent of the black on the head was much as before."

On 6/4/53, J. C. Davenport and I found the tern again. It was rapidly assuming nuptial dress. Back, flanks and belly were now wholly black. The black of the wings had deepened. Face, forehead, throat and neck were still white, but the black on crown and nape was increasing, so that the white-collared effect was more pronounced than ever. The tail was now conspicuously white. The bird was now on good terms with the local stilts. It was seen to fly with them and settle near them on an islet in the pool.

Further changes occurred in the ensuing week, for when N.M. photographed the tern on 12/4/53 the neck was darkening but forehead, face and chin were still white. By 17/4/53, as reported by H.R.McK. and J.C.D. the white area on the head had still further diminished. The bill was still dark. Although this was the last occasion on which the white-winged black tern was seen at Miranda by regular members of the Auckland ornithological team, Mr. Jonson's letter, quoted above, seems to indicate that two birds were frequenting the pools at least till May. (v. Sketch B.)



WHITE-WINGED BLACK TERN, MIRANDA, 1953.

Sketches from photographs by N. Macdonald. A: In early stage of assuming breeding plumage on Feb. 22, 1953; and B (three positions) in advanced nuptial dress, showing the distinctive underwing pattern and white tail.

Some weeks later, Auckland ornithologists had another C. leucopterus to watch. On 14/6/53 when they were taking a winter census of waders in Manukau, B. D. Heather reported seeing an unusual tern over a flooded paddock beside Ascot Road, Mangere, and about a quarter of a mile inland from Puketutu Flats. The collapse of a drain and prolonged rains had turned a low-lying paddock into a most attractive pool, some three acres in extent. Because of the wet winter, this pool lasted till September. Stilts soon found it a rich feeding-ground; red-billed gulls in hundreds resorted to it for bathing; a white-faced heron spent a week there in late June; and on almost any day till 27/8/53 it was possible to see the white-winged black tern swooping and dipping over the surface. Of the many ornithologists who went keen to see it, few were disappointed. In the eleven weeks between June 14 and August 27 I made twenty-three visits to Ascot "flash", and on nineteen of these the tern was present. The following notes are from my diary:—

June 15.—3 p.m.: Clear and sunny. The tern was busily hawking and alighted only once while I was watching. Many stilts and gulls were present but did not molest it. Once it picked something off the water from among four gulls and later its sudden swoop upset a stilt's balance. Its plumage is much the same as that of the Miranda bird when it was first seen, but the black and grey pattern of the wings is less vivid and there seem to be faint brown flecks on the upper surface.

June 16.—3.45 p.m.: Tern tirelessly flitting up and down pool. Two stilts which came in followed it up and down once, during which pursuit it twice dipped unconcernedly down to the surface.

June 18.—4.10 p.m.: Tern left the pool for the harbour, where I found it resting on a small rock near Puketutu causeway.

June 19.—4 p.m.: Tern restless as ever. Weather bitterly cold.

June 25.—4 p.m.: A squall was threatening and the tern came in from the harbour. Then parties of stilts, with the wind behind them, came rocketing in from the tideline. The tern flew up and down the pool with them before they settled.

July 11.—The brown in the wings seems to be fading.

July 22.—3.15 p.m.: Very cold. Tern feeding busily. The grey of the upper wing is cleaner. The contrast between the black and grey is sharper.

July 29.—1.30 p.m.: N.M. kindly supplied the following note: "The tern landed on a small grassy island in the pool and stayed there preening busily while I watched it through Mr. Prickett's powerful telescope. Of particular interest were the markings on the head which could be clearly seen. Crown and nape were dark and mottled, while the dark continued in a line at the back of the eye, but with a space of pure white between it and the eye. The neck was pure white. The back was grey, slightly darker across the shoulders, the rump grey and the tail was pale grey above and white underneath. The outer primaries were black or very dark. The rest of the wings was grey, darker on the secondaries. The bill was dark with a slight reddish tinge. The feet were hidden in the grass. The bird was obviously moulting, because as I watched, it pulled out a grey secondary feather which fluttered on to the grass. When not preening, the bird would settle down into the grass and appear to doze. A characteristic movement in flight is a graceful skimming for several yards just above the surface of the water, then a rapid rise and down again, wings flapping continuously."

August 4.—9.15 a.m.: Red-billed gulls dominated the pool. The tern was lurking either in a corner or on a little pond nearby. When it flew over the big pool the gulls chased it, but it had no difficulty in dodging them. It appeared to catch insects over the land. Once, with stilts, it flew some way inland and returned with them. It spends much more time resting now. As the gulls moved away it resumed its hunting over the pool. The croaking of frogs suggests that frog spawn or tadpoles may be a new source of food.

August 6.—4 p.m:: The tern was resting on the island and I was able to examine with the aid of a telescope the markings of the head and to confirm N.M.'s findings. Its legs are reddish.

August 8.—8.45 a.m.: Hundreds of gulls present. When the tern emerged from its secluded corner into the open it was harried by gulls.

August 12.—The water is down a little. With the milder weather the tern spends more time on the ground. Today it was seen to walk about, apparently snapping up insects, which are likely to abound along the muddy fringe of the pool.

August 16.—Water very high again. Tern very active. No gulls.

August 27.—2.45 p.m.: Tern not present when Dr. Falla and I arrived. Suddenly it tumbled out of the sky and began to feed in its usual way, which recalled the popular song "Round and Round for Ever and Ever." Whereas back, rump and upper surface of tail were of a fairly uniform pale grey when this tern was first noticed in June, now the rump is showing white in contrast to the grey of the back and tail, and the pattern in the wings is more pronounced.

It is rather surprising that a white-winged black tern should spend the coldest months of the winter in a place so bleak as Mangere, which is exposed to the full force of the south-west winds. Ihumatao, which is part of Mangere, means "cold nose." There is no doubt that the tern was attracted, as were many stilts, by a sizeable sheet of casual water as a potential feeding-ground. Recent observations, both in Mangere and at Miranda, suggest that shallow pools near the coast which are sufficiently rich in insect life to attract stilts, also suit wandering white-winged black tern.

It may not be unprofitable to speculate on the age of the two single terns which are the subject of this discussion. If, as seems likely, they were bred in some Asiatic marsh, I am inclined to think that the Miranda bird was nearly two years old, i.e., hatched about June, 1951, and the Mangere bird a yearling, i.e., hatched about June, 1952. This hypothesis tallies quite well with the observed changes in their plumages, e.g., the almost complete assumption of nuptial dress by the Miranda bird—though it would have to travel fast if it was going to be breeding in Asia by the end of May—and the disappearance of the last traces of brown immature mottling in the Mangere bird. Alexander (Emu, Vol. 17, pp. 95-100) has described a remarkable invasion of thousands of white-winged black tern into Western Australia at Easter in 1917. They arrived overland from the north-east after a strong easterly blow. Nearly all were immature. Less than 1% were in full breeding plumage. The Cape York area is probably a regular wintering ground for white-winged black tern of Asiatic origin. The species is not known to breed in Australia.

But if, as Stead believed, white-winged black tern bred at Lake Ellesmere and these birds were of New Zealand origin, I would suggest that the Miranda bird was hatched about December, 1951, and the Mangere bird about December, 1952. On this hypothesis the Miranda bird was assuming nuptial dress some six months before actual breeding. This is not as surprising as it at first seems. Some black-fronted terns (**C. albostriatus**) are in nuptial dress by the end of May, though four or five months must elapse before egg-laying. In Africa, **C. leucopterus** breeds just south of the equator, in Kenya nd Tanganyika, in June and July. It would, indeed, be interesting if at the other end of its world range it was breeding as far south of the equator as the South Island of New Zealand.

All previous New Zealand records of the white-winged black tern have been from the South Island. However, had I not been guilty, as I am now convinced, of a misidentification, this species would have been recorded more than a decade ago from the North Island. On 6/5/41 W. Ridland and I watched a marsh-tern flitting over Lake Kanono, a big pool among the Poutu sandhills near North Kaipara Heads. Although I was a newcomer to New Zealand, I had seen black-fronted terns at Muriwai, some thirty miles to the south, and I somewhat hastily assumed that this bird was also a

black-fronted tern. (Rep. and Bull, O.S.N.Z., p. 85 and Notornis 3, p. 11.) Fortunately the bird was so strikingly marked that I took careful note of its plumage, and when it alighted on a post made a hasty thumbnail sketch. In the light of recent experiences I am quite certain that it could only have been a white-winged black tern. While we were watching the tern, a fine specimen of the blue moon butterfly (**Hypolimnas bolina**) was sunning itself on the scrub manuka. Is it too fanciful to suppose that both tern and butterfly had been borne on the same wind from the direction of northern Australia?

Two other possible occurrences of **C. leucopterus** have come to light. In September 1953 I visited the Far North and in the course of conversations with Messrs. A. H. Watt and Kaka Wiki, learnt that in August 1949 and again in August 1953 at Te Kao single small greyish terns had visited wet paddocks which were much frequented by red-billed gulls. From the description of their behaviour I concluded that, while certainty was impossible, these terns were in all likelihood specimens of **C. leucopterus**, which has truly been described as a "great wanderer."

If the white-winged black tern is not breeding in New Zealand—and there is no substantial evidence that it is—its reaching New Zealand at all is a feat of travelling comparable with the occasional wandering to eastern America by specimens of presumably European origin. A perusal of the relevant literature shows that little is known about the normal southern limits in winter of the Asiatic population. Malayan ornithologists agree that the species is a regular migrant and winter visitor to the Straits of Malacca, Gibson-Hill adding that the numbers vary considerably from year to year. In the Philippines, Delacour and Mayr tersely describe it as a winter visitor. Mayr does not include it either in his list of New Guinea Birds, 1941, or in his Birds of the South-West Pacific, 1945. According to Serventy and Whittell, it "sometimes reaches the coast of northern Australia." Alexander chronicled the great invasion of Western Australia in 1917, but nearly thirty years elapsed before the species was recorded again. Hindwood (in lit) knows of no occurrence near Sydney.

Of the many Auckland ornithologists who watched the local white-winged black terns in 1953, I am especially grateful to Miss N. Macdonald, Mr. H. R. McKenzie and Mr. and Mrs. J. Prickett, who put at my disposal their notes and photographs, and, in discussion, gave me the benefit of their observations on these stimulating birds.

THREE OBSERVATIONS OF FANTAILS.

By J. M. Cunningham, Masterton.

(1) INCUBATION.—On September 5, 1953, I noticed a pair of fantails (**Rhipidura flabellifera**) had just, within a few hours, commenced building a nest on a tree fern frond, overhanging a stream flowing through my garden. It was thus favourably placed for observation and activities were watched in some detail. The nest, five feet above the water, was sheltered by another dead frond, and differed in no way from numerous published descriptions. On examining the not inconsiderable literature, however, I was amazed to find an almost complete absence of data concerning the incubation period. With such a common and readily observable species, it is certain that the period must have been determined on many occasions, but the only published references are W. R. B. Oliver (N.Z. Birds, 1930, p. 470) who states: "Mr. Wilkinson informs me that the period of incubation is 13 days and the young spend a further fortnight in the nest," and A. S. and the late Amy Wilkinson (Kapiti Bird Sanctuary, 1952, p. 64): "Incubation lasts about 13 days and for two weeks the young stay in the nest." ("About 13 days" does not, of course, imply doubt but rather that the period is variable.)