

AN ARCTIC TERN AT THE TARAWERA RIVER MOUTH

By P. C. M. LATHAM

A small, slim, whitish tern was seen at the mouth of the Tarawera River, in the Bay of Plenty, on the afternoon of 10 June 1978. It was roosting on the beach in a mixed flock of Black-fronted Terns (*Chlidonias albostratus*), White-fronted Terns (*Sterna striata*), Red-billed Gulls (*Larus novaehollandiae*) and Black-billed Gulls (*L. bulleri*).

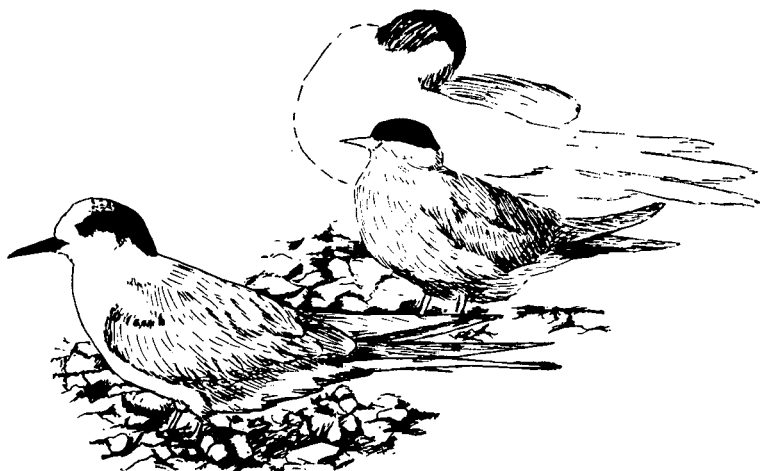


FIGURE 1 — Arctic Tern (foreground) at Tarawera River mouth, from colour slide by P. C. M. Latham. Bill somewhat distorted against disruptive shingle background. Black-fronted Tern in centre (head turned slightly, foreshortening bill); preening White-fronted Tern (out of focus) behind, included for comparison of size.

Body size: That of a Black-fronted Tern, but appearing slimmer and longer because of its long tail streamers. My first impression was of a rather small White-fronted Tern.

Forehead: White from base of bill right back to forepart of crown.

Crown: Fore-crown white, mid-crown streaked with black, hind-crown and nape a shiny, black cap down to the mantle.

Lores: White.

Ear coverts: Black. The black of the nape came forward in a broad line to surround the eye.

Underparts from chin and cheek to under tail-coverts: White.

Mantle and back: Pale pearly grey, slightly darker than *striata*.

Rump and upper tail-coverts: White.

Tail: White, except for dark grey outer edges of the outer tail streamers. When the bird was at rest these long, slender tail streamers projected a little beyond the wing tips.

Upper wing surface: Grey, darker than mantle and back; i.e. darker than that of *striata* but not as dark as that of *albostrriatus*. When the wing was folded a mottled, blackish-grey edging showed at the carpal joint. This was not a bold marking but indistinct and difficult to see at any distance.

Underwing: White with dark grey primary tips.

Bill: Black with a small, dull red patch at the base of the lower mandible, noticeable only at close range in good light; longer and slimmer than that of *albostrriatus*, shorter but the same shape as that of *striata*. Inside the mouth was bright, blood red.

Legs: Red, very short, making the bird look as though it was almost lying on the ground; compared to those of *albostrriatus* (average tarsus length 16 mm — Oliver 1955), appearing not only shorter but slighter.

During the half hour or so that I watched, from a distance of about 14 metres, the tern showed no alarm at my presence nor was it harried at any stage by any of the birds about it. When last seen it was flying out to sea, in easy, buoyant fashion, in the company of three Black-fronted Terns.

Though this description more or less fits the non-breeding dress of four similar species of tern which occur in or close to the New Zealand region, the Common Tern (*Sterna hirundo*), the Roseate Tern (*Sterna dougalli*), the Antarctic Tern (*Sterna vittata*) and the Arctic Tern (*Sterna paradisaea*), only *paradisaea* matches it exactly.

The eastern race of the Common Tern (*Sterna hirundo longipennis*), the race most likely to reach New Zealand as it annually visits eastern Australia, has, until very recently, not been recorded here. It can however be eliminated on a number of points. The bill and legs are black at all times (Slater 1970); the average tarsus length is 20 mm and the tail streamers do not project beyond tips of the folded wing and the bill is more robust than that of the White-fronted Tern (Serventy *et al.* 1971). The last three points apply to all races of the Common Tern. In his description of the immature *longipennis* Slater (1970) says it has dusky secondaries, pale grey rump and broad carpal bar particularly obvious when the bird perches. Serventy *et al.* (1971) add that it has brown barring on the mantle.

The Roseate Tern, which has not been recorded in New Zealand, has an average tarsus length of 19 mm (Serventy *et al.* 1971) and has entirely white tail streamers very much longer than the folded wing tips (Slater 1970). As an immature, *dougalli* has black legs, lacks a white forehead, and mantle and back are coarsely scaled, almost barred and often show some buff colouring (Grant & Scott 1969).

The New Zealand race of the Antarctic Tern, *Sterna vittata bethunei*, though breeding at the South Cape and Snares Islands, and at Port Pegasus in Stewart Island in 1977-78 (R. B. Sibson pers comm.), has yet to be recorded from mainland New Zealand. Murphy (1938) gave the average tarsus length of *bethunei* as 18.9 mm. Watson (1975) described the outer tail streamers of the Antarctic Tern as "... white or only lightly washed with pale grey on the outer web." He also says the immature and nonbreeding adult have black bill and feet, and "The Antarctic Tern has a more robust body and heavier bill than the Arctic Tern, . . ." The last point, however, is valuable only in a situation of direct comparison.

The Arctic Tern, though breeding in the sub-arctic and arctic zones of the northern hemisphere, migrates south to spend the northern winter in the Antarctic off the continental pack ice, particularly in the Weddell Sea (Watson 1975). It is known to have occurred in New Zealand several times and indeed may pass through annually (R. B. Sibson, pers. comm.). The dark grey outer edges of the outer tail streamers and the very short tarsus are important distinguishing features of *paradisaea* when they can be seen to advantage. Both Murphy (1938) and Watson (1975), when comparing *vittata* with *paradisaea*, drew attention to these features. Murphy (1938) gave the average tarsus length as 15.8 mm. He also said, "The plumage of *paradisaea* is of a lighter and more pearly grey, particularly on the ventral surface, than that of the palest race of *vittata* . . . the tail streamers are relatively longer and more slender in *paradisaea* than in any form of *vittata*." Watson (1975) mentioned the tail streamers as projecting beyond the folded wing tips and Serventy *et al.* (1971) stated that the ends of the primaries are grey.

The following is taken from Grant & Scott's (1969) description of the immature Arctic Tern. References to the Common Tern have been omitted as they apply to the European race (*S. h. hirundo*). "... bill . . . appears all black, although some older individuals actually have at the base of the lower mandible a little red which is rather difficult to see in the field. Legs orange, usually redder-orange . . . in older birds. General plumage coloration is black, grey and white, lacking buff or brown. The mantle lacks any strong scaling and is virtually uniform grey, especially in older individuals. When on the ground, the less extensive dark carpal bar is usually only just visible on the folded wing as it is largely hidden by the overlap of the mantle feathers. Except in very newly fledged birds, which

retain some feather down, the forehead is always pure white and the cap is jet black, even glossy. From below, against the light or in bright sun, the undersides of the primaries appear very white and translucent, and have a thin clear-cut black line along the tips. The secondaries are also translucent”

A final relevant point regarding the sub-adult *paradisaea* is that “first- and second-year birds retain white foreheads all year and have a dark cubital bar on the ulnar portion of the upper wing” (Watson 1975).

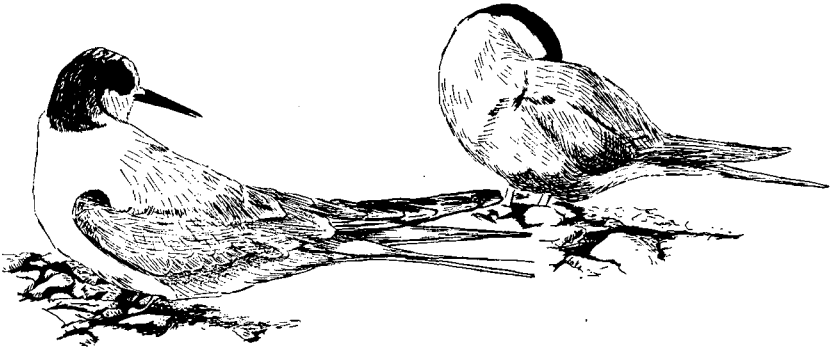


FIGURE 2 — Arctic Tern (foreground) with resting Black-fronted Tern at Tarawera River mouth. Bill on slide strongly distorted by movement. Note short, thin legs.

Having been fortunate enough to see the tern on land and with other species for direct comparison I found its identification far less formidable than if it had been flying. The very short legs, with *albostrigatus* for comparison, are in themselves diagnostic (Fig. 1 & 2). When this point is backed by the dark grey outer edges of the outer tail streamers, the streamers extending beyond the folded wing tips, slim bill, dark grey primary tips, indistinct cubital bar and white rump, the bird can safely be identified as an Arctic Tern.

It seems likely that the tern was sub-adult, as it was not in breeding plumage in June. Its description too, is consistent with that of an older immature, i.e. second summer bird. Campbell (1977) states, “Immature birds may stay south for their first summer or longer; breeding usually begins at three years old.”

It should be noted that the guide to distinguishing *vittata* from *paradisaea* in the Antarctic, by M. C. Downes (*Emu* 1952: 307) and reproduced by Falla *et al.* (1970: 164), should be used with caution as it is primarily applicable to birds seen in the austral summer, e.g. the leg and bill colours may well be reversed in the southern winter.

Most sightings and/or recoveries of Arctic Terns in the New Zealand region have been at river mouths and harbour entrances on the mainland or at outlying islands:

Waikanae River Mouth, Dec. 1929; a single live bird, collected (Oliver 1955).
 Waimakariri River Mouth, 1939; a single live bird, collected (Oliver 1955).
 Kaipara Heads, 1939 (O.S.N.Z. Checklist 1970).
 Auckland Islands, 1943; a single live bird, collected (Oliver 1955).
 Waikanae River Mouth, Oct. 1952; two live birds (Downes 1954).
 Manukau Harbour, Mar. 1961; four live birds (Edgar 1961).
 Auckland Islands, 1963 (O.S.N.Z. Checklist 1970).
 Foxton, Nov. 1963; a single dead bird (Imber 1965).
 Manukau Harbour, May 1968; a single dead bird (Frew 1969).
 Oreti Estuary, Southland, Jan. 1969; a single dead bird (Muller 1969).
 Aramoana, Dec. 1972; a single live bird (Hogg 1975).
 Chatham Islands, Jan. 1975; a single dead bird (Veitch 1975).
 Campbell Island, 1936, 1960 & 1962; all sightings of live birds but there appears to be some doubt about these records (Kinsky 1969).

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