with white below except for the breast where light greyish colouring was noticeable. In certain lights the white superciliary stripe and yellowish legs were visible.

The Tattler allowed approach to within 30 feet at which distance it was closely observed through 16×50 binoculars. A bobbing motion of the head was noticed when the bird stood still and on being disturbed it gave a rapid call of 3 or 4 high notes and flew low upstream. This short call, uttered only once, would appear to distinguish the bird seen from the, at times, almost identical Wandering Tattler (Heteroscelus incanus).

The Tattler was also noticed by Mr. and Mrs. G. Medway on 31/12/66, but apparently departed after that date, for it was not seen again although a careful search was made on a number of later occasions.

_ D. G. MEDWAY

NEW ZEALAND TATTLER RECORDS

By DAVID G. DAWSON

A sighting by me of a strange wader at the stilt lagoon (near the lighthouse) Kaikoura Peninsula, prompted me to review the New Zealand records of Tattlers. Oliver (1955) lists them as *Tringa incanus* (Wandering Tattler) and *Tringa brevipes* (Grey-rumped Tattler), while the Checklist (1953) lists them as subspecies of *Heteroscelus incanus*. As the two seem to be clearly separable on morphological grounds in the hand if not in the field I will use the former arrangement.

Most sightings have been in the New Zealand spring, summer and early autumn, when these birds are in their "winter" plumage. As is the case with most other arctic migrants some may remain here in the New Zealand winter. If they are adult these birds will be in their "summer" plumage. In this plumage both species show dark grey-brown barring on the undersurface. That of incanus is more distinct and extends onto the middle of the abdomen and under-tail coverts, while these areas are white in brevipes (Serventy 1944). Two New Zealand sight records mention the "summer" plumage as the criterion used in identification. These are both of brevipes (6 and 8). Three records deal with birds that appear to have been juvenile, as they did not show full breeding plumage of either species at a time when adults would be expected to. These are: 16 (17/7/60), 19 (13/5/61), and 21 (25/5/62), in the table.

In the "winter" plumage these two species are most difficult to distinguish. Three criteria have been suggested by New Zealand observers to aid in their identification at this time (our summer).

The first is a difference in habitat preference. This was never considered to be a diagnostic feature. The difference was first suggested by Brathwaite (1955). Sibson (pers. comm.) thinks that incanus is seldom, if ever, far from the tideline, and an inland Tattler is more likely to be brevipes. In Fiji, incanus may go some way inland up the bigger rivers.

RECORDS OF TATTLERS

References are to Notornis

- 1. Portland Island: two shot, 1883. Buller (1888).
- 2. Raoul Island: one shot ("summer" plumage), 1913. Oliver (1955).

3. Kawakawa: one, Aug. '48 to Dec. '50. (6: 111).

4. Parengarenga: six, 13/2/50 to end of Mar. '51 (4: 122-134).

5. Parengarenga: two, 10/1/51 to 26/3/51. (4: 122-134).

- 6. Parengarenga: three plus, 3 to 6/4/53. (5: 227). 7. Ahuriri Lagoon: one, 16/11/53. (6: 145-150).
- 8. Manukau: one, 25/4/55 to 7/5/55. (6: 243-244).
- 9. Manukau: one, 5/11/55 & 3/12/55. (6: 243-244 & 7: 92).
- 10. Manukau: one, 1/2/57 to 18/4/57. (7: 203).

11. Manukau: one, 29/10/57 to 20/4/58. (8: 87). 12. Farewell Spit: one, Mar. '58. (10: 58).

13. Manukau: one, throughout summer up to 26/4/59. (8: 224).

14. Kuaotunu Beach: one, Feb. '60. (9: 76).

- 15. Muriwai Lagoon (Gisborne): one: 13/3/60. (9:76).
- 16. Heathcote-Avon estuary: one, 17/7/60 & 10/1/61. (9: 135-136).
- 17. Waikanae estuary: one, 1/10/60 to 22/4/61. (10: 67-72).
- 18. Greenpark Huts: one, 25/3/61. (9: 243). 19. Aramoana (Otago Harbour): one, 13/5/61. (9: 181).
- 20. Chatham Island: one (B. D. Bell in litt.) 21. Farewell Spit: one, 24 & 25/5/62. (10: 58).
- 22. Farewell Spit: one, 19/9/62. (10: 224).
- 23. Black Reef: one, 10/11/62. (10: 188).
 24. Port Jackson (Coromandel): one, 21/12/62 to 1/1/63. (10: 236).
- Ahuriri Lagoon: one, 13/1/63 to early Feb. '63. '(10: 237). 25.
- 26. L. Tuakitoto (Kaitangata): one, 2/2/63 to 10/2/63. (10: 237-238).
- 27. Manukau: one, 22/11/63 to 27/1/64. (14: 35-36). 28. Waitakaruru, F.o.T.: one, 3/3/64. Miss A. Goodwin.
- 29. Mairetahi, Kaipara: one, 16/3/64. (12: 79).
- 30. Farewell Spit: three, 6/4/65. (13: 105).
- 31. Papanui Inlet: one, 9/5/65 to 25/7/65.
- 32. Kaikoura Peninsula: one, 10/5/65. (This paper).
- 33. Tarawera Rivermouth, B.o.P.: one, 24/9/66.
- 34. Waiongona rivermouth, New Plymouth: 26/12/66 to 31/12/66.
- 35. Farewell Spit: four, Jan. 1967. (14: 177).
- 36. Chatham Islands: one, 1967. (B. D. Bell in litt.).

The second criterion is the relative length of the nasal groove on the bill: in brevipes it ends "sharply exactly half-way along the upper mandible, . . . not tapering to two-thirds of the way along the bill as in H. i. incanus." (Andrew 1962). Serventy (1944) has shown this character holds for a sample of five incanus and twenty-seven brevipes specimens collected in Australia. This character is difficult to see in the field and only three New Zealand records claim identification based These are 3 and 22 for incanus and 17 for brevipes. upon it.

The third criterion for the identification of birds in "winter" plumage is the call. That of *incanus* is usually of several syllables (Hindwood and Hoskin 1954 and Sibson 1965). That of brevipes is normally given as a double note: "too-weet" (Hindwood and Hoskin 1954). No doubt this distinction usually holds, but shorter calls are recorded for *incanus*: "a sweet clear whistle of four even notes closely run together" given "except once, . . . on numerous occasions and at all seasons" (McKenzie 1949 & 1955), while longer ones are recorded for *brevipes*: "peeep-peeep-pip-pip-peep" (Keast quoted in Turbott 1951), "too-too-too somewhat slurred and all on the same pitch" (Andrew 1962). It is clear that *incanus* can give short calls and *brevipes* long ones. Our knowledge of the calls of these two is based upon few birds of known identity and little is known of possible age, sex, or seasonal differences. Thus identification cannot be based on the calls, at least until we have more information on the calls of birds of known identity. Records 4, 5, 9, 10, 11, 13, 16, 19, 20, 21, 24 and 25 rely upon the call for identification and must be considered identified only as Tattlers and not to species. All except 23 and 24 were considered *brevipes* by their authors.

Three records are of birds shot. Record 1 is of a pair shot in autumn. The description of the male identifies it as *incanus* in "summer" plumage, but that of the female could apply to either species. These skins are not in New Zealand (F. C. Kinsky pers. comm.). Record 2 is of a "specimen in summer plumage shot at Raoul Island . . ." and is considered to be *incanus* by Oliver. I have not found any indication that a skin was ever made of this bird.

The rest (7, 12, 14, 15, 18, 26, 29 and 32) are not considered identified to species by their authors.

Another criterion that has been suggested for distinguishing these two species is the rump colour. In *brevipes* there is a wide white barring on the upper tail coverts, while in *incanus* these bars are very narrow (Serventy 1944, Witherby *et al.* 1943); however Bull (1948) notes these bars may be worn and Andrew (1962) found them inconspicuous on a newly moulted bird. It seems this criterion is useful only on a skin (but see below).

Record 32 is the one that prompted this review. I watched the bird from a distance of about five to ten yards for an hour as it fed wading in the shallows with four Pied Stilts (Himantopus leucocephalus). Though unaided vision was used, my field notes and sketches identify the bird as a Tattler, uniform grey upperparts and pale-yellow legs being among the key points noted. Mr. D. H. Brathwaite independently came to the same conclusion on examining my notes. I recorded the call as "a single whistle, wavering in pitch." This description is perhaps nearer to the traditional one for brevipes, which is sometimes said to be slurred into one note, but my notes do not place the call clearly in either of the traditional categories. Though I noted "lighter rump" I feel this is not sufficient to be sure the bird was brevipes. This character would deserve more attention. Like records 16, 19 and 21, my bird was probably a juvenile. It is of note that all such late records of juveniles are from the South Island.

It is to the credit of New Zealand observers that seven records of this difficult pair are detailed enough to be sure of the specific rank (1, 2, 3 and 23 incanus and 6, 8 and 13 brevipes). The other sight records can at present be considered only as Tattlers, though there is reason to suspect most are records of brevipes. There is need for more careful study of calls and plumages along the lines of that reported by Andrew (1962) on the Waikanae brevipes.

REFERENCES

SHORT NOTES

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SPINE-TAILED SWIFTS OVER KAIPARA FLATS

On 21/11/67, a calm day, after recent northerly gales and rain, I was on a 600-foot hill-top on my farm at Kaipara Flats near Warkworth. The weather was generally dull with showers and occasional thunderstorms; but at 2.30 p.m. when the hill was bathed in warm sunshine, I became aware of the presence of six strange birds, darting and circling at incredible speeds, when one began repeatedly diving at me. They flew about the knoll for about half an hour during which time they "buzzed" me and the dogs frequently. Their speed was such that at close range the eye could not focus nor register much detail. Almost instantly they would be too distant for me to observe the smaller markings.

Their flight was remarkable in that there was very little wingbeating for the speeds maintained and they seldom went where expected. They could glide in a circle of about five chains in diameter with rigid wings and not lose height or speed. It seemed they were jet-propelled. No vocal sounds were heard; only a whistling swish as they rocketed by.

Against the sky, dark colouring predominated; but when they were seen from above, a greenish brown on the head and back was visible. At a certain angle to the sun a reddish purple glint would appear. A wide dirty white bar crossing the under-tail coverts and just showing on the lower back was dull and in contrast to the irridescence of the rest of the plumage. The wings were long and narrow at the tips and curved back evenly as though to form a fifth part of a circle. The short square tail was not forked. The head was blunt and rounded. I was unable to see sufficient of the eyes, bill or legs to warrant description.

The birds finally left the hill and began to climb, still circling and flying at a fantastic speed. A three-knot breeze carried them slowly to the south-east but they disappeared from sheer height.

On consulting "Oliver's Birds of N.Z." I decided that they were "Spine Tailed Swifts" (Chaetura caudacuta).