# Some Results from Banding Little Terns at Stockton, New South Wales

S. G. LANE

From January 1974 to November 1977, 252 Little Terns *Sterna albifrons* were banded* at Stockton, on the estuary of the Hunter River, N.S.W., during wader banding activities. All were caught at night in mist nets (wader nets). Because of the concentration on waders, full details of plumage, moult, etc. were not always recorded for the Little Terns, particularly during the first two seasons. However, some details are discussed in relation to the status of the species in N.S.W.; details of weights and measurements are given.

Two questions asked by C. B. Campion (1963) have not been satisfactorily answered. These questions were:

"1. Where do the populations of *S. albifrons* breeding in eastern Australia spend the winter?

2. What of the relatively large numbers of eclipse plumage *albifrons*, normally present (in Sydney, at least) during each breeding season? Are these birds merely immature 'reserves' of the local breeding populations, or do they include immatures and/or eclipse plumage adults of the northern hemisphere wintering here?"

Campion went on to say—"The assumption of nuptial plumage in May and June by some *albifrons* observed in the North Island of New Zealand (McKenzie and Sibson, 1957)† suggests that northern hemisphere birds do winter south of the equator."

Little Terns usually arrive in the estuary near Stockton about the beginning of September and generally depart by the end of April. Sometimes two or three birds have been recorded in the estuary during the winter months (May to August), but no specific details of the plumage of these birds are available.

In the first two banding seasons at Stockton most of the Little Terns were caught during the first four months of the years, the exception being seven which were caught on 4 May 1975. Subsequently birds have been caught from the first week in November until the last week in April.

On the nights of 19 and 20 December 1975, 33 birds were caught. All were in eclipse plumage with black or almost black bills, and were at a similar stage of moult; the two outer primaries were old, the next two were partly emerged and the remainder were new. At that time of the year the local population of Little Terns should be at the height of their breeding season along the eastern coast of Australia.

However, the breeding status along this coast is now precarious. It is unlikely that any of the 16 breeding stations listed by Campion (p. 131) could now be placed in that category. A. K. Morris (*pers comm.*) in a current summary has listed some 29 recorded breeding stations in New South Wales, but since 1970 he has indicated that breeding success has only been recorded at two or three of these, and then with only one or two pairs. It seems that at present two or three pairs may attempt to breed, probably with little success, in no more than a few of the breeding locations in this State.**

The plumage of the majority of the birds caught at Stockton in the early part of the season (November and December) has been outlined. There is a noticeable plumage change in those birds caught in March and April. Some Little Terns with yellow bills and obviously in breeding plumage have been seen in late March in com-

* *Bands used were provided by the Australian Bird-banding Scheme, Division of Wildlife Research, CSIRO.*

† McKenzie, H. R. and R. B. Sibson (1957), 'Does the Little Tern *Sterna albifrons* reach New Zealand?', *Notornis* 7: 174-182.

** A review of the current status of all breeding sites in New South Wales is at present being conducted by A. K. Morris and G. Holmes and a report is planned for 1978.

pany with birds having black bills and eclipse or almost eclipse plumage. But as already stated, most of the birds caught at that time of the year were completing a full body moult into breeding plumage. This is indicated clearly by one (band number 040-91724) which was banded on 11 December 1976 when it was in eclipse plumage with the bill completely black and with the moult of the wing primaries partly completed. It was recaptured on 19 March 1977 when the bill was showing horn-yellow in the centre and at the base of the lower mandible. It was completing a body moult into breeding plumage and its wing moult had been completed. A specimen in The Australian Museum (Reg. No. 045295) from Stockton in March 1975 is an example of this plumage. It is recorded as showing the "start of breeding plumage of the black crown". The oviduct was starting to thicken up and curl, thus indicating its approach to breeding. But where would it have bred? Certainly not in N.S.W. where the breeding season is from October to January. Although the breeding season may be as early as August in north Queensland, it seems more likely that this bird, and others like it, would be breeding birds from the northern hemisphere.

In Recovery Round-up (*Corella* 1: 22) details were given of a Little Tern banded as a nestling in Japan on 3 June 1975 which was recovered near Kerema in the Gulf of Papua, Papua New Guinea; this further indicates that Little Terns from northern hemisphere breeding locations in or about Japan probably visit the eastern coast of Australia during the northern hemisphere winter. It is not yet known where birds which originated from this coast spend the southern hemisphere winter months.

## Weights and Measurements

The following table gives details of weights and some measurements of birds caught from November to May at Stockton:

| | Weight (grams) | Wing Length (mm) | Bill Length (mm) |
|---|---|---|---|
| Maximum | 56 | 194 | 34.1 |
| Minimum | 39 | 157 | 26.2 |
| Mean | 47.5 | 173.6 | 29.5 |
| Standard Deviation | 3.3 | 8.9 | 1.7 |
| Number of Samples | 140 | 104 | 114 |

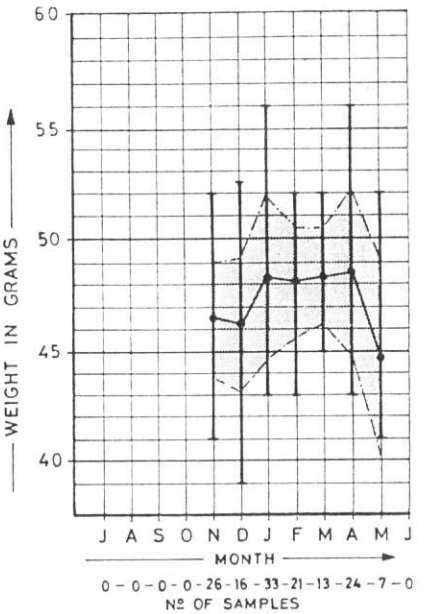


Figure 1. *Mean body weight of Little Tern* Sterna albifrons. *Maximum and minimum weight and the standard deviation (shaded area) are also shown.*

Figure 1 indicates the variation in mean body weight during the period involved. There is no apparent explanation for the drop in body weight for the month of May although the sample is small. However, it may indicate that those birds were ones which would have remained in Australia during our winter months.

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## Reference

Campion, C. B. (1963), 'Banding the Little Tern', *Bird Bander* 1: 125-132.

S. G. Lane, 65 Wood Street, Lane Cove, N.S.W. 2066.