

## THE LITTLE EGRET IN SOUTH AUSTRALIA

(By H. T. CONDON)

Since World War II there has been an increase in the amount of information in bird literature dealing with sight identifications and habits, and it is now a fairly simple matter to recognise species once thought impossible. Unfortunately, much of the newly-acquired knowledge is swallowed by inexperienced or uncritical observers with no good effects. In this connection I am thinking more especially of the increasingly bold and aggressive claims for rare or unusual water birds which have appeared in print in recent years.

Many of these claims are "inconclusive," to say the least, and I believe that the stage has now been reached where it is impossible to accept any new record for South Australia without a specimen.

### First Specimen of Little Egret

It is with great pleasure, therefore, that I am able to report, by means of a skin, the occurrence in South Australia of the Little Egret (*Egretta garzetta nigripes*).

For long it has been suspected that this species was an irregular visitor to this State, but proof was lacking.

The specimen is an adult male which was taken near St. Kilda, about 12 miles north of Adelaide, and forwarded to the South Australian Museum in fresh condition by Mr. R. W. McKecknie on April 7, 1958. It has two long plumes at the nape and short nuptial feathers on the upper breast and back. The bill, legs and feet were black, with the soles bright greenish yellow. The basal half of the lower mandible, lores and face were greenish-yellow and the irides were pale yellow. Measurements: wing 265 mm.; tarsus 101; culmen 89.

### Identification of Egrets

The taking of a specimen of the Little Egret does not necessarily "confirm" previously published claims of sight observations or add to their value. The heron family is notoriously difficult for the observer who is not conversant with bodily changes attributable to age, sex, or season. Investigations of seemingly reliable claims have shown on many occasions the need for rigorous editorial censorship. For instance, there are members

who have regularly reported the Brown Bittern (*Botaurus*) from districts where it undoubtedly occurs, yet I have found that these people did not know the difference between the bittern and the young of the Nankeen Night Heron (*Nycticorax*)!

Mistakes in sight identifications are sometimes understandable, but those due to ignorance and carelessness can be avoided. An observer should constantly guard against wishful thinking, a common fault, which is responsible for the majority of problematical claims.

Future sight records of the Little Egret are desirable only in one or more of the following circumstances.

1. Observations in connection with nesting activities which can be investigated. These have been reported rarely. The birds may breed in heronries in small groups in association with other members of the genus. Careful observation may be required to establish the presence of more than one species of egret in a breeding colony. The Little Egret has been known to breed at two places in New South Wales (Cawndilla lakes, near Broken Hill, and the Moree district), and in Victoria at Moira Lakes.

2. When a bird is observed showing the head plumes (see fig. 2). These are present during breeding season.

3. Full details of coloration of bill, face, and legs (tibiae and tarsi) having been obtained, preferably in conjunction with direct comparison for size with either White-fronted Heron (or some other common species) or with the large White Egret (*Egretta alba*).

There are a number of published reports of the Little Egret in *The Emu* and elsewhere for northern Australia. In most cases no descriptions of the birds seen are given. Because the species is known to occur regularly in tropical areas, such claims are rarely questioned. The same must not be assumed for southern Australia and observers are warned not to jump to conclusions. Serious objections to sight identifications may be raised in spite of known occurrences.

### Size

1. The Little Egret and Plumed Egret (*E. intermedia*) are both about the size of the

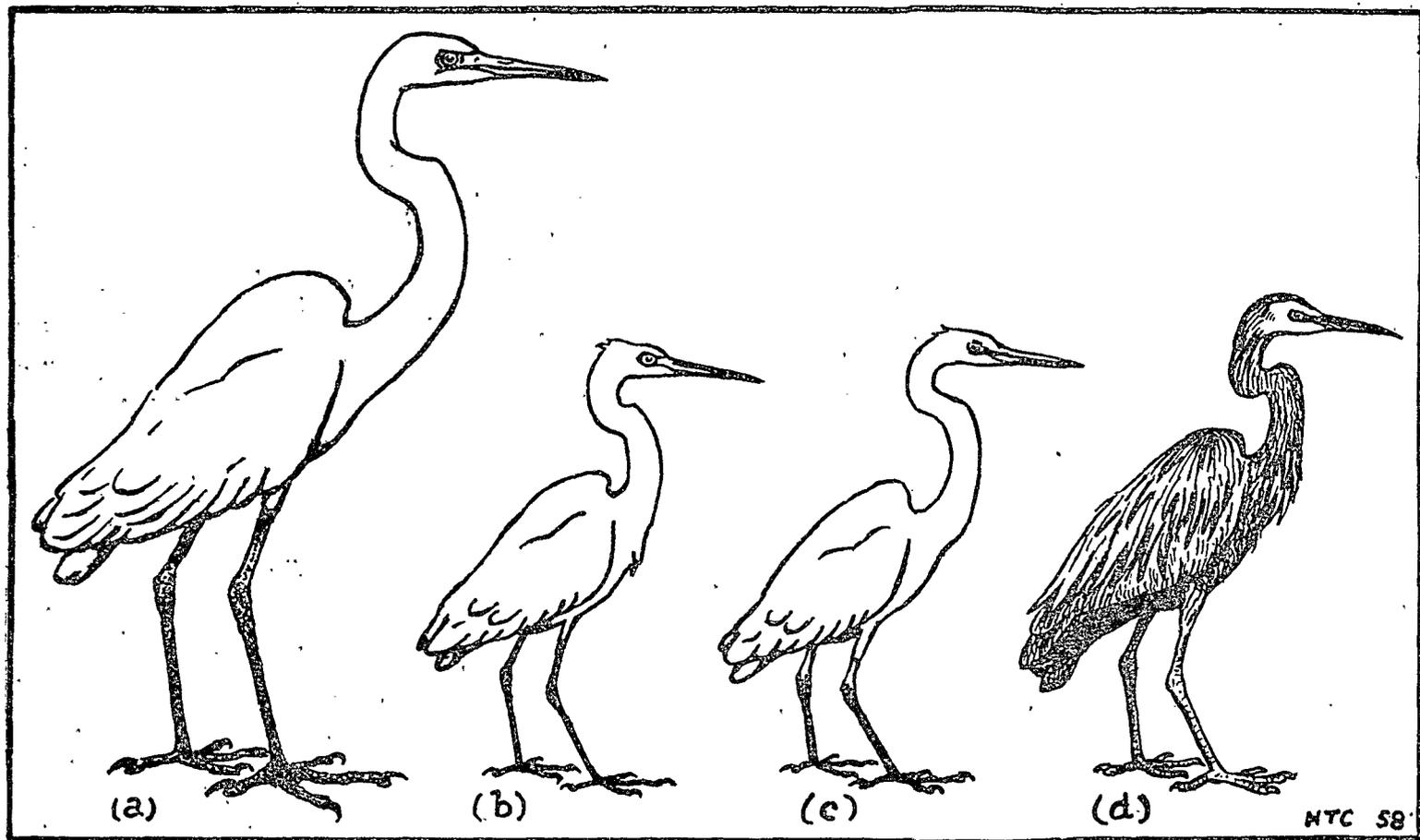


Fig. 1.—Egrets in non-breeding plumage: (a) White; (b) Little; (c) Plumed; (d) White-faced Heron. To scale  $\times \frac{1}{2}$ .

White-fronted Heron (*Notophoxyx novae-hollandiae*) and approximately only half the size of *Egretta alba*. Many writers have commented on the "slimmer and neater" (J. Jones) or more dainty appearance of *garzetta* when compared in life with *intermedia*. McGill (1955) considers that *garzetta* is "noticeably smaller than" the White-faced Heron, which is true so far as body size is concerned; the bill is the same length and tarsi somewhat shorter in the heron, which has a larger head and longer tail than the Little Egret. Bolger (1957) states "rather smaller than the White-faced Heron."

2. It has been suggested by Jack Jones (1940) and Arnold McGill (1944) that "Spotless Egret" would be a better name for the Little Egret because it is no smaller than the Plumed Egret. This suggestion hinges upon Gould's name for "*Herodias immaculata*," which is almost certainly a synonym and obsolete, although it has been employed subspecifically by Peters (1931) and Serventy and Whittell (1948). Amadon and Woolfenden (1952) use *nigripes* for Australian birds, a procedure which cannot be questioned. The name Little Egret is now widely used, as for example in writings on South African birds and in Asiatic publications as well as the latest A.O.U. Checklist (1957). It would be inadvisable to change it. Certain authors refer to *E. garzetta* as the "Snowy Egret." In Africa, there are several color phases in *E. garzetta*, including pale, dark grey, and multicolored forms.

### Plumes

The species of egrets found in Australia develop nuptial plumes or feathers which are lost after the breeding season.

1. Feathers on the back and lower fore-neck become greatly elongated and are delicately formed in *E. garzetta* and *E. intermedia*, but only back plumes resembling a train are acquired by breeding *E. alba*. In *E. garzetta* a pair of long, slender, white plumes extend from the nape for about six inches in breeding birds. They are not always visible.

2. The plumes on the body are more strongly developed in *E. intermedia* than in the Little Egret, hence the vernacular name of "Plumed Egret" for the first-named. Outside Australia *E. intermedia* is everywhere known as the "Lesser Egret," "Intermediate

Egret," or "Median Egret." According to Amadon and Woolfenden (1952) "geographical variation in this egret (*intermedia*) is slight and involves only the color of the bill and legs." Gould's name "*plumifera*," which must be used subspecifically for Australian birds, has no particular significance, therefore, and the vernacular name "Plumed Egret" could be dropped with advantage.

3. The back plumes extend for about one inch beyond the tail in *garzetta* and at least five inches in *intermedia*.

4. In the absence of plumes certain doubts must arise concerning the identity of non-breeding birds of one or other species unless viewing conditions are good.

### Color of Bill

Variation in bill coloration is incompletely understood in all species of egrets; it can depend on age, season, or geography. The following data, unless otherwise indicated, refer to Australian material.

1. *Egretta garzetta nigripes*: black, with basal half of the lower mandible greenish-yellow (breeding). Bill probably similar in non-breeding birds, but yellow coloration less vivid. This is the consensus of present-day writers.

2. *Egretta intermedia plumifera*: dark orange-red, yellow at tip (Dr. Spencer Roberts—in Bryant, 1934). Pale yellow in non-breeding birds according to many authors (e.g. McGill, 1943). In the nominate race, which occurs widely in Europe and Asia, the bill is said to be black in breeding birds and yellow with a dark tip in others. The African race (*brachyrhyncha*) has a yellow bill and legs, according to Amadon and Woolfenden (1952).

It is believed that the presence of a yellow bill will be sufficient in most cases to distinguish *intermedia* from the Little Egret. Reports of yellow bills in the last-named are unusual, e.g. L. M. Mayo (1934), who referred to a captive individual in Taronga Park. This bird might have been a Cattle Egret (*Bubulcus ibis*), a species only lately recognised in Australia. Alternatively, the bill coloration may have been changed by unnatural conditions in captivity.

Although it is generally assumed that no black-billed individuals of *intermedia* occur in Australia, the possibility should not be

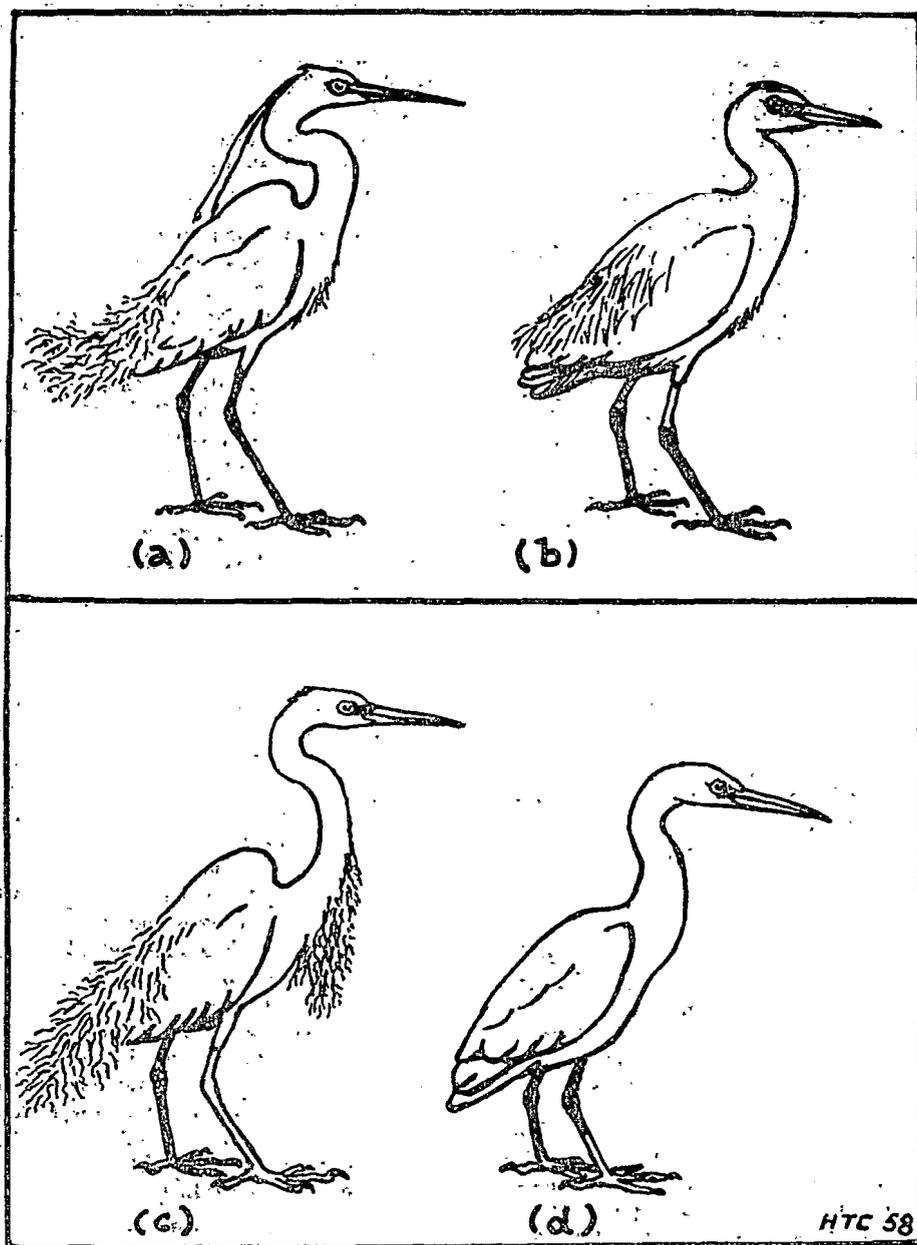


Fig. 2.—Egrets in breeding plumage: (a) Little; (b) Cattle; (c) Plumed; (d) Reef Heron (white phase). To scale  $\times \frac{1}{6}$ .

overlooked. Braithwaite (1952) considers that such a condition may be "transitory" in the Plumed Egret.

3. *Egretta alba modesta*: differences in the color of the bill in this widespread species have been used for racial separation by taxonomists. Undoubtedly some geographical variation exists but data in regional works is contradictory. Breeding birds have black bills (or "very dark horn-colored"—Bryant, 1934). As in the nominate race, there is some yellow on the lower mandible. McGill (1943) reports having seen breeding birds with "dark orange-yellow" bills, which suggests *intermedia*, although he says they were "undoubtedly *alba*." Non-breeding birds, including those with the remnants of a dorsal train, may have the bill yellow with a dark tip. It will be recalled that A. Mawhiney (in Bryant, 1934) maintained that birds in the Moree district have the black bill all the year through. More information is required on this point. Usually *alba* is immediately distinguished by its large overall size. However, with no other species for comparison, it will be apparent that hasty identifications are dangerous when black-billed individuals in non-breeding garb are encountered. Hindwood (in Sharland, 1957) noted that "young White Egrets had bright yellow bills, but those of the adults were leaden or greyish-black, some with yellow on the basal parts, whilst a few had bills completely dull yellow."

### Colors of Legs and Feet

Coloration of the legs should not be regarded as an easy, reliable, or especially useful means of recognising the different species of egrets in Australia, even when the light is good. Very often the legs are soiled with mud and there are definite color changes in each species according to age and season.

1. *Egretta garzetta nigripes*: Tibiae and tarso-metatarsi are thought to be black at all seasons in the Australian race. In nominate *garzetta*, the feet and adjoining parts of the tarsi are greenish-yellow (or crimson-pink) in the breeding season. So far as known only the soles are colored greenish-yellow in *nigripes*. More observations are needed. In this species the legs extend well beyond the tail in flight.

Mathews' description of the legs in breeding birds as "olive brown" is, without doubt,

erroneous. Recently, Iredale (1956) has attempted to justify the statement.

2. *Egretta intermedia plumifera*: Gould's description, in which it is stated that the tarsi are black and the tibiae yellowish or inclining to flesh color, is often quoted as diagnostic for this species. However, it is known that a similar coloration occurs in the White Egret (see below). Some writers believe that the two species could be confused.

In breeding birds the tibiae and tarsi are yellow in the Australian form (see Amadon and Woolfenden, 1952) and black in the nominate race, which does not occur in Australia.

Outside the breeding season, *plumifera* has the legs yellowish mottled with black, with individual birds showing more of one color or the other, although the tibiae appear yellowish as a rule.

Identifications of the Plumed Egret based solely on the coloring of the legs are unacceptable.

*Egretta alba modesta*: Questions posed by variation in the coloring of the legs in this species show that opportunities for careful observations should not be neglected and further collecting of specimens is needed. Many authors simply state "the legs and feet are black." Actually, there are some differences in the coloration of the tarsi and tibiae, and in breeding birds these are usually found to be blackish and yellowish respectively. Sharland (1957), in describing the adults in a breeding colony, says the legs were "generally brownish with a paler shade on the top half of the leg, above the ankle or so-called 'knee'." Gould stated "legs above the knee pale dull yellow, which color is continued down the centre of the inner part of the tarsi; remainder of the tarsi and feet black." A similar description, with fewer details, is given by Mathews (1912) for the type of "*E. a. neglecta*" (locality, Parry's Creek, north-western Australia).

A yellow-billed bird, which had a few nuptial plumes, was collected at Tailém Bend, South Australia, in January, 1941; the feet and tarsi were blackish and the tibiae yellow. Some descriptions of the larger nominate race of the Palaearctic region refer to the coloring of the legs in similar terms. On the other hand, certain authors describe breeding birds from southern Asia, where is supposed to

occur the same race as found in Australia (*modesta*), as having the 'knee' and tibiae pale flesh color.

Individuals lacking the dorsal nuptial train usually show little or no yellow on the legs, although examples with the tibiae light-colored or ochreous and the tarsi dark grey are not uncommon. A wild bird examined in April, 1955, at close quarters in the Adelaide Botanic Gardens, where it was engaged in catching goldfish, had the webs of the feet and the tarsi greyish and the toes and tibiae black.

### Other Colors, Habits, etc.

Coloration of the irides, lores and facial region, differ in the Australian egrets. According to Amadon and Woolfenden (1952), *E. intermedia plumifera* is distinguished by having the lores "blackish," and Bryant (1934) records the face coloration a uniform "beautiful apple green." In the Little Egret the face is yellow or yellowish-green; this color may become more brilliant or perhaps even change to another color at the height of the breeding season. In the White Egret the face is dull green in breeding birds and dull yellow in those with yellowish bills.

The habits of all species of egrets are similar. They occur in flocks, small parties or pairs, and solitary birds are not uncommon. Shyness is not confined to any particular member of the genus. The Little Egret is considered by some writers to be "more active" than the others and also "more sociable." Non-breeding individuals of the Plumed Egret and Cattle Egret (*Bubulcus ibis*) can be confused unless it is remembered that in the latter, the yellow bill is short and heavy and the legs (black) also relatively shorter than in *intermedia*.

### Conclusion

The White Egret, which frequents most parts where there are permanent waters, is considerably taller and larger than the other two species (see Fig. 1). Nevertheless, there may be times when, seen alone, its size and other features cannot be judged correctly. On occasions small flocks of up to ten birds are met with, and although there is a certain amount of unexplained individual variation in size in the White Egret the smaller species can be detected without much trouble when

found in association with it. Whether *garzetta* and *intermedia* are separable with certainty at all times is doubtful. In the first-named the feathers do not extend so far down the tibiae as in *intermedia*, where only about one inch above the joint is bare. The Plumed Egret has a longer neck and slightly heavier bill and legs than *garzetta*, and the toes are longer. Inexperienced observers are advised that it is impossible to rely on these features in sight identifications.

The Plumed Egret (*Egretta intermedia*) is a rare bird in South Australia, and few specimens have been taken. Most likely it has been confused on numerous occasions with the Indian Cattle Egret (*Bubulcus ibis*), whose presence in Australia was unsuspected until proved by H. G. Deignan in 1948 (see *The Emu*, vol. 49, p. 192).

The Cattle Egret has, like the Plumed Egret, a light-colored yellowish bill, but it is a smaller bird in every way and non-breeding birds have a yellowish tinge to the feathers. Because of the frequency of staining of plumage in water birds, coloration by itself is not acceptable as evidence of recognition of this species.

Serventy and Whittell (1951) refer to the liberation of eighteen Cattle Egrets in the Kimberley Division of Western Australia in 1933. Deignan's discovery in 1948 of great flocks of these birds at Oenpelli, Northern Territory, suggests that the species has been in Australia for a considerable time. Additional support for this view is the existence of a specimen, formerly in the possession of Edwin Ashby, and now in the South Australian Museum (No. B 19492), from "Queensland." This bird was in non-breeding plumage, with just a trace of orange-buff on the crown. It was incorrectly identified as "*Mesophoyx plumifera*" (i.e. *Egretta intermedia*) according to the original label, which bears the name C. G. H. Lloyd and the number 202. Whittell (1954) mentions that Lloyd presented bird skins from Tasmania to the British Museum in the year 1889. Perhaps this example of *Bubulcus ibis*, which is an old mounted specimen (complete with red glass eye), is the first to have been taken in Australia many years before Deignan found the species.

There is no reason to think that the Cattle Egret occurs in South Australia. Of course, strays are always possible, but I would

prefer to regard any sight observations as referable to the Plumed Egret.

In this account I have attempted to show the danger of jumping to conclusions in sight records of species belonging to groups in which plumage and other differences between the various stages of development are insufficiently known. While there is a great need for reliable information, observers who report unusual species must realise that something more than their "word" is required. I am satisfied that the literature is full of wishful thinking, and no better examples can be quoted than the small percentage of

baseless claims, which can be found in any recent periodical, regarding egrets and other members of the heron tribe.

Dr. E. Eisenmann, Editor of *The Auk*, has lately suggested "that before an observation can be accepted as a scientific record, there should be proof not merely of the observer's competence to identify the bird, but of circumstances assuring a careful and self-critical attitude." He also says, "One point, little emphasised in discussions of the reliability of sight reports, is that 'birding' has become not only a popular, but often a *competitive* sport." With this we must agree.

#### ADDENDUM:

Just to hand is a copy of *Notornis*, volume 8, number 1, July, 1958, in which are reproduced photographs of the Little Egret and Reef Heron. Note the length of the tibiae of the Little Egret (p. 16) and my remarks (*antea*, p. 82) on the reliability of this feature. The Reef Heron (*Demigretta sacra*), which has light and dark color phases, is known in South Australia in the grey form only. A white phase, which is common in tropical latitudes, has been recorded from South-West Australia (Serventy and Whittell, 1951). The Reef Heron is dumpy and short-legged, with a relatively long bill and neck. Grey birds might be confused with the White-faced Heron (*Notophoxyx*) on occasions. The bill and legs are yellowish; tibia and a little below the joint is darker.

We have been favoured with a copy of the new (9th Revised) edition of Leach's "An Australian Bird Book" Nothing new is contained in the descriptions of the three egrets (p. 61)—this portion of the text is unchanged. The Little Egret is shown as "rare" and the other two as "very rare." It is a pity that these designations, which are now meaningless, were not omitted altogether. The tibiae are much too long in the coloured plate of the Plumed Egret, and the half-tone illustration of the Reef Heron is unrecognisable. However, these criticisms are not to be taken as condemnatory of the most useful popular production which has appeared in recent years.