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## Further remarks concerning the Little Egret complex in East Africa

Little Egret-like birds that occur in Africa have been the subject of debate for decades, and remain taxonomically highly controversial. Three forms in Kenya (*garzetta*, *schistacea* and *dimorpha*) largely behave as separate species and are generally easy to identify, but confusion remains as to whether *Egretta garzetta* in Africa is monotypic or whether it represents a polytypic species embracing some or all of the forms *dimorpha*, *schistacea* and *gularis*.

In Europe the Western Reef Egret (*E. gularis*) and the Little Egret (*E. garzetta*) are usually recognized as separate species (Cramp & Simmons 1977, Hancock & Elliott 1978, Payne 1979, Brown *et al.* 1982, Sibley & Monroe 1990). Two, sometimes three, subspecies have been recognized for the Western Reef Egret, all of which have a mainly coastal distribution and are dimorphic with dark and white individuals occurring in the same population, together with intermediates in variable proportions. These are: nominate *gularis* in West Africa; *schistacea* in East Africa and the Indian sub-continent, and a third form *dimorpha* in the Malagasy Region and coastal East Africa which has been variably considered as a race of either *gularis* or *garzetta* or a species, Dimorphic Egret, in its own right (Dubois & Yesou 1995).

The race *schistacea* (known earlier as *asha*), is typically a bird of the Indian sub-continent, while in Africa it occurs throughout the Persian Gulf from the southern Sinai south to the Somali and north Kenya coasts. Elsewhere an inland population extends (alongside typical Little Egrets) down the Rift Valley to Lake Turkana in northern Kenya with vagrants reported south to lakes Nakuru, Naivasha, Albert and Edward. From southern Kenya south through coastal and off-shore islands in Tanzania to the Comores and Madagascar, *schistacea* is replaced by the form *dimorpha*.

The introduction of several hundred *schistacea* from Pakistan into Germany and Austria during 1980–82 resulted in several escapees, some of which were of the dark-morph variety and subsequent sightings of dark egrets along the Mediterranean coasts may have referred to such individuals (Wust 1983, Cistac 1984).

Typical characteristics of Little Egrets (*E. garzetta sensu stricto*) and Western Reef Egrets (*E. gularis/schistacea*) have been described which should allow ready separation in the field.

- i) General overall appearance: Little Egrets are typically slimmer and more graceful. No dark morph individuals are recorded in East Africa, while in *gularis/schistacea/dimorpha* populations a high percentage of dark morph birds are always present.
- ii) Bill shape and colour: Little Egret has a long, narrow, straight, black bill compared

to *gularis/schistacea* in which birds often have a thicker yellowish bill with variable amounts of black.

iii) Loral features: Little Egrets have blue-grey lores, while those of *gularis/schistacea* are yellow.

iv) Tarsus and feet: Little Egrets have black legs and yellow feet, while *gularis/schistacea* have blackish legs with yellow extending variably from the feet and often well up the tarsus.

Dimorphic Egret (*E. dimorpha*) is polymorphic, with dark birds common. Madagascar populations are larger than Little Egret (*E. garzetta sensu stricto*) but resemble it in leg colour and in bill colour and shape. Indeed, white birds of the smaller south Kenya coast population, ascribed to this form, are doubtfully distinguishable from Little Egrets though they do tend to show more extensive yellow on the tarsus (Zimmerman *et al.* 1996).

Little Egrets tend to feed in small groups on wetlands, inland or near the coast, while the reef-egrets (*gularis/schistacea/dimorpha*) tend to be more solitary and are characteristically found on coastal shores. It might be reasonable to treat the two East African coastal reef-egrets (*schistacea* and *dimorpha*) as races of *E. gularis*, but the presence of *schistacea* alongside Little Egrets (*garzetta*) throughout the Rift Valley from Ethiopia south to Kenya and Uganda, and the presence of *dimorpha* throughout all inland wetlands in Madagascar complicates the issue. Also, dark individuals of *schistacea* are often paler or more greyish than either dark *gularis* or *dimorpha*, while the white wing patches that are always present in dark morph *dimorpha* and *gularis*, are generally absent in *schistacea*.

Turner (2010) outlined three possible treatments of the *E. garzetta* complex in East Africa: as three, two or just a single species. Dickinson & Remsen (2013) have since followed Payne (1979) in treating *garzetta* and *gularis* as separate species with *dimorpha* included in *garzetta*, and *schistacea* within *gularis*. Meanwhile, Safford & Hawkins (2013) have followed del Hoyo *et al.* (1992) in considering *gularis*, *schistacea* and *dimorpha* as being conspecific with *garzetta*, but agreed with Kushlan & Hancock (2005), who point out the lack of convincing evidence to resolve the taxonomy of this group, and urge for "definitive, range-wide studies using a combination of biochemical, morphological, and behavioural characteristics".

Confirmed cases of interbreeding between *schistacea* and *garzetta* are few, but studies over a period of five years at Lake Turkana, northern Kenya of the pairing and nesting of individuals that appeared to be dark phase *schistacea* with those that appeared identical with the all-white *garzetta*, led Hancock & Kushlan (1984) to the hypothesis that they are best considered the same species.

While *schistacea* are highly variable in appearance, they are relatively easy to separate from Little Egrets (*garzetta*) by the combination of characters detailed above. Many nominate *gularis* share these diagnostic characters, but others closely resemble Little Egrets, and white individuals can be very difficult to separate from them. Meanwhile in Europe, several pale grey or pied egrets with plumage resembling *gularis* or *schistacea*, but with shape and structure typical of *garzetta* have occurred in both France and Spain suggesting that mixed pairing may occasionally occur and be productive (Dubois & Yesou 1995). Elsewhere, and particularly in India and Africa, the many examples of what appear to be intermediate birds, presumably resulting from cross breeding, constitute strong arguments supporting the concept that these

populations are not different species.

In conclusion, while many issues remain unresolved, and pending molecular information to the contrary, the evidence appears to support the view that the *E. garzetta* complex is best considered for now to be a single polymorphic species. The principal characteristic of all reef-egrets, that of a thicker bill, is probably an adaptation to hard-bodied food in marine habitats.

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#### References

- Brown, L.H., Urban, E.K., & Newman, K. 1982. *The Birds of Africa*. Vol 1. London & New York: Academic Press.
- Cistac, L. 1984. Observation d'une Aigrette des recifs (*Egretta gularis schistacea*) en Camargue, en relation vraisemblable avec des importation en Allemagne. *Alauda* 52: 145–146.
- Cramp, S., & Simmons, K.E.L. 1977. *The Birds of the Western Palearctic*. Vol 1. London: Oxford University Press.
- del Hoyo, J., Elliott, A. & Sargatal, J. (Eds). 1992. *Handbook of the Birds of the World*. Vol 1. Barcelona: Lynx Edicions.
- Dickinson, E.C. & Remsen, J.V. (Eds) 2013. *The Howard & Moore Complete Checklist of the Birds of the World*. 4th Edition. Eastbourne, UK: Aves Press.
- Dubois, P.J. & Yesou, P. 1995. Identification of Western Reef Egrets and dark Little Egrets. *British Birds* 88: 307–319.
- Hancock, J. & Elliott, H. 1978. *The Herons of the World*. New York: Harper & Row.
- Hancock, J. & Kushlan, J. 1984. *The Herons Handbook*. New York: Harper & Row.
- Kushlan, J.A. & Hancock, J. 2005. *Herons*. Oxford: Oxford University Press.
- Payne, R.B. 1979. *Ardeidae*. In Mayr & Cottrell (Eds). *Peters Check List of Birds of the World* 2nd Edition. Cambridge, USA: Museum of Comparative Zoology.
- Safford, R.J. & Hawkins, A.F.A. (Eds). 2013. *The Birds of Africa*. Vol 8. The Malagasy Region. London: Christopher Helm.
- Sibley, C.G. & Monroe, B.L. 1990. *Distribution and Taxonomy of Birds of the World*. New Haven: Yale University Press.
- Turner, D.A. 2010. The *Egretta garzetta* complex in East Africa: A case for one, two or three species. *Scopus* 30: 59–63.
- Wurst, W. 1983. Küstenreiher (*Egretta gularis schistacea*) aus Pakistan nach Mittelfranken importiert. *Ornithologische Mitteilungen* 35: 132–133.

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## Shelley's Greenbul *Andropadus masukuensis* in Kimboza Forest Reserve, Tanzania

Kimboza Forest Reserve is a lowland forest (300–500 m) located in the eastern foothills of the Uluguru Mountains, Tanzania (7°00' S, 37°48' E). It is a small c. 386 ha (Burgess *et*