

THE TYPE SPECIMEN OF THE AUSTRALASIAN GANNET *Morus serrator* (G.R. GRAY, 1843)

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ABSTRACT

G.R. Gray first used the name *Pelecanus serrator* in association with the drawing by Sydney Parkinson of an adult Australasian Gannet taken at sea near the Three Kings Islands in 1769. Parkinson's drawing is an illustration of the specimen described in manuscript by Daniel Solander as *Pelecanus Sectator*. Both the drawing and the description are of the type specimen and have previously unrecognised taxonomic importance. The correct type locality of *Morus serrator* is the vicinity of the Three Kings Islands.

John Gould (1841:177) based his *Sula Australis* on adult specimens of the Australasian Gannet collected by himself in Tasmania in 1839 and he gave its habitat as the Tasmanian Seas. Two years later, G.R. Gray (1843:200) used *Sula australis* with reference to Gould's work as the name of a species recorded by Dieffenbach at Queen Charlotte Sound. He gave "Pelecanus serrator, Banks" as a synonym [not as a new name for the combination *Sula australis*, as stated by Dorst & Mougín (1979:183) and Marchant & Higgins (1990:751)], and referred to "Icon.ined.,t.30", but did not otherwise describe the bird to which the name *Pelecanus serrator* related. Unfortunately Gould's name was a junior primary homonym because of the publication by Stephens (in Shaw & Stephens 1812-26: XIII:104) 15 years earlier of the same combination *Sula australis* for the species which Linnaeus (1766-8:I:218) had described as *Pelecanus Sula*. Gray must have soon realised this because in 1845 (Gray 1845:19) he abandoned *Sula australis* as the name of the species and called it *Sula serrator* with *Sula australis* becoming the synonym. He followed this allocation on subsequent occasions (Gray 1862:250; 1869-71:III:126). On the other hand, Gould continued his use of *Sula australis* for the Australasian Gannet (Gould 1840-48:VII:Pl.76 and text; 1865:II:504). Most other 19th century authors who made reference to the Australasian Gannet followed Gray by using the specific name *serrator*. That specific name has been accepted ever since.

Various authors, starting with Mathews (1912:241), considered *serrator* to be a subspecies of the North Atlantic Gannet *Morus bassanus* (Linnaeus, 1758), but it is now generally regarded as having specific status (see e.g. Turbott 1990:79; Marchant & Higgins 1990:751). Although Finsch (1876:203) considered that a New Zealand specimen agreed with those from Australia, Mathews (1913:63) admitted two subspecies of the Australasian Gannet – *S. serrator serrator* from New Zealand and *S. serrator dyotti* from Tasmania. This was later changed by Mathews & Iredale (1921:77) to *S. serrator serrator* from Tasmanian Seas and *S. serrator rex* from New Zealand.

The subspecies *S. serrator rex* is no longer accepted as valid, although it was recently listed by Howard & Moore (1991:11).

Hutton (1871:49), Finsch (e.g.1872:257), and at one time Buller (1882:91) – no doubt following Gray – attributed the authorship of the specific name *serrator* to Joseph Banks, who had accompanied Cook on his first circumnavigation. Banks had collected the first specimens of the Australasian Gannet known to have been taken by Europeans but the name *serrator* was never published by him. G.R. Gray is the correct author of the name *Pelecanus serrator* in terms of Article 50(g) of the International Code of Zoological Nomenclature.

Gray first used the name *Pelecanus serrator* in association with the drawing which he identified as “Icon.ined.,t.30”. This is a reference to the drawing by Sydney Parkinson, natural history draughtsman on Cook’s first voyage, formerly in the ownership of Banks and now in The Natural History Museum, London, as Folio 30 in Volume 1 of Parkinson’s zoological drawings done on the voyage (Sharpe 1906:177; Lysaght 1959:278; Wheeler 1986:44-5). The unsigned partly coloured drawing bears the notation in Banks’s hand “1.Pelecanus sectator Aehie ne Mauwe”, the latter being a reference to the North Island of New Zealand, called Aeheino mouwe by Cook (in Beaglehole 1968:243) and Eaheino-Mauwe by Parkinson (1784:120n). The bird depicted in the drawing, which has not previously been published, is clearly an adult Australasian Gannet (see Figure 1).

Parkinson’s drawing was based on one of the gannets shot by Banks at sea near the Three Kings Islands on 24 December 1769:

Calm most of the Day: myself in a boat shooting in which I had good success, killing chiefly several Gannets or Solan Geese so like European ones they are hardly distinguishable from them. As it was the humour of the ship to keep Christmas in the old fashiond way it was resolved of them to make a Goose pye for tomorrows dinner. (Banks in Beaglehole 1963:I:448-9).

It is not surprising that none of these specimens are known to have found their way to England, considering that Banks recorded that on Christmas Day “our goose pye was eaten with great approbation”.

These events were also recorded by Parkinson (1784:111):

It being calm, Mr Banks went out in the small boat; and we saw some birds so much like our island geese, that we could not have distinguished the difference. We caught several of them, made them into a pye, and they tasted excellently.

One of these birds formed the basis of Solander’s description of *Pelecanus Sectator*. His original manuscript, obviously completed at the time of collection of the specimen described, is in Sol.Z8 (Solander Slips, Aves at ff.171-2) with a fair copy in Sol.Z4 at f.17. Both are in The Natural History Museum, London (Diment & Wheeler 1984:475-7). Solander’s description is published here in its original Latin for the first time with an English translation kindly provided by Mr R.B.Sibson:



FIGURE 1 — Sydney Parkinson's drawing of the holotype of the Australasian Gannet *Morus serrator* (G. R. Gray, 1843). Reproduced by permission of The Natural History Museum, London.

5-6
Sectator
(*chrysocephalus*
crossed out)

PELECANUS cauda cuneiformi, rostro serrato, corpore albo, remigibus omnibus reatricibus quatuor intermediis facieque nigris. Habitat in Oceano Australiam septentrionalem alluente. Lat. austr. XXXVI—XXXIII. Longit. occid. CLXXXV-CLXXXVII. (Dec. 24. 1769).

Avis pulchra, Ansere paulo minor. Caput superne & suprema pars colli fulvescens, reliquum corpus niveum. Remiges omnes nigrae. Rectrices quatuor intermediae nigricantes. Rostrum rectum, albidum, marginibus nigricantibus serratis. Mandibula superior prope apicem parum excavata, postice sulco nigricante, cutaceo utrinque exarata; infra oculos processu mobili antrosum dentem exserente aucta. Mandibula inferior rectissima. Lingua minima. Regio infra & ante oculos nuda, nigricans, ut et limites rostri frontales. Annulus oculorum caeruleus. Iris cinerea. Pupilla nigra. Area nuda, nigricans, angusta per medium gulae & juguli ducta. Limites rostri jugulares nigrae, cutaceae, cum limitibus superioribus angulum acutissimum pone angulos oris formantes. Pedes nigricantes, vittis pallide sulphureis ornati. Vitta pallide sulphurea antice in tibia inferne tripartita per digitos tres majores ducta; digitus quartus seu interior etiam supra vittatus. Unguis intermedius interne pectinatus. Cauda cuneata, acuta. Volitant saepe in phalanges. Longitudo 34 unc. Transvers. 5 ped. 9 unc.

Obs. Sula hojeri Ray. av. 123. Willughb. & c. Rectrices intermedias nigras habet, unde distinctam judicamus avem a Pelecano Bassano Linn; a nostra illae differunt remigibus secundariis albis.

5-6
Sectator

Pelecanus with a wedge-shaped tail, serrated bill, white body, all the flight feathers the four central tail feathers and face black. It lives in

the Ocean which washes northern Australia. S.lat. 36-33 W.Long.185-187 (Dec.24.1769).

A beautiful bird, slightly smaller than a goose. Head above and highest part of the neck tawny, rest of the body snowy. All flight feathers black. The four central tail feathers blackish. Bill straight, whitish with blackish serrated edges. Upper mandible slightly hollowed near the tip; furrowed towards the rear with a blackish groove, leathery on both sides; below the eyes enlarged by a mobile process which sprouts a tooth jutting forwards. Lower mandible very straight. The tongue is very small. Region below and before the eyes bare, blackish, as are also the edges of the bill along the brow. Ring of the eyes blue. Iris ash-grey. Pupil black. A bare area, blackish and narrow leading through the centre of the chin and throat. Jugular edges of the bill black, leathery, forming with the upper edges a very sharp angle behind the angles of the mouth. Feet blackish, brightened by pale yellow bands. A pale yellow band forward on the tibia divided below into three leads along the three larger toes; the fourth or inner toe is also banded above. The central toe is pectinated on the inner side. Tail wedge-shaped, sharp. They often fly in massed lines. Length 34". Wingspan 5'9".

Note. The *Sula* of Hoier Ray av. 123. Willughby & c has the central tail feathers black whence we claim it is a distinct bird from *Pelecanus Bassanus* Linn; from ours they differ in their white secondary flight feathers.

Solander's reference to "Australia" is to the land which Banks then believed to be the Southern Continent but which later during the voyage turned out to be the islands which became known as New Zealand. Solander's account of *Pelecanus Sectator* is an accurate description of an adult Australasian Gannet. He noted the principal characteristics which distinguish the adult Australasian Gannet from the adult North Atlantic Gannet – the former's black primary and secondary flight feathers and blackish four central tail feathers, although the latter is a somewhat variable feature (Sibson 1988).

At the end of his description, Solander referred to "*Sula hoieri* Ray. av. 123. Willughb. & c." *Sula hoieri* of Ray (1713:123), being The *Sula* of Hoier of Willughby (1676:249-250;1678:331), was described by those authors as having three black middle tail feathers compared with the Soland Goose or *Anser Bassanus* (the *Pelecanus Bassanus* of Linnaeus), whose tail was wholly white in the adult. Although Linnaeus (1766-8:I:217) had placed *Sula hoieri* in the synonymy of his *Pelecanus Bassanus*, Solander considered *Sula hoieri* to be a distinct bird from *Pelecanus Bassanus* because of the former's black central tail feathers. Rather than being distinct as claimed by Solander, *Sula hoieri* was no doubt a specimen of the North Atlantic Gannet in late third or fourth year plumage, most of which differ from adults of that species in having dark central tail feathers (Harrison 1989:228). Both Gmelin (1788-93:I:577) and Latham (1790:II:891) followed Linnaeus in placing *Sula hoieri* in the synonymy of *Pelecanus bassanus*.

Perceptively, however, Solander considered that both *Sula hoieri* and *Pelecanus Bassanus*, with their white secondaries, differed from his bird. Accordingly Solander applied the name *Pelecanus Sectator* (changed from *Pelecanus chrysocephalus*) to it. Confirmation that Banks and Solander regarded their *Pelecanus* as a new species is provided by their placement

of a diagnosis of it (being the same diagnosis as appears at the start of Solander's manuscript description) between *Pelecanus Bassanus* and *Pelecanus Piscator* in the annotated copy of the twelfth edition of Linnaeus's *Systema Naturae* (1766-8:I:opp.217) taken on the voyage (Marshall 1978:22). This is also indicated by the figures 5-6 at the head of Solander's manuscript description, which are the numbers borne by *Pelecanus Bassanus* and *Pelecanus Piscator* respectively in that edition of *Systema Naturae*.

There is no evidence that Gray used either the original Solander manuscript or fair copy descriptions of *Pelecanus Sectator* or the annotated copy of *Systema Naturae* as the source of the name *Pelecanus serrator*. Indeed it can be safely assumed that he used only the Parkinson drawing for that is the only source to which he referred. It seems obvious that he incorrectly transcribed the name *sectator* thereon as *serrator*, a mistake which Sharpe (1906:177) also made much later when describing the Banksian drawings. Despite Gray's error, *serrator* must stand as the correct original spelling of the name in terms of Article 32(b) of the International Code of Zoological Nomenclature.

The adult Australasian Gannet depicted in Parkinson's drawing is the holotype of *Morus serrator* (G.R. Gray, 1843). Solander's description may be accepted as being of that type for, even though Banks collected several specimens, it is not unreasonable at this distance in time to accept that the description and drawing were based on the same individual. Consequently both the Parkinson drawing and the Solander description have previously unrecognised taxonomic importance. The type locality of Tasmania given for *serrator* by various authors, including Turbott (1990:79), must be corrected to the vicinity of the Three Kings Islands. The Three Kings group was most probably being used as a breeding station by the species when Banks collected his specimens off-shore on Christmas Eve of 1769. Cheeseman (1888:145) mentioned that one or two voyagers immediately after Cook stated that the Maoris were in the habit of crossing from the mainland to those islands at long intervals to obtain young muttonbirds or gannets.

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