



J. Smit lith.

PELECANUS FUSCUS.

M & N Hanhart imp.



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PELECANUS RUFESCENS.

M & N Hanhart. imp.

that of *S. sipunculiforme*. I exhibit figures of both of these species, which will show the great differences between them.

SCLEROSTOMA CLATHRATUM.

Caput corpore discretum, cylindricum, parvum; oris limbo interno dentato, limbo externo auriculato; auriculis quinque; corpus utrinque attenuatum, lineare.

Femina.—*Corpus minute clathratum, striis exilibus transversis et longitudinalibus; cauda obtusa, sæpe convoluta, apertura genitali supra apicem.*

Mas.—*Corpus longitudinaliter minute striatum, striis numerosis; bursa caudalis lobata.*

Long. fem. lin. 26, lat. lin. 1.

Long. maris lin. 24, lat. lin. $1\frac{1}{2}$.

Hab. In ventriculo *Loxodontæ africanæ*.

The head is distinctly separated from the rest of the body, and is cylindrical and small; the mouth is dentated inwardly, and on the outer edge is marked with five distinct auricles, which descend upon the upper portion of the body, but do not form a distinct part of it. The body is attenuated at both extremities and is linear in shape; in the female it is, as it were, minutely clathrate, being striated transversely with fine lines, and having the spaces between the lines minutely longitudinally striated or sulcated, giving, under a tolerably high power, the appearance of being latticed or clathrate. The tail is obtuse, not so sharp-pointed as *Sclerost. sipunculiforme*, and has the genital organs situate a short distance from the extremity; it is frequently, but not in all cases, convolute. The body of the male is longitudinally striated, and the bursa at the extremity of the tail is lobed.

The African Elephant, from which these worms were taken, was a young female which died in London in October 1867. I am not aware of any entozoa having been previously described as inhabiting the body of this species of Elephant.

2. Notes on the Pelicans living in the Society's Gardens.

By P. L. SCLATER, M.A., Ph.D., F.R.S., Secretary to the Society.

(Plates XXV. & XXVI.)

The Society's series of Pelicans has been much augmented of late years. During the present spring examples of no less than six distinct species have been exhibited, concerning which I beg leave to offer a few remarks to the Meeting.

1. PELECANUS ONOCROTALUS, Linn.

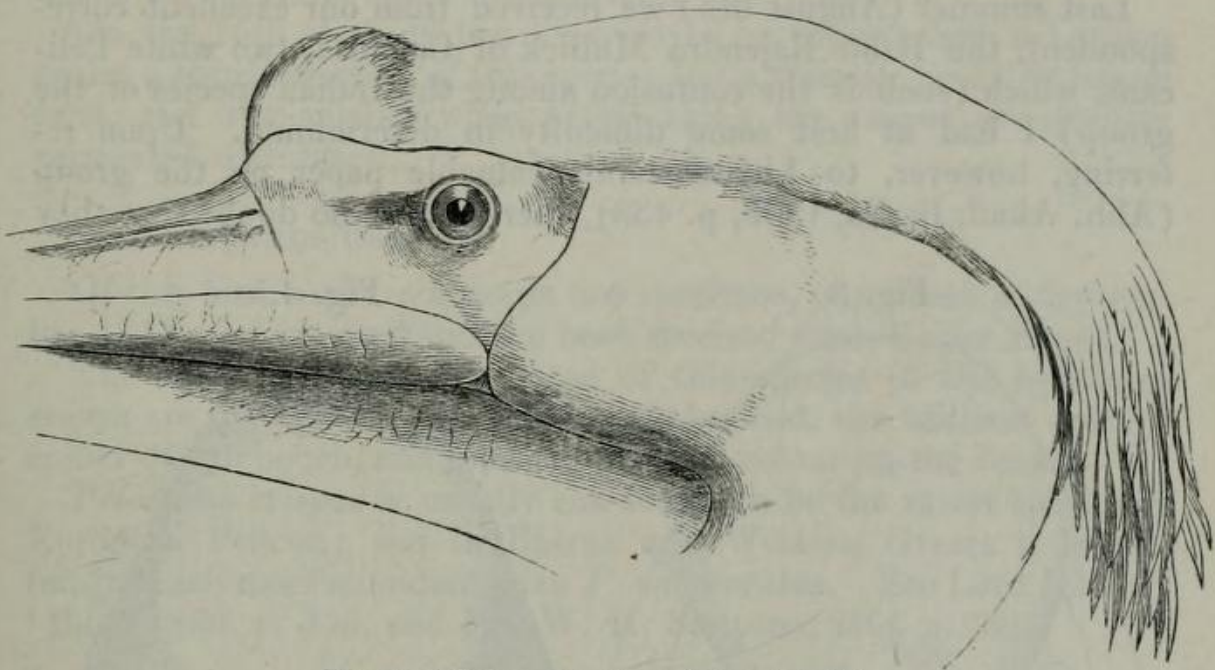
Of this well-known species two fine examples, acquired in 1851 and 1852, are in the Society's collection. Early every spring they

put on their nuptial dress. A beautiful rosy tint overspreads the whole of the plumage, a fine large lemon-coloured patch appears upon the breast, the colour of the gular pouch becomes bright yellow, the crest attains a greater development, and the point of the bill attains a brighter crimson.

These phenomena, however, do not last very long, disappearing gradually about six weeks or two months after they have been attained. At the present date they are already passing away.

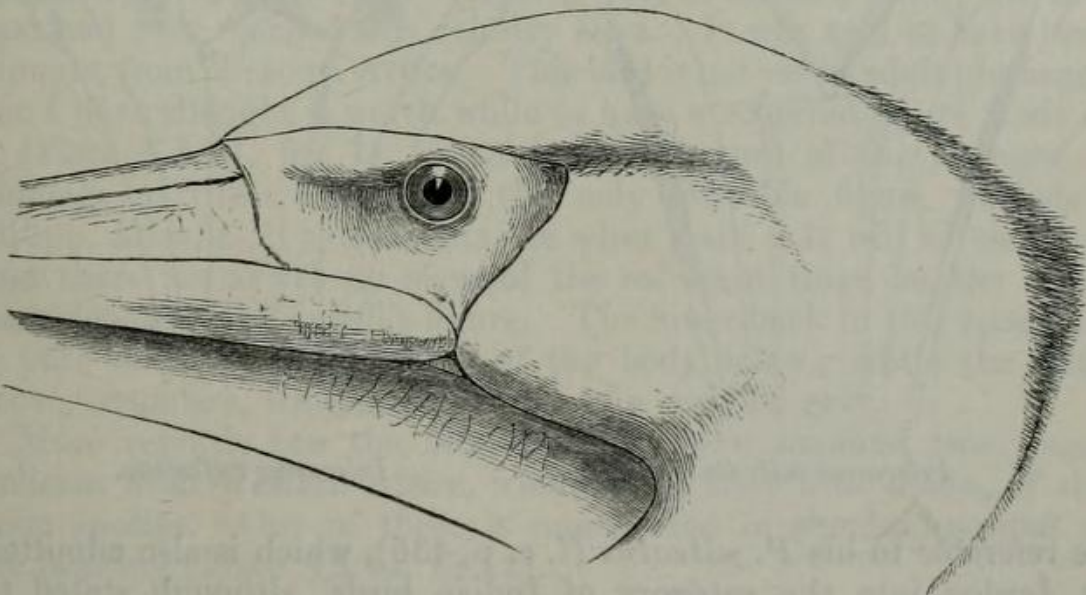
On the 3rd of February last we received from our Corresponding Member, Mr. E. T. Rogers, Acting Consul-General for Syria, a bird which I am inclined to consider the young of this species. Mr. Blyth, however, believes that this is an example of the "Large

Fig. 1.



Head of *Pelecanus onocrotalus* (adult).

Fig. 2.



Head of *Pelecanus onocrotalus* (jr. ex Syria).

Indian Crestless Pelican (the true *P. javanicus* of Horsfield), which never has a pendent crest or a tumid forehead, has narrow black margins to both the outer and inner webs of the wing-coverts and tertiaries, the bill livid blue and the throat-patch of a much deeper yellow than in *P. onocrotalus*." If Mr. Blyth's views are correct (which will be proved when the bird becomes fully adult), the range of the latter species will be extended to Syria, whence our specimen was received.

The drawings now exhibited (figs. 1 and 2) give comparative views of the head of the adult *Pelecanus onocrotalus* and the Syrian bird, showing the flattened forehead and crestless nape of the latter.

2. PELECANUS MITRATUS, Licht.

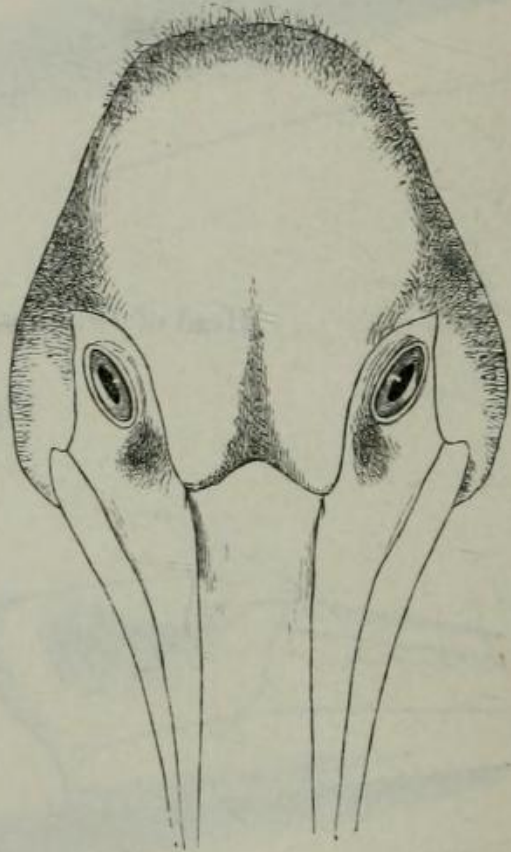
Last summer (August 6th) we received from our excellent correspondent, the Babu Rajendra Mullick of Calcutta, two white Pelicans, which (such is the confusion among the Indian species of the group) I had at first some difficulty in determining. Upon referring, however, to Lichtenstein's valuable paper on the group (Abh. Akad. Berlin, 1838, p. 433), there can be no doubt that they

Fig. 3.



Pelecanus mitratus.

Fig. 4.



Pelecanus rufescens.

are referable to his *P. mitratus* (*l. c.* p. 436), which is also admitted by Jerdon into the category of Indian birds, although stated to be rare in India. I have also little doubt that this species is the

true *P. minor* of Rüppell (Mus. Senck. ii. p. 185, et Syst. Ueb. p. 132, t. 49). It belongs to the same group as *P. onocrotalus*, having the frontal feathers produced into an acute angle between the eyes, as shown by Lichtenstein, *l. s. c. t. iii. fig. 2 a* and in fig. 4; but no one who has seen the two species alive together would deny their specific distinctness. *P. mitratus* is at once distinguishable by its smaller size, by the purer white of the whole plumage, and the long pendent crest.

Bonaparte (Consp. ii. p. 162) has united *P. mitratus* to *P. rufescens*. This is a great error*, as these birds belong to two distinct sections of the genus. In *P. mitratus* (see fig. 3, p. 266) the frontal plumes are produced between the eyes and terminate in an acute angle. In *P. rufescens* (fig. 4, p. 266), as will be seen from the sketches taken from our living specimens, these feathers terminate in a curved line which is concave towards the middle of the culmen.

On the 16th of April last we received on deposit from a London dealer a third specimen of this species, but a younger bird. It has no crest, and the smaller wing-coverts along the carpus are slightly variegated with black.

3. PELECANUS CRISPUS.

Of this bird we have a single fine specimen, purchased in September 1853, and believed to have been received from Upper Egypt.

The chief changes to be noted of this species in the breeding-season are the greater development of the crest, the brilliant orange-colour of the pouch, and a patch of lemon-colour on the breast.

Pelecanus crispus is usually considered to be the rarest species of European Pelican; but in Epirus and Western Greece it is certainly much more abundant than *P. onocrotalus*. See Lord Lilford, 'Ibis,' 1860, p. 355, and Mr. W. H. Simpson, *ibid.* p. 395.

4. PELECANUS RUFESCENS, Gm. (Plate XXVI.)

On the 18th of May 1866 we purchased of a dealer the first living specimen of this Pelican I ever saw, and, so far as I know, the first that had ever reached this country alive. It was said to have been brought from Western Africa. This bird is not yet in adult plumage; but I have thought it worth while to have a coloured figure made of it (Plate XXVI. fig. 1), as so little is known of the changes of plumage of these birds, and the only tolerable figure published (Rüpp. Atlas, t. 21) represents the adult state. It will be observed that there are as yet no signs of the rufescent tinge on the lower back depicted in Rüppell's figure. The lower back in this specimen is pure white, as is the whole of the body below; while the head above, scapulars, wings, and tail are of a mottled grey.

More recently (on the 5th inst.) we have acquired two young Pelicans from Western Africa, which are, I have little doubt, of the same species. One of these is represented in the background of the drawing (Plate XXVI. fig. 2).

* Cf. Jerdon, B. India, iii. p. 856.

The plumage is brown above, below much paler; wings and tail brownish grey.

5. *PELECANUS CONSPICILLATUS*.

The Australian Pelican was a desideratum in the Society's series until 1864, when one was obtained by purchase, which is still living in the Gardens. Two other specimens were presented shortly afterwards by the Acclimatization Society of Victoria, but have been lost. In this species there appears to be but little change in the breeding-season, except that the plumage becomes generally brighter and purer.

6. *PELECANUS FUSCUS*. (Plate XXV.)

Of this species the Society received two specimens (both males, as subsequently ascertained by dissection) from their late Corresponding Member, Capt. Abbott, in 1854. These birds lived many years in the Gardens—one having died in the spring of 1867, and the other only a few weeks since. Every year, in the month of February, they put on the fine nuptial plumage shown in the sketch now exhibited (Pl. XXV., front figure). The back of the neck becomes of a deep rich coffee-brown, with a pure-white longitudinal stripe between it and the gular sac; the gular sac itself becomes darker, and the whole plumage brighter. Some time in August this plumage is put off, and the bird appears in the more sombre colour shown in the second sketch (Pl. XXV., hinder figures).

These changes of plumage not having been well understood, I have thought it important that a record should be made of them. It appears to have been supposed by Audubon* and other writers on American ornithology that the white-necked plumage is peculiar to the female. Our observations show that this is not the case, both our males having adopted it upon the termination of the breeding-season. Whether the females ever adopt the black and white neck and corresponding changes of plumage I cannot say, as we have not as yet possessed specimens of that sex.

I will now add a few remarks upon the species of Pelican that have not yet been exhibited in the Society's living series. These are, as far as I am acquainted with the group, four, namely two American (*P. trachyrhynchus* and *P. molinæ*) and two Asiatic (*P. javanicus* and *P. philippensis*).

P. javanicus, Horsfield†, has the frontal feathers produced into an acute angle, as in *P. onocrotalus*—but never attains the pendulous crest of that species and of *P. mitratus*, having merely a short recurved crest on the nape. Several skins of this species are in the collection formed by Capt. Beavan in British Burmah.

P. philippensis is, as admitted by all authors, a close ally of *P. rufescens*; but I agree with Prince Bonaparte (C. R. xliii. p. 574,

* Birds of America, vii. p. 200.

† The bird described by Jerdon (B. Ind. iii. p. 857) as *P. javanicus* appears to be *P. mitratus*; while his *P. onocrotalus* (l. c. p. 854) is probably the true *javanicus* (Cf. Blyth, J. A. S. B. xviii. p. 821).

et Consp. ii. p. 162) in considering it distinct *rostri maculis impressis seriatim dispositis*. Several skins of it are in Capt. Beavan's collection, and appear undoubtedly different from our living *P. rufescens*.

*P. trachyrhynchus** appears to be often without the conspicuous knob on the upper mandible. Probably this striking feature is only developed in the adult male. This species is distributed in appropriate localities all over the United States, both east and west; it is also found in Mexico, and on the Pacific coast of Guatemala (cf. *Scl. et Salv. Ibis*, 1859, p. 233, et *Salvin, ibid.* 1865, p. 197). I trust that it will not be long before we acquire living examples of this species from some of our excellent correspondents in the New World.

P. molinæ (well-described in Bonaparte's 'Conspectus,' ii. p. 164, under the name *Onocrotalus thagus*) is one of the numerous excellent species that is not in the Leyden Museum, and is consequently discarded by its Director as a mere synonym of *P. fuscus*. But after examining the specimens of this bird in the British Museum, I cannot but allow, with Mr. George Gray and Prince Bonaparte, that it is an excellent species, allied to *P. fuscus*, but at once distinguishable by its larger size and darker plumage. At the same time I agree with Prof. Schlegel (*Mus. des P.-B. Pelecani*, p. 28) that *Pelecanus thagus* of Molina is a very doubtful synonym, and prefer, therefore, to adopt Mr. Gray's appellation *molinæ* for this species.

The species of *Pelecanus*, therefore, which seem to me to be well founded are ten in number, and may be divided as follows:—

a. *Saccus gularis minor, gulam solam amplexens.*

a'. *Lora nuda.*

a''. *Frontis plumæ projectæ, in angulum acutum antice terminantes...* { 1. *P. onocrotalus.*
2. *P. mitratus.*
3. *P. javanicus.*

b''. *Frontis plumæ truncatæ, linea fere recta antice terminantes.*

a'''. *Mandibula tota nuda.....* { 4. *P. crispus.*
5. *P. rufescens.*
6. *P. philippensis.*

b'''. *Mandibula ad basin plumosa ...* 7. *P. trachyrhynchus.*

b'. *Lora plumosa.....* 8. *P. conspicillatus.*

b. *Saccus gularis major, ad collum medium descendens* { 9. *P. fuscus.*
10. *P. molinæ.*

* I think it better to pass over Gmelin's name *erythrorhynchus* for this species, although prior to Latham's. The bill is not red; and Gmelin called it *erythrorhynchus* because he mistook the word "rough," applied to its bill by Latham, for *rouge*! (See Latham, G. H. x. p. 408.)