

Eagles, I had the use of a very fine series, formed of Mr. Anderson's birds as well as my own. This collection, numbering between 30 and 40 birds, is, I believe, the finest there is; for I have not heard of even Mr. Hume possessing the half-changed striped birds. It was very pretty to see how this striped bird changed gradually into the old black one, and to see, on the other hand, how remarkably distinct *A. bifasciata* was from *A. crassipes* in every stage. Beyond the fulvous on the back of the head the two birds have nothing in common, except that they are of very similar size.

3. On the Genus *Chelymys* and its Allies from Australia.

By DR. J. E. GRAY, F.R.S. &c.

[Received February 28, 1872.]

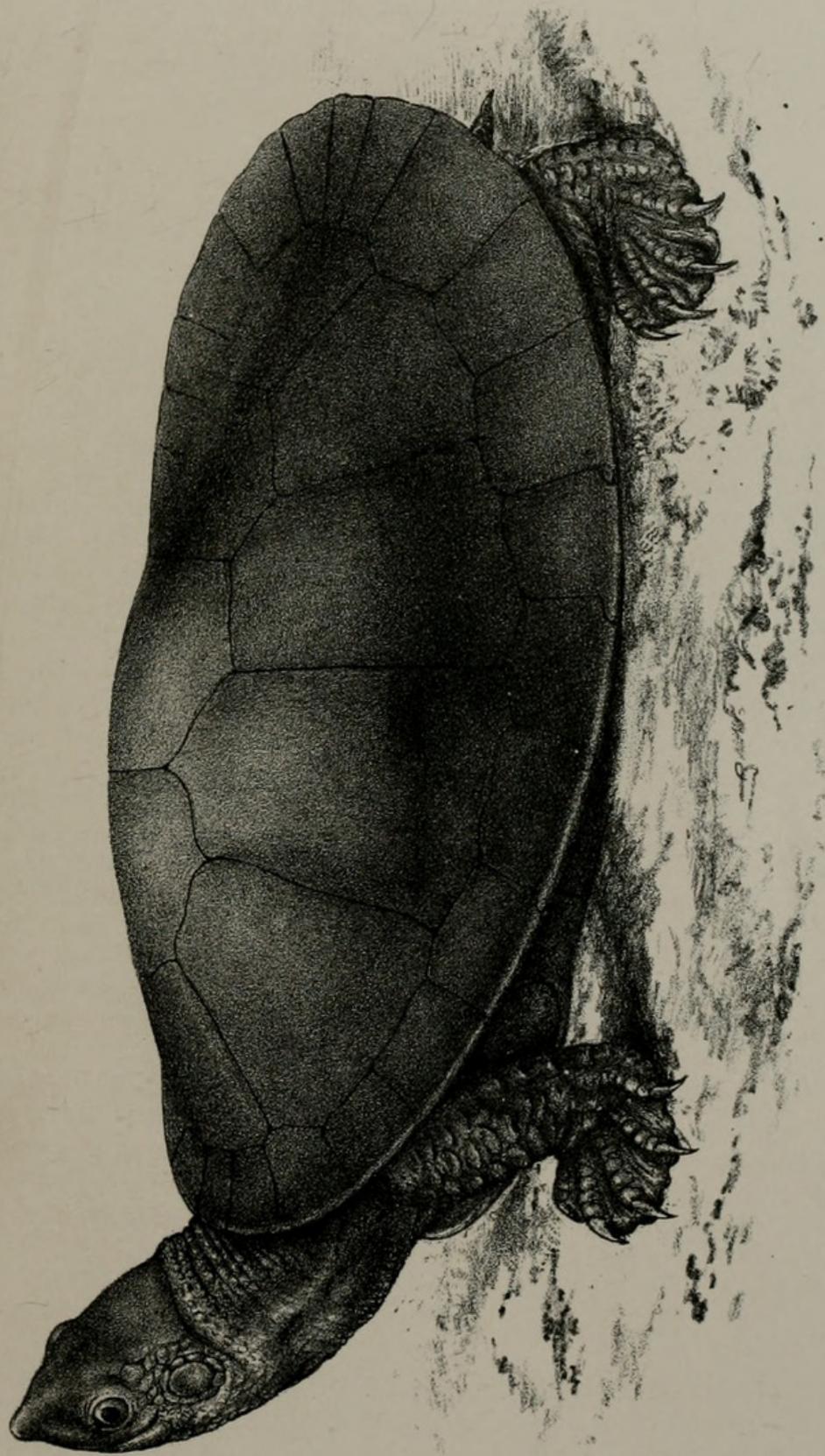
(Plates XXVII.—XXIX.)

Chelymys of Australia, in its more extended sense, forms with *Platemys* from Tropical America a group differing from all the other *Hydraspidae* in having a solid skull with a broad square face and crown, with the temporal muscles on the side, and a broad auri-occipital arch. The American genus *Platemys* is somewhat like the Australian genus *Elseya*, but differs from it in many particulars sufficiently to show that it is a distinct genus.

For many years only a single species, called *Emys macquaria* by Cuvier, was known; but as the country has been more searched we have gradually become acquainted with several very distinct species, which in the 'Annals and Magazine of Natural History' for 1867 (vol. xx. p. 44) I separated into two genera, *Chelymys* and *Elseya*, the former having no beard on the chin, whilst the latter has two distinct beards, but no nuchal shield.

In the 'Annals and Magazine of Natural History' for 1871 (viii. p. 117) I separated the genus *Euchelymys* from the latter because it had a narrow nuchal shield as well as two beards. We have since received from Mr. Krefft several more specimens of these animals—which has induced me to revise the characters of these genera, and also to examine and figure the skulls of two of them, as well as the other parts of the skeleton. I am now in doubt whether the existence of a narrow nuchal plate is a sufficient character for the establishing of a genus or species; but I must leave this question to be solved by the discovery and examination of more specimens. As yet we have only a single specimen with a nuchal plate; and, as far as I have had an opportunity of judging, I think it may probably be an accidental malformation of a comparatively common species without a nuchal plate, of which there are several specimens in the Museum collection.

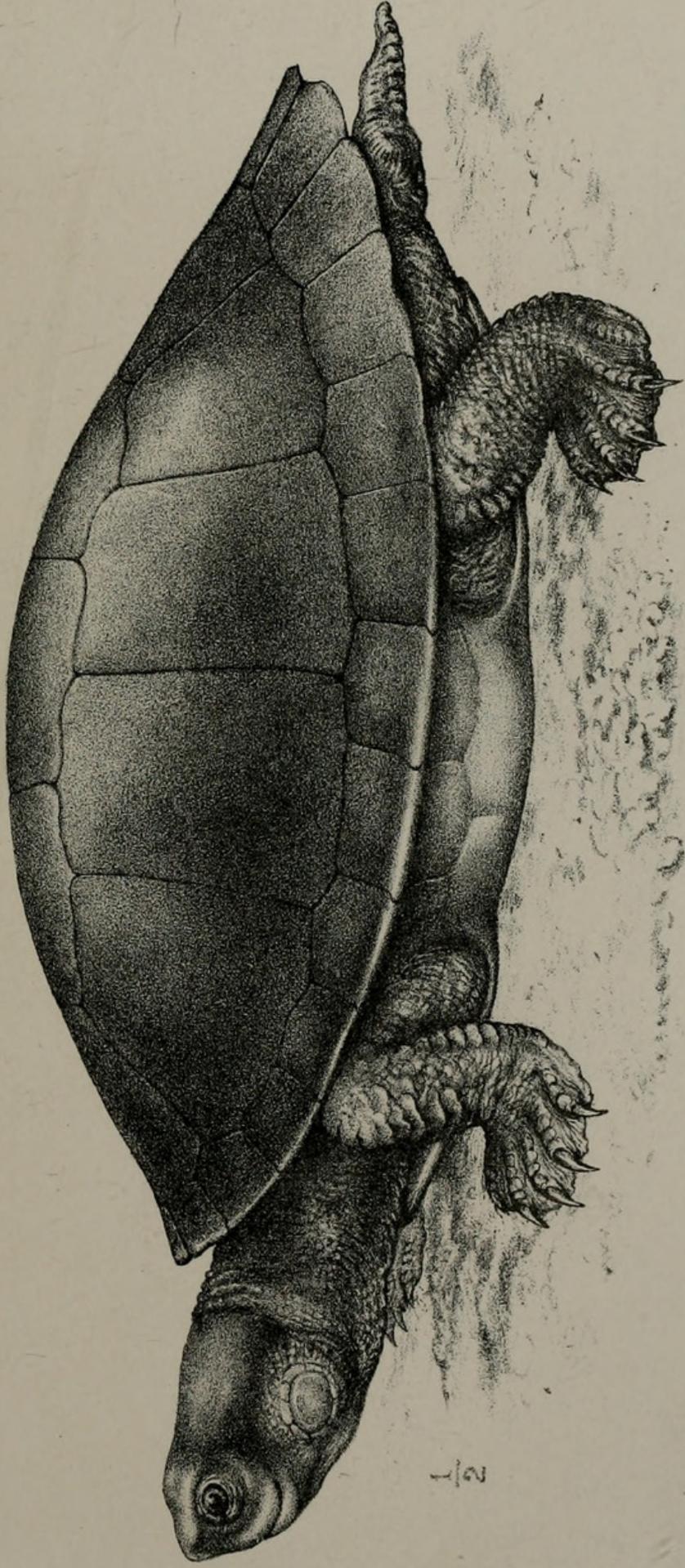
The Australian genera have solid, rather thick, skulls, unlike the



C. Berjeau. del. et lith.

CHELYMYS VICTORIÆ.

Mintern Bros. imp.

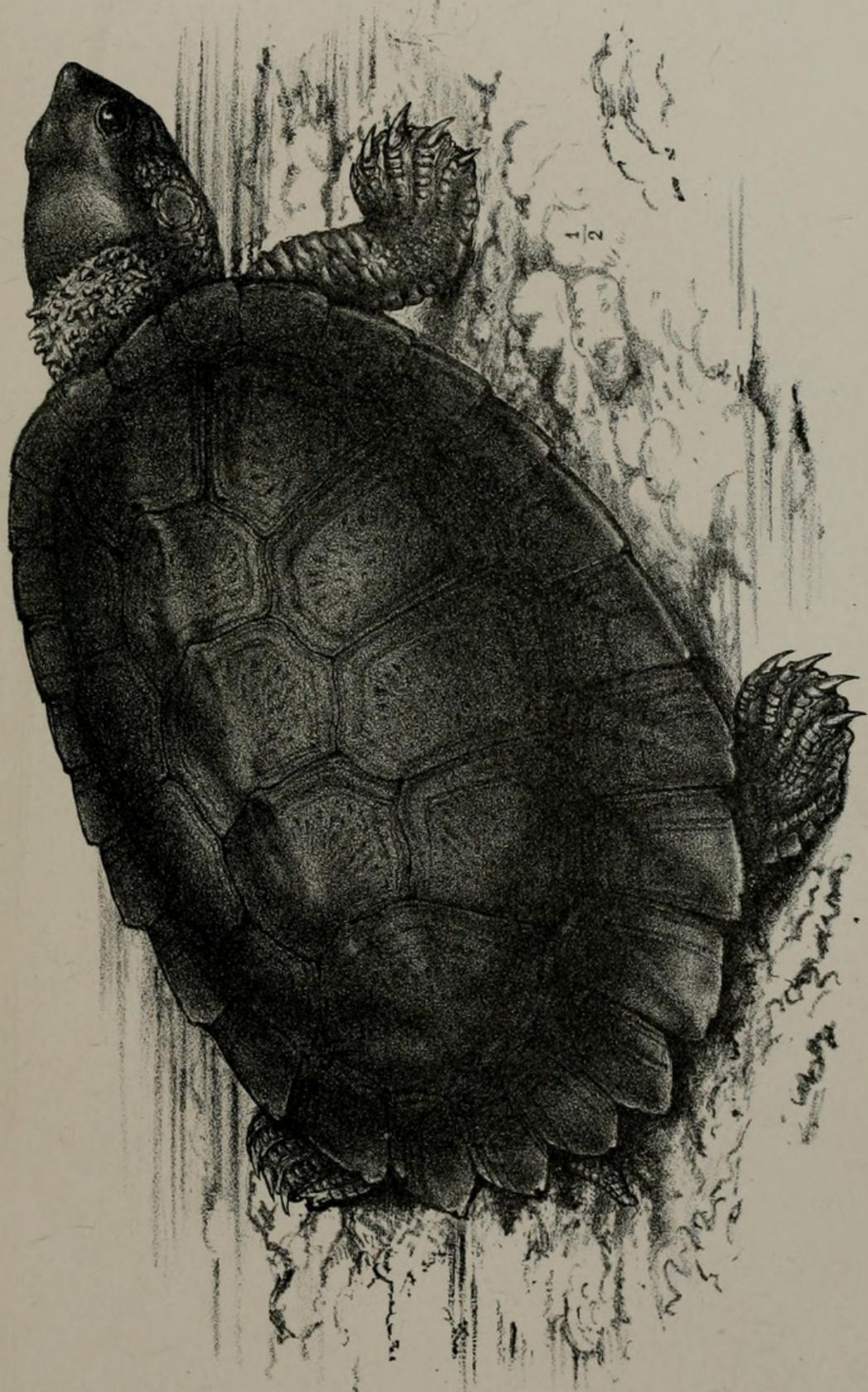


C. Berjeau del. et lith.

CHELYMYS KREFFTII.

Mintern Bros. imp.





C. Berjeau del et lith.

ELSEYA LATISTERNUM

Mintern Bros. imp.

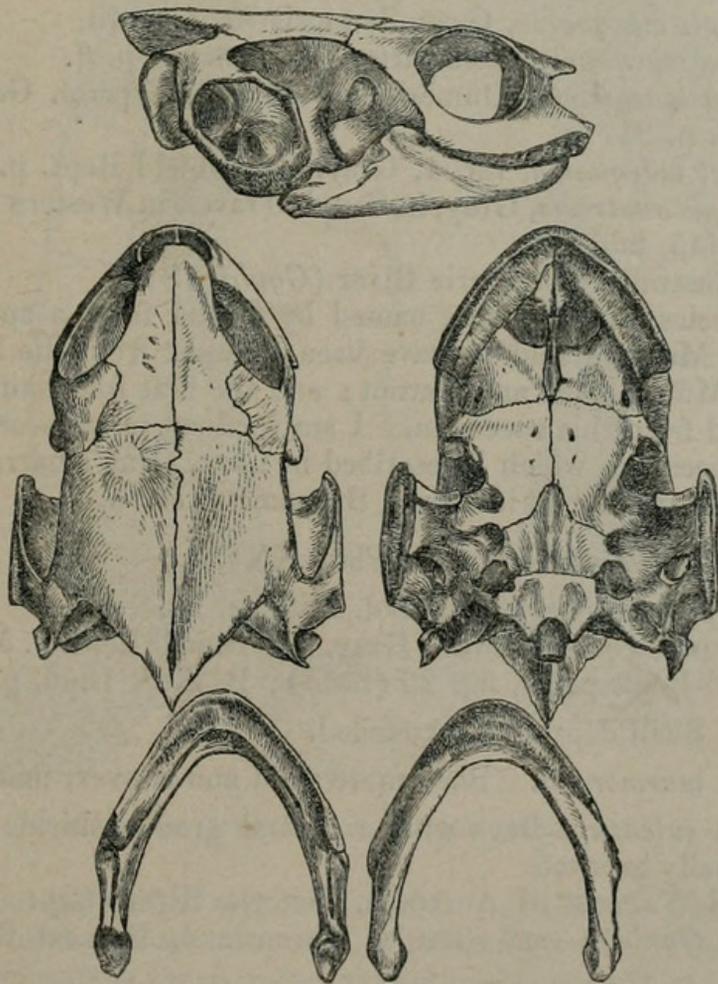
thinner skulls of the American genus *Platemys*. They may be divided thus:—

- I. *Head covered with a skin, which is reticulated over the temples; nuchal plate distinct; neck smooth, reticulated.*
 1. **CHELYMYS.** Chin not bearded; nuchal plate generally broad; occiput like the crown. (Fig. 1, p. 505, skull.)
 2. **EUCHELYMYS.** Chin two-bearded; nuchal plate narrower; sides of occiput with two oblong, subtriangular, diverging, hard plates.
- II. *Head and temporal muscles covered with a hard bony sheath; nape spinose; chin two-bearded; nuchal plate none (or, rarely, very small and narrow).*
3. **ELSEYA.** (Fig. 3, p. 507, skull).

1. **CHELYMYS.**

Head covered with a smooth skin, reticulated and divided into

Fig. 1.



Skull of *Chelymys victoriae*.

small plates over the temples. Chin without any beard; nape smooth, reticulated; legs with small scales. Nuchal shield broad and well developed. Crown and occiput nearly square, scarcely dilated behind; hinder edge produced in the middle. Vertebral shields of the adult quite as long as broad.

Skull depressed, without any zygomatic arch, and with a large tympanic opening; forehead and crown broad, flat, produced behind in the middle of the occiput. Basisphenoid transverse, shorter and broad, with a triangular projection on the front edge, produced behind the hinder part of the palatine bones. The basioccipital oblong, transverse, as broad as the sphenoid.

I am inclined to think that more than one species were included under the name of *Chelymys macquaria* in the Catalogue and Supplement, some even belonging to what is now regarded as another genus, as they have two beards, which were overlooked in the stuffed specimens.

* *Thorax ovate, more or less depressed, with the hinder margin expanded. Head of moderate size.*

1. CHELYMYS MACQUARIA.

B.M.

Emys macquaria, Cuvier, R. A. vol. ii. p. 11.

Hydraspis macquaria, Gray, Synopsis Rept. p. 40.

Emydura macquaria, Bonaparte, Tab. Analyt. p. 8.

Platemys macquaria, Duméril and Bibron, Erpétol. Générale, & Cat. Méth. p. 21.

Chelymys macquaria, var. 1, Gray, Cat. Shield Rept. p. 57.

Hydraspis australis, Gray, in Gray's Travels in Western Australia, vol. ii. p. 445, tab. vi.

Hab. Australia, Macquarie River (*Gould*, 1840).

The species was originally named by Cuvier from a specimen in the Paris Museum said to have been brought from the Macquarie River by MM. Lesson and Garnot; and the first four names quoted are derived from this specimen. I am inclined to suppose that Mr. Gould's specimen, which I described in Capt. Gray's narrative, may be the same species, as it is from the same river.

2. CHELYMYS VICTORIÆ. (Plate XXVII.)

B.M.

Hydraspis victoriæ, Gray, Zool. Misc. p. 55.

Chelymys macquaria & var., Gray, Cat. Shield Rept. p. 57; Suppl. Cat. Shield Rept. p. 76, fig. 25 (head); P. Z. S. 1856, p. 31.

Var. 1. Shell depressed, expanded.

Var. 2. *marmorata*. Back more solid and convex, marbled.

Var. 3. *sulcata*. Back with a central groove, shields obscurely longitudinally grooved.

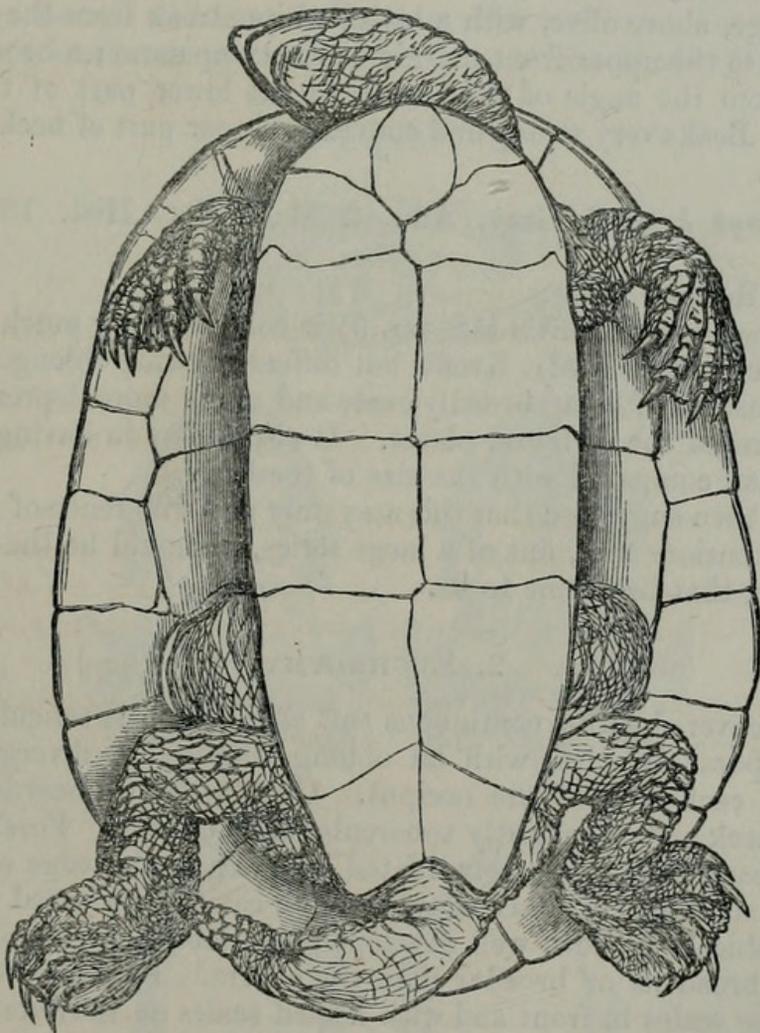
Hab. N.W. coast of Australia, Victoria River (*Capt. W. Chambers*, *Mr. Gould*); east coast of Queensland, Burnett River (*Mr. Krefft*).

This species appears to have a very extensive geographical distri-

bution. There are several specimens in the British Museum brought from the Victoria River by Capt. William Chambers and Mr. Gould, and more lately several specimens in spirit from Burnett River on the east coast of Queensland. It is remarkable that the specimens received at the same time from the Victoria and Burnett rivers present such variation in form that one is induced to believe that they are referable to two species. Having only one or two specimens of the one from the Macquarie River, we have not the means of deciding whether the same variations occur in that river.

The specimens agree in having a lead-coloured head, with a broad streak from the middle of the hinder part of the orbit to the upper front margin of the tympanum, and a similar, rather broad, streak from the angle of the mouth to the underside of the tympanum.

Fig. 2.



Chelymys victoriae, from Krefft's photograph.

In general the gullet and throat below this line are white; but in some they are more or less varied with lead-colour. The thorax in all the specimens is much more oblong and convex than in the specimens received from Segou, on the Macquarie River; but they vary

both in the outline of the thorax and in the convexity of the back very considerably. The smallest is the broadest, with the back of the shell much elevated in the centre. Indeed no two of the specimens are alike in form and convexity, which induces me to believe that they all belong to one variable species.

** *Thorax oblong, convex, high. Head large.*

3. CHELYMYS KREFFTII. (Plate XXVIII.) B.M.

Thorax oblong, scarcely broader behind, very convex. The second, third, and fourth vertebral shields as long as or rather longer than broad; the second and third nearly square, with only a slight angle near the middle of each side; the fourth contracted behind; the first nearly square, rather broader than long, and rather broader in front. Thorax convex, elevated from the margin, the lateral processes convex. Head large, above olive, with a broad white streak from the back of the orbit to the upper front margin of the tympanum; a broad white streak from the angle of the mouth to the lower part of the tympanum. Beaks very strong and convex. Upper part of neck slightly granular.

Chelymys krefftii, Gray, Ann. & Mag. Nat. Hist. 1871, viii. p. 336.

Hab. Burnett River.

One specimen (Krefft's MS. no. 9) is coloured very much like the others received from Mr. Krefft, but differs in being oblong and very convex, instead of being broadly ovate and much more depressed, and in the form of the vertebral plates. It also differs in having a much larger head compared with the size of the body.

It has been suggested that this may only be a difference of sex; but it is very curious that, out of a large series, it should be the only one of the sex that has come to us.

2. EUCHELYMYS.

Head covered with a continuous soft skin, which is reticulated over the temporal muscles, with an oblong, triangular, diverging hard plate on each side of the occiput. Chin with two beards. Back of the neck netted, slightly tuberculated or convex. Forehead and crown nearly square, scarcely dilated behind; hinder edge of occiput scarcely sinuated. Thorax convex, solid; cavity contracted in front; nuchal shields narrow, well developed; vertebral shields broad, the fifth as broad as or broader than the others. Fore legs with large transverse scales in front and with keeled scales on the outer margin.

Euchelymys (part.), Gray, Ann. & Mag. Nat. Hist. 1871, viii. p. 118.

I first established this genus in the 'Annals and Magazine of Natural History' for August 1871, placing the two species together, because they both had nuchal plates; but I believe now that the second species was founded on an abnormal specimen of *Elseya*.



Gray, John Edward. 1872. "On the genus *Chelymys* and its allies from Australia." *Proceedings of the Zoological Society of London* 1872, 504–514.

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