the usual flat-backed Mud-Tortoises and the very convex *Emydæ* of the Indian tanks, which have a series of marginal bones in the margin of their cartilaginous dorsal shield.

7. Notes on *Bartlettia*, a new Species of Freshwater Tortoises belonging to the Family *Peltocephalidæ*. By Dr. J. E. Gray, F.R.S. &c.

It has been well observed that after the greatest care some new fact in the structure of an animal that has been often observed will occur. I have been for several years collecting together the species of Tortoises, and more especially studying the osteology, and particularly the skulls of the *Testudinata*; I have published several papers on them, and have collected these papers together, with many additional observations and descriptions, as a 'Supplement to the Catalogue of Shield Reptiles in the British Museum,' which is printed and ready for distribution; and yet, before it has actually been published, an accidental circumstance has revealed to me that a series of specimens that I believed were all of one species, coming from nearly the same locality, consists of two most distinct species, belonging to two most distinct genera, marked by very great differences in the form of the alveolar process, which has been confirmed by the examination of the skulls or heads of a series of specimens of each species of different ages.

Mr. Edward Bartlett, during his excursion to Brazil for the purpose of collecting objects of natural history, sent to the Museum a series of specimens of a freshwater Tortoise which he obtained in the freshwater lakes in the region of the upper Amazons. They were considered to be half-grown examples of *Podocnemis expansa*, which they greatly resemble in all external characters; but on Mr. Edward Gerrard, junior, preparing a skeleton of one of them for the collection, it was discovered that it possessed a very different alveolar surface of the upper jaw; and on examining the jaws of the other specimens, they were all found to have the same peculiar character; therefore I have described and figured these jaws; and to point out, in the shortest manner, the differences between it and the other genera of the family, I have formed a tabular distribution of them.

Peltocephalidæ.

Peltocephalidæ, Gray, Suppl. Cat. Sh. Rept. p. 82.

In the skulls of all the genera in this family the vomer is not ossified, and the internal nostrils of the skull are not divided by a septum, but leave a large open aperture in the front of the palate.

The bony vaulted arch that covers more or less completely the depression on the side of the skull for the temporal muscle, is entirely formed, according to Prof. Owen, of an extension of the parietal bone.

In my paper on the genus *Podocnemis* in the 'Proceedings' of the Society I pointed out that the *Podocnemis expansa* of Wagler and the *Emys expansa* of Cuvier, which had been considered the same species, had very different skulls, and I entered into the details of the differences between them.

In my paper in the 'Proceedings' of the Society for 1864, p. 133, I formed them into separate genera.

In *Bartlettia* and *Podocnemis expansa* both the ischiadic and iliac bones are affixed by a bony suture to the sternum.

The thorax of the animals of this family has the cavity contracted, like the shells of the greater part of the Bataguridæ of India. In a very large specimen of *Podocnemis expansa* the front contraction is separated from the margin of the cavity by a considerable space, and may be so in younger specimens; in the genus *Bartlettia* it is continuous with the margin of the cavity, as in all the Batagurs I have examined.

Tribe I. Peltocephalina.

The head high, subcompressed; parietal bone entirely covering the temporal muscle. Nose produced, rounded above, without any longitudinal groove.

1. Peltocephalus.

P. tracaxa, Gray, Supp. Cat. Sh. Rept. p. 84. B.M.

Tribe II. Podocnemina.

Head depressed; parietal expanded, covering the upper part of the temporal muscle, leaving a broad rounded notch in the skull, between the end of the maxilla and the tympanic bone. Nose flattened, with a deep longitudinal groove.

2. Chelonemys.

Head elongate ovate; the alveolar surface of the upper jaw rather sinuous, convex in front and shelving behind, with two diverging ridges, separated by a broad longitudinal depression, the inner one low and indistinct. Lower jaw with a sharp outer edge and a deep longitudinal concavity, the inner margin elevated, divided by a central longitudinal groove into two ridges; the central notch produced forward between the under margin towards the apex of the central beak. (Cuvier, Oss. Foss. v. part 2, pl. 11. figs. 11, 12.)

C. dumeriliana, Gray, Suppl. Cat. Sh. Rept. p. 83. B.M.

3. Podocnemis.

Head short and broad; alveolar surface of upper jaw flat, with three diverging ridges, separated by a flat rugose space in the middle, the inner one low and distinct; lower jaw with a sharp outer edge, a deep longitudinal concavity, the inner margin elevated, divided

by a central longitudinal groove into two ridges; the central notch not produced forward. (Gray, Cat. Sh. Rept. tab. 37. f. 1.)

The young animal is black, the head ornamented with large white spots.

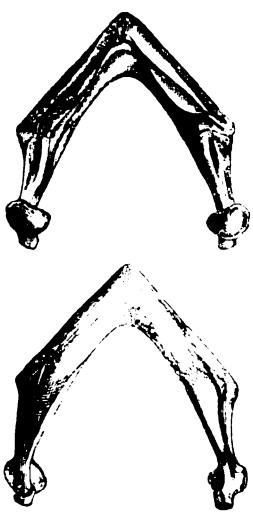
P. EXPANSA, Gray, Suppl. Cat. Sh. Rept. p. 83. B.M.

4. BARTLETTIA.

Head short and broad; alveolar surface of the upper jaw flat in front, shelving and concave behind, with a very indistinct, short, subcentral ridge parallel to the outer margin; alveolar surface of the lower jaw with a slightly raised ridge on the outer edge, narrow, slightly concave in front, the inner edge obliquely raised into a sharp ridge, which is wide behind and narrow in front, with a rounded depression in the centre of the hinder edge (fig. 1). The central ridge in the horny beak of the upper jaw more distinct than in the skull.

The skull (fig. 2, p. 721) is short and depressed, the eyes separated, forehead convex; the head covered with hard shields, the crown-shield rounded in front, temporal shields large; chin with a single central beard; the cheek-shield covering part of the temporal muscle not covered by the bone. The animal olive, and the head not spotted.

Fig. 1.



Lower jaw of *Bartlettia pitipii*.

BARTLETTIA PITIPII. B.M.

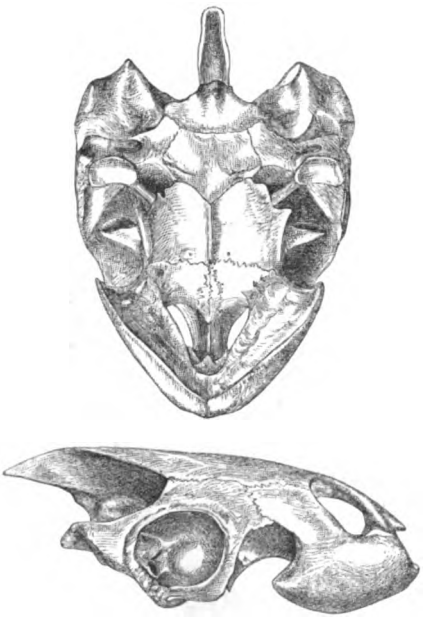
Shell olive-brown, ovate, hinder margin greatly expanded; the head olive above, rather paler below; the second and third vertebral

shields bluntly keeled, the keel most elevated on the suture between these two shields.

The sternum paler; the limbs, in spirit, pale yellowish white.

Hab. Lakes of the Upper Amazons (*Edward Bartlett*): called "Pitipii."

Fig. 2.



Skull of *Bartlettia pitipii*.

There are four specimens in the British Museum, the largest being 13 inches by 11 inches, and one has been prepared as a skeleton.

The shell is very like that of *Podocnemis expansa*; but the largest specimen we have of the latter is 31 inches long by 23 inches.

I have named this genus after Mr. Bartlett, the Superintendent of the Gardens of the Zoological Society, who has published several excellent papers on the manners, and habits, and growth of the animals under his care. It is only to be regretted that he has not printed more of his notes; for observations on these subjects from a person who has the power of accurately observing and duly estimating the importance of the facts observed, as Mr. Bartlett has shown that he possesses, are most valuable for science; such observations can only be made by one who has the animals constantly under his supervision, while the separation of the species, and the systematic zoological characters, are able to be best eliminated in extensive collections in museums.