

remains of this order have been compared anew to ascertain which are genuine Emydoids, and which Hydraspides. The modifications noticed in the form have suggested their subdivision into several tribes or sub-families. (Compare p. 355.)

GENERA OF THE SUB-FAMILY OF NECTEMYDOIDÆ.

I. *PTYCHEMYS*, *Ag.* Horizontal alveolar surface of the upper as well as the lower jaw very broad, and divided by a ridge, the crest of which is tuberculate, and parallel to the cutting edge of the jaws. This edge is either smooth or serrate. The front of the alveolar margin of the upper jaw is either emarginated or more or less deeply notched, with or without a projecting tooth on either side (Pl. 27, fig. 5). Lower jaw very flat, with a hook or sharp point in front, behind which a keel extends along the symphysis, on each side of which there is a deep pit; alveolar surface spreading inward beyond the vertical branches of the jaw. Horny sheath of the lower jaw rough externally. A row of large scales, in the shape of a fold, along the outer edge of the forefeet (Pl. 27, fig. 1-3). Tessellation of the epidermis, amounting to scales upon the neck, but not upon the loose skin between the legs. The clawless fifth toe of the hind foot forms an angular projection on the posterior edge of the foot (Pl. 27, fig. 1-3). The color varies greatly with age, and even in different specimens of the same age. When young, the whole surface has more or less confluent ocellated and crescent or lozenge-shaped figures, which become more transverse afterwards, and may be resolved into simple blotches in old age. The claws also vary greatly in length and strength; sometimes, especially in half grown specimens, those of the three middle toes exceed the length of the whole foot. In the young, the median row of scales forms a blunt keel along the back, which fades entirely in the adult. The scales are at first smooth, or rather finely granulated; afterwards radiating rugosities appear upon their periphery, while in old age¹ they are longitudinally rugose.

PTYCHEMYS RUGOSA, *Ag.*² Its most prominent specific character consists in the

¹ This shows how unsatisfactory specific characters must be which are derived from the direction, or even the presence, of these rugosities.

² This species is well known to the American naturalists, under the name of *Emys rubriventris*, (Holbrook, N. Amer. Herp., vol. 1. p. 55, pl. 6.) first applied to it by Major LeConte; but, as this able observer has himself acknowledged, (Proc. Ac. Nat.

Sc. Phil., 1854, p. 189,) it had been described before, by Shaw, as *Testudo rugosa*. Merrem and Schlegel consider it as a variety of *Emys serrata*, while Say and Harlan have actually confounded it with *Emys serrata*, from which it differs, even generically. Gray also describes it as *Emys serrata*, (*Emys irrigata*, *Bell*). *Emys rivulata*, *Gray*, is not specifically distinct. Duméril and Bibron describe it under three