

SECTION V.

FAMILY OF CHELYOIDÆ.

The family of Chelyoidæ, as characterized below, embraces only one genus, the *Chelys* of South America. As limited by former observers, the type of *Pleurodères*, to which *Chelys* belongs, combines features which are parallel to those that characterize the families of *Trionychidæ*, *Chelydroidæ*, *Cinosternoidæ*, and *Emydoidæ*. These peculiarities would seem to be remarkably blended here, if this type were to constitute a single family. I believe, however, that this is not the case.¹ I have, at least, satisfied myself already, that the Chelyoidæ are very different from the other *Pleurodères*, as the following description may show.

The dorsal part of the vertebral column, from the first dorsal vertebra back-

¹ Of all the types of *Testudinata*, that of *Chelydina* is the only one, for the examination of which I have not been able to secure ample materials. Having however myself, when student in the University of Munich, made most of the skeletons which are figured in the *Atlas to Wagler's Natur. System Amphibien*, 1830, I have derived sufficient information from his illustrations of this subject to satisfy myself that several families are still included under the group called *Elodites Pleurodères*, by Duméril and Bibron, (*Erpét. génér.*, 1835.) The first allusion to the propriety of considering them as a distinct group may be found in J. E. Gray's *Synopsis of the Genera of Reptiles*, (*Ann. of Philos.*, 1825,) where they are enumerated as a sub-family of the *Emydoidæ*, under the name of *Chelidina*. Soon afterwards Fitzinger considered them as a distinct family, under the name of *Chelydoidea*, (*Neue Classif.*, 1826.) This family was afterwards adopted by Wiegmann, under the name *Chelydæ*, (*Handb. d. Zool.*, 1832,) then subdivided into two sub-families by Canino, under the names of *Hydraspidina* and *Chelina*, (*Cheloniorum, Tab. Anst.*, 1836.) These two divisions are considered as families by Fitzinger, in his latest work, (*Syst. Amph.*, 1843,) under the names of *Hydraspides* and *Chelydæ*. Gray, however, considers them still as one family, under the name of *Chelididæ*,

(*Cat. Brit. Mus.*, 1844.) I hold that the separation of the Chelyoidæ from the *Hydraspides*, as a distinct family, is founded in nature. From the examination of several specimens in the Museum of the Essex Institute in Salem, I have satisfied myself that the genus *Chelys* of Duméril truly constitutes of itself a natural family. But I am by no means convinced that the genera referred to the family of *Hydraspides* are so closely allied to one another as to form one natural family. There are those among them which recall the *Cinosternoids*, while others resemble more the *Emydoids*. I am, therefore, inclined to believe, though I have not the means to show, that as *Chelys* constitutes a natural family among the *Pleurodères*, analogous to the *Chelydroidæ* among the *Cryptodères*, so does *Sternotherus* correspond to the *Cinosternoids*, while the other genera correspond to the bulk of the *Emydoids*, thus forming two natural families, which may be called *Sternotheroidæ* and *Hydraspides*. It may be, however, that several of the genera of the *Hydraspides* differ still more from the others than the sub-families of *Emydoidæ* among themselves, as, for instance, *Podocnemis* and *Chelodina*. This type of *Pleurodères* requires yet to be thoroughly studied, in all its ramifications, and minutely compared with the corresponding types of *Cryptodères*, characterized in the following pages as distinct families.