early as 1825, Gray had distinguished them as a family, which was adopted by Bell, by Fitzinger, by Canino, and by Duméril and Bibron, the latter only changing the name of Trionychidæ into that of Potamides. This group constitutes one of the most natural families among Turtles, at once recognized by the flat, thin shield of an elegant oval form, by the long neck, the pointed head, and projecting nose. But the question is farther, whether this family can be associated in one sub-order with Emys and Testudo, or not. If we consider the total absence of scales, the imperfect ossification of the shield, the absence of ossification of the margin, or the limited extent to which it is ossified, the slight protection of the jaw by a small, horny sheath, we cannot fail to recognize characters of inferiority in these features, when comparing them with those of the Emyds and Testudos; and I would not hesitate to consider that family, though exhibiting alone such characters, as forming a sub-order of the same organic value as that of the Chelonii, did we not observe similar differences between the Sphargididæ and the true Chelonioidæ, and had we not learned long ago that any amount of difference existing between two groups never constitutes a difference of kind. The question might even be raised, whether the very imperfect ossification of Aspidonectes, and especially the total absence of marginal scutes, do not place them below the Chelonioidæ. But when it is remembered that among Chelonii the ossification is still more imperfect, at least in Sphargis, and that the skin is as destitute of scales in this genus as in Trionyx, there can be little doubt left that all the peculiarities of Trionyx are only family characters. The structure of their limbs is almost as perfect as in Emys, and, as we shall see hereafter, their whole organization brings them close to the Emydoids, Chelys and Chelydra forming the intermediate links. The remaining two types, Emys and Testudo, evidently stand, in every respect, highest among the Amydæ or Digitata, and close the series of Testudinata.

I greatly question the propriety of separating Trionyx, Chelys, Emys, and Testudo as groups coequal with Chelonia, as so many herpetologists do. There are many modifications in the degree of separation of the fingers among them, which alone do not establish differences of the same kind nor of the same degree as between these on one side and Chelonia on the other, even though as to ossification, development of scales, and armature of jaws, Trionyx differs somewhat from Emys and Testudo, while the two latter agree as closely as possible with one another. I would, therefore, consider Testudo, Emys, Chelys, and Trionyx together as one sub-order, showing the whole number of sub-orders among Testudinata to be only two, CHELONII and AMYDÆ, — the latter, however, including a number of distinct families, as I shall demonstrate presently.

The same argument which has led us to consider Sphargis and Chelonia as distinct families, leads naturally to the separation of a number of families among