CHAP. L SPECIAL CLASSIFICATION OF TESTUDINATA.

lies, with two sub-families of Canino, correspond exactly to the four families of Duméril and Bibron, the difference lying only in the separation, as families, of the Chersites and Elodites by Duméril and Bibron, while they constitute two subfamilies of the Testudinidæ of Canino. Again, the Chersites, the united Potamides and Elodites of Duméril and Bibron and their Thalassites represent the divisions of Ritgen and Wagler. I do not mean by this to say, that the separation of the Potamides and Elodites is not natural, but only to allude to the fact that Duméril and Bibron's Thalassites correspond exactly to Ritgen's Eretmochelones and to Wagler's Oiacopodes, while their Chersites answer to Ritgen's Podochelones and to Wagler's Tylopodes, the Potamides and Elodites of the French herpetologists corresponding together to the Phyllopodochelones and Steganopodes of the two German writers.

The agreement, and the discrepancies between these different systems, then, consist in this, that Oppel and Merrem and with them Bell, admit two higher subdivisions in the order of Testudinata, those with oar-like feet and those with distinct fingers, while Ritgen and Wagler admit three, distinguishing between those the visible fingers of which are webbed, and those in which they are entirely separated, while Duméril and Bibron introduce a farther distinction between those with webbed feet and a scaly body and those with a naked carapace, the Emyds proper and the Trionyx. Canino maintains this distinction between the naked and scaly fresh-water Turtles, but as he unites all the scaly ones together, whether their fingers are webbed or not, his division includes the Chersites of Duméril and Bibron as well as their Elodites. The sub-families which Duméril and Bibron introduce among the Elodites are founded upon the mode of motion of the neck, which exhibits differences already noticed by Wagler in 1830. Bell, Gray, and Fitzinger, who have a still larger number of groups which they call families, have founded them upon the same features which have led Duméril and Bibron to subdivide the Elodites. I do not here speak of the classifications of Fleming¹ and Latreille,² which are too artificial to deserve special notice.

Beyond these divisions, all authors mention only genera and sub-genera. Now, it must be obvious, from the agreement of all these writers in some points of their subdivisions of the Testudinata, that this order is not so homogeneous as to exclude higher divisions than genera in its classification. The point on which all agree is, the separation of the Turtles with oar-like, natatory organs of locomo-

¹ FLEMING, (J.,) The Philosophy of Zoölogy, London, 1822, 2 vols., 8vo., divides the CHELONEA, as he calls the Testudinata, into those with a movable and those with an immovable sternum.

² LATREILLE, (P. A.,) Familles naturelles du règne animal, Paris, 1825, 1 vol., 8vo., divides the CHELONIANS into those which can retract their legs. Cryptopodes, and those which cannot, Gymnopodes.