

The disagreement of authors as to the limits and respective value of its orders and families may be partly owing to the unnatural circumscription of the class itself.¹ As to the Reptiles, it is already certain, that the Amphibia and Reptiles proper, so long united as one class, constitute two distinct classes. In the main, the development of the true Reptiles² agrees very closely with that of the Birds, while the Amphibians³ resemble more the true fishes. In no class are renewed embryological

1856, vol. 17, p. 443.—MÜLLER, (A.) Ueber die Entwicklung der Neunaugen, Müller's Arch., 1856, p. 803. The unexpected facts mentioned here, render it highly probable, that *Amphioxus* is the immature state of some marine Cyclostom.

¹ The peculiarities of the development of the Plagiostoms consist not so much in the few large eggs they produce, and the more intimate connection which the embryo of some of them assumes with the parent, than in the development itself, which, notwithstanding the absence of an amnios and an allantois, resembles closely, in its early stages, that of the Reptiles proper and of the Birds, especially in the formation of the vascular system, the presence of a sinus terminalis, etc. Again, besides the more obvious anatomical differences existing between the Plagiostoms and the bony Fishes, it should be remembered that, as in the higher Vertebrata, the ovary is separated from the oviducts in the Sharks and Skates, and the eggs are taken up by a wide fallopian tube. That the Plagiostoms can hardly be considered simply as an order in the class of Fishes, could already be inferred from the fact, that they do not constitute a natural series with the other Fishes. I would, therefore, propose the name of SELACHIANS for a distinct class embracing the Sharks, Skates, and Chimæras. Recent investigations upon the Cyclostoms, show them also to differ widely from the Fishes proper, and they too ought to be separated as a distinct class, for which the name of MYZONTES may be most appropriate.

² VOLKMANN, (G. W.) De Colubri Natrix Generatione, Lipsiæ, 1834, 4to.—RATKE, (H.) Entwicklungsgeschichte der Natter, (Coluber Natrix,) Königsberg, 1839, 4to. fig.—WEINLAND, (D.) Ueber den Eizahn der Ringelnatter, Würt. Nat. Hist. Jahreshfte, 1855.—TIEDEMANN, (F.) Ueber

das Ei und den Fœtus der Schildkröte, Heidelberg, 1828, 4to. fig.—BAER, (K. E. v.) Beiträge zur Entwicklungsgeschichte der Schildkröten, Müller's Archiv, 1834, p. 544.—RATKE, (H.) Ueber die Entwicklung der Schildkröten, Braunschweig, 1848, 4to. fig.

³ RÜSEL v. ROSENHOF, (A. J.) Historia naturalis Rannarum nostratum, etc., Norimb., 1758, fol. fig.—FUNK, (A. F.) De Salamandrarum terrestris vita, evolutione, formatione, etc., Berlin, 1826, fol. fig.—RATKE, (H.) Diss. de Salamandarum corporibus adiposis eorumque evolutione, Berol., 1818.—Ueber die Entstehung und Entwicklung der Geschlechtstheile bei den Urodelen, N. Schr., Dantz. Naturf. Ges., 1820.—STEINHEIM, (L.) Die Entwicklung der Frösche, Hamburg, 1820, 8vo. fig.—HASSELT, (J. CONR., VAN.) Dissert. exhibens Observationes de metamorphosi quarundam partium Ranae temporarie, Göttingæ, 1820, 8vo.—PREVOST, (J. L.) et LEBERT, Mémoire sur la formation des organes de la circulation et du Sang dans les Batraciens, Ann. Sc. Nat., 3e sér. I. p. 193, fig.—RUSCONI, (M.) Développement de la Grenouille commune, depuis le moment de sa naissance jusqu'à son état parfait, Milan, 1828, 4to. fig.—Amours des Salamandres aquatiques et développement du Têtard de ces Salamandres, etc., Milan, 1822, 4to. fig.—BAER, (K. E. v.) Die Metamorphose des Eies der Batrachier vor der Erscheinung des Embryo, etc., Müller's Archiv, 1834, p. 481.—Entwicklungsgeschichte, etc., vol. 2d, p. 280.—REICHERT, (K. B.) Das Entwicklungsleben im Wirbelthierreich, Berlin, 1840, 4to. fig.—Vergleichende Entwicklungsgeschichte des Kopfes der nackten Amphibien, etc., Königsberg, 1838, 4to. fig.—Ueber den Furchungsprocess der Batrachier-Eier, Müller's Archiv, 1841, p. 523.—VOGT, (C.) Untersuchungen über die Entwicklungsgeschichte der Geburtshelfer-