

embraces two groups: the Acari and the Arachnoids proper, corresponding respectively in this class to the Entomostraca and the higher Crustacea. The embryo of the Acari resembles somewhat that of the Entomostraca, whilst that of the true Spiders¹ recalls the metamorphosis of the higher Crustacea. On the ground of the similarity of their young, some animals, formerly referred to the class of Worms,² are now considered as Arachnoids; but the limits between the aquatic Mites and the Pycnogonums are not yet quite defined.

In the branch of Vertebrata, all classes have been extensively studied, and as far as the principal types are concerned, the leading features of their development are satisfactorily known. Much, however, remains to be done to ascertain the minor modifications characteristic of the different families. It may even be, that further investigations will greatly modify the general classification of the whole branch. The class of Fishes³ may require subdivision, since the development of the Plagios-

Isotropa vulgaris.) Müller's Archiv, 1844, p. 27.—KÖLLIKER, (A.) Observationes de prima Insectorum Genesi, Turici, 1842, 4to. fig.—ZADDACH, (G.) Die Entwicklung des Phryganiden Eies, Berlin, 1. vol. 4to. 1854.—LEUCKARDT, (R.) Ueber die Micropyle und den feinem Bau der Schalenhaut bei den Insekteniern, Müller's Arch., 1855, p. 90.—NEWPORT, (Geo.) On the Organs of Reproduction and the Development of Myriapoda, Phil. Trans. R. Soc., 1842, II. p. 99.—STEIN, (Fr.) Vergleichende Anatomie und Physiologie der Insecten, 1ste Monogr., Die weiblichen Geschlechtsorgane der Käfer, Berlin, 1847, fol. fig.—STENOLD, (C. TH. E. v.) Ueber die Fortpflanzung von Psyche, Zeitsch. f. wiss. Zool., 1848, vol. 1, p. 93.—LEYDIG, (Fr.) Einige Bemerkungen über die Entwicklung der Blattläuse, Zeitsch. f. wiss. Zool., 1850, vol. 2, p. 62.—MEYER, (H.) Ueber die Entwicklung des Fettkörpers, der Tracheen und der keimbereitenden Geschlechtstheile bei den Lepidopteren, Zeitsch. f. wiss. Zool., 1849, vol. 1.—BURNETT, (W. J.) Researches on the Development of viviparous Aphides, Amer. Journ. Sci. and Arts, 1854, vol. 17, p. 62 and 261.—As far as the metamorphoses of Insects, after the eclosion of the larva, are concerned, I must refer to the works of Reaumer and Roesel already quoted, and to almost every modern book upon Entomology. The metamorphoses of North American Insects are minutely described in Harris's Report, q. n.

¹ HEROLD, (M.) De generatione Araneorum in ovo, Marburgi, 1824, fol. fig.—RATHKE, (H.) Ueber die Entwicklung des Scorpions; Zur Morphologie, q. n.—VANBENEDEN, (P. J.) Recherches sur l'Histoire naturelle et le développement de l'Ataxypsilophora, Mém. Ac. Brux., 1850, vol. 24, p. 444.—WITTICH, (W. H. v.) Observationes quædam de araneorum ex ovo evolutione, Diss. inaug. Iulii Sax., 1845.—Die Entstehung des Arachnideneies im Eierstock, Müller's Arch., 1849, p. 113.—CARUS, (J. V.) Ueber die Entwicklung des Spinneneies, Zeitsch. f. wiss. Zool., 1850, vol. 2, p. 97.—DUJARDIN, (F.) Mémoire sur des Acariens sans bouches, dont on a fait le genre Hypopus et qui sont le premier âge des Gamasos, Ann. Sc. Nat., 1849, vol. 12, p. 243 et 259.

² KAUFMANN, (Jos.) Ueber die Entwicklung und zoologische Stellung der Tardigraden, Zeitsch. f. wiss. Zool. 1851, vol. 3, p. 220.—VANBENEDEN, (P. J.) Recherches sur l'organisation et le développement des Linguatules (Pentastoma), Mém. Ac. Brux. vol. 15, I., p. 188.—SCHUBERT, (T. D.) Ueber Entwicklung von Pentastomum tænioides, Zeitsch. f. wiss. Zool. 1852, vol. 4, p. 117.—WILSON, (E.) Researches into the Structure and Development of a newly discovered Parasitic Animalcule of the Human Skin, Phil. Trans. R. Soc. 1844, p. 305.

³ FORCHHAMMER, (G.) De Blennii vivipari