

The writer who can see that the Quadrupeds unite with the Fishes, and the like, and yet says that Cuvier "was totally unacquainted with the very first principles of the natural system," hardly deserves to be studied in our days.

The attempt at representing graphically the complicated relations which exist among animals has, however, had one good result; it has checked, more and more, the confidence in the uniserial arrangement of animals, and led to the construction of many valuable maps exhibiting the multifarious relations which natural groups, of any rank, bear to one another.

SECTION VI.

EMBRYOLOGICAL SYSTEMS.

Embryology, in the form it has assumed within the last fifty years, is as completely a German science as the "Naturphilosophie." It awoke to this new activity contemporaneously with the development of the Philosophy of Nature. It would hardly be possible to recognize the leading spirit in this new development, from his published works; but the man whom Pander and K. E. von Baer acknowledge as their master must be considered as the soul of this movement, and this man is Ignatius Döllinger. It is with deep gratitude I remember, for my own part, the influence that learned and benevolent man had upon my studies and early scientific application, during the four years I spent in his house, in Munich, from 1827 to 1831; to him I am indebted for an acquaintance with what was then known of the development of animals, prior to the publication of the great work of Baer; and from his lectures I first learned to appreciate the importance of Embryology to Physiology and Zoölogy. The investigations of Pander¹ upon the development of the chicken in the egg, which have opened the series of those truly original researches in Embryology of which Germany may justly be proud, were made under the direction and with the coöperation of Döllinger, and were soon followed by the more extensive works of Rathke and Baer, whom the civilized world acknowledges as the founders of modern Embryology.

The principles of classification propounded by K. E. von Baer seem never to have been noticed by systematic writers, and yet they not only deserve the most careful consideration, but it may fairly be said that no naturalist besides Cuvier has exhibited so deep an insight into the true character of a natural system,

¹ PANDER, Beiträge zur Entwicklungsgeschichte des Hühnchens im Eie, Würzburg, 1817, 1 vol. fol.