

the skins and bones of animals, and not the soft parts capable of dissection, could be sent from remote parts of Asia to Greece. However probable it may be that Aristotle received the most liberal aid from Philip and Alexander for the furtherance of his studies in physical science, for procuring an immense number of zoological specimens both from Greece and the neighboring seas, and for forming a collection of books unique in that age, and which passed successively into the hands, first of Theophrastes, and afterward of Neleus of Skepsis, we must nevertheless regard the accounts of "the presents of eight hundred talents, and the maintenance of so many thousand collectors, overseers of fish-ponds, and bird-keepers," as mere exaggerations of a later period, or as traditions misunderstood by Pliny, Athenæus, and Ælian.*

The Macedonian campaign, which opened so large and beautiful a portion of the earth to the influence of one sole highly-gifted race, may therefore certainly be regarded, in the strictest sense of the word, as a *scientific* expedition, and, moreover, as the first in which a conqueror had surrounded himself with men learned in all departments of science, as naturalists, geometricians, historians, philosophers, and artists. The results that we owe to Aristotle are not, however, solely to be referred to his own personal labors, for he acted also through the intelligent men of his school who accompanied the expedition. Among these shone pre-eminently Callisthenes of Olynthus, the near kinsman of the Stagirite, who had

* Compare Sainte-Croix, *Examen des Historiens d'Alexandre*, 1810, p. 207; and Cuvier, *Histoire des Sciences Naturelles*, t. i., p. 137, with Schneider, *ad Aristot. de Historiâ Animalium*, t. i., p. xlii., xlvi., and Stahr, *Aristotelia*, th. i., s. 116-118. If, therefore, the transmission of specimens from Egypt and the interior of Asia seems to be highly improbable, yet the latest writings of our great anatomist, Johannes Müller, show with what wonderful delicacy Aristotle dissected the fishes of the Greek seas. See the learned treatise of Johannes Müller, on the adherence of the ovum to the uterus, in one of the two species of the genus *Mustelus* living in the Mediterranean, which in its foetal state possesses a placenta of the vitelline vesicle connected with the uterine placenta of the mother, and his researches on the γαλέος λείος of Aristotle, in the *Abhandl. der Berliner Akad. aus dem Jahr 1840*, s. 192-197. (Compare Aristot., *Hist. Anim.*, vi., 10, and *De Gener. Anim.*, iii., 3.) The distinction and detailed analysis of the species of cuttle-fish, the description of the teeth of snails, and the organs of other gasteropodes, all testify to the delicate nicety of Aristotle's own anatomical examinations. Compare *Hist. Anim.*, iv., 1 and 4, with Lebert, in Müller's *Archiv der Physiologie*, 1846, s. 463 und 467. I myself, in 1797, called the attention of modern naturalists to the form of snails' teeth. See my *Versuche über die gereizte Muskel und Nervenfaser*, bd. i., s. 261.