organs in living beings, and their functions. In plants, these organs and functions seemed to be much simpler and more easily observed than in animals, and Linnæus had selected the sexual organs, since they were the most easily distinguishable, as a primary character for his classification of the vegetable kingdom. Somewhat later [1] he classifies the animal kingdom according to the internal structure, and characterises animals for the purpose of division according to the heart and the blood. The celebrated dictum, that "minerals grow, plants grow and live, animals grow, live, and feel," which appeared in the last edition of the 'Systema Naturæ,' places a physiological distinction at the base of the classification. This conception, which has been somewhat modified since Linnæus's time to meet our altered views, is an obvious first step towards a description of natural objects. Yet this no more than the second step, which fastens upon the organs of reproduction in plants, on the heart and blood in animals, gives any clue to the comprehension of the great variety and apparent fixity of forms which the living world presents to our observation. In fact, purely morphological considerations were subordinated to physiological ones, and were brought in only to assist in the further subdivision of the two great kingdoms. Linnæus felt the artificiality of his classification—the arbitrariness of the characters he selected for the purpose of division. But a more natural system could only be arrived at by an intimate knowledge of and intercourse with living nature, as well as by a careful comparison of its hidden forms and organisation—*i.e.*, by a more de-

29. Outdoor studies.

[1] See Carus, 'Geschichte der Zoologie,' p. 503, &c.