

THE PALEOPATHOLOGY OF THE FOSSIL INVERTEBRATES

THE recent volume by Edgar Dacqué, professor in the University of Munich,¹ gives some interesting evidences relating to the paleopathology of the fossil invertebrates, but are so hidden under the misleading title of the book that there is need of calling especial attention to them for those interested in ancient evidences of disease.

His discussion of matters relating to paleopathology is given under two headings: (1) *Epökie*, *Parasitismus*, *Symbiose*, pp. 457-476. (2) *Regeneration*, *pathogene Schalen*, *Häutung*, pp. 693-703. Dacqué finds it necessary to discuss the meaning of the unusual term, *Epökie*, and one wonders why he did not use some well-known term, of which there are several, with the same significance. He defines the term, *Epökie*, as restricted to those cases in which an animal lives attached to the outside of another living animal. He points out the difficulty of properly interpreting these evidences which are forerunners of diseased conditions.

The treatment of ancient evidences of parasitism is not nearly so complete as that given by Dr. John M. Clarke², but is an interesting résumé, illustrated by numerous European and American examples, with bibliographic references. One illustration is very interesting. It is a pathologic carapace of a Cretaceous crab, possibly infested by some member of the family Bopyridæ, which inhabit the branchial cavities of other Crustacea, a habit they are known to have had in the early Pleistocene also. The specimen, derived from the middle Cretaceous of England, was described by Th. Bell in 1862.

1 "Vergleichende biologische Formenkunde der fossilen niederen Tiere," Berlin, 1921. The cumbersome circumlocution forming the title was evidently used to avoid the repetition of the term *Palæobiologie*, which would be a more exact title but which was adopted by O. Abel in his "Grundzüge der Palæobiologie der Wirbeltiere," Stuttgart, 1912. The two volumes supplement each other in a wonderful way and form a complete and adequate discussion of the paleobiology of all fossil animals.

2 "Organic Dependence and Disease: Their Origin and Significance," New Haven, 1921.

It is difficult to understand why Dacqué uses the term *pathogene* instead of the more appropriate term *pathologische*, adopted by all other German writers on paleopathology. There is certainly nothing *pathogenic* about either the injured snail or the diseased sand-dollar, from the Oligocene and Miocene respectively, shown on page 699. His studies in regeneration are rather incomplete and largely restricted to European evidences, but on the whole Dacqué's work is to be commended for the attempt to gather evidences relating to the early phases in the evolution of disease. It is worthy of note that such evidences can be satisfactorily sifted only by one who has a wide acquaintance with fossil invertebrates, since rare judgment must be displayed to avoid numerous possible misinterpretations.

ROY L. MOODIE

DEPARTMENT OF ANATOMY,
UNIVERSITY OF ILLINOIS,
CHICAGO, ILLINOIS

QUOTATIONS

ACROSS THE SAHARA BY MOTOR

THERE is a twofold interest in the attempt to cross the Sahara which is about to be made in Citroën motor-cars. The greater part of the world loves an adventure almost in proportion to its apparent foolhardiness. The brave Frenchmen who next month are to leave the railhead at Tuggurt, in South Algeria, for Timbuctoo are undertaking a journey of over 1,800 miles through a trackless desert, in a region of burning sun by day, of piercing cold at night. Trying to follow the same route by the swifter aeroplane, General Laperrine perished miserably, after a forced landing, and Major Vuillemin succeeded, but only after terrible adventures. Better preparations have been made for the motor-car party. Citroën cars have already been to In Salah and back, a stretch of over five hundred miles, at the northern end of the route, where wells exist and stores of petrol have been placed. At the southern end, along the Niger to Burem, and across the desert to Kidal, a stretch of over three hundred miles, and possibly even farther, stores have been placed in readiness. But for the central "trek" the expedition must be self-dependent. Let our home-fed imagination not picture the desert as a plain of sand, smooth,