

REVIEWS

Annual Review of Earth and Planetary Sciences. Vol. 7. Edited by F. A. Donath, F. G. Stehli and G. W. Wetherill. (Annual Reviews, Inc., Palo Alto, California 94306, USA), 1979. Pp. 517. Price: Bound \$ 17.50 (outside U.S.A.).

This volume, in conformity with the high standards of earlier volumes in the series, is an excellent compendium of the state-of-the-art papers in several branches of the earth and planetary sciences. The diverse disciplines covered by this volume include geochemistry, petrology, sedimentology, historical geology, climatology, meteorology, palaeontology and planetology. The arrangement of papers is random, which is probably a reflection of the diversity of subjects covered. It would have been better if the papers were arranged subject-wise, as has been done in the 'Chapter titles' under the 'Cumulative Indexes'.

There is an excellent review on the Sm-Nd isotopic systematics by R. K. O'Nions and others, highlighting its increasing application to problems of geochronology and evolution of the earth's crust and mantle. The advancements in the organic geochemistry of clays in relation to the generation of hydrocarbons have been projected well by W. D. Johns. Navrotsky has dealt with the application of calorimetry to petrological problems. The importance of crystal physics of diamond for understanding the nature of earth's mantle is reviewed by W. A. Bassett. Generation of Mid Atlantic Ridge and its bearing on seafloor spreading have been outlined by J. R. Heirtzler. There are two comprehensive review papers on sedimentology, namely, sandstone diagenesis by E. D. Pittman and primary sedimentary structures by J. C. Harms. Historical geology gets a boost from the paper on the enigma of extinction of dinosaurs by D. A. Russel. New palaeogeographic reconstructions of the global Palaeozoic have been presented by A. M. Ziegler and others.

Interesting papers on the atmospheric sciences cover wide-ranging problems such as thunderstorms, atmospheric tides, nitrogen in atmosphere, and influence of man on climate. There is an informative paper on synthetic seismograms by D. V. Helmlinger and (p. J. Burdick. Geophysical studies on silicate planets Lapers by C. Schubert, E. J. Smith and S. Gulkis, and N. F. Ness) provide an insight into the origin of the earth-moon system.

This volume is reasonably priced in relation of the wealth of data contained therein. It is an essential acquisition for any earth science library

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"FEVER" Its Biology, Evolution, and Function. By Matthew J. Kulger. (Princeton University Press, Princeton, New Jersey), 1979. Pp. 197. Price \$ 19.00.

The book is written in four chapters and there are 147 useful illustrations and a number of tables.

Prof. Matthew J. Kulger begins with an extensive discussion on the regulation of body temperature and physiology of fever. Temperature regulation is discussed as a reflex containing sensors, integrators and effectors. He has differentiated the control of body temperature in endotherms and ectotherms by the mechanism residing in the effector limb of the reflex.

The author explains lucidly the activator and initiator of febrile response and further he has nicely brought out the place of endotoxins in febrinogenesis. The literature with regard to the role of prostaglandins, the Na^+ to Ca^+ ratio in the causation of fever has been extensively reviewed. The antipyretic drugs seem to exert their effect through the central nervous system, although the precise mechanism of action of these drugs is unknown.

According to the author the fever appears to have an adaptive value and he argues in favour of this theory in that, the fever occurs in vertebrates from fishes through mammals and he observes that if fever had no beneficial role, this process which is so energetically expensive would not be such a common occurrence during infection. The demonstrably good results of raised temperature are the increased susceptibility of lysosomes to breakage resulting in the death of the virus within the cell. The increased transformation of lymphocytes and the increased mobility of polymorphs nuclear granulocytes (although the ability of granulocytes to phagocytosis is not substantially changed) are the other beneficial effects of elevated body temperature.

Prof. Kulger suggests that moderate fever should be allowed to run its course without the use of antipyretic drugs.

The contents and presentation of book are fascinating and it is a highly commendable piece of work. The book should be possessed by every research worker in the field and should be read in detail by medical men.

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