

regarded as generated by a subsiding ocean floor and directed against strata near the coast, producing underthrust folds with thinned under limbs, and bordered on their outer sides by synclinal fore-deeps. The Appalachians, Rockies and other mountain systems are taken as examples. In the first case it is assumed that the thrust came from the interior (Mississippi valley) sea, not from the east as usually supposed; in the case of the Rockies the thrust came from the Cretaceous sea covering the region of the Great Plains; and the thrust forming the Coast Ranges has come from the subsiding Pacific basin. The effect of the trend of the coast lines on the shapes of arcs rising off their shores is elaborated.

In the closing chapter on physiognomy the author reemphasizes his well-known ideas regarding the intimate relationship existing between fractures and surface expression. It is pointed out that in the Great Basin province north-south and east-west fractures with their bisectrices are dominant, and Africa is regarded as divided into a fault mosaic by fractures developed in the same directions. This fracture system is also applied to southern South America, and the author concludes that this pattern of fractures is continental in extent and probably worldwide.

The conception is entertained that both fracturing and folding may go on simultaneously within the same strata, rather than limited to separate depth zones. The author does not regard the theory of a zone of fracture as distinct from a subterranean zone of flow as tenable.

The book closes with a concise survey of the field of theoretical geology in which the author enumerates the theories he regards as tenable and which are emphasized through the book, together with the theories that are rejected as not being tenable.

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The Air and Its Ways. The Rede Lecture (1921) in the University of Cambridge with other contributions to meteorology for Schools and Colleges. By SIR NAPIER SHAW, Sc.D., F.R.S. With 100 figures, Royal 8vo, pp. xx + 237. Cambridge University Press, 1923. New York, The Macmillan Company. Price, \$7.00.

LECTURES and addresses on meteorological subjects are always easy to make and sometimes interesting to hear. So Sir Napier Shaw says and doubtless believes. But some of us on this side of the Atlantic can not help but qualify his statement with our own "That depends"—because of our own experience.

However, few of us can lecture or write like Sir Napier Shaw—more's the pity—and perhaps this is one reason why meteorology or to give it a modern

and more suitable appellation, *aerography*,¹ makes but slow headway in university curricula.

The present volume is not a text-book. We have the author's word for that; and yet it certainly can serve as such and serve admirably in any university course on atmospherics, using this word in its general sense and not the restricted one, of irregular and unwelcomed static interferences with radio messages.

Sir Napier Shaw says frankly that the book shows meteorology (awkward word) in its workaday clothes, with loose or missing buttons here and there and the tailoring not always perfect. This may be so; but we fail to observe it; and the originality and attractiveness of the work permit no notice of defects in dress.

In the book there are essays on climatology, air physics, dynamics of the atmosphere, agriculture as dependent on weather; and much valuable historical matter.

In a brief review, these can not be dwelt upon, and it is enough to say that he who is interested in any one of these fields of applied science will find page after page of up-to-date information and stimulating discussion.

Sir Napier is himself easily the most suggestive of aerographers. In this book he brings out no less than three new lines of investigation, or, in his own words, "new meteorological principles, as inductively justified": First, the motion of the air under balanced forces; second, the *eviction* of air by turbulent motion as an inevitable concomitant of convection; and third, *stratification* in consequence of the resilience due to excess temperature. He hopes that the last will in time lead to satisfactory explanation of the formation of high pressure areas.

The book is in the main not beyond a layman's depth and seems to the reviewer to be exactly the type of book an instructor in aerography should own, read, re-read and ponder over.

Typographically, the book is beyond criticism, as well it might be, having been seen through the press by a master hand, being indeed the last work of Mr. J. B. Peace of the Cambridge University Press, the author's college friend of many years.

ALEXANDER MCADIE

ZOOLOGICAL NOMENCLATURE

THE Secretary of the International Commission on Zoological Nomenclature has the honor to notify zoologists, especially ichthyologists, that Professor David Starr Jordan and the U. S. Fish Commission concur in recommending the adoption of the general principle that names now current are not to be dis-

¹ Aerography, literally the air and its ways.