

essential to know the frequency of occurrence of low readings and whether any of them are fortuitous. Such information can be readily obtained from the mean deviation, which takes account of all the deficiencies in the series. This is another reason for including some such measure of the variability of the rainfall in the curve of the predicted lowest values.

This exhaustive analysis of Scottish rainfall is of particular importance in that the Western Highlands of Scotland provide a promising field for the further development of water-power schemes, having a large area with an average annual fall of more than 80 inches (reaching locally 150 inches) and a smaller factor of variability than most other areas in Great Britain.

The Spider Crabs of America.¹

MISS RATHBUN has completed a very beautiful systematic monograph on the American spider crabs. It is a work of enormous labour, for no less than seventy-nine genera and nearly three hundred species are described, with minute details of their distribution and lists of the specimens examined from all localities. The figures are good photographs or clear diagrams and occupy nearly half the book, which is a most important contribution to the study of carcinology, and will be extremely useful to all systematists.

The companion volume is "The Grapsoid Crabs of America," forming Bulletin 97 of the United States National Museum, 1918, and here is to be found an introduction serving for both volumes, which are to be followed by others. The collections in the United States National Museum, embracing many hundreds of specimens, form the basis of both bulletins.

We have in the present volume a handbook for the study of American spider crabs which will be indispensable to workers in all countries. Some of these crabs have an extremely wide range of distribution; such are *Hyas araneus* and *Hyas coarcticus*, aptly termed "toad crabs," both of which are common on British coasts. *Hyas coarcticus*, which was originally described by Leach from British seas, is shown to have also a wide vertical range, extending from low water to (exceptionally) 906 fathoms.

The love of spider crabs for decoration is remarkable, and although in a work of this kind there is no room for details as to habits, still much may be learnt from it as to habitat and adaptation. Whether the animals actually decorate themselves with foreign substances or, without using them, are so like their environment that decoration is unnecessary, they are all so perfectly adapted to their surroundings that even in dead specimens one can usually recognise the kind of ground on which they live. The members of the Majidae are the most important of the "masking crabs," but even among these there are some which do not cover their bodies with extraneous matter. Thus we have the bright red *Thoe puella* in the fringing shallows living on broken pieces of coral which have portions of sponge scattered over them of a similar colour to the crab; and the hairy *Mithrax verrucosus*—the hiding-place of which is in rocky holes covered with madrepores—which only comes out to feed at night. In the smaller family, Parthenopidae, there are *Heterocrypta granulata*, the "pentagon crab," living on shingly bottom, bearing a striking resemblance to a freshly broken chip or flake of stone, and *Parthenope serrata*, which lives in the sand in shallow water with

only the rostrum, eyes, and afferent apertures exposed, these apertures being situated between the base of the finger and the margin of the orbit.

There are very good diagrams showing the nomenclature of the parts as used in the monograph, and the descriptions of the crabs and the keys are all clear and easy to understand.

University and Educational Intelligence.

ABERDEEN.—Ordinances for the establishment of chairs in forestry and bacteriology have been approved of by Order in Council.

The Right Rev. E. W. Barnes, Bishop of Birmingham, has been appointed Gifford Lecturer for the period 1926–8.

CAMBRIDGE.—Mr. G. E. Briggs, fellow of St. John's College, has been reappointed as demonstrator in plant physiology. Mr. Briggs has in the past done effective research on carbon assimilation and growth.

The Royal Commission has issued amended regulations governing the initial appointments to be made under the new statutes.

Certain amendments to the regulations of the mechanical sciences tripos have been brought forward. The proposed changes are chiefly concerned with the regrouping and amendment of the "B" (advanced) papers, the special function of which is to grade the candidates.

The local nominees to the first committee of management of the new Polar Institute consist of the present Vice-Chancellor, and three antarctic explorers—Messrs. Debenham, Priestley, and Wordie. The Council of the Royal Geographical Society has nominated Dr. H. R. Mill as its representative.

A Gordon Wigan prize of 30*l.* has been awarded to Mr. F. H. Constable, fellow of St. John's College, for chemical research on "The Nature of Catalytic Action."

ST. ANDREWS.—The degree of D.Sc. has been conferred on Mr. James Forrest, lecturer in natural philosophy, University College, Dundee, for a thesis entitled "Magnetic Quality in Crystals; Part I., Magnetic Discrimination of Molecular Lattices; Part II., Stability of Molecular Lattices."

STERLING Fellowships for Research in the Humanistic Studies and the Natural Sciences at Yale University Graduate School have been established by a gift of 1,000,000 dollars from the trustees of the estate of the late John W. Sterling to stimulate scholarship and advanced research in all fields of knowledge. They are divided into two general classes: Research or Senior Fellowships, candidates for which must be of the standing of the Ph.D. degree; and Junior Fellowships, candidates for which must be well advanced in their work towards the Ph.D. degree. The annual stipends of the former range from 200*l.* to 500*l.* or more, dependent upon the character of the proposed investigation, and of the latter from 200*l.* to 300*l.* The fellowships are open equally to graduates of Yale University and other approved colleges and universities. Applications for the fellowships should be addressed to the Dean of the Graduate School of Yale University, New Haven, Connecticut, for Junior Fellowships, by March 1, and for the Senior Fellowships by April 1.

THE December number of the *University Bulletin* of the Association of University Teachers contains an article by Dr. Alex Hill, of the Universities

¹ Smithsonian Institution; United States National Museum. Bulletin 129: "The Spider Crabs of America." By Mary J. Rathbun. Pp. xx+613 +283 plates. (Washington: Government Printing Office, 1925.) 2 dollars.