

and some physiological relations. In the last chapter are included such timely topics as toxalbumins, anaphylaxis, hæmagglutinins, and precipitin reactions.

Aside from numerous statistical tables of great value for reference, commendatory mention must be made of the unique bibliography of six hundred titles, itself one of the most useful, as well as the most complete, recent contributions to protein literature. No attempt has been made in the text to give working directions for students or investigators, or to furnish a descriptive account of the proteins. It is rather their properties, phenomena and relationships which are the subject of discussion. As an illustration of the helpful innovations introduced, the description of the acid and basic properties of proteins, and the relation of solubility to the free state or salt formation of proteins may be cited. The presentation is original and suggestive, in contrast with some of the current confusion of ideas on the subject.

The book is one of the series of Monographs on Biochemistry edited by R. H. Aders Plimmer and F. G. Hopkins.

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Our Search for a Wilderness, an account of two ornithological expeditions to Venezuela and British Guiana. By MARY BLAIR BEEBE and C. WILLIAM BEEBE. Pp. xix + 387; appendices A, B and C. New York, Henry Holt and Co.

In "our Search for a Wilderness," Mrs. and Mr. Beebe have amply fulfilled the promise of their earlier book, "Two Bird-lovers in Mexico," and the present volume gives a delightful account of two journeys to northern South America. While the scientific results of these trips (and the collections made in their course) have been fully reported on by the New York Zoological Society, this narrative of the field experiences teems with interesting details of tropical life, and is written with evident enthusiasm and much charm. One closes the book with reluctance, and it can hardly fail to interest the casual

reader, while to the student of nature, in whatever degree of advancement, every page carries some suggestion or graphically describes some picturesque circumstance. The authors went through their journeys with their senses all on the alert, and the vivid sensations of the humid Tropics are as real as mere words can paint them.

It is to the bird-lover, however, that the book must make its strongest appeal, and every effort has been made to render the necessarily random notes and observations as useful and as accessible as possible, by devoting an appendix to the species of birds observed, and indexing each species, in the text, with a corresponding number. By this reference it is always possible to tell at once what species is under discussion.

Many exceedingly interesting observations, paying high tribute to the open-mindedness and keen sensations of the observers, relate to the protectiveness, in actual use, of many apparently bold and conspicuous color-schemes. The "Owl Butterfly," so long used as an example of "warning colors," comes into his own, and is shown, photographically, to be a marvelous composite of its rough-barked sanctuary on the tree-trunk, the "owl's eye" proving to be, instead of a conspicuous warning eye, a beautifully painted hole in the bark.

In the appendix giving the local native names of birds, it is interesting to notice the old habit of calling new birds by old home names, on the slender thread of fancied resemblance, here, as in other English-speaking outposts. Thus the familiar name of the European red-breast, "robin redbreast," is given in North America to a large thrush, in Jamaica to a tiny crimson-throated kingfisher (*Todus viridis*), and in British Guiana to a ground-starling! In this same appendix are noted vernacular names of birds not given in the list of species observed, and we are left in the dark as to the identity of such interesting-sounding species as "four-winged cuckoo" and "speculum parakeet."

One of the best chapters is the one relating to "A Gold Mine in the Wilderness" although, in the narrative, the pay-streak seems

greater to the naturalist than to the argonaut. The charms of discovery here seem endless and enthralling, and it is hard to call to mind a passage more replete with pioneer enthusiasm than this one. But each succeeding chapter carries new charm, and it is perhaps unfair to select any one as distinguished by its interest from the others. The river journey from the mines to the coast by canoe is as delightful a piece of descriptive writing as it has been our fortune to read. A real contribution, too, is the chapter on "The Life of the Abary Savannas," which contains a large amount of fine and original observation on the Hoatzin, an anomalous bird with reptilian tendencies and no close avian relationships.

The book is illustrated with well selected photographic half-tones, mostly by Mr. Beebe, and closes with a very complete and usable index. For the casual reader, as well as for the naturalist, it is replete with interest, and in places the excitement of scientific research, so generally quashed or altogether lacking, carries the reader into a new sympathy with the longing which leads men and women into the strange places of the earth.

LOUIS AGASSIZ FUERTES

SCIENTIFIC JOURNALS AND ARTICLES

The Journal of Experimental Medicine for September contains the following articles: "Effect of Various Agents on the Blood Flow through the Coronary Arteries and Veins," by G. S. Bond; "Another Point of Resemblance Between Anaphylactic Intoxication and Poisoning with Witte's Pepton," by Arthur D. Hirschfelder; "Studies on Immunity in Cancers of the White Rat," by Isaac Levin; "The Relation of Fatty Degeneration to the Oxidation of Purines by Liver Cells," by H. Gideon Wells; "Experimental Yaws in the Monkey and Rabbit," by Henry J. Nichols; "Changes in the Hemosiderin Content of the Rabbit's Liver during Autolysis," by W. H. Brown; "The Effect of Vagus Section upon Anaphylaxis in Guinea Pigs," by John Auer; "The Cultivation of the Leprosy Bacillus and the Experimental Production of Leprosy in the Japanese Dancing Mouse," by Charles W.

Duval; "Intracellular Proteolytic Enzymes of Liver," by A. R. Dochez; "The Cell Changes in Amaurotic Family Idiocy," by B. Sachs and I. Strauss; "A Transmissible Avian Neoplasm. (Sarcoma of the Common Fowl)," by Peyton Rous.

SPECIAL ARTICLES

THE PREVENTION OF THE TOXIC ACTION OF VARIOUS AGENCIES UPON THE FERTILIZED EGG THROUGH THE SUPPRESSION OF OXIDATION IN THE CELL

IN former papers I had shown that the toxic effects of certain solutions on the fertilized eggs of the Californian sea urchin could be prevented by suppressing the oxidations in the eggs; either by depriving them of oxygen or by adding KCN to the solution. The solutions for which this was proved were: (1) hypertonic solutions, (2) hyperalkaline solutions and (3) solutions of certain neutral salts like LiCl, NaCl, KCl and others. The same observation as far as NaCl is concerned was made previously by O. Warburg.

I have continued these experiments this summer on the eggs of *Arbacia* in Woods Hole and find that the facts mentioned above are only special cases of a more general law. It is possible to prevent or diminish the toxic effects of the following agencies through the prevention of oxidation.

1. Neutral and alkaline salt solutions (with the exception of the salts of heavy metals).
2. Solutions of grape sugar (and probably other non-conductors).
3. Hypotonic solutions (*e. g.*, sea water diluted with equal parts of distilled water or a $\frac{3}{4}m$ solution of ethylalcohol).
4. Narcotics (chloral hydrate, phenylurethane, chloroform and alcohol dissolved in sea water).

In former papers I had shown that without oxygen no development of the egg is possible and it remained doubtful whether the life-saving effect of lack of oxygen under the conditions mentioned above was due merely to the inhibition of the morphological phenomena of development in the egg or to an inhibition of