

entirely different explanations from that which applies to Juncos. It may be that the gonads and photoperiodism furnish only the initiating impulse and that the magnitude and especially the direction of migration are determined by other agencies.

The comment here offered aims not to detract from the striking and highly commendable work of Rowan. Questions are raised which doubtless are in process of solution at the present time by him. Rowan seems well on the way toward settling certain phases of the migration mechanism. Pending more elaborate confirmations, however, I feel that an over-enthusiastic acceptance of all points in Rowan's theories would lead to an attitude of uncritical satisfaction rather than to the best progress toward a complete understanding of migration.—ALDEN H. MILLER, *February 25, 1930.*

BERNHARD RENSCH ON RACE-GROUPS AND THE ORIGIN OF SPECIES.*—This volume must be approached with liberality of spirit. If the reader must assume a professionally defensive attitude, with one hand raised to set off the whole critical battery of his reference shelves, he may perhaps riddle the book at a hundred points, not one of which is likely to be vital. At the same time he may prove himself merely stiff-necked before some of the richest chapters of constructive criticism which have been printed in recent years.

Perhaps the chief trouble is that Rensch falls between two stools. He disclaims the intention of scholarly completeness, yet falls short of the ease and continuity of the scientific essay. Where he might follow the graceful sequences of Darwinian exposition, or the sincere simplicity of a Julian Huxley, he retains the jolting, subdivided, ugliness of the technical paper of the day, though without its pretense to mechanical completeness.

From an elaborate review and analysis of the geographic principle in modern systematics Rensch passes with almost naïve directness to the problem of the origin of species and the evidence for the direct influence of environmental changes, normally unaided by mutation, selection, or the indefinite factors of "orthogenesis."

The heart of the matter lies in the seventh chapter, which examines, and often,—perhaps suspiciously often,—sustains, such laws and such suggestions as serve to coordinate racial and environmental gradations. The total is imposing, and while it goes without saying that such an exposition, confined within 185 pages of text, can in strictness hardly win more than the verdict of "not proven," the array of evidence presented on such matters as progressive variation in size, proportion, and melanin quantity or quality, physiologic factors, sexual affinity and its relation to morphology, the relationships of laboratory and field genetics, and the histological basis of many phenomena, is sufficient to keep a good company of field, museum, and library naturalists employed for a generation, testing and checking one plausible and constructive hypothesis after another.

There is a suggestion that certain American sources have been treated rather casually. Those who are familiar with the array of modern critical paraphernalia which Dr. Linsdale has brought to bear on his races of *Passerella* will be amused to see his paper dismissed as "depending wholly on direct measurements, with no ratios." F. B. Sumner, who is drawn upon more extensively than any other American or Englishman, with J. A. Allen a close second, is apt to be "swallowed whole" with little regard even for his own reservations, as is the case with his experiments on temperature and hair-weight in mice. As may be inferred, the vast majority of sources, outside Rensch's personal investigation in Europe and the East Indies, are German. Two hundred and forty-eight titles are brought into play and assembled at last in an excellent bibliography of cited works.

On page 116 a section heading has been omitted. On page 82 the word "rassen" appears to have been used inadvertently in place of "arten."—T. T. MCCABE, *February 27, 1930.*

MANUAL FOR BIRD BANDERS.*—For ten years now, bird banding has been a major activity among the bird students of Canada and the United States. One group of birds after another has yielded to trap ingenuity, until today a surprisingly large

*Rensch, Bernhard: *Das Prinzip geographischer Rassenkreise und das Problem der Artbildung*. Berlin, Gebrüder Borntraeger, 1929: 8vo., pp. 4 + 206, 27 figs. in text.

*Manual for Bird Banders, by Frederick C. Lincoln and S. Prentiss Baldwin. Misc. Publ. U. S. Dept. Agr. no. 58, November, 1929, pp. 1-112, 70 text figs.