

granted higher rank than a region of much less geographic extent comprising several times as many peculiar types. Hence the divisions here recognized, and the rank assigned them, are based as far as possible upon the relative numbers of distinctive types of mammals, birds, reptiles, and plants they contain, with due reference to the steady multiplication of species, genera, and higher groups from the poles toward the tropics."

Dr. Merriam's studies of the life areas of North America have evidently had a wide scope, and have been prosecuted systematically and with great thoroughness. His historical review of what has been done in this field by previous workers, including a collation and tabulation of their results, is alone a most useful and important contribution to the subject, as well as an admirable preparation for further research. His experience in the field also has given him the rare advantage of a personal knowledge of a large part of the area he attempts to treat, and the opportunity of studying on a grand scale the relation of cause and effect in the distribution of animal and vegetable life. Besides possessing great familiarity with the literature of the subject, he has at his command a mass of as yet unpublished details resulting from years of field work on the part of himself and a large corps of collectors and assistants, systematically directed for the express purpose of accumulating data bearing on the distribution of life in North America. With such resources at his command one may well hesitate to criticise his results, as unfolded in his several papers above cited. Yet there are some points we had hoped to see settled that are still left in abeyance, one being a consistent and well-grounded system of nomenclature for the various life areas recognized. Hitherto each writer has adopted such designations as seemed to him most convenient, with little regard to preceding systems and terminology. As we hope soon to treat this phase of the subject somewhat in detail in another connection, we will merely add here that so far as Dr. Merriam's areas are concerned, their boundaries, and in the main their assumed relationships, we are in hearty accord with his results. As regards his classification and nomenclature, we should prefer sundry changes, which, however, may not be in conflict with Dr. Merriam's own views. Evidently he has not thus far attempted to present a systematic scheme of terminology, his designations for different areas being descriptive and provisional rather than the outgrowth of a broad scheme of classification, as regards their relative rank and systematic terminology. — J. A. A.

Suchetet on Hybridity in Birds.—The third part of M. Suchetet's work on 'Hybridity among Birds in a Wild State'* treats of the Passeres, and forms about 280 octavo pages. It shows a vast amount of painstaking

* Les Oiseaux Hybrides | rencontrés a l'état sauvage | par | André Suchetet | — | Troisième Partie | Les Passereaux | — | Extrait des Mémoires de la Société Zoologique de France | Tome V. page 253, année 1892. | — | Lille | Imprimerie typographique et lithographique le Bigot Frères | 68, rue Nationale, et 9-11, rue Nicolas-Leblanc | 1892. — 8vo., pp. 179-451 + i-v.

research, and seems to cover very thoroughly the literature of the subject. He appears to weigh the evidence, for the most part, very judiciously, but, as he himself deplors (p. 191), he is seriously handicapped in his task by the fact that he is not professionally an ornithologist, and is thus untrained in the technique of the science. He is hence hopelessly at sea where questions of nomenclature, synonymy, and classification are concerned, the status of species and subspecies and of questionable forms proving frequent and troublesome stumbling-blocks in his way. He has, however, brought together a large amount of information bearing on the subject in hand, which, aside from its intrinsic interest, will be a valuable aid to any investigator desirous of pursuing the subject further.

After sifting the available evidence, he reaches the conclusion (p. 442) that the authentic instances of crossing in a state of nature between birds of unquestioned specific distinctness number only 24, many of which are between species commonly referred to distinct genera. Among types which he considers merely races or varieties of the same species he adduces 20 cases, to which he adds 7 others he thinks should be entered in the same category. He cites 34 additional alleged cases where to him the evidence is not, for one reason or another, wholly satisfactory. His work is well worthy of careful examination by those especially interested in the subject of hybridity. Unfortunately the text is greatly marred by incorrect spelling of personal and geographical names, to such an extent indeed as to give the effect of careless composition and a generally unscholarly appearance.—J. A. A.

Minor Ornithological Publications.—

American Field.

'The American Field' was last noticed here in Vol. VIII, pp. 387-392, where the record was carried through Vol. XXXIV. Since then it has not contained much ornithology, the only contributions worthy of mention in Vols. XXXV-XXXVII (Jan., 1891,-June, 1892) being the following (Nos. 2452-2465).

2452. *Birds Observed in Alabama*. By W. C. A[very]. 'American Field,' Vol. XXXV, No. 1, Jan. 3, 1891, p. 8; No. 2, Jan. 10, 1891, p. 32; No. 3, Jan. 17, 1891, p. 55. — An interesting 'local list.' For the previous parts of the paper see *Auk*, VIII, 392, No. 2111.

2453. *Days with the Waterfowl of America*. By Dr. F. Henry Yorke. *Ibid.*, No. 2, Jan. 10, 1891, pp. 25-27, No. 3, Jan. 17, 1891, pp. 49-51, No. 4, Jan. 24, 1891, pp. 73-74, No. 5, Jan. 31, 1891, pp. 97-99, [*Anas discors*]; No. 6, Feb. 7, 1891, pp. 121-123, No. 7, Feb. 14, 1891, pp. 145-147, [*Anas boschas*]; No. 8, Feb. 21, 1891, pp. 169-171 [*Anas boschas*, *Grus mexicana*, *Botaurus lentiginosus*]; No. 9, Feb. 28, 1891, pp. 193-195, No. 10, March 7, 1891, pp. 217-219, No. 11, March 14, 1891, pp. 245-247, [*Anas boschas*]; No. 12, March 21, 1891, pp. 269-271, No. 13, March 28, 1891, pp. 293-295,