twenty-eighth stage is that of the Anthropoides, most closely approached by Hylobates among recent forms, and then succeeds the Pithecanthropi or Alali, which included forms similar to, but not identical with, the gorilla and chimpanzee and finally, as the thirtieth stage, comes man.

Without attempting either a general or particular criticism of such a scheme, it may be said of the work that while clearly and interestingly written, it will hardly carry conviction to the mind of the reader. The gaps in the plan are too evident and too lightly passed over; conflicting theories, if mentioned, are treated too summarily; similarities between forms are frequently exaggerated; and, in short, the entire tone of the work is too dogmatic to be convincing. Sentences such as the following are by no means rare: 'In their first stage of development * * * the embryos of all the vertebrates, from the fish to man, are only incidentally or not at all different from each other,' 'Comparative evolution leads us clearly and indubitably to the first source of love—the affinity of two different erotic cells, the sperm cell and ovum (*erotic chemotropism*).'

On the other hand, one looks in vain for many facts which would have added strength to the general argument, and especially is this so in the chapters dealing with the phylogeny of the organs. Much that is highly pertinent has been omitted from the chapters on the muscular and nervous systems, and it is disappointing to find merely a mention of the recent important researches of Schwalbe and Klaatsch on the Neanderthal and Pithecanthropus remains.

But, notwithstanding these imperfections, the book is exceedingly interesting and contains a wealth of information on the questions under discussion. One can not help feeling, however, that it would have gained in value and authority if it had been limited to a discussion of the more general question of the descent of man, without attempting to define some thirty ancestral stages. It is especially in connection with the details that the dogmatism offends.

Finally, it may be remarked that it is unfortunate that more care has not been taken with the translation and proof-reading, in the latter especially with regard to proper names. Thus one finds Dreisch for Driesch, Moll for Mall, Ralph for Rolph, Dalton for D'Alton and Wiederscheim. Numerous terms are employed in the translation which are unfamiliar to English-speaking zoologists, and so much so as to indicate a lack of familiarity with the science on the part of the translator. It is possible to recognize the earthworm in the designation 'rainworm,' but to speak of a Turbellarian as a 'coiled-worm' can not be said to have the authorization of usage; 'tinting and dissection' mean staining and sectioning in ordinary parlance; and it is rather amusing to find one of His's reconstructions described as 'invented' by him. The rabbit is throughout transformed into a hare; *Echidna* is labeled a 'sea-urchin,' and a plate showing variations in the form of the pinna of the ear has for its legend 'ear muscles' (cf. Ohrmuscheln). On the whole, however, the translation is readable and set forth in idiomatic English.

J. P. McM.

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Comparative Neurology and Psychology for July contains two leading articles: (1) 'The Sense of Hearing in Frogs,' by Robert M. Yerkes. Although in nature frogs seem very insensitive to sounds, yet both field observations and laboratory experiments show that their hearing is good over a wide range of sounds. The sense of hearing apparently serves rather as a warning sense which modifies reactions to other simultaneous or succeeding stimuli, than as a control for definite auditory motor reactions. Sounds which never cause a motor reaction are found to reinforce an accompanying visual or tactile reaction and under other conditions to inhibit reaction. (2) 'The Reactions of Ranatra to Light,' by S. J. Holmes. A detailed laboratory study of the phototactic reactions of the common water scorpion, with a discussion of the general theories suggested by them.

THE July number of the *Journal of Nervous and Mental Diseases* opens with the presidential address delivered at the meeting of the American Neurological Association, June 1, 1905, by Dr. William G. Spiller. Dr. Spiller follows a custom more prevalent abroad than at home on such occasions and discusses a subject of general interest, namely, disturbances in the associated movements of the eyes as affording a sign of localizing value in lesions of the brain. He makes an exhaustive summary of the literature and adds reports of a number of cases of his own, with numerous illustrations. The paper is to be continued in the next number. The second article is by Dr. Smith Ely Jeliffe, of New York, on 'Dispensary Work in Nervous Diseases,' being a report of the clinic of Professor M. Allen Starr for the year 1904. This is followed by a paper by Dr. Robert H. Chase, of Philadelphia, on 'Delusions of the Insane.'

THE contents of the *Journal of Infectious Diseases* is as follows:

TILESTON, WILDER, and LOCKE, EDWIN A.: 'The Blood in Scarlet Fever.'

WHERRY, WM. B., and MCDILL, JOHN R.: 'Notes on a Base of *Hematochyluria*, Together with Some Observations on the Morphology of the Embryo Nematode—*Filaria Nocturna*.'

BUTTERFIELD, ELMORE E.: 'Case of Pulmonary Infection with an Acid-fast Actinomycosis.'

EDWARDS, RALPH T.: '*Bacillus Mycogenes* (*Bacterium Mucogenum*) Nov. Spec., an Organism Belonging to the *Bacillus Mucosus Capsulatus* Group.'

WHERRY, WM. B.: 'A Search into the Nitrate and Nitrite Content of Witte's "Peptone" with Special Reference to its Influence on the Demonstration of the Indol and Cholera Red Reactions.'

WEAVER, GEORGE H., and TUNNICLIFT, RUTH: 'The Occurrence of Fusiform Bacilli and Spirilla in Connection with Morbid Processes.'

MANWARRING, W. H.: 'A Quantitative Study of Hemolytic Serum.'

MANWARRING, W. H.: 'The Absorption of Hemolytic Ambceptor.'

ROBINSON, G. C.: 'The Rôle of the Typhoid Bacillus in the Pulmonary Complications of Typhoid Fever.'

JORDAN, E. O.: 'Thermostalbe, Hemolytic Precipitate from Nutrient Broth.'

GWYN, N. B. and HARRIS, N. MACL.: 'A Comparison between the Results of Blood Cultures Taken During Life and After Death.'

GUTHRIE, C. C.: 'A Contribution to the Clinical Knowledge of Texas Fever.'

DISCUSSION AND CORRESPONDENCE.

ANCIENT GREEK FISH AND OTHER NAMES.

IN SCIENCE for July 7 (p. 23) Dr. C. R. Eastman has given some valuable references to authors treating of the ancient Greek names of fishes but has omitted notice of the most important and trustworthy of all. Besides other data, Cuvier and Valenciennes, in their 'Histoire Naturelle des Poissons' (1828–1849), have embodied quite full notices of the ancient literature concerning the species they treat of. Their greatly superior knowledge of the fauna of the Greek peninsula and archipelago enabled them to make better identifications than any of their predecessors. It is from the neglect of that great work, and not of Artedi's, that Hoffman and Jordan have failed to make their contribution as valuable as it might have been. Had they used the work they would not have fallen into the error of confusing the accounts of the *σκάρσο* and *σπάρος* as they have done—and as Apostolides also has done! In most respects Hoffman and Jordan's work is excellent.

I can by no means assent to the estimate as to 'the extremely valuable historical and bibliographical works of Artedi.' Indeed, there are few errors more deplorable than Artedi's misidentifications which have entailed on ichthyological nomenclature such monstrosities as the use of *Esox* (corrupted from a Gallic or Teutonic name of the sturgeon) for the pike, of *Echeneis* (a blenny) for the sea suckers, of *Exocœtus* (a goby or blenny) for the flying fishes, of *Trigla* (a surmullet) for the gurnards, and of *Callionymus* (a stargazer) for the dragonets. The example thus set was followed by Linné and others, so that most of the Greek names now in use for fish genera have a signification neither justified by ancient usage nor by analogy.

A new English translation of Aristotle's zoological works is a great desideratum. The old translations are poor and inferior to