

Professor Howell has apparently attempted a marriage between the field of comparative anatomy and comparative behavior. The degree to which he has been successful must be judged by competent scientists in both fields. The problem which arises because methodology, including terminology, for describing activities of animals is not nearly as well developed as methodology in anatomy has not been solved by Professor Howell. This disparity has, however, placed him at a great disadvantage in writing "Speed in Animals." It is suggested that as science is currently organized and developed, the central problem to which Professor Howell addressed himself should have been attacked by authorities from fields of anatomy and behavior working in collaboration.

Professor Howell's position on the problem of how environment and behavior causally affected modification of structure is not clear to this reviewer. It seems that the assumption is made that changes in animals' environments and the subsequently modified behavior directly cause structural modifications. It is not clear that he fully considers the processes of selective elimination and "survival of the fittest." The causal relation of behavior to structural changes in the development of a species seemingly lacks full exposition in a subject content where this might be expected by a reader.

A check of the bibliography shows that the source material is predominantly drawn from the period of 1930's. Wartime conditions probably account for this time lag.

The reviewer regrets that "Speed in Animals" does not deal in a more comprehensive manner with the locomotor behavior of primates including man and

that the behavior of prehension is not more adequately covered.

Perhaps it is yet too early for scientists to use effectively results from stroboscopic photography in analyzing the relations of animal structures to their actions. Professor Howell will find this technique of value in extending his field of interest.

Finally, it seems to the reviewer that the book could have been more fittingly entitled "Animal Locomotion."

C. R. CARPENTER,
Captain, Air Corps

THE PENNSYLVANIA STATE COLLEGE

STEEL IN ACTION

Steel in Action. By CHARLES M. PARKER. 218 pp. 18 illus. Index. Lancaster, Pa.: The Jaques Cattell Press. 1943. \$2.50.

FOUR chapters of this book are alone worth the time even of a busy man to read and study, namely: "Steel in Our Daily Life"; "The Struggle for Raw Materials"; "The Steel Industries of the World"; "The Distribution and Control of Raw Materials." The author's acquaintance with these and related phases of the steel industry is well known to those who have followed his recent work. He also speaks from a wealth of knowledge contained in the records of the American Iron and Steel Institute. Every industrialist and every citizen has an interest in these vital components of world peace and of our present and future economic life. To all persons in these two categories—and this means every one—we strongly recommend the reading of these four chapters.

BRADLEY STOUGHTON

SPECIAL ARTICLES

ON THE Rh AND OTHER BLOOD FACTORS IN JAPANESE¹

THE practical importance of the Rh factor in the pathogenesis of a specific form of fetal and neonatal morbidity, erythroblastosis fetalis, has stimulated studies on the racial distribution of the Rh factor and its several varieties.²⁻⁵ As Levine^{2,3} has shown, the incidence of erythroblastosis fetalis in any race is directly proportional to the frequency of negative reactions with anti-Rh₀ serum. With this serum the

values of positive reactions in the white, colored and Chinese races are 85, 92-95 and 99 per cent., respectively. In terms of negative reactions one should expect a far greater frequency of erythroblastosis fetalis in the white, and almost none among Chinese. These expectations are amply borne out by clinical observations.

It was of interest to make parallel observations on Japanese individuals residing in the metropolitan area of New York City. Cell suspensions (2.5 per cent.) in saline were obtained from 150 individuals of Japanese parentage. These tests were carried out independently by each author and identical results were obtained. In addition to tests with the several varieties of anti-Rh sera and tests for the blood groups, the subgroups of A and the M and N factors, were also studied.

¹ From the Laboratories of Flushing Hospital, Flushing, N. Y., and the Ortho Research Foundation, Linden, N. J.

² P. Levine, *SCIENCE*, 96: 452, 1942.

³ P. Levine and H. Wong, *Am. Jour. Obst. and Gyn.*, 45: 832, 1943.

⁴ A. S. Wiener, *SCIENCE*, 96: 407, 1942.

⁵ A. S. Wiener, R. B. Belkin and E. B. Sonn, *Am. Jour. Phy. Anth.* 2: NS 787, 1944.