ample ever found since Cuming collected his shell on the coast of Ecuador. Mr. Olsson's specimen is younger and smaller than the type, but is undoubtedly a valve of this very striking and rare species.

An examination of this shell proves that *Arca lithodomus* is not an *Arca (Barbatia) candida* of abnormal type, for it is clearly an undistorted specimen. Moreover, it is not a member of the subgenus *Barbatia*. Dr. Pearl Sheldon, the *Arca* expert, pronounces it a true Ark. Therefore, the rediscovery by Mr. Olsson, in Panama, of Cuming's Ecuadorean shell proves (1) that *Arca lithodomus* Sowerby is a valid species; (2) that the shell belongs to *Arca, sensu stricto;* (3) that the section *Litharca* Gray is unnecessary; (4) the range of the species is extended from about Lat. 1° South to approximately Lat. 7° 30′ North.

CARLOTTA J. MAURY
CORNELL UNIVERSITY

THE GEOGRAPHICAL DISTRIBUTION OF HYBRIDS

IN a former number of this journal, Professor Fernald has done me the honor of stating that he is glad to have my confirmation of his "thesis" in regard to the geographical distribution of hybrids between natural species. As my statement was merely a brief summary of the views of the eminent Austrian systematic botanist, Kerner von Marilaun, Professor Fernald does me undeserved honor, and at the same time is unfortunately guilty of an anachronism. Kerner's views on hybrids were known to the world some time before Professor Fernald's star arose on the horizon.

I think I made it clear in my former statement, that according to Kerner, natural hybrids may occur not only within the range of the parent species, but *also beyond the range of one or both of them.* The situation indicated by the words in italics is clearly not in accord with the tenor of Professor Fernald's biting criticisms of the recent work of Brainerd Peitersen on the blackberries of New England. He repeatedly condemns these authors for entertaining the heterodox idea that a hybrid can occur beyond the geographic range of one of its parent species. In this attitude my colleague is obviously not in harmony with Kerner. It may be emphasized that Kerner's views possess a peculiar authority, not only because he devoted himself especially to the study of hybrids in nature, but also because he was fortunate enough to live in a region where the Pontic, Mediterranean, and Baltic floras overlap.

I am loath to attribute to my colleague the intentionally ambiguous language of an oracle, or the "weasel words" of the aspiring politician. His statements, however, appear to keep the word of promise to the ear, while breaking it to the hope, as in that Shakespearian tragedy where a forest undergoes an interesting geographic migration, not due to the mineral characteristics of the substratum.

E. C. JEFFREY

THE RAY SOCIETY

ALL interested in natural history are familiar with the publications of the Ray Society. Since its establishment over three quarters of a century ago this society has published annually one or more volumes in the biological sciences. Its object is to issue works which from the expense of illustration or other causes could not profitably be brought out by an ordinary publisher. In this way have appeared Agassiz's four volumes of Bibliography, Darwin's "Cirripedia," Allman's "Tubularian Hydroids" and "Freshwater Polyzoa," Alder and Hancock's "Nudibranches," West's "Desmids," Cash and Wailes's "Rhizopods and Heliozoa," Groves and Bullock-Webster's "Charophyta," and Lucas's "Orthoptera."

The annual subscription to the society is at present one guinea, in return for which the subscriber receives the annual volumes and has the privilege of purchasing, at a reduction from the published price, one copy each of any of the society's works already issued and remaining in stock. Subscribers for 1921 will receive for that year one of the

parts of the beautifully illustrated monograph on British Annelids by Professor W. C. McIntosh, a work that will probably be priced to the public at over two guineas.

The income of the society is derived almost entirely from its list of subscribers and it is imperative, if the society is to continue its activities, that this list be enlarged. It is, therefore, hoped that American naturalists will show their appreciation of the good work of the Ray Society by giving it their hearty support. The annual subscription of one guinea should be sent to the secretary of the society, Dr. W. T. Calman, 1 Mount Park Crescent, Ealing, London, W. 5, England.

G. H. Parker

Harvard University

SCIENTIFIC BOOKS

The Analysis of Mind. By Bertrand Russell, F.R.S. New York: The Macmillian Company. Pp. 310. 1921.

It would not be difficult to show that in the course of the centuries mathematical developments were much retarded, sometimes arrested or diverted from their natural course, by an unenlightened psychology and especially by a crude psychology of mathematics. The fact is evident both in the history of algebra and in that of geometry. Not only was the development of the number concept hampered, but the advent of the concepts of hyperspace and non-Euclidean geometry was delayed for two thousand years, by a psychology that in things mathematical often did not know a knee from an elbow. It is, therefore, a special pleasure to note and to welcome the appearance of a psychological work by an eminent contributor to the literature of mathematical foundations. Compared with the work which has been done in the logic of mathematics, that which has been done in the psychology of the subject is exceedingly meager, and the explanation is obvious: mathematicians have been psychologically incompetent, and psychologists mathematically incompetent, to deal with the matter. The work in hand is indeed not specifically concerned with the psychology of mathematics; its scope is general; but it is likely to awaken psychological interest among mathematicians and may incite some of them to study the psychological aspects of their own science.

This volume consists of a course of lectures given in London and Peking. Its motive is a primarily logical one for the work has sprung out of the seeming discordance of two present scientific tendencies, one of them in psychology, the other in physics; the former may be called a tendency to materialize mind; the latter, a tendency to "spiritualize" matter; they are both of them methodological rather than metaphysical. The former tendency, most notably represented by the behaviorist school of psychologists (like Professor Watson, for example), is manifest in the distrust of introspections as a means to knowledge of mental phenomena and in the growing dependence of psychology upon external observation of animal and human behavior and upon physiological experiment, as if matter were regarded "as something much more solid and indubitable than mind." The other tendency, most notably represented by workers (like Professor Einstein, for example) in physical theories of relativity, is manifest in the increasing inclination of physicists to regard "events" as primary and to derive "matter" from them, or to make it out of them, by the processes of logical construction.

If we regard both of these counter tendencies as being in the main sound, as Mr. Russell regards them, they confront us with a certain logical problem which every one must feel the challenge of and which Russell, owing to a highly refined logical sensibility, feels with especial keenness. The problem is that of reconciling the two tendencies, seemingly so inconsistent; it is the problem of determining their joint significance; the two tendencies face each other, move towards each other, and, pointing in opposite directions, seem to indicate a common goal—some important truth lying, so to speak, between them, and the problem is to ascertain that truth, if such there be.