fourths of an inch. On this account the pieces to be preserved must not be too large.

The best formula for Müller's fluid known to me is:—

Bichromate of potassium	2 per cent
Sulphate of sodium	2 " "
Water	96 " "

In practice it is convenient and sufficiently exact to dissolve two grammes of each salt in 1,000 cubic centimetres of water.

It will be, I am sure, a pleasure to many naturalists in America to learn of an opportunity of rendering a service to Professor Kölliker, to whom we all owe so much, and whose continued activity is perhaps the most remarkable instance of prolonged and fully sustained mental power in the whole history of biological science. We must all feel confident that any material placed at his disposal will be the means of securing important additions to knowledge.

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BOOK-REVIEWS.

The Meaning and the Method of Life: A Search for Religion in Biology. By GEORGE M. GOULD. New York, G. P. Putnam's Sons. $1.75.

THIS book is a result of the unsettled and transitional state of religious opinion. Feeling deeply the want of some religion, but dissatisfied with the religions of the past, Dr. Gould has sought in the phenomena revealed by his favorite science of biology the basis of a new theology and a new religion. His views are somewhat singular. He holds that matter is eternal and independent of God, who is the author of life and mind only, using matter as the material of the living bodies that he forms, but having otherwise no control over it. Hence God is a limited and conditioned being, and, though very wise and perfectly good, is very far from omnipotent. This theory is somewhat like one that had some prevalence in ancient times, which also regarded matter as eternal and the Creator as merely the workman who fashioned it; yet the doctrine of this book limits Him still more, since it confines Him strictly to the world of life, excluding Him entirely from the vastly larger field of inorganic matter. In this way Dr. Gould thinks that he accounts for the existence of evil, which is due to the limited power of the Creator, whose goodness is thus saved at the expense of his omnipotence. Every living thing is an incarnation of Divinity, and man especially so. Man's duty consists in promoting the growth and fulness of life everywhere, and especially the spiritualization of human life. On the question of immortality, Dr. Gould expresses no decided opinion, holding that God has not seen fit to reveal his design with regard to man's future, and believing that information concerning it would be of no use to us here if we had it.

Such is Dr. Gould's religion; but, though it may find some favor among other biologists, we doubt if it wins acceptance anywhere, for religions and philosophies that deny the Divine omnipotence have never proved congenial to the human mind, and never will. His theory of the universe and its Author is evidently due to a too exclusive study of one science to the neglect of other and wider views, a mode of investigation peculiarly dangerous in theology. But whatever may be thought of his positive doctrines, all true souls will symphathize with the sentiment expressed in his introductory chapter, that "the bravest, noblest attitude is that of unsatisfied longing, and the never stilled faith that light will come into all of our darkness, and that the riddle of our lives will be solved."

Beiträge zur Kenntniss der Baues und Lebens der Flechten. II. Die Syntrophie. VON DR. ARTHES MINKS. WIEN, 1893.

DR. MINKS of Stettin, Prussia, is, or should be, known to all who are interested in the Lichens, and the controversy with regard to them, as one of the strongest advocates of their autonomy, on grounds peculiarly his own. In various publications he has announced the result of arduous and long-continued investigations, which are at least worthy of serious consideration. They cannot be ignored, as is the fashion among those who adopt the ideas of the new school.

CALENDAR OF SOCIETIES.

Biological Society, Washington.

Apr. 22.—O. F. Cook, Notes on the Natural History of Liberia; J. N. Rose, Two New Trees of Economic Importance from Mexico; V. A. Moore, Observations on the Distribution and Specific Characters of the Streptococci Group of Bacteria; Erwin F. Smith, Peach Yellows and Plant Nutrition.

Geological Society, Washington.

Apr. 26.—The first half hour will be devoted to continuing the discussion concerning the Age of the Earth. Bailey Willis, Interpretation of Sedimentary Rocks; M. R. Campbell, The Influence of Post-Paleozoic Deformation on the Drainage of the Central Appalachians.

Academy of Sciences, Biological Section, New York.

Apr. 10.—H. F. Osborn, on "The Evolution of Teeth in Mammalia in Its Bearing upon the Problem of Phylogeny," reviewed the recent researches and theories of Kükenthal, Röse, and Tacker upon the formation and succession of the dental series in mammamalia, and pointed out that, especially in marsupials, cetaceans, and edentates (with other placentates), the existence of two series of teeth was now abundantly proven, as well as the fact that Homodynamous forms were derived from early Heterodont. He then showed that recent discoveries demonstrated that in marsupials teeth of the second series might be interposed in the first series—to explain the typical dentition of such forms of Didelphys. This transposition enables a comparison of dentition of marsupial with that of turassic mammalia $\left(=i, \frac{4}{4}, c, \frac{1}{1}, p, \frac{4}{4}, m, \frac{8}{8}\right)$. It was further noted that the triconodont type (as Amphilestes) was probably the hypothetical point of divergence of placental mammalia. As to the form of crowns, the theory (Kükenthal-Röse) that complex mammalian types were made by concrescence of simple reptilian cusps was upon the evidence of the turassic mammalia shown untenable, as well as the converse theory that cetaceans have derived homodynamous form by the splitting of the cusps of triconodont. Bashford Dean, in "Contributions to the Anatomy of Dinichthys," correlated the parts of this Devon-Lower Carboniferous Arthrodiran to those of Coccos tens. Notes were made upon the (1) disposition and character of the lateral line organs, (2) pineal foramen, (3) nasal capsules, (4) dentary plates (homologies), (5) ginglymoid articulation of lateral shoulder plates, (6) character of shagreen, (7) probable disposition of paired and unpaired fins. N. L. Britton presented a "Note on the Genus Lechea." This genus of Cistineæ is entirely American, and, from the investigations of Mr. Wm. H. Leggett and Dr. Britton, appears to consist of about fourteen species.

Agassiz Scientific Society, Corvallis, Ore.

Apr. 13.—C. D. Thompson, Relation of Soils to Plant Growth.

Mar. 8.—Professor John M. Bloss, The Early Lives of Some of Our Scientists.