become poisonous to plant life, as the great French chemist Pasteur would have it. Now humic acid has the same effect both in plant life and in the soil—for all nature was torn off the same bolt.

While it must not be inferred that the whole book is on a par with the extract quoted, there is enough of such reckless writing in it, especially regarding scientific matters, to render it almost worthless from a scientific standpoint and to impair seriously its usefulness from a practical point of view. W. H. Beal.

SCIENTIFIC JOURNALS AND ARTICLES.

The *Botanical Gazette* for October contains the following papers: Dr. E. B. Copeland concludes his paper on 'The Rise of the Transpiration Stream.' It is based upon a series of experiments conducted by the writer in the Hull Botanical Laboratory. Water moved upward in an artificial 'tree' of plaster of Paris more than forty feet high, but no definite conclusions could be obtained. The paper, therefore, is rather an historical and critical discussion of the subject. The theories which ascribe the rise of water in trees to either the cohesive power of water or the activity of living cells are thoroughly invalid. There is some sound evidence in support of the view that the pressure of the atmosphere forces the water upward. The water travels a large part of the way in a film between bubbles and the wall of the conducting vessels; but the physical properties of such a film are unknown. Not the least valuable part of the paper is the complete bibliography of the subject containing one hundred and seventy-four titles. Mr. W. J. G. Land publishes an account of the essential morphology of *Thuja*, which throws additional light upon the peculiar morphology of the Coniferæ. No ventral canal cell is organized, but its nucleus appears and is not separated from the egg cell by a cell wall. This nucleus remains in the upper part of the egg and may divide and give rise to several nuclei, the group resembling a proembryo. These results make Arnoldi's conclusions in regard to the absence of ventral canal cells in Cupressineæ very doubtful. In the formation of the proembryo eight free nuclei are formed before cell walls appear. Miss Laetitia M. Snow publishes the results of her studies of the ecology of the Delaware coast in the region of Rehoboth Beach. This paper is designed to fill a gap in our knowledge of the vegetation of the Atlantic coast, connecting the work of Harshberger in New Jersey with that of Kearney in Virginia and North Carolina. There is general agreement with their conclusions, as with the work of Cowles on the Lake Michigan dune flora. Several characteristic northern species reach here their southern limit. The formations and character species are the usual ones of dune regions. Dr. J. M. Greenman describes a new western *Camasia* from Washington.

In *The American Naturalist* for September V. L. Kellogg discusses at some length 'The Development and Homologies of the Mouth Parts of Insects' and Carlo Emery furnishes 'An Analytical Key to the Genera of the Formicidæ, for the Identification of the Workers.' C. E. Preston describes some 'Peculiar Stages of Foliage in the Genus *Acacia*' and C. C. Trowbridge considers the subject of 'The Relation of the Wind to Bird Migration,' the author believing that temperature is a less important factor than is usually believed and that wind is more important.

The Popular Science Monthly for October has as frontispiece a portrait of the late Rudolf Virchow. The first article, by J. W. Toumey, is 'A Study in Plant Adaptation,' with special reference to the cholla, *Opuntia fulgida*. O. F. Cook discusses 'The American Origin of Agriculture,' adducing evidence in support of his theory of a westward migration from America to the Pacific Islands. F. A. Woods continues his study of 'Mental and Moral Heredity in Royalty' and John Waddell discusses 'The (Commercial) Competition of the United States with the United Kingdom.' Arthur E. Bostwick offers a study of 'Scientific Reading in a Public Library'; Alja R. Cook describes 'An Ascent of Mt. Orizaba' and David Starr Jordan reviews the various theories of the 'Origin of the Fins of Fishes,' considering that none of them is yet definitely proved. Calvin M. Woodward has a good discussion of 'Domestic and Inter-

collegiate Athletics' and the final article is a reprint of Virchow's lecture in 1898 on 'Recent Advances in Science, and their Bearing on Medicine and Surgery.' In the November number James R. Angell presents 'Some Reflections upon the Reaction from Coeducation,' the general tone of the article being decidedly favorable to coeducation, and W. D. Halliburton states 'The Present Position of Chemical Physiology,' being one of the Presidential addresses before the British Association. 'Scientific Palmistry' by Harris H. Wilder is a plea for the use of impressions of the palms and soles for the purposes of identification. 'Towards the North Pole,' reprinted from the London Times shows the work that has been done, but impresses one with the high latitudes reached by the early navigators in their small vessels. Waldon Fawcett describes 'The Development of Economical Utilities for Handling Raw Material' and Frederick A. Woods presents the fourth of his studies of 'Mental and Moral Heredity in Royalty,' while David Starr Jordan tells 'How to Collect Fishes,' an art with which he has had long acquaintance.

Bird Lore for September–October contains 'The Destructive Effects of a Hailstorm Upon Bird Life' by H. McI. Morton, 'A Goldfinch Idyl' by Ella Gilbert Ives, the three best lists of birds observed by members of the Massachusetts Audubon Society and the sixth instalment of 'How to name the Birds' by Frank M. Chapman, besides Notes, Reviews and reports of the Audubon Societies. From this last it appears that there is to be a revival in the use of birds in millinery and that renewed efforts must be made by friends of the birds.

The Museums Journal of Great Britain contains a description of the Oceanographic Museum of the Prince of Monaco, reviews of various museum reports and a large number of notes on museums at home and abroad. It also contains the first instalment of a 'Directory of the Museums of Great Britain and Ireland,' which is intended to give a very considerable amount of information concerning each institution.

IN *The American Naturalist* for October Bashford Dean considers the 'Historical Evidence as to the Origin of the Paired Limbs of Vertebrates,' concluding that this supports the view that they are derived from a continuous lateral fold. D. H. Campbell gives a summary of 'Recent Investigations upon the Embryo Sac of Angiosperms' and Leonard W. Williams describes 'The Vascular System of the Common Squid, *Lolıgo Pealii.*' F. M. Webster shows the importance of 'Winds and Storms as Agents in the Diffusion of Insects'; D. S. Jordan tells of 'The Colors of Fishes,' not only the permanent colors, but those temporarily assumed, and T. D. A. Cockerell gives some notes on 'Flowers and Insects in New Mexico.' This paper is likely to prove a stumbling block to bibliographers for it contains descriptions of several new species of bees, although there is no hint of this either in the title or introduction.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON.

THE 358th meeting of the society was held Saturday evening, October 28.

Mr. W. H. Dall stated that in examining some Corbiculas from Uruguay it was found in several species that the females contained a large number of young shells of various ages; some were developed so far as to show traces of the radiating color markings which characterize the adult. The palearctic Corbiculas have been abundantly collected and described, but no record of their incubation of the young in the maternal body appears in the manuals or such works on the Corbiculidæ as he had been able to consult. It is probable, therefore, that they do not retain the young in this manner. If this inference be correct, the separation by Fischer, on conchological characters, of the South American species under the name of *Neocorbicula* would receive additional support from the difference indicated.

A similar discovery was also announced by Mr. Dall in the common boreal shell known as *Cardita* (*Venericardia*) *borealis,* Conrad,