

# SCIENCE

FRIDAY, JANUARY 20, 1888.

WASHINGTON SEEMS DESTINED in the not very distant future to become a leading scientific centre for the student of natural history. The Smithsonian Institution and the National Museum have long offered unsurpassed facilities for research in most branches of science, although there has been a lack of facilities for the study of natural history from live subjects. The National Museum, however, has taken a step in the right direction at last, and has made a collection of live animals, which, though unimportant at present, may prove the nucleus of what may, with proper congressional aid, be made the most valuable zoölogical collection in the country. In addition to this, the Fish Commission is preparing a fine collection of fresh and salt water fishes, mostly confined to those of economic value, but which will incidentally contain many varieties of marine life not valuable for food, but interesting for study. There are at present about forty varieties of fresh fish on exhibition in addition to the regular hatcheries of carp, shad, etc. The most interesting of these is a small fish from South Carolina, which brings forth its young alive, as animals do, instead of in the form of eggs, as is almost the universal custom of fishes. In another tank may be seen nearly one hundred Mississippi River catfish from a river in the neighborhood of Quincy, Ill. These are Western fish, and the Fish Commission intends to introduce them into Eastern rivers on account of their great value as food-fish. The flesh is white, firm, and of fine flavor. The present experiment is to determine whether they will spawn in captivity. Another tank is full of beautifully marked goldfish originally from Japan. Goldfish are not indigenous to any part of America, and are all of Asiatic or Japanese origin, the latter being much the handsomest. Several specimens of the California grayling, the gamest of all the gamey fishes, are also to be seen. A fine collection of salt-water fauna will also be brought from Wood's Holl, Mass., where it has been for some months, and placed on exhibition in Washington. In addition to the various food-fishes of the ocean, the exhibit will contain many other interesting forms of sea-life. The location of the exhibition in the Armory Building leaves much to be desired, and it is but poorly adapted for the needs of the work. Such a collection should be located in a building built expressly for the purpose, which will, in all probability, be ultimately erected. The exhibit of salt-water fishes is intended, in addition to its affording valuable means of study, to demonstrate the feasibility of keeping a collection of ocean fauna at a point remote from the sea. The water used will be artificial sea-water, and the experiment has never before been made on so large a scale. The difficulties attending the transportation of sea-water prevent such exhibitions at any distance from the sea. The exhibit will be tastefully and conveniently arranged. The asphalt floor is always dry, and the display interesting and instructive to the layman as well as to the scientist, and will also give valuable aid in the other work of the Fish Commission.

IN THE JANUARY ISSUE of the *Journal of Mental Science*, Miss Ellen F. White gives a most interesting account of medical gymnastics. We hear in this country more or less about the Swedish movement-cure, but it is quite usual to regard it as simply a new phase of quackery. It is, however, something very far removed from quackery, and Miss White's paper on it makes this very clear. Ling, the originator of the system, was a Swedish officer, who hap-

pened to discover that a lameness in his own arm was cured by fencing. He reflected on this fact, and then made an exhaustive study of anatomy, physiology, and pathology for the purpose of testing the principle which he thought he had discovered. As a result he evolved his system; and it includes medical, military, and educational or hygienic gymnastics. The object of the latter is to preserve the balance of power in the body: that of the former is to restore the balance when it has been disturbed by a loss of the proper proportion between the parts. The theory premises that blood is the carrier of life and of disease, and that the flow and the quality of blood can be controlled, or at least regulated, by gymnastics. The writer instances a number of cases and of affections which substantiate these claims, and describes the various classes of movements, and explains their nature and aims. She mentions the fact, which is very evident to us in the United States, that hundreds of so-called gymnasts, who may have been a few months or a few weeks only under a teacher, are advertising themselves as specialists, and bringing discredit upon the whole system. If it is to establish itself in the public confidence, it must be taken out of the hands of charlatans and quacks.

## THE UNITED STATES HYDROGRAPHIC OFFICE.

AN important bill has just been introduced in Congress by which it would seem as though the continued efficiency of this office, both as regards its relation to the navy, of which it is a most important and necessary adjunct, and to commerce and the entire maritime community, would be insured. The bill referred to provides for the appointment of a permanent hydrographer and assistant hydrographer, to be nominated by the President and confirmed by the Senate.

Few landmen are in a position fully to appreciate the scope and character of the work done by this office, much of it being of a purely technical character, involving the preparation of charts, sailing-directions, light-lists, etc., for the use of navigation in every port of the globe. Until recently, however, the tour of duty of the officer detailed as hydrographer has been so short, in accordance with the usual custom in the navy, that it has been impossible to do more than keep up the routine work of the office, which in itself requires unremitting attention and care. Thanks to a longer detail than usual, granted by Secretary Whitney at the request of the chief of Bureau of Navigation, in order to develop the latent possibilities of the office, the present hydrographer has succeeded in lifting it out of the old ruts in which it was moving, and has infused into it renewed life and energy; so much so, indeed, that it is now fully recognized as one of the great scientific bureaus of the government, and the cordial assistance and support which it is receiving from masters of vessels show far more forcibly than words can do the great practical value of its work. Branch offices have been established at six of our principal seaports, and with such success that more are demanded at other ports; American charts and other hydrographic publications have come to the front again; and last, but by no means least, the monthly Pilot Chart, a publication which is unique of its kind, has been established, and has obtained an influence and importance well attested by the fact that a large edition is generally exhausted in a few days after it is issued. All those of our readers who have crossed the Atlantic during the past three years have probably had an opportunity to form their own ideas regarding the esteem in which it is held by masters of vessels.

To keep such an establishment moving smoothly, economically, and efficiently, undoubtedly requires a longer tenure of office for its responsible head than the three years prescribed by naval custom; and the bill which is now before Congress must receive hearty and