

SCIENCE

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FRIDAY, JULY 15, 1898.

THE AMERICAN ASSOCIATION FOR THE
ADVANCEMENT OF SCIENCE.

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DETAILS additional to those already published in SCIENCE have been sent out regarding the approaching anniversary meeting of the Association. The Rogers Building of the Massachusetts Institute of Technology will be the headquarters of the Association, and the preliminary meeting of the Council will be held there at noon on Saturday, August 20th. The Copley Square Hotel has been chosen as hotel headquarters. The first general session of the Association will be held at 10 a. m. on Monday, August 22d. The meeting will be called to order by the retiring President, Professor Wolcott Gibbs, who will introduce the President-elect, Professor F. W. Putnam. Addresses of welcome will be made by his Excellency Roger Wolcott, Governor of Massachusetts; His Honor Josiah Quincy, Mayor of Boston, and President James M. Crafts, of the Massachusetts Institute of Technology, and President Putnam will reply.

In the afternoon the addresses of the Vice-Presidents of the Association will be made before the Sections as follows:

At half-past two o'clock. Vice-President Whitman, before the Section of Physics: 'On the Perception of Light and Color;' Vice-President Cattell, before the Section of Anthropology: 'The Advance of Psychology;' Vice-President Farlow, before the Section of Botany: 'The Conception of Species as Affected by Recent Investigations on Fungi.'

MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

At half-past three o'clock. Vice-President Barnard, before the Section of Mathematics and Astronomy: 'Development of Astronomical Photography;' Vice-President Blue, before the Section of Social and Economic Science: 'The Historic Method in Economics;' Vice-President Packard, before the Section of Zoology: 'A Half-century of Evolution, with Special Reference to the Effects of Geological Changes on Animal Life.'

At half-past four o'clock. Vice-President Smith, before the Section of Chemistry: subject to be announced; Vice-President Fairchild, before the Section of Geology and Geography: 'Glacial Geology in America;' Vice-President Cooley, before the Section of Mechanical Science and Engineering: subject to be announced.

On Monday evening Professor Wolcott Gibbs will make the address of the retiring President, his subject being 'On Some Points in Theoretical Chemistry.' President Eliot will address the Association at Harvard University on Friday evening, and it is expected that illustrated lectures will be given on Wednesday evening on the Boston Park System and the Metropolitan Water Supply and Sewage System.

The scientific work of the sections will be practically confined to two days, Tuesday and Thursday, excursions having been arranged for Wednesday, Friday and Saturday. As we have already stated, the excursion on Wednesday will be to Salem, where the Association will be the guest of the Essex Institute, while on Friday it will be the guest of Harvard University by invitation of the President and Fellows. On Saturday excursions have been arranged to Riverside, Wellesley, Concord and Lexington; various excursions have also been planned to follow the close of the meeting.

THE BREEDING OF ANIMALS AT WOODS
HOLL DURING THE MONTH OF
MAY, 1898.

THE opening of the Biological Laboratory of the United States Fish Commission made it possible for a number of naturalists to work at Woods Holl during the month of May, and it is hoped that the

abundance of animal life may attract others to the shore in 1899.

The temperature of the water during the month of May rapidly rose from 46 to 57 F. To this remarkable physical change both the fauna and flora responded, and the biological facies were materially altered.

Vertebrates.—The winter forms gradually disappeared and the familiar types of the warmer months began to arrive. The lampreys (*Petromyzon marinus*), ripe with eggs, were taken during the latter part of the month at East Taunton. Spiny dog-fish (*Squalus acanthias*) were taken in Vineyard Sound, and *Raja ocellata* was abundant throughout the month, though probably not breeding. The transparent young of the common eel were frequently taken on the surface and in the shallow water. The fishermen say that the adults descend the streams while the alewives are passing up. This migration to the sea happens about the 12th, when there is the heaviest run, although many may be taken on subsequent nights. If the sky is clear and cloudless the catch is never so large as when dark and stormy. Late in the month several barrels of menhaden (*Brevoortia tyrannus*) were taken at Cuttyhunk, while throughout the month the skimming-net caught multitudes of young herring (*Clupea harengus*). *Fundulus heteroclitus*, ripe with eggs, was captured in great numbers at Falmouth on the 13th, where were also found two species of stickleback (*Gasterosteus bispinosus* and *Apeltes quadracus*), both sexually mature. An abundance of breeding pipe-fish (*Siphostoma fuscum*) were seined from eel-grass on May 13th, and they have been found, with pouches filled with eggs, as late as July 13th. The first mackerel (*Scomber scombrus*) was taken on May 3rd. A few butter-fish (*Rhombus triacanthus*) were taken in a trap at Cuttyhunk on the 11th, though reported at West Dennis on the 5th. They spawn in June.