

whether they would develop into normal plutei.

The eggs were first centrifuged and then fertilized. About one minute after fertilization the membrane was shaken off and the eggs transferred to calcium-free sea-water (Herbst's formula). They were allowed to segment in the calcium-free sea-water and some of the eggs in which the first cleavage plane was parallel to the stratification were isolated. After the blastomeres had fallen apart, they were transferred to normal sea-water where they were permitted to develop. The two blastomeres thus produced differ in that one contains all the red pigment while the other one is perfectly clear and contains the whole of the oil cap. The exact distribution of the two middle layers is not easily made out. Both blastomeres produce normal plutei. The only visible difference in the two was that one contained the red pigment-spots; the other lacked them. FERNANDUS PAYNE

INDIANA UNIVERSITY

#### THE CONVOCATION WEEK MEETINGS OF SCIENTIFIC SOCIETIES

THE American Association for the Advancement of Science and the national scientific societies named below will meet at Boston, Mass., during convocation week, beginning on December 27, 1909.

*American Association for the Advancement of Science.*—Retiring president, Professor T. C. Chamberlin, University of Chicago; president, Dr. David Starr Jordan, of Stanford University; permanent secretary, Dr. L. O. Howard, Cosmos Club, Washington, D. C.; general secretary, Professor Dayton C. Miller, Case School of Applied Science, Cleveland, Ohio.

*Local Executive Committee.*—H. W. Tyler, chairman; Thomas Barbour, J. S. Kingsley, Edward R. Warren, John Warren, George W. Swett, secretary.

*Section A, Mathematics and Astronomy.*—Vice-president, Professor Ernest W. Brown, Yale University; secretary, Professor G. A. Miller, University of Illinois, Urbana, Illinois.

*Section B, Physics.*—Vice-president, Dr. Louis A. Bauer, Carnegie Institution, Washington, D. C.; secretary, Professor A. D. Cole, Vassar College, Poughkeepsie, N. Y.

*Section C, Chemistry.*—Vice-president, Professor William McPherson, Ohio State University; secretary, C. H. Herty, University of North Carolina, Chapel Hill, N. C.

*Section D, Mechanical Science and Engineering.*—Vice-president, Professor John F. Hayford, Northwestern University; secretary, G. W. Bissell, Michigan Agricultural College, East Lansing, Mich.

*Section E, Geology and Geography.*—Vice-president, Reginald W. Brock, Canadian Geological Survey; secretary, F. P. Gulliver, Norwich, Conn.

*Section F, Zoology.*—Vice-president, Professor William E. Ritter, La Jolla, Cal.; secretary, Professor Morris A. Bigelow, Columbia University, New York City.

*Section G, Botany.*—Vice-president, Professor David Penhallow, McGill University; secretary, Professor H. C. Cowles, University of Chicago, Chicago, Ill.

*Section H, Anthropology.*—Vice-president, Dr. W. H. Holmes, Bureau of American Ethnology; secretary, Dr. George Grant MacCurdy, Yale University, New Haven, Conn.

*Section I, Social and Economic Science.*—Vice-president, Byron W. Holt, 54 Broad St., New York City; secretary, Dr. John Franklin Crowell, 44 Broad St., New York City.

*Section K, Physiology and Experimental Medicine.*—Vice-president, Professor C. S. Minot, Harvard Medical School; secretary, Dr. Wm. J. Gies, College of Physicians and Surgeons, Columbia University, New York City.

*Section L, Education.*—Vice-president, Dean James E. Russell, Columbia University; secretary, Professor C. R. Mann, University of Chicago, Chicago, Ill.

*The American Society of Naturalists.*—December 29. President, Professor T. H. Morgan, Columbia University; secretary, Dr. H. McE. Knowler, University of Toronto, Toronto, Can. *Central Branch.* President, Professor R. A. Harper, University of Wisconsin; secretary, Professor Thomas G. Lee, University of Minnesota, Minneapolis, Minn.

*The American Mathematical Society.*—December 28-30. President, Professor Maxime Bôcher, Harvard University; secretary, Professor F. N. Cole, 501 West 116th St., New York City.

*American Federation of Teachers of the Mathematical and Natural Sciences.*—December 27, 28. President, Professor H. W. Tyler, Massachusetts Institute of Technology; secretary, Professor C.

R. Mann, the University of Chicago, Chicago, Ill.

*The American Physical Society*.—President, Professor Henry Crew, Northwestern University; secretary, Professor Ernest Merritt, Cornell University, Ithaca, N. Y.

*The American Chemical Society*.—December 27–31. President, Dr. Willis R. Whitney, General Electric Company, Schenectady, N. Y.; secretary, Professor Charles L. Parsons, New Hampshire College, Durham, N. H.

*The Geological Society of America*.—December 29, 31. President, Dr. G. K. Gilbert, U. S. Geological Survey; secretary, Dr. E. O. Hovey, American Museum of Natural History, New York City.

*The Association of American Geographers*.—December 30–January 1. President, Professor W. M. Davis, Harvard University; secretary, Professor Albert P. Brigham, Colgate University, Hamilton, N. Y.

*The American Society of Vertebrate Paleontologists*.—December 27–29. President, Dr. J. C. Merriam, University of California; secretary, Dr. E. S. Riggs, Field Museum of Natural History, Chicago, Ill.

*The American Society of Biological Chemists*.—December 28–30. President, Professor Otto Folin, Harvard Medical School; secretary, Professor William J. Gies, 437 West 59th St., New York City.

*The American Physiological Society*.—December 28–30. President, Professor W. H. Howell, Johns Hopkins University; secretary, Dr. Reid Hunt, Hygienic Laboratory, 25th and E Sts., N. W., Washington, D. C.

*The Association of American Anatomists*.—December 28–30. President, Professor J. Playfair McMurrich, University of Toronto; secretary, Professor G. Carl Huber, 1330 Hill St., Ann Arbor, Mich.

*The Society of American Bacteriologists*.—December 28–30. President, Dr. J. J. Kinyoun, Washington, D. C.; secretary, Dr. Norman MacL. Harris, University of Chicago, Chicago, Ill.

*The American Society of Zoologists*.—Eastern Branch, December 28–30. President, Professor Herbert S. Jennings, Johns Hopkins University; secretary, Dr. Lorande Loss Woodruff, Yale University, New Haven, Conn.

*The Entomological Society of America*.—December 29, 30. President, Dr. Henry Skinner, Philadelphia, Pa.; secretary, J. Chester Bradley, Cornell University, Ithaca, N. Y.

*The Association of Economic Entomologists*.—December 28, 29. President, Professor W. E. Brit-

ton, Connecticut Agricultural College; secretary, A. F. Burgess, U. S. Department of Agriculture, Washington, D. C.

*The Botanical Society of America*.—December 28–31. President, Professor Roland Thaxter, Harvard University; secretary, Professor D. S. Johnson, Johns Hopkins University, Baltimore, Md.

*American Nature Study Society*.—January 1. President, Professor C. F. Hodge, Clark University; secretary, Professor M. A. Bigelow, Teachers College, Columbia University, New York City.

*Sullivant Moss Society*.—December 30. President, Professor Bruce Fink, Miami University, Oxford, O.; secretary, Mrs. Annie Morrill Smith, 78 Orange St., Brooklyn, N. Y.

*Wild Flower Preservation Society*.—President, Professor Chas. E. Bessey; secretary, Dr. Charles Louis Pollard, New Brighton, N. Y.

*The American Psychological Association*.—December 29–31. President, Professor Charles H. Judd, University of Chicago; secretary, Professor A. H. Pierce, Smith College, Northampton, Mass.

*The American Anthropological Association*.—December 27–January 1. President, Dr. W. H. Holmes, Bureau of Ethnology; secretary, Dr. Geo. Grant MacCurdy, Yale University, New Haven, Conn.

*The American Folk-lore Society*.—Week of December 30. President, Dr. John R. Swanton, Bureau of American Ethnology; acting secretary, Dr. R. B. Dixon, Peabody Museum, Cambridge, Mass.

*Association of Mathematical Teachers in New England*.—December 28. President, Charles A. Hobbs, Watertown, Mass.; secretary, George W. Evans, Charlestown High School, Boston, Mass.

*Physics Teachers of Washington, D. C.*.—Meets in conjunction with American Federation of Teachers. President, W. A. Hedrick, McKinley High School, Washington, D. C.; secretary, Dr. Howard L. Hodgkins, George Washington University, Washington, D. C.

*American Phytopathological Society*.—December 28–30. President, Dr. L. R. Jones, University of Vermont; secretary, Dr. C. L. Shear, U. S. Department of Agriculture, Washington, D. C.

*American Alpine Club*.—December 30. Secretary, Dr. Henry G. Bryant, Room 806 Land Title Building, Philadelphia, Pa.

*American Breeders' Association*.—Meeting of Eugenics Committee. Secretary, Dr. Chas. B. Davenport, Cold Spring Harbor, N. Y.