

CALTECH'S DIVISION OF BIOLOGY

Is Nineteen Years Old

By ALFRED H. STURTEVANT

THE "FIRST Annual Announcement of Throop University" was issued for the academic year 1892-1893; since Throop University ultimately became the California Institute of Technology, this bulletin represents the beginning of the Institute. Listed in it are a "Professor of Zoology" (C. F. Holder) and a "Professor of Biology and Instructor in Physics and Chemistry" (A. J. McClatchie). The college courses listed cover only the Freshman and Sophomore years; Science in the Freshman year was Botany (though Physics of Geology might be substituted), and in the Sophomore year it was Zoology (with Organic Chemistry or Mineralogy as a possible substitute). Biology remained in the curriculum for about twenty years—though not for long in such a preferred position. From 1905 to 1908 the Professor of Biology was Joseph Grinnell, who had taken his A. B. at Throop in 1897, and who left the Institute to become the distinguished Director of the Museum of Vertebrate Zoology at the University of California. His successor at the Institute was Carl S. Milliken, Professor of Biology from 1908 to 1910. Mr. Milliken is now a well-known breeder and grower of Iris in Southern California. For the five academic years from 1910-1911 through 1914-1915 courses in Biology were listed in the Annual Bulletins, with the note that these courses are not to be given in the current year; then Biology ceases to be even mentioned, until 1928.

The character of the Institute was greatly changed in these years when Biology was not represented, and it is therefore not surprising that the new Division of Biology, organized in 1928, was different in kind from the earlier department. In that year Dr. Thomas Hunt Morgan, then Professor of Experimental Zoology at Columbia University, was made Professor of Biology at the Institute, and was charged with the development of the new Division. The first (west) unit of the Kerckhoff building was erected, and work began in September, 1928. The staff members were four geneticists: T. H. Morgan, A. H. Sturtevant, E. G. Anderson, and S. Emerson; the three latter are still in the Division. An undergraduate course, Biology 1, was given, replacing a course in Ethics as a required subject in the Science options. Graduate work was offered from the beginning, and at the end of the first academic year the Ph.D. degree was

given to Albert Tyler, who was then appointed to the staff, of which he is still a member.

The stated object of the organization of the Division of Biology was the development of instruction and research in the experimental and physiological aspects of Biology, with special emphasis on the relations to Physics, Chemistry, and Mathematics, already so well represented at the Institute. Accordingly additions to the staff were made in Biochemistry, Embryology, Plant Physiology, Biophysics, and Animal Physiology, these being the subjects that seemed most appropriate for such a program. Work in General Zoology and Botany has also been developed, as a necessary background for these subjects.

Dr. Morgan remained Chairman of the Division until 1941, and was Emeritus Professor of Biology, in residence at the Institute, until his death in 1945. The present Division is largely of his creation, and its aims are still not far from those he expressed in the 1928 Institute Catalogue:

"Emphasis is placed primarily on research and graduate study; and, even in these directions, no attempt is made to cover at once the whole science of Biology, but rather efforts are concentrated on the development of those of its branches that seem to offer the greatest promise as fields of research. It is proposed to organize groups of investigators in General Physiology, Biophysics, Biochemistry, Genetics, and Developmental Mechanics. The choice of these fields of modern research implies that emphasis will be laid on the intimate relations of Biology to the Physical sciences. A closer relation of these sciences with Biology is imperative."

The physical resources of the Division of Biology have been increased by the acquisition of the experimental farm at Arcadia (1929), the Kerckhoff Marine Laboratory at Corona del Mar (1930), and the greenhouse on Orlando Road in San Marino (1944); and by the erection of laboratories and greenhouse for Plant Physiology (1930 and later), and of the second (east) wing of the Kerckhoff building (1938).

The administration of the Division was under a council (A. H. Sturtevant, H. Borsook, A. J. Haagen-Smit, F. W. Went) from 1941 until 1946; in that year Dr. G. W. Beadle, then of Stanford University, became Professor of Biology and Chairman of the Division of Biology.



Thomas Hunt Morgan
1866-1945