

Charles H. Gilbert, Pioneer Ichthyologist and Fishery Biologist

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Charles Henry Gilbert (Fig. 1) was a pioneer ichthyologist and, later, fishery biologist of particular significance to natural history of the western United States. Born in Rockford, Illinois on 5 December 1859, he spent his early years in Indianapolis, Indiana, where, in 1874, he came under the influence of his high school teacher, David Starr Jordan (1851–1931). Gilbert graduated from high school in 1875, and when Jordan became a professor of natural history at Butler University in Irvington, Indiana, Gilbert followed, and received his B.A. degree in 1879. Jordan moved to Indiana University, in Bloomington, in the fall of 1879, and Gilbert again followed, earning his M.S. degree in 1882 and his Ph.D. in 1883 in zoology. His doctorate was the first ever awarded by Indiana University.

Jordan and Gilbert, along with other students, explored the streams and rivers of Indiana and the southeastern United States in the late 1870's, describing a number of new fishes. In late 1879, Jordan was asked by Spencer Fullerton Baird (1823–1887), Commissioner of the U.S. Commission of Fish and Fisheries, to undertake a survey of the fisheries of the U.S. Pacific Coast. Jordan took a leave of absence from Indiana

University, chose Gilbert as his assistant, and headed west to San Francisco in December 1879. They surveyed the area from southern California to British Columbia, and then Gilbert, alone, proceeded to Mexico and Panama to collect more fishes. Their 1-year pioneering survey of fishes in the west laid the foundation for nearly 50 years of study of Pacific fishes and fisheries by the team of Jordan and Gilbert.

By the time Gilbert received his Ph.D. degree at the age of 24, he was the author or coauthor of more than 80 scientific papers, all but three as junior author with Jordan. Gilbert served at Indiana University from 1880 to 1884, first as instructor, then as Assistant Professor in Natural Sciences and Modern Languages. In 1884, he accepted the Professorship of Natural History at the University of Cincinnati, remaining there until December 1888. In 1889, Gilbert returned to Indiana University as Professor of Natural History. During his tenure in Cincinnati, Gilbert also served as Naturalist-in-Charge of cruises of the U.S. Fish Commission Steamer *Albatross* in Alaskan waters in 1888 and off the U.S. west coast in 1889.

Jordan became president of Indiana University in 1885. However, in 1890, Senator and Mrs. Leland Stanford chose Jordan to be the founding president of a new university to be established in Palo Alto, California, in memory of their deceased son, Leland Stanford, Jr. Among Jordan's first appointments to the new faculty was the Chairman of the Zoology Department, Charles Henry Gilbert.

Gilbert then began a career at Stanford University which spanned

nearly 37 years. He concentrated on Pacific fishes, mostly marine, and participated in expeditions ranging from Panama to Alaska, and served again as Chief Naturalist aboard the steamer *Albatross*, off Alaska in 1890, to the Hawaiian Islands in 1902, and to the Japanese Archipelago in 1906. As a pioneer descriptive ichthyologist, Gilbert described either alone or with others about 120 new genera and 620 species of fishes. He ranks with Jordan as the foremost ichthyologist of the American West.

Around 1909, Gilbert turned his attention to the study of Pacific salmon *Oncorhynchus* spp., and soon became the foremost expert on these economi-

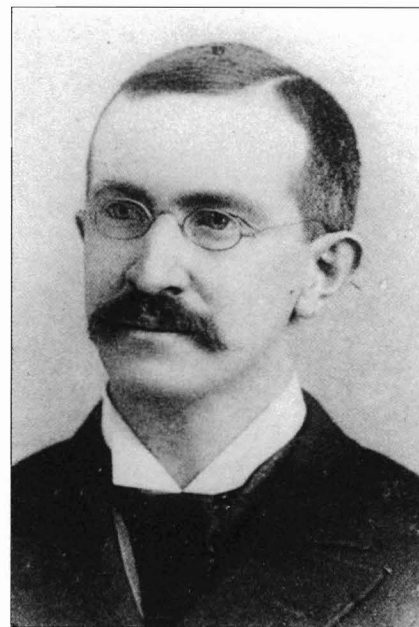


Figure 1.—Charles Henry Gilbert, ca. 1903.

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cally important fishes. He studied salmon from California to Alaska, but concentrated his efforts in British Columbia (from about 1912 to 1921) and, from about 1918 to 1927, in Alaska. He was the first scientist to apply the scale method to aging of Pacific salmon, he pioneered racial studies using scales, and he was instrumental in establishing tagging programs on salmon in Alaska. Gilbert was also one of the very first scientists to consider the population dynamics of Pacific Northwest stocks of salmon. Altogether, he published over 170 scientific papers.

In his later years, Gilbert became an outspoken champion of the need for conservation of Pacific salmon resources, warning all who would listen that this resource was in dire jeopardy unless overfishing was curtailed. His world view was far ahead of his time,

and he urged the U.S. Bureau of Fisheries, successor to the U.S. Commission of Fish and Fisheries, to instigate data collection programs on Alaska salmon and to regulate the commercial salmon fisheries.

Always formal and proper and a man of seemingly high "moral" standards, Gilbert nevertheless was a demanding person with a sharp eye and an even sharper temper. He was an active teacher, administrator, and researcher at Stanford University. He supervised the graduate studies of several notable ichthyologists and fisheries biologists, among them William Francis Thompson (1888–1965) and Carl Levitt Hubbs (1894–1979).

Gilbert retired in 1925, but continued his research as an Emeritus Professor. He died on 20 April 1928 at the age of 68. His wife, Julia, born in 1849, died

in 1916. There were three children, Carl (1891–1963), Winnifred (Mrs. Carl F. Braun, 1886–1980), and Ruth (Mrs. Percy R. Baker, 1885–1982), all of whom were graduated from Stanford University.

Gilbert has been remembered and honored by ichthyologists and fishery biologists for his many contributions. In his honor, the Gilbert Fisheries Society was established in 1931 in the College of Fisheries, University of Washington, Seattle. This organization was short lived, however, and the Society was reconstituted in 1989 in Seattle as the Gilbert Ichthyological Society. A U.S. Bureau of Commercial Fisheries research vessel was commissioned in 1960 as the *Charles H. Gilbert*, and, recently, a new building at Stanford University was named the Charles H. Gilbert Biological Sciences Building.