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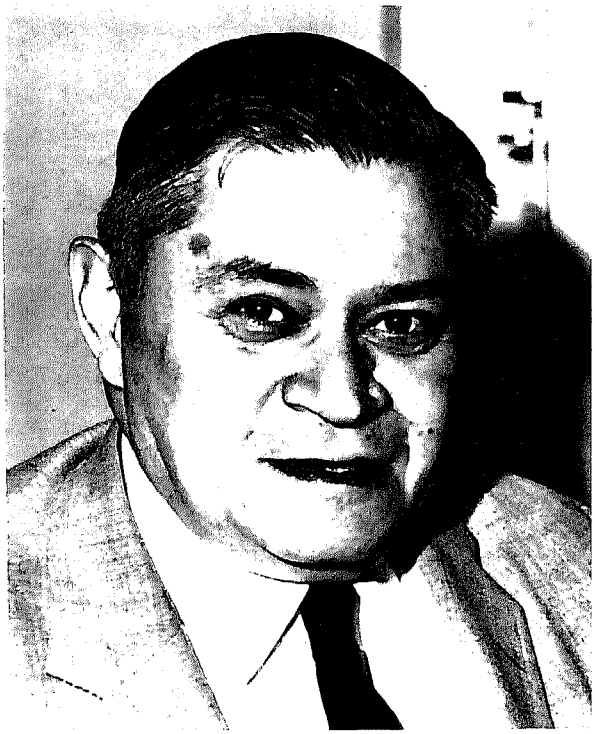
THEODORE LOUIS JAHN

1905-1979

In Memoriam



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As a protozoologist, cell physiologist, insect physiologist, originator of a practical electrical method of healing bone, taxonomist, astute theoretician, cofounder of the Society of Protozoologists, administrator, opponent of unsound scientific dogma and as an individual gifted in establishing friendships with a wide variety of people, Dr. Theodore L. ("Ted") Jahn was widely known around the world. He was a charter member, an active member, and finally, an Honorary Member of the Society of Protozoologists, and was also an active member of many other scientific societies. He is remembered with much love and affection, admiration and respect by his many friends and colleagues for his informal and generous friendship, his scientific ability, his diligence and tenacity of purpose, the generosity with which he gave time to his students, to many offices and committees, and, not least, for his quick wit, sense of humor, and the tremendous energy he brought to all of his endeavors. He will be most sorely missed by all who knew him.

Theodore L. Jahn was born in New Orleans, Louisiana, on 17 December 1905, the elder son of Charles Edward Jahn, and his Texas-born wife, Aline Blair. The family first moved to Beaumont, Texas and later to Houston, Texas, where "Ted" Jahn grew up, though he often referred to himself as "a Louisiana Frenchman." The family knew hardship, and, as the elder son, he worked at whatever he could as a growing youngster and teenager to help support himself and the family. These strong working habits continued for his lifetime.

An excellent student, he won a 4-year academic scholarship at the Rice Institute (now Rice University) in Houston, where he planned to study business administration. At Rice, however, he became more interested in Biology under the aegis of professors Asa Chandler and, especially, Richard P. Hall, a then new protozoologist on the Rice faculty. In 1927, he graduated with distinction and went to New York University for graduate study with Hall, who had left Rice for a new position at that university. With Hall, Ted Jahn pioneered work on axenic cultures of *Euglena gracilis*, studying its physiology so well that he was chosen, in 1933, to head a Cold Spring Harbor Symposium on cell cultures. At New York University he received the M.S. degree in 1928 and his doctorate in 1931.

On 18 July 1931, he married a fellow student, Frances Floed, of Idaho, beginning a loving, working partnership that continued until his death. They developed a writing style noted for its expositional lucidity and together they wrote both the original and revised versions of the widely used handbook, *How to Know the Protozoa*.

From New York University Dr. Jahn went to Yale University as a National Research Council Fellow at the Osborn Laboratory, where he taught protozoology for a year while Lorande L. Woodruff was on leave. In 1934 he went to The University of Iowa as a research associate (in grasshopper physiology), remaining there until 1948 during which period he rose in rank to associate professor of zoology. In 1948, he accepted a professorship of zoology at the University of California at Los Angeles. He became department chairman there in 1949, a role in which he served diligently for nearly a decade. When he relinquished that post in 1958, the department of Zoology at UCLA had risen in ranking to among the top 5 departments of zoology in the nation, while more than doubling in faculty and physical facilities. He returned to teaching and research, re-

maining at UCLA as professor and professor emeritus until his death, after a cerebral hemorrhage, on 1 May 1979.

As an active member of many scientific societies he gave enormously of his energies, giving numerous papers at their meetings, serving on many of their committees and, frequently, as an officer. He was a cofounder of and wrote the draft of the first constitution for The Society of Protozoologists; was its first secretary and treasurer (1947-49), then vice-president (1949), and its president (1952-53). He also served on its committees and on the editorial board of *The Journal of Protozoology*; in 1975, Theodore Jahn was elected to Honorary Membership for his contributions to protozoology and to the Society.

Dr. Jahn also served as vice-president (1949-51) and president (1954) of the American Microscopical Society, president of the Western Division of the American Association for Advancement of Science (1969-70), president of the Western Society of Naturalists (1972-73), and as treasurer of the American Society of Zoologists (1953-56).

Besides administrative activities as a professor at U.C.L.A. and in the various societies, Dr. Jahn served on the boards of directors of several organizations, most notably as trustee (1963-69) and president of the board of trustees (1966) of Biological Abstracts, in which role he negotiated the acquisition of that organization's present building and helped initiate the development of its computerized BIOSIS Program. He also served, in the 1960's, on Fulbright awards committees and on grant-awards committees for the Office of Naval Research, The National Institutes of Health, The National Science Foundation, and The National Atmospheric and Space Authority. In Los Angeles, he was active as a member and president of The Committee for Advanced Science Training, an organization that selected and sponsored summer research appointments for high school students in the sciences who had demonstrated promising capabilities in research.

Despite these many administrative activities, he found time to guide the researches of 34 doctoral students and at least as many master's degree students, and to author or coauthor nearly 200 publications that included scientific papers, reviews, popular scientific articles, articles in encylopedias, chapters in books, a well received book, and numerous "letters to editors."

A highly gregarious man, Ted Jahn had a special talent for generating and maintaining friendships, giving freely of his time, help and advice to friends, of which he had many. At their home in Beverly Canyon in Los Angeles, he and his wife entertained a seemingly endless stream of visitors, often giving elaborate dinners and parties. Scarcely ever did a visitor or guest depart without having acquired a lasting friendship with them. Their kindnesses to others are virtually legendary.

A stimulating teacher, he gave lucid and accurate lectures (often up-dated an hour or 2 previously) that sparkled with wit and humor. He knew many of his scientific peers, personally, and made them, by anecdote, living participants of his lectures, with their foibles as well as their accomplishments, yet without ever denigrating them. He was a determined opponent of scientific (or other) dogma for its own sake and he attacked it vigorously in his teaching and research, particularly where it was illogical or inaccurate. He detested bigotry and while others debated race relationships, he accepted students as such and without regard to race or other background.

Dr. Jahn's researches ranged widely. Besides his extensive work with protozoa (which included their taxonomy, physiology, biochemistry, life cycles, ecology, behavior and movements) he also worked extensively with insects, studying their vision, diurnal rhythms, cardiology, neurophysiology, visual electrochemistry, and permeability of their eggs. He proposed theories of redox potentials, membrane transport, imbibition of water into cells, piezoelectric movements of ions in flagella and bone (the latter resulting in development of an electrical method of healing fractured bone) and application of Gibbs-Donnan equilibria to physiological phenomena such as ciliary reversal, cytoplasmic contraction, and water flux in cells. He extended the use of motion-picture cameras and pioneered the use of high-speed (up to 1,000 frames/sec) missile-tracking cameras to cinematography of motion in protozoa, including ameboid movements of all types, flagellar and ciliary movements, and movements of sporozoan trophozoites. He extended these studies by examining movements of spirochetes, bacteria, and spermatozoa, and movements of the water-expelling vesicle ("contractile vacuole"). He also studied contraction of cytoplasm under electrical stimulation and developed an explanation based on an ion-exchange mechanism. With several of his graduate students, he investigated the pattern-swimming phenomenon of dense populations of microorganisms, developing theoretical explanation for it. At the time of his death he was working on a theory to explain the formation of coral reefs on combined mechanical, geological, and biochemical bases.

Dr. Jahn sought and obtained much research grant and fellowship support for his own researches and for those of his graduate students and postdoctoral fellows. Papers from his laboratories appeared in a continuous flow and were published in many scientific journals of high quality. These publications led to many requests that he write reviews of the subjects he researched and to many invitations to speak at seminars and symposia sponsored by various scientific organizations and universities. Many of these requests he accepted. Notably, he was an invited principal speaker at the Second International Congress of Protozoology.

His many accolades included Honorary Memberships in the Society of Protozoologists, and in the American Microscopical Society; awards of merit from the Iowa Academy of Science and from the Committee for Advanced Science Training in Los Angeles; a Distinguished Alumnus Award from New York University; the establishment of the Theodore L. Jahn Fund and Award by the Society of Protozoologists. Shortly before he died, he was nominated for a 1979 Distinguished Service Award of the American Institute of Biological Sciences. His biographical sketch has regularly appeared in successive editions of *American Men and Women of Science, Who's Who in America,* and *Who's Who in the West.*

A complete listing of his many publications (often coauthored with one or more of his associates, since he generously shared credit wherever he felt it was due) is too long for this article, including about 200 titles even when abstracts are not counted. The partial listing that follows indicates the wide scope of the researches he and his associates pursued, with emphasis on the major papers from his own researches and those with coworkers during the 50-year span of his research life.

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