The Hopkins Marine Station at Pacific Grove
Photograph by Dr. W. K. Fisher, 1920
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First Edition

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PROLOGUE

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PROLOGUE

We begin this history with a letter written in 1922 by then Stanford Professor and Director of Hopkins Marine Station, Walter K. Fisher to former Stanford Professor Vernon Kellogg, expressing his enthusiasm for the future of the University’s seaside laboratory, and the potential for funding from the Rockefeller Foundation to support the advancement of the marine science facility.

April 24, 1922

Dr. Vernon Kellogg
National Research Council
Washington, DC

Dear Doctor Kellogg,

In conversation, President Wilber stated recently that you are interested in obtaining financial aid for the Station from the Rockefeller Foundation. This is good news. I feel that we are ideally located for nearly all sorts of biological work. Not only have we an unequaled marine fauna very accessible, but terrestrial conditions are equally favorable. And all this is available 12 months of the year. We have a strategic position with reference to the whole region west of the Rockies: we are closest to its center of academic population.

I think I have already written you that cooperation with the University of California, both in teaching and research, will start experimentally this summer, with every chance of success. Dr. Kofoid is much interested in the project, as are others in the departments of Zoology and Physiology. Dr. C.V. Taylor, of their Dept. of Zoology, will give 2 courses, as a member of The Stanford Faculty and several U.C. students will attend. It is our aim to extend this idea, when facilities permit, to include collegiate institutions of other states, as well as of our own. For instance, it would mean a great deal to the advance of biology in Oregon, Washington, Montana, Idaho, Utah, Nevada, Arizona, etc., if an adequate centrally situated set of laboratories were available for
research and summer teaching. It would furnish the best out of “seasoning” for our western “fresh-water” institutions. Kofoid and Taylor have emphasized the point that western biologists need a common meeting ground, and have stated that this institution would be very acceptable to the University of California biologists. I think this point is important. You will recall how little we have gathered together in the past-men from different institutions-and swapped ideas. Meetings of societies at rare intervals are almost futile. Men must work together day after day until there is an abrasion of professional reserve-if you catch what I mean. (You cannot mix them up suddenly and expect anything worthwhile to float to the surface.) In other words, we want to make this the western Woods Hole, and can do so given money and a little time. From the standpoint of the advancement of biology and of teaching I am inclined to think this point of a common work-shop for the whole Pacific-Rocky Mt. region to be of great importance. It will certainly remove the danger (or the fact) of provinciality, which the smallest institutions are subject to, and will be of great value to everyone in creating an esprit de corps?

We ought to have, to do the thing right, an endowment of $500,000, yielding an annual income of $25,000, and in addition about $100,000 for a new building, a cement breakwater (with wells for live animals), and a launch. In the new building, one of the desiderata is a biochemical laboratory, small but well equipped, and space for a future biophysical laboratory. The equipment for piping seawater must be the best obtainable to be of any use in precision work. For this, our existing equipment is useless. All water has to be carried in by hand.

Such a laboratory would certainly be utilized by the government, and by investigators working under the auspices of various institutions. (I can imagine that sooner or later the “teredo commission” will come to experiment in our great estuaries, free from commerce).

F.R. Lillie, E. G. Conklin, T. H. Morgan, H.H. Newman, A. H. Sturtevant, have worked here. Dr. Lillie and Dr. Conklin, who certainly know Marine Station, were very enthusiastic about the possibilities for development. Dr. Lillie said he did not know why more eastern men did not avail themselves of the advantages of the place.
Very Truly Yours

Stanford University Archives]

To understand the history associated with this letter, we must briefly turn back thirty years to the beginnings of Stanford University’s first marine science facility, the Hopkins Seaside Laboratory of Natural History, established in Pacific Grove in 1892.
CHAPTER 1

THE ESTABLISHING OF HOPKINS SEASIDE LABORATORY

In 1891, during his first year as President of the Leland Stanford Junior University, David Starr Jordan set out to establish a seaside laboratory of natural history. Having attended America's first summer school of science, the Anderson School of Natural History in 1873, President Jordan was well aware of how access to the natural science available at the seashore, could broaden the scope of education and research offered by the new Stanford University. The result of Jordan's enthusiasm for a seaside laboratory was, in the summer of 1892, the locating of a hastily constructed wooden building precariously positioned atop a treeless plateau knick-named Lovers' Point, in Pacific Grove, California. This two story wooden structure, and a second more fortified building added two years later, served for the next twenty-five years, as the Hopkins Seaside Laboratory of Natural History. From this seaside facility, then only nominally associated with Stanford University, was offered each summer, a six-week program of natural science instruction. Beyond offering courses of instruction, the seaside laboratory served as a research facility for university students, professors and visiting scientist.\(^1\)

Within just two decades of opening its doors, Pacific Grove's vacation resort activities had encroached upon the privacy of Hopkins Seaside Laboratory to the point where the University recognized the need to move the facility to a more protected and private location.\(^2\) The momentum for relocating the seaside laboratory was in large part due to the energy and vision of the third President of Stanford University, Dr. Ray Lyman Wilbur. As a graduate from Stanford University, Ray Lyman Wilbur had received a Bachelors of Arts (B. A.) degree in 1896 and a Masters of Arts (M. A.) degree in 1897. Wilbur then studied at the Stanford University School of Medicine (then named the Cooper School of Medicine), receiving a Doctor of Medicine (M. D.) degree in 1899. RL Wilbur went on to serve as the Dean of the Stanford University School of Medicine from 1911 to 1916, and then as President of Stanford University from 1916 until 1943.\(^3\) During both his Stanford undergraduate and graduate years, Wilbur spent time at the Hopkins Seaside Laboratory, as part of his education in the Department of Physiology.\(^4\) President Wilbur's experience at the seaside laboratory included serving as an assistant to
his academic advisor, Professor Oliver Peeble Jenkins, and two visiting scientists named Jacques Loeb and Bashford Dean. The important "hands on" laboratory learning experience provided during his time spent at the Hopkins Seaside Laboratory allowed Wilbur to recognize the value of having a marine science facility associated with Stanford University.
THE ESTABLISHING OF HOPKINS MARINE STATION

And so it was, during the year 1916, through the efforts of the third President of Stanford University, Ray Lyman Wilbur and the Stanford Board of Trustees, a land exchange was negotiated with the Pacific Improvement Company, that secured five acres of land at a rocky headland named Point Almeja for the immediate purpose of relocating the Hopkins Seaside Laboratory.\(^5\) Having been the site of Pacific Grove’s Chinese fishing community for many years, this particular location was known to the residents of the Monterey peninsula, as China Point. During the first years of the Hopkins Seaside Laboratory, this vibrant and picturesque fishing village became particularly dear to a number of students and researchers, as it was the home of Quock Tuck Lee; an exceptionally skilled collector whose efforts provided the necessary material for important research associated with the comparative embryology of primitive fishes.\(^6\)

With the China Point property secured, the next stage in the development of the research facility at this location was initiated in January of 1917, when the Board of Trustees of Stanford University approved plans and authorized the construction of a new building at a cost not exceed $23,000.\(^7\)

On October 26, 1917, with the construction of the new building in process, the Board of Trustees, in recognition of the financial support provided by long-time Stanford Trustee, Mr. Timothy Hopkins, during the life of the original seaside laboratory, named this new facility “Hopkins Marine Station of Stanford University.” \(^8\)
THE FIRST BUILDING AT HOPKINS MARINE STATION

According to Walter K. Fisher, plans for the Hopkins Marine Station’s new building were the efforts of Professor Frank Mace McFarland, of the Department of Anatomy, in discussions with Professor Charles Henry Gilbert, of the Department of Zoology. When completed, this structure built of reinforced concrete, stood forty-one feet wide by eighty-four feet long, and a height of three stories. As for the interior of the new building, the first floor was held the following: a physiological laboratory for teaching, which contained a large floor aquarium capable of being divided into three separate compartments by moveable partitions, a photographic dark room, a concrete floored room for the storage of boats, a men’s bathroom, a large storeroom, and a janitor’s room. The second floor, into which the main entrance of the building opened, held three large teaching laboratories, and two small private laboratories reserved for instructors. On the third floor were located six private laboratories for investigators, an advanced laboratory for teaching, a large library, complete with a generous fireplace, an adjoining room for writing, and a women’s bathroom.

In addition, the building was equipped with heating, electricity, as well as freshwater and seawater - both of which were efficiently plumbed to each laboratory. The opening of this new building, which coincided with the summer quarter of 1918, heralded the next chapter in the history of Stanford University’s marine science laboratory, nestled along the shoreline of southern Monterey Bay. Within the first years of relocating the facility to China Point, the Hopkins Marine Station became a bustle of excitement, both in terms of teaching and research efforts. The coming decades necessitated an expanded emphasis directed toward both education and exploration, with spring and summer quarters courses offered to students, and access to the station extended to both faculty and visiting scientist, year-round.
HOPKINS MARINE STATION LIBRARY

Located on the third floor of first laboratory building, the Hopkins Marine Station Library featured a generous fireplace and an adjoining room for writing. With the addition of the Jacques Loeb Laboratory, there was the second story of the building that held two stack rooms, and a reading room. During the first years of the library, finances for establishing and adding to the collection were limited. In 1930, the Rockefeller Foundation provided a generous donation of $20,000 toward a library fund for Hopkins Marine Station; with the understanding that Stanford University would contribute an equal amount toward the fund. These monies allowed for the acquisition of scientific literature in the fields of marine botany and zoology, biophysics, biochemistry, oceanography, and related subjects would be available to the faculty, students and staff of the Hopkins Marine Station.

In 1931, the Hopkins Marine Station Library became integrated into the Stanford University Libraries system, at which time the existing collection of 693 volumes was accessioned and cataloged. Index cards for the journals and books in the library were made available in the central catalog of the University libraries. Acquisitions were completed through the Order Division, and the cataloging handled prior to books being shipped to Pacific Grove. During these years, the Hopkins Marine Station Library was visited several times by the Reviser of the Bibliography Division and the Director of University Libraries.

During the year 1933 a significant amount of scientific literature was accessioned into the library to support a research program named the Hydrobiological Survey of Monterey Bay. At that point in time, more than 4,000 titles were held in the library, each of them having been classified and indexed.

Counted among the major gifts acquired were the MacFarland library; G. M. Smith's Library; Ed Ricketts' Library; W. K. Fisher’s Library (his wife sold his library to HMS and then gave the money to Stanford University for a student aid fund).
EARLY LITERARY PERCEPTIONS OF HOPKINS MARINE STATION

A common perception of the first decades of Hopkins Marine Station is one of a seaside laboratory staffed with elderly faculty clinging to traditional and outdated scientific methods of study. This view stems primarily from the comments of Joel Hedgpeth which appeared in the publication The Outer Shores: Ed Ricketts and John Steinbeck Explore the Pacific Coast and reads:

"It was an odd quirk of fate that Ed should establish himself in a community where there was so little intellectual stimulation for a field naturalist, despite the presence of a marine station. Ironically, the greater Monterey community was, at the same time, a fermenting compost of relationships, interactions, story-telling, and conversation that was ideal for the development of a novelist. In this lively environment John Steinbeck flourished as a writer and Ed Ricketts struggled as a biologist. Over at Hopkins, there was the old guard, the staunch conservatives of another day, whose concerns were for the most part with the identification and cataloguing of species (Shores I:28)."16

Contrary to Hedgpeth's depiction of Stanford's seaside laboratory, the Hopkins Marine Station of Ed Ricketts' day was, at times quite vibrant and exciting, both in terms of teaching and research, as a stream of visiting oceanographers, fisheries scientists, invertebrate zoologists, and experimental scientists expanded the potentials of what the facility had to offer.

In addition to Hedgpeth's personal view of scientific efforts of the faculty associated with the seaside laboratory, this curmudgeon - like literary rendering of the first decades of Hopkins Marine Station extends to the lasting characterization of the Director, Walter K. Fisher as a crusted dry-ball academic scientist. This characterization of WK Fisher is the result of his having been construed as the point of reference in a paragraph that appears in John Steinbeck and Ed Ricketts’ book Sea of Cortez:

"We sat on a crate of oranges and thought what good men most biologists are, the tenors of the scientific world--temperamental, moody, lecherous, loud-laughing, and healthy. Once in a while one comes on the other kind--what used in the university to be called a 'dry-ball'--but such men are not really biologists. They are the embalmers of the field, the picklers who see only the preserved form of life without any of its principle. Out
of their own crusted minds they create a world wrinkled with formaldehyde. The true biologist deals with life, with teeming boisterous life, and learns something from it, learns that the first rule of life is living. The dry-balls cannot possibly learn a thing every starfish knows in the core of his soul and in the vesicles between his rays. He must, so know the starfish and the student biologist who sits at the feet of living things, proliferate in all directions. Having certain tendencies, he must move along their lines to the limit of their potentialities. And we have known biologists who did proliferate in all directions: one or two have had a little trouble about it.\footnote{17}

What we will come to understand is that if it were not for scientists like Walter K. Fisher, researchers who were professionally trained to be "dry-ball" invertebrate taxonomists, Ricketts would have been at a loss as to the taxonomic identity of many of the species he collected, and therefore, incapable of writing the book *Between Pacific Tides* and the annotated phyletic catalog associated with the *Sea of Cortez*.

A broadened understanding of WK Fisher and his connections to teaching and research of marine invertebrate biology and studies of intertidal ecology at Hopkins Marine Station allows one to understand the role the Director of Stanford’s seaside laboratory had in shaping EF Ricketts as an ecologist.