

CHAPTER 2

DAVID STARR JORDAN, M. D., Ph.D., LL.D.

David Starr Jordan was born on January 19, 1851, in Gainesville, New York. His father, Hiram Jordan, was born in Moriah, New York, his mother Huldah Hawley, was born in Whitehall, New York.¹ It is said David Starr Jordan chose “Starr” for his middle name for two reasons; to honor his mother's great admiration for the writings of Unitarian and Universalist minister, Thomas Starr King and for his love for astronomy.² He was raised on a farm in Gainesville, New York, where early on Jordan showed his love for nature.³ His father, Hiram Jordan, was active on behalf of all educational movements, serving for a long time as a trustee of the public school of his district, and as a teacher, locally noted for his skill in instruction and maintenance of order. His mother, Huldah Hawley Jordan, was also a successful teacher, which enabled his parents, for some time after their marriage, to maintain on the farm, a private school with a few resident pupils.⁴

THE EDUCATION OF DAVID STARR JORDAN

At an early age Jordan's attention was directed toward botanical studies, and to satisfy this interest he prepared for college, taking his first lessons at the Gainesville Female Seminary.⁵ In 1869, having won a scholarship to Cornell, Jordan entered the University to begin his college education.⁶ The following year (1870), women, for the first time, were admitted to Cornell and among the three who enrolled was David Starr Jordan's sister, Mary Jordan. At the time of his graduation in 1872, Jordan had completed so much extra work he was awarded a Master of Science degree (M.S.), and not the Bachelor's of Science degree (B.S.) awarded to the other students of his class.⁷

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INSTRUCTOR, DAVID STARR JORDAN

During his years at Cornell University (1871-1872), David Starr Jordan was an instructor in botany. In 1873, Jordan took the position of Professor of Biology at Lombard University, in Galesburg, Illinois. This position at Lombard required Jordan to teach classes in German and Spanish, Botany, Chemistry, Geology, Mineralogy, Physics, Zoology, Political Economy and Paley's Evidences of Christianity.⁸ In the summer of 1873, Jordan spent his first of two summer sessions attending the Anderson School of Natural History on Penikese Island. It is without question that the influence of Louis Agassiz, and the two summers of participation in the Anderson School of Natural History, attending as a student the first year and then as an instructor of marine botany the second year, contributed to the academic development of David Starr Jordan. It was during his first year on Penikese Island, working toward devoting himself to the study of marine algae, when Agassiz asked him to undertake a study of the fishes of the region. Through the examination of the catches of the pound-nets at Martha's Vineyard, Jordan became well acquainted with fishes of the region. Thus began a life's journey for David Starr Jordan, as he would become one of the preeminent leaders of ichthyology, the branch of zoology devoted to the study of fish.

After the first summer session on Penikese, Jordan traveled to Harvard College to become a curator of fossil vertebrates in the Museum of Comparative Zoology; a position offered to him by Agassiz. While Jordan was at Harvard, Agassiz received a request from a Dr. Russell Z. Mason in Appleton, Wisconsin to suggest a student for the position of Principal of the Appleton Collegiate Institute.⁹

The Appleton Collegiate Institute was a preparatory school that was organizing its curriculum on the theories of Johann Heinrich Pestalozzi, (1746-1827) and Friedrich Froebel (1782–1852), with the teaching of science to be a special emphasis. Quoting Jordan from his book *Days of a Man*, he describes the events to follow: *From Agassiz's answer nominating me for the position I was allowed to copy a few sentences which, after all these intervening years, I may be pardoned for printing: "The highest recommendation I can give Mr. Jordan is that he is qualified for a curatorship in the Museum of*

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*Comparative Zoology. I know no other young man of whom I can say that." This statement was sufficient, and I at once set forth for Appleton to undertake my new duties.*¹⁰

David Starr Jordan remained as Principal at the Appleton Collegiate Institute for one year (1873-1874). Though Louis' Agassiz had passed away, Jordan returned to Penikese for the next summer session (1874), serving as the instructor for the course in marine botany. In the fall of 1874, Jordan was a teacher of natural history at the Indianapolis High School, today's Shortridge High School, in Indianapolis, Indiana (1874-1875). During this time, Jordan studied medicine at Indiana Medical College, where he earned a medical degree (M. D.) in 1875. Next, Jordan became a Professor of Natural History at Northwestern Christian University (later Butler University) in Indianapolis, Indiana, where he earned his Doctorate of Philosophy (Ph.D.) degree in 1878. In the fall of 1879, Jordan began teaching at Indiana University, in Bloomington.

In 1885, at thirty-four years of age, Jordan was elected the seventh president of Indiana University, becoming one of only two scientists presiding over an American university, and the youngest college president in the nation. As President of Indiana University, Jordan became known as a distinguished academic leader, securing the school's position as a prominent educational institution.

In the spring of 1891, the former California Senator Leland Stanford recruited David Starr Jordan to be the first president of a newly formed academic institution named Leland Stanford Junior University, established in honor of the Senator's deceased son.¹¹ In his position as President of Stanford University, Dr. Jordan welcomed personally the first students and first professors, and it was his pride that, for the first five years of the life of the institution, he knew each and every student and professor by name. Personal contact, Jordan insisted, was the great welding force in education, and he encouraged his students always to treat their professors as fellow students who were just a little farther along the road of education.¹² Like his mentor Louis Agassiz, Jordan was a firm believer in co-education, enabling women students to come to an academic education on equal terms with the men. Just before Stanford officially opened its doors to students, a dormitory for women was rushed to completion in just ninety days.¹³

DAVID STARR JORDAN AND LOUIS AGASSIZ

David Starr Jordan would lecture of Louis Agassiz, to both the lay public and academic institutions, an untold number of times, most often with a presentation titled *Agassiz as Teacher*. Besides lectures, Jordan penned numerous articles about Louis Agassiz and the pedagogical method of instruction he had introduced on Pekinese Island. Without a doubt, Agassiz and the two summers on Penikese left a strong mentoring impression on David Starr Jordan. It was the mentoring influence of Agassiz that had informed and molded Jordan's idea what a University could and should be.¹⁴

From an article that appeared in *The Popular Science Monthly*, April 1893, written by Jordan, and titled *Science and the Colleges*:

*In a high sense, as I elsewhere have said, the coming of Agassiz marked the foundation of the first American university. Agassiz was the university. The essential character of the university is Lernfreiheit, freedom of learning, the freedom of the student to pursue his studies to the furthest limit of the known, the freedom of encouragement to invade the infinitely greater realm of the unknown. It is from this realm that come the chief rewards of the scholar. The school from which no exploring parties set out has no right to the name of university.*¹⁵

With that introduction of David Starr Jordan, we are now set to present the early history of the Hopkins Seaside Laboratory. The next subject being two professors of science, Charles Henry Gilbert and Oliver Peeble Jenkins, both of whom took up their graduate studies under the mentoring supervision of David Starr Jordan, during his tenure at the Indiana University. A scholarly relationship with Jordan that then resulted in these two men being among the first faculty members selected by Dr. Jordan for the new Leland Stanford Junior University.

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CHARLES HENRY GILBERT, Ph. D.

Charles Henry Gilbert, born December 5, 1859, in Rockford, Illinois, spent his early years in Indianapolis, Indiana. In 1874, he came under the influence of his high school teacher, David Starr Jordan. After CH Gilbert graduated from high school in 1875, he followed Jordan to Northwestern Christian University (later Butler University) receiving a Bachelor of Arts (B. A.) degree in 1879. In 1877, Gilbert accompanied Dr. Jordan in a survey of the fish indigenous to the state of Georgia. When Jordan moved to Indiana University in the fall of 1879, Gilbert again followed. During that same year, Gilbert was appointed by Spencer Fullerton Baird, then Commissioner of the United States Commission of Fish and Fisheries, to serve as an assistant for Dr. Jordan's survey of the fish and fisheries of the Pacific Coast; a survey which Gilbert lengthened to include the Mazatlan and Panama. From the University of Indiana, Gilbert earned his Master of Science (M. S) degree in 1882, and his Doctorate of Philosophy (Ph.D.) in 1883, in zoology with the river fishes being his specialty. His doctorate, awarded to Gilbert at the age of 24, was the first ever bestowed by Indiana University.¹⁶ By the time Gilbert received his doctorate, he was the author or co-author of more than eighty scientific publications.

During the years 1880-1884, while at the University of Indiana, Gilbert first held the position of Instructor, and then Assistant Professor of Natural Sciences and Modern Languages. Gilbert next served as Professor of Natural History at the University of Cincinnati in Ohio, from 1884-1888, returning to Indiana University in 1889, as Professor of Natural History.¹⁷ In 1891, David Starr Jordan recruited Gilbert to the Leland Stanford Junior University, offering him the position of Professor of Zoology. Except for the four year period when CH Gilbert was a Professor at the University of Cincinnati, he remained academically associated with David Starr Jordan; beginning with his high school in Indianapolis, then Indiana University and finally Leland Stanford Jr. University, where, in 1925 he attained the status of emeritus professor.¹⁸

OLIVER PEEBLE JENKINS, Ph. D.

While at Indiana University, a second student by the name of Oliver Peeble Jenkins, also took up his Ph.D. research studies with David Starr Jordan as his primary advisor, making a study of Hawaiian fishes. Jenkins began his college education at Moore's Hill College of Indiana, which was organized in 1854, under the auspices of the Methodist Episcopal Church. According to his youngest son, Olaf Pitt Jenkins in his book *Early Days Memoirs*, his father, Oliver Peebles Jenkins, entered Moore's Hill College in 1864, when he was fourteen years of age.¹⁹ He worked his way through school by waking at 4 a.m., sawing up hardwoods such as hickory and black walnut, and then starting all the open fires in the college building during the wintertime. Jenkins choice of Moore's Hill College was likely the result that both his father and his father in-law were instructors at Moore's Hill College in Indiana.²⁰ In fact, for a time, both his father and father-in-law each served as presidents' of Moore's Hill College; Reverend George Peterson Jenkins, 1887-1890, and Reverend Francis A. Hester, 1876-1879. By the age of nineteen, Oliver P. Jenkins had received two degrees from Moore's Hill College, a Bachelor of Arts (A. B.) in 1869, and Master of Arts (A. M.) in 1872.²¹

During this period in the United States, most men pursuing a college degree started out their education by studying the ministry. This required students spending much of their time becoming familiar with languages, such as Hebrew, Latin, and Greek. Oliver P. Jenkins had told his son, Olaf, that he had read the Bible in seven different languages.²² At this time in American history, other than the ministry, the chosen profession acquired through an academic education was usually either medicine or law. For his chosen profession, Oliver P. Jenkins selected the lesser-known subject of natural history.

In order to obtain his academic education in natural history, Jenkins was required to venture from one college to another to get the learning he desired. He first attended De Pauw University, followed by Northwestern, next Johns Hopkins, and finally Indiana University, where he received a Master of Science (M.S.) and in 1886, and a Doctor of Philosophy (Ph.D.) in 1890.²³ During his pursuit of this education, Oliver P. Jenkins served as Professor of Natural Science at Moore's Hill College from 1876-1882; Professor

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of Natural Science at the Indiana State Normal School, 1883-1886; and Professor of Biology at De Pauw University, Indiana, 1886-1891.²⁴

While at Indiana University, OP Jenkins, took up his doctorate research with David Starr Jordan as his primary advisor. This scholarly relationship with Jordan resulted in Jenkins being among the first of the faculty members selected by Dr. Jordan for the new Leland Stanford Junior University. The third president of Stanford University Ray Lyman Wilbur, in his Memoirs, provided the following description of his undergraduate advisor, as he experienced OP Jenkins as a course instructor: *Dr. Jenkins was a gifted and unusual teacher. His exposition of the subject was always clear and effective, in spite of some hesitation of manner. It was a real delight to see him draw a picture on the blackboard with colored chalk and then, in hesitation for a proper word, pass his hand across his brow-until by the end of the lecture he looked like a painted Indian.*²⁵

Oliver Peeble Jenkins, like his fellow student Charles Henry Gilbert, remained associated with David Starr Jordan for much of his career. As we will see, both men will make their way to the California coast and participate in the development of a seaside laboratory along the Southern tip of Monterey Bay.