



JULIA ANNA GARDNER

MEMORIAL TO JULIA ANNA GARDNER (1882-1960)

BY HARRY S. LADD

Julia Anna Gardner, distinguished paleontologist and authority on the stratigraphy of the Coastal Plain, died at her home in Bethesda, Maryland, on November 15, 1960, after a long illness. She was 78 years of age.

Julia Gardner was born in Chamberlain, South Dakota, on January 26, 1882. Her father, Dr. Charles Henry Gardner, a practicing physician in Chamberlain, died when Julia was but four months old. Julia was raised by her mother, Julia Brackett Gardner. Much of Julia Anna's girlhood was spent in South Dakota where her early schooling was by private tutors. In 1898 mother and daughter moved to North Adams, Massachusetts, where Julia attended Drury Academy, graduating in 1900. She entered Bryn Mawr, receiving an A.B. degree in 1905. She taught grammar school briefly in Chamberlain, then returned to Bryn Mawr where she received a Master's degree in 1907. At Bryn Mawr she met two other girls with geological interests, and the three formed an enduring close friendship. These other two were Eleanora Bliss (Later Mrs. Adolph Knopf) and Anna Jonas (later Mrs. George Stose).

Professional Career

As a graduate student and Assistant in Paleontology at Johns Hopkins in Baltimore during the years 1907-1915, Miss Gardner developed her interest in the richly fossiliferous beds of the Coastal Plain. During a part of this time she was also a Geologist on the Staff of the Maryland Geological Survey and, at frequent intervals, she visited the United States National Museum in Washington to confer with W. H. Dall and compare her fossils with those in the Museum collections. She was awarded a Ph.D. by Johns Hopkins in 1911.

In 1915 she moved to Washington and

worked at the Museum under contract with the U. S. Geological Survey until, at the end of 1917, she joined the Red Cross for duty in France. After the war, early in 1920, she became a Paleontologist with the Survey, a position she was to hold for the next 32 years.

Miss Gardner's doctor's thesis at Johns Hopkins dealt with a part of the fauna of the Upper Tertiary beds of Virginia and North Carolina, but this document was not completed and published until many years later. While with the Maryland Survey she studied Upper Cretaceous mollusks and some minor groups. Her comprehensive reports in the two volumes that appeared in 1916 constituted a valuable pioneering effort. Detailed reports on the Cretaceous of Maryland and other areas have followed, but these reports, by others, have not replaced her work nor impaired its value.

One of the two major studies undertaken during her early years in Maryland extended her field of interest to Virginia and North Carolina. Her third major paper, the molluscan fauna of the Alum Bluff group, continued the expansion southward into Florida. This proved a notable effort as the molluscan fauna of the Alum Bluff group exceeded 800 species. These were covered in a single Professional Paper of more than 700 pages, the several parts appearing at intervals over a period of 25 years. As with all Miss Gardner's papers, the species were fully described and adequately illustrated. The volume is used by all workers on the Coastal Plain, and, as of this date, all but one of its numerous chapters have been reprinted.

Miss Gardner's fourth major paper extended her field westward, as it covered the Midway group of Texas, of Paleocene age. The molluscan fauna was smaller than those described in her other monographic studies, and she covered it thoroughly. Her field investigations were aided

by reports or maps from practically every petroleum company operating in Texas. She worked out the stratigraphy in great detail and related the Midway to rocks of comparable age both in this country and abroad. Her report, published by the University of Texas, has proved exceedingly valuable to all geologists on the Gulf Coast.

A final extension of Miss Gardner's work on the Coastal Plain carried her into northern Mexico. She planned to monograph the Tertiary faunas of the Rio Grande Embayment against their stratigraphic background and to correlate them with other Gulf faunas. These aims were achieved. Hundreds of collections of fossils made by oil-company geologists were submitted to Miss Gardner for study. These and many others collected by herself were described, figured, and interpreted in Memoir 11 published by The Geological Society of America, which had supported the work.

In addition to the five major reports mentioned above, Miss Gardner wrote about 40 shorter papers and brief notes. Some of these were primarily taxonomic, others were stratigraphic or paleoecologic. Nine of them were prepared jointly with one or more of nine coauthors. All but two of her published papers dealt primarily with Coastal Plain geology.

It seems, in retrospect, that Miss Gardner planned her professional career sensibly. At an early date she found that she liked fossil mollusks, particularly those of the Tertiary. She did describe a variety of other organisms in small numbers, but her major efforts went to Tertiary mollusks in areas where they appeared in sufficient abundance to be potentially useful. This proved to be a large area, but she did, one might say with some truth, cover the waterfront from Maryland to Mexico.

At the time of her retirement Miss Gardner was engaged in studies of Cenozoic fossil mollusks, collected by Geological Survey field parties on the islands of the western Pacific, and in the preparation of a unit for the Treatise on Invertebrate Paleontology. She planned to finish both tasks, and I am sure that she would have done so had not serious illness intervened.

War Services

When the First World War started Julia was 32 years of age. She had never been to Europe

but she felt deeply about the struggle from the beginning. On August 9, 1914, only a week after the general war started, she wrote to a friend at the Museum: "I cannot tell you how incredibly awful this war seems to me who has no relatives nor intimate friends immediately concerned." Following the death of her mother late in 1917 (the year the United States entered the war) she said: "All I want to do is to go with the Red Cross to France." By the end of the year she was with the American Canteen Service in France; later she served as Auxiliary Nurse, including ambulance service, with American Hospitals and, immediately after the war, with the American Friends Service in devastated parts of France. During the summer of 1919 she was hospitalized in Rheims, following an accident in line of duty.

It was well nigh impossible to make Julia talk about her war experiences, although once, when pressed, she did admit that her Unit was under fire and that on one occasion a bullet did land beneath the cot she occupied. She kept a diary during part of her nursing days, and this reveals something of her work near the Front. She noted air raids, emergency surgical operations, and the necessarily gruesome details involved in caring for the seriously and mortally wounded. Her small Unit was formally decorated by the French Government.

Years later, in 1931, C. W. Merriam went to France to do some geological work. He carried a letter of introduction from Julia Gardner addressed to a M. Laire, an archeologist and highly respected citizen in the once war-torn town of Epernay. Merriam was enthusiastically received when Julia Gardner's letter was presented. There was a virtual parade and a reception with some of the participants in uniform. Miss Gardner's war services were well remembered.

During the Second World War Miss Gardner served on the home front. She recessed her paleontological studies and transferred to the newly created Military Geology Unit of the Geological Survey. As "Miss Julia" she became a respected leader in the "Dungeon Gang" that, under high pressure, prepared highly classified strategic studies for the Armed Forces. According to those who worked with her, she prepared superior texts, offered excellent ideas, and compiled maps. Her maps were carefully

prepared but sometimes difficult for the draftsman to follow as she preferred delicate pastel shades to glaring primary colors! She was invariably the first to appear for work in the morning and, like all members of the Unit, worked long hours, sometimes around the clock. She helped her younger fellow workers in many ways—sometimes with translations of French and German technical terms and many times with encouragement and advice that involved deep human understanding. The Dungeon Gang, understandably, was devoted to her.

Travel

Following her tour of duty in Europe during World War I, Julia Gardner made at least three later visits. In 1926, as a representative of the U. S. Geological Survey, she attended the International Geological Congress in Madrid. In 1929 she studied and collected from the type exposures of the Danian in Denmark, spent time in the field in other parts of Europe, and analyzed fossil collections in a number of museums, including the British Museum in London. The knowledge thus gained was of great assistance to her in interpreting disputed parts of the stratigraphic sections of the coastal plains of eastern North America.

In 1937, she was appointed a delegate of the United States to the International Geological Congress held in Moscow. She took part in a field excursion that carried her north to the Barents Sea and to the island of Novaya Zemlya.

In 1946–1947 Miss Gardner had an extended tour of duty in the western Pacific. In Japan she worked with the National Resources Section, Headquarters of the Supreme Commander for the Allied Powers. Her base was Tokyo, but she traveled widely, visiting universities and marine biological stations and becoming acquainted with many Japanese scientists and their families. Her work with Japanese geologists and biologists, alienated by the war, did much to restore normal relations, and the friendships she made continued to the end of her life. The Japanese developed a great respect for her as a geologist and a deep affection for her as a person.

While in the western Pacific she spent several weeks with a Geological Survey field party in

Palau, where she became acquainted with some aspects of island geology, including coral reefs, and made collections of fossils.

To the overseas trips Julia added field work in Mexico, and, unlike some of her European tours, the Mexican jaunts were not always comfortable. Once, accompanied by others, she drove through a small village of adobe houses that seemed almost deserted and decidedly uninviting in the hot midday sun. One in the party remarked, "My! I'd hate to pass the night here, wouldn't you, Julia?" To which Miss Julia replied: "I spent three weeks here."

As retirement drew near Julia determined to climax her travels with a trip around the world, and, characteristically, she planned to do it independently. She did, in fact, make a reservation, not on a populous cruise ship, but on a freighter bound for Africa. It was at this particular time that she suffered an unexpected attack of cerebral convulsions; her reservation and her plans had to be cancelled. She made a strong and determined fight for full recovery, but her doctor told her firmly that the motions of a ship could not be tolerated by one with her affliction—at least not in the foreseeable future.

Human Relations

Julia Gardner's geological interests were concerned primarily with the Coastal Plain that stretches for more than 2000 miles along our Atlantic and Gulf shores, but her interests in people had no boundaries. Many of her closest geological friends worked in fields far removed from her own, and her nongeological friends were spread widely among many other fields of human activity. Julia was generously endowed with kindness, thoughtfulness, and modesty, as well as with a delightful sense of humor. She always displayed an intelligent interest in the activities of others. Among her elders and contemporaries of both sexes she commanded admiration and respect, but among the young and inexperienced, to whom she paid particular attention, she also won gratitude and affection. Newcomers and visitors to the National Museum were welcomed informally with an afternoon cup of coffee in her office. The coffee was thick and black. It strengthened the weak, emboldened the shy,

and removed every trace of drowsiness from all hands!

Miss Gardner, however, was not a Pollyanna. She had strong and definite opinions about the way things should be done in professional and private life and in the political world. She could coin a cogent phrase. Once, writing of a fellow worker—a perfectionist with a tendency to dawdle—she stated: “Dr. X. is a competent scientist but, unfortunately, he has no terminal facilities.” She was, however, generous to a fault. I recall a day when we were casually discussing a colleague, a colleague who was a good geologist but one possessed of irritating personal characteristics, “You know,” said Julia, “I’ve always wished I liked him better.” This summation, to one knowing Miss Julia, was devastating criticism!

Miss Gardner was a charter member of the Arts Club in Washington and lived there for many years prior to her illness. In the Club’s attractive quarters she entertained many friends—young and old, those who fancied rocks and fossils, and many who didn’t know the difference between the two.

Recognition

Julia Gardner was a member of the Paleontological Society and was its President in 1952. She was a charter member of the Society of Economic Paleontologists and Mineralogists. She was elected to Fellowship in The Geological Society of America in 1920 and was made Vice-President in 1953, the third woman to be so honored. She was elected to membership in the American Association of Petroleum Geologists in 1927; she was a Fellow of the American Association for the Advancement of Science, a member of the Washington Academy of Sciences, the Geological Society of Washington, the Biological Society of Washington, Phi Beta Kappa, and Sigma Xi. At the time of her retirement from the Geological Survey she was given the Department of the Interior’s Distinguished Service Honor Award.

Any listing of the honors and recognition that came to Julia Gardner would be incomplete without mention of the two handsomely bound volumes of letters that were presented to her at the time of her retirement by her Branch Chief, Preston Cloud. These letters, a true

measure of the love and affection of many friends, were, as noted on the fly leaf of volume I, “From one hundred and sixty-eight people who just wouldn’t be silenced.” Many, but not all, the contributors were geologists, and they span the United States with numerous representatives in Mexico, Venezuela, France, England, Australia, Japan, Okinawa, and Taiwan.

During the long illness that preceded her death, Julia was well cared for by devoted friends who lived with her. She left no close relatives but she did leave a host of friends, none of whom will ever forget her.

In preparing this memorial I have been given helpful information by Mrs. Eleanora B. Knopf and Wendell P. Woodring.

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