

HISTORY OF THE MUSEUM OF PALEONTOLOGY, 1940-1975

Robert V. Kesling

For the Museum of Paleontology, this interval of history was marked by vigorous expansion and reluctant contraction, by major changes in administrative status, by outstanding graduate teaching coupled with productive scientific contributions, and by increased problems of housing for the collections. In all, it was a time of enhanced standing of the Museum and career growth of the staff punctuated by crises of budget and University organization.

Early years.— Three significant events of 1941 changed the course of the Museum of Paleontology. First, Professor Ermine Cowles Case retired after a distinguished career of thirty-four years at Michigan and was succeeded as Director by Lewis B. Kellum. Second, the Museum of Paleontology was transferred from the Department of Geology in the College of Literature, Science and the Arts to a status similar to that which had evolved for other museum units— a separate budget and direct responsibility to the President. Third, in September of that year Joseph T. Gregory (Ph.D. California 1938) was appointed half-time Curator of Vertebrate Paleontology and half-time on the teaching staff of Geology.

The operational change was authorized by the Regents, and recorded in Chapter 26 of the Proceedings for 1942-45, sections 26.01 and 26.09. It provided that:

The Museum of Paleontology shall be an administrative entity as one of the associated Museum units. It shall be maintained for the care and preservation of fossil materials and for providing facilities for their study.

Instruction shall be carried on by this unit through the appropriate teaching departments.

For the next 17 years the Museums operated under this arrangement.

A year after his appointment, Joseph Gregory was drafted into the armed forces, and upon his return in 1946 resigned to accept an assistant professorship at Yale University. In general, the war years were as quiet for the Museum of Paleontology as they were turbulent for the world at large.

Expansion.— With the resignation of Gregory, the staff consisted of Lewis Kellum (director), George M. Ehlers (Paleozoic invertebrates), and Chester A. Arnold (paleobotany). Within four years, the staff doubled.

In September of 1946, Claude W. Hibbard (Ph.D. Michigan 1941) was appointed to fill the vacancy left by Gregory. He shifted the emphasis in vertebrate paleontology from large reptiles to small vertebrates, and the Museum now has the world's outstanding collection of North American late Cenozoic small mammals.

In 1947 Erwin C. Stumm (Ph.D. Princeton 1936) came as Associate Curator of Paleozoic Invertebrates. His research on fossil corals, brachiopods, cystoids, and trilobites, chiefly from the Michigan Basin, soon added many more catalogued specimens to the collections.

Two years later, Robert V. Kesling (Ph.D. Illinois 1949) was appointed Associate Curator of Micropaleontology. He initiated collections of quantities of matrix from Michigan Devonian formations, washing and extracting the fauna. Most of his early work was done on Ostracoda, but later he studied other invertebrates, including crabs, crinoids, and cystoids.

Except for Kellum, the Director, staff members held shared appointments in teaching departments of the University. During the academic year, Ehlers, Hibbard, Stumm, and Kesling were half-time in the Department of Geology and Arnold was half-time in the Department of Botany. During the summer, all were full-time in the

Museum of Paleontology, actively conducting field work. Kesling also taught at the Summer Camp of the Geology Department at Boulder, Colorado, for four summers, during which time he advised several master's theses in that state.

Two unusual specimens.— Although hundreds of type specimens in the collections have perhaps more scientific value, during this period a Pleistocene mastodon received the greatest public acclaim and a Cretaceous ammonite captured scientific attention.

Professor Case was well into retirement and his preparator William Buettner was approaching 60 when they excavated the Owosso mastodon. Because it was the most complete skeleton ever found, Case desired it to be mounted as the main attraction in the Hall of Evolution. Artist Carleton Angell sculpted the few missing bones and Case supervised the mounting. Newspaper accounts followed the progress from the excavation through the stages of preparation. After two years' work, the mastodon was placed on public display on August 8, 1947, with great ceremony.

The ammonite was itself less spectacular, but it was the first discovered bearing tooth marks left by a mosasaur, an extinct giant marine lizard which dominated Cretaceous seas. Kesling and his student Erle G. Kauffman (later at U.S. National Museum) studied the punctures to determine that the predator was actually a mosasaur and to reconstruct the action of its double-hinged jaws. Their publication in 1958 was soon translated into several languages, and replicas of the mosasaur-bitten ammonite are on display in prominent museums in North America and Europe.

Exhibits.— The core of displays in the Hall of Evolution was set up by the Museum of Paleontology staff, mostly under direction of Case. Then in 1947, Irving G. Reimann was appointed Prefect of Exhibits, charged with improving all exhibits open to the public. The actual specimens in the Hall of Evolution remained the property and responsibility of the Museum of Paleontology, whereas the Exhibits section assumed their attractive arrangement and presentation.

Return to the College.— A serious step affecting the status of all Museum units was made in 1957. Through the insistence of Dean C. E. Odegaard, the budgets of the several museums were transferred from direct control of the President to the College of Literature, Science and the Arts, and have so remained since.

Staff changes of the 1960's.—The retirement of Professor Ehlers in 1961 created a vacancy in the field of Paleozoic invertebrates. In 1963 Donald B. Macurda, Jr. (Ph.D. Wisconsin 1963) was appointed Associate Curator. His special interest was Paleozoic echinoderms, particularly blastoids, and he later became a Scuba diver to observe modern crinoids and interpret their ecology. He conducted field expeditions to many foreign areas to collect fossil echinoderms.

Upon retirement of Lewis Kellum, Robert V. Kesling was appointed on July 1, 1966, by the Dean of the College to be the Director. At this time, the directorship was revised to come in line with other directorships and chairmanships in the College, and appointment was made for a five year term. To offset simultaneous changes in affiliated divisions, this was later extended with a short term of three years so that Kesling served until 1974.

Also in July of 1966, the Dean approved a new position in vertebrate paleontology to be shared half-time with the Museum of Zoology. Cooperation between the two units had been informal, and the budgetary arrangement was intended to strengthen the ties. Gerald R. Smith (Ph.D. Michigan 1965) was selected but could not

join the staff until 1969. His strong interests in Cenozoic fishes fitted extremely well into the research needs of both museums. From 1969, the Museum of Paleontology enjoyed the services of two vertebrate curators.

The year 1968 marked an all-time high in staffing. Kesling was director and Curator of Micropaleontology, Hibbard was Curator of vertebrates, Stumm was Curator of Paleozoic Invertebrates, Arnold was Curator of Paleobotany, Macurda was Associate Curator of Invertebrates, and the position for Smith was authorized. At that time, ten half-time research assistants were appointed from the graduate students in paleontology, artists were employed on an hourly basis, and support was given by a vertebrate preparator, photographer, and two secretaries. Emeritus Curators Ehlers and Kellum still took part in curatorial activities and continued their research.

In 1967 at the invitation of Dean Haber, Frank H. T. Rhodes came from the University of Swansea to Michigan as professor in the Department of Geology and Mineralogy. Because his training and research had been in paleontology, he was given a non-salaried position in the Museum of Paleontology. At the same time, Professor John A. Dorr, Jr., of Geology and Mineralogy was also given the title of Research Associate. Thus the Museum came to benefit from their expert knowledge, Rhodes on conodonts and Dorr on early mammals. Both men continued their paleontologic investigations and participated in Museum of Paleontology affairs. Rhodes was made Dean of the College in 1971 and was selected to be Vice-President of Academic Affairs for the University in 1974; by degrees, he gave up his conodont research.

Also at about this time, two unsalaried research collaborators were appointed to the staff, Ruth Berner (Mrs. William) Chilman and Jean Davies (Mrs. E. P.) Wright. Both scholars held Master's degrees from the University. They made substantial contributions to the museum in the form of specimens and original research, on which they published their results.

Late staff changes.— The untimely deaths of Erwin C. Stumm on April 24, 1969, and of Claude W. Hibbard on October 9, 1973, brought an end to an era in the Museum of Paleontology. Before Macurda came in 1963, Kesling was the youngest staff member; with the death of Hibbard in 1973 he "became the oldest. This decade was also one of changes in the science of paleontology. Emphasis shifted from pure taxonomy to paleoecology, from faunal distribution to community studies, and from pure description to computer processing of data. These shifts were reflected in the approaches of the new appointees.

The retirement of Arnold in 1971 left a vacancy in paleobotany. James A. Doyle (Ph.D. Harvard 1971) was hired in November of that year, with half-time in Botany during the academic year as Arnold had been. His special research was in pollen and spores as they relate to the origin of angiosperms. His activities in this field, new to the Museum, resulted in significant contributions.

The unexpected death of Hibbard left a vacancy for which the College authorized replacement. Philip D. Gingerich (Ph.D. Yale 1974) joined the staff in 1974. His searches for early primates in Asia, Africa, and North America soon led to new scientific discoveries and enrichment of the Museum's collections.

On July 1, 1974, the Dean and Executive Committee of the College appointed Gerald R. Smith to be the new Director. He accepted the unenviable task of providing leadership and management at a time when positions were being left vacant, budgets were being reduced, cost of services was increasing, and space for collections was becoming critical. The long-delayed replacement for Stumm was rejected. Yearly percentage reductions in budgets caused by University constrictions had by this time

already resulted in loss of four half-time Research Assistantships for students, and further cuts were soon to lead to loss of three more.

Publications.— The Museum of Paleontology publishes two series, numbers of which are distributed to other universities through the Exchange section of the University Libraries and offered for sale by the Museum.

The *Contributions from the Museum of Paleontology*, started in 1924, had reached volume 6 in 1940, volume 8 in 1950, volume 16 in 1960, volume 23 in 1970, and at the end of this period is in volume 2h. Some volumes contained as many as 25 articles.

The *Papers on Paleontology* was launched as an 8 x 10-inch offset publication for longer contributions. It was started in 1970 and reached number 8 in 1975. Number 3 in the Papers was Emeritus Curator Ehlers' classic work on Silurian strata and fossils from the Upper Peninsula of Michigan, and number 8 was Kesling and Chilman's monograph on the megafossils of the Middle Devonian Silica Formation.

Research and recognition.— Staff members were noted for both the quality and quantity of their research. Hibbard and Kesling each published around 200 scientific articles. Ehlers was well known and respected for his work on Paleozoic invertebrates and stratigraphy of Michigan. Stumm was author of the Geological Society of America Special Paper on Devonian corals. Hibbard was a world authority on late Cenozoic small mammals, collected by special techniques which he developed. In the prestigious Treatise on Invertebrate Paleontology, Macurda contributed to the volume on blastoids and Kesling wrote the volume on cystoids and contributed to the volume on ostracods. Arnold was author of the standard textbook on Paleobotany. Such activities brought recognition and awards.

Hibbard was President of the Michigan Geological Society in 1957 and President of the Michigan Academy of Science, Arts and Letters in 1958. He also served on the Board of Directors of the American Geological Institute. Ehlers was chosen as field trip leader for the Geological Society of America in 1951 (with Stumm and Kesling) and the Michigan Geological Society in 1952, 1957, and 1970 (with Kesling). Kellum was Chairman of the Cretaceous Symposium for the 26th International Geological Congress in Mexico in 1956. Arnold was vice-president of the Paleobotanical Section of the 7th International Botanical Congress in India in 1951. Kesling and Stumm were editors of the *Journal of Paleontology* from 1957 to 1964, and Kesling served many years on the Editorial Board of *Micropaleontology*.

The Museum attained national prominence at the New Orleans meeting of the Geological Society of America in 1967. Stumm presided as President of the Paleontological Society and Macurda was chairman of the symposium on growth and development.

Special events.— Shortly after the death of Professor Case in 1953, a memorial fund was established in his name. Income from this fund has been used to provide an annual award to the student with the most outstanding research and presentation in his thesis on paleontology. To further honor the memory of the long and distinguished career of the late director, the Ermine Cowles Case Memorial Lecture was arranged as an annual occasion in Rackham Amphitheater, with an outstanding paleontologist as speaker and a reception. From 1955 this memorial lecture has brought many famous scientists to our campus.

In May of 1974, a symposium was organized as a memorial tribute to the late Professor Hibbard. It was attended by 92 vertebrate paleontologists and included 34

presentations of papers. At this time, these papers are being published in the Papers on Paleontology.

Collections.-- The collections, dating from the Cabinet of Natural History created by the first Board of Regents of the University in 1837, had reached about 20000 catalogued lots by 1940. It grew to 25000 by 1949 and to 37000 by 1960. At the close of this history, it includes over 60000 catalogued lots of fossils. The specimens are invaluable for science, many of them unique for their species. The commercial value could be placed very conservatively at 2 million dollars. The representations of Paleozoic invertebrates of the Michigan Basin, Pennsylvanian age flora of the Midwest, Permo-Triassic amphibians and reptiles of southwestern U.S., and late Cenozoic small mammals rank among the world's best.

Teaching.-- Staff members taught formal courses during this period in elementary paleontology, advanced invertebrate paleontology, stratigraphy, vertebrate paleontology, paleobotany, paleontological techniques, evolution, micropaleontology, and special investigations. They also assisted in other geology courses, and even taught meteorology before that field became a University department.

Probably the lasting achievement of the Museum of Paleontology staff members from 1940 through 1975 was their training and placement of graduate students. During this time, 58 doctoral and over 100 master's candidates completed their degree work in paleontology. Listing the accomplishments and honors of these alumni would require far more space than is allotted here. The Ph.D. degrees in paleontology may be grouped simply:

Years	Ph. D ' s
1940-44	4
1945-49	2
1950-54	6
1955-59	9
1960-64	18
1965-69	11
1970-75	8

One might be tempted to interpret this table as a reflection of the vigor and fervor of the staff, reaching zenith in the early 1960's. However, the figures also follow the trend of half-time Research Assistantships available to financially help paleontology graduate students, and the decrease coincide; with the stringency and reductions in staffing and student support during the last decade.

Envoy.--Despite its small staff, the Museum of Paleontology has become ranked among the upper ten to twenty research museums in Worth America. By careful staffing it has maintained highly respected research, and its Ph.D. graduates are sought by both academia and industry. Even though it faces problems of budget and space, the staff continues with cohesive enthusiasm and industry.