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MEDALS OF THE NATIONAL ACADEMY OF SCIENCES¹

PRESENTATION OF THE DANIEL GIRAUD ELLIOT MEDAL AND HONORARIUM TO RICHARD SWANN LULL

THOUGH I was not a member of the committee that made this award, I heartily concur in the propriety of it, and am especially glad that the long-continued and admirable labors of Professor Lull are receiving recognition which, though belated, will undoubtedly be welcome.

The award is made especially for the monograph on "The Horned Dinosauria or Ceratopsia," which is a very comprehensive and thorough piece of work. After an introduction on the stratigraphy of the formations in which remains of these incredible monsters have been discovered, and a section on their geographical distribution, which ranges from Mongolia to South America, the body of the work is given up to a description of the material scattered through the various

¹ Presented at the annual dinner, Washington, D. C., April 25, 1939.

museums of the United States and Canada. Then follows a description of the habitats and manner of life of these great reptiles, upon the problems of which much light was thrown by the Mongolian discoveries, the American Museum expeditions having collected several nests of *Protoceratops*, a small dinosaur of this group, in which many eggs were found just as they had been left by the mothers. Some of these were near to hatching and contained recognizable embryonic skeletons. Then finally there is a discussion of the evolution of this group throughout the Upper Cretaceous period, in which the great quantity of material is marshalled in an orderly way and their mutual systematic relations admirably discussed.

It should be added that the committee also had in mind the great body of Professor Lull's work on fossil mammals and his artistic achievements in the way of restoring these long-vanished creatures.

It is to me a particular pleasure to recognize the fine Yale tradition in vertebrate paleontology, which

began with the work of Professor Marsh in 1859 and has continued with distinguished success and fine results until the present day, a period of 80 years. For a long time vertebrate paleontology in North America was practically confined to Philadelphia and New Haven; and in 1880 Sir Archibald Geikie published in *Nature* an article headed "Yale College and Palæontology," which was an enthusiastic description of the marvels that he had seen during a visit to Professor Marsh.

Another aspect of this work which deserves to be emphasized is the gratifying cooperation it indicates between all the museums of the country, such an infinite improvement over the state of more or less declared hostility and warfare in the days when the famous Marsh-Cope feud overshadowed all the paleontological work of the country.

W. B. SCOTT

RESPONSE BY THE MEDALIST

To paraphrase part of a note recently received from Japan: It is with "the greatest honour and unutterable throb of heart I feel in offering you this word of thanks."

I am in a sense a successor of Othniel C. Marsh, for twelve years president of this august body, whose vast collections at Yale and the United States National Museum have not only greatly enriched our science but given those of us who followed him a duty and a privilege beyond compare.

Marsh's collections were made with a view to monographing in succession great groups of animals. Of his projected memoirs but two were completed in his lifetime—the Dinocerata and the Toothed Birds. For the others beautiful lithographic plates were prepared and many species described in a great number of papers published in the *American Journal of Science*. Upon Professor Marsh's death in 1899 my own preceptor, Henry F. Osborn, succeeded him as vertebrate paleontologist to the United States Geological Survey and proposed to carry out Marsh's original plan. He realized that this was too great a task for any one man to accomplish, and, while reserving for himself the Brontotheres or Titanotheres, the Proboscidea and the Sauropod Dinosaurs, he delegated other problems to his associates.

One of these, the Ceratopsia, was entrusted to J. B. Hatcher, to whom Marsh had given the task of collecting Ceratopsian material from the famous locality in the Lance formation of old Converse County, Wyoming. Hatcher succeeded so well that he secured 30 odd skulls and much skeletal material now in the Yale Peabody and National Museum.

Hatcher worked diligently at his task and had finished the discussion of the history of discovery, the morphology and systematic descriptions when his hand

too was arrested by death, leaving a bulky typescript but no further notes. My own connection with the work arose through having had some field experience in collecting Ceratopsia and in describing a skull which I had helped to collect, and as a consequence I was asked to complete the Marsh-Hatcher memoir. This was done, using so far as possible the conclusions of my predecessors, and the finished manuscript was presented to the United States Geological Survey for publication. A delay of one, two and finally three years made me begin to think that a strange fatality was in some way connected with the exploitation of these creatures of old, as in the case of King Tutankhamen's tomb, but by the grace of Providence I survived to see the memoir in its published form in 1906.

Since that time new discoveries have been made, especially in the Red Deer region of Alberta, where new forms came to light, dimly known in part from the earlier collections in the Judith River of Montana, but here displayed with such beauty and perfection of detail that one soon realized the incompleteness of the story as set forth in the memoir of 1906. Most of this new material was described by Lambe, Brown, Parks and others, but the need of assembling in memoir form the knowledge they had gained became more and more apparent. Having the facilities offered by a richly endowed chair at Yale and the courteous privilege of study in the several American and Canadian museums, we undertook the work, the result of which you have honored to-night.

It was fascinating to study the Ceratopsia, not as dry bones, but to visualize them as living creatures in an environment such as they may be found on earth to-day and to try to imagine their mode of life, their endowment of weapons and prowess, and why such apparent fitness availed them nothing when in the fullness of time their extinction came. Our task is that of a resurrectionist, for, as Robert Dick put it years ago,

Hammers and chisels and a'
Chisels and fossils and a'
Resurrection's our trade
For by raising the dead
We've glory and honor and a'.

And when to this is added recognition by the National Academy of Sciences, one's cup is filled. For this culminating honor I thank you!

RICHARD SWANN LULL

PRESENTATION OF THE AGASSIZ MEDAL TO HARALD ULRIK SVERDRUP

It is an honor to introduce to you as the duly selected recipient of the Agassiz Medal of the National Academy of Sciences for the year 1938 Harald Ulrik Sverdrup, Knight of the First Class of the Order of St. Olaf, member of the Academy of Science of Oslo, hon-