



GEORG HAAS
1905-1981¹

It seems appropriate to dedicate this symposium to Dr. Georg Haas, Professor Emeritus of Zoology of the Hebrew University of Jerusalem, who died on the 13th of September 1981. He was a morphologist, skilled with the classical techniques involving scalpel and microtome, but he conceived of his subjects as living animals. His first paper in 1929 represented an attempt at characterizing the ingestion mechanism of a pit viper by combining observation and anatomy; it and the efforts that followed inevitably led to our symposium half a century later.

Georg Haas was born in Vienna on 19 January 1905 and studied zoology and

paleontology at Vienna University interacting with the herpetologists Franz Werner and Otto Wettstein. As, or more, important in the present context, was his interaction with J. Versluys, whose monographs during the first decade of the century had added immeasurably to our knowledge of the cephalic anatomy of sauropsids and established the fundamental concepts of cranial kinesis. Versluys, who was then preparing the chapter on sauropsid head muscles for the Bolk-Göppert-Kallius-Lubosch *Handbuch der vergleichenden Anatomie*, clearly had a major influence on Haas' approach to morphological topics.

The influence of Versluys is documented by G. Haas' doctoral study which was published as a series of four major papers providing detailed descriptions of cephalic anatomy including muscular arrangement and innervation. All of these studies represent fundamental contributions to reptilian morphology; it is as important that all incorporated comments and viewpoints on possible functional interpretation. A fifth paper immediately placed the materials into a phylogenetic framework. Not only these papers, but the anatomical terminology they established constituted a baseline for future work.

After graduation, Haas spent 1931-1932 in M. Hartmann's department at the Kaiser Wilhelm Institute in Berlin, where he worked on protozoan cytology and produced a classic report. However, he continued to devote part of his time to a series of shorter morphological papers on reptiles, which were clearly his first love. In 1932, he joined the Department of Zoology of the Hebrew University in Jerusalem, where the ecologist F. S. Bodenheimer held the chair.

Haas remained on the staff of the Hebrew University for 49 years. During this period, and often under most difficult circumstances, he developed the teaching and research of zoology and paleontology. He established a modern training pattern and maintained it up to date through regular visits to European and American institutions where he studied and lectured, and through personal contacts with scholars around the world, which led to an ever

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increasing sequence of visits to his laboratory. His broad training came in handy as he had initially to handle the teaching of a diversity of courses; he later commented to me on the pleasure he felt each time the advent of another specialist allowed him to restrict his instructional efforts toward vertebrate morphology.

Soon after his arrival in Jerusalem, Haas expanded his zoological horizons. He began a pattern of observation and collection and used this as a basis for the generation of an up-to-date herpetofaunal list of the region. However, he hardly restricted himself to the herpetofauna. His bibliography indicates the diversity of his interests. First, malacology attracted his attention and he arranged for substantial collections, some of which are only now being studied. Then there were studies on other invertebrates and finally his extensive work in vertebrate paleontology. In spite of these new interests he continued to produce studies in reptilian morphology, each one an important documentation of a species or topic. His enthusiasm was clearly characteristic of that of a well-rounded zoologist who has the opportunity to work in a previously unstudied region.

Perhaps his greatest joy came with the discovery of fossil finds, first in the Makhatesh Ramon of the Negev and then at 'Ein Yabrud in the Judean Hills. The rich samples of Triassic reptiles, excavated in the desert under often rather uncomfortable conditions, were commented on in many of his letters. But even more exciting were his discoveries of three new Cenomanian snake-like reptiles, less than a decade ago. As his vision became poor, he relied heavily on the support of his valued preparator Mary Rosenthal. However, in spite of her help, only about half of the description of the three new forms could be completed before his unexpected death.

It was not surprising that his knowledge and enthusiasm attracted local students (E. Kochva, E. Nevo, E. Tchernov and Y. L. Werner completed their Ph.D. under his guidance). It is most significant that he also supported and trained anatomists from other countries by advice, exchange of publications and hospitality, as I had ful-

some opportunity to discover. We had corresponded in the fifties and I was delighted to meet him at the end of that decade. However, I was both startled and flattered when he off-handedly invited me to visit him in order to examine his extensive collection of serially sectioned snake heads as these would provide new insights into morphological questions then concerning me. When I accepted, he provided me with a room in his apartment for a month while he guided me through the intricacies of cranial analysis, paleontological work in the desert and a mixed Austrian-Middle Eastern cuisine.

This period also provided me with a broader view of the man, disclosing his kindness and excellent sense of humor, his capacity to tell tales and jokes in multiple languages and idioms, and his knowledge and perspective of history. His bachelor apartment occupied a whole floor of an old stone building and was crammed with books, as well as archeological and zoological memorabilia; its wide balcony housed an enormous collection of cacti which (after suitable instruction) I was allowed to help water.

As the years progressed, Georg was honored by various professional societies and received the recognitions of a distinguished zoologist. However, his letters continued to reflect the spirit of discovery, sometimes commenting on a new fossil with its unusual characteristics, or on his pleasure at the amazement of one or another visitor at the fascinating things extracted from "our miserable Trias." To the end, he remained a teacher in the best and broadest sense, and his students remember such remarks as "you must talk to your microtome blade as it approaches the block." He often had to work under circumstances unlikely to generate tranquility. However, his enthusiasm always struggled to overcome an intrinsic pessimism. Wherever he looked, he saw fascinating animals and discovered interesting problems.

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