



Reseña

The final volume in an epic series on reptilian biology
C. Gans and K. Adler (eds.). 2010.
Biology of the Reptilia. Vol. 22 Comprehensive Literature of the Reptilia, compiled
by E. A. Liner. Society for the Study of Amphibians and Reptiles, Contributions to
Herpetology No. 25. Ithaca, New York: 1366 pp.

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With volume 22 of the scholarly series “Biology of the Reptilia,” created and edited by the late Carl Gans, this classic comes to an end after 42 years. I think it is worthwhile to give a short overview of Carl Gans’s life before reviewing this last volume of his monumental *opus*. Gans died in November 2009, just months before this volume was published.

Carl Gans was born on September 7, 1923 in Hamburg, Germany. As a teenager he immigrated to the United States. He attended high school in New York and then earned a bachelor’s degree in Mechanical Engineering from New York University in 1944. That same year he joined the U.S. Army and served in the Philippines and Japan until 1946. While working during the day for Babcock and Wilcox Co. installing power boilers, he got a Master’s Degree, also in Mechanical Engineering, from Columbia University in 1950. Later he earned a Doctoral Degree in Biology from Harvard in 1957, first working under A. S. Romer and finishing with Ernest Williams. He was a fellow of the John Simon Guggenheim Memorial Fund from 1953 to 1955 studying reptiles in Brazil. Carl Gans was Professor of Biology at the University of Buffalo, from 1958 to 1971. He then became Professor of Zoology at the University of Michigan in Ann Arbor until he retired in 1998. He moved to Austin, Texas and was Adjunct Professor in the University of Texas at Austin until his death after a long illness, on November 30, 2009. His library, about 20 000 titles, and correspondence has been deposited at Ben Gurion University in Israel.

Carl Gans served the scientific community as president of many societies including the American Society of Zoologists, American Society of Ichthyologists and Herpetologists, and the Society for the Study of Amphibians and Reptiles. He was the editor of the Journal of Morphology for 25 years. He served as chairman of the Biology Department in the University of Buffalo and then was chairman of the Zoology Department at the University of Michigan, for many years. Many of the specimens Carl Gans collected over years of field work are deposited at several academic institutions, among them the Carnegie Museum, Museum of Comparative Zoology at Harvard, California Academy of Sciences, and the Field Museum.

Among his many publications, over 700, there is a variety of topics, from systematics to functional morphology, evolution of vertebrates, breathing in frogs, natural history, and many others; his publications appeared in many prestigious journals, like *Science*, *Nature*, *Evolution*, *Ecology*, *Animal Behaviour*, as well as the top herpetological journals *Copeia*, *Herpetologica*, and the *Journal of Herpetology*. One of his first books is entitled “Biomechanics, An Approach to Vertebrate Morphology” published in 1974. But Carl Gans’s major contribution to biology and in particular herpetology, is the series, “Biology of the Reptilia.” The publication of “Biology of the Reptilia” extended for a period of 42 years, initiated in 1969; in its pages scientists of different disciplines and many countries wrote state-of-the-art syntheses of different subjects from morphology, physiology, neurology, ecology, and behavior. The series was never intended to be taxonomic in focus, but in volume 2 there is a chapter on taxonomic literature on reptiles by Carl Gans



Figure 1. Carl Gans, photo courtesy of K. Adler.

and Thomas Parsons, editors of that volume. The number of authors and editors of the series is 169, from 21 different countries, and from 5 continents. Many of the authors are not necessarily known as herpetologists, but they are all experts in their disciplines.

Volume 22 of this series has a Preface by Kraig Adler; a Foreword by Harry Greene, followed by portraits of all 16 editors of the 22 volumes. An introduction by Ernest Liner, who compiled the bibliography for this last volume, precedes the body of the book. The main contents of this volume presents, from pages 1 to 8 the reprinted table of contents of all published volumes. The second section lists in alphabetical order all contributors of the entire series on pages 9 and 10. In the third section, which is the largest in the book, Liner listed in alphabetical order 22 652 bibliographic references, from pages 11 to 1001. In this part of the book the citation appears, after the citation in parentheses the volume in which it was cited and first page of the corresponding chapter where it was cited. The fourth and last section of the book, from pages 1003 to 1366, contains a subject index for the entire 22-volume series. For obvious reasons there is not an author index as in all previous volumes.

It is convenient to point out a few points in relation to this particular publication. Liner was confronted with the fact that the format of bibliographic citation changed throughout the publication of the entire series; this is because it had 5 publishers, starting with Academic Press in London, which published vols. 1 to 13; continuing with John Wiley & Sons, publishers of vols. 14 and 15; volume 16 was published by Alan R. Liss; the University of Chicago Press published vols. 17 and 18, and finally the Society for the Study of Amphibians and Reptiles (SSAR), published the remaining four volumes including this last one reviewed here. Liner presented all literature cited for the entire series in this volume in uniform format. Another important factor was that many original references were inaccurate. Liner attempted to check every reference where he suspected errors. In this respect Liner gets editors of the previous volumes off the hook, by mentioning "Editors simply cannot check all references to their source, ... Some chapters in this series had over 1000 references." and making the purpose of this book more worthwhile. In this respect it has been found that about 20% to 30% of some bibliographic compilations have errors (Liner and Hutchison, 1998). Some of the most common errors are associated with the name of the author, the title of the publication and the publication source. Regardless of who compiles bibliographies all are prone to have errors in any of these parts of a citation. For example, to find citations to my papers in the citation index I have to check under several combinations of my name Flores-Villela O; Flores

O. Flores V.O.; Villela, O F.; certainly, some of these variations are attributable to the authors who cited those papers in the original publications but others are made by the people at the ISI while capturing the references from indexed journals. Liner spent 17 years working on this project, compiling 22 652 references, which was a very intense work; considering that the 17 771 citations that are included in the 6 volumes of "Synopsis of the Herpetofauna of Mexico" (Vol. IV does not contain a list of Mexican literature) took Hobart and Rozella Smith a significant part of their entire academic life.

Liner's effort is not only prized for the compilation, standardization, and correction of the literature, he also made a big effort putting together the subject index for the entire series. This last part of the book is an index where each independent subject indexed for each volume is condensed into a single index. This job must have taken painful hours of meticulous work to merge the same key word in different volumes, then similar words and terms in to the appropriate one, and different variations of the same theme in the proper order. For this part, each term is followed by the volume and the page(s) where it is cited. There are tens of thousands of words, technical terms, and scientific names, as well as hundreds of thousands of page references to them.

In brief this last volume of the "Biology of the Reptilia" series would be an important addition to any professional herpetologist's library, if you have the entire series. It is also of great value to reference librarians. Or maybe the publication of this last volume will encourage others, like me, to acquire the entire series; this volume will also be useful for those that want to keep current with the specialized literature, and can be used as an auxiliary reference. I congratulate the editors and the compiler of this "blockbuster" in herpetology.

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