

- . 1982c. Descriptions of *Cosmocampus retropinnis* sp.n., *Minyichthys sentus* sp.n. and *Amphelikurus* sp. (Pisces, Syngnathidae) from the Eastern Atlantic Region. *Zool. Scr.* 11:135–140.
- . 1985. Indo-Pacific Pipefishes (Red Sea to the Americas). Gulf Coast Research Laboratory, Ocean Springs, Mississippi.
- . 1990. Syngnathidae, p. 658–664. In: Checklist of the fishes of the eastern tropical Atlantic. J. C. Quéro, J. C. Hureau, C. Kaarrer, A. Post, and L. Saldanha (eds.). JNICT, Lisbon, Portugal.

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WILLIAM JACOB  
KOSTER  
13 MARCH 1910–  
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WILLIAM J. Koster, a pioneer in the study of New Mexico fishes, died on 22 Feb. 1993, after a year-long battle

with cancer. He was born on 13 March 1910 to Christian Ludwig Koster and Anna Grimm Koster in Brooklyn, New York. Koster's interest in biology began early when, in high school, he adopted botany as a hobby and spent his summers employed as a gardener. He maintained his interest in plants during his undergraduate years at Cornell University (1927–31), graduating with a major in zoology and a minor in botany. During his college career, he worked as a special scout for the Bureau of Plant Quarantine and as a member of the New York State Biological Survey. He entered graduate school at Cornell University in 1932, with a scholarship for the first two semesters. That financial aid, however, did not alleviate the hardships of the Great Depression; Koster saved money by avoiding the cost of a room and instead camped in a tent on the Cornell campus.

Koster chose the eminent herpetologist and biologist, A. H. Wright, to supervise him through his graduate training in vertebrate zoology and limnology. Koster's classmates included K. F. Lagler and W. J. Hamilton, Jr., and he taught ichthyology to enthusiastic undergraduates P. W. Gilbert and E. C. Raney. Koster was himself an excellent student and was elected to Alpha Zeta, Sigma Xi, and Phi Kappa Phi. In 1936, he submitted his dissertation, "Life-history and ecology of sculpins of central New York" (Koster, 1936). During the next two years, he worked for the New York Department of Conservation performing fish surveys in New York's western drainages.



Fig. 1. William J. Koster, MSB Fish Division, 1955.

In 1938, A. H. Wright was notified that the fledgling biology department at the University of New Mexico would be hiring a vertebrate biologist to complement its staff of three faculty botanists. Koster received the job and was charged with developing and teaching all courses pertinent to zoology. He knew that the University of New Mexico had no vertebrate zoology library, no collection of lower vertebrates, and virtually no bird or mammal specimens and that he would be responsible for acquiring specimens for classes. A. H. Wright graciously invited Koster to take whatever specimens he wanted from the Cornell University vertebrate collection.

In the summer of 1938, Koster and his wife, Lela, left Ithaca with their personal possessions and a small assortment of ex-Cornell fishes packed tightly in their car. They drove into New Mexico on Route 66, one of only two paved thoroughfares in the state at the time. Koster started teaching in the fall of 1938 and immediately began acquiring a diversity of local vertebrates for his classes. His fieldwork took him to all corners of the state and resulted in the beginnings of the vertebrate collections in the Museum of Southwestern Biology. Many of the specimens he obtained represented the first record of the species from the state (Koster, 1940, 1946a, 1946b, 1960, 1963; Koster and Maslin, 1954).

When he arrived in New Mexico, Koster had planned to continue with his primary research interest, the life history of fishes (Koster, 1937, 1939, 1948a, 1948b). He soon realized, however, that there was almost no information on the fishes of the region; and he formulated a plan to sample the state's ichthyofauna, starting in the northeast corner and thoroughly surveying one drainage at a time. He, his wife, and his students made collections with seines, homemade electrofishing gear, gill nets, fyke nets, and fishing poles, generally saving everything they caught. He encouraged enthusiastic students to take fish samples from their local streams, recognizing that many valuable specimens and records could be obtained in that way.

Koster tried to transfer his interest in natural history to his numerous students. During his tenure in the department of biology, he was principal advisor for at least 10 graduate students and served on more than 60 graduate committees. Studies conducted by some of his first students investigated the biology of *Gambusia affinis* (Troxel, 1939), *Uta stansburiana* (Bretney, 1940), and *Canis latrans* (Bowman, 1940). Many graduate students approached Koster about the possibility of working under his guidance in a doctoral program. Because of the limited job market, Koster generally advised against this and directed his more promising undergraduates to pursue advanced degrees in medicine or a field other than biology.

In 1955, Koster published an important paper in *Ecology* outlining the procedure and methods for performing an ecological life-history study of fishes (Koster, 1955). That publication was the culmination and synopsis of almost two decades of work dating back to his dissertation at Cornell. In 1957, he published *Guide to the Fishes of New Mexico*, a book that described, in nontechnical language, nearly 100 taxa of fish from the state (Koster, 1957). That contribution represented a significant accomplishment, for as Koster noted, "Back in 1938 we knew of 35 kinds of New Mexico fish." He expected this work to be the prelude to a technical volume on the state's ichthyofauna on which he was working. However, he suffered a serious fall in 1960, injuring vertebrae and curtailing future fieldwork. He spent most of his remaining years at the university working with students, concentrating his efforts on fish fossils (Koster, 1969), and making occasional fish collections.

Koster retired from the University of New Mexico in 1975 after 37 years of service, but he maintained an office and a reduced work schedule in the department of biology until the

early 1980s. Koster provided the Fish Division of the Museum of Southwestern Biology with several thousand black-and-white 35 mm negatives taken on collecting trips, 40 years of field notes, thousands of microfiche copies of reprints, and all of his distribution maps for the technical book on New Mexico fishes that he was unable to complete. In retirement, he spent much of his time enjoying his family and his lifelong passion, gardening.

This review of Koster's life would not be complete without acknowledging the importance of his wife (the former Lela Reitz) to his career. The two met while William was a graduate student at Cornell and were married for 50 years prior to Lela's death in 1983. She provided him continuous support, constant companionship, and was a lifetime field assistant.

Koster is survived by his daughters Karla Koster and Frieda Koster Holley, the many students with whom he came in contact during almost 40 years at the University of New Mexico, and the legacy he left behind in the form of historic fish collections from New Mexico's waters. Koster recognized the need for southwestern ichthyofaunal research and collections, and his pioneering efforts in acting to fill this gap will prove a timeless contribution to ichthyology.

#### LITERATURE CITED

- BOWMAN, S. W. 1940. The life history of the Coyote. Unpubl. master's thesis, Univ. of New Mexico, Albuquerque.
- BRETNEY, P. 1940. Notes on the life history of *Uta stansburiana*. Unpubl. master's thesis, Univ. of New Mexico, Albuquerque.
- KOSTER, W. J. 1936. Life-history and ecology of sculpins (Cottidae) of central New York. Unpubl. Ph.D. diss., Cornell Univ., Ithaca, New York.
- . 1937. The food of sculpin (Cottidae) in central New York. *Trans. Amer. Fisher. Soc.* 66:374–382.
- . 1939. Some phases of the life history and relationships of the cyprinid, *Clinostomus elongatus* (Kirtland). *Copeia* 1939:201–208.
- . 1940. The first record of the snake *Hypsiglena* from New Mexico. *Herpetologica* 2:30.
- . 1946a. Records of the snapping turtle from New Mexico. *Copeia* 1946:173.
- . 1946b. Records of the robber frog in New Mexico. *Copeia* 1946:173.
- . 1948a. The assessment of age in the Rio Grande cut-throat trout. *J. Colorado-Wyoming Acad. Science* 3:69–70.
- . 1948b. Notes on the spawning activities and the young stages of *Plancterus kansae* (Garman). *Copeia* 1948:25–33.
- . 1955. Outline for an ecological life history study of a fish. *Ecology* 36:141–151.

- . 1957. Guide to the fishes of New Mexico. Univ. of New Mexico Press, Albuquerque.
- . 1960. *Pychocheilus lucius* (Cyprinidae) in the San Juan River, New Mexico. *Southwest. Nat.* 5:174–175.
- . 1963. Appendix A. The fishes of Navajo Reservoir district, p. 54–55. In: Ecological distribution of some vertebrates in the San Juan Basin, New Mexico. A. H. Harris (ed.). Museum New Mexico Pap. Anthro. 8:64.
- . 1969. Fishes of the Rita Blanca lake deposits, p. 135–139. In: Paleocology of an early Pleistocene Lake on the High Plains of Texas. R. Y. Anderson and D. W. Kirkland (eds.). Geological Society of America, Inc. Memoir 113, Boulder, Colorado.
- , AND T. P. MASLIN. 1954. *Tropidoclonion lineatum lineatum* (Hallowell) in New Mexico. *Herpetologica* 10:172.
- TROXEL, R. B. 1939. Notes on the life history and ecology of *Gambusia patruelis*. Unpubl. master's thesis, Univ. of New Mexico, Albuquerque.

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Albert Schwartz in the early 1970s. Photo courtesy of M. H. Strahm.

**ALBERT SCHWARTZ** NEAR midday on **13 SEPT. 1923–** Sunday, 18 Oct. **18 OCT. 1992** 1992, the prevailing winds must have lessened momentarily and the rustling palms on the hundreds of islands and cays in the West Indies must have become hushed as the spirit of the greatest contributor to West Indian zoology passed overhead for the last time on his way to the eternal collecting ground. Albert Schwartz led a life that was beyond the comprehension of most people and probably will never be equaled by anyone. His career can be divided into three major phases that are unveiled here by three colleagues close to Al during those epochs of his life—prior to the West Indies (WED), herpetological work in the West Indies (RT), and postherpetological fieldwork in the West Indies (RWH).

Born on 13 Sept. 1923 in Cincinnati, Ohio, Al was the only child of a surgeon, who was one of five brothers; all were professionals, and Al was the only child of the five. Receiving training in the classics in private schools, Al had enviable abilities in languages and music; he was fluent in German, French, and Spanish, and he could read Latin and Greek. His linguistic expertise was demonstrated effectively to the astonishment of the PhD language examiner at the Uni-

versity of Michigan when Al verbally translated one French text into German and vice versa. His abilities in Latin and Greek are evidenced in the many trivial names that he coined; Al enjoyed creating new names and only needed to be given some characteristics of an undescribed taxon before he could pose several alternatives, one of which he characteristically would select as being the most euphonic or appropriate. Al loved classical music and had a passion for opera; in the 1950s when long-playing recordings of classical music first appeared, Al visited the local record stores in Ann Arbor, Michigan, regularly; and it often was a challenge to see who would get the latest Mozart recording, Al or C. F. Walker. Al also was an accomplished pianist and composed music as a hobby.

In 1941, he entered the University of Cincinnati and completed a BA in psychology. While an undergraduate student, Al drove his newly widowed (and soon to be deceased) mother to Florida for a vacation. Al fell in love with Florida, and after graduation and a short stint as a draftee at the army hospital at Fort Knox, Kentucky, he headed for Miami. Fortunately, the University of Miami did not have a graduate program in psychology, so Al enrolled in biology and, thus, began his professional career. Although his master's thesis was on the parasites of sharks, Al taught comparative anatomy