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GARY L. VINYARD

Richard W. Rust and Deidre Vinyard

Editor's Note: This issue of the *Western North American Naturalist* is dedicated to Gary L. Vinyard, professor of biology at the University of Nevada–Reno and major contributor to conservation of Great Basin organisms and systems. Gary died in 1998, age 49, at the height of his professional career. Articles in this issue were submitted by professional colleagues as well as former students of Dr. Vinyard. Some authors were involved in research with Dr. Vinyard at the time of his death; their papers represent results of their studies. Other authors were invited to submit articles detailing past or present research. All felt a desire to honor Gary for his personal and professional contributions.

The following biographical sketch was compiled by Richard W. Rust, a colleague and friend at UNR, and Gary's wife, Deidre Vinyard.



Gary L. Vinyard
1949–1998

Professor of Biology
University of Nevada–Reno

Gary L. Vinyard began his academic career as a biologist in 1967 at the University of Kansas. However, both of Gary's parents recall his early interest in natural history and science. He completed a bachelor of arts in biology and anthropology in 1971. During his undergraduate career he began his world travels with a 6-month educational trip to Australia and the Australian National University in 1970. Immediately upon graduation he began his doctoral studies at the University of Kansas under the mentorship of Dr. W.J. O'Brien. He completed his Ph.D. 6 yr later with his dissertation, "Analysis of preference and accessibility as determinants of prey selection by the bluegill sunfish, *Lepomis macrochirus*." In addition to studies on bluegill predation, Gary's dissertation studies took him to India where he studied invertebrate predation on *Daphnia carinata*.

Even before completion of his dissertation, Gary began his professional career as a visiting assistant professor at Oklahoma State University in 1976. From Oklahoma he traveled to Montana, where he was an assistant professor at the University of Montana in 1977. In July 1978 he joined the Department of Biology faculty at the University of Nevada–Reno, where he spent the next 20 yr as a researcher, educator, colleague, and friend. Gary had an active professional career. He published 43 scientific papers and an equal number of reports and reviews, generated over \$2 million in research grants, and had 21 graduate students complete

advanced degrees under his supervision. Gary was a member of a variety of professional societies: American Society for the Advancement of Science, American Fisheries Society, American Society of Limnology and Oceanography, Animal Behavior Society, Desert Fishes Council, Ecological Society of America, International Society for Behavioral Ecology, Sigma Xi, Society for Conservation Biology, and 5 professional regional advisory committees.

Dr. Vinyard was an excellent educator. He taught 16 different courses at the University of Nevada, 8 of which were taught on a regular schedule. His undergraduate courses in aquatic ecology, ichthyology, and animal behavior were challenging courses offering both lecture and laboratory experiences for students. Gary presented lectures with such enthusiasm that many students were attracted to him. In the classroom his greatest contribution was his ability to communicate to his students his intense enthusiasm for biology. The joy he felt for his work attracted many students to his laboratory, some of whom switched their specializations to aquatic ecology so they could work with him. Although he set high standards for his graduate students, he kept equally high his faith in their abilities. Gary could see the potential in every student and believed that all students should have the chance to experience independent study. He was known for his multi-colored chalkboard illustrations of fish capturing daphnia or daphnia escaping fish, Great Basin pluvial lakes and drainage patterns, and character differences of various fish families—all drawn without the assistance of notes.

But Gary's real teaching excellence was in the laboratory or in the field. He presented stimulating and creative laboratory exercises and was always incorporating the latest technology into his exercises and field courses. Gary made sure that all students participated in every aspect of a laboratory or field exercise, from simply throwing the anchor overboard to secure the location of the boat, to the proper entry of a data set into statistical software for analysis, to the preparation of figures and tables for oral presentations. His field trip menus were famous. Canned fishes and invertebrates washed down with warm beer were the standard fare for lunch, and his camp chili and coffee were big hits whenever they were served. In the field, Gary was a master at improvisational exercises, whether they were

behavioral measurements of successful mating attempts and territorial defense in pupfish or population estimates of tadpole shrimp in a flooded playa. He had the naturalist's sense and knew how to collect meaningful data that would allow hypothesis testing. At the graduate level, Gary mentored 21 graduate students. Fifteen completed research theses, 5 doctoral degrees and 10 master's degrees; 6 were non-research master's degrees.

Gary's laboratory, to the first-time visitor, was "Fibber McGee's closet." But to his students and colleagues, his laboratory was a naturalist's paradise. There were aquaria filled with green slime, filamentous algae for various herbivorous fishes, aquaria filled with different species of Great Basin fishes, snails, and aquatic insects for study and analysis, aquaria designed with pumps and baffles to produce stream flow parameters for testing both predator capture rates and prey escape patterns. Supporting all the aquaria were numerous aeration tubes, electrical wires for lights, pumps hanging from support frames suspended from the ceiling, and "miles" of PVC pipe. Gary was a master of PVC plumbing and water movement. If someone wanted an aquarium with a particular pattern of surface flow and currents, Gary could design and build it. Holes cut into the ceiling allowed cameras to be mounted to record the activities of aquatic predators and prey under study. There were numerous computers, printers, and other electronic data-processing apparatus, many designed and built by Gary, all wired together for recording, analyzing, and printing figures and tables of the data being monitored. Gary's laboratory also supported a variety of other organisms: terraria with desert tenebrionid beetles, culture vials with different morphs of *Drosophila*, and a variety of snakes and lizards. If one needed a tool, a piece of scientific equipment, or assistance with its repair, it was available in Gary's lab. Gary's laboratory was also a meeting place for students and colleagues, and Gary always made time for conversation and answering questions.

Dr. Vinyard's research with aquatic organisms began with the analysis of feeding behavior in fish species and prey species escape. His 1976 *Ecology* paper with W.J. O'Brien is a classic in analysis of fish feeding behavior. Gary and his students continued this avenue of research with another 16 papers. In 1980, Gary began 6 yr of research projects in the

Middle East, beginning with a joint Israeli-Egyptian project, working with Egyptian scientists on Lake Manzalah and Israeli scientists studying Lake Kinneret. This first project, funded by AID, was followed by an NSF-funded project exploring the effects of blue tilapia and Galilee Saint Peter's fish on the plankton community of Lake Kinneret. Gary next began working in 1992 with the U.S. Forest Service, U.S. Fish and Wildlife Service, and Nevada Division of Wildlife on the recovery of Lahontan cutthroat trout. This research with his recent graduate students has contributed to the conservation of the species. Gary also contributed to the conservation of the cui-ui and the desert dace. He was an active member of the Desert Fishes Council, a society dedicated to the study and conservation of desert fishes. At the time of his death, Gary was working with the U.S. Environmental Protection Agency on a major monitoring project of aquatic life and aquatic parameters in the Humboldt, Muddy, and Walker River drainages in Nevada. Gary's research travels and collecting throughout the Great Basin brought several new species of unusual aquatic organisms to science. Two of these have been named in his honor, the freshwater snail *Pyrgulopsis vinyardi*, and the freshwater spring ostracod *Cyclocypris vinyardi*. Gary knew and appreciated these unusual aquatic organisms. They were just as important to him as were the better-known fishes.

In addition to Gary's academic abilities and work, he was a husband, father, and most of all a good friend. For Gary, work was his life, and his life was to be lived to the fullest, every minute and every day. To be with Gary in the Great Basin Desert sitting around a sagebrush campfire, drinking strong, black coffee laced with dark rum, and discussing results of the day's activities, or talking about biology and science, or philosophizing about the nature of life was to experience and enjoy Gary at his very best. At the time of his death, Gary was recognized as the major contributor to the conservation of Great Basin aquatic organisms and systems. He knew aquatic organisms extremely well. Those of us who knew him realized this was possible because he could think like a fish. His work and presence will be sorely missed. We thank him for everything he offered to his family, students, friends, and most of all to the fishes of the Great Basin.

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- STEPHANIE BYERS, M.S. 1989. Plankton community impacts of a filter-feeding minnow, the Sacramento blackfish (*Orthodon microlepidotus*).
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- JIM CALL, M.S. 1991. Non-thesis.
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- TRAVIS MICKELSON, M.S. 1995. Non-thesis.
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- PETER FISCHER, M.S. 1999. Non-thesis; finished with Dr. L. Weber.
- OKAN KÜLKÖYLÜOĞLU, PH.D. 1999. Taxonomy, ecology, and biogeographic distribution of spring water Ostracoda (Crustacea) in Nevada (completed with Dr. R. Rust).
- MICHAEL MEEUWIG, M.S. 2000. Thermal effects on growth, feeding, and swimming of Lahontan cutthroat trout, *Oncorhynchus clarki henshawi* (completed with Dr. Hayes).
- DON EATON, PH.D. 2001. Pending completion with Dr. R. Rust.

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