

ARDEN R. GAUFIN, 1911–1997: OBITUARY AND LIST OF PUBLICATIONS

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Arden R. Gaufin

Arden R. Gaufin was born in Salt Lake City, Utah, on 25 December 1911, and passed away on 8 January 1997. He married Ruth Lund in September 1936 and to them were born two children: Richard and Marilyn. Raised on a farm in Kaysville, Utah, Arden graduated from Davis High School. He attended the University of Utah, receiving both his B.S. and M.S. degrees in biology, and then went to Iowa State University, where he received his Ph.D. in 1950. His doctoral dissertation was a study of the production of the bottom fauna of the Provo River, Utah. He served as a captain in the U.S. Army in the South Pacific during World War II and received the Bronze Star.

Arden's first position after graduating was with the Public Health Service Environmental

Health Center in Cincinnati, Ohio. There he met Clarence Tarzwell and together they championed the idea that aquatic insects are actually twenty-four-hour instream sentinels of stream conditions. Their research on Lytle Creek, Ohio, was very significant in the formulation of the design, methodology, and implementation of research on and recognition of the importance of sampling aquatic environments. Such studies stressed the importance of complementing physical and chemical data with biological information. Results of this applied research helped strengthen the need to protect aquatic life, the true indicators of environmental health. This in turn led to the establishment of water quality criteria for protecting the integrity of aquatic ecosystems at the time when states were formulating stream standards for inter- and intrastate waters.

As a result of his research on integrating the physical, chemical, and biological components of aquatic systems, Arden was selected to serve on the Public Health Service National Advisory Council, which established water pollution control standards in the 1960s. It was during this time that Arden became one of the early members of the Midwest Benthological Society. He was an avid supporter of and participator in this organization that is now the very successful North American Benthological Society.

Arden was a Professor of Biology from 1953 to 1975 at the University of Utah, where he taught a wide variety of classes. He spent the summers from 1963 through 1975 at the University of Montana Biological Station on Flathead Lake as Visiting Professor of Zoology and Assistant Director. In addition, he worked during the 1968–69 school year at the University of Montana campus in Missoula as Professor of Zoology and Director of Environmental

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Biology. The summers in Montana and the nearby states and Canadian provinces were some of the highlights of Arden's life. The biological station experiences reminded him of the summer that he spent as a graduate student at the University of Michigan, Douglas Lake Biological Station.

Over the years Arden guided many graduate students in a wide variety of projects dealing with aquatic ecosystems. His interests ranged from high mountain lakes to salt ponds near the Great Salt Lake. In fact, many colleagues would say that Arden's greatest contribution to aquatic biology is the large number of students he influenced. He was always ready to listen to novel ideas and would willingly seek funding to support a new graduate student. His help extended not only to those included as coauthors in the following list of publications but also to numerous others who studied various aspects of aquatic biology. Arden helped many students begin successful careers in biology. For this we owe him a lasting debt of gratitude.

In addition, he worked with several colleagues on projects across the United States: C.M. Tarzwell, stream pollution in Ohio; R. Patrick, macroinvertebrates and algae of the Potomac River; G.W. Prescott, algae in and around Flathead Lake, Montana; J.F. Hanson, S.G. Jewett, Jr., and W.E. Ricker, stoneflies (Plecoptera).

Several of Arden's former graduate students aided in the preparation of this publication. Their help and encouragement are much appreciated: Claron Bjork, Price, Utah; Allen Knight, Green Valley, Arizona; Alan Nebeker, Corvallis, Oregon; Jack Stanford, Polson, Montana; Gerald Smith, Ann Arbor, Michigan; Bill Stark, Clinton, Mississippi.

Following is a list of scientific publications authored by Arden or coauthored by him with colleagues and students. Even though every attempt was made to maintain consistency, some problems still exist because original publications were not available.

- 1939. Rees, D.M., and A.R. Gaufin. The termite problem in Utah. University of Utah Bulletin 30:8.
- 1949. Gaufin, A.R. A comparative study of the bottom fauna productivity of the north and south forks of the Provo River at Stewart's Ranch, Utah. Transactions of the Midwest Wildlife Conference.
- 1950. Wilson, J.N., C.M. Tarzwell, and A.R. Gaufin. Lytle Creek investigations. Environmental Health Center Activity Report 6:30-43.
- 1952. Gaufin, A.R., and C.M. Tarzwell. Aquatic invertebrates as indicators of stream pollution. Public Health Reports 67:57-64.
- 1953. Gaufin, A.R., and C.M. Tarzwell. Discussion of Ruth Patrick's paper, "Aquatic organisms as an aid in solving waste disposal problems." Sewage and Industrial Wastes 25:214-217.
- 1953. Ingram, W.M., D.G. Ballinger, and A.R. Gaufin. Relationship of *Sphaerium solidulum* Prime to organic pollution. Ohio Journal of Science 53: 230-235.
- 1953. Katz, M., and A.R. Gaufin. The effects of sewage pollution on the fish population of a mid-western stream. Transactions of the American Fisheries Society 82:156-165.
- 1953. Tarzwell, C.M., and A.R. Gaufin. Some important biological effects of pollution often disregarded in stream surveys. Purdue University Engineering Bulletin, Proceedings of the 8th Industrial Waste Conference. 38 pp.
- 1954. Gaufin, A.R. Mosquito production in polluted water. Pages 21-22 in Proceedings of the 7th Annual Meeting, Utah Mosquito Abatement Association.
- 1955a. Gaufin, A.R. Save our wetlands. Utah Fish and Game Bulletin 11:1-3.
- 1955b. Gaufin, A.R. Taste and odor in water. Utah Engineering Experiment Station Bulletin 72: 99-109.
- 1955c. Gaufin, A.R. The effects of pollution on our fishery. Proceedings of the Utah Academy of Sciences, Arts, and Letters 32:71-74.
- 1955d. Gaufin, A.R. The stoneflies of Utah. Proceedings of the Utah Academy of Sciences, Arts, and Letters 32:117-120.
- 1955e. Gaufin, A.R. Aquatic problems in the desert. Pages 28-30 in Symposium on ecology of disease transmission in native animals. Dugway Proving Grounds, Dugway, Utah.
- 1955. Gaufin, A.R., and C.M. Tarzwell. Environmental changes in a polluted stream during winter. American Midland Naturalist 54:78-88.
- 1956a. Gaufin, A.R. An annotated list of the stoneflies of Ohio (Plecoptera). Ohio Journal of Science 56: 321-324.
- 1956b. Gaufin, A.R. Fishes. Page 51 in Ecological check lists: the Great Salt Lake Desert series. Ecological Research at the University of Utah, Salt Lake City.
- 1956c. Gaufin, A.R. Wildlife production vs. mosquito abatement. Pages 3-4 in Proceedings of the

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1956. Gaufin, A.R., and C.M. Tarzwell. Aquatic macro-invertebrate communities as indicators of organic pollution in Lytle Creek. *Sewage and Industrial Wastes* 28:906–924.
1956. Paine, G.H., Jr., and A.R. Gaufin. Aquatic Diptera as indicators of pollution in a mid-western stream. *Ohio Journal of Science* 56: 291–304.
1956. Roscoe, E.J., and A.R. Gaufin. Crustaceans. Page 28 in *Ecological check lists: the Great Salt Lake Desert series*. Ecological Research at the University of Utah, Salt Lake City.
1957. Gaufin, A.R. The use and value of aquatic insects as indicators of organic enrichment. Pages 136–143 in *Biological problems in water pollution*. Seminar transcripts compiled by U.S. Department of Health, Education, and Welfare.
- 1958a. Gaufin, A.R. Algae and algae control. *Utah Engineering Station Bulletin* 89:100–108.
- 1958b. Gaufin, A.R. Check list of fishes. In: Preliminary report on the biological resources of the Glen Canyon Reservoir. University of Utah Anthropological Papers 31:174–175.
- 1958c. Gaufin, A.R. The effects of pollution on a mid-western stream. *Ohio Journal of Science* 58: 197–208.
- 1959a. Gaufin, A.R. Biological indicators of organic enrichment in freshwater. Page 237 in *Biological problems in waste pollution*. Seminar transcript compiled by U.S. Department of Health, Education, and Welfare.
- 1959b. Gaufin, A.R. Production of bottom fauna in the Provo River, Utah. *Iowa State College Journal of Science* 33:395–419.
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- 1960b. Gaufin, A.R. The effects of insecticides on aquatic life. Pages 16–18 in *Proceedings of the 13th Annual Meeting, Utah Mosquito Abatement Association*.
- 1960c. Gaufin, A.R. Organisms as indicators of pollution. Transactions of the 40th Annual Conference of the Western Association of State Game and Fish Commissions.
- 1960d. Gaufin, A.R. Summary of physiological aspects of insecticides on water quality. *Proceedings of the Conference on Physiological Aspects of Water Quality*.
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- 1962b. Gaufin, A.R. How fish breathe. *Utah Fish and Game Bulletin* 18:10–11.
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- 1964b. Gaufin, A.R. Systematic list of Plecoptera of Intermountain region. Proceedings of the Utah Academy of Sciences, Arts, and Letters 41: 221–227.
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