

## Centers of Learning

### University of Washington Seattle

*by David A. Manuwal*

The University of Washington is located on the shore of Lake Washington in Seattle. With a student enrollment of 33,000, it is the largest single campus university on the West Coast. Students enjoy the benefits of a major metropolitan area with a wealth of cultural and entertainment offerings to supplement the scholarly regime, and a surrounding area that provides a magnificent array of scenic attractions and outdoor recreational opportunities. A pleasant, temperate climate assures enjoyment of outdoor attractions throughout the year.

Seattle is ideally located for students wishing to study vertebrate ecology and behavior. The extremely diverse environment includes the Puget Sound lowlands, flanked on the west by the Olympic Mountains, rainforest and coastal Washington, and on the east by the spectacular Cascade mountains which support the famous Douglas-fir forests and alpine tundra of the North Cascades and Mount Rainier National Parks. Beyond the Cascades stretches the arid environment of eastern Washington. All of these areas are within easy driving distance of the campus.

Educational opportunities in avian ecology and behavior are available through the Department of Zoology, Institute for Environmental Studies and College of Forest Resources. All are located on the campus.

The Department of Zoology offers an undergraduate degree and MS and Ph.D. degree programs. The major fields of interest in the Department of Zoology are cellular and developmental biology, general and com-

parative physiology, ecology and ethology, vertebrate and invertebrate zoology.

Research facilities include the many well-equipped laboratories in the new Kincaid Hall including outdoor aviaries and controlled environment chambers and the modern facilities of the Friday Harbor Laboratories in the San Juan Islands.

Nine of the 37 faculty of the Department of Zoology have active research programs in avian biology. These include:

David P. Barash. (also Department of Psychology), field ethology; ecology and evolution of social behavior.

Dee Boersma. Ecology, Behavior, reproductive strategies, marine biology.

Donald S. Farner. Avian physiology and endocrinology biochronometry, environmental physiology, avian reproductive biology; photoperiodic systems.

Aubrey Gorbman. Comparative endocrinology and neuroendocrinology.

George James Kenagy. Behavioral physiology of vertebrates; physiological ecology, endogenous rhythms and photoperiodism; energetics, evolution and morphology of vertebrates; desert and tropical biology.

Gordon H. Orians. Ecology and ethology, vertebrate social systems, community structure; plant-herbivore interactions

Sievert Rohwer. Systematics and ecology, appearance and social systems in birds.

Thomas W. Schoener. Theoretical ecology, island ecology; biogeography; biology of lizards.

Richard C. Snyder. Comparative and functional vertebrate anatomy; vertebrate biology.

The Institute for Environmental Studies is an interdisciplinary unit of the University of Washington which offers a variety of environmentally-related courses and supports a research program. There are two faculty members in the Institute that teach and conduct research in avian biology, the Director, Gordon Orians and Dee Boersma as mentioned above in the Department of Zoology

The College of Forest Resources through the Wildlife Science Program offers several courses and research opportunities in the field of wildlife biology. Studies in forest resources include the application of the natural and social sciences to the uses of forest, range, and recreational lands and the related technological and managerial processes applicable to the production of forest-based goods and services. The many aspects of forestry-related subjects range from the development of ecological principles governing the dynamics of biotic populations to the methods of management of both private and public lands

The College of Forest Resources offers curricula leading to the degrees of Bachelor of Science in Forest Resources, MS and Ph.D.

Research facilities include specially equipped laboratories in the three building forest resources complex, a specialized forestry library with more than 20,000 volumes and 2,000 periodicals; a herbarium, a computer center, and a large arboretum on the shore of Lake Washington. Field research centers consist of more than 10,000 acres of forested land in three major locations near the College. Associated groups further support the interdisciplinary nature of college research. These include the College

of Fisheries, Center for Quantitative Sciences, Quaternary Research Center and the Marine Mammal Laboratory (U.S. Nat'l Marine Fisheries Service).

Students interested in wildlife biology will find opportunities at the undergraduate level in the wildlife science curriculum. Graduate students enter forest resources and specialize in wildlife biology. Currently, there are two faculty involved in wildlife studies:

Richard D. Taber. Biology and conservation of free-living birds and mammals; wildlife and human culture; ungulate-plant interactions.

David A. Manuwal. Effect of forest management on birds and mammals; reproductive strategies and population structure of seabird populations.

Regardless of which program one enters, a student at the University of Washington has a wealth of available faculty and resources. The extensive computer facilities, the University library system which on a recent date had 2,187,917 volumes and 46,996 current periodicals, and a boundless natural environment contribute to a rewarding atmosphere in which to study avian biology.

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## American Birds 1977 Salon of Photography

Once again this year *American Birds* will hold a competitive salon of bird photographs by its readers. First, second, and third prizes, as well as honorable mentions, will be awarded in two categories: color, and black-and-white. Color submissions may be in the form of transparencies or prints. Deadline for acceptance will follow almost immediately upon receipt of this issue. The salon will be published in the November issue. First prize for color will be honored by being published as the front cover of that issue, if at all possible

One suggestion: since the quality of photography in this competition has been of a very high order, we suggest that you carefully screen your entries, eliminating poorly lighted, framed, or focused photographs (unless soft focus is an integral aspect of the shot). This year we will limit each photographer to six entries in each category and as in the past, entries will be judged on the basis of technical excellence, artistic merit, and difficulty.