

JACKSON HOLE BIOLOGICAL RESEARCH STATION  
ANNUAL REPORT  
1976



Oscar H. Paris, Director  
UNIVERSITY OF WYOMING  
Laramie, Wyoming



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## PREFACE

Dr. Oscar Paris accepted a position with the U.S. Nuclear Regulatory Commission in Washington, D.C. in August of 1976. During his tenure as Station Director much was accomplished to improve the quality of the Station's research program, strengthen the Station's cooperation with Federal, State and private organizations and to upgrade the Station's physical facilities. The University is grateful for his efforts and wishes him success in his new position. Successful continuation of the Station's program and preparation of this Annual Report with little perturbation has been largely due to the highly competent assistance provided the Acting Director by Ms. Priscilla Moree, Administrative Secretary in the Department of Zoology and Physiology and by Vice President for Research, E. Gerald Meyer. Finally, to the many other individuals who contributed in various ways to make 1976 a productive year, your efforts were appreciated.

Kenneth L. Diem  
Acting Director

## ACKNOWLEDGMENTS BY THE FORMER DIRECTOR

First I wish to express my appreciation to Dr. Kenneth Diem for giving me this opportunity to thank those who were of especial assistance to me during my last year as Director of the Jackson Hole Biological Research Station. Ms. Marty Wagner Paris, as always, was of inestimable help to me in administering the Station, and I continue to be very grateful for her support. Bill Gordon served commendably as the Station Assistant during the summer of 1976; his keen sense of responsibility, his strong motivation, his dedication to the Station, his willingness to work hard, and his pleasant disposition were particularly noteworthy. David Hales assisted in the hard chores required to get the Station in full operating condition at the beginning of the 1976 summer season; I am grateful for his hard work and capable assistance. Nobel Gregory provided his usual invaluable help with many problems involving the physical plant and grounds. Ms. Priscilla Moree, with her customary efficiency and competence, kept the Station's accounts, handled our budget, advised me on budgetary matters, and typed the Annual Report; I am extremely indebted to her.

Superintendent Robert Kerr and many of his staff at Grand Teton National Park assisted me and numerous investigators at the Station in a great variety of ways. For the Station personnel as well as myself I want to express deep appreciation for GTNP's interest, support, and assistance. Working with the fine staff of GTNP has been a source of much satisfaction and pleasure to me. I am also grateful for the interest shown in the Station by U.S. National Park Service Director Gary Everhardt and Chief Scientist Theodore Sudia.

Finally, let me note the two things which made Marty and me saddest when we left Wyoming: leaving our dear friends in Jackson Hole and in Laramie, and leaving the Jackson Hole Biological Research Station. But I take much comfort in the fact that the University has appointed Ken Diem to succeed me; with Ken as Director, the future of JHBRS rests in very capable hands.

Oscar H. Paris  
Bethesda, Maryland  
February 3, 1977

ADVISORY BOARD

The Inter-Disciplinary Research Committee

- Dr. Eugene M. Wilson, Civil Engineering
- Dr. George T. Baxter, Department of Zoology and Physiology
- Dr. Paul A. Rechard, Water Resources Research Institute
- Dr. Robert McColloch, Graduate School
- Dr. Robert Houston, Department of Geology
- Dr. Jack C. Turner, Department of Zoology and Physiology
- Dr. Kenneth L. Diem, Department of Zoology and Physiology
- Dr. L. I. Painter, Department of Plant Science
- Dr. Don S. Warder, Recreation and Park Administration
- Dr. Gabor Vali, Department of Atmospheric Science
- Dr. E. Gerald Meyer, Chairperson
  
- Mr. Donald Rollens, Supervisor, Medicine Bow National Forest
- Mr. Reid Jackson, Supervisor, Teton-Bridger National Forest
- Mr. Robert Kerr, Superintendent, Grand Teton National Park
- Mr. John Townsley, Superintendent, Yellowstone National Park
- Mr. Neil Reid, National Park Service

## INTRODUCTION

This Fourth Annual Report of the Jackson Hole Biological Research Station summarizes the research and associated activities conducted at and through the Station during 1976. Sixteen projects, 11 continuing and 5 new, were carried out at the Station emphasizing local research application and/or research on the unique features of the area.

The National Park Service through the Rocky Mountain Regional Office, Grand Teton National Park and Yellowstone National Park continued to actively support the Station. Their financial assistance and varied logistic assistance greatly aided several projects and the Station. Additional financial assistance for selected research projects was provided by the Station's long-time supporter, the New York Zoological Society. Varied project assistance was also provided by the Teton National Forest, the National Elk Refuge and the Wyoming Game and Fish Department.

The major facilities improvement project begun in 1973 was essentially completed in 1976. One cabin re-roofing is all that remains to be accomplished in the future.

Between June 9 and August 20, 11 weekly seminars were presented by resident investigators.

RESEARCH PROJECT REPORTS

## SEMINARS

- June 10, 1976 "Avian Population Responses to Prescribed Burning in Sagebrush"  
John M. McGee  
Department of Zoology & Physiology  
The University of Wyoming
- June 17, 1976 "Ecology and Population Trends of Trumpeter Swans in North America"  
Dr. Paul A. Johnsgard  
School of Life Sciences  
University of Nebraska, Lincoln
- July 1, 1976 "EPA Sponsored Water Quality Research in Teton County"  
Sidney (Bo) Stuart  
Department of Microbiology  
Montana State University
- July 8, 1976 "Five Needle Pines in the Jackson Hole Area"  
Dr. Alan Beetle  
Plant Science Division, College of Agriculture  
The University of Wyoming
- July 15, 1976 "The Role of the Senses in the Hunting Coyote"  
Michael Wells  
Department of Zoology & Entomology  
Colorado State University
- July 22, 1976 "Ecology of Beaver on the Snake River Floodplain"  
Tom Collins  
Department of Zoology & Physiology  
The University of Wyoming
- July 29, 1976 "Coyote Conversations: Vocalizations of Canis Latrans"  
Dr. Philip Lehner  
Department of Zoology & Entomology  
Colorado State University
- August 5, 1976 "What's Cooking Under Grand Teton and Yellowstone National Parks?"  
Dr. Robert Smith  
Department of Geology and Geophysics  
University of Utah
- August 12, 1976 "Investigation of Regulatory Mechanisms in Pine Marten Populations"  
Dr. Tim W. Clark  
Department of Biology  
Idaho State University
- August 19, 1976 "Pineal Organs and the Distribution of Animals"  
Dr. Charles L. Ralph, Department of Zoology & Entomology  
Colorado State University

## FINANCIAL REPORT

1975-76

<u>Item</u>	<u>Budgeted</u>	<u>Reappropriated from 1974-75</u>	<u>Total</u>	<u>Expended</u>
Assistants, P/T	14,125.00		14,125.00	14,124.28
Contractual	1,146.00		1,146.00	1,146.00
Contractual/Repairs	500.00		500.00	496.12
Travel	468.00		468.00	468.00
Supplies	2,052.00		2,052.00	2,052.00
Equipment	1,119.00	33.48	1,152.48	1,152.48
Fixed Charges	<u>100.00</u>	<u>72.00</u>	<u>172.00</u>	<u>72.00</u>
	19,510.00	105.48	19,615.48	19,510.88

Rent received in the amount of \$1,441.00 was placed in the General Fund of the University of Wyoming

Grants-in-aid totaling \$1,235.00 were awarded to investigators by the New York Zoological Society.

1976-77

<u>Item</u>	<u>Budgeted</u>	<u>Reappropriated from 1975-76</u>	<u>Total</u>	<u>Expended*</u>
Personal Services	2,724.00		2,724.00	2,724.00
Assistants	11,401.00		11,401.00	5,539.12
Other Services & Charges	2,346.00		2,346.00	1,215.25
Supplies	3,052.00		3,052.00	2,375.78
Equipment	1,719.00	138.07	1,857.07	138.07
Rentals, Lease, etc.	100.00		100.00	-0-
Travel	<u>868.00</u>		<u>868.00</u>	<u>-0-</u>
	22,210.00	138.07	22,348.07	11,992.22

\*Expended to date (2-1-77)



