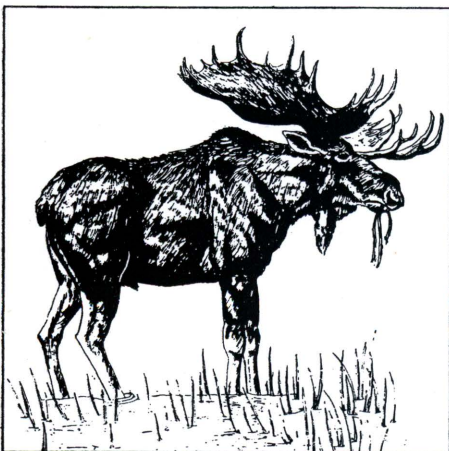


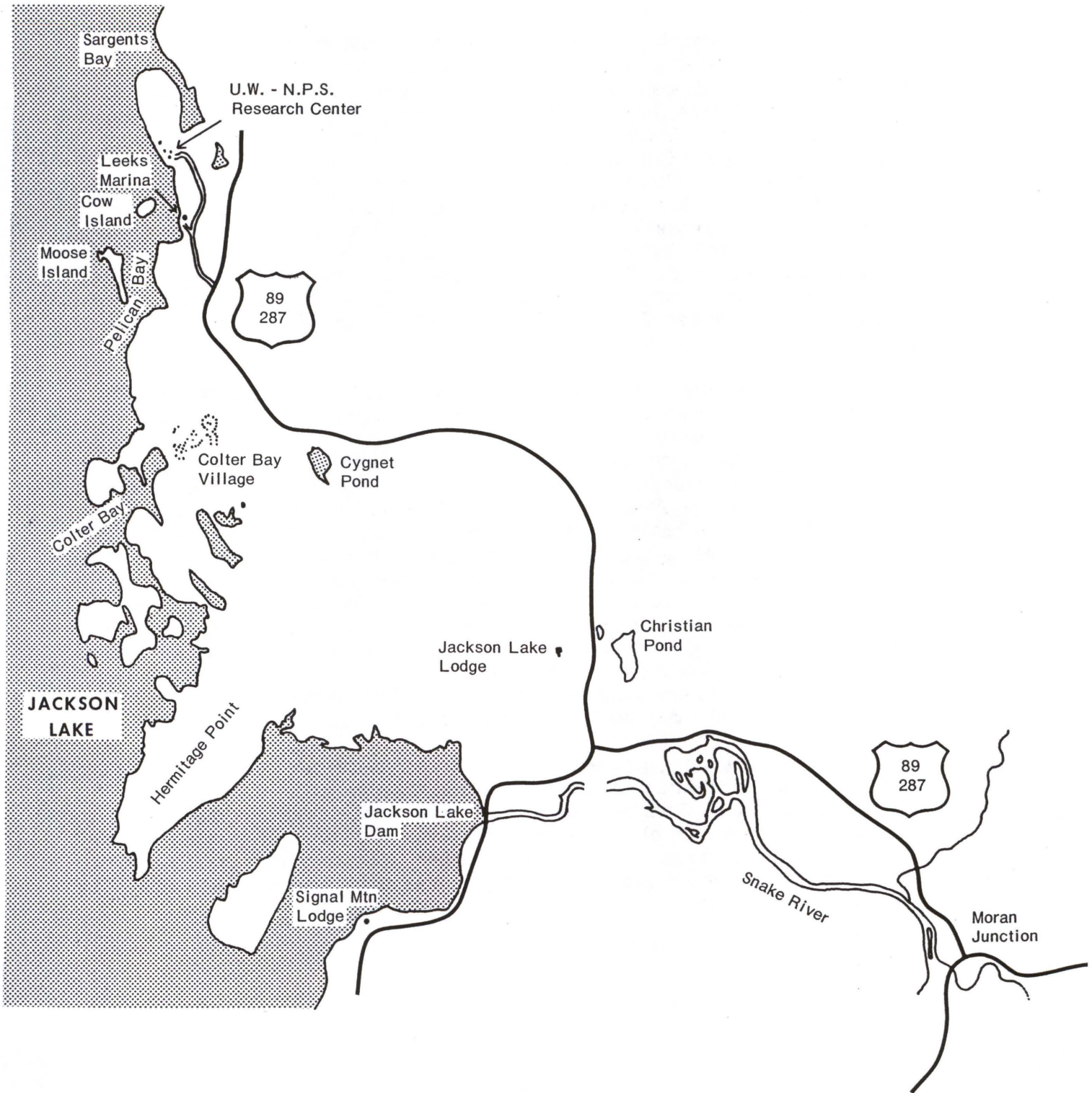
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UNIVERSITY OF WYOMING-NATIONAL PARK SERVICE RESEARCH CENTER

University of Wyoming
National Park Service Research Center
Ninth Annual Report
1985





Box 3166 University Station
Laramie, Wyoming 82071
Telephone: (307) 766-4207 or 4227

Box 170
Moran, Wyoming 83013
Telephone: (307) 543-2463

PREFACE

The University of Wyoming-National Park Service Research Center sponsors and supports substantial and significant research in the biological, physical and social sciences which can best be done in National Park areas of Wyoming, Montana, North Dakota, South Dakota and Utah because of the unique features those areas possess. Administratively, the Research Center is governed by a 10-member Steering Committee composed of 5 University of Wyoming representatives and 5 National Park Service representatives. The Dean of the Arts and Sciences College serves as Committee Chairperson. A faculty member of the University of Wyoming is Director of the Research Center program and is administrator of the Research Center facilities. Also, the Director is an ex-officio member of the Steering Committee. The Research Center physical plant consists of laboratory, library, living, seminar, shop and storage accommodations. Those facilities are normally operational from mid-May to mid-October.

The Director annually calls for research proposals in early September from institutions and individuals requesting such notification. Included with this solicitation are 1) guidelines for proposal preparation, 2) housing and laboratory information, 3) Research Center operational policies, and 4) the Research Center operational calendar. Topics for research include 1) those research problems identified by Park personnel, and 2) research problems suggested by outside individuals on basic or applied proposals they consider to be timely and important and uniquely appropriate to the National Park areas of the five states concerned. While many of the research topics will be directed at solution to management problems and improvement of interpretation information, there will be a concerted effort to encourage and maintain support for a substantial basic research program. Research projects may extend beyond the exact boundaries of the Park areas to work on problems common to the Park lands and adjacent lands. Limited funds are available for support of meritorious research projects. Also, research studies may be funded by other institutions or by individuals.

Investigator(s) submitting proposals to the Research Center should be a faculty member of an academic institution or a full-time member of a governmental research institution. Scientific and fiscal accountability must be assigned to an academic or governmental research institution. Normally all proposals should reach the Director no later than mid-November. The decisions of the Steering Committee concerning approval and where applicable, funding, are released no later than early March.

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STEERING COMMITTEE MEMBERS

- Mr. Robert Barbee, Superintendent, Yellowstone National Park, National Park Service;
- Dr. Phyllis Bear, Department of Microbiology and Veterinary Medicine, University of Wyoming;
- Dr. Kenneth L. Diem, Ex-officio Member, and Director, UW-NPS Research Center;
- Dr. Walter Eggers, Dean, Arts and Sciences College, University of Wyoming and Steering Committee Chairperson;
- Dr. Dan Huff, Chief Scientist, Rocky Mountain Region, National Park Service;
- Ms. Sandra Key, Superintendent, Bryce Canyon National Park, National Park Service;
- Dr. Anne Martha Slater, Department of Anthropology, University of Wyoming;
- Mr. Jack Stark, Superintendent, Grand Teton National Park, National Park Service;
- Dr. Ronald Surdam, Department of Geology, University of Wyoming;
- Mr. Jimmy D. Taylor, Superintendent, Grant-Kohrs Ranch National Historic Site, National Park Service;
- Dr. Michael Whelan, Department of Civil Engineering, University of Wyoming;

DIRECTOR'S REPORT

Fourty proposals were submitted to the Research Center for the 1985 season. Twenty nine of these proposals submitted by investigators from 17 institutions were approved (Table 1). Research support totalling \$218,694 was awarded to 18 projects submitted by investigators from 10 institutions.

On June 6, 1985 the Research Center's area of responsibility was enlarged at the request of the National Park Service. The area now covers 5 states, Utah, Wyoming, Montana, and North and South Dakota. Specifically, this involves thirty one national park units covering over 9,000 square miles. Since its inception in 1953, 252 researchers representing 83 academic or research institutions have published 270 scientific articles or reports based on research conducted at the Center or the Biological Research Station.

With respect to the Center's physical plant, the deteriorating 58 year old shingle roof of the Johnson Lodge and Garage continues as a major threat to the interior and integrity of that structure. Despite the efforts of Grand Teton National Park to have it repaired in 1985, constraints on their budget prevented correction of the problem. Unless this problem is addressed by the National Park Service in 1986, serious leakage problems will be occuring in that national architectural structure.

One ceiling circulation fan and three airtight fireplace heating units were installed with stainless steel chimney liners in the Johnson Lodge. These installations were made to (1) sharply reduce the cost of supplemental electric heat; (2) provide a more efficiently generated, even and comfortable temperature environment in the living quarters; and (3) eliminate a serious potential of destructive chimney fires.

For the first time in the last 8 years the Center was unable to provide living and laboratory space for all investigators conducting bonafide research within the Grand Teton area. This problem is expected to continue until the Lawrence House is made available under terms of the Center's Special Use agreement with the National Park Service. That house has not been lived in for 3-1/2 years and is suffering the effects of closure in the severe climatic environment of the northern Jackson Hole area. Since occupying the AMK facilities, the Center has had to operate with two fewer living units than it had at the old Research Station site. The priority need for solution of the Lawrence House problem is second only to the Johnson Lodge roof.

During the course of the summer the Center served as host for a number of meetings. The first was the Governors Resource tour with 120 participants. This was followed by a meeting of the Western Regional Research Technical Committee (W-102), composed of Parasitology professors from 15 states. Next, 50 representatives of the University Consortium For International Development met at the Center. Closing out the meeting schedule was the September annual meeting of the Wyoming REACT agencies.

Table 1. Funding sources, recipient institution and location of research conducted through the U.W.-N.P.S. Research Center, 1985.

<u>University of Wyoming</u>		<u>Funding Source</u>		<u>Other Grants or Non-Grant Support</u>		
<u>Recip. Instit.</u>	<u>Location of Res.</u>	<u>Recip. Instit.</u>	<u>Location of Res.</u>	<u>Recip. Instit.</u>	<u>Fund Source</u>	<u>Location of Res.</u>
Univ. of WY	Bighorn Canyon N. Rec. Area	Brigham Young Univ. and Rky. Mtn. For. & Range Exp. Sta.	Badlands NP	Univ. of S. CA	NSF	GTNP
Univ. of WY	Bighorn Canyon N. Rec. Area	Univ. of CO	Custer, NM	San Fran. State Univ.	Private	GTNP
Univ. of N. CO	Fort Laramie NHS	MT State Univ.	GTNP	Univ. of New Orleans	Private	GTNP
Univ. of WY	Jewel Cave	Oregon State Univ.	Custer, NM	Univ. of Toronto	NSERC Canada	GTNP
A.R.S.	GTNP & YNP	Snow College & Int. Mtn. For. & Range Exp. Sta.	GTNP	Univ. of Nebraska	Univ. of Nebraska	GTNP & YNP
Univ. of WY	GTNP	MT State Univ.	Theodore Roosevelt NP	Univ. of WY	U.S.F. & W.S.	GTNP
					U.S.F.S.	
					U.S.N.P.S.	
					WY G. & F. Dept.	GTNP
					NSF	GTNP

MT State Univ.	Univ. of MN	Jewel Cave Wind Cave	SC. Mus. of MN	Sc. Mus. of MN	GTNP
	Univ. of CO	YNP	Ft. Lewis College & YNP	NSF	YNP
Univ. of WY & MT State	Univ. of MT	YNP			YNP & GTNP
Univ. of MT	Univ. of WY	YNP	Univ. of WY	Univ. of WY & Pri.	GTNP
Carnegie Mus. of Nat. Hist.					GTNP

RESEARCH PROJECT REPORTS

The following project reports have been prepared primarily for administrative use. The information reported is of a preliminary nature and may be subject to change as the investigations continue. Consequently, the information presented may not be used without written permission from the author(s).



BADLANDS NATIONAL PARK

WHISENANT

