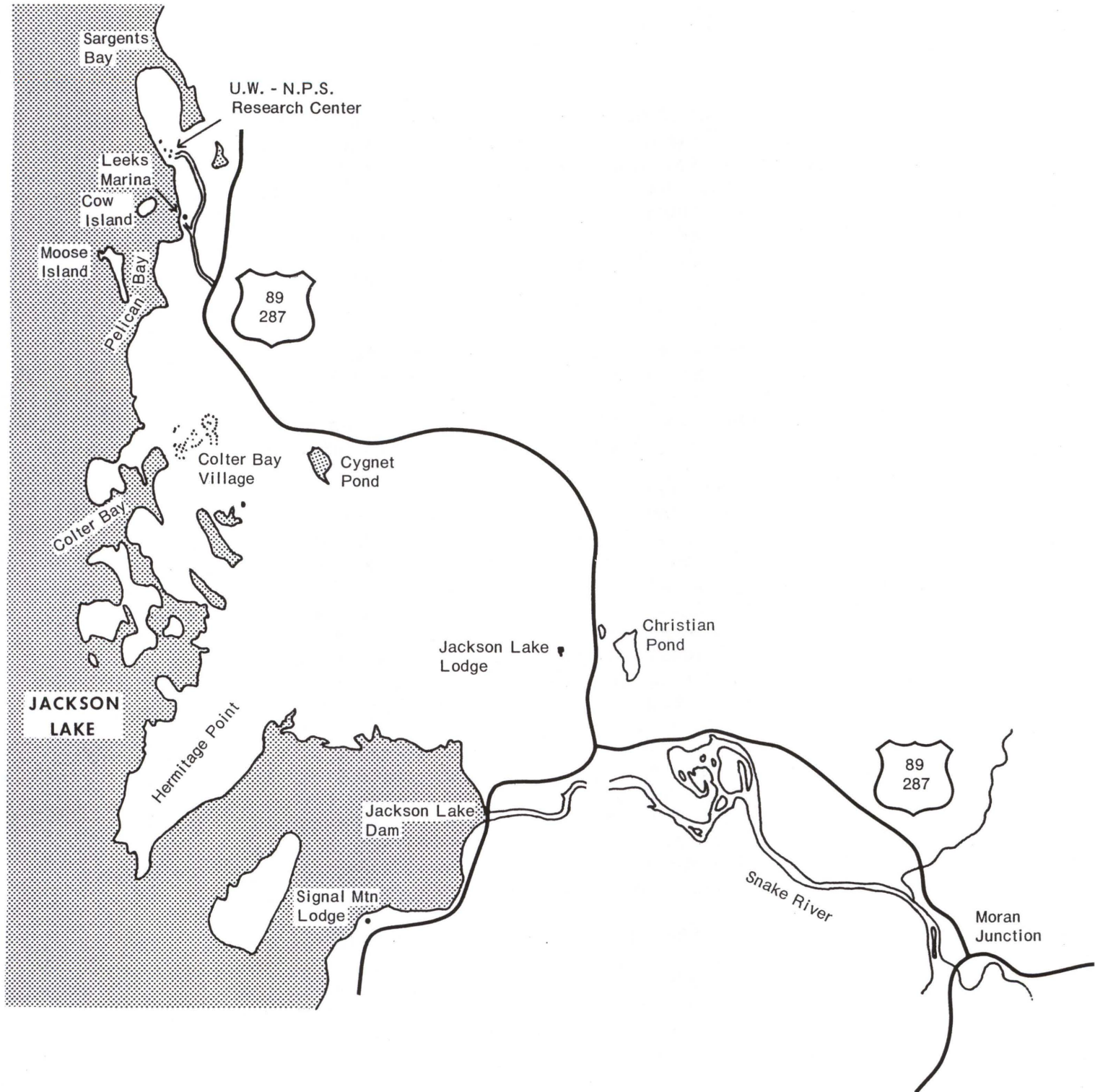




UNIVERSITY OF WYOMING-NATIONAL PARK SERVICE RESEARCH CENTER

University of Wyoming
National Park Service Research Center
Third Annual Report
1979





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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 and South Dakota because of the unique features those areas possess. Administratively, the Research Center is governed by an 8-member Steering Committee composed of 4 University of Wyoming representatives and 4 National Park Service representatives. The University of Wyoming ~~Vice President for Research~~ 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 four 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 concentrated 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 research institution. Undergraduate and graduate students cannot be project investigators. 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 by mid-February.

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STEERING COMMITTEE

Mr. Jack Stark, Superintendent, Grand Teton National Park,
National Park Service;

Mr. Neil J. Reid, Chief Scientist, Rocky Mountain Region, National
Park Service;

~~Mr. Homer Rouse, Superintendent, Bighorn Canyon National Recreation
Area, National Park Service;~~

Mr. John Townsley, Superintendent, Yellowstone National Park,
National Park Service;

~~Dr. Ronald Beiswenger, Department of Geography and Mathematics
and Science Teaching Center, University of Wyoming;~~

Dr. Donald J. Brosz, Department of Agricultural Engineering,
University of Wyoming;

~~Dr. E. Gerald Meyer, Vice President for Research, University of
Wyoming and Steering Committee Chairperson;~~

~~Dr. Donald Veal, Department of Atmospheric Science, University of
Wyoming;~~

Dr. Kenneth L. Diem, Ex-officio Member, and Director, UW-NPS
Research Center;

*add
new members*

DIRECTOR'S REPORT

Sixty four research proposals were submitted to the Research Center for the 1978-79 season. Twenty eight of these proposals, submitted by 25 investigators from 14 institutions, were approved. Also, 20 of these proposals received funding support from the Center. Eleven of those proposals receiving funding were continuing projects. Additional supporting funds were provided by sponsoring institutions: The National Science Foundation, U.S. Water and Power Resources Service and the Wyoming Game and Fish Department. Distribution of the projects included 1 in Fort Union Trading Post National Historic Site, 1 in Glacier National Park, 8 in Yellowstone National Park and 1 jointly in Yellowstone National Park and Grand Teton National Park. Fourteen of these projects were conducted by researchers residing at the Research Center.

With the exception of the Darkroom, the Berol Laboratories were fully operational when the Center's field activities were initiated in mid-May. Modifications of the Double Cabin as a living unit, the electric line system and the water system were major Center maintenance projects for the summer. University Physical Plant personnel and equipment were used to oil the exterior log wall structures of the Berol and Johnson Lodge buildings. Lack of trenching equipment delayed burying electric lines to the Boat House which in turn delayed the internal modification of that structure for an aquatic laboratory. Telephone communications with the Research Center were vastly improved with the new buried cable, private lines and the pay telephone.

Various supporting equipment was added to strengthen the Research Center's meeting facilities and the Library in the Berol Lodge. In the course of the summer three working scientific meetings were held in the foregoing facilities: the Pacific Flyway Management Plan Workshop (U.S. Fish and Wildlife Service) with 45 participants; the Western Energy and Land Use Conference (U.S. Fish and Wildlife Service) with 25 participants; and the Eisenhower Consortium for Western Environmental Forestry Research (U.S. Forest Service and 9 Rocky Mountain universities) with 18 participants. In the three meetings, the physical facilities and the quiet, aesthetic atmosphere of the Center were very favorably noted by the participants.

The Research Center's Seminar Program was activated following the suspension during the Center's relocation to the new AMK site. Five seminars by investigators from four institutions dealt with topics concerning digger wasp behavior, osprey and bald eagle populations, long term microtus population cycles, lung worm parasites in elk and butterfly and moth distribution and evolution in Western

Wyoming.

The development of better communication channels with the smaller National Park areas in the four states was begun with on site visits by the Director to Fossil Butte National Monument, Big Hole National Battlefield and the Grant-Kohrs Ranch National Historic Site. These visits will be extended to the remaining small Park areas to more fully explain the Research Center's program, to obtain first hand information on their specific needs and problems and to encourage their participation in the Center's program.

Kenneth L. Diem
Director

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).



GRAND TETON NATIONAL PARK

ANTWEILER
BAGDONAS
BENNETT
BERGSTROM
ENG
EVANS

McKNIGHT
MEEDER
MORRIS
PINTER
SAUER
ZEVELOFF

