



# NATIONAL PARK SERVICE RESEARCH CENTER



## 18TH ANNUAL REPORT 1994



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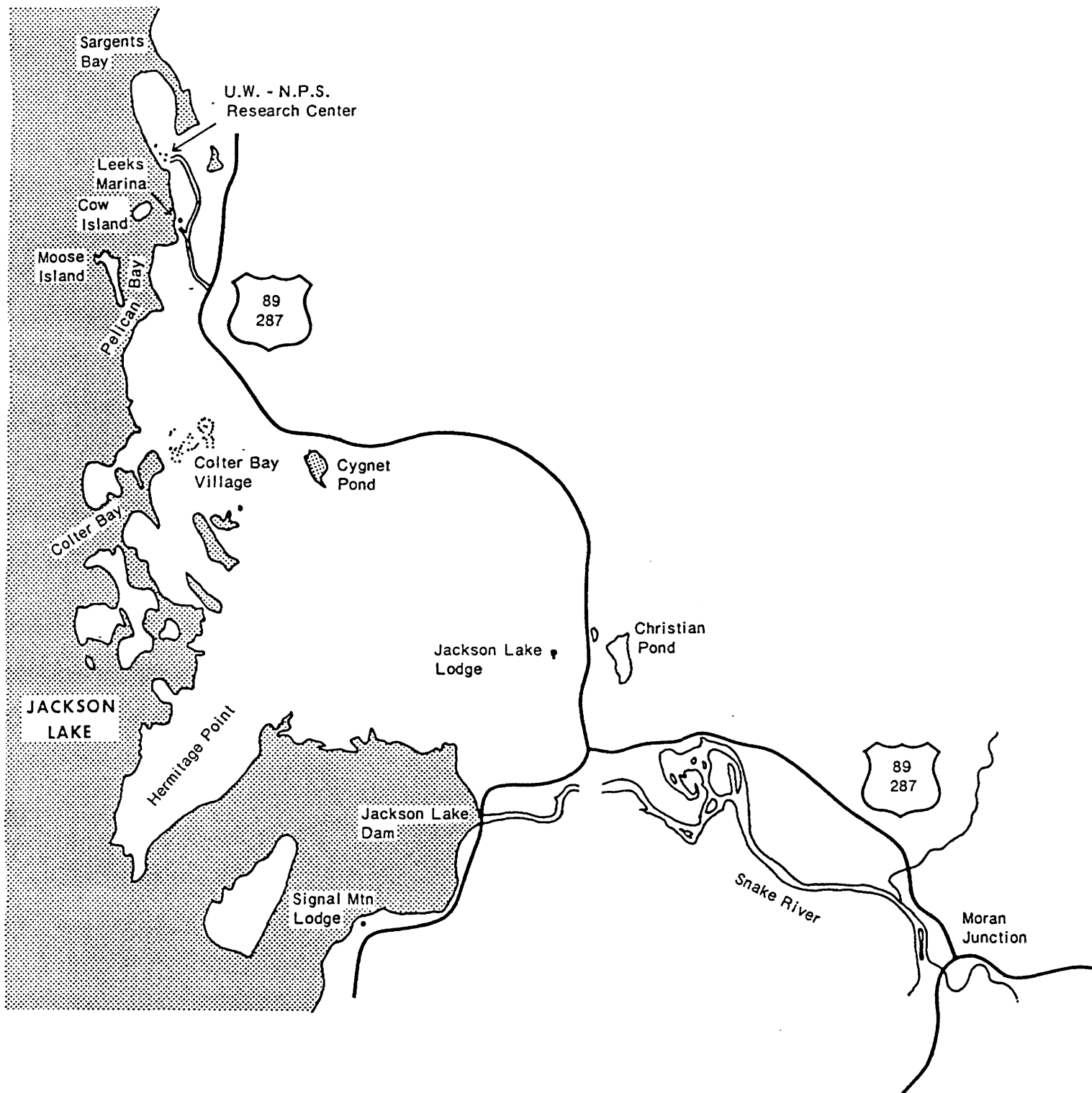


18TH ANNUAL REPORT 1994

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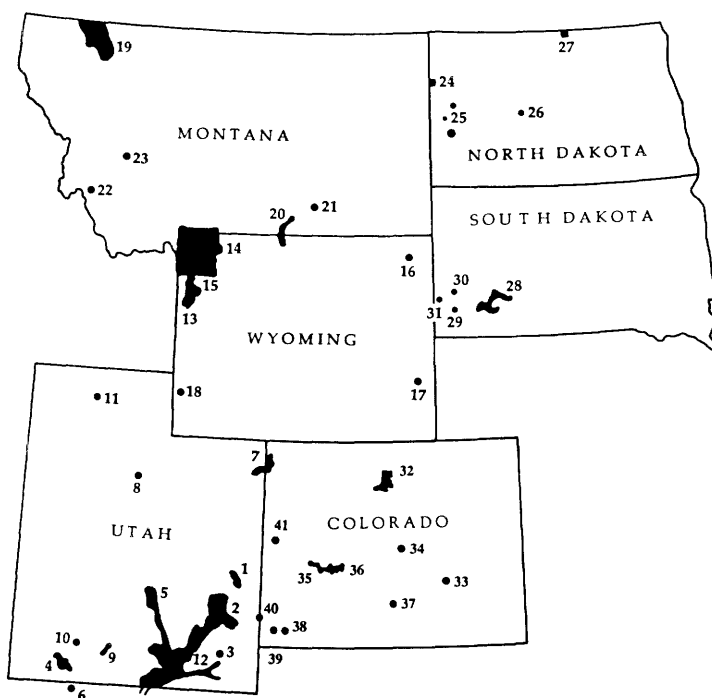
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### ♦ UTAH

1. Arches National Park
2. Canyonlands National Park
3. Natural Bridges National Monument
4. Zion National Park
5. Capitol Reef National Park
6. Pipe Spring National Park
7. Dinosaur National Monument
8. Timpanogos Cave National Monument
9. Bryce Canyon National Park
10. Cedar Breaks National Monument
11. Golden Spike National Historic Site
12. Glen Canyon National Recreation Area

### ♦ WYOMING

13. Grand Teton National Park
14. Yellowstone National Park
15. John D. Rockefeller, Jr. Memorial Parkway
16. Devils Tower National Monument
17. Fort Laramie National Historic Site
18. Fossil Butte National Monument

### ♦ MONTANA

19. Glacier National Park
20. Bighorn Canyon National Recreation Area
21. Little Bighorn Battlefield National Monument
22. Big Hole National Battlefield
23. Grant-Kohrs Ranch National Historic Site

### ♦ NORTH DAKOTA

24. Fort Union Trading Post National Historic Site
25. Theodore Roosevelt National Park
26. Knife River Indian Villages National Historic Site
27. International Peace Garden

### ♦ SOUTH DAKOTA

28. Badlands National Park
29. Wind Cave National Park
30. Mount Rushmore National Memorial
31. Jewel Cave National Monument

### ♦ COLORADO

32. Rocky Mountain National Park
33. Bent's Old Fort National Historic Site
34. Florissant Fossil Beds National Monument
35. Black Canyon of the Gunnison Nat. Monument
36. Curecanti National Recreation Area
37. Great Sand Dunes National Monument
38. Mesa Verde National Park
39. Yucca House National Monument
40. Hovenweep National Monument
41. Colorado National Monument



# CONTENTS

	PAGE
STEERING COMMITTEE-----	vii
INTRODUCTION-----	ix
FEATURE ARTICLE-----	1
A Remote Sensing and GIS-Based Model of Habitat as a Predictor of Biodiversity D.M. Debinski & K.Kindscher -----	3
RESEARCH PROJECT REPORTS-----	17
Multi-Park Studies	
Stanton et al. -----	19
Badlands National Park	
Plumb -----	29
Plumb -----	31
Grand Teton National Park	
Blodgett & Jakubauskas .....	37
Cody .....	42
Greene & Roach .....	46
Jannett .....	52
Doyle & Knight .....	56
McKnight .....	61
Moshier et al. ....	65
Montopoli et al. ....	76
Pinter et al. ....	92
Pinter .....	94
Jewel and Wind Cave National Parks	
Mattson et al .....	99

**Yellowstone National Park**

Crabtree.....	105
Merrill & Marrs .....	114
Merrill et al.....	126
Moen, Oksanen & Huntley .....	131
Patla & Peterson .....	135
Sylvester & Smith .....	145
Turner & Peterson .....	152
Vyse.....	156
Whitlock.....	160



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# INTRODUCTION

## 1994 ANNUAL REPORT



During the period of this report the University of Wyoming-National Park Service (UW-NPS) Research Center supported and administered research in the biological, physical and social sciences performed in national parks, monuments, and recreation areas in Wyoming and neighboring states. The UW-NPS Research Center solicited research proposals from university faculty or full-time governmental research scientists throughout North America via a request for proposals. Research proposals addressed topics of interest to National Park Service scientists, resource managers, and administrators as well as the academic community. Studies conducted through the Center dealt with questions of direct management importance as well as those of a basic scientific nature.

The Research Center continues to consider unsolicited proposals addressing applied and basic scientific questions related to park management. Research proposals are distributed to nationally-recognized scientists for peer review and are also reviewed and evaluated by the Research Center's steering committee. This committee is composed of university faculty and National Park Service

representatives and is chaired by the Director of the UW-NPS Research Center. Research contracts are usually awarded by the middle of March.

The UW-NPS Research Center also operates a NPS-owned field research station in Grand Teton National Park. The research station provides researchers in the biological, physical, and social sciences enhanced opportunity to work in the diverse aquatic and terrestrial environments of Grand Teton National Park and the surrounding Greater Yellowstone Ecosystem. Station facilities include housing for up to 40 researchers, wet and dry laboratories, a library, herbarium, boats, diving equipment, traps, environmental monitoring instrumentation and shop accommodations. The research station is available to researchers working in the Greater Yellowstone Ecosystem regardless of funding source, although priority is given to individuals whose projects are funded by the Research Center.

Special acknowledgement is extended to Ms. Karen Noland, Office Associate, for her skills and dedication to the Research Center which were a vital contribution to this publication.

### RESEARCH PROJECT REPORTS

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





## FEATURE ARTICLE











Harlow and Harlow: Front Matter and Table of Contents

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