UNIVERSITY OF WYOMING

NATIONAL PARK SERVICE RESEARCH CENTER

14TH ANNUAL REPORT 1990

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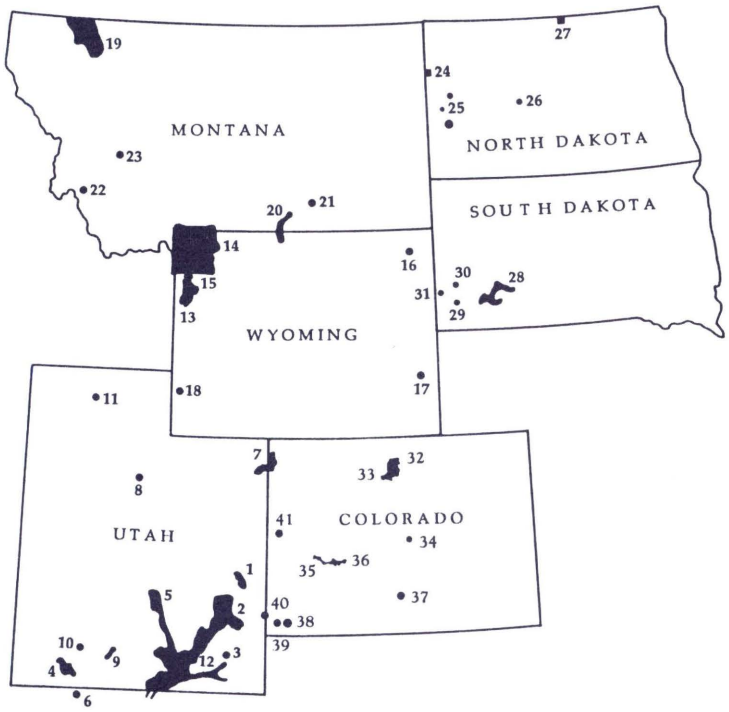

✦ WYOMING

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 Recreational Area
21. Custer 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 Gardens

✦ SOUTH DAKOTA

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

✦ 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 Monument
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

✦ COLORADO

32. Rocky Mountain National Park
33. Shadow Mountain National Recreation Area
34. Florissant Fossil Beds National Monument
35. Black Canyon of the Gunnison National Monument
36. Curecanti National Recreation Area
37. Mesa Verde National Park
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INTRODUCTION
1990 ANNUAL REPORT

The University of Wyoming-National Park Service (UW-NPS) Research Center supports and administers research in the biological, physical and social sciences performed in the 40 national parks, monuments, and recreation areas in Wyoming, Montana, North Dakota, South Dakota, Colorado and Utah. The UW-NPS Research Center solicits research proposals from university faculty or full-time governmental research scientists throughout North America through a request for proposals. Research proposals address topics developed by National Park Service scientists, resource managers, and administrators and deal with questions of direct management importance as well as those of a basic scientific nature.

The Research Center also considers unsolicited proposals addressing applied and basic scientific questions related to park management, but which may not have been included in the request for proposal packet. 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 five university faculty and five National Park Service representatives and is chaired by the Dean of the College of Arts and Sciences, University of Wyoming. This committee is responsible for all decisions regarding awarding of research contracts. 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, 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.

Our *Annual Report* has been given a "face-lift" this year. In addition to the improved production and layout, we have also implemented a feature essay. We hope that you find our annual report to be informative and interesting. All comments or suggestions will be welcomed.

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).

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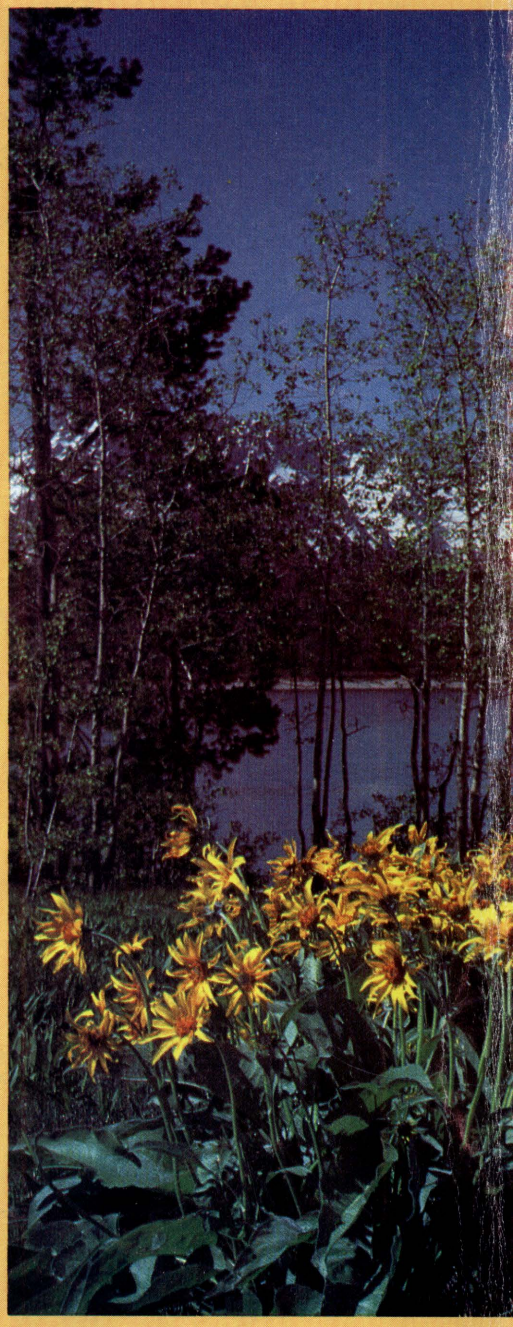
Feature Articles