CFER

Cooperative Forest Ecosystem Research

LONG-RANGE STRATEGIC PLAN

The Cooperative Forest Ecosystem Research (CFER) Program

Long-Range Strategic Plan

The Cooperative Forest Ecosystem Research Program, commonly referred to as CFER, was formed in 1995 to facilitate management of forest ecosystems on public lands administered by the Bureau of Land Management (BLM) in western Oregon. The BLM is a federal land-management agency that oversees millions of acres of forested land within the western United States, including about one-quarter (about 2,330,000 acres) of the federal lands in the range of the northern spotted owl in western Oregon. Founding cooperators of CFER are the Oregon State Office of the BLM; the U.S. Geological Survey's Biological Resources Division, Forest and Rangeland Ecosystem Science Center; and two colleges at Oregon State University (OSU), the College of Forestry and the College of Agricultural Sciences. The purpose of the program is to facilitate management of forested ecosystems in the Pacific Northwest, with special emphasis on providing information to the BLM and other cooperators in western Oregon. These intentions are identified explicitly by the program's mission statement, goals, and objectives.

CFER Mission, Goals & Objectives

Mission

The CFER program will work closely with resource managers, researchers, and decision-makers to develop and convey information needed to successfully implement ecosystem-based management at forest stand and watershed scales, especially on lands dominated by young forests and fragmented by multiple ownership.

Goals

The primary goals of CFER are to provide forest managers with new information to evaluate current and proposed strategies and practices associated with management of forest ecosystems, and to facilitate development of sustainable forest practices. This will be accomplished with team-oriented, integrated research.

Objectives

The objectives of the CFER program are to:

1. Further the understanding of ecological relationships in forest ecosystems with special emphasis on biodiversity and its management in young forest stands and riparian zones; and
2. Deliver information to cooperators, forest managers, and the general public in a timely and responsive manner.

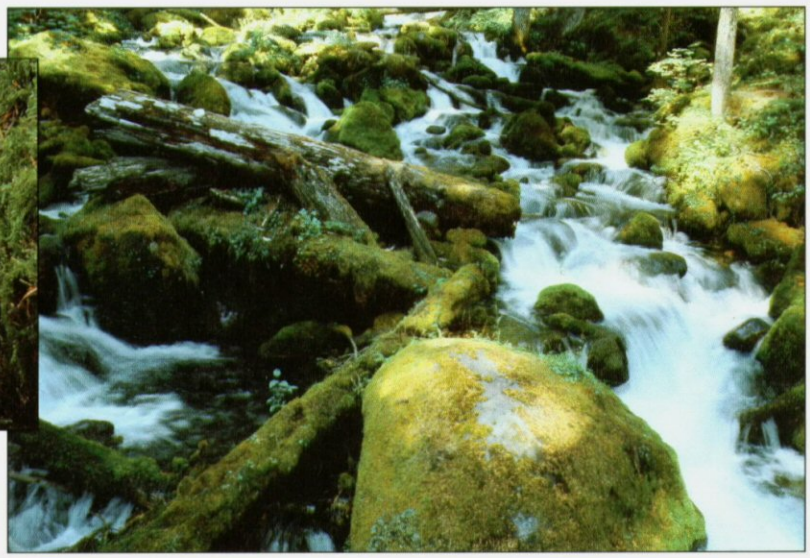
This long-term strategic plan describes general steps to be taken as the CFER Program accomplishes its objectives and moves toward attainment of the program's mission and goal. The geographical emphasis associated with the CFER Program is founded within the historic context of the program and the forest management issues confronting the BLM. The emphasis is on that portion of Oregon west of the crest of the Cascade Mountains, simply referred to as western Oregon. That said, it also is expected that many aspects of the program will result in research activities and information relevant to management of all lands within the scope of the Northwest Forest Plan. The Northwest Forest Plan was adopted in 1994 to implement management of forest ecosystems on a regional scale and, because of the issues that were pivotal in its development, provides guidelines for managing forested federal lands within the range of the northern spotted owl. That range extends from northern California to the Canadian border, and from the Pacific coast to the Cascade Mountains.

Background

Coniferous forests dominate the landscape of western Oregon and the western portion of most of the Pacific Northwest. Dense, moist forests of Douglas-fir, western hemlock, and associated species are most common within this forest type. Other types of coniferous forests, mixed forests of conifers and hardwoods, and a variety of other plant communities also are present. For example, the lowland river valleys between the Coast Range and the Cascade Mountains support extensive areas of deciduous woodlands and swales, riparian forests, grasslands, and herbaceous wetlands. The Klamath Mountains near the California and Oregon border support a diverse mixture of drought-resistant conifers and hardwoods that have evolved under conditions of low precipitation and complex geological and ecological forces. Because of the diversity of plant communities to be considered, effective forest management in western Oregon demands a perspective that is multifaceted and viewed from broad spatial scales.

For about a century, forest management in western Oregon, and for that matter throughout most of the Pacific Northwest, emphasized clearcut harvesting. The result was substantial loss of old-growth forests and extensive forest fragmentation. This in turn contributed to concerns about maintaining biodiversity and preserving native wildlife. The northern spotted owl, several salmonid species, and some amphibians are frequently cited as examples of species whose existence was threatened by historic practices of forest management. Reforestation practices also have contributed to management concerns. Since about 1970, reforestation with Douglas-fir following clearcutting has been a common practice, and consequently, young, dense stands of this species are now common. These stands often lack attributes of old-growth forests that can be important to some wildlife, such as large snags, various types of decaying logs, and large, living trees.

Robert Burr Smith



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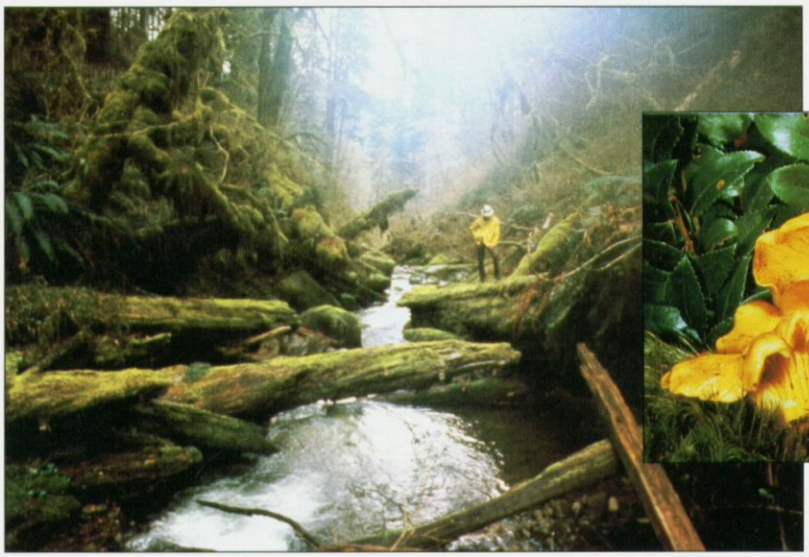
The BLM has actively managed a large portion of its land using clearcut harvesting and reforestation to produce even-aged stands of Douglas-fir. The Northwest Forest Plan has established new directions in forest management, which BLM and other federal agencies must implement. Consequently, the BLM is actively developing new management strategies in order to comply with the plan. Acquisition of information that supports implementation of the Northwest Forest Plan is a top priority of CFER, and research is needed for obtaining much of that information. In fact, development of a research agenda by the BLM to meet these information needs provided the impetus for formation of the CFER Program.



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Catherine Ardrey

Research Direction

CFER research is developed in accordance with the program's mission, goals, and objectives. This program is striving to maintain adequate flexibility for addressing short-term information needs, while providing the continuity necessary to address longer-term questions. The information needs of resource managers are inherently complex and integrative, and many of the issues extend over many years and a broad geographic area. Accordingly, CFER has adopted an integrated approach that is oriented towards answering questions at different scales of time and space.

Research issues related to the BLM's management of western Oregon forests currently revolve around implementation of the Northwest Forest Plan. A recent assessment of BLM research needs in this area revealed three main subcategories: the ecology and management of young forest stands; riparian systems; and taxa that were identified as being of special management concern in the Northwest Forest Plan. Research questions related to these issues will be the initial focus of the CFER Program.

CFER has adopted a research emphasis based on the general guidance provided by the program's research problem analysis (Smith et al. 1997). Research is guided by an ecosystem perspective of forest management, with an emphasis on:

- effects of natural disturbance, forest management, and their interactions on ecosystem function and development;
- ecology of individual species within a general framework of understanding community and ecosystem-level relationships;
- nature of ecosystem processes and functions, and critical linkages among ecosystem components; and
- biotic and abiotic patterns, processes, and linkages at multiple levels of time and space.

A single research program cannot effectively meet all of the information needs associated with management of forest ecosystems, and many pertinent questions are being investigated by other research groups. Thus, CFER will maximize overall effectiveness by developing and promoting cooperation and interaction with researchers and land managers from other organizations and programs.

Successfully achieving the goal of CFER requires an open exchange of information. A key issue is providing forest managers with relevant scientific knowledge across a diverse array of disciplines and promoting the use of this knowledge to implement improved management practices. Therefore, CFER must be sensitive to current and emerging management issues and use this information in the development of new research. Furthermore, CFER is developing ways to ensure information flow both from CFER to BLM and other cooperating agencies, and from cooperators and forest managers to CFER.

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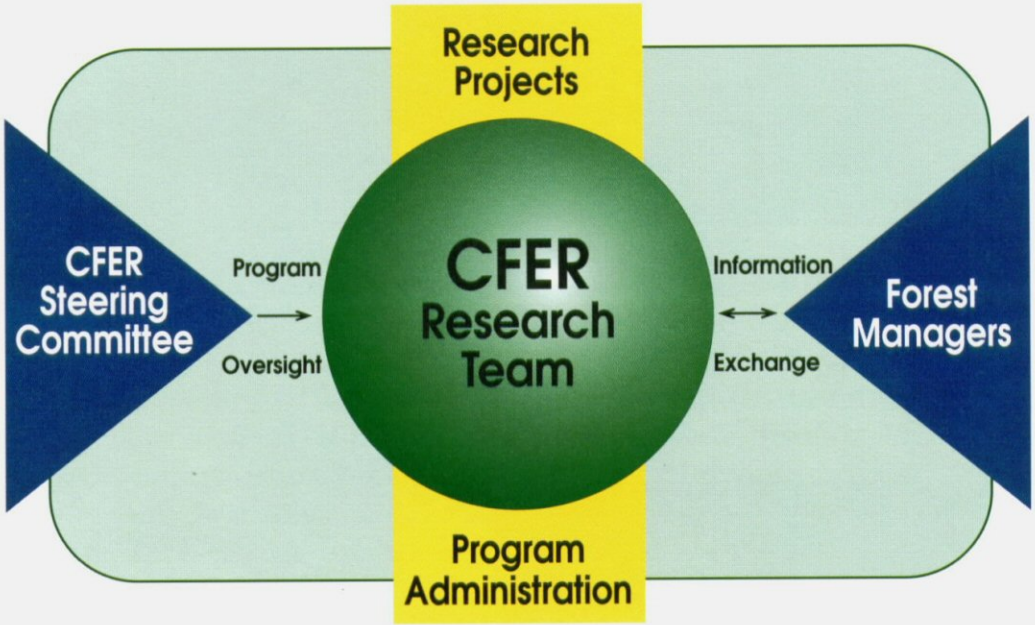
Hal Brown, Cornell Laboratory of Ornithology

Program Structure

The CFER Program has an adaptable structure designed to adjust to the changing demands and short-term needs of resource managers, while maintaining the continuity to pursue problems requiring many years of effort.



Cooperators

The CFER Program's four original cooperators have slightly different roles. The BLM will provide study sites, be responsible for installation of management projects, and provide other assistance and in-kind support as needed. The USGS Forest and Rangeland Ecosystem Science Center will provide financial support for CFER and for scientists participating in the program. The OSU Colleges of Forestry and Agricultural Sciences will assign faculty and staff to participate in conducting the research. Additional cooperators may be added as appropriate.

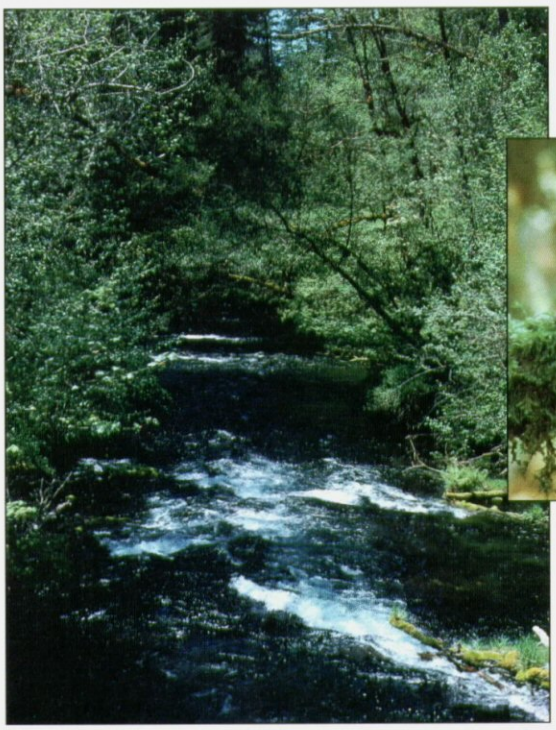
CFER Steering Committee

The CFER Steering Committee has a representative from each of the cooperating organizations. The founding Steering Committee consists of a representative from the Oregon BLM State Office, the Director of the Forest and Rangeland Ecosystem Science Center, and one representative from each of the participating colleges. The Steering Committee provides program guidance and oversight, facilitates review and approval of proposals, and maintains ties with cooperating organizations. Additional Steering Committee members may be added as needed.

CFER Research Team

The CFER Research Team administers CFER, conducts research, and coordinates information exchange. Additionally, the Team will manage the routine operations required to fulfill the objectives of the program, including budget administration and allocation and supervision of the support staff. The team-oriented structure of the program is important to its success. Because the goals and objectives of CFER are integrated and interdisciplinary, the Research Team's membership reflects a broad range of academic disciplines and experience in ecology and management of terrestrial and aquatic ecosystems. Team members work together to ensure a high level of integration in all aspects of program development and execution. Initially, the CFER Team consists of five scientists from the Forest and Rangeland Ecosystem Science Center, the OSU College of Forestry, and the OSU College of Agricultural Sciences.

The CFER Research Team will be responsible for designing and implementing applied research projects. The major thrust is to conduct integrated research geared toward production of scientifically credible results that will be published in peer-reviewed scientific publications and other appropriate outlets.



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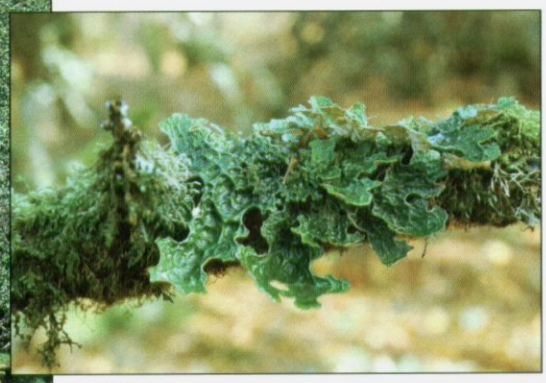

Bruce McCune

Involvement of Other Research Scientists

Involvement of scientists who are not members of the CFER Team is essential to the research program because the broad objectives that provide the foundation of the program cannot be effectively studied by a single group. Collaboration with other scientists provides a greater breadth of experience and increases the creativity of the program. Scientists who

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are not members of the CFER Research Team become involved in two ways. As appropriate, other scientists are invited to collaborate in specific research projects being directed by scientists on the Team. Such collaboration will enhance the value of the team's research program. In addition, program funds will be provided to other scientists to pursue specific, critical research questions whenever they cannot be adequately addressed by the Research Team. The Team will be responsible for coordinating involvement of non-CFER Research Team scientists and, with appropriate CFER Steering Committee review and oversight, will solicit and evaluate proposals for studies when necessary.

Information Exchange

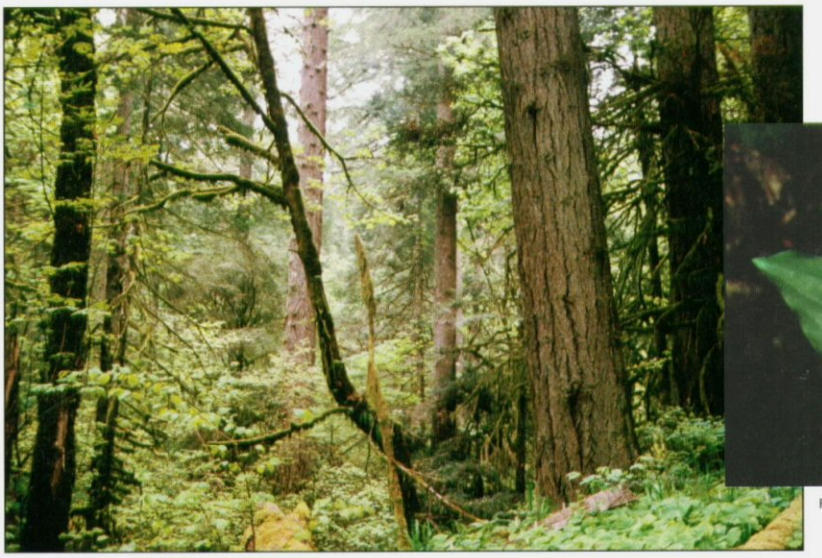
To be successful, CFER requires a regular exchange of information between researchers and interested management agencies. The Research Team will develop and use existing means for transferring information between CFER and cooperating agencies and forest managers. Information on research needs and opportunities will be solicited from the BLM (and other cooperating agencies) and forest managers in general. This flow of information is essential for developing technology transfer programs that can meet the needs of resource managers. In addition, information on the latest research findings and the current state of scientific knowledge will be directed from CFER to the BLM (and other cooperating organizations) and forest managers in general. CFER recognizes that providing this information in a timely manner is very important to managers.

Information exchange will be accomplished by using a number of mechanisms. Information flow from cooperators and forest managers will result from informal discussions and meetings, as well as organized conferences designed to seek input. Information flow from CFER to cooperators and forest managers will include a variety of electronic (e.g., a web site), written (e.g., a newsletter), and face-to-face (e.g., workshops, meetings, and field tours) approaches.

Program Duration

The CFER Program began with the Memorandum of Understanding signed by the program's initial cooperators in June 1995, and a mission statement for the program was adopted by the program's Steering Committee in March 1996. A Research Problem Analysis to identify the information needs that formed the basis for the research and technology transfer programs of CFER was extensively reviewed and completed in June 1997 (Smith et al. 1997). The CFER Research Team of five scientists, established in July 1997, has used the Problem Analysis for guidance in developing the structure and specific direction of the program.

Several years will be required to meet many of the research and information needs identified in the Problem Analysis. The research program was formally implemented in October 1997 and is anticipated to last a minimum of 10 years to accomplish program objectives.



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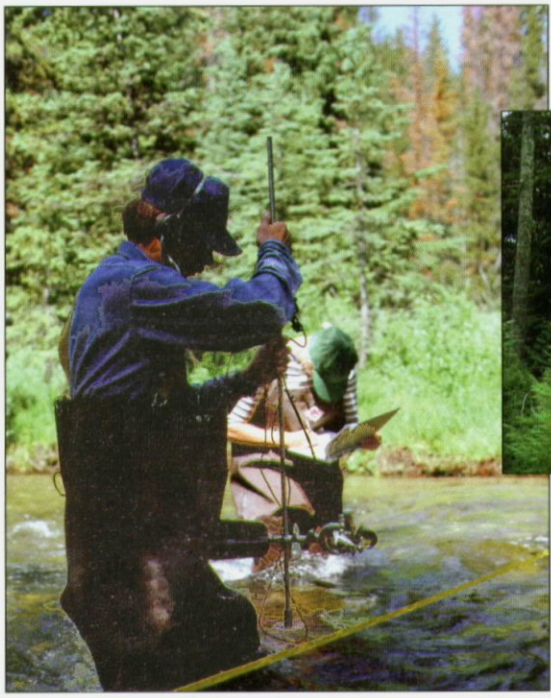
Funding

Initial funding for CFER will be provided by the Forest and Rangeland Ecosystem Science Center, USGS Biological Resources Division. As the program evolves, additional funds from other cooperators may be available. In FY 1996, funding supported development of the problem analysis and this long-range plan. In FY 1997, additional support was allocated for planning, coordination, program development, and initiation of pilot studies. The CFER Program is being implemented in FY 1998 with $500,000 in funding. Funding in FY 1999 through 2007 is expected to be approximately $1,200,000 annually.



Robert Gresswell

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Program Review & Oversight

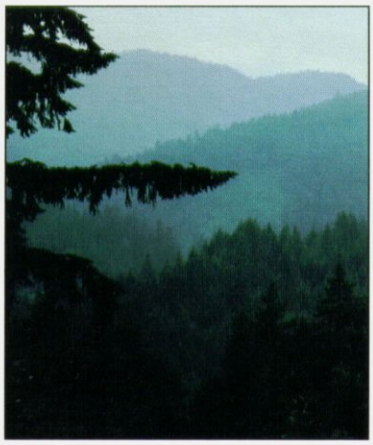
Principal review and oversight for CFER are provided by the CFER Steering Committee. Progress on the program's research and information exchange activities is reported to the Steering Committee annually. Program reviews are conducted every five years. In addition, an independent peer-review process will be used to evaluate all research plans and scientific products.

Reporting Program Progress

Program progress is reported to cooperators, forest managers, and researchers in many ways. This will be accomplished primarily with the CFER Annual Report. In addition, regular periodic updates of CFER progress are provided through CFER's information exchange program.

References

Smith, J. P., R. E. Gresswell, and J. P. Hayes. 1997. A research problem analysis in support of the Cooperative Forest Ecosystem Research (CFER) Program. Report to Forest and Rangeland Ecosystem Science Center, Biological Resources Division, US Geological Survey, Corvallis, Oregon. Oregon State University Contract Agreement No. H952A1-0101-25. 92 p.



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