

**Organization of
Biological Field Stations**

**Newsletter
No. 51
Winter 1990**



ORGANIZATION OF BIOLOGICAL FIELD STATIONS

Number 51

Winter 1990

Newsletter Editor

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Powdermill Biological Station

The Carnegie Museum of Natural History

Rector, PA 15677

NEWSLETTER

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HAPPY
HOLIDAYS

I. MINUTES--1990 ANNUAL MEETING FOR BUSINESS, LAKE ITASCA FORESTRY AND BIOLOGICAL STATION, LAKE ITASCA, MN

I. Session 1 - Sept. 20 - 8:00 a.m.

A. In attendance: Appendix I lists those present.

B. President Jerry Rozen convened the meeting which extended with occasional interruptions over the two day interval. Having consulted with the executive committee, he announced this year's nominating committee: Gerry Sherba, Dave Dawson and Nevin Aspinwall. Vacancies are: President, Vice-President, Editor and one Member-at-Large for the executive committee. In addition two standing committees (Administration and Facilities as well as Public Relations) will have vacant chairs. Continuing committee chairpersons are Susan Allen (Education) and Steve Havera (Research).

C. The 1989 minutes were approved as in the fall Newsletter.

D. The report of the Secretary/Treasurer. Membership stands at 154 (109 stations, 45 individuals). Since the 1989 meeting there have been 15 new members, 8 new directors at member stations and 3 resignations. For details, see Appendix II.

E. Treasurer's report. Since 1989 the checking account balance has risen by \$102. Income from dues, interest (from NOW checking account and CD) totaled \$6736.71; expenses, \$5013.50. Among the latter, office and misc. were about \$1500.00; AIBS dues, \$100.; travel (by board members to AIBS meetings and by guests invited to the annual meeting) \$2116.50; Newsletter and Directory postage were \$890.66. On Aug. 31, '90, the checking account balance was 6838.78. Note: OBFS holds CD #6837 for \$7500 at the Jefferson Bank in Eureka MO., expiration date, October 2, 1990. Coles requested guidance concerning whether to renew or cash in this asset. (Subsequently, hearing no advice and realizing that expenses loom in the future for publication of a brochure, and of a revised directory, Coles decided to place these funds in the NOW checking account which still earns interest.) For details see Appendix III.

F. Editor's Report (Joe Merritt):

1. Newsletter. Joe reviewed the two issues (Autumn & Spring) of 1989-90. The Autumn issue carried minutes, a questionnaire, a request for field station descriptions and listed members' addresses. The spring issue had announcements concerning the approaching annual meeting and descriptions of field stations. Joe extracted commitments for field station descriptions from Sara Greene (Cascade Head), Cindy Hunter (Hawaiian Institute of Marine Biology),

Ron Lawrenz (St. Croix Watershed Research Station), and Al Muth (Deep Canyon Reserve).

2. Directory. Joe reviewed the production of the Directory, currently being sold at \$3.00 plus \$1.25 for mailing. The Directory cost \$11,418.15 of which \$8869.15 was for printing 500 copies. The supply has dwindled to 50 copies. We need Directories for new members who get a complimentary copy, and for those who inquire. When the brochure appears, there will be additional requests for the Directory. There was consideration of either reprinting the present version, or revising (updating) the Directory as a new edition. The matter was referred to the Executive Committee for further deliberation.

G. Historian's Report (Bob Fisher): Bob requests contributions of information from members about the early days of OBFS. He needs old Newsletters, from scattered dates prior to 1980. He reviewed the history of OBFS which first met in 1966 at the encouragement of the National Science Foundation, at Cedar Creek Biological Station. In 1967 we met at Lake Texoma. Early movers included Arch Tryon, William Marshall, Loren Puttnam and others. The traditional group photo was taken later during the gathering at Itasca. We discussed the possibility of holding a reunion by inviting the original/founding members to attend our 25th anniversary meeting in 1991.

H. Summer Course Announcement Poster (Susan Allen): Sue summarized the poster finances revealing a deficit (\$193.83) for the '90 edition. This should be covered by revenues from the '91 edition. She distributed forms to be completed by those wishing representation on the '91 poster and will contact others not present by mail. She announced an intention to use a different colored dot on the map for those stations just providing research opportunities, thus to include all station members. Sue also plans for the '91 poster be highlighted with bright colors as currently in vogue.

I. Future Meeting Sites (Jerry Rozen):

1. In '91 we meet at the Organization of Tropical Studies (OTS) field station ("La Selva") in Costa Rica. Lucinda McDade presented a brief description of the facilities. The dates will be Sept. 19-21 (Thur. through Sat.) Charges for accommodations will be at the rate for researchers (with NSF subsidy). Members are welcome to bring families. The main group of attenders would arrive in San Jose Wed. afternoon because of airline flight schedules, and stay the night. The group will travel Thur. A.M. and pause en route for a trail breakfast perhaps at a pass at 2000m. Others coming early or staying late can be assisted in arranging for excursions to other parts of Costa Rica by the OTS office in San Jose. Such OTS sites as Palo Verde (in the northwest) or the Wilson Botanical Garden (in the south) might be visited.

La Selva is lowland tropical riverine forest, 1200 meters lower than San Jose. The timing for this meeting is good; crowding by tourists is not a problem in September because it is wet season. At

La Selva, typically the wet season reaches a peak in May-June and another in November-December, but there is a period of reduced precipitation in late August and early September. It rains year 'round - there is no month of the year with less than 15 cm. So bring clothing to shed water. Residential facilities (with bunk beds) are on the east bank of the Rio Puerto Viejo. A swinging bridge connects these with the labs and landscape on the west bank which is operated as a biological reserve. From the bridge one sees turtles, caiman and the characin (fruit eating) fishes. Many of the forest trails are boardwalks or concrete because of soft soil in the wet season and to protect tree roots from soil compaction. There will be opportunities to get up early and go birding before breakfast. There are numerous species of frogs, 60 snakes, (5 or 6 are poisonous), 450 birds, 60-70 bats, including the endemic white bat Ectophyla alba which makes a tent from a palm frond, monkeys, anteaters, cats (seldom seen, but whose tracks are common) and many insects, including army ants. Visitors should bring shorts, bathing suit, and snorkel. La Selva provides sheets, towels, and blankets. Cheap 50% cotton, 50% polyester work-pants from Sears or Penney's are recommended. Jeans never dry out and hold moisture heavily and indefinitely.

The business meeting was adjourned for other purposes.

II. Session 2. Friday, September 21, 10:30 a.m.

I. Future Meeting Sites continued:

2. Jerry welcomed invitations in our quest for meeting locations in 1992 and beyond. Already on record are invitations from Malheur (Oregon), the Adirondacks station (northern New York), Flathead Lake (Montana), the Northern Studies Centre (Churchill, Manitoba) and Mountain Research Station (Colorado). Jerry indicated that we would soon decide where to meet in 1992, and we could plan for 1993 as well.

J. Spontaneous discussion arose concerning NSF's requirement that stations provide funds to match agency funds in the special competition. This is regarded as an onerous burden worthy of modification toward greater flexibility. Ken Armitage while president had written a letter on behalf of the membership about this, but to no avail. Now, perhaps, a new letter would be in order. A show of hands indicated that a number of stations had not applied because of this requirement. It was suggested that NSF allow salary money be used to match grant money - for example the salary of a data manager be used to match funds for data management equipment. Numerous comments were offered. Jerry appointed Art McKee to coordinate drafting of a letter to NSF regarding the cost sharing question. (Before the end of the meeting, such a letter was drafted)

K. AIBS Representative (Steve Havera): See Appendix IV for the report. In Feb., Steve attended the AIBS council meeting in Arlington, VA. Paul Ehrlich is now president; Paul Risser, president-elect. There is an emphasis this year on the role of Biology regarding agriculture and the bio-sphere and how the AIBS may speak for the disci-

pline. Discussions centered on how might AIBS better serve as an umbrella representing 70,000 biologists nationwide, while only 10% of these are dues paying members. The next general meeting of the AIBS council, set for Trinity University in San Antonio, TX., will focus on Biological (Environmental) Education.

The editor of Bioscience spoke emphasizing two goals. The first, which has been achieved, was to broaden the coverage and scope of BIOSCIENCE. The second goal, not yet realized, was to recruit additional overseas readership. There was also discussion concerning the number of female, minority, and disabled persons in biology.

Jerry attended a meeting of society presidents convened by AIBS, also attended by senators Gore, TN, Wirth, CO, and Heinz, PA. Each senator said now that the cold war is in decline, environmental issues will loom as a major area of governmental concern for nations, worldwide. Ehrlich is trying to take a strong stand on this area with and for the AIBS. Jerry urged that all biologist support (join) AIBS, which now has a strong record and is well beyond the financial difficulties that plagued it years ago.

Lucinda McDade mentioned that there is an effort to establish a National Institutes of the Environment to parallel NIH. This new agency, would not do in-house research, as does NIH, but would work instead with other organizations active at the interface of Biology, with environmental problems and human activities, especially governmental activities. There would be five separate institutes, each granting funds to researchers. It's now the time to mobilize and lend momentum to they NIE. David Blockstein is the staff person working on this in the Washington office of AIBS.

Art McKee who had been our bridge to the "Research Support" Liaison Committee on Ecology, Evolution and Systematics" reported that the group is moribund or at least in dispaue at the moment.

L. Reports of Standing Committees

1. Administration & Facilities (Chairman Alan Grundman). The results from questionnaires generated by both Alan's committee and that of Linda Vescio regarding how OBFS members manage natural areas were distributed. Those not in attendance wishing a copy should write to Alan or Linda for a copy. Though he will no longer be committee chairman, Alan wishes to continue analysis of the results of his questionnaire. There was general acceptance of this suggestion.

2. Education (Chairman Susan Allen) Sue reported she had just succeeded in reactivating this committee and identifying or recruiting members for it. Members include Eberhardt, Shaw, Webber, Stanford, Scherba, Mahon, Maron and Burkhardt. As an individual, Sue had gathered limited data on charges and will now extend this effort to include all OBFS members. She wishes to asses the state of education at field stations and the fees charged for courses. She will solicit information about what is taught including non-traditional

educational activities, elder hostels, and the like. She will also gather ideas about how to improve education at field stations. Are there new methods which should be applied etc?

3. Research Committee (Chairman Steve Havera) Steve mentioned a publication called the Grants Register, now in it's 12th edition, which gives some 2000 sources of funds and costs \$79.95 It is available from St. Martins Press, Inc.

The committee suggests these topics for discussion at future meetings: Animal Rights, (Is it inhumane to catch a mouse in a snap-trap?), the Freedom of Information Act, the role of public opinion about research activities occurring at field stations, debt for Nature Swaps; the biological survey being done in Costa Rica; the role of the Parks Service and Foundations working for preservation of Costa Rican landscape; how is it that Costa Rica is so different from its neighboring countries?; a review of Costa Rican natural history; and the effects of deforestation and habitat change on population size in migratory bird species.

The committee is also concerned about getting information derived from research performed at field stations into the public awareness. Is there a problem with disseminating of our findings?

4. Public Relations (Laura Carter) Laura reported that the member's desires regarding a brochure have now consolidated. The American Museum of Natural History has donated labor and skill for design and layout. Three draft copies were brought to the meeting as examples of how the front page might look and members were asked to vote for their favorite version. There were also samples of text on hand. The brochure will have color photographs and will use high quality 4-color renditions throughout. If funds permit, 5000 copies will be printed. About 50 free copies would go to each station member of OBFS. Stations will be able to order additional copies and were requested to indicate how many they might want. The budget is set at \$7500; the target date for completion is late 1990. Laura thanked all on the committee who worked at great length in the deliberations that lie behind the production of this document.

It was suggested that we publicize better the availability of the OBFS slide show.

5. Program Committee (Susan Allen) An open meeting (without minutes) for all to render suggestions was scheduled. The 1991 program will be set using those suggestions and others herein.

It was suggested that we establish an awards committee to identify and recognize senior and emeritus field station folks, who have made significant contributions to field stations and to field biology. This matter will be reviewed by the executive committee. The OBFS might also develop an annual award to recognize field station donors.

The meeting was interrupted and resumed on 9/21.

III Session 3 - Friday Sept. 21 after lunch

M. Art McKee distributed a draft of a letter to Dave Schindel at NSF, regarding the burden of the match requirement. Input from members was invited as they returned copies of the draft, to be upgraded and mailed over the signature of our president.

N. Ad Hoc Committee Reports

Nominating Committee (Sherba) The committee presents two candidates to run for the office of President: Jerry Rozen and Nevin Aspinwall; for Vice-president: Susan Allen; for Editor: Joe Merritt; for the at large member of the Executive Committee: Peter Connors. Nominations were invited from the floor, but none were forthcoming; so the above victims will appear on ballots found elsewhere in this Newsletter.

O. Other Old Business - (many of these items emerged from a meeting of the Executive Committee between times.)

1. The 1991 poster will again charge \$55. for a listing.

2. The executive committee recommendation that the Directory be reprinted was approved. Joe Merritt will get prices for producing 300, 500, or 700 copies. This Directory will include a new supplement insert describing new member stations. This would not be interdigitated with the previous pages and the new stations would not be in the matrix. The insert will contain information provided by all new member stations who wish to participate. Merritt said it would not be difficult or costly to accommodate a few new pages at the back. Meanwhile, Merritt agreed to produce a full new second edition of the Directory by early 1992. The latter would include all stations then participating in OBFS as station members. A second edition will probably be sold in order to recover the costs.

P. New Business

1. Jerry Rozen suggested that our financial practises be codified and formalized by our developing a budget in advance of the year, so that expenses can be predicted. The Secretary/treasurer committed to preparing an historic rendition of the past three years of expenditures by category to serve as a basis for projection for the current year fiscal year, which begins October 1.

2. Jerry announced the new chairman of the committees in need of same: Nevin Aspinwall chair the Public Relations committee; Peter Connors, the Administration & Facilities committee. Jerry reminded all present that volunteers interested in serving should contact the chairman. The chairman, as well, will recruit new participants. The committees have no specific number of members.

3. Future Meetings. The '92 meeting will be held at the Malheur Station in southeast central Oregon; in '93 there is a tentative plan to meet at the Adirondack's Ecological Center in New York.

Additional invitations for future meetings are still welcome. Corky MacReynolds invited us to meet at Tree Haven in Wisconsin in '95 (an anniversary for that facility).

4. Lynn Jorgensen suggests we develop a little pin, a T-shirt, a patch, and/or baseball cap, with the OBFS logo on it for sale/distribution to members. Jerry promised that the Executive committee will consider this idea.

5. Sue Allen pointed out that the focus of OBFS has shifted towards a more global perspective. We have expanded in foreign countries. Four tropical sites have inquired about starting a field station and joining OBFS. Sue has started a foundation for the preservation of some landscape in Argentina at a cost of \$7.11/acre.

6. On behalf of all present Jerry Rozen extended our great thanks to our hosts, Don Siniff, John Ross, and the staff at Itasca, and to John Tester, Dave Bosanko and the staff at Cedar Creek, to which many attenders journeyed after the conclusion of festivities at Itasca. The hosts were most gracious in their hospitality and the visitors all had a wonderful time. In addition, Rozen thanked the members of the Executive Committee, the Chairman of the Standing Committees and Ad Hoc committees, those that served on them, and especially Becky Palmer for her services in the central office. The meeting was adjourned.

* * * * *

III. REPORTS AND MISCELLANEOUS ITEMS

A. TREASURER'S REPORT

Balance Checking Account, August 31, 1989 \$5,115.57

Income

Dues	\$5808.66	
Interest on NOW	336.48	
Interest on CD	591.57	
		<u>6,736.71</u>
		11,852.28

Expense

Office and Miscellaneous		
103.5 hr @ \$9.55	988.42	
Postage	339.27	
P O Box Rental	6.50	
Phone (toll calls)	28.60	
Stationary & supplies	89.12	
Xeroxing	60.20	1,512.11
AIBS Dues		100.00
Meetings & Travel		
S. Eubanks	90.00	
P. Ehrlich	919.00	
S. Havera	696.00	
J. Merritt	300.00	
J. Rozen	111.50	2,116.50
Newsletter		860.66
Directory - postage		30.00
Questionnaire		394.23
		<u>5,013.50</u>

Balance Checking Account August 31, 1990 6,838.78

Asset.....CD #6837 - \$7500.00...expires October 2, 1990

Current Net Worth.....\$14,338.78

* * * * *

B. REPORT OF AIBS REPRESENTATIVE

The AIBS Council meeting convened 7-9 February 1990 in Washington, D.C. The Council is composed of 12 board members, six members-at-large, and representatives of societal members of AIBS.

AIBS societal members were brought up-to-date on the recent activities. Paul Ehrlich was installed as AIBS president for 1990. Paul Risser is president-elect. The theme of the meeting was Sustaining Agriculture and the Biosphere with emphasis on the research and educational dimensions.

AIBS is the only national biological organization that provides an interface between the biological community and the Federal government. Because of this unique relationship, part of the program was devoted to discussions regarding how AIBS can be an effective umbrella organization for all biological societies (similar to the American Chemical Society, Engineering Society, etc.) and to developing a national registry of life scientists. Although AIBS represents approximately 70,000 biologists, students, and others concerned with biological issues and 40 affiliated societies, only about 7,000 individuals are members who pay dues. A central thrust of AIBS this year will be to try to increase the number of paying members in the Institute. AIBS would like to have all members of affiliate organizations also be members of AIBS. As an umbrella organization with a larger membership, AIBS believes it can make a difference in policy, resources, human capital, and the level of respect of biologists. Such a larger organization consisting of a wide diversity of autonomous societies and their memberships could have more impact on broad issues (ie. biodiversity, global warming, animal rights) and would be able to address issues at the state as well as the national level (ie. evolution in education). A national registry for life sciences would consist of a comprehensive integrated list of members of the various societies and would be useful to aid and improve communications and information exchange among biologists and the public.

The editor of BioScience, Julie Miller, addressed the group and discussed the two main goals of the publication committee for 1989. One goal was to broaden the coverage of Bioscience and the other was to increase the overseas distribution of the journal. The first goal was achieved by broadening the coverage and scope of BioScience, by making BioScience more attractive, and by including more important articles in BioScience, such as the impact of fire on the Yellowstone community. The second goal of significantly increasing the overseas readership of BioScience was not achieved; however, a proposal concerning the promotion and distribution of BioScience outside the United States is still under review.

Other topics on the program included women, minorities and disabled in biology; global change; and a congressional fellow report. The 1991 AIBS meeting will be held at Trinity University in San Antonio and the theme will be biological education.

After the program, various groups of council members visited Capitol Hill to meet with professional staff members, minority staff directors, science consultants, and congressional fellows to provide our important viewpoints on biodiversity, global climate change, conservation provisions in the 1990 Farm Bill, the National Initiative for Agricultural Research, animal rights and research, coastal marsh problems, the clean air act, ground water pollution, and other timely subjects.

Submitted by Stephen P. Havera, 1990.

C. PARTICIPANTS AT THE 1990 ANNUAL OBFS MEETING

Host Station: Lake Itasca
Univ Minnesota - MN
Donald Siniff & John Tester

Jan Eberhardt Rep Station
Kellogg Biol Sta
Michigan

Susan Allen Station
RMBL - Crested Butte
Colorado

Robert L Fisher Station
Raystown Field Station
Pennsylvania

Nevin Aspinwall Station
Reis Biological Station
Missouri

John W Fitzpatrick Station
Archbold Biological Station
Florida

David Bosanyo Visitor
Cedar Creek
Minnesota

Bill Glider Visitor
Cedar Point
Nebraska

Laura S. Carter Individual
E.N. Huyck Preserve
(Bd of Directors)

Steve Golladay Rep Station
Univ Oklahoma
Oklahoma

Philippe S Cohen Station
Granite Mountain Reserve
California

John Gorentz Visitor
Kellogg Biol Sta
Michigan

Richard W Coles Station
W U Tyson Research Center
Missouri

Sarah Greene Station
Cascade Head Exp Forest
Oregon

Peter Connors Station
Bodega Marine Lab
California

Alan Grundman Station
Jasper Ridge Biological Pres
California

Kenneth Cummings Station
Pymatuning Lab of Ecology
Pennsylvania

Robert W Hastings Station
Turtle Cove Biological Sta
Louisiana

Daniel R Dawson Station
Valentine Eastern Sierra
California

Stephen P Havera Station
Ill Natural History Survey
Illinois

Peter DeNapoli Visitor
Siemens Solar Industries
Michigan

Lucile A. Housley Station
Malheur Field Station
Oregon

John A Downing Individual
Station de Biologie
Montreal

Cindy Hunter Rep Station
Hawaii Ins of Marine Biology
Hawaii

David C Duffy Visitor
Seatuck Research Program
New York

Lynn P Jorgensen Individual
Biol Photographic Asso
Minnesota

Jeffery Kennedy	Station	William Porter	Station
UC Natural Reserve System		Adirondack Ecological Ctr	
California		New York	
Harold E Klieforth	Station	Jerome G. Rozen, Jr.	Station
Whitell Forest		American Museum of Nat History	
Nevada		New York	
Bob Vande Kopple	Rep Station	Richard Sage	Visitor
Univ Michigan Bio Sta		Adirondack Ecol Center	
Michigan		New York	
Ron Lawrenz	Station	Gerald Scherba	Station
St Croix Watershed Res Sta		Desert Studies Center	
Minnesota		California	
David Mahan	Station	Ross F. Shaw	Station
Au Sable Institute		Thomas Crowley Laboratory	
Michigan		Washington	
Arthur McKee	Station	Wade C Sherbrooke	Station
Andrews Experimental Forest		Southwestern Research Station	
Oregon		Arizona	
Lucinda A McDade	Rep Station	Roger Smoka	Visitor
La Selva Biol Sta		Lake Itaska	
Costa Rica		Minnesota	
Corky McReynolds	Station	Linda Vescio	Individual
Treehaven Field Station		Cedar Point Biol Sta	
Wisconsin		Nebraska	
Joseph F. Merritt	Station	Lavern J. Weber	Station
Powdermill Nature Reserve		Marine Science Center	
Pennsylvania		Oregon	
Allan Muth	Individual	David S White	Station
Deep Canyon Desert Res		Hancock Biol Station	
California		Kentucky	
Paula Orkand	Station	Peggy Wilzbach	Visitor
Institute of Neurobiology		Pymatuning Lab of Ecol	
Puerto Rico		Pennsylvania	
David Parmelee	Individual	Glen E Woolfenden	Visitor
1595 Northrop St		Archbold Biol Sta	
Minnesota		Florida	
Jean Parmelee	Individual	Louis A Yurasits, Jr	Visitor
1595 Northrop St		Pymatuning Lab of Ecol	
Minnesota		Pennsylvania	

D. CURRENT STATUS OF OBFS MEMBERSHIP (11/5/90)

154 members - 109 station members; 45 individual members
15 new members - 8 New Directors at Member Stations
3 resigned

NEW MEMBERS

Dr Clifford Crawford - Sevilleta Nat Wildlife Refuge NM
Mary Garvin - J H Barrow Biological Field Station OH
Dr Samuel Gruber - Bimini Biological Station Bimini
Royce Hayes - St Catherine Island GA
Dr Richard Heller - Albright College PA
Paul C Huth - Mohonk Lake NY
Ronald Lawrenz - St Croix Watershed Research Station MN
Carl T Meadors - University of Charleston WV
Dr Timothy Moulton - CEPARNIC Brazil
Dr Allan Muth - Boyd Deep Canyon Desert Research Sta CA
W Leon Neel - Tall Timber Research Station FL
Dr Richard Orkand - Institute of Neurobiology-San Juan PR
Ms J C. Richardson - Las Rocas De Dios CA
Dr Hugh Spencer - Cape Tribulation Field Sta Australia
Dr Stephen Threlkeld - The Louis Calder Center NY

NEW DIRECTORS AT MEMBER STATIONS

Dr Mark S Boyce - Univ Wisc National Park Service WY
Dr Robert Cruden - Iowa Lakeside Laboratory IA
Dr John Downing - Station de Biologie Montreal Canada
Dr Elmer Finck - Ross Natural History Reservation KS
M Ross Lein - Kananaskis Centre for Environ Res Alberta
Dr Dennis Powers - Hopkins Marine Station CA
Bill Sperling - Pigeon Lake Field Station WI
Dr Patrick Webber - W K Kellogg Biological Station MI

RESIGNED

Dennis Johns - Individual CO
Dr William Keller - Board Member, Huyck NY
Michael Yoder-Williams - CA

E. AIBS WASHINGTON SCENE - NOV. 1990

OIL SPILL LAW SIGNED President Bush recently signed a comprehensive oil spill liability measure into law, ending a 14-year debate on the issue. Policymakers had been at odds since 1976 on a provision that would allow federal law to preempt state liability limits.

Coastal states generally have much stricter laws with higher liability awards permitted. Senators from coastal states sought to allow the tougher state laws to override the federal statute, but House members had consistently blocked their efforts. Public pressure from the *Exxon Valdez* disaster in March 1989 persuaded members of Congress to resolve their differences.

The new law requires double hulls on ships by the year 2015, creates a \$1 billion cleanup fund, and provides \$25 million annually for oil pollution research, which includes long-term environmental research.

MT. GRAHAM SQUIRREL The University of Arizona will soon begin building three telescopes in the Coronado National Forest, despite the disruption it may cause to the Mt. Graham red squirrel. The squirrel is an endangered species whose remaining habitat is located in the heart of the construction project.

The US Fish and Wildlife Service (FWS) had called for further study of the project, but the US Forest Service rejected that

recommendation and issued permits in late August for construction of the telescopes. Normally, the red squirrel would be protected by the Endangered Species Act, but in 1988, Congress shortened the formal environmental review process for this project after an initial FWS opinion concluded the project would not harm the squirrel. FWS biologists later disclosed in court depositions that they had been pressured by superiors to reaching that conclusion.

NAS RECOMMENDS BIOLOGY EDUCATION REFORMS The National Academy of Sciences has proposed "massive reform" in the teaching of biology in elementary and secondary schools. The recommendations come from a three-year study by the National Research Council, and they are presented in *Fulfilling the Promise: Biology Education in the Nation's Schools* (\$14.95 + shipping). Reports may be ordered from the National Academy Press, 2101 Constitution Avenue NW, Washington, DC 20418. Tel: 800/624-6242.

Reform for K-12 biology education was recommended by a committee of biologists and educators; the reforms include changes in curriculum, textbooks, and teacher training. The report concluded that the current biology curriculum "seems to snuff out interest" in science, and it recommended that biology should be presented to young children as nature studies. Middle-school biology education should be geared toward health, hygiene, and disease, whereas high-school instruction should be "pared of everything that does not illuminate the relatively few concepts" deemed essential to understanding biology.

PUBLICATIONS

NAS Publications. The National Academy of Sciences has released *Confronting Climate Change: Strategies for Energy Research and Development* (\$17.95 + shipping), which suggests new energy research and development strategies for confronting climate change. Order through the National Academy Press, 2101 Constitution Avenue NW, Washington, DC 20418. Tel: 800/624-6242.

GAO Reports. The General Accounting Office recently released *Greenhouse Effect: DOE's Programs and Activities Relevant to the Global Warming Phenomenon* (GAO/RCED-90-74BR). Order through the GAO, P.O. Box 6015, Gaithersburg, MD 20877.

F. ANNOUNCEMENT FROM NSF

The February 15, 1991 deadline for receipt of NSF proposals for Field Station and Marine labs has been postponed until April 15, 1991.

New proposal guidelines for this deadline will be issued in late January, 1991.

**For more information contact: Dr. David E. Schindel,
Phone: 202-357-7652**

G: QUESTIONNAIRE: EDUCATIONAL PROGRAMS

At the 1990 meeting at Lake Itasca it was decided to conduct a survey among the membership in order to display the array of formal and informal instruction that is offered at our stations. Hopefully, such an array, when presented and discussed at the 1991 meeting, will prove informative and spark ideas for new offerings at other stations.

1. Please check the kinds of organized or formal courses offered by your station or at your station.

undergraduate degree-applicable credit courses
 graduate degree-applicable credit courses
 pre-collegiate level courses. Please explain.

non-credit or extension courses
 other non-credit courses, e.g. Elderhostel.
Please explain

2. What broad disciplines are represented in the organized courses you offer, e.g. biology, geology, education.

3. What kinds of informal educational programs do you offer?

research participation programs
 field trips
 weekly (or other frequency) seminars
 tours
 informal discussion groups
 other (please explain)

4. Are some of your formal courses or programs a required part of a campus degree program?

If so please explain.

5. To what extent does instruction at your station involve educational technology? That is, do you or your faculty utilize satellites or television to deliver instruction at some distance from your field station?

If yes, please explain.

6. Does your station engage in enrollment building or student recruitment activities?

If yes, which of the following do you utilize?

- Brochures
- Posters
- News releases
- Personal appearances
and presentations
- Advertisements
- Other. Please explain.

7. Does your station perform periodic course and/or program evaluations?

If so, please describe what you do.

8. What kinds of changes have resulted from these evaluations?

9. Do your programs or courses have a special or distinctive or unique emphasis? If so, please explain.

10. What course(s) or programs do you consider the most distinctive or distinguished? Please explain.

Return this questionnaire as soon as possible, but in no instance later than 30 April 1990. Return to:

Ms. Susan Allen, Director
Rocky Mountain Biological Lab
P.O. Box 519
Crested Butte, CO 81224

CASCADE HEAD EXPERIMENTAL FOREST AND SCENIC RESEARCH AREA

Cascade Head Experimental Forest was established by the USDA Forest Service in 1934. The western one third of the Experimental Forest, the adjacent private land to the south, and the Salmon River estuary were established as a Scenic Research Area by the United States Congress in 1974. The Experimental Forest and Scenic Research Area have been designated a Biosphere Reserve.

ACCESS

The Cascade Head Experimental Forest is located along the Pacific Coast 4 miles (6.4 km) north of Lincoln City and 90 miles (144 km) southwest of Portland, OR.

ENVIRONMENT

The Cascade Head Experimental Forest and Scenic Research Area includes extensive Sitka spruce-western hemlock and Douglas-fir-western hemlock forests, numerous streams, several grassy headlands, and the Salmon River estuary. Most of the forested area dates back to a large forest fire that burned in the late 1840s. These forests contain some of the highest biomass and highest growth rates of any temperate forests in the world. They generally support a luxuriant undergrowth of shrubs, herbs, and mosses.

The grassy headlands are basalt intrusions with steep cliffs and headwalls. Though once grazed by domestic livestock, they are no longer. One headland has some of the best native red fescue coastal prairie known to exist along the Oregon coast.

There are numerous small stream drainages with riparian zones dominated by red alder, bigleaf maple, and salmonberry. Most of these streams do not contain anadromous fish as the streams generally cascade down steep cliffs into the ocean.

The Salmon River estuary is one of the least disturbed estuaries along the Oregon coast. Much of the estuary was diked to provide pasture in the early 1960s, but more than 50% of the dikes have been removed since the Scenic Research Area was established. The Salmon River also contains anadromous fish runs.

Because of the Pacific Ocean influence, Cascade Head has a moderate but very wet climate. The average yearly rainfall is 98 inches (240 cm), although fog drip through the forest canopy may add 20 inches (50 cm) of unmeasured precipitation. Heavy rains and gale force winds blowing off the ocean are common in winter.

FACILITIES

There are a headquarters office and a residence on the property which will accommodate up to 15 people.

RESEARCH AND EDUCATION

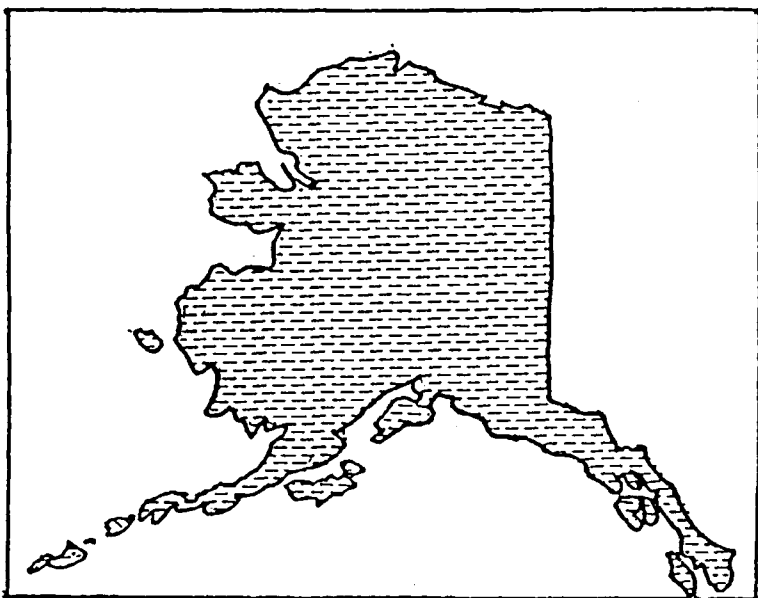
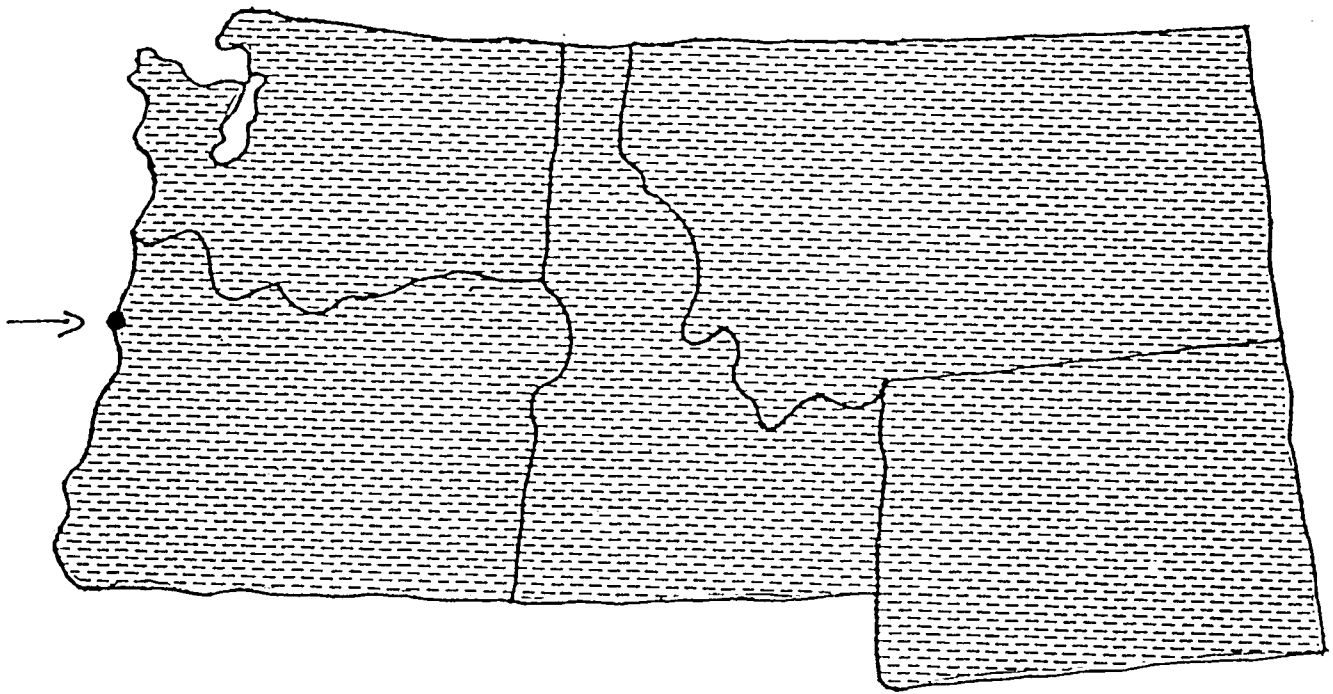
Early research efforts at Cascade Head focused on basic relations between vegetation and climate, and growth and yield of Sitka spruce-western hemlock, Douglas-fir, and red alder stands. From the late 1940s through the 1960s, experimental, commercial-sized harvest cuttings were done to evaluate the silvicultural and economic results of different cutting methods. Numerous sets of permanent sample plots, some established in the 1930s, are still maintained. More recently the emphasis has shifted to an ecosystem orientation including nutrient cycling, forest ecosystem productivity and mortality, and estuarine research.

Field trips originating from all over the region occur throughout the year. There is one Research Natural Area and a Nature Conservancy preserve on the property.

CONTACT: Sarah E. Greene

STATE / PROVINCE	OR	
STATION #		
NAME	Cascade Head Experimental Forest and Scenic Research Area	
AFFILIATION	Fed.	
SEASON	All Year	
AREA (hectares)	6,940	
BIOLOGIC COMMUNITIES	CONIFEROUS	*
	DECIDUOUS	*
	SHRUB	*
	GRASSLAND	*
	OLD FIELD	
	TUNDRA	
	AQUATIC	*
	MARINE - Estuarine	*
FACILITIES	LABORATORY SPACE	
	DORMITORIES	*
	CABINS	
	MEALS	
	KITCHENETTES	*
EMPHASIS	RESEARCH	*
	EDUCATION	*
	PRESERVATION	*
# PERMANENT STAFF	1	
UNIVERSITY-LEVEL CLASSES	*	
MAILING ADDRESS & TELEPHONE #	Pacific Northwest Research Station PO Box 3890 Portland, OR 97208	
SYNOPSIS (PAGE #)		

NORTHWEST REGION



Alaska
Idaho
Montana
Oregon
Washington
Wyoming

HAWAII INSTITUTE OF MARINE BIOLOGY

The Hawaii Institute of Marine Biology (HIMB) is a research institute within the School of Ocean and Earth Science and Technology at the University of Hawaii. Originally begun as the Hawaii Marine Laboratory in Waikiki in 1921, the facility was moved in 1948 to Coconut Island, on the windward coast of Oahu, 26 km from the main UH campus. HIMB provides facilities to researchers and students in marine-related programs.

ENVIRONMENT

Part of Hawaii Institute of Marine Biology's uniqueness lies in the close proximity of a well-equipped laboratory to a major university campus and to sub-tropical environments. Kaneohe Bay has year-round accessibility and comprises both estuarine and coral reef components, including numerous isolated patch reefs located in the protected waters inside the barrier reef. Outside the barrier reef, open ocean waters 1000 m deep are within 6 km of Coconut Island. Coconut Island is surrounded by a 64 acre coral reef sanctuary.

FACILITIES

Special capabilities at HIMB include: reef microcosm tanks, remote environmental monitoring capabilities, flumes for simulating coral reef flat environments, solar simulators, controlled tidal ponds, algal and larval culture facilities, cell biology and analytical biochemistry labs, electrophoresis and nuclear counting facilities, underwater video recording and data analysis, a photographic darkroom, terminals to the UH mainframe timesharing computers, SCUBA equipment room and compressor, maintenance and engineering shop, 10 outboard skiffs, the RV Mao Mao (11 m, winch, A-frame, fish-finder sonar), the Hono Kai (14 m, passenger/cargo), a marine railway, and an excellent flow-through sea water system. HIMB has six controlled tidal ponds with a total of 4,820 square meters of area, 30 flow-through sea water tables, and 26 large tanks in excess of 1000 liter capacity. HIMB also operates the Mariculture Research and Training Center, a 22-acre site at the northern end of Kaneohe Bay. This site is a focus for aquaculture research activities, and includes laboratory, office, and dormitory buildings; 12 ponds with a total area of about 8.25 acres; salt and freshwater capabilities; and a fully automated data acquisition system.

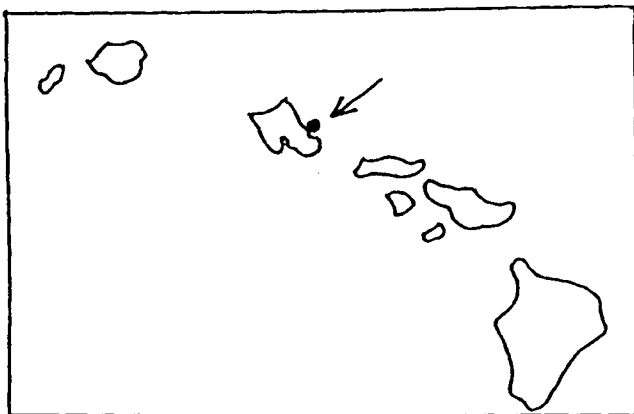
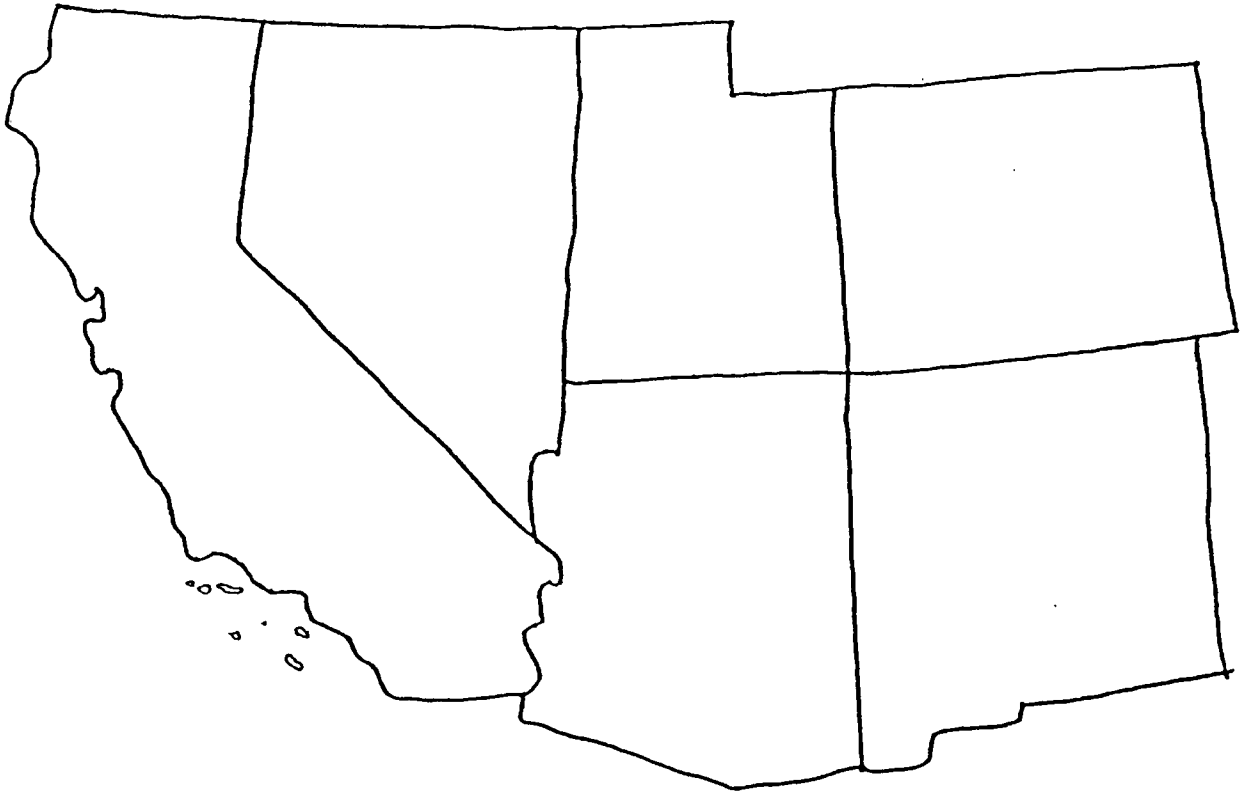
RESEARCH AND EDUCATION PROGRAMS

Current areas of research emphasis include coral reef biology and ecology, tropical aquaculture, fish endocrinology, behavior of marine animals, zooplankton and phytoplankton ecology, pollution and management of marine ecosystems, biogeochemical processes in marine ecosystems, and fisheries biology.

The HIMB Summer Program in marine topics promotes state-of-the-art collaborative research and instruction with top scientists and students from around the world. The 1991 Summer Program topic will be "Diffusion Barriers and Carbon Limitation in Reef Corals".

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- Colorado
- Hawaii
- New Mexico
- Nevada
- Utah

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