Organization of Biological Field Stations

Newsletter
No. 48
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ORGANIZATION OF BIOLOGICAL FIELD STATIONS

Number 48 Spring 1989

Newsletter Editor
Joseph F. Merritt
Powdermill Biological Station
The Carnegie Museum of Natural History
Rector, Pennsylvania 15677

NEWSLETTER

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I. RESERVATIONS & PROGRAM

OBFS ANNUAL MEETING
Rocky Mountain Biological Laboratory
(RMBL), Crested Butte, Colorado
September 7-10, 1989

About the Rocky Mountain Biological Laboratory

The Rocky Mountain Biological Laboratory in Gothic, Colorado, is pleased to be hosting the 1989 Annual Meeting of OBFS. Enclosed with this newsletter is a brochure describing RMBL. In early September we can have cold, clear weather, or even an unseasonable snowfall here at 9500' in south-central Colorado. Those of us who live here year-round consider fall the most exquisite time of the year, with aspens and willows turning color, wildlife readily observed making winter preparations, late-blooming wildflowers setting seed, and the surrounding mountains breathtaking in the beauty of first snows. We're delighted to be sharing this fall with you.

Travel

There are a variety of ways to arrive at Gothic. The nearest airport is Gunnison, a drive of 38 miles from RMBL. In September there will be four flights per day on Continental Express (also called Rocky Mountain Airways) but on small planes, each holding 19 passengers. There will also be one flight per day on United Express, on an aircraft that holds about 40 passengers. All flights come from Denver. If you arrive on one of these flights on the 7th we can arrange to pick you up, as we will meet each flight that we know ahead of time has passengers coming to RMBL. If you arrive on a different day you would have to take the airport limo, Alpine Express, which can cost from $12 to $30 to bring you to Gothic, depending on the number of passengers. On the 10th we can drive people to the airport for their return flights to Denver.

Another way to consider coming is to fly to Denver and rent a car. We are five hours from the Denver airport by the most direct route (Hwy. 285 southwest to Poncha Springs, then Hwy. 50 to Gunnison over Monarch Pass, then Hwy. 135 north to Crested Butte, through the 4-way stop in town, continuing 4 miles past the ski area to the stables where the road turns to dirt, then 4 more miles to Gothic...essentially the end of Hwy. 135). You may wish to arrive in Denver early and visit any of the other three field stations in Colorado: Mountain Research Station in Nederland, Pike's Peak Research Station in Florissant, or the Philips University Field Campus near Monte Vista. All are an easy drive from the Denver airport. Contact those stations for specific arrangements...all of the Directors have issued invitations for visits from OBFS members. The cost of a rental car from Denver for a week, especially if shared, is about what the round-trip costs from Denver to Gunnison on an airline, and you see a beautiful part of Colorado en route.

Some of you may be driving from your own stations. Head for Gunnison on Hwy. 50, and then follow the above directions. Call Susan Allen, RMBL Director, at (303) 349-7231 if you want more specific road advice.

Accommodations

We can house and feed 120 people in our cabins and dorms. Understand that our housing is rustic at best, with woodstoves, old wooden buildings, outhouses, and one solar shower house with rather tepid water. We do have a few slightly "upscale" family cabins available, and could indeed accommodate some families, so consider bringing yours. There are ample recreational opportunities in the area, with fishing, rafting, horseback riding, mountain biking, birding and hiking trails nearby. If we have enough OBFS members to fill our dining hall, we may ask that family members cook for themselves in their cabins and not join us for meals, and the charge would be adjusted accordingly. I will let you know as registration proceeds.

What to Bring

Above all you should be prepared for cold weather. Certainly nights will be below freezing, and days could be in the 35-65° F. range. Bring your warmest sleeping bag, sweaters, down jacket, hat and gloves, long underwear, hiking boots, and rain gear. Other necessary items are a flashlight, sunscreen, alarm clock, water bottle and daypack. We are definitely casual at Gothic, so nothing fancier than jeans is necessary. If we're lucky we'll have Indian summer weather, but nights will still be cold. You may wish to bring fishing equipment, as our trout streams are legendary, but there are places to rent in Gunnison and Crested Butte. The same is true for mountain bikes and river rafts. Cameras and binoculars would be nice to have.

Cost

The RMBL share of expenses, which includes housing, meals, alcoholic beverages, transport to and from the airport, meeting facilities, and guided field trips (walking) from Gothic, is $85 per person for 7-10 September. For families, those over 18 are also $85, and ages 5-17 are $40. Children under 5 are free. Anyone who wishes to arrive early would pay $6 per day but would have to cook their own food. **Call Susan Allen if you have questions (303-349-7231).**

Susan Allen, in charge of local arrangements, Program Committee

1989 OBFS ANNUAL MEETING
REGISTRATION

Please register by 31 July. We will be sending information packets to all advance registrants, and will ask you to provide us with travel plans at that time.

Name_____

Address_____

_____

_____

Telephones_____

OBFS Station Member?____yes

Station_____

OBFS Individual Member?____yes

Accompanying family (please give names, relationship, ages of children -- thanks)_____

_____

_____

Payment:

____Enclosed is my check (we'll send a receipt) for $_____

____Please send an invoice to me at the above address

Return to: **Ms. Susan Allen**
Rocky Mountain Biological Laboratory
P. O. Box 519
Crested Butte, Colorado 81224

1989 OBFS ANNUAL MEETING
PROGRAM

Important notice: This year's program emphasizes sharing our experiences at coping with management issues at field stations. There will be three panel discussions, each presented by three OBFS members who will describe their experiences with: 1) Rules and Regulations at Biological Field Stations; 2) Site Management at Field Stations; and 3) Non-conventional Sources of Income for Field Stations. **Please be prepared to discuss your attempts to deal with the same issues.**

Jerome G. Rozen, Jr., Chairman
Program Committee

Thursday, September 7:

9:00 a.m.-5:00 p.m. Arrival at RMBL.
5:00 p.m. Mixer
6:00 p.m. Dinner
8:00 p.m. **Introduction to RMBL,** Susan Allen, Director, RMBL

Friday, September 8:

7:00 a.m. Breakfast
8:00 a.m. Business
10:30 a.m.-2:00 p.m. Field walks with sack lunches.
2:00 p.m. **Panel discussion: Rules and Regulations at Biological Field Stations**

Participants: David C. Mahan, Au Sable Institute, Linda Vescio, Cedar Point Biological Station (Univ. Nebraska) and Joseph F. Merritt (Coordinator), Powdermill Biological Station (The Carnegie Museum of Natural History).

In order to operate efficiently and effectively, biological field stations must establish specific rules and regulations for researchers, students and other visitors. These "house rules" vary greatly among stations contingent on such factors as station emphasis (research, education, preservation), geographic setting, season of operation, affiliation, available facilities and number of resident staff. Some of the topics to be addressed are:

- FACILITIES
  - Cabin Use Policy
    - Priorities of use and restrictions.
    - Cleaning schedules and maintenance.
  - Pets
  - Laboratory Space Allocation
  - Equipment Utilization (i.e., computers, microscopes, boats, vehicles, etc.)
- ENVIRONMENT
  - Research Areas
    - Coordination of projects and tracking resulting publications.
    - Habitat modification and management practices.
    - Collecting of specimens.
  - Educational Areas
  - Visitor Management

Public Access
Hunting, fishing, trapping: permits and regulations.
Miscellaneous problematica.

3:30 p.m. **Topic: Opportunities for Interaction with Land Management Agencies**

OVERVIEW: Art McKee, Site Director, Andrews Experimental Forest.
What are some opportunities?
Who benefits? Everyone.
Whom do you contact?

COLLABORATION WITH THE US FOREST SERVICE: Steve Eubanks, Coordination Oficer, Recreation Staff, USFS, Washington, DC.
USFS organization and management.
Examples of collaborative research and education projects.
National Forest land planning and monitoring.
Mechanisms for funding research and education projects.
How to approach the agency.

THE NATIONAL RESEARCH NATURAL AREA PROGRAM: Sarah Greene, Interagency Ecologist, Pacific Northwest Interagency Committee on Research Natural Areas
What are Research Natural Areas?
What types of uses are allowed?
How do you use them?

5:00 p.m. Social hour
6:00 p.m. Dinner
8:00 p.m. **Speaker: Paul R. Ehrlich**, Bing Professor of Population Studies, Department of Biological Sciences, Stanford University. **Subject: Global Change, Biodiversity and the Role of Field Stations**

Saturday, September 9:
7:00 a.m. Breakfast
8:00 a.m. Business
9:30 a.m. **Speaker: James L. Edwards**, Biological Research Resources Program, National Science Foundation. **Subject: National Science Foundation's Funding of Field Stations**
10:30 a.m.-2:00 p.m. Field walks and sack lunches.
2:00 p.m. **Panel discussion: Site Management of Field Stations**

Participants: Anthony Joern (Coordinator), Cedar Point Biological Station, _____*_____, and _____*_____.

The panel will discuss control and management of natural areas associated with field stations to promote diverse opportunities for research and teaching. Specific issues and questions will include but will not be limited to: (1) SITE MANAGEMENT: What types of land management are required to maintain the natural areas surrounding the field station? When and how does a field station promote "invasive" management of natural areas to maintain sufficient diversity for comparative study? How detailed are management plans and objectives and what is optimal? What proportion of a station's resouces go into such activities? (2)

* To be announced

PERMANENT RESOURCES: What are the necessary and sufficient permanent resources (e.g., collections, replicate ponds, root boxes, specialized general equipment, labs, etc.) required by a station to foster and support research in neighboring natural areas? (3) DATABASE DEVELOPMENT AND USE: How much general monitoring of the environment should fall to individual stations to support research sites? What are the necessary and sufficient attributes to measure? What is the station's role in suggesting or controlling research directions? What is the nature of the policy used to control and monitor site used for research? What is the best way to promote database development and organization?

3:30 p.m. **Panel discussion: Non-conventional Sources of Income for Field Stations: Opportunities and Problems**

Participants: Lucille Housley, Malheur Field Station; Gerry Scherba, California Desert Studies Consortium; Wade Sherbrooke (Coordinator), Southwestern Research Station, American Museum of Natural History.

Discussions by panelists will include a survey of the types of revenue-generating activities they are utilizing and the local circumstances that have led to success. Potential problems resulting from entering "business" ventures will be shared, as will some of their resolutions.

5:00 p.m. Social hour
6:00 p.m. Dinner
8:00 p.m. **What's New**

Directors of new member stations: Please be prepared to present a short (10 minute) overview (with slides, if possible) of your installation and the programs carried out there so that members can get to know you better.

Other members may wish to discuss briefly (10 minutes) recent changes, innovations, or items of interest regarding their field stations.

Sunday, September 10:
7:00 a.m. Breakfast
8:00 a.m. Wrap-up

Program Committee:
Susan Allen
Jeffrey B. Froke
Jerome G. Rozen, Jr., Chairman

II RESULTS OF QUESTIONNAIRE

NSF Program on Equipment and Facilities for Research at Biological Field Stations and Marine Laboratories

1. Did you apply for a facilities grant from NSF? 14 Yes 11 No (If no, please go to No. 5)

2. If yes, were you successful? 9 Yes 5 No

3. Did you have problems with obtaining the institutional match? 7 Yes 7 No

Please answer the following: (If yes, please also answer No. 4)

3a. Was your request part of an institutional program already in progress; that is, was your institution previously committed to improving your station? 6 Yes 10 No

3b. If yes, did NSF funding make improvement beyond that already approved by the institution possible? 6 Yes 1 No

3c. Or was the proposal primarily a means of reducing institutional costs? 3 Yes 10 No

3d. Was the institutional funding contingent upon your obtaining NSF support? 10 Yes 4 No

Please add any comments about your proposal development as it applies to the NSF guidelines.

See Comments.

4. Please describe the nature of the problem of obtaining this institutional match and how you overcame the problem (then go to number 6).

See Comments.

5. For what reason did you *not* apply for NSF support (if more than one reason applies, please number them in the order of importance, with 1 as most important).

a. 3 Not enough time to prepare a proposal

b. 0 No need for funds

c. 3 We're primarily teaching and don't qualify

d. 2 Institution refused matching funds

e. 2 Didn't bother as I knew the institution did not have matching funds

f. 3 Other. Please explain: (2) Had previous grant.

If you selected (d) or (e), would you please describe the problem you have with obtaining matching funds.

See Comments.

6. Should NSF continue the facilities support program beyond the anticipated 5 years? 27 Yes ____ No

7. Should funding be increased? 21 Yes 2 No

8. What do you consider a reasonable annual budget for this program given the overall NSF budget?

   3 1-2 million 4 2-3 million 12 3-5 million 4 >5 million

9. Should the matching funds provision be retained? 18 Yes 6 No
   (Please give reasons for your answer)

   See Comments.

10. Please add any additional comments relating to the evaluation and operation of the NSF Program.

    See Comments.

Please return to: Ken Armitage, Division of Biological Sciences, The University of Kansas, Lawrence, Kansas 66045, by **January 15, 1989.**

COMMENTS

3d.

Extremely difficult for ----- to come up with 100% matching funds. If we had an extra $100,000 in the budget it would already be dedicated to something. Should be able to use operating expenses for research as part of the matching funds.

For the coming year (submission Feb. 15, 1989), we have committed 12% of the Corpus of our major systemwide endowment fund to NSF matching. And, we have used that as a lever to attract additional campus-based and extramural funds which we are vigorously pursuing.

We tried for 10 years to get University support for new housing for students. We were eventually told that the initial investment (= $150,000) was too large and not sufficient priority. NSF funds "got the ball rolling".

Actually provided in response to the NSF award.

We submitted a relatively small proposal and designated existing monies in our University budget for the match. Fortunately, we had just received a large increase in our University equipment budget, and had some flexibility in spending it. We did not ask the University for new money for the match. I doubt if we could have gotten it.

Guidelines need to include the criteria of availability of field station facilities in the Biotic province concerned. Funds should be partially allocated on the basis of biotic provinces. For example, we don't need excess funding in the oak-hickory - Boreal Forest transition zone.

The matching funds were contingent upon the NSF support.

Institution contributed only because of matching fund requirement.

4.

Got pledges of equipment donations, plus user part of capital item budget.

When the ----- Director informed our University V.P. for Gov't Relations that he had political support for funding in the State Legislature (which we are forbidden to pursue) the V.P. offered $500,000 in matching to go with the campus' $500,000 commitment in pursuing a $500,000 NSF Grant ($1.5 million total).

Comments (continued)

4.

Finding an institutional match took some searching for an administrative unit willing to back us financially. Many years of working with various administrative offices helped here - they were all generally willing to listen.

Administration was unwilling to make absolute commitments. I went directly to our president, invited him to the station and got a letter of commital.

No problem. The University gave its approval with a 5-minute conference.

The Dean had committed all of his discretionary funds. I agreed to postpone encumbering money until a subsequent budget cycle. I raised $15,000 myself and I convinced the V.P. for research to contribute.

Traded in approved funds for a new storage building as matching funds. Organization didn't have enough readily available funds to offer as a match.

Institutional matching commitment was provided on a pro-rated basis from five administrative levels (department, college, Agricultural Experiment Station, V.P. - Research, Provost) - a very involved and difficult negotiation because of differing priorities at each administrative level.

Institutional match was less than 50% of total project cost had to fundraise privately to raise additional funds to meet 50% match.

5d or e.

I would not have been able to find 100% match with new funds. (I am supposed to be raising $30,000 per year of new funds against my operating budget!).

----- is so programmed for 25-30% range of matching funds for NSF proposals that they simply wouldn't even talk about what was proposed. Might have been able to combine College of Forestry and Dean of Research Office support up to 35% of total cost of project -- but 50/50 was simply unacceptable.

Institutional budgets are prepared 2 years in advance. Hard to get matching funds even they might be budgeted.

Informed by vice chancellor for research that matching funds were not available.

Essentially had to fundraise within the University. This required time - couldn't make 1988 deadline but will make 1989.

7.

Absolutely! This is the most critical limitation at a minimum, double the funding!

What was track record established!

I am speaking only for my station which has received support from this program. It may be that additional funds are needed for stations that have not received support. (Note: This unit voted no on questions 6).

9.

Some assurance of institutional commitment is good. But let that our operating budgets plus any capital improvements.

The requirement for matching funds enables our facility to generate increased funding for projects (based on the award of an NSF proposal). If we didn't have a required match, the University would be less likely to feel committed to generate the funds.

Yes, but no qualifications as to whether or not primarily teaching or research institution.

Presumably most stations operate at a break-even point (if not a deficit!) NSF should provide funds for growth that a station cannot otherwise afford. If they could afford it they should already be doing it . . . growing, that is. Upgrading station facilities or adding new programs seems an excellent use of NSF money.

Institutional support is critical to developing good science. The only rub is when the Departments or Institutes support the proposal, but the University-wide administration does not. For that situation, I can offer no solution.

Institutional commitment should be required to limit applications, focus on priorities of supporting institutions which must keep up annual budgets for programs, operations.

But 1:1 match is much too extreme. I would suggest a 15-25% match as a legitimate minimum. Remember, there are some creative solutions. Also, perhaps NSF should consider alternatives to matching such as commitment to regional outreach, etc.

It stimulates contributions from home institutions.

It provides leverage for field stations within their own institutions. It also assures NSF that the institution is behind the field station.

9.

However, a reduced percent (e.g. 25%) should be required - enough to show institution commitment and provide for basic equipping of funded facilities.

Our experience is that institutions are very reluctant to provide 100% matching funds for off-campus facilities, especially in time of dwindling support for higher ed. The way the competition plays now, the megabucks Marine Labs have an easier time than the struggling small Marine Labs or Field Stations. The system favors a rich get richer situation. The program should either be prorated with increasing requests requiring larger percentage matching funds, or the Marine Labs and Field Stations should compete separately.

It provides a lever on the parent institution and/or a "seed" to other fund-raising efforts. It assures NSF that requested facilities are taken seriously by others - essentially another review.

Forces agencies to support goals with active support.

It helps me evaluate commitments by our administration.

But at a reduced percentage.

Our annual budget from the University is about $240,000. NSF should be willing to provide some funding without additional University contributions.

Modified by <100%.

The University should be supportive of the field station. If not, why should NSF be supportive.

Matching funds stretch NSF dollars and insure institutional commitment. But suggest a 3 for 1 or other similar matching arrangement, other than 1 for 1.

I firmly believe that this forces a higher level of sound decision-making. It also forces the University to review its commitment to the stations even though it means that I have to, once again, be an advocate for the station and its programs.

But highly modified-perhaps scaled to size of request; e.g., no match up to $50,000 and 1:1 match over $200,000.

Some people can't get enough of a match from their organization. Only the rich get richer. I don't think NSF will eliminate this requirement though.

But not 1:1! A continuing institutional commitment to further development of a field station is essential. Facilities must be maintained and require operational support. Why not return to language used initially, with major facility projects having significant institutional match. Final negotiation by NSF program officer.

Amount of required match should be reduced and not specified. NSF should just say matching funds are required and allow competition to weed out those with inadequate match. Match is good because it 1) demonstrates commitment of parent institution, 2) thins ranks of those competing for funds, puts a lever on institutions to provide more money.

10.

Somehow, we have to design a system that minimizes the rich-get-richer-and-the-poor-lose-out syndrome. Good science <u>can</u> be done at a young, undeveloped site with promise.

Seemed well done, smooth, good (intelligent, informed) comments from panel.

I do not like to see the marine and inland stations in same competition --- i.e., Duke Marine Lab versus FLBS.

The program should be returned to its initial goals of providing facility improvements for inland research stations where the need for such a program was initially identified.

This is the <u>only</u> way we'll be able to acquire "<u>Big Budget</u> items" --- anything over $10,000. Vehicles should be allowed as potential items. We're in crisis situation.

Comments (continued)

NSF needs a mechanism to support developing as well as developed stations. NSF needs to partially allocate its resources on the basis of biotic provinces or some other biological criteria.

Ad hoc reviewers selected for facility proposals should have field station research experience - ideally, a record of NSF research grants conducted/supported at field stations.

III MISCELLANEOUS ANNOUNCEMENTS

A. ENVIRONMENTAL JOB OPPORTUNITIES

Other Sources of Information About Environmental Jobs

The ASSOCIATION FOR EXPERIENTIAL EDUCATION (AEE) publishes a monthly Jobs Clearinghouse. Listings are mostly internships and outdoor education instructorships with emphasis on wilderness experience. Subscriptions are $20.00/year for nonmembers; $1.50 for single issue. Checks should be made out to the Association for Experiential Education and mailed to AEE, Campus Box 249, Boulder, CO 80309.

The NATIONAL ASSOCIATION OF INTERPRETATION (P.O. Box 1892, Ft. Collins, CO 80522) offers a telephone dial/tape listing service. Telephone 301/491-7410 any time for listings of full-time, seasonal, temporary jobs. Telephone 303/491-6434 after office hours or all day Friday, Saturday, and Sunday for listings of internships. Xerox copies of listings available for $3.00.

The ENVIRONMENTAL STUDIES DEPARTMENT of ANTIOCH/NEW ENGLAND GRADUATE SCHOOL sponsors a 10-12 page monthly listing serving environmental job interests. Subscriptions are $22.00 for 6 months; $39.00 for 1 year; $64.00 for 2 years. Free sample copy available on request. Send subscription check to Environmental Opportunities, P.O. Box 969, Stowe, VT 05672. Sandy Berry is editor (802/253-9336). Listings include jobs, seasonal work, internships, conferences, and educational offerings.

CAREER PLACEMENT REGISTRY (CPR) is a computerized employment network that will make your credentials available electronically to over 50,000 employer-subscribers throughout the nation and worldwide, including businesses, research firms, educational institutions, publishers, advertising and public relations firms, manufacturing companies, high tech firms, government agencies, multinational corporations. Employers use their computer terminals to search CPR database for combination of factors that they desire. If they are interested in your qualifications, they will come to you! For more information about CPR, call toll-free 1-800-368-3093 or request it from CAREER PLACEMENT REGISTRY, INC., 302 Swann Avenue, Alexandria, VA 22301. Total cost to register: $12.00

ENVIRONMENTAL JOB OPPORTUNITIES
Institute for Environmental Studies, University of Wisconsin-Madison
550 North Park Street, 15 Science Hall, Madison, WI 53706 (608/263-3185)

The Environmental Job Opportunities is distributed free to appropriate UW-Madison campus offices and costs $10.00 per year (10 issues) for off-campus subscriptions. Prepayment is required. To subscribe, fill in the requested information below and mail it, with a check payable to the University of Wisconsin-Madison, to the above address.

Please circle one: New subscription Renewal Change of address

NAME _____

ADDRESS _____

_____

Institute for Environmental Studies
University of Wisconsin-Madison
550 N. Park St., 15 Science Hall
Madison, WI 53706

B. SCHMITT HOMESTEAD

Harrison H. Schmitt

P.O. Box 14338
Albuquerque, NM 87191-4338
(505) 823-2616

April 17, 1989

Director
Powdermill Biological Station
Star Route South
Rector, Pennsylvania 15677

Dear Sir or Madam:

Dr. James Judge of Southern Methodist University's Fort Burgwin Research Center near Taos, New Mexico, suggested that I alert you and your institution to the pending disposition of my family's property in southwestern New Mexico near the town of Silver City.

The Schmitt Homestead, in the Rocky Mountain foothills of southwestern New Mexico, encompasses both an unique biological resource and an unique educational opportunity. Roughly eighty acres of ungrazed grassland amid a thriving pinon and juniper forest surrounds a large brick main residence, two smaller brick residences, a small frame residence, and several garages and workshops.

Many specialized and now rare biological habitats exist on the Homestead due to the absence of grazing by livestock for at least 75 years and the presence of a stabilized but steep sided 50 to 75 feet deep eastward draining arroyo. These habitats range from the grassy desert flora on south facing slopes to the heavily forested north facing slopes to mixed habitats on gently eastward sloping flats. Abundant small mammal, reptile, and bird species help to round out the biological diversity of the Homestead.

The arroyo exposes an easily accessible stratigraphic section of rocks spanning Mississippian to Cretaceous in age. This section has been cut by numerous dikes and sills of Tertiary age basalt. The rocks, and the caliche, soil, and alluvial deposits that locally cover them, make up a typical example of much of the geological setting of southwestern New Mexico.

Southwestern New Mexico constitutes one of the richest regions of biological, geological, and archaeological interest in the United States. The southern border of the Gila National Forest, which includes the Gila Wilderness Area lies only 5 miles north of the Homestead. The historic and still active Santa Rita mining district is 15 miles to the east. The entire region has an abundance of archaeological sites, the most famous of which belong to the Mimbres Culture and the Gila Cliff Dwellers.

The Homestead offers to established research institutions an opportunity to combine the preservation and study of a largely undisturbed natural biological site with the availability of facilities and accommodations that can serve a variety of research, teaching, conference, and administrative functions.

If you or your colleagues have an interest in visiting the site or in discussing specific details, please do not hesitate to contact me.

Best regards,

Harrison H. Schmitt

IV. TELEPHONE NUMBERS OF OBFS MEMBERS 1989

ALLEN, Susan

Station: (303) 349-7231

ALLISON, Dr. David C.

Campus: (309) 457-2021

ANDERSON, Dr. Richard V.

Station: (217) 256-4519
Campus: (309) 298-1553
Home: (309) 836-6536

ARMITAGE, Dr. Kenneth B.

Campus: (913) 864-3236
Lab: (913) 843-8573

ASPINWALL, Dr. Nevin

Office: (314) 658-3902
Station: (314) 786-8313
Home: (314) 822-3972

BAMFIELD Station

Station: (604) 728-3301

BARRETT, Dr. Reginald H.

Campus: (415) 642-7261
Station: (916) 587-4830

BEDNARZ, James

Station: (215) 756-6961
Home: (717) 943-2074

BOHL, Dr. Walter B.

Campus: (614) 235-4646

BOVBJERG, Dr. Richard V.

Campus: (319) 353-3421
Home: (319) 338-2294
Station: (712) 337-3669

BOWERS, Dr. Michael A.

Station: (703) 837-1758
Home: (703) 837-2244

BOYLEN, Dr. Charles

Campus: (518) 270-6757
Station: (518) 644-3541
Home: (518) 279-3898

BRAND, Dr. Charles

Station: (305) 872-2331

BRUCE, Dr. Richard C.

Campus: (704) 526-2602

BURKHART, Dr. Jeffery T.

Office: (405) 237-4433
Station: (303) 852-3052

CARTER, Laura S.

Campus: (201) 564-7697

CLARK, Dr. David B.

Station: 71 85 27

COHEN, Dr. Philippe S.

Station: (619) 733-4222
Campus: (714) 787-5917
Home: (619) 733-4222

COLES, Dr. Richard W.

Station: (314) 938-5346
Home: (314) 938-5271

CONARD Environmental Res Area

Station: (515) 236-2892

CONNORS, Dr. Peter G.

Station: (707) 875-2211

COX, Dr. Donald D.

Campus: (315) 341-2343
Station: "
Home: (315) 343-2076

CROZIER, Dr. George G.

Station: (205) 861-2141

CUMMINS, Dr. Kenneth

Station: 683-5813

DALGLEISH, Dr. Robert C.

Office: (617) 999-8205

DARDA, David M.

Campus: (415) 642-3567

DARDA, Patricia A. Garvey

Campus: (415) 642-3567

DAVIES, Dr. Chris

Station: (204) 675-2307

DAWSON, Daniel R.

Station: (619) 935-4334

DEMOTT, William R.

Campus: (219) 482-5254
or 482-5271
Station: (219) 691-2596

DIEM, Dr. Kenneth L.

Campus: (307) 766-4207
or 766-4227

DIMOCK, Dr. Ronald V., Jr.

Campus: (919) 761-5567
or 761-5323
Home: (919) 768-5694

DRUMMOND, Dr. Boyce A.

Station: (303) 689-2025
Campus: (303) 748-3341

ELDER, James L.

Office: (617) 927-0585

FICKEN, Dr. Millicent

Campus: (414) 675-6844
Home: (414) 377-7962

FISHER, Dr. Robert L.

Campus: (814) 643-4310
ext. 575
Station: (814) 658-3060
Home: (814) 658-2191

FITZPATRICK, John W.

Station: (813) 465-2571
Home: (813) 465-3691

FROKE, Jeffrey

Station: (714) 858-0309
Campus: (714) 586-6190
Home: (714) 858-0313

FROST, Thomas M.

Campus: (608) 262-2840
Station: (715) 385-2750

FUSARI, Dr. Margaret H.

Campus: (408) 429-4971
Station: (408) 667-2543

GILLINGHAM, James C.

Station: (517) 774-3291

GLADFELTER, Dr. Elizabeth H.

Station: (809) 773-9339
Campus: (201) 460-5180
Home: (809) 773-9339

GOOD, Ralph E. Good

Office: (609) 757-6146
Station: (609) 894-8849
Home: (609) 757-6146

GRUNDMAN, Mr. Alan

Campus: (415) 723-1589
Field: (415) 851-2745
Home: (415) 856-0624

HALFPENNY, Dr. James C.

Campus: (303) 492-6387

HALL, DR. CLARENCE A.

Station: (619) 873-4344
Office: (213) 825-2093

HARMAN, Dr. Willard N.

Campus: (607) 431-3703
Station: (607) 547-8778
Home: (607) 988-7716

HARPER, P.P.

Campus: (513) 343-6790
Station: (514) 563-3111
Home: (514) 678-2959

HARTMAN, Dr. Richard T.

Home: (412) 486-4902

HASTINGS, Dr. Robert W.

Office: (504) 549-2033
Home: (504) 386-9974

HAVERA, Dr. Stephen

Campus: (217) 333-6830
Station: (309) 543-3950
or 3105
Home: (309) 547-2757

HEISER, Dr. John B.

Campus: (607) 256-3717
Station: (603) 430-7160

HELFRICH, Dr. Philip

Station: (808) 247-6631
Campus: (808) 948-6715
Home: (808) 247-2523

HILL, Dr. Loren G.

Campus: (405) 325-5391
Station: (405) 564-2463
Home: (405) 329-7016

HOUSLEY, Lucile A.

Station: (503) 493-2629

HUNTSMAN MARINE SCIENCE CTR

Station: (506) 529-8895

INOUYE, Dr. David W.

Station: (303) 492-8841

JOERN, Tony

Station: (402) 472-2724

JUDGE, Dr. W. James

Campus: (214) 369-9556
Station: (505) 758-8322
Home: (505) 265-1016
or 266-1618

KENIS, Judith

Campus: (619) 225-8354
Home: (619) 226-0325

KENNEDY, Jeffery

Campus: (415) 644-4217
or 4211
Home: (415) 658-7645

KENNEDY, Dr. Michael

Campus: (901) 454-2970
Station: (901) 876-5772
Home: (901) 761-0143

KLIEFORTH, Dr. Harold

Campus: (702) 972-1676
Station: (702) 784-6188
Home: (702) 747-3482

KNAP, Dr. Anthony

Station: (809) 297-1880

LAUFF, Dr. George

Campus: (517) 353-9445
Station: (616) 671-2323
or 671-2356
Home: (616) 671-5630

LAYNE, Dr. James

Station: (813) 465-2571
Home: (813) 465-4240

LEDDY, Linda E.

Station: (617) 224-6521
Home: (617) 224-3241

LEDERER, Dr. Roger J.

Station: (916) 895-5356
Home: (916) 895-4490

LIDDLE, Dr. Larry

Station: (516) 283-4000
x 162
Home: (516) 283-7376

LOTZE, Joerg-Henner

Station: (207) 546-2821

MAHAN, Dr. David C.

Station: (616) 587-8686

MALLORY, Elizabeth P.

Station: (617) 224-6521
Home: (617) 837-8479

MARCHAND, Dr. Peter J.

Campus: (802) 635-2356
Home: (802) 635-7720

MARTIN, Dr. John

Station: (408) 633-3304

MARTIN, Dr. William H.

Campus: (606) 622-3122
Station: (606) 633-5828

McCRIMMON, Dr. Donald A.

Station: (207) 288-3605

MCKEE, Arthur

Office: (503) 757-4395
Station: (503) 822-3914
Home: (503) 753-9013

MERRILL, Carl

Station: (207) 726-4749

MERRITT, Dr. Joseph

Campus: (412) 593-2221

MORTON, Dr. Jack

Station: (305) 768-8096

MURRAY, J.J. Jr.

Campus: (804) 924-3151
Station: (703) 626-7196
or 7171
Home: (804) 924-7868

NATIONAL AUDUBON SOCIETY

Station: (602) 455-5522
Campus: (303) 492-7184

NUSSBAUM, Ronald A

Campus: (313) 764-2201

PARKINSON, Dr. Dennis

Campus: (403) 284-6344
or 5271
Station: (403) 673-3662
or 284-5355

PARMELEE, Dr. David F.

Campus: (612) 646-8278

PORTER, Dr. William

Station: (518) 582-4551
Campus: (315) 470-6798
Home: (315) 636-8386

PRCHAL, Dr. Steven J.

Station: (602) 883-3945
Office: (602) 834-7274

PRUSSO, Dr. Donald

Office: (702) 784-6188

PYKE, Dr. Graham H.

Station: 02-3398195
Home: 02-9494656

REED, Dr. A. Scott

Station: (218) 879-4528
Campus: (612) 624-1234
Home: (218) 384-3702

REUTTER, J.M.

Campus: (614) 422-8949
Station: (419) 285-4754
Home: (419) 285-2531

ROBINSON, Dr. Gordon

Campus: (204) 474-9297
Station: (204) 274-2106

ROZEN, Dr. Jerome G., Jr.

Office: (212) 873-5000
Home: (201) 768-9590

RUDY, Dr. Paul

Station: (503) 888-5534
Home: (503) 888-9225

RYE, Dr. Robert Jr.

Office: (515) 747-8383
Home: (515) 747-3460

SCHERBA, Dr. Gerald

Campus: (714) 773-2428
Station: (619) 733-4500
Home: (619) 243-5796

SEELY, Dr. Mary K.

Station: ZRR226 via
Walvis Bay Radio
(0642-3581)

SHAW, Dr. Ross F.

Campus: (206) 281-2200
Station: (206) 375-6721
Home: (206) 281-2200

SHAY, Dr. Jennifer

Campus: (204) 474-9297
Home: (204) 453-5830

SHERBROOKE, Wade C.

Station: (602) 558-2396

SHIELDS, William H.

Campus: (315) 470-6771
Station: (315) 848-3444
Home: (315) 469-7198

SHREFFLER, Shelley A.

Station: (612) 455-6204
Campus: (612) 696-6104

SINIFF, Sr. Donald B.

Station: (218) 266-3691
Campus: (612) 625-9165
Home: (612) 378-0291

SMILEY, John

Office: (408) 667-2543
Home: (408) 427-3150

SPEAIRS, Dr. Richard K, Jr.

Station: (501) 394-3956
Home: (318) 861-6059

STANFORD, Dr. Jack A.

Campus: (406) 243-5123
or 5222
Station: (406) 982-3301
Home: same

STONE, Dr. Donald E.

Station: (919) 684-5774

STROMBERG, Dr. Mark K.

Station: (408) 659-2664

TENHUNEN, Dr. John D.

Station: (619) 229-2896
Campus: (619) 442-3821

TESTER, Dr. John R.

Station: (612) 434-5131

THOMPSON, Judy

Station: (408) 373-0464

VERNBERG, Dr. John

Station: (803) 777-5288

VESCIO, Linda

Station: (402) 472-5977

WEBER, Lavern J.

Station: (503) 867-3011

WHITE, David S.

Station: (502) 474-2272

WYMAN, Richard L.

Station: (518) 797-3440

YODER-WILLIAMS, Michael P.

Campus: (206) 543-1942

*Numbers listed only ones on file

V. NEW MEMBERS OF OBFS

Steven Prchal
Sonoran Arthropod Studies, Inc.
2437 N. Stone
Tucson, AZ 85703 (Individual member)

Dr. Graham Pyke
Australian Museum
608 College Street
Sydney, NSW 2000
Australia (Individaul member)

Dr. Wilburn A Sliger
Reelfoot Lake Biological Station
Department of Biological Sciences
University of Tennessee- Martin
232 Brehm Hall
Martin, TN 28238-5014 (Station member)

Shelley A Shreffler
Katherine Ordway Natural History Study Area
9550 Inver Grove Trail
Inver Grove Heights, MN 55075 (Station member)

Dr. Nathaniel J. Wheelright
Department of Biology
Bowdoin College
Brunswick, ME 04011