

**Organization of  
Biological Field Stations**

**Newsletter  
No. 34  
June 1982**

# OBFS



NUMBER 34

JUNE 1982

Newsletter Editor

Joseph F. Merritt  
Powdermill Nature Reserve  
Carnegie Museum  
Star Route South, Rector, PA 15677

## Newsletter

### TABLE OF CONTENTS

- I. Pre-registration information and tentative program for the 1982 annual meeting, OBFS-- The University of Michigan Biological Station, Douglas Lake, Michigan, September 17-19, 1982.
- II. Field Station Descriptions
  - A. Charles M. Allen Biological Station, Wake Forest University, Ronald V. Dimock, Director
  - B. Crooked Lake Biological Station, Indiana-Purdue University at Fort Wayne., Kenneth M. Brown, Director
- III. Field Station Energy Conservation Measures
  - A. Archbold Biological Station, Lake Placid, Florida
  - B. Kananaskis Centre for Environmental Research, University of Calgary, Alberta, Canada
- IV. Miscellaneous Information
  - A. Elderhostel Programs
  - B. University of Minnesota Cedar Creek Natural History Area  
David F. Parmelee
  - C. Winter Ecology Program inquiry-- Peter Marchand

1982 OBFS Annual Meeting  
The University of Michigan Biological Station  
September 17-19, 1982

Travel: The University of Michigan Biological Station is located on Douglas Lake, 5 miles east of Pellston at the northern tip of Michigan Lower Peninsula.

The Station can be reached easily by auto via I-75. Take exit 322 onto County 64 and drive west 3 miles to the entrance. From US 31 (which goes up the west side of the state) turn east at Pellston on to C 64 and drive five miles to the entrance. By air travel to Pellston airport— Republic Airlines has connecting flights from Chicago and Detroit. The airport is just six miles from the Station. Transportation will be provided to and from the airport.

Climate: Mid September weather is unpredictable in the Upper Great Lakes region. Autumn is definitely close at hand. One should be prepared for cool weather and rain, but normal highs are in the mid to upper 60's and the weather may be delightful and sunny.

Accommodations: Lodging will be at the Station in the Dormitory or cabins. All units will have private bathrooms and heat.

Meals: Participants will dine in the main Dining Room of the Station located in the center of Camp. All meals will be served buffet style.

Registration Fees: The cost for the conference including lodging, meals and transportation is \$65.00.

Program Schedule: The schedule is tentative and takes into account the arrival and departure of flights in the afternoon.

Field Trips: We are scheduling field trips to research and class sites on Saturday afternoon. However, there will be opportunities for more informal field trips at other times.

ORGANIZATION BIOLOGICAL FIELD STATIONS

Tentative Schedule 1982 Annual Meeting  
The University of Michigan Biological Station  
Douglas Lake, Michigan  
September 17-19, 1982

Friday, September 17

Noon-6:00 PM	Registration - Dormitory Lounge
5:30-6:30 PM	Reception - Dining Room
6:30-7:30 PM	Dinner - Dining Room
8:00-9:00 PM	Introduction to the University of Michigan Biological Station - Seminar Room
9:00-	Director's Dialogue - Seminar Room

Saturday, September 18

7:30- 8:00 AM	Breakfast-Dining Room
8:30-10:30	Terrestrial Environments of Northern Michigan- Seminar Room
10:30-Noon	Tour of Biological Station
1:00-2:30 PM	Aquatic Environments of Northern Michigan- Seminar Room
2:30-5:00	Field Trips to Aquatic or Terrestrial sites
5:30-6:30	Reception-Director's Residence
6:30-7:30	Dinner-Dining Room
8:00-9:30	A Gazetteer for a Field Station - Seminar Room

Sunday, September 19

7:30-8:30 AM	Breakfast - Dining Room
8:30-10:00	OBFS Business Meeting - Seminar Room
10:30-12:00	Data Management at Field Stations - Seminar Room
12:30- 1:30	Luncheon - Dining Room
	End of Formal Program. Transportation to airport for those needing it. Informal Field Trips.
6:30-7:30	Dinner for those remaining

Monday, September 20

7:30 AM	Light Breakfast - Dormitory Lounge Kitchen
	Transportation to airport

Pre-Registration Form 1982 OBFS Meeting

FROM:

NAME: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

I expect to attend the 1982 OBFS meeting to be held at the University of Michigan Biological Station September 17-19, 1982.

I plan to arrive by air or auto  
(circle one)

I will be accompanied by: \_\_\_\_\_

---

Spouses are welcome; there is plenty of lodging for shared or single rooms and cabins.

Send to: Mark W. Paddock  
The University of Michigan Biological Station  
4053 Natural Science Building  
Ann Arbor, Michigan 48109

Charles M. Allen Biological Station  
Wake Forest University

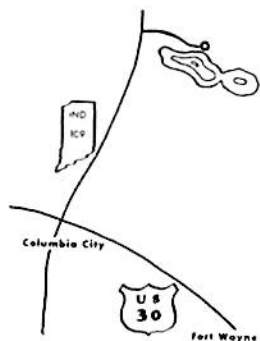
The Charles M. Allen Biological Station is located at Belews Lake, Stokes County, North Carolina, approximately 25 miles northeast of Winston-Salem. The station is on a 100 acre tract of land, located on a peninsula which extends into the reservoir. Belews Lake is man made, having been constructed by Duke Power Company. The 3800 acre impoundment reached full water level in 1974 and is used in part as a source of cooling water for two 1143 megawatt, coal-fired, electrical generators. As a result, the lake receives thermal effluent from the power plant.

The reservoir is unusual for the Piedmont area of North Carolina in that it is markedly oligotrophic, frequently experiences secchi depths of 3-4 meters, and has a maximum depth of about 50 meters. The main body of the lake has been subjected to selenium influx from the activities of the power plant and currently is devoid of most piscivorous fishes as well as the larger species of planktivores. For example, there are no centrachids in the lake.

The Station facilities include a 600 sq. ft. laboratory and a 400 sq. ft. aquarium building-wet lab, supplied with well water. Both buildings are heated and air-conditioned. The Station has a variety of watercraft, including two, 25' pontoon boats. In addition to the Station property, there are approximately 1000 acres on the peninsula; essentially 90% of the lake's shoreline is undeveloped and owned by Duke Power Company. The land on the peninsula and the shoreline are available for scientific study.

The Station currently is used for research and field trips by the Biology Department of Wake Forest University and by several local colleges and universities. There is no formal teaching program at the Station during the summer. However, a summer program is being contemplated for the near future.

# STUDIES IN AQUATIC BIOLOGY AT CROOKED LAKE BIOLOGICAL STATION



**LOCATION-** THE CROOKED LAKE FIELD STATION IS LOCATED ON THE SHORES OF CROOKED LAKE, ABOUT 10 MILES NORTH OF COLUMBIA CITY, IN., OFF INDIANA ROUTE 109. AMONG THE MOST OLIGOTROPHIC LAKES IN INDIANA, CROOKED LAKE IS APPROXIMATELY A MILE LONG AND OVER 100 FOOT DEEP IN SOME AREAS.

**FACILITIES:** FIELD STATION BUILDINGS CONSIST OF A MAIN LABORATORY BUILDING, A LARGE BOAT HOUSE, AND HOUSING IN 5 TRAILERS ABOVE THE MAIN LABORATORY. THE MAIN LABORATORY HAS 5 OFFICES FOR INDEPENDENT INVESTIGATORS, CLASSROOM FACILITIES FOR GROUPS OF UP TO 15, AND DARK ROOM FACILITIES. A COMPLETE ANALYTICAL LAB, WITH OVER 2,000 SQ. FEET OF WORKING AREA, IS HOUSED IN THE LOWER LEVEL. LABORATORY EQUIPMENT INCLUDES A SPECTROPHOTOMETER, HIGH SPEED CENTRIFUGE, PH METERS, DISSOLVED OXYGEN AND CONDUCTIVITY METERS, DRYING OVENS, FURNANCES, AND ANALYTICAL BALANCES. FLOWING LAKE WATER IS AVAILABLE IN A LARGE HOLDING ROOM WHICH ALSO FEATURES TWO WALK-IN ENVIRONATORS. SEVERAL ALUMINUM BOATS, MOTORS, AND A PONTOON BOAT ARE AVAILABLE FROM THE BOAT HOUSE.

**PROGRAM:** SEVERAL FIELD COURSES ARE TAUGHT BY INDIANA-PURDUE UNIVERSITY AT FORT WAYNE WHICH UTILIZE THE STATION:

ENVIRONMENTAL BIOLOGY (BIOL. 285) - TAUGHT EACH FALL SEMESTER EMPHASIZING PHYSIOLOGICAL, POPULATION AND COMMUNITY ECOLOGY. LABORATORIES EMPHASIZE FIELD BIOLOGY.

AQUATIC BIOLOGY (BIOL. 445) - TAUGHT EVERY OTHER FALL OR IN SUMMER. LABORATORIES EMPHASIZE WATER QUALITY ANALYSIS, SAMPLING OF AQUATIC COMMUNITIES, AND ESTIMATION OF AQUATIC PRODUCTIVITY.

FIELD ECOLOGY (BIOL. 591) - TAUGHT EVERY OTHER FALL, ALTERNATING WITH BIOL. 445 OR DURING SUMMER. BOTH TERRESTRIAL AND AQUATIC COMMUNITIES ARE STUDIED USING THE FACILITIES OF THE STATION.

BIOLOGY OF ALGAE (BIOL. 577) - TAUGHT EVERY OTHER FALL, LABORATORIES EMPHASIZE ALGAL ECOLOGY AND SYSTEMATICS.

SPECIAL PROJECTS IN AQUATIC BIOLOGY (BIOL. 595) - TAUGHT EACH SUMMER BY FACULTY RESIDENT AT THE STATION. CONSULT INDIVIDUAL FACULTY FOR TOPICS.

## FACULTY:

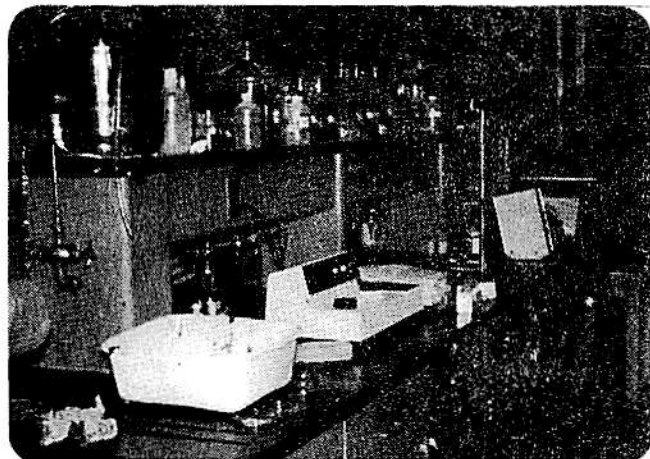
DR. KENNETH M. BROWN - RESEARCH INTERESTS INCLUDE LIFE HISTORY EVOLUTION IN AQUATIC INVERTEBRATES, COMMUNITY ECOLOGY. TEACHES BIOL. 285-591, CO-INSTRUCTOR IN BIOL. 445.

DR. WILLIAM DAVIES - RESEARCH INTERESTS INCLUDE ALGAL POPULATION DYNAMICS, ESTIMATES OF ALGAL PRODUCTIVITY IN SANDY BEACHES. TEACHES BIOL. 577.

DR. JAMES HADDOCK - RESEARCH INTERESTS INCLUDE RESOURCE PARTITIONING IN STREAM INSECTS, BIOLOGICAL CONTROL OF MOSQUITO LARVAE. CO-INSTRUCTOR IN BIOL. 445.

INDEPENDENT INVESTIGATORS OR CLASSES - WE ENCOURAGE STUDIES BY INDEPENDENT INVESTIGATORS OR USE OF LABORATORY FACILITIES FOR INSTRUCTION. CROOKED LAKE OFFERS A DIVERSE ZOOPLANKTON AND PHYTOPLANKTON ASSEMBLAGE. THE NORTHERN SHORE OF THE LAKE IS A STATE NATURE PRESERVE AND OFFERS A NUMBER OF DIFFERENT WETLAND HABITATS. INVESTIGATORS INTERESTED IN LEARNING MORE ABOUT THE FACILITIES AND FEES FOR USING THE STATION SHOULD CONTACT:

DR. KENNETH M. BROWN, 219-482-5710  
DEPARTMENT OF BIOLOGICAL SCIENCES  
INDIANA-PURDUE UNIVERSITY AT FORT WAYNE  
2101 E. COLISEUM BOULEVARD  
FORT WAYNE, INDIANA 46805  
(SUVON NUMBER 710-5710)



## Energy Conservation Measures Undertaken at Archbold Biological Station

1. Tinted, reflecting film has been installed on windows and vertical blinds have been installed on sliding glass doors subject to high heat loads.
2. The much-used lounge areas have been equipped with ceiling fans to substitute for or supplement air conditioning.
3. Thermostats have been provided with locked covers.
4. All water heaters have been insulated and the thermostats turned down.
5. Additional blown insulation has been added to attics of cottages and the dining room of the main building to provide maximum insulation.
6. Insulation has also been installed in walls of cottages when they have been repaneled.
7. Bright orange stickers urging conservation of electricity have been put on all light switches to remind users to turn off lights when not in use.
8. Several old and inefficient central air conditioning systems have been replaced with new, more efficient ones.
9. Two large solar heaters at each end of the main building, installed in the early 1930's, continue to provide a significant share of the hot water used. The system was recently reworked to increase its efficiency.



## ENERGY KANANASKIS

Energy Kananaskis is a community-scaled energy conservation project funded by the University of Calgary and private industry. The Kananaskis Centre for Environmental Research, a community of resident research staff and their families, is serving as a model which demonstrates effective energy conservation measures.

Several strategies for conserving energy at the Centre are being tested. Retrofit technology is used to insulate buildings and increase the efficiency of utility systems. Operating practices within the work spaces are modified to use the utility systems more efficiently (lighting levels were reduced and use of high wattage equipment is scheduled to avoid peak loads). Renewable sources of energy are integrated with existing energy systems. Wind power, solar radiation and woodfired supplemental heating systems are tested to evaluate performance criteria. A computer-based energy monitoring and control system has been designed and installed in the laboratory building. This device automatically monitors climate and energy use as well as regulating the heating and ventilating systems in response to human comfort requirements.

Management practices to reduce waste of energy and materials are also being tested. For example, waste materials are recycled to reclaim paper, glass, and metal.

One of the main goals of the Energy Kananaskis project is the development of applied research at the Centre to demonstrate environmentally appropriate energy technology in Alberta. Solar Energy and Windpower applications are initial components of that project.

The project is also concerned with the fostering of a public awareness of energy resources and energy conservation. This public service and teaching involves conducting courses and lectures for public interest groups, participating in professional conferences and seminars, presenting information to the media, as well as preparing project reports.

A. ELDERHOSTEL PROGRAMS

Draft March 11, 1982

Re: Biological Field Stations

ELDERHOSTEL combines the best traditions of education and hosteling. Inspired by youth hostels and folk schools of Europe and guided by the needs of older citizens for intellectual stimulation and physical adventure, ELDERHOSTEL is a national educational movement of considerable significance which has seen remarkable growth since its inception in 1975. ELDERHOSTEL is a short-term, on-campus residential experience in the liberal arts and sciences for people 60 years of age and older. Programs are typically one week in length, occur during the summer and usually take place on college and university campuses. Increasingly, however, ELDERHOSTEL programs around the calendar are being established at conference centers, research stations, and other appropriate educational institutions - utilizing their campuses more fully, providing gratifying and stimulating jobs for faculty, enriching the inter-generational mix of students on campus and demonstrating a commitment to life-long learning. ELDERHOSTEL represents an opportunity for host institutions to work in common cause with a very diverse group of educational institutions, thereby enriching the experience for all.

This year ELDERHOSTEL expects to enroll over 55,000 older adults in the 500 participating colleges, universities and other educational institutions in the network.

For a biological field station wishing to participate, here's how it works: You are asked to design a program in accordance with guidelines, selecting your own courses and faculty and in general creating a program which is distinctly your own. ELDERHOSTEL suggests the format; what goes into that format is very much up to

the individual host institution. From a program point of view, ELDERHOSTEL is decentralized. As far as promotion and admissions are concerned ELDERHOSTEL is very centralized with its Boston office publishing and sending a catalog to over 200,000 individuals, enrolling participants and thus sparing the participating institutions the administrative expense and energy involved in attracting a student group.

ELDERHOSTEL programs have been offered successfully for several years at the University of Oklahoma Biological Station. If you are interested in learning more about ELDERHOSTEL, you are encouraged to contact Elizabeth E. Caney, Program Director at:

ELDERHOSTEL  
100 Boylston Street  
Boston, MA 02116

---

B. Input from David F. Parmelee:

The University of Minnesota Cedar Creek Natural History Area, one of the EER's, was recently designated an LTER (Long-Term Ecological Research) site by NSF. Drs. G. David Tilman and John R. Tester are the Principal Investigators on "Micro and Macro Views of Succession, Productivity, and Dynamics in Temperate Ecosystems," 1 January 1982- 31 December 1986. Also-- David indicated that, " in the past there has been some misunderstanding concerning our two field stations, Itasca and Cedar Creek. Although the two sites are 200 miles apart, they are both managed by the Field Biology Program."

C. Winter Ecology Programs?

Peter Marchand is interested in assessing the presence of courses dealing with the subject Winter Ecology-- Can you help his efforts by filling out the following brief questionnaire? Many thanks!

Title of course:

Topics covered:

Text Materials:

Enrollment (Grad, Undergrad):

Duration: