

REPORT ON THE ACTIVITIES  
OF THE  
JACKSON HOLE BIOLOGICAL RESEARCH STATION  
SUMMER 1957

L. Floyd Clarke, Director

## PHYSICAL FACILITIES

A considerable portion of the activities in improving physical facilities was concerned with moving three housing units from Moran to the Research Station. Considerable difficulty was encountered in completing all arrangements for this moving and also in getting final clearance to obtain the housing which was needed. We were fortunate in obtaining these particular buildings. A brief description of the buildings and improvements made on each is as follows.

1. A small laboratory building with pine paneling was placed adjacent to the existing laboratory. This was the building used as the office for the director in charge of the Moran housing. During the course of construction of buildings at Moran, much of the pine paneling was removed, and considerable work on our part was required to reconstruct it and put it back into a usable condition. After completely remodeling it and repairing the roof the building was equipped as a botany laboratory housing the Station herbarium.

2. A single room housing unit was moved to the Station and located immediately east of the old power house. This building required reroofing and complete renovation and repair inside before it could be equipped as a living unit.

3. A three-room structure which was formerly the home of Mr. Barton, who was in charge of Moran housing, was acquired. This building was located near the east edge of the enclosed Station area. Each of the rooms was remodeled and equipped as a separate living unit. This required a considerable amount of remodeling, reroofing and construction of new chimneys.

All the new buildings were completely oil treated by the spray method. All of these buildings were completed by shortly after the middle of July and were occupied during the last part of the summer. In the meantime the old buildings located at the original site of the Research Station were burned by the Park Service, so the personnel using this housing was moved to new housing at the Station. X

Another project which was undertaken and is now in the final stages of completion involved remodeling of the old power house into a bath house. This involved the erection of a partition to divide the space into accommodations for men and women; installation of wash basins, showers and toilets in each unit; and the installation of a septic tank and sewage disposal unit.

The work of replacing the log foundations of existing buildings with cinder blocks was continued. Considerable work was spent on the general improvement of the Station grounds and other buildings. Much more is to be done in this regard and will be continued next summer.



No plans are currently being made to increase the size of the Station, however, we do expect to make the following improvements as rapidly as possible.

1. Construction of a room either as an addition to the laboratory or as a separate building to serve as a seminar room, reading room, and to house the Station library which, at present, is located in three different places. The weekly seminars of the Station have been held in the living room of the home of the Director, and the space available is not adequate.

2. One other improvement anticipated is the replacing of the existing bunkhouse, which is an old shingled structure not in keeping with the log construction of the other buildings, by a new log building to serve as bachelor quarters for research workers.

We will be constantly attempting to improve the existing facilities to make them more pleasing and more effective in carrying out the various research programs.



## SEMINARS

Seminars were held each Tuesday evening at 7:30 p.m. at the home of the director. They were very well attended by Research Station personnel, Park Service employees, and other biologists who happened to be in the Jackson Hole area at the time. The number of biologists attending varied from 25-40. Each seminar was followed by an informal period of discussion and refreshments. Based on the reactions of those attending, I would say that the seminars were highly successful. Following is a list of the seminars presented.

Margaret Altmann - Dynamics of Moose Behavior.  
Charles Thornton - Review of three Years' Work on Regeneration.  
Kenneth R. John - Deformed Chub in Two Ocean Lake.  
Kenneth Armitage - Ecology and Behavior of Yellow-bellied Marmot.  
Alan Beetle - Evolution of Plants of Jackson Hole Area.  
Garth Kennington - Effect of Altitude on Animal Metabolism.  
George Baxter - Wyoming Fishes, Amphibians, and Reptiles;  
A Discussion of Swan Lake Ecology.  
W. G. Solheim - Botany of Jackson Hole and Adjacent Areas.  
Gerald Scherba - Problems in the Ecology of Ants.

## LIBRARY

The library books and journals are readily available for Station personnel. Some new books have been acquired and all subscriptions to periodicals continued. Current periodicals are placed in the laboratory for examination before being placed in the stacks.

Reprints continue to come in from research workers of previous years. These are made available as needed. A list of the reprints from publications which we have available on research conducted at the Station is included as an appendix to this report. Other papers are now in the process of being published. Duplicate copies of all reports of research workers during the past two summers are being prepared for use by the personnel at the Station. One copy is kept on file in the Department of Zoology at the University.



## COOPERATION WITH OTHER AGENCIES

Research workers at the Station cooperated with the Park Service, Forest Service, and Wyoming State Game and Fish Department exchanging ideas and mutually assisting each other to the benefit of all concerned. The Park Service personnel utilized the Station laboratory including the museum for study. We especially appreciate the cooperation with Mr. Frank Oberhansley, Superintendent of Grand Teton National Park, and his staff of naturalists. Mr. Wilcox, district ranger in charge of the Park district in which the Station is located, was very cooperative with Station personnel in helping them to carry out projects. As in previous years, many of the research projects involved forests outside the Grand Teton National Park area. In all instances the Forest Service personnel was most cooperative in giving advice and assistance with the research projects being carried on in the forests.

Our weekly seminars were attended by as many as ten Park Service employees. Mutual interchange of ideas and information between Park and Station personnel took place throughout the summer. In line with an agreement made during a March meeting in Cheyenne between the Park Service and the University of Wyoming, a meeting was held with Park Service personnel and staff of the Research Station. This meeting was held August 5 at 8:30 a.m. at Park Headquarters. The following brief account of this meeting may be of interest.

Preceding the discussion concerning the Research Station, Superintendent Oberhansley discussed Park problems including the forthcoming Conference of the National Park Service scheduled for September 13-17. The problems concerned with the large number of visitors (3000 per day) at Colter Bay and the importance of Colter Bay in relieving camping pressure in other areas of the Park was mentioned.

A summary of research in progress was given by each principal investigator at the Station. Dr. Clarke briefly discussed the operation of the Station pointing out the diversity of research, selectivity of personnel, functions of advisory committee, sources of financial support, and the policy of encouraging younger students to work with teachers at the Station. Dr. Solheim mentioned the service function of the Station. Dr. H. C. Bryant commented on the Student Conservation Program emphasizing the assistance given by the Station to this program.

The suggestion was made that another meeting be held in which the various department heads of the Park Service would explain in more detail the functions of their departments.



-21-

A very important and gratifying meeting was held on September 13, 1957 at the Research Station concerning the future development of the Biological Research Station and its relations to Grand Teton National Park. Attending this meeting were Mr. C. L. Wirth, Director of the National Park Service, and several other representatives of the National Park Service; Mr. Frank Oberhansley, Superintendent of Grand Teton National Park, and representatives of his naturalists staff and others; Mr. Laurance S. Rockefeller, Chairman of the Executive Committee of the New York Zoological Society; Mr. Fairfield Osborn, President of the New York Zoological Society; and representatives of the Advisory Board and staff of the Biological Research Station.

In connection with our request for a renewal of the lease on the land occupied by the Station, it was deemed logical to examine the present status of the Station and its future plans and to analyze these in terms of the relations of the Station to the Mission 66 development program in Grand Teton National Park. As a result of correspondence between those people interested in the development of the Research Station and representatives of the Park Service, the meeting was planned to discuss matters of mutual interest and to make plans for the future of the Research Station. The previous meetings as well as the correspondence referred to above resulted in a mutual understanding which permeated the proceedings of this conference. After the representatives of the conference had assembled, Mr. Wirth made an opening statement expressing enthusiastic support for the Research Station and its activities. Discussion followed which emphasized the importance of close cooperation between the Research Station and Park Service. Mr. Wirth and others at the meeting stated that the Park Service would be happy to work out arrangements for the continuance of the Research Station at its present location. This assurance of Park Service cooperation certainly gives a feeling of stability and an incentive for continued improvement in the quality of research at the Station. The cooperative attitude of the Park Service is certainly appreciated by all those interested in the development of the Station. The interest and support of Mr. Laurance Rockefeller, Mr. Fairfield Osborn and others of the New York Zoological Society have added immeasurably to the success of the Station program. The future of the Station being assured, we can now concentrate on the problem of improving the nature of the research activities.

The Research Station cooperated with the Student Conservation Program extensively during the summer of 1957. The following programs were furnished by Research Station personnel. These programs were all presented at the Ramshorn Ranch and were accompanied by demonstrations and audiovisual aids.

Margaret Altmann - Behavior of Wild Ungulates, July 6.  
(Emphasis given to studies on moose and elk in area.)

Alan Beetle - Range Management and Plant Conservation in the Jackson Hole Area. (Included field identification of plants.) July 18.



-22-

Kenneth Armitage - Mammals of the Jackson Hole Area, August 9.  
 George Baxter - Fishes, Amphibians and Reptiles of Wyoming,  
 August 13.  
 Gerald Scherba - Ecology of Ants and Other Invertebrates,  
 August 15.  
 W. G. Solheim -Vegetational Zonation in the Jackson Hole Area.  
 (Included field identification of plants.) August 20.

The students in the Conservation Program visited the Station on August 3 and were shown firsthand the research projects underway. Also, they were given opportunity to discuss with individual investigators various research projects. Other visits by small groups of the students were made to the Station at other times during the summer.

The students picnicked at the Station campsite area on August 3 and, as an indication of the friendly atmosphere existing between the students and Station personnel, I might mention that faculty from the Station were invited and attended a square dance given by the students at the Ramshorn Ranch.

We trust that the contributions made by our staff helped in some measure to make the initial year of the Student Conservation Program a success.

#### VISITING SCIENTISTS

More than 200 people visited the Station during the summer. The interests of these people varied from those simply curious about activities of the Station to eminent biologists with special interests in research projects underway. Many of these visitors contributed valuable advice to Station personnel. Because of the location of the Station less than a mile from the Jackson Lake Lodge and some five miles from the Colter Bay tourist area, many scientists who were either vacationing in the area or who were attending conventions at the Jackson Lake Lodge took the opportunity to visit the Station. Representatives of many federal and state agencies such as the Wyoming Game and Fish Department, Federal Fish and Wildlife Service, and U.S. Forest Service visited the Station. The following is a list of some of the visitors during the summer.

Mr. Laurance S. Rockefeller, Chairman of the Executive Committee of the New York Zoological Society.

Dr. Fairfield Osborn, President of the New York Zoological Society.

Mr. Gordon Cuyler and family, Membership Secretary of the New York Zoological Society. Mr. Cuyler visited with research workers and accompanied them on field work. An article concerning the Research Station written by Mr. Cuyler appeared in the September-October, 1957 issue of ANIMAL KINGDOM.

-23-

Dr. and Mrs. David Kistner, Department of Biology, University of Rochester.

Dr. and Mrs. Paul Gilbert, Lawrence College, Appleton, Wisconsin.

Dr. E. G. Butler, Professor of Biology at Princeton, and member of the National Science Foundation committee on summer biological laboratories.

Dr. Colin Pittendrigh, Professor of Biology at Princeton.

Dr. and Mrs. Norman French, biologist with the Atomic Energy Laboratory at Arco, Idaho and a former research investigator at the Station.

Dr. James Opsahl and other ecologists from the University of Illinois. Dr. Opsahl was making some rodent surveys as a follow-up on research done in the area during previous summers.

Dr. Richard Taber, Department of Forestry, Montana State University.

Mrs. Harold Fabrai, Trustee of the New York Zoological Society.

Dr. Maurice Smith, Department of Psychology, University of Colorado.

Mr. Walter Kittams, Yellowstone National Park Biologist.

Dr. H. C. Bryant, Director of Park Service Student Conservation Program. The students in this program also visited the Station.

Dr. Raymond Fox, Department of Floriculture, Cornell University.

Dr. and Mrs. D. Jackson, Western Michigan University, Kalamazoo.

Dr. and Mrs. B. H. Willier and daughter. Dr. Willier, now retired, was Head of the Department of Zoology at Johns Hopkins.

Dr. John C. Neess, Department of Zoology, University of Wisconsin.

Dr. Ralph Ames, Head of the Department of Botany and Plant Pathology, Utah State Agricultural College.

Mr. Eugene Cronin, Botanist, U.S.D.A.

Miss Elizabeth Cushman, Student Conservation Program Representative of the National Parks Association.

Dr. James L. Mickle, Forest Pathologist, Intermountain Forest and Range Experiment Station.

Mr. Donald E. Wilbert, Range Specialist, Wyoming Game and Fish Department.



## FINANCIAL REPORT

1956-1957

October 1, 1956-June 30, 1957

<u>Item</u>	<u>Budgeted</u>	<u>Expended</u>	<u>Carried Over to Next Year's Budget</u>
Part-time Assistants . . . .	\$ 650.00	\$ 650.00	
Equipment . . . . .	491.55	96.62	\$ 394.93
Supplies . . . . .	104.64	45.70	58.94
Contractual . . . . .	985.88	136.39	849.49
Travel . . . . .	300.56	4.56	296.00
Fixed Charges . . . . .	36.00	36.00	
Extraordinary Expense . .	<u>23.95</u>	<u>          </u>	<u>23.95</u>
	\$2592.58	\$ 969.27	\$1623.31

July 1, 1957-October 31, 1957

<u>Item</u>	<u>Budgeted*</u>	<u>Expended</u>	<u>Unexpended</u>
Research Projects . . . .	\$1476.00	\$1476.00	
Part-time Assistants . .	1000.00	400.00	\$ 600.00
Equipment . . . . .	3609.93	2744.21	865.72
Supplies . . . . .	522.94	359.94	163.00
Contractual . . . . .	1349.49	868.49	481.00
Travel . . . . .	696.00	315.90	380.10
Fixed Charges . . . . .	36.00		36.00
Extraordinary Expense . .	<u>98.95</u>	<u>51.08</u>	<u>47.87</u>
	\$8789.31	\$6215.62	\$2573.69

\*Includes money carried over from previous year.

\$688.50 received for lodging at the Station was placed in the General Fund of the University.

Special appropriation from the New York Zoological Society for moving and improvement of buildings - \$1500.00.

The New York Zoological Society contributed \$500 toward the Director's salary in the form of an honorarium.

Grants-in-aid in the amount of \$1500 were given by the New York Zoological Society.

Grants from the National Science Foundation totaled \$12,600.00.

\$7500 supplied by Interregional Research Program to Wyoming Agricultural Experiment Station for sagebrush study; \$5300 for cattle helminths study.

\$2000 from Natural Resources Board for range studies.