

REPORT ON THE ACTIVITIES  
OF THE  
JACKSON HOLE BIOLOGICAL RESEARCH STATION  
SUMMER 1962

L. Floyd Clarke, Director



## PHYSICAL FACILITIES

During the past year some improvements were made in the physical facilities of the Research Station. A new 1,000 gallon septic tank together with the sewage drainage system was installed. This is essential to maintain adequate sanitary conditions at the Station. New laboratory tables were installed in both the zoology and botany laboratories. Additional equipment was purchased as needed to meet the needs of research workers. The Station is now in relatively good position in the standpoint of available equipment.

The second year of operation with the new highway coming close to the Station proved that this condition did not result in as much disturbance to our operation as had been previously anticipated. All roadways within the Station grounds were eliminated with the exception of a central driveway with the result that the areas previously used by vehicles are beginning to become revegetated. This results in a decrease in the amount of dust and improves the appearance of the Station grounds.

The Station is still in need of two major improvements, neither of which will necessarily increase the total number of investigators, but will provide for improved operation and convenience. The first of these is the construction of a seminar-library building to eliminate the necessity of holding the seminars in the living room of the director's house and also to provide adequate space for books and periodicals which the Station is building up. Currently the library is housed in the zoology laboratory, but this is seriously hampering space for laboratory use. A budgeted item has been included in the 1963-65 University of Wyoming budget to provide some funds to help out with this construction. One of the serious handicaps to obtaining funds for construction is the short-term contract which is now in effect between the Park Service and the New York Zoological Society and the University of Wyoming. Our attempts to obtain a long-term agreement recently received a temporary set back when we were informed by the Park Service that they felt it was desirable to continue on a short-term basis until their own research program had been definitely crystallized. We trust this is only a temporary cut back, since most Park officials with whom we have had contact seemed to favor a longer term agreement.

The second major construction item is living quarters for investigators who come to the Station without families. The present dilapidated building being used for this purpose will be torn down as soon as adequate quarters can be provided.



## SEMINARS

As in previous years seminars were held each Thursday evening at 7:30 in the home of the director. These were all well attended and furnished an excellent opportunity for all of the investigators to become better acquainted with research projects underway as well as to provide valuable suggestions to the investigators on their research program. The seminars continue to serve a very important function in the unification and stimulation of the research efforts at the Research Station.

The following is a list of seminars presented.

Margaret Altmann - Age and Social Role in Wild Ungulates.  
George B. Schaller - Behavior of Mountain Gorilla.  
Charles C. Laing - Effect of Human Use on Wild Lands in the Tetons.  
Donald C. Lowrie - Competitive Exclusion Principle.  
Gerald Scherba - Social Organization among Colonies of the Mound Building Ant.  
J. Gordon Edwards - Ecology, Taxonomy, and Bionomics of Insects in Grand Teton Area.  
John Merkle - Misconceptions in Plant Ecology.  
Ralph Dimmick - Canada Goose Population Study in Jackson Hole.  
Kenneth L. Diem - Influence of Geological Formation on Dependent Plant and Animal Populations.

## LIBRARY

Periodicals previously subscribed were continued but no new ones added. The current periodicals were made available to the research workers before being filed in the stacks. We continue to receive reprints from research workers of previous years. The total number of the titles of published data resulting from work at the Station is currently well in excess of 100. Current National Park Service and Forest Service publications and information are made available to investigators. Reports on research projects, Annual Reports and other information related to the Station operation are made available. A list of the reprints of publications which we have available on research conducted at the Station is included as an appendix to this Report.

## COOPERATION WITH OTHER AGENCIES AND INDIVIDUALS

The cooperation with Grand Teton National Park during the past year was better than any other previous season. This was due to increased interest of Park Service personnel in Research Station operations. Worthy of special mention was the very great interest which Mr. Willard E. Dilley, Chief Park Naturalist, showed in our operation. No Park Service representative with whom we have been in contact the past years has demonstrated the cooperation which Mr. Dilley has shown. As a result of discussions with Mr. Dilley relations of the Research Station with the National Park Service were re-evaluated. Participating in these discussions were Kenneth L. Diem, L. Floyd Clarke, and Willard E. Dilley. The following is a brief summary of the results of these discussions as prepared by Mr. Dilley.



1. Need for permanency to be attained by an agreement for no less than twenty years.
  - (a) The fiscal department of the University of Wyoming is of the opinion that the type of buildings used at the Research Station cannot be amortized in a period less than twenty years. New building construction could not be authorized for a shorter period.
  - (b) A long term agreement makes planning of the operations of the Research Station less difficult. Various contracts can be entered into by the University without the shadow of termination affecting the agreement.
  - (c) A long term agreement creates a more favorable situation when grants for research are sought from various foundations.
2. The staff of the Research Station believes that the present location is satisfactory and ideal in many respects. Geographically it is centrally located to most of the field work which researchers engage in. Pack horses and saddle horses can be obtained nearby. It is not too inaccessible for use during the winter season. Occasionally some projects require field work during the winter. Dr. Clarke and Dr. Diem felt that it would be very difficult to convince the Directors of the University of the justification for a move to another location.
3. Extent of facilities at the Research Station. The Director of the Research Station plans to keep the Station at about its present size. If a long term agreement is forthcoming, they plan to remove one bunk house and build a library-seminar building of about the same size. They would expect to replace all tents, trailers, etc., with adequate quarters. Any construction would be in the nature of upgrading their present facilities.
4. Pasturage for horses is not essential or even desirable. It is considered more economical to rent saddle and pack animals, with the outfitter furnishing all needed equipment.
5. It was felt that it would be desirable to state in any agreement, a few matters of policy as to the nature of research performed and the objectives of the Research Station. Most of the ideas discussed have been a policy of the Station as far as practice is concerned, but they were matters which had not been put in writing.
  - (a) The primary objective of the operation is to perform research which has local application or research which can best be done here because of some unique

feature of this area. This statement is not intended to confine research to the exact and artificial boundaries in the park.

- (b) All applicants who apply for permission to work from the Station facilities will be treated equally, giving no regard to the school or other institution with which they might be affiliated.
- (c) To avoid continuous use of the Station quarters and facilities by any one researcher to the exclusion of other qualified persons, projects are approved for no more than three years. In instances where a project is not completed within the three year period, the investigator may apply for an extension of one year. The board of directors may review the petition and decide if an extension is justified.

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The pocket gopher study initiated in the summer of 1961 in cooperation with the Park Service was continued. Dr. Kenneth L. Diem is in charge of this project. Personnel of Grand Teton National Park, Teton National Forest and others continued their helpful advice on this project.

A new project was initiated in cooperation with the Park Service dealing with the study of alpine ecology. Dr. John Merkle was in charge of this project. Mr. Glen Cole, the Park Biologist, and Mr. Willard E. Dilley, Chief Naturalist, were especially helpful to Dr. Merkle in the initiation of this research program.

The cooperation of the Wyoming Game and Fish Department is also appreciated. The personnel of the Department, especially Mr. George Wrakestraw, assisted Mr. Ralph Dimmick in a Canada goose study. The Wyoming Game and Fish Commission also provided financial support for this project. They were also cooperative in providing the necessary permits for collection and study of game species in the area.

As in previous years investigators at the Research Station were available for advice on biological problems. Both private agencies and individuals and public agencies including the Park Service, Forest Service, and the Game and Fish Department were assisted by Research Station personnel.

Many scientists of national and international reputation were visitors at the Station during the past summer. These and other people interested in our operation too numerous to list in this report were welcomed to the Station and had opportunity to visit the various investigators.

Again this year Dr. and Mrs. Fairfield Osborn and some of their guests visited at the Station. Dr. Osborn is President of the New York Zoological Society, which has so effectively cooperated with the Research Station in its development. We always appreciate his cooperation, advice and counsel.



Included in last year's Annual Report was a report dealing with cooperation with the Park Service for developing a plan of research in national parks, prepared by Dr. L. Floyd Clarke and Dr. Kenneth L. Diem with the advice and counsel of Dr. David Love of the U. S. Geological Survey, and various Park Service representatives. This was well received. During the past year and a half, at least, the Park Service has increased its interest in research very greatly. It has recognized the opportunity which national parks can provide for research of significance to the Park Service itself and other fields of biology.

#### STUDENT TRAINING PROGRAM

The Research Station of the past years has not only attempted to furnish opportunity for experienced investigators to develop significant research in which the area provides opportunity, but has also established programs in which students interested in biological research have been given the opportunity to work with experienced investigators. These students have received valuable information on methods and procedures in biological research. For the past several years the Station has cooperated with the National Parks Association and the National Park Service in a Student Conservation Program in which two or three students under this program worked on research projects at the Station. This program was discontinued during 1962, however, it is hoped that the Park Service will be able to continue this program in the future. However, the Station continued to provide opportunities for young investigators. Two biology majors from the University of Wisconsin, John McLeod and Steve Martin assisted Dr. Margaret Altmann in her study of ungulate behavior. Paul Sebesta, graduate student from the University of Iowa, was an assistant to Dr. Charles Laing on the study of effects of visitor use on the wild lands in the Tetons. Ralph Dimmick, graduate student from the University of Wyoming, in addition to study on his own project, assisted Dr. L. Floyd Clarke on a limnological study and Dr. Kenneth L. Diem on an ecological study of the elk summer range. Barton Baldwin, a biology student from New York, assisted Dr. Paul G. Roofe on his salamander studies and Dr. L. Floyd Clarke on the limnological study. Norman Heryford, graduate student at the University of Kansas, assisted Dr. Gerald Scherba on his study of ant ecology. Mrs. Jackie Bonquet, graduate student at Los Angeles State College, assisted Dr. Donald Lowrie on his study of spiders. All of these students had an opportunity to become acquainted with research activities of all the investigators at the Station.

Additional graduate students from the University of Wyoming had opportunity to come to the Station for short periods of time. All of these young investigators felt that the experience they received would prove very valuable in connection with their plans for continuing study and research in fields of biology.



## FINANCIAL REPORT

1961-1962

November 16, 1961 - June 30, 1962

<u>Item</u>	<u>Budgeted</u>	<u>Expended</u>	<u>Carried Over To Next Year's Budget</u>
Part-time Assistants	\$ 200.00	\$ 200.00	\$
Equipment	1,245.61	131.67	1,113.94
Supplies	671.54	123.69	547.85
Contractual	1,325.05	64.15	1,260.90
Travel	356.40	15.75	262.40
Fixed Charges	36.00	36.00	
Extraordinary Expense	102.78		102.78
	<u>\$3,937.38</u>	<u>\$ 571.26</u>	<u>\$3,287.87</u>

July 1, 1962 - October 15, 1962

<u>Item</u>	<u>Budgeted*</u>	<u>Expended</u>	<u>Unexpended</u>
Research Projects	\$ 877.50	\$ 877.50	\$
Part-time Assistants	1,600.00	1,400.00	200.00
Equipment	1,293.94	419.10	874.84
Supplies	1,147.85	381.39	766.46
Contractual	2,103.90	681.51	1,422.39
Travel	484.40	257.84	226.56
Fixed Charges	36.00		36.00
Extraordinary Expense	177.78	124.12	53.66
	<u>\$7,721.37</u>	<u>\$4,141.46</u>	<u>\$3,579.91</u>

\*Includes money carried over from previous year, therefore, does not indicate amounts appropriated for one year.

Rent received in the amount of \$757.70 was placed in the General Fund of the University.

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 \$1890.00 were given by the New York Zoological Society.

Yellowstone National Park grant - \$1500.

Grand Teton National Park grant - \$1000.

National Park Service grant - \$1000.

Other projects not included here were supported by grants from various sources as indicated after project summaries.