SUMMARIES OF RESEARCH PROJECTS CARRIED OUT IN 1957

A Study of Social Behavior Patterns in Moose of Wyoming

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Project Number 77

In the framework of a long range comparative study of social behavior in free-living wild ungulates, the Wyoming moose, Alces alces shirasi, is being investigated. This study follows similar methods as our study of Wapiti behavior.

Behavior patterns of the moose and their changes at different seasons, ages, sex and habitat types are analyzed. The reactivity of the moose to disturbances is used as a testing device. These reactions reveal behavior not detectable under normal conditions and will supplement the previous factual data on moose behavior. In particular, the phenomena of aggression, yielding and evasion will provide information as yet untapped. The selected areas of study in Grand Teton National Park and in the adjoining U.S. Forest Service wilderness district are unique in moose population and lend themselves especially well for this study since moose habitats with and without "disturbance" factors are within easy reach.

It is expected that the results of this study will not only yield theoretical facts on group behavior but will provide some useful answers to questions of practical wildlife management as well.

As has been pointed out in our earlier Wapiti publication, our work on moose behavior is greatly benefited by the lively interest and friendly cooperation of the National Park Service personnel. To share the information and the results of our study with them seems a pleasant task.

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Assisted by James Ruos.

Ecology and Behavior of the Yellow-bellied Marmot (Marmota flaviventris)

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Project Number 82

The adult population increased from ten in August 1956 to 14 in June 1957. During the summer of 1957 there was some fluctuation in numbers as three yearlings left the colony, but would reappear from time to time. It was possible to identify all the adults as to sex except one. All were females except the unidentified one. This same animal has been observed for three years and is believed from certain behavioral characteristics to be a male. There were five litters of young with a total population of twenty-five. There were sixteen females and nine males.

Much social antagonism was observed among the adults during June. Most of this antagonism was directed toward the yearlings. One yearling female, who was living in a burrow in the northeast side of the colony, tried repeatedly to move south past the burrows of three older adults to a feeding area at the south border. She was often able to slip by one or two of the adults, but eventually she was seen and chased from the area. One of the older adults also visited the burrow of the yearling and apparently tried to prevent the yearling from using it. The yearling left the colony, although she did return several times. Late in the summer she was able to move freely through the colony and was not molested by those adults who had previously chased her, although she passed within a few feet of them. There was some social conflict among the older established adults. Essentially this was limited to the early part of the summer and was concerned with establishing feeding territories.

Careful attention was given to the development of the behavior of the young. When the young first emerge from the burrow, they carefully examine all the objects in the immediate vicinity. They do not wander more than twelve or fifteen feet away from the burrow entrance during the first three or four days. They are very nervous during this period and run to the burrow at the slightest disturbance. After about a week they begin to wander from the burrow; this early wandering follows established trails. They gradually wander further from the burrow until their movements encompass that portion of the colony which will be the home range of the family. Most of their wandering is performed as a family unit. Certain members of the family may tend to roam further and will wander through other parts of the colony, but will always return to the home area. Sometimes a member of a family may take up residence at an auxiliary burrow and stay there for several weeks. At about the time the adults enter hibernation, the young may move to a home burrow of another family. The young seem fairly tolerant of young from other families, but adults will chase strange young. Thus, no prolonged mixing of young from different families can occur until at least some adults have entered hibernation. Play is limited mainly to young within a family. The function of play seems to be, at least in part, the means of establishing dominance-submissiveness relationships among the young.

A few observations were carried out on the Unita ground squirrel (Citellus armatus) in order to compare it with the marmot. The ground squirrel colony was composed of several families, each with two males and three or more females.

Marmot colonies were located in the Teton Mountains and a photographic record made of the various conditions under which marmot colonies are found. The location and number of melanistic marmots were also determined.

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