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A Comparative Study of Communications in Big Game
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Project Number 124

The long range study of the communication systems of wild ungulates was continued during the summer (May 20 to September 4, 1971) as planned. Our special interest was centered on the role of fear in the daily and seasonal life of the animals.

Comparative observations of the ethological and ecological patterns in elk, moose, and mule deer led to the analysis of the role of attenuated fear, the extinction of the flight reaction, and eventually to the establishment of familiarity in respect to disturbances. Manmade disturbances provided the most often occurring examples of intrusion into the herd and individual life of elk and moose.

Our observations confirmed our findings from previously collected research data that increased disturbance (mainly tourist pressure) leads to increased concentration of big game animals in the areas of lesser pressure. This in turn leads to overuse of food and shelter resources and to increased intra-species pressure (social interaction). At times, social herd organization was impaired and normal grazing and dispersion were modified.

The definite emergence of a new type of "big game" in the form of a tourist-tolerant, less reactive roadside game animal (moose, elk, deer) was found and studied in detail. Such a "park edition" of wild big game is, however, still a rare phenomenon, but their number will increase steadily, if ecological pressure is continued. Some National Park Service members have mentioned that this type of park game will be the unavoidable goal under denser tourist conditions.

The attenuation of the fear- and flight-reaction which may bring at first sight some advantages for the onlooker, will in the long run have a devastating effect on the social ecology of any wild species. Fear and flight in the big game animals serves as an important steering and distributing device in herd and individual movements. Without this device the tendency to congest in certain areas, to erode and overgraze their ranges is stepped up.

Excessive familiarity (erroneously called "tameness") with man also increases the incidence of roadkills and develops beggar animals to the point at which the game animal as well as the tourist is endangered.

Another approach of our research this year dealt with observations on the role of the subordinate animals in elk or moose groups. It appears likely that the subordinate animal serves in important signal functions and provides a replacement reserve. The further evaluation of our data will have to shed more light on all these questions.

Increased attention was also given to the olfactory-scent markings and their behavioral consequences in moose, elk, and deer movements.

Among the interested scientists visiting our research headquarters were Dr. Adolph Murie, Biologist, Moose, Wyoming, and Mr. Hugh B. House, Curator of Mammals, Bronx Zoo and New York Zoological Society.

Assisted by Miss Betty Erickson, a graduate student from the University of Colorado.