

SOCIAL INTERACTIONS, MOVEMENTS AND ACTIVITY
OF RIVER OTTERS IN GRAND TETON NATIONAL PARK

Joseph G. Hall
California Academy of Sciences
San Francisco

Objectives

There are several goals of the river otter project. One is assessing year-to-year variations in population densities, primarily in the Jackson Lake Dam to Deadman's Bar section of the Snake River. Another is evaluation of habitat preferences on this section. A third objective is documenting behavioral reactions among otters and between otters and other species living in the riparian habitat. Finally, I wish to obtain a picture of the summer activity-cycle on a 24-hour basis.

Methods

Direct observation of the otters continues to be the major way information is gathered in all phases of the study. Observations from canoe appear less disruptive than those made on foot. Since none of the animals are marked, population estimates are not absolute. Season-to-season fluctuations are inferred, based on the number of individuals seen per hour afield. Boatmen conducting tours from Pacific Creek to Deadman's Bar have contributed both to estimates of population density and to analysis of habitat preference by marking on sketch maps where otters are seen. These sites are matched with a master map depicting distribution of habitats identified from aerial photos. Variations in diurnal activity are detected by direct observation but nocturnal activity must be inferred by indirect means. For the past two seasons, inexpensive time-recording cameras actuated by treadle-switches buried along otter trails have been used. The method of continuous monitoring of a prime site by a dawn-to-dusk team of observers proved particularly productive, revealing facts about daytime activity and intra- and inter-specific behavior.

Results

In the June 18 to July 24 period, otters were observed for a total of slightly less than eight hours during slightly more than 71 field hours, an efficiency of 11%. Since the efficiency was approximately 12% the previous season, the population density in the Oxbow area is presumed to be about the same. At least two separate family groups of three and four individuals are known to have frequented this area with some regularity. This year, for the first time, I was given information on how many hours boatmen were afloat. However, the data for two successive years must be available for comparison since the "field strategy" of boat tours is quite different from my own.

Results of habitat-preference appeared remarkably similar to those of 1984. The least available category, log jam-beaver lodge, was most favored and the most available, gravel beach, was sixth choice. Intermediate choices were coniferous slope, grassy bench, gravel slope and coniferous bench and duplicated the order shown in 1984 almost exactly.

On July 22, the beaver lodge at the Old Research Station was monitored from 6:20 a.m. to 8:45 p.m. The site was a most fortunate choice, especially for behavioral observations, as it was the center for otter activity for the entire 14 hours. New observations: two family-groups occupied the lodge simultaneously, once for four hours; at least one, possibly two beaver also occupied the lodge for part of this period although they may have been in separate chambers. Coyotes, beavers and otters exhibited cautious tolerance of each other, beaver and otters sometimes making sham rushes at each other and otters doing so at coyotes. Beavers occasionally tail-slapped in response to approach of coyotes but not to otters. Tentative conclusions corroborated: otter family groups are cohesive units even when close enough to other groups to mingle freely; an extended "siesta" occurs in the afternoon.

Four camera sets were operated for a total of 28 camera-nights. These recorded seven otter-passages, of which four were legible and, fortuitously, a fifth was observed directly. The times of these events were: 6:00 p.m., 8:30 p.m., 8:30 p.m., 3:00 a.m. and 5:00 a.m. These records suggest around-the-clock activity but are, of course, too small a sample to be very informative.

Conclusions

Success in observing otters was similar to that of 1984 and the population level is inferred to be comparable in the Oxbow study area. For the second consecutive season, log jams and beaver lodges proved to be the key river shore habitat. Less favored habitats held their previous ranks consistently. Although the dividends of a typical all-day vigil certainly cannot be expected to be as high as they were on July 22, the method unquestionably should be exploited in future studies. The potential of the nocturnal activity monitors was amply demonstrated but the coverage, both in space and time, must be doubled or tripled in order to yield statistically adequate samples.

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