DESERT BIGHORN AND PEOPLE IN THE SANTA ROSA MOUNTAINS

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Abstract: Human encroachment is beginning to make serious inroads on the bighorn habitat in the Santa Rosa Mountains. Human harassment of bighorn at a waterhole forced them to abandon the area and move to another source of water. These same bighorn have demonstrated that they can live close to a residential area.

Additional studies, public education on the needs of bighorn, and consolidation of checkerboard land ownership into public land are needed to preserve the bighorn and their ranges.

INTRODUCTION

The greatest threat to the future of desert bighorn (Ovis canadensis) in the Santa Rosa Mountains is loss of habitat due to human encroachment.

It is certain that portions of the bighorn range in the Santa Rosa Mountains will be lost in the near future because of urban development.

This paper presents an evaluation of the problem and suggests possible methods to minimize the loss of bighorn habitat.

Description of Area:

The Santa Rosa Mountains southeast of Palm Springs extend 43 miles and end between the Salton Sea and Borrego Valley (see Figure 1). The highest summit is 8,716 feet. The mountain range separates Coachella Valley from Borrego Valley, both valley floors being near sea level.

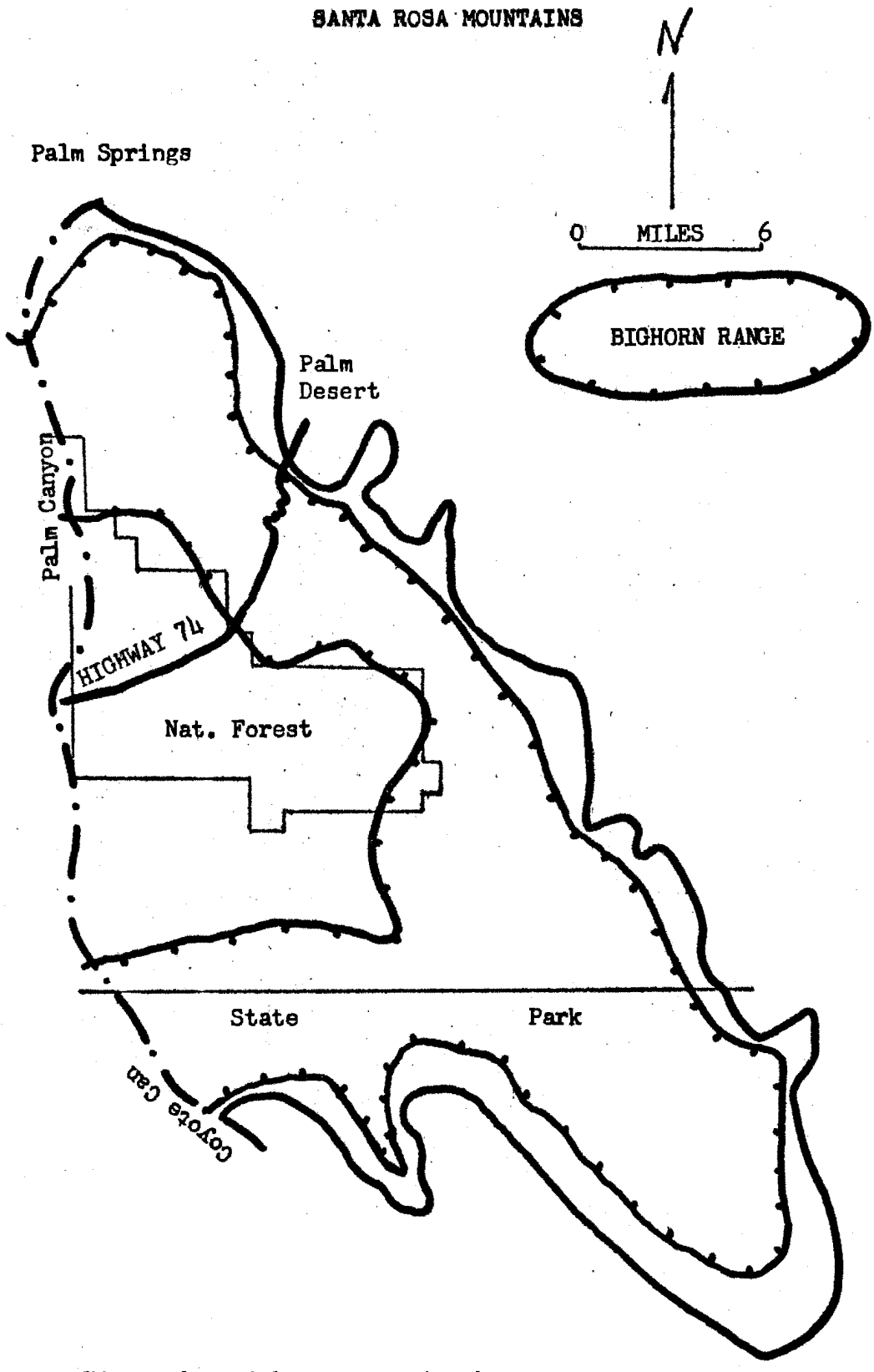

Figure 1. Bighorn range in the Santa Rosa Mountains.

The San Bernardino National Forest contains much of the mountain range in Riverside County above the elevation of 4,000 feet. Approximately ten miles of the southern end of the range lies within the Anza-Borrego State Park in San Diego County. Land ownership in Riverside County is in a checkerboard pattern. Every other square mile is privately owned. The even-numbered sections are either National Forest land or Public Domain. Most of the bighorn habitat is under the administration of the Bureau of Land Management.

This pattern of land ownership makes it possible for residential development in much of the bighorn habitat.

Bighorn Distribution:

Bighorn live on the desert slopes of the mountain range generally between the elevations of 500 feet and 4,500 feet.

Ewes and young bighorn live within a mile of the waterholes in the hot, dry months. Adult rams are able to range farther from water in this hot, dry period. Each waterhole in bighorn habitat has its summer concentration area. Water distribution and the number of summer concentration areas appears to form a primary control on the abundance of bighorn in these mountains.

The northern portion of the bighorn range is in the shape of a narrow belt. Sheep habitat in this area, above Palm Desert, is close to urban development. The southern half of their range is broader, and waterholes are more abundant. The area also is less accessible to people.

Human Encroachment:

Human encroachment upon the sheep habitat, that is close to the urban area, is increasing, to the detriment of the bighorn sheep. In the narrow belt area of Palm Desert, houses have been built at the upper and lower limits of their habitat. Wells drilled above their range apparently have lowered the water table, causing some of the springs to become dry in bighorn habitat. Highway 74 cuts through the sheep range. Traffic on this road is heavy during the weekends. Eventually, it may become a barrier to the sheep. Plans have been made for residnetial development that will penetrate the bighorn habitat northwest of Highway 74 within the next year.

Much of this sheep habitat between Highway 74 and Palm Canyon is scenic and has suitable terrain for home sites. Urban development between Palm Springs and Palm Desert is growing as rapidly as any area in Riverside County. In this area the population increased approximately 70 percent between 1960 and 1966. This percentage of increase is predicted to be repeated by 1985.

It seems doubtful that bighorn will be able to adjust to the extent of human use expected in this area in the future.

Human disturbance which proved to be more than the sheep could tolerate, caused bighorn to abandon Magnesia Spring near Palm Desert. This waterhole is about one mile from the community of Rancho Mirage. By 1964 Magnesia Canyon was used heavily by local residents for hiking and picnicking. Picnicking and harassment of the sheep at the waterhole during the summer caused the bighorn to abandon the waterhole and its summer concentration area in 1965 and 1966.

They moved north to the next canyon, where residents had provided a water trough. This new source of water in Bradley Canyon is one and three-quarter miles from Magnesia Spring. The residents in Bradley Canyon piped water to a trough on the slopes above the community water tank in 1965. The Magnesia Canyon band of at least 25 bighorn accepted this new source of water the first summer it was available.

These bighorn have been living close to a highway and residential areas for a long time. Looking down on the highway, homes and golf course they have become conditioned to hearing the noise of humanity. People at a respectable distance do not disturb them.

In the summer of 1966 a house was built within 60 yards of the water trough in Bradley Canyon. The activity of building this house went on all summer long. The noise of skill saws, hammering and the blasting of air guns that drive nails into concrete did not deter the bighorn from their routine trips to water.

The bighorn were able to tolerate this activity and noise because they were not disturbed at the waterhole or within their summer concentration area.

Conclusions:

If the bighorn in these mountains are not disturbed at the waterholes or within their summer concentration areas during the hot, dry period they can live close to residential areas. People in the desert communities should be educated to stay away from these areas in the summer months.

Bighorn can tolerate photographers, hikers, and horseback riders in the winter months.

Important waterholes should be maintained, so that they do not become filled with silt.

Bighorn summer concentration areas can be extended by providing watering devices in the waterless areas of the bighorn range. Such devices that collect rain water can be transported into inaccessible areas of the bighorn range by helicopter.

Water can also be piped from residential areas into sheep habitat. This would help compensate for waterholes lost because of human development.

More information is needed on the ecology of bighorn and their capability to adjust to human disturbance. The University of California has a desert research laboratory at Palm Desert. Possibly the University's graduate students will be able to make an intensive study of the bighorn in the Santa Rosa Mountains.

The Bureau of Land Management is in the process of classifying the government land in the Santa Rosa Mountains. In 1967 they will have developed a plan to retain portions of their lands. Certain areas will be given priority. It is hoped that eventually a large portion of the checkerboard land ownership pattern in these mountains will be consolidated into a block of public land. Connecting the National Forest and the State Park with National Reserve land will enhance the future of bighorn in these mountains.