

# Recreation



By David A. King

*Anyone who has gone fishing, camping, or picnicking recently is well aware of the recreation boom on our wildlands. (By wildland we mean noncultivated forest and range land.) The boom is reflected also in recreation use statistics.*

In Arizona, the number of visits to recreation areas under the administration of the Park Service and Forest Service increased 42 and 54 percent, respectively, between 1960 and 1964.

In 1964, Arizona's National Forests ranked between 3rd and 5th among

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perhaps in response to protests.

Recently the National Wool Growers Association asked a U.S. Senate subcommittee to appropriate more funds for the control of predators in the west but apparently most cattle ranchers are not pushing for additional federal control. Coyotes infrequently injure heifers or kill calves, but losses are minor compared with lamb and sheep losses to coyotes. Some cattle ranchers like to see some coyotes around to keep down the rodents and rabbits. Mr. Clump, a rancher near Dos Cabezas, feels a coyote on his range all year saves enough forage to feed one cow. If the coyote takes only one jackrabbit a week, the total of 52 jackrabbits would eat more of his range forage than one cow.

## Don't Kill All Rabbits

On the other hand, coyotes are

quite mobile, feed on what is most available to them, and they cannot be depended upon to control effectively all rabbits and rodents. Very little control of coyotes is practiced on the Papago Indian Reservation. Jackrabbits and rodents still thrive there, and their numbers vary from year to year with rainfall, local predator numbers and many other factors, just as they do throughout the state. Bill Carty has worked on the reservation for nine years and he knows of no kills of cattle or calves by coyotes, in spite of the lack of control there.

Modern range livestock management in Arizona requires good wildlife management as well as good range management. Coyote management should not be merely coyote control, although control other than by sport hunting will still be needed. Research offers new methods of coyote population management, especially needed in urban areas where

traps, cyanide guns and poisons are not desirable.

## Now They Have "The Pill"

Don Balsler of the Fish and Wildlife Service Denver Research Center is experimenting with a steroid for population control of coyote. He uses a drop bait without poison, but containing alpha stilbesterol to interrupt or to prevent pregnancy of female coyotes. Other research is needed to assess the ecological interrelationships of coyote, jackrabbits and rodents.

Facts and the right tools should help us find the right niche for the coyote in Arizona, and allow us to use more of him than his howl. Economic loss on farms and ranches cannot be tolerated. We must find proper management methods because apparently the coyote is here in Arizona to stay.

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all National Forests in number of visits to the following site categories: all developed sites, campground, picnic sites, organization camps, and hotels and resorts on National Forest lands. This is especially interesting when it is noted that Arizona's National Forests ranked 10th in the total number of developed sites.

Despite these impressive statistics, it is safe to say that Arizona's recreation resource potential has not been reached. If it is to be reached efficiently and without lowering the quality of recreation experiences, research is needed to provide information to guide planning and management.

### Some Recreation Problems

The problems for which solutions or information are needed are many and varied, requiring different kinds of research expertise and subject matter knowledge. A brief summary of some of the problems will illustrate this.

A basic problem in recreation, comparable to one in range management, is the determination of "carrying-capacity" for different sites under different kinds and rates of recreational use. In other words, how much use can an area receive before undue physical deterioration of the plant and soil complex takes place, and before recreation visitors impinge on one another to the extent that the quality of the experience is lowered beyond some minimum. Here we see that what may appear to be mainly a biological problem will also involve some sociological and psychological aspects.

Another problem involves the layout or design of recreation areas. What sizes of campgrounds are desirable? How many of each size? Where should they be located? How far apart should the individual campsites be? What species of shrubs and trees are best suited for use as screens and barriers?

Answers to these questions require knowledge of the plant and soil complexes best adapted to recreational development, the preferences of campers for areas of differing vegetative and topographic characteristics, and the potential demand for campgrounds of different types.

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These questions are biological and sociological.

### How Entertain Them

Educational programs at recreational areas raise questions for which we need more information. What type of audience do we have? What methods of presentation best accomplish program goals? Can people be educated to appreciate nature? What should be the content of these programs? These kinds of questions involve biology, sociology, education and political science.

Several federal agencies are encouraging private recreational development, and these private developers need planning guides to ensure successful ventures. County and local governments need information on zoning and land use development, in order to prevent the kind of disorderly development that can kill the very basis for the attractiveness of an area. These problems involve economics, political science and aesthetics.

Although we know that "not every aspect pleases," we don't really know what "aspects" do please. To what extent does the average person recognize difference in vegetative cover? What are the preferences, if any, for different vegetative covers? What silvicultural practices can be encouraged to produce aesthetically pleasing landscapes? Is different treatment of forested roadside strips really necessary? These problems involve ecology, silviculture, aesthetics, and psychology.

### Know Ecology First

While the problems of wildland recreation management and planning involve several fields of knowledge, a basic understanding of forests and ranges is necessary. This understanding is required by the importance of the basic wildland resource in efficiently satisfying the recreation wants of our growing population. A lack of recognition of this could result in development that would destroy the very thing people are looking for when they go into these areas for recreation.

The brief summary above shows the multitude of problems that could be studied in a total recreation research program. However, in initiating a new program it is necessary to narrow the scope. This is what has been done in the new recreation research project in the Department of Watershed Management. The project will be limited to investigating problems related to the demand for and

economic value of wildland recreation.

The objective of the demand studies is development of improved ways of forecasting how many people will want and be able to use recreational facilities in the future. In order to attain this objective, studies will be made to find out why people participate in recreational activities, and how these reasons are related to the kinds of areas they use and to their social and economic characteristics. A byproduct of such studies will be descriptive information about recreation visitors that will be useful to recreation managers in planning site layouts and visitor information services.

### What Is Dollar Value?

The economic valuation of recreation sites is useful in helping to make land use decisions. These decisions involve both questions of recreation versus other land uses, e.g., for timber or forage production, and of one kind of recreation development versus another kind. Economic valuation is difficult because public recreation has been traditionally provided free of charge.

Even though daily and seasonal charge are now made on federal areas, the same fee is charged for all areas and the fees have been set administratively. Because of this, there have been several different valuation methods proposed. The basic differences between them are really based on differences in opinion among economists. Thus, empirical research can't be used to pick the best one. But research can attempt to test the assumptions underlying them and help to improve their application; leaving the choice of method up to the judgment of the evaluator.

### Just a Beginning

Future studies under the project will be broader, covering more kinds of recreation and broader areas. The total program may also expand to include other problems of importance to Arizona and the nation in general. This project is just a start at attacking a small portion of the problems in wildland recreation management.

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Existe la posibilidad de que la clase de alimento que el ave ingiere pudiera influir en la postura de huevos con manchas de sangre. En unas investigaciones, la incidencia de las manchas de sangre alcanzó los niveles más altos en los huevos producidos por gallinas que recibieron alfalfa deshidratada.