

THE RIVER OTTER JOURNAL

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A Message From Our President:

SUPPORT THE ENDANGERED SPECIES ACT FOR THE OTTER'S SURVIVAL

The 20-year old Endangered Species Act, enacted in 1973, will be up for renewal next year. While otters are not a federally-listed endangered species, they are protected through many states' endangered or threatened species programs. The Endangered Species Act prohibits killing, harming, or otherwise "taking" endangered species, including altering or destroying their habitat.

The present administration and many special-interest groups would like to force a basic change in the Endangered Species Act and criticize the Act for creating conflicts between protecting the environment and the economy. Our question to those who wish for a more lenient revision of the Act is: If regulations are relaxed, at what point will development stop when confronted with escalating growth and business demands?

As Charles Wilkenson states in "Eagle Bird, Mapping a New West", federal and state lands are in the public trust and the agencies are the trustees. To be a trustee of an area and its occupants means preservation of that area rather than just portions of that area in which developers have no interest.

There is no greater task during the next few years than to set priorities for the intrinsic value of our public trust. We must all act with a sense of urgency and "connect all of nature with the future of human-kind...we are all linked together in a chain of interaction, dependency, and vitality."

We urge you to write to your representatives in support of the Endangered Species Act.

Carol Peterson, President

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A California Otter Behavior Study

By Scott Shannon
Dept. of Biological Sciences,
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Arcata, California

Since 1983, I have studied the behavior of a marine population of the North American otter (*Lutra canadensis*) at Trinidad Bay on the far northern seacoast of California. In the last nine years, I have recorded more than 6,000 hours of direct observations of otters and witnessed first-hand many heretofore hidden

combination of physical and behavioral characteristics. Recognizing individuals is the key to understanding any animal's social behavior, and my ability to identify these otters reliably is what makes my long-term study of otter behavior the first of its kind.

The matriarchal social organization of the Trinidad otters is characterized by female dominance, male gregariousness, and a strict social

many heretofore hidden aspects of otter behavior.

The focus of my research has been to chronicle the behavioral development of wild North American otter pups, a process never before documented. Thus far, I have followed the lives of 4 mothers and their 11 litters, comprising 33 pups. In particular, it was my goal to follow the 2 females born in 1986 through their entire behavioral development to their own parenthood. That goal was attained last year when the second of those females gave birth to her first pups at the age of 5 (her sister first gave birth at 4 years of age).

Concurrent with my pup development work, I have made extensive observations of the social organization of these marine coastal otters. The otter population at Trinidad Bay lends itself well to observational study, as the 9 - 15 resident individuals can be observed during daylight hours at relatively close distances (5-100 meters). Because of the otters' visibility and proximity, I have learned to recognize individuals by sight, without the use of tags or telemetry. With repeated observation, every otter in this population can be identified by its own unique

segregation of the sexes. At Trinidad, adult male otters are very gregarious - so much that the males constitute a seasonally stable, cohabitating social group that I call 'The Clan'. For anyone familiar with the current scientific literature on *L. canadensis*, the existence of a stable social group of 5-8 males should come as a genuine surprise. In almost any reference on the species, you will likely see adult males described as 'solitary and territorial'. The Clan males are emphatically neither. They are, in fact, conspicuously gregarious and communal. During my entire study, there has never been an adult female member of the Clan; all of the adult females are members of the extended family group.

This leads to a discussion of the most remarkable behavior pattern displayed by the Trinidad otters: the extreme degree to which adults of the opposite sex mutually avoid social interaction. The strength of sexual segregation exhibited by the Trinidad otters is truly astonishing. For example, as of 31 March 1992, it had been 1,417 sessions (September 1986)

(CONTINUED ON NEXT PAGE)

California Otter Behavior Study (continued)

since I saw an adult male and an adult female simply forage together, and 1,085 sessions (June 1988) since I saw adults of the opposite sex interact playfully.

The otters at Trinidad Bay are fortunate indeed. The local people treasure these otters as a precious scenic resource, so the otters have never been objects of exploitation or deliberate harassment. These are the primary reasons that these otters are so tolerant of the presence of people and so easy to observe. The Trinidad otters are also fortunate to inhabit a healthy, productive marine environment. Moreover, California has been

closed to otter trapping since 1960. Otters elsewhere are not nearly so fortunate. As Emil Liers, the famous 'Otter Man', once said, 'What otters need most are friends who will fight for their protection.' It is very heartening to see the formation of a group like the River Otter Alliance to carry on the work of fighting for the preservation of these often misunderstood and mistreated animal allies!

In the next River Otter Journal, I will summarize the results of my study of pup development and will tell the life-stories of the dominant female, 'Mama', and her first born daughters: 'Mama Junior' and 'Scarnose'.



(Scott Shannon is the founder of an earlier otter organization, The River Otter Fellowship. Publications of the group's newsletter, The Brightwater Journal, were discontinued due to time constraints when Scott began his own field research on this group of otters in Trinidad Bay.)



 **Report on Dolores River Ski Trip** 

The THIRD ANNUAL DOLORES CANYON SKI TRIP turned out to be a marvelous opportunity for tracking river otter sign and a rather rough ski trip due to an inadequately frozen river. We had skied the river the previous weekend to make sure that the ice was in a suitable condition for the ski tour. As it turned out, the ice had not formed the nice, thick, solid layer that we had found in previous years and was further deteriorated by a recent period of warmer weather. Therefore, we decided to call off the official River Otter Alliance Trip.

During our reconnaissance trip, however, we did have very good luck tracking. A snow storm had just ended just 24 hours previously so we knew that all the fresh tracks had been made within a one-day period. The first set of tracks were spotted only 150 meters from where we left our vehicle and we were able to follow the tracks of what were probably two otters as they travelled up the canyon.

We found signs of lots of activity of the otters entering and exiting the partially frozen river and sliding down an icy streambank. Increasingly worse ice conditions turned us back before we had our fill of otter tracking. Once again, winter-time and snowy conditions provided a wonderful opportunity for tracking otters.



Update On River Otter Reintroduction in Rocky Mountain National Park, Colorado.

By Dave R. Stevens, Research Biologist
Rocky Mountain National Park

As of 1974, although unconfirmed observations were still being reported, the river otter was considered extirpated in the Rocky Mountain National Park. In 1975, it was designated as endangered in Colorado by the Colorado Division of Wildlife.

Apparently the otter was never really abundant in Colorado but records of sightings are available for most major drainages. Wright, Dixon, and Thompson (1932:110) considered the river otter to have been transient in the park and advised against reintroduction of the animal based on the lack of knowledge as to the reasons for the scarcity of the animal in Colorado. Armstrong (1987) noted that E.R. Warren in 1922 speculated that the seasonal variable flow of the state's streams might explain the rarity of the otter. Other reasons may be the high levels of beaver trapping during the 1800's and possible loss of water quality due to mining activities. Although this question could not be satisfactorily answered, it was decided that only by releasing some animals and monitoring their survival could it perhaps be determined.

Therefore, the restoration of river otter was proposed for Rocky Mountain National Park primarily because of the available habitat and the protection that could be provided. The most suitable habitat for the release was the North Fork of the Colorado River in the Kawuneeche Valley. In cooperation with the Colorado Division of Wildlife, otters were obtained from Washington, Oregon, Wisconsin, and Minnesota. During the period of 1978 to 1984, 43 otters were released in the Kawuneeche Valley. Twenty-seven of the otters were implanted with radio transmitters by the DOW in order to monitor their movements. From 1981 to 1984, Curt Mack of the Colorado State University, conducted a study of the released otter movements and food habits in the valley.

Since the period of Mack's study, monitoring has occurred in order to determine the extent of the otters' movements. Movement to the east of the Continental Divide was confirmed when otter sign was found in Forest Canyon in March of 1987. Limited surveys were conducted in March of 1988 in the Kawuneeche Valley; results estimate the presence of approximately six otters in the area. In February of 1989, a two-day study of the Kawuneeche Valley, Baker Creek, and East Inlet determined that at least 11 individuals could be accounted for without duplication. In March of 1990, a survey similar to the previous year was conducted with the use of 29 volunteers and park employees. These results determined that there were probably a minimum of 13 otters using the area surveyed.

With the success of these counts, it was decided that the method was reasonably good for monitoring the long term success of the restoration and that a survey every other year would be sufficient for that purpose. According to this plan, another survey was made this year (1992) to cover as many areas of the valley and side drainages as possible in a two-day period.

On Friday, March 28, a total of 32 volunteers, U.S. Forest Service, Colorado Division of Wildlife, and National Park employees assembled at Maxine's Restaurant for breakfast. An orientation and slide show followed at the park headquarters auditorium and soon fifteen teams, consisting of at least two persons per team, were put in the field. The weather was good and the last snow had been three days ago. The only problem was the warm temperature was melting out some of the tracks and the snow had a breakable crust that slowed our travel speed. The basic area surveyed included the Colorado River channel from Shipier Mountain to the Shadow Mountain Reservoir and from Shadow Mountain Dam to Lake Granby. Other areas covered were the lower portions of Baker Creek, Bowen Creek, Beaver Creek, Timber Creek, Onahu Creek, East Inlet and North Inlet.

Surveyors were asked to record any sign of otter and to estimate the age based on the snow in the tracks and the degree of melting. Signs observed were tracks, slide areas, holes kept open, and scat. Analysis of otter numbers considered location of most recent tracks, distance from other tracks, tracks indicating more than one otter, and the direction of travel.

Similar to the findings in 1989 and 1990, these data indicate that otter are using most of the habitat along the main channel of the Colorado River and are using the tributaries

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 = OTTER HABITAT

Illustration of western region of Rocky Mountain National Park. Hatched area shows river otter habitat.

**(Continuation of river
otter reintroduction in
Rocky Mtn. Natl. Park)**

such as North Inlet, East Inlet, and Baker Creek. By adding up the numbers estimated in different areas with some chance of duplication, we came up with 15 otters, which is two more individuals than were considered to be present in 1990. Certainly the data indicates that after a period of 8 years since the last otter was introduced there is good survival. Reproductive evidence is still difficult to obtain. Reports of sightings and tracks of three otters together suggest a female and pups. As a result of these surveys, we can still say that the effort to reintroduce the river otter to Rocky Mountain National Park appears successful.

NOTE: WE HOPE TO BE ABLE TO INCLUDE RIVER OTTER ALLIANCE MEMBERS IN FUTURE OTTER SURVEYS IN THE ROCKY MOUNTAIN NATIONAL PARK.



In The Interest of Water...

*A high country plain without water,
Used more of it up than it ought 'e,
Till there came a day,
When the rains went away,
And the desert grew hotter and hotter.*

*The people cried, 'we must leave town,
Our lawns are all turning to brown,
We need a new mayor,
And a waterboard chair,
They'll build dams to bring water down'.*

*After all, I've been paying my dues,
And the waterboard cannot refuse,
To send me post haste,
Though it's true I might waste,
As much water as I wish to use.*

*So the lawns once again were quite green,
It's just that no people were seen,
As though they were cursed,
They all perished from thirst,
Their priorities mixed, it would seem.*

By John Mulvihill

Carol Peterson, president of the River Otter Alliance, and John Mulvihill, secretary, are currently involved with water conservation study and education. A 30-minute slide show, with text prepared by Carol, is presented to any group making a request by volunteers belonging to Sneakers For A

Sustainable Future. This speakers group has given over 200 slide-show presentations throughout Colorado on the benefits of recycling.



A Native American Otter Legend



Otter legends go back a long time in history. One of the earliest we have encountered, and one of our favorites, was told by the Assiniboine Indians, a branch of the Dakota living in the valleys of the Saskatchewan and Assiniboine Rivers in Canada. The legend is called "Why Crane's Feathers are Brown and the Otter Doesn't feel the cold."

To tell the tale briefly, Crane laid her egg so that her young Crane did not have time to learn to fly before summer was done. Crane asked Otter, "Please keep my son safe until I return in the spring". Otter promised he would do so and took young Crane to live in his den.

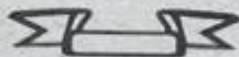
One day, Otter went hunting. Then Osni the Cold came into the den and took young Crane away. "You will do what I tell you," said Osni to Crane. Crane, on command, tended the fire. He fanned the hot coals and his wings became brown.

In Spring, the young Crane escaped from the Lodge of Osni and cried for help. Otter heard the young Crane and rushed to the cave of Thunder and Lightning. "Help me!" he said, "I have found young Crane and must retrieve him from Osni the Cold."

"We will do it," they said. Osni was struck by Thunders Lightning flashed and Cold fell down. Crane returned joyously crying, "You have saved my son." he said to Otter, "You now have my gift! You will not feel the cold in the winter. You will swim, you will run, you will hunt when the cold is great and the snow is deep, you will play and slide in the snow, but you will not feel the cold because you have saved my son!"

And so it is with Otter.

(Adapted from *The Long-Tailed Bear and Other Indian Legends*, by Natalie M. Betting)



Wetlands Classifications and Possible Effects of the Proposed Changes in their Delineation.



One of the current issues in the conservation movement is the protection, and subsequently, the definition of wetlands. The United States is currently losing wetland acreage at a rate of 300,000 acres per year. In spite of the high rate of these losses, the current administration, the same administration that announced the 'no net loss of wetland' pledge, proposed in September of 1991 to change the federal definition of wetlands. This proposed change would remove roughly half of the country's remaining wetlands from protection.

Our country has already sustained substantial losses of wetlands. It has been estimated that over the past 200 years, half of the country's original 220 million acres have been lost to draining and filling activities in an effort to turn what appeared to be 'wasteland' into cropland.

What appeared to be a wasteland to some people is actually a highly productive and diverse ecosystem that provides a variety of valuable functions. Wetlands are able to improve water quality by filtering and absorbing pollutants. Wetlands provide flood control by detaining water and reducing the destructiveness of peak flows. The presence of wetlands in only 15% of a watershed has the capacity to reduce flood peaks by 60%. Groundwater aquifers, many of which supply municipal drinking water, are often recharged by wetlands. Soil erosion is also reduced by wetlands, especially in coastal shorelines. The

productivity and diversity of wetlands supports both freshwater and marine fisheries as well as providing habitat for a wide range of plants and animals. Many of the species on the Federal Threatened and Endangered List are dependent upon wetlands for their survival.

Given the tremendous loss of wetland acreage in the past, the current loss of 300,000 acres per year, and the strong importance of wetlands, it is almost inconceivable that a plan could be presented that would weaken our protection of wetlands rather than strengthen it. According to the delineation guidelines of the new plan, roughly 50 million acres, which are currently protected, would no longer be considered to be wetlands.

For example, this new plan would mean that virtually all of the cottonwood and willow wetlands that border streams in the Rocky Mountains and the southwest would be excluded from protection. Fifty percent of the hardwood swamps in the southeast would no longer be protected. More specifically, 25 % of the Everglades National Park and 41 % of the Everglades remaining in private ownership would not be protected as well as 80% of the Great Dismal Swamp in Virginia and North Carolina. In the West, most of the high coastal marshes along the
(CONTINUED ON NEXT PAGE)

UPDATE ON RIVER OTTER REINTRODUCTION ON DOLORES RIVER, SOUTHWESTERN COLORADO.

During 1988 and 1989, twenty river otters (10 males/10 females) were reintroduced to the Dolores River in southwestern Colorado by the Colorado Division of Wildlife. Otters are believed to have been extirpated from this area since the late 1800's due to the impacts associated with beaver trapping and, later, from acid mine wastes.

Since the time of their release, these otters have greatly increased their distribution and have been found upstream above the McPhee Reservoir and downstream in the Colorado River near Moab, Utah. Otters have also been found in the San Miguel River which joins the Dolores downstream of the otter's release site.

The population appears to be doing well, although there have been some deaths. Reproduction was documented in the summer of 1990 when an adult and two very small pups were observed! An additional family group was seen during the summer of 1991. An abundant crayfish population and a well-distributed collection of beaver bank dens, as well as a series of deep pools, appear to be factors in the success of this river otter reintroduction.

(The Green River and the Gunnison River, indicated by (X) on the figure, are locations of other river otter reintroduction projects within this region of the Colorado River drainage basin. The actual release site for these rivers is not indicated in this figure.)



Illustration of rivers in the Four Corners region. Known river otter distribution is shown by the shaded area. The release site of the otters on the Dolores River is indicated by the arrow. The Green River and the Gunnison River, indicated by an (X), are also locations of river otter reintroductions.



Fisherman's Friend or Foe

By John_Mulvihill

As a member of 'Trout Unlimited' and my wife as a newly initiated fisherwoman, I would like to share information regarding the impact of river otters on trout populations in our rivers and streams.

Food selection and preferences in the otter's diet depend a great deal on the relative abundance and availability of prey species. A typical diet consists of fish, crayfish, amphibians, birds and small mammals. As otters are opportunistic feeders, they will typically pursue those prey that will require the least amount of energy expenditure. Captive otters have been found to have higher capture rates with the slower moving fish, such as suckers and catfish, rather than the faster swimming fish, such as trout.

Seasonal dietary differences occur with otters which reflect not only the changes in availability and distribution of prey but also reflect the swimming ability of fish. Due to

the cold-blooded nature of fish and the fact that their body temperature usually resembles that of the surrounding water, warmer summertime conditions mean that a fish is typically harder to catch by a predator because of its greater speed and maneuverability. A number of studies have shown that otters take proportionately less fish in the summer, particularly of the faster-moving species.

Many people believe that otters actually improve the health of fish populations in streams and lakes by removing the sick and damaged fish. Furthermore, by catching the smaller fish, otters reduce competition for habitat among fish, which can sometimes lead to an increase in the average size of fish. For example, 'studies of a lake in Sweden showed that by substantially reducing the population and the spawning rate, the average size of fish was increased by 50% in



Certainly, the glimpse of a river otter during a fishing expedition would enhance the experience, and the presence of otters indicates that we are fishing on a healthy, viable river along with one of nature's most skilled fishing species.

(WETLANDS CONT'D)

Pacific Coast would no longer be protected. The loss of protection to these areas could mean a loss of habitat to many river otter populations.

These and other wetlands are among the most biologically diverse wetlands in the United States. The loss of protection to these areas could jeopardize at least 79 species of plants and animals which are currently listed as threatened and endangered by the federal government as well as 120 species which are candidates for federal listing. As far as we can tell at this time, the proposed changes of the Federal Wetlands Delineation Manual have not been accepted, presumably due in part to the widespread disapproval from all regions of the country.

(For further reading about the current status of our nation's wetlands, we suggest the recent article 'Our Disappearing Wetlands' in the October 1992 issue of the National Geographic.

NEW MEMBERS

Joe and Betty Hall - Grand Junction, CO
Dave and Jan Robertson - Boulder, CO
Dale and Frandee Johnson - Boulder, CO
Loren Slebert - Seattle, WA
Myra Smith - Marblehead, MS
Dave Bones and Seb Hopkins - Boulder, CO
Field and Barbara Benton - Denver, CO
Pat Foster-Turley - Vallejo, CA
Linda Marlett - Santa Ana, CA
Joseph Davis - Somerset, NJ
Eldon Hurst - Colo. Spgs. CO
Susan Engfer - Color Spgs, CO
Alan and Ellen Pauly - Gaffney, SC
Yan and Muriel Linhart - Boulder, CO
Helen and Warner Dewey - Scottsbluff, NE

EDITOR'S NOTE

During the compilation of this newsletter, we have become aware of the heavy emphasis on river otter projects in the western United States and in Colorado, in particular. It is not our intent to report solely on western projects and we plan to increase our pursuit of information of river otter news in other regions of the country as well. If you know of a project which may be of interest for the River Otter Journal, please let us know!



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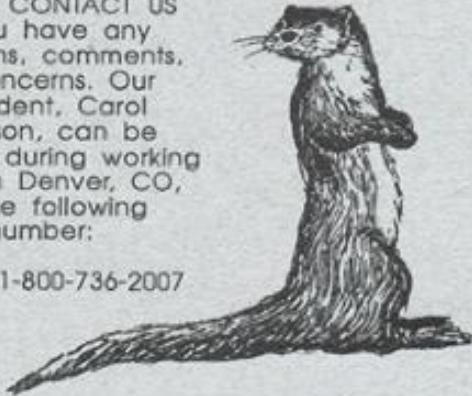
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Joseph Hall
Paul Polechla
Scott Shannon

Naturalist David Rains Wallace poses an interesting thought in "Klamath Knot", which was conceived after observing some otters on the Eel River:
"It's hard to imagine where the evolutionary path of otters will lead...tools, curiosity, playfulness, sociability... otters may be the 'humans' of sixty million years hence."

PLEASE CONTACT US
If you have any
questions, comments,
or concerns. Our
president, Carol
Peterson, can be
reached during working
hours in Denver, CO,
at the following
number:

1-800-736-2007



THE RIVER OTTER ALLIANCE

The River Otter Alliance is a non-profit, tax exempt group which is organized to promote the survival of the North American river otter (*Lutra canadensis*) through education, research, reintroduction, and habitat protection.

All work and efforts of this organization are on a volunteer basis by those who share a common concern for the river otter and its habitat. We heartily invite all interested persons to participate at any level of the organization.

MEMBERSHIP FORM

Yes! I would like to become a member of the River Otter Alliance.
Enclosed is my tax-deductible check.

Name _____
Address _____
City _____ State _____ Zip Code _____
Phone _____

Membership Level:
_____ \$ 15 Student/Retired
_____ \$ 25 Individual
_____ \$ 35 Family
_____ \$ 50 Sustaining
_____ \$ 100 Sponsoring

Please make check payable to THE RIVER OTTER ALLIANCE and mail to:
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