THE RIVER OTTER JOURNAL

Volume X, Number 2, Autumn 2001

North American River Otter
Photo by Jeanne Colby

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THE RIVER OTTER JOURNAL is a semi-annual publication of the River Otter Alliance. Look for the next edition of THE RIVER OTTER JOURNAL in Spring 2002!

The River Otter in Missouri

By Glenn D. Chambers

The North American river otter (Lontra canadensis) was a common predatory mammal in Missouri before settlement. But as civilization spread westward, settlers drained the marshes and swamps, destroying the places where otters lived. The otter's fine fur attracted the attention of the fur industry and because of unregulated harvest and habitat destruction, otter numbers declined rapidly. By the 1930's, otters were rarely seen in Missouri. A few otters managed to survive in the Mississippi Lowlands (the Bootheel), west central, and the northeast part of the state. In 1937, a state-wide survey of the otter population indicated that the population had been reduced to about 70 animals.

In 1974, the Missouri Department of Conservation (MDC) placed the river otter on the list of endangered animals in the state. In the late 1970's MDC biologists realized that the otter habitat had been restored to a large part of the otter's original range. They further reasoned that because white-tailed deer and Eastern wild turkey restoration efforts had been such a success, perhaps river otters could flourish in Missouri waters again. Between 1982 and 1992, using wild-trapped river otters from the marshes of Louisiana, a total of 845 otters were released in 35 counties across the state. Coincidentally, most of the otters captured in Louisiana for transfer to Missouri were taken in foot-hold traps.

Media exposure of MDC's otter restoration efforts throughout the release period far exceeded that given to other efforts like the deer and turkey. Especially effective and popular were media events built around the release program. Television and newspaper coverage, and the inclusion of school districts' involvement took the educational aspect to a

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River Otter Alliance Mission

The River Otter Alliance promotes the survival of the North American River Otter *(Lutra Canadensis)* through education, research and habitat protection. We support current research and reintroduction programs, monitor abundance and distribution in the United States, and educate the general public through our newsletter, THE RIVER OTTER JOURNAL, on the need to restore and sustain River Otter populations.

Our goal is to be a center of communications among wildlife biologists, environmental organizations, fishermen, and all interested parties on a national and international basis, in order to ensure the healthy future of the North American River Otter.

President's Message

Dear Readers:

Welcome to the Fall 2001 edition of The River Otter Journal.

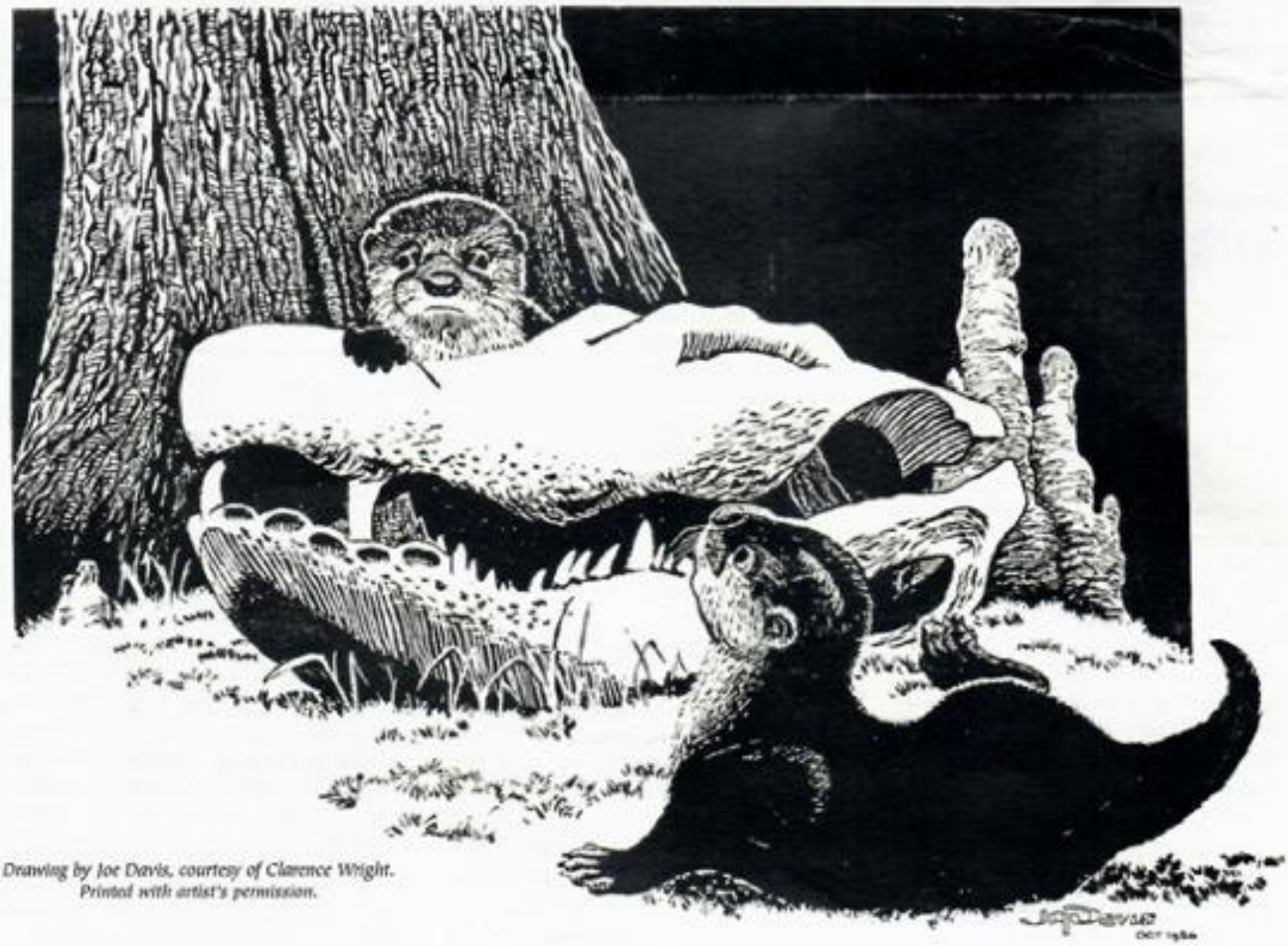
In this issue, The River Otter Alliance will introduce you to the Missouri river otter reintroduction project. The project has been called "the world's most successful carnivore restoration in history," where 845 river otters released between 1982 and 1992 have grown to an estimated population of 11,000 - 18,000 animals. The results have so exceeded the expectations of conservation department wildlife managers, river otters have become a source of complaints from anglers who worry otters might be affecting the state's fish populations.

This newsletter presents the first comprehensive overview of the project in an article written by Glenn Chambers, who experienced it first-hand as a wildlife research biologist and national award-winning cinematographer for the Missouri Department of Conservation (MDC). Now retired from the MDC, Glenn continues his work as a wildlife cinematographer and—along with his wife, Jeannie, and otters, Splash and Slide—travels the state as a river otter-goodwill spokesperson.

Also in this issue, we've included Dr. Paul Polechla's article on successful river otter tracking, Dr. Jo Thompson's report on the IUCN/SSC Otter Specialist Group's August meeting on African otters, and an update on the sea otter-related lawsuit brought against the United States Fish and Wildlife Service by the Commercial Fishermen of Santa Barbara. We also present an article from June Gerrard on her quest to view otters in the wild during her recent visit to the United States.

On a final note: in this difficult time following the September 11th Tragedy that has affected us all so deeply, The River Otter Alliance greatly appreciates our readers' contributions. Sadly, we have begun to hear many organizations are no longer able to continue their work due to a lack of charitable funding. So, in addition to your generous support of the victims of the terrible tragedy and their families, please also remember to assist groups that conduct work you value; especially please consider those who feed and care for the needs of our animal friends.

—Tracy Johnston, ROA President and Newsletter Editor



Drawing by Joe Davis, courtesy of Clarence Wright. Printed with artist's permission.

The River Otter in Missouri

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higher level. It was not uncommon for schools to transport busloads of school children to remote release sites to witness the otter releases firsthand.

By the mid-1990s, statistical estimates, and anecdotal accounts and sightings by people living in the areas where otters had been re-introduced, confirmed that the otters were reproducing well in their new homes.

Otter depredation complaints to MDC from aqua-culture business owners (catfish and crayfish farmers) were heard in growing numbers and severity. Finally, beaver and raccoon trappers were catching otters in larger numbers each year, although the season was closed to otter trapping. Otters so taken had to be surrendered to MDC. During that time, the otter population was estimated to be in excess of 5,000 animals. River otter populations are now widely restored across Missouri's rivers, streams, lakes and even small farm ponds. Estimates of the statewide population in 1999 varied from 11,000 animals (MDC population model) to about 18,000 (University of Missouri population model).

The food habits of river otters in Missouri are being studied. Otters, a supreme aquatic predator, tend to feed primarily on crayfish in the summer. During winter when many species of crayfish are buried in the mud, otters shift to an almost all-fish diet. Otters will supplement their diets with a number of other available foods including snails, small birds (including ducks), small mammals (including muskrats), frogs, salamanders, clams, snakes, insects and their larvae, earthworms, and some vegetation.

The winter feeding habits of otters, because of their propensity for fish in the diet, puts otters in conflict with people. Aside from the aqua-culture conflict, otters are capable of damaging fish populations in farm ponds and in the headwater portions of some of the clear Ozark streams. Anglers, particularly those that fish for smallmouth bass in the headwaters of streams, contend that the otters are responsible for the demise of smallmouth fishing in some parts of the Ozarks. Granted, otters will catch and eat 17 inch-long smallmouth bass. Study of the winter feeding habits of otters in the Ozarks, although preliminary with small sample sizes, indicates that otters prey on sport fish in higher numbers than other fish groups. The preferred group is the family Centrarchidae, which includes smallmouth bass, largemouth bass, longear sunfish and rock bass. Current data suggests that 56 percent of the fish in this group that were eaten by otters in the Ozark region were more than four years old and about 17 percent were seven years of age or older. Smallmouth bass reach 12 inches in length between four and five years of age.

Photo by Jerry Claussen

Fish farmers know that a group of hungry otters can spell economic disaster. Farm pond owners (there are about 300,000 farm ponds in Missouri, each stocked primarily with bass, bluegill, and channel catfish) who enjoy fishing in their ponds are dismayed when they realize that the otters clean out their private fishing holes. Complaints about otters damaging private property have increased steadily since 1996. That year there were 12 reports lodged with MDC. In 1997 there were 29, in 1998 there were 49, in 1999 there were 67, and in 2000 there were 108 reports of damage.

When MDC embarked on the most aggressive otter restoration program ever undertaken by any state agency in the United States, (845 wild-trapped otters introduced into habitats where only an estimated 70 otters lived), biologists expected that a regulated trapping season might eventually be needed to help control the population 20 to 30 years in the future, assuming the program was successful at all. In 1996, only four short years after the last release was made, MDC biologists suggested the first regulated trapping season be permitted to help control a population that some people thought was already out of control. The damage complaints and new population models indicated that there were numerous otters in some localities. In response, the first two-month statewide trapping season (November 20 to January 20) was permitted that year (1996). Trappers harvested approximately 1,000 otters in each of the trapping seasons from 1996 to 2000. Despite the regulated take of these animals, the MDC population estimate is between 11,000 and 16,000 animals in 2001.

When MDC announced the trapping season in 1996, it triggered what immediately became the "otter debate." The most immediate response was from local and national animal rights groups expressing their outrage that an animal only recently restored would be subjected to the very threat that, by their descriptions, carried the otter population to the brink of oblivion in the first place. An annual survey conducted for MDC by the Gallup organi-

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zation in 1997, revealed that about 70 percent of Missourians think "trapping is O.K. as long as it is regulated."

Animal rights groups filed two lawsuits questioning MDC's data on population estimates. Their intent was to stop otter trapping in Missouri. The first lawsuit was filed by the Animal Legal Defense Fund and two Missouri citizens. In dismissing that challenge, the court ruled that MDC's otter trapping season was not "arbitrary and capricious" as the suit alleged, and that the MDC had followed all proper procedures in establishing the wildlife rules.

The second lawsuit was again filed by the Animal Legal Defense Fund, joined by the Humane Society of the United States. This suit was filed in the United States District Court against the United States Fish and Wildlife Service. In 1996 MDC requested export authority from the United States Fish and Wildlife Service (as required for CITES listed species), and temporary permits were granted each year until final authority was obtained in 1999. This authority was sought because, although not "endangered" in Missouri, river otters from Missouri resemble species of endangered otters that live in other countries. This case was dismissed by a Federal Judge who ruled that since the MDC was going to have a trapping season anyway, granting an export permit had no impact.

With so much controversy surrounding the river otter re-introduction program, and to clarify otter management issues further, MDC's Director Jerry Conley requested the establishment of an Otter Advisory Committee in 1998. This is a citizens group consisting of people who have varied and divergent interests in the otter in Missouri. The committee is made up of anglers, an aqua-culture business owner, University of Missouri and MDC biologists, a county commissioner, a trapper, businessmen and landowners in the Ozarks where damage complaints run high, a member of an otter protection group, and an otter behaviorist. This group meets at different times throughout the year. They address, discuss, and dispute issues related to otter population estimates, the impact of river otter depredation on fish in private lakes and ponds, headwater Ozark streams and commercial aqua-culture businesses, and issues surrounding the trapping of otters.

This committee faces "head on," management options dealing with the delicate problem of managing this population of predatory mammals in the state. On one hand there is the "kill no otters" attitude. On the other hand, some folks contend that MDC was reckless in restoring otters to a landscape where game fish were vulnerable to otter predation. They point to degraded aquatic habitat in Ozark streams that leave game fish especially vulnerable to the otter's predatory efficiency. Discussions address the problems of gravel accumulation, siltation and nutrification from fertilizer and municipal sources that have weakened the ecosystem. Some folks think that most fish could still survive until MDC added otters to the list of problems that fish had to deal with.

In addressing the problem of how to deal with such a sensitive subject, the Otter Advisory Committee, though not without dispute, eventually recommended that MDC consider an adaptive strategy for managing otters based on the relative abundance of otters in Missouri. MDC staff responded by proposing five otter management zones with limits and season length extensions where appropriate, based on factors such as otter population indices, impact on public fisheries, and damage to private impoundments. Basically the proposal suggested a five-otter trapping limit in three zones adjacent to Missouri's three major metro areas—Kansas City, Saint Louis, and Springfield: a 20-otter limit in most of the balance of the state; and finally a zone in which otters could be taken in any numbers with an extended 31 day season in that zone only. This focused on Missouri's south-central region where the consequences of otters have been particularly significant.

In the final stages, and after much heated discussion, MDC's Regulations Committee adopted the Five Zone Approach. It was approved based on the following points: (1) the most current biological data relative to otter densities was compatible with current harvest rates, (2) it was responsive to the polar views—"kill no otters" and "kill 'all' otters"—and was consistent with the Otter Advisory Committee recommendations, and (3) it contained elements that could help alleviate otter damage in areas that were most affected.

The otter trapping season of 2000-2001 was the first year that the adaptive management strategy of five zones was in effect. Up until then the average harvest of otters in the state was about 1,000 otters per year.

During the 1999-2000 season, 1,058 otters were taken statewide. In 2000-2001, 1,378 otters were taken by trappers. This was a 30 percent increase.

The zone including the Ozarks where most of the damage complaints come from had an increase of 115 percent. The take there was 381 otters in 1999-2000 and increased to 819 otters in 2000-2001.

Author's Note:

In the midst of the otter controversy, Jeannie and I have taken our otters all across the state telling the otter story just as you have read it here. We have been doing this since 1992, the year of the final otter releases in Missouri. We are supported by the Missouri Department of Conservation where I worked as a wildlife research biologist and wildlife film maker for over 25 years. I retired in 1995 but have continued to take the conservation message to school children throughout Missouri. We do live river otter presentations for schools, nature centers, county fairs, community centers, civic organizations, and some sports shows.

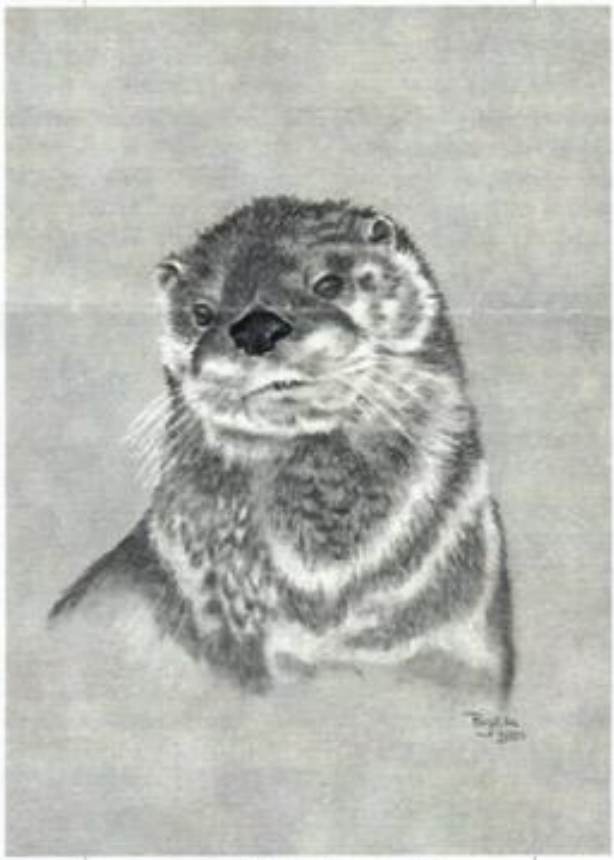
Our otters are not considered to be "pets." They were born in captivity and their mission in life is strictly educational. They are imprinted and they behave like wild otters. We enjoy taking them into wild places to exercise and swim and just let them be otters. They have an educational role to fulfill and they are good at it. They are the subjects of educational films and of course the "on the road" live river otter presentations. They have appeared on television on numerous occasions.

Searching for Otters (in the U.S.)

By June Gerrard

Editor's Note: June Gerrard is a Warden at the Kylerhea Otter Haven on Scotland's Isle of Skye.

Neil was traveling to the U.S. on business. Myself, not wanting to miss the trip of a lifetime, hung onto his coat tails. First stop for R&R was hot, arid Arizona except it was not very hot. Dreaming of cactus and deserts and cowboys on horseback programmed from Westerns. Far from reality. Instead we arrived at Flagstaff to two feet of snow and fifteen degrees below zero! Drove down to Sedona through deep sunset red rock canyons sprinkled with piñon and snow. A friend had heard reports of otters decimating stocks at a local fish farm. This could be my chance to see river otters in the wild. We drove down to the Game and Fish farm. Brazenly I walked up to the office door and went inside. Wandering through the corridors I found a couple of guys having a coffee so I introduced myself and asked about their otters. One guy explained where the fish have been taken from and how many. A lot. Bit strange for a single otter, but he insists that he has seen the otter in the pond while he has been working. Cheeky as well as greedy. So off we trot down to the said pond. We find a row of eight purpose built ponds all the same size. Some lined with butyl liners to prevent erosion, others left au naturel. Hundreds of red muddy footprints surround the first three butyl-lined ponds, then we find piles of scat scattered beside and between. Raccoons. They have had a great time walking around the ponds to find an easy way down the steep banks then sliding the last foot into the water, leaving tell tale muddy skid marks. Thoughtfully the Game and Fish people have left knotted ropes dangling into the water, handy raccoon ladders. Lots of scrub and brush surround the ponds along with piles of cut branches and trees, nice habitat but as yet no otter. We measure and photograph the tracks and take scat samples to analyze and produce a report for the Warden. We don't want otters to be blamed for raccoon banditry. The sixth pond is not lined and the water is beautifully clear with lots of lovely vegetation. Perfect otter habitat. And along the bank in the corner we find a holt. I



Drawing by Bernadette Gangell

stick my head down and sniff. A smell of clean damp earth. Empty. Searching around for other otter signs, we find old dry scat but no footprints. Looks like otter has moved on. And so must we.

We now travel south-east heading to New Orleans. We still haven't found otters so we drive along the most southern road in Louisiana. Roadkill Highway. The landscape couldn't be more different from the red rocks and canyons. We are in bayou country. Swamps and wetlands with the patches of low-level dry land, stretching to the horizon. Surely there will be otters here. "Oh sure, there's so many. Here otters are captured and then relocated to other parts of the U.S. in reintroduction programs" I had been told. Otters are still legally hunted here. The road is the only dry ground for a hundred square miles. On the north side the swamp runs faster as it travels from trees and higher ground, slowing as it nears the sea on the south side of the road. Here there is a parallel channel which was dug out to provide material for the raised road, the landscape then becomes swampy and brackish until it mixes with the sand and the sea. I thought that the only place on earth to contain so much life was the rainforests, I was mistaken. I have never seen so many dead animals in my life. My stomach churns for the first thirty miles, after which we stop to have a closer look at some of the bloody remains. Hundreds of flattened matted raccoons, unidentifiable birds (live herons, egrets and crows fly around us), dozens of nutria, white-tailed deer, and a desiccated alligator. There are probably dead otters around, but they are too mangled to identify. We climb back into the car and ponder. This road isn't busy, there aren't that many towns around here, so why the carnage? We return to the conclusion of the amazingly abundant wildlife. Neil suddenly stops the car and reverses back ten yards. He saw a splosh of an animal diving in the water channel. He thinks it may have been an otter—we wait holding our breath. A sudden splash beside the car and two river otter faces appear looking straight at me! They are so close that Neil can't see them from his seat! Another surfaces ten feet away in the centre of the channel, the other two then leap off into the water and dive. Out of Sight. Wish granted!

Otter Updates

By Tracy Johnston

• The *Ocean Journey Conservation Program* has given approval to fund three river otter research/reintroduction-related proposals:

1.) Dr. Paul Polechla will study the presence of river otters and habitat suitability on the Rio Grande and its tributaries in south central Colorado near the New Mexico border.

2.) Drs. Nathan Nibbelink, Merav Ben-David, and Gail M. Blundell will complete a Spatial Model of Dispersion to study the feasibility and rate of natural recolonization of river otters following reintroduction programs.

3.) Dr. Ben-David will oversee a population survey for river otters in Rocky Mountain National Park conducted by the University of Wyoming's Student Chapter of Wildlife Society.

• The Wildlife Conservation Society Research Fellowship Program (RFP) awards small grants to field research projects leading directly to the conservation of threatened wildlife and wildlife habitat. The RFP will support fieldwork on a wide spectrum of wildlife species, habitats, and conservation issues. The RFP does not support research in North America, Australia or Europe. For more information or an application, contact:

Program Coordinator, Research Fellowship Program
Wildlife Conservation Society
2300 Southern Blvd., Bronx, NY 10460
ph: 718-220-6828; fax: 718-364-4275
e-mail: fellowship@wcs.org
web: wcs.org/home/wild/researchfellowship/4596

Applications must be post-marked by January 1 or July 1 of every year.

• The New York River Otter Project's Board of Directors hosted a June 9, 2001, celebration of the river otters' successful return to Central and Western New York. The celebration honored the 100+ persons who volunteered approximately 54,000 hours on the six-year acquisition stage of the project, which spanned from 1995–2001. Biologist Dennis Money from Rochester Gas & Electric Corporation heads the project. Visit the River Otter Project web site at www.nyotter.org for highlights on the reintroduction program.

Lillie at five weeks old.
Photo by Tracy Johnston

• Sexy Sadie's river otter pups, Lyle and Lillie, born on March 7, 2001, at the Rocky Mountain Ark Wildlife Rehabilitation Center, have already begun work representing their species. The pups have attended numerous educational and other functions this past summer and fall, including the Colorado Division of Wildlife's river otter population survey training and a volunteer appreciation luncheon. The third pup, a male, did not survive.

Lyle (top) and Lyle and Lillie (bottom) at ten weeks old.
Photos by Toni Leuthold

• Sea otters are now legally free to roam the length of the California coast—at least for a while—as part of an agreement reached between the United States Fish and Wildlife Service and the Commercial Fishermen of Santa Barbara (CFSB) and others in a Los Angeles U.S. District Court this past July. As part of the agreement, CFSB agreed to dismiss a lawsuit against federal wildlife officials while the Fish and Wildlife Service studies alternatives to relocating sea otters from key fishing areas located along the southern California coast. Dismissal of the lawsuit will allow the Fish and Wildlife Service to use its limited resources to complete its evaluation of the translocation program.

The lawsuit would have forced the Fish and Wildlife Service to resume transporting sea otters from the "no otter zone" between Point Conception to the Channel Islands, a practice started in 1986 that environmentalists and wildlife biologists have long criticized as fatal to the otters. Terre Hawkins, a Santa Barbara sea urchin fisherman, states the fear that the state's commercial fishery for invertebrates such as mussels, abalone and sea urchins—worth more than $31 million—could be decimated within two years by otters if they are free to move into the area. However an approximate 10% decline in the sea otter population over the last five years has federal wildlife officials concerned the only way for the species to recover from a threatened population is to stop the relocation efforts and allow the otters to naturally expand southward.

The United States Fish and Wildlife Service expects to issue a Draft Supplemental Environmental Impact Statement in the winter of 2002. It plans to complete its final decision by December, 2002. In agreeing to dismiss its lawsuit, CFSB reserves the right to challenge the Fish and Wildlife Service's final decision whether the translocation program should be modified or terminated completely.

• The St. Petersburg Times reported an American Eskimo dog was attacked and killed by a river otter in Florida this past May. The dog's 13-year-old owner first thought the otter was playing with her dog, Mike, until it seized his snout and dragged him from her back yard into a lake bordering her family's property. The otter also attacked a family friend when he tried to rescue Mike.

"Otters usually are not aggressive, they're usually a very shy animal," said Denise Hilton, Pasco Animal Control Manager. She speculated the otter could have been a mother trying to protect her litter or it could have been rabid. Jeff McGrady, a wildlife biologist with the Florida Fish and Wildlife Conservation Commission, was also quoted in the article as saying "This is very bizarre behavior for an otter. It sort of just left us scratching our heads."

• The Rocky Mountain Ark Wildlife Rehabilitation Center in Telluride, Colorado, generously donated Otto, a male river otter, to the Denver Zoo this summer following the death of Retaxus, the resident male river otter. Otto joins Rosetta, the zoo's resident female river otter. (See "Denver Zoo Otter's Past Travel" in the Spring 1998 issue of The River Otter Journal for information on Rosetta.)

• Archaeologists have discovered sea otter bones—among those of other wildlife—in the remains of an American Indian village located at the mouth of the Coquille River in what is now the city of Bandon, Oregon. Although indigenous to the area, sea otters no longer live along the Oregon coast, despite a 1970s reintroduction effort of Alaskan otters, which failed when all the animals disappeared.

Now in the first stage of another effort to return the sea otter to Oregon, Portland State University researchers are focusing a genetic magnifier on sea otter bones from prehistoric settlements. The purpose is to discover whether the native otter was more closely related to today's Alaskan or California sea otter populations, or some sort of blending of the two, in hopes of insuring the success of a future reintroduction program. The project is to be financed through donations and grants. Portland State University graduate student Kim Valentine will conduct most of the laboratory work.

• The 2nd Edition of the *North American River Otter Husbandry Notebook* is now available. This updated and expanded 283 page volume contains contributions from several authors. Information is divided into 17 chapters on: Taxonomy; Distribution; Status; Identification & Description; Behavior, Social Organization & Natural History; Reproduction; Captive Management; Hand-Rearing; Feeding & Nutrition; Health Care; Behavioral & Environmental Enrichment; Training or Behavioral Modification; North American River Otters in European Institutions; Rehabilitators and Otter Resources; Websites, On-Line Education and Useful Addresses; Otter Tales and Legends; General Bibliography. This volume is available at a cost of $20.00 plus $2.50 shipping (U.S.), $5.00 (Canada), $12.00 (overseas). All funds raised will be contributed to the American Association of Zoos and Aquariums' (AZA) Otter SSP.

For additional information contact: Jan Reed-Smith, jrsotter@iserv.net, or send a check made payable to John Ball Zoo Society, Attn. Otter Husbandry Notebook, John Ball Zoo, 1300 W. Fulton, Grand Rapids, MI 49504. Master Card, Visa, or Discover card payments must include card #, expiration date, name, billing and shipping addresses. Send to: jbzslisa@hotmail.com. Information may be faxed to: Lisa Hann, John Ball Zoo Society, 616-336-3907.

Tracking Tips...Otters and Other Critters

By Paul Polechla Jr., Ph.D.

I've been on some hot trails and I've been on some cold trails. One of the hottest trails was so hot that when I observed the river otters walking along the shoreline of a glacial cirque lake, I could feel the warmth from the foot in the fresh track. One of the coldest trails I've been on was so cold that it was a 150,000,000-year-old meat-eating dinosaur (a Jurassic Megalosaur in the panhandle of Oklahoma) fossil track in stone.

Regardless of the age of the trail, tracking (the art and science of finding, identifying, and interpreting the tracks and trails of animals) is a time-honored tradition. It has been employed by Native Americans and non-Native pioneers. It is the tool of hunters, trappers, naturalists, scout youth groups, forensic scientists, search and rescue personnel, policeman, and professional wildlife biologists as well. Although dogs have been used to trail the scent of animals, some biologists have jumped exclusively on the high-tech "band wagon" and use infrared photography, radio-telemetry, DNA fingerprinting, and a variety of other fancy methods. Although these are useful methods, many answers can be gleaned from low-tech tracking. There is no substitute for dyed in the wool, down and dirty, good-old-fashioned trackin'.

If tracking is attacked with the curiosity of a child and the gritty determination of a Dick Tracy detective, the tracker can learn a considerable amount of information. A knowledgeable tracker may determine the age of the track, weather conditions when made, location, habitat of where it was made, sex and age of the animal, what gait the animal used. If you're patient enough to find droppings or scats (called "spraints" by the British), then you may determine what the animal ate. The scat will be approximately the diameter of a quarter and will be laced with fish scales and bones as well as reddish crayfish parts. Coloration can be gray to nearly black when fresh and whitish when old.

Otter Scat
Photo by Judy Berg

Trailing, following the path of tracks an animal makes, is like solving a complex riddle. Who made it, when it was made, where was the animal at the time, how it was made, what it was doing when it made it, and perhaps even why it was made is answerable.

Although much of tracking is a combination of applied physics, you won't have to tote your physics book with you. Bring your mind and some common sense. Keep in mind that "for every action there is an equal and opposite reaction" and that animals as well as inanimate objects must adhere to the law of the conservation of energy.

Otter Tracks in Sand and Snow
Photos by Judy Berg

With these two simple yet eloquent ideas in mind. The appearance of the track is dependent on several variables: the anatomy of the foot and body, the weight of the animal, the means of locomotion, and the nature of the substrate. When observing an individual track (or seal as the British biologists call them "seals") note the 1) presence/absence of claw marks, 2) number, shape, and arrangement of the rounded (not elongate like raccoons and beavers) toe pads, 3) presence/absence, and extent of webbing, 4) shape of the foot (metacarpal or metatarsal) pad, and 5) dimensions of the front and hind feet.

Otters generally show 5 toes and claws in a 1-3-1 (the "thumb" and "little finger" are spaced apart from the middle three fingers) pattern with webbing. Some animals walk on tips of their hooves (like deer and other ungulates), some walk on the pads of their digits (like foxes, coyotes, mountain lions, bobcats, and galloping otters), and some animals like the river otter (when walking, and the beaver, raccoon, and muskrat) plant their entire foot down from heal to claw. A walking gait will leave a different trail pattern than galloping and running. The galloping or loping gait will show a 1-2-1x pattern of tracks. The fastest gait of an otter is a hunchback inchworm bounding-type of motion. In this case the tracks will be placed in a 2x pattern. Stride or the distance between tracks of the four track series varies according to gait.

Otters will occasionally make a running slide down hill or on flat ground over snow, ice, and slick clay. Look for a trough about 5-6 inches wide when snow is 2 inches deep. The front track measures 2-1/2 to 3-1/2 inches long by 2-3 inches wide, while the rear track measures 3-4 inches long by 2-1/3 to 3-1/3 inches wide.

It is a good idea to train yourself to develop a combination of two viewing techniques: 1) tunnel vision whereby the observer concentrates on the path of the animal and 2) peripheral vision whereby the observer looks to the right and left to detect a turn or angling of the animals path. The ideal time of the day to search for tracks is morning and evening when the low angle of the sun accentuates the track relief. If one is forced to track at mid-day then try "back glancing" or observing the track while looking over your shoulder or while crouched in front of the track. At mid-day or in low light, the tracker can feel the track with his/her fingertips to detect the details and freshness of the track. If you would like a chance of forward tracking to observe the actual animal, make sure you track into the wind. The best time of the year to track is during their breeding/reproductive season: late fall, winter, and early spring. In late fall the vegetation is downed and the surface is usually wet enough to make a good track. Winter is nice in northern or high altitude locations due to fresh blankets of snow. Early spring is good when the vegetation has not come up and obscured tracks and plenty of bare ground is available.

River Otter Slide with Embedded Tracks.

Otter Slide with tracks.
Photos by Judy Berg

Good places to look for tracks include anywhere water bodies are near one another: such as on mud flats, banks, and sandbars near oxbows, cut-offs, and hair pin turns of streams and rivers. Narrow pieces of land between ponds and lakes. In really swampy and marshy areas, look on logs, rocks, cypress "knees," and hummocks for scats. The lodges, dens, and burrows of other animals are good places to search: beaver lodges/bank dens, muskrat lodges/burrows, nutria dens, and even fox and woodchuck dens. When along the Pacific, Atlantic, or Gulf Coast check out bays, estuaries, brackish marshes, and river deltas for otter sign as well.

Before heading out to the great remaining wetlands check out otters at your local zoo and study their tracks and behavior. Buy a good track book and compare the characteristic tracks of other animals in your area.

Track on brothers and sisters. Enjoy your adventure!

Update on African Otters

By Dr. Jo Thompson

On 14 August 2001, the IUCN/SSC Otter Specialist Group (OSG) presented a workshop titled, "African otters - How to increase knowledge of biology, distribution and threats to survival." The workshop convened in Sun City, South Africa and was co-moderated by Mr. Claus Reuther, Chairman IUCN/SSC Otter Specialist Group, and Prof. Jan Nel, Coordinator for the IUCN/SSC Africa Otter Specialist Group. The program included a session lead by Prof. Nel detailing "What do we know and what do we not know about biology, distribution and threats of African otters," a session lead by Mr. Reuther presenting the "State of knowledge about otters on other continents and examples of initial activities to increase this knowledge," and a plenary discussion concerning "How could knowledge about biology, distribution and threats to African otters be increased and which activities should be the priorities."

As reported by Prof. Nel, there are four species of otters in Africa: the Cape Clawless (*Aonyx capensis*), the Spotted-necked Otter (*Lutra maculicollis*), the Congo Clawless Otter (*Aonyx congicus*) and the Eurasian Otter (*Lutra lutra*). The distribution of the Eurasian Otter is narrowly limited on the continent to a range covering the **supra**-Saharan countries of Algeria, Morocco and Tunisia. Knowledge about the three **sub**-Saharan species varies, but for all three species knowledge is severely lacking. While initial studies (made several decades ago) on the Cape Clawless Otter and the Spotted-necked Otter provided some data on their biology in southern most Africa, the Congo Clawless Otter still remains largely a mystery (see article in The River Otter Journal, Volume IX, Number 1, Spring 2000, pgs 4-5). One of the main problems for the conservation of these African otter species is the insufficient knowledge of their distribution and the threats they are facing for survival, especially with regards to their current status. Much of the wetland habitats of Africa fall within the central continental nations whose recent history is dominated by human unrest and armed conflict making research and conservation efforts difficult or impossible. Thus, it was stated that our knowledge of African otter biology, distribution and survival threats is singularly deficient.

The OSG promotes otters as very unique mammals and encourages their use as ambassadors for all kinds of wetland conservation (they are the top of the riverine food chain). Based on the OSG's successful experiences in Europe, Asia and Latin America, Mr. Reuther proposed that otters could be very useful "tools" for conservation activities in the developing countries of Africa, including habitat management activities, public awareness, ecotourism, and fundraising projects. But, this can only happen after research and conservation efforts are initiated.

The priority areas for study were defined as: species distribution at fine-scale resolution (including population fragmentation and range contraction); diet and prey/food availability; activity patterns and factors affecting activity patterns; habitat use, parameters, availability, and degradation; and possible competition with man for food.

After much discussion, it was clear that experiences from other continents cannot be easily applied to African otter research and conservation. To begin the process of collecting knowledge about biology, distribution, and survival threats of African otters, researchers on the ground must use opportunistic data, especially the perspective and information from local human populations, as well as determination of spraint composition. We must initiate interest in otters through all individuals, groups, and institutions involved in wildlife conservation and research in Africa. The activity priorities must focus on issues of identifying where African otters occur, what threatens their survival, differentiation of species, and data for population genetics. It was agreed among the participants from the field that otters are generally inconsequential to daily human life and survival, therefore they are little known even by rural people. Local humans are most informed about those species that they target for consumption. Since otters are not widely sought as a source of human food, there is not much interest in them or knowledge about their natural history. Regarding ecotourism activities, tourism focuses on the charismatic mega-fauna symbolic of our image of "Africa," such as elephants, rhinos, lions, leopards, buffalos (the "big five"), gorillas, herds of migrating wildebeests, zebras, etcetera. So, our task is first and foremost to put otters on everyone's radar screen. In Africa we must adopt the mantra "Otters, otters, otters" and all work actively on "otter marketing." The interest of international conservation, scientific, and research groups and individuals will prompt range countries to demonstrate their commitment towards learning and preserving their resident otter populations.

Activities for African otter research and conservation must begin at the most fundamental level: surveying local human populations with standardized techniques. This will require simple species identification tools (such as a notebook of material in transparencies showing footprints, physical characteristics, and images of each species) and a standardized, very basic set of questions to ask, including local names. Professional, governmental, academic, and non-governmental bodies from the countries of projected otter distribution must be incorporated in an increased network of communication. For example, in the Democratic Republic of Congo, in collaboration with the Institut Congolais pour la Conservation de la Nature (equivalent to the National Department of Parks) we have recently introduced Ranger-based Monitoring Data Sheets that enable park rangers of Salonga National Park to systematically collect data on and uniformly report the status of significant target species, including otters. This first-of-its-kind national data collection system will promote recording of the general progress of the park's daily monitoring patrols, weather conditions, human activity observed (such as evidence of fire and presence of traps by type and number, livestock, poachers, and wood cutters), direct or indirect details about specific faunal species' activities and locations, and the presence and disturbance of identified habitat types. This should also facilitate implementation of training for Park Rangers and concurrently increase local public awareness. These findings should be shared through publications and conferences, ultimately leading to influencing conservation activities at the national level.

The IUCN/SSC Africa Otter Specialist Group workshop also opened possibilities for cooperation across countries and research interests, including scientific cooperation regarding field surveys, realization of management cooperation for habitat conservation, and collaboration towards education/raising public awareness.

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Drawing by Bernadette Gangell

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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*) though education, research, reintroduction, and habitat protection.

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

The River Otter Alliance

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