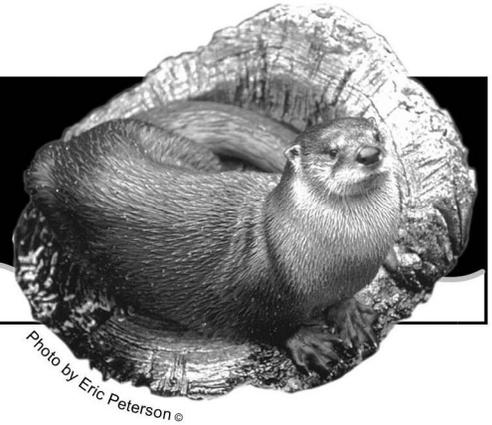


the River Otter Journal



Volume XXI, Number I, Spring-Summer 2012

Prehistoric Otters Unearthed in CO

By Jennifer Bohrman

In October 2010, a dazzling archaeological cache was revealed when a bulldozer operator working near Snowmass Ski Resort in Colorado unexpectedly uncovered the tusk of an Ice Age mammoth. Over the next several months, scientists from the Denver Museum of Nature and Science recovered over 5,000 bones from 41 different mammals buried beneath the Ziegler Reservoir, an ancient glacial lake basin. Among the animals frozen in time were mastodon, mammoth, giant bison, giant ground sloth, Ice Age deer, camel, and river otter. The site is estimated to be between 45,000 and 150,000 years old.

Fossils of North American river otters have been dated back to the Pleistocene Epoch, which ran from 2.6 million to 11,700 years ago. The Snowmass discovery offers striking evidence that river otters once roamed the Rocky Mountains along with colossal Ice Age beasts.

The National Geographic Society featured the fossil find in *National Geographic Magazine* and in a NOVA special (Ice Age Death Trap), which aired on PBS in February of this year. The Denver Museum of Nature and Science's Snowmastodon Project web page continues to provide updates on the status of the excavation (<http://www.dmns.org/science/the-snowmastodon-project/>).



Artist's rendition of the Ziegler Reservoir ~120,000 years ago
©2012 Denver Museum of Nature and Science

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THE RIVER OTTER JOURNAL

is a semi-annual publication of
the River Otter Alliance.

River Otter Alliance Mission

The River Otter Alliance promotes the survival of the North American River Otter (*Lontra 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.

Visit the River Otter Alliance Web Page at www.otternet.com/ROA

President's Message

Dear Readers,

Welcome to the spring-summer edition of the 2012 River Otter Alliance (ROA) newsletter.

Consistent with the old adage, "change is the only constant in life," we begin this year sans a president for our group. The executive board of the ROA has decided we will not seek a replacement for the position of president and will instead govern as a group for the remaining tenure of the ROA. We have also decided to take this opportunity to move towards gradual closure of the organization.

Consistent with this direction, we will no longer be accepting membership dues/donations and will distribute our remaining funds through the ROA grant program. Grants from the ROA support otter-related research, education, reintroduction, rehabilitation, and habitat protection by providing funding to proposals deemed appropriate based on their rationale, significance, scientific merit, and benefit to the species.

This will also be the final year for our printed newsletter, The River Otter Journal, in spite of having a new editor, Jennifer Bohrman. Our web site will continue to be maintained and periodic postings of reports authored by recipients of ROA-issued grants will be added to the site, in addition to other notable articles and otter-related information.

We heartily thank you, our members, for your continued support, financial and otherwise, throughout the years.

Sincerely,

The River Otter Alliance Board of Directors

Grants Awarded

The River Otter Alliance is pleased to announce it has awarded the following grants:

- \$150 grant to *Hilary Cosby/Humboldt State University* for storage, cleaning and organizational-related supplies related to her study of the "Diet and Activity of River Otters (*Lontra Canadensis*) Based on Seasons and Ecosystems."
- \$960 grant to *Nohra Mateus-Pinilla & Samantha Carpenter/University of Illinois at Urbana-Champaign* for two digital trail cameras to "evaluate the relationship between latrine use and individual visitation rates of *L. canadensis* to latrines."
- \$500 grant to *Gandhiv Kafle/Wetland Friends of Nepal* for materials and travel expenses to conduct a field survey of otters in the Parsa Wildlife Reserve, Nepal.
- \$1,000 grant to *Merav Ben-David/University of Wyoming*, made possible by a donation from Lois Herrmann, to assist with expenses for 12 - 16 members of the U.W.'s Student Chapter of the Wildlife Society to conduct two river otter population field surveys in 2012 on the Colorado River headwaters in Rocky Mountain National Park. These bi-annual surveys have been consistently conducted by the students every spring and fall since 2001, as a follow up to the State of Colorado's reintroduction of river otters in the same location.

Otter Updates

By Jennifer Bohrman

- The IUCN Otter Specialist Group has established a Scholarship Fund in the name of the late Jim Conroy. The fund is housed at the Columbus Zoo and will be used to assist student research (primarily from developing countries) with otters and participation at the Otter Colloquium.
- An effort to reintroduce river otters to the Upper Gila River in New Mexico was recently halted in order to protect native threatened and endangered fishes in the watershed. Until 2008, New Mexico remained the only contiguous U.S. state without a population of river otters. Thirty otters were released on the upper Rio Grande from 2008-2010, and the Upper Gila River reintroduction was originally planned for 2010. After the program was stalled for debates about its potential biological impacts, New Mexico Game and Fish Department biologists made the decision to pull the plug. Supporters of the reintroduction argue that river otters will benefit native species by reducing numbers of invasive fish; however, state wildlife officials are not willing to take that risk.
- Recently, Drs. Tracey Goldstein and Jonna Mazet from the University of California-Davis identified the phocine distemper virus (PDV) in stellar sea lions and sea otters off the coast of Alaska. PDV is a pathogen related to canine distemper that causes lethargy, fever, and death in infected animals. The disease produced two epidemics in the Atlantic Ocean, killing more than 23,000 harbor seals in 1998 and 30,000 in 2002. Scientists suspect that the disease is responsible for recent declines in sea otter, seal, and sea lion numbers in the northern Pacific Ocean, but more research is needed.
- On June 1, 2012, the Denver Zoo opened an exhibit for its two new Asian small-clawed otters: a 10-year-old male from the Georgia Aquarium in Atlanta and a 7-year-old female from the National Zoo in Washington, D.C. The pair are the Denver Zoo's first Asian small-clawed otters.
- The following river otter sightings were reported in Yellowstone National Park since the last newsletter:
 - **January 9, 2012**
On a day trip to the Grand Canyon of the Yellowstone River, a Winter in Wonderland group spotted 3 otters at the bottom of the Upper Falls. The group observed them fishing and playing in the water.
 - **December 30, 2011**
A Winter in Wonderland group spotted an otter on the Gibbon River while traveling from Old Faithful to Mammoth. The group observed the otter swimming in the river and rolling in snow on the bank.

River Otter Alliance Board of Directors

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The River Otter Alliance is a non-profit, tax-exempt group organized to promote the survival of the North American River Otter (*Lontra canadensis*) through 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.

Follow-up report for grants received for the project: Non-invasive reproductive hormone assessment using faecal samples from captive Eurasian otters (*Lutra lutra*)

By Emmelianna Bujak,^{1,2} Daphne I. Green¹ and William V. Holt¹

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Purpose of Project

The purpose of this project was to improve our understanding of the reproductive physiology of female Eurasian otters, in the hope that this information may eventually be used to improve the captive breeding success of this species. The primary objective of this study was to use non-invasive methods for monitoring the reproductive cycle of female Eurasian otters.

Scientific Methodology

Preserved faecal samples, frozen at -20C, were analyzed. Samples were collected from eight female Eurasian otters in four European captive collections (in Poland, France and Spain). Samples were collected on a daily basis from all individuals, for a six-month period (September 2009 - February 2010). Samples collected on alternate days were selected for analysis for oestradiol and progesterone levels at Institute of Zoology, London. Remaining samples remained frozen for further examination at a later date. The methodology for the extraction of steroids from faecal samples was similar to those described for other mammalian species (Wasser *et al.*, 2000; Khan *et al.*, 2002; Pereira *et al.*, 2006; Heistermann *et al.*, 2001). Progesterone metabolites and oestradiol were quantified in the otter faecal extracts using enzyme-linked immunosorbent assay (ELISA), following procedures based on those described for other mammals (Heistermann *et al.*, 2001; de Haas van Dorsser *et al.*, 2007; Barja *et al.*, 2008). A subset of samples was also analysed using ultra performance liquid chromatography (uPLC), using methodology similar to those described for other mammalian species (del Castillo *et al.*, 2005; Ketola *et al.*, 2010).

Main Findings

Hormone assays were purchased and used to quantify concentrations of progestagens and oestradiol in faecal samples collected from eight female Eurasian otters held in captivity in various zoological collections in Europe (Spain, Poland, France and Germany). Preliminary research was undertaken to analyse the faecal progesterone metabolite and oestradiol concentrations for four female Eurasian otters and the faecal progesterone metabolite concentrations only for four more female Eurasian otters. The faecal oestradiol concentrations had not previously been quantified in the latter four otters, due to time and financial constraints. We were particularly interested in investigating the estrogen profiles for these four individuals, as their progesterone concentrations remained at very low, baseline levels throughout the study period.

The patterns obtained from the otters studied were unclear and unexpected. The oestradiol concentrations were lower than expected, with several peaks that did not appear to coincide with increases in progesterone metabolite concentrations. These unexpected results suggested that the oestradiol assays we had used might not have been appropriate, as Eurasian otters might excrete a different type of estrogen. Therefore, ultra performance liquid chromatography (uPLC) was used to analyse a small subset (n=9) of the samples in order to identify and quantify the individual chemical components and identify the estrogens present. The results from these tests suggested that oestrone glucuronide is the major estrogen metabolite excreted by the Eurasian otters investigated. This is an interesting finding in itself and is valuable information for future research investigating the reproductive physiology of Eurasian otters.

In order to characterize the reproductive cycle of this species it would be necessary to analyse all of the samples again, using an assay specifically designed to measure concentrations of faecal oestrone glucuronide. Unfortunately, the steroid concentrations in all the samples that formed the sub-set were very low, and the entire set of samples is likely to be even lower (as the sub-set had been selected specifically as these samples were expected to contain higher concentrations of estrogen metabolites). Unfortunately we were unable to generate

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sufficient financial support to cover the principal investigators salary for the duration of the study. Therefore, the principal investigator conducted this research project on a voluntary basis, preventing us from conducting further analyses at the present time.

Current / Future Research

The principal investigator has recently commenced a PhD project at the Institute of Zoology and Brunel University, UK. The project will investigate potential effects of environmental pharmaceutical contamination on otters (including potential effects of these chemicals on otter physiology, including endocrine and immune function). It is conceivable that this project will include further research on the reproductive physiology of female Eurasian otters.

Acknowledgments

We are extremely grateful for the financial support received from the River Otter Alliance.

Rehabilitated Otters Take to the Wilds of Texas

By Jennifer Bohrman

The ARC (Animal Rehabilitation Center) is an organization of volunteers in East Texas dedicated to providing temporary, rehabilitative care to sick, orphaned, and injured wildlife. The organization strives to return healthy animals to their native habitats and discourages unpermitted individuals from possessing or attempting to care for wild animals, emphasizing that most well-meaning people don't have the facilities or training to provide proper care and treatment to animals in need.

The ARC regularly receives and rehabilitates river otters, which are later released in private or protected areas using a "soft release" technique. With this technique, otters are regularly provided with food at their release site until they have fully adjusted to their new environment. Orphaned baby otters are returned to the wild after 12 to 18 months of care, which includes live prey training at The ARC's facility.

Two groups of orphaned otters were released this spring (6 males and 4 females) on 6500 private acres near Winona, TX. ARC volunteers predicted that many of the otters will enter the Sabine River Bottom area, where Texas Parks and Wildlife Department biologists will report sightings and other information about the otters' movements and activity in the area. The ARC receives no state or federal funding, so donations are much needed and appreciated. Donations may be made online at www.arcforwildlife.com.



*Preparing to step into the wild
©2012 The Animal Rehabilitation Center*



*Returning to the "feeding station" after exploring new habitat
©2012 The Animal Rehabilitation Center*



*Relaxing at the "feeding station" after lunch
©2012 The Animal Rehabilitation Center*

Long-term Survival and Reproduction in a North American River Otter (*Lontra canadensis*) with an Intraperitoneal Radio-Transmitter

By Jennifer A. Bohrman,¹ Sadie S. Stevens,^{1,2} and Thomas L. Serfass¹

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Radio-telemetry is one of the most common methods of monitoring translocated animals following release into an area. Several different types of radio-transmitters may be used, depending on factors such as cost, invasiveness, and species morphology and behavior. For aquatic and semi-aquatic mammals, intraperitoneal (intra-abdominal) radio-transmitters are considered particularly practical biotelemetry devices (Smith and Whitney 1977; Melquist and Hornocker 1979; Reid et al. 1986; Horning et al. 2008) because, unlike radio-collars and harnesses, they are appropriate for the lifestyle and body shape of various species (Garshelis and Siniff 1983; Reid et al. 1986; Rado and Terkel 1989; Van Vuren 1989). However, several complications can potentially result from surgery and implantation of intraperitoneal radio-transmitters, including infection, incision dehiscence, and blockage of internal organs. Moreover, biologists are often concerned about the potential effects of intraperitoneal transmitters on long-term survival, growth, and reproduction (e.g., Van Vuren 1989).

Several studies have investigated the effects of intraperitoneal radio-transmitters on survival and reproduction in aquatic and semi-aquatic mammals (Reid et al. 1986; Horning et al. 2008). Ralls et al. (1989) found no complications associated with intraperitoneal implantation of radio-transmitters in adult Sea Otters (*Enhydra lutris*) and documented normal reproductive performance in females. Similarly, Horning et al. (2008) studied captive California Sea Lions (*Zalophus californianus*) and Steller Sea Lions (*Eumetopias jubatus*) that had been surgically equipped with radio-transmitters and tracked them post-release. After observing low morbidity and zero mortality, Horning et al. (2008) concluded that intraperitoneal radio-transmitters are viable radio-tracking devices. Reid et al. (1986) assessed the reproductive performance of 7 adult female North American River Otters equipped with intraperitoneal radio-transmitters. Six of the North American River Otters in their study were pregnant at the time of implantation, and they progressed successfully through parturition, with 2 of the females giving birth again in the following season. No adverse effects of the implants were documented at any stage of the reproductive cycle (Reid et al. 1986).

Hernandez-Divers et al. (2001) investigated survival and reproduction in 22 North American River Otters surgically equipped with intra-abdominal radio-transmitters and released in western New York. Although 2 of the North American River Otters experienced surgical complications, both recovered. Three individuals died within the first year of monitoring (1 from an automobile collision and 2 from unknown causes); the remaining 19 North American River Otters in their study established new home ranges. No reproduction was documented during the post-release radio-telemetry monitoring period; however, biologists subsequently observed a pair of the reintroduced North American River Otters in a den with young and received reports of other released individuals having successfully reproduced. Despite the concern that intraperitoneal radio-transmitters may be harmful, long-term data are not available for most studies of animals surgically equipped with a transmitter. As a result of the relatively short battery life of traditional internal radio-transmitters, researchers cannot generally monitor survival or reproductive performance for periods longer than three years (Horning et al. 2008). We present a case study of a North American River Otter that carried an intraperitoneal radio-transmitter for nearly 10 years and successfully reproduced.

From 1982 to 2003, 153 North American River Otters were reintroduced into areas in Pennsylvania where the species had been extirpated. Several of the North American River Otters were surgically equipped with intraperitoneal radio-transmitters prior to release (Serfass et al. 1996). In March 1999, a North American River Otter surgically equipped with an intraperitoneal radio-transmitter (field ID: TC-1-99a) was accidentally killed near Kellettsville, Pennsylvania (41.55°N, 79.26°W), approximately 3 km from her release site, by a fur trapper using a #330 Conibear® trap (Oneida Victor, Cleveland, Ohio) set for American Beaver (*Castor canadensis*). The North American River Otter was originally captured in New York in June 1990 by a trapper and was purchased from the trapper. She was then held in a lab for 14 days to facilitate medical evaluations and surgery to implant a radio-transmitter. She weighed 5.4 kg.

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On 22 June 1990, TC-1-99a was sedated using an intramuscular injection of ketamine hydrochloride (Serfass et al. 1993), and a region of her abdomen was shaved in preparation for surgery. The radio-transmitter (IMP/200/L, Telonics, Mesa, Arizona) was inserted into her peritoneal cavity through a 4-cm lateral skin incision. A lateral approach was chosen rather than a ventral approach because of North American River Otters' habit of dragging their abdomen along the ground (Serfass et al. 1993). In June 1990, TC-1-99a was 1 of 4 North American River Otters to be surgically equipped with an intraperitoneal radio-transmitter and released at Tionesta Creek (41.61°N, 79.15°W) in northwestern Pennsylvania. Radio-telemetry data collected from 29 June 1990 to 5 March 1991 indicated that TC-1-99a remained within 7 km upstream and 30 km downstream of her release site post-release.

The carcass of TC-1-99a was retrieved in March 1999, and a necropsy was conducted. The necropsy included inspecting the digestive tract for food content, checking for ear tags, evaluating the overall physical condition (weight, condition of teeth, etc.), and extracting the lower canines for cementum aging by a commercial laboratory (Matson's Laboratory, Milltown, Montana). The North American River Otter weighed 5.2 kg. Her radio-transmitter remained where it had been inserted in the mid to caudal portion of the abdominal cavity and was surrounded by the omentum.

There was no evidence of adhesion, inflammation, or localized infection. Because TC-1-99a's ear tags were no longer present, her radio-transmitter was sent back to the manufacturer so that she could be identified by her radio-transmitter's frequency. Both her upper and lower canines were worn to the incisor level. Cementum aging of the lower canines estimated her to be 10 years old (± 1 year). At the time of her death, she was pregnant with two fetuses. Inspection of the digestive tract revealed a poorly masticated prey content of 7 Smallmouth Bass (*Micropterus dolomieu*) and approximately 20 Smoothbelly Darters (*Etheostoma* spp.).

Our information represents the first long-term data on survival and reproduction of a wild North American River Otter surgically equipped with an intraperitoneal radio-transmitter. At 10 years old, TC-1-99a was near the maximum reported life span of a wild North American River Otter, reported by Kruuk (2006) as 14 years. Her canines were severely worn, also indicating her age as old. TC-1-99a appeared to be in good health, and there were no indications of complications associated with her implant.

Despite her age, TC-1-99a was reproductively active. TC-1-99a's age and pregnancy demonstrate that her radio-transmitter implant introduced no detriment to her longevity or reproductive performance. Our observations suggest that intraperitoneal radio-transmitters may not disrupt the life history characteristics of North American River Otters, lending more support to their efficacy as biotelemetry devices.

Acknowledgements

We thank F. Felbaum, J. Hassinger, and A. Hayden for support and guidance during release phases of the Pennsylvania River Otter Reintroduction Project and G. Kollias, A. Gutleb, T. S. Jung, and D. G. Reid for comments that improved this note.



Male fetus recovered from female North American River Otter with intraperitoneal radio-transmitter



Female fetus recovered from female North American River Otter with intraperitoneal radio-transmitter

Otter Enrichment

By Jennifer Bohrman

T&D's Cats of the World, located in Penns Creek, PA, is perhaps the largest exotic wildlife rescue organization in Pennsylvania. The facility, founded and privately owned and operated by the Mattive family, provides a permanent home to over 200 abused, mistreated, or unwanted animals, including two river otters: Cartman and Milly. Cartman and Milly came to T&D's from Ohio, where they had been used for entertainment purposes after being trapped from the wild in Louisiana.

Along with the other animals at T&D's, Cartman and Milly receive regular enrichment to provide mental stimulation and encourage natural behaviors. Occasionally, Cartman and Milly are given live minnows to chase around their swimming pool; other times, they are introduced to novel toys and scents.

As a not-for-profit organization, T&D's relies on private donations in order to provide care for their animals. The facility accepts private donations by mail (T&D's Cats of the World, P.O. Box 186, Penns Creek, PA 17862) or online (www.tdscats.com). The facility's *Sponsor an Animal Program* also allows visitors to sponsor a river otter for \$50/year in return for a personalized certificate, biography, photo, species information sheet, two free passes to visit T&D's Cats of the World in the summer, when the facility is open to the public, and a subscription to the T&D's Cat Chat newsletter.



Cartman attempts to crack open a hard-boiled egg he received for enrichment
© Jennifer Mattive

Yellowstone's Otters are No Match for Invasive Lake Trout

By Jennifer Bohrman



Yellowstone otter and pup sharing a cutthroat trout

According to a January report by University of Wyoming researchers, river otters in Yellowstone Lake may struggle to adapt if invasive lake trout continue to outcompete native cutthroat trout. When biologists compared the physiology and blood chemistry of Yellowstone Lake otters and sea-level otters, they discovered that the former's blood component levels have adapted to the lower oxygen associated with high altitude. However, these adaptations, including increased blood viscosity, could potentially reduce otters' blood flow and swim speeds during deep dives.

Yellowstone Lake otters have a nearly 40 percent success rate per dive when hunting cutthroat trout, but

researchers predict this would be lower for lake trout, which typically occupy depths below 130 feet.

Cutthroat trout suffer from both outbreeding and predation by lake trout, with the average adult lake trout consuming 41 cutthroats every year. In 2009, the National Park Service increased efforts to control Yellowstone lake trout populations through commercial fishing and netting. The annual commercial fishing efforts are estimated to cost \$2 million annually, and the Park Service hopes to receive adequate funding from fisheries and environmental groups as well as private donors in order to continue the harvests until 2017.



Yellowstone otter dining on cutthroat trout
Photo: John William Uhler
(<http://www.yellowstone.co/>)
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The Search for a Perfect Otter Pond

By Zoe Bowers

A North American River Otter swimming in Matilija Creek in Ojai Valley, California may seem unlikely, but during the winter of 1964 this actually happened. The young otter pup had been an unexpected addition to my life during the previous year and her presence dramatically changed the course my husband, Clark, and I had set upon.

We were a young city couple from Southern California planning to settle in Ketchikan, Alaska. Just three days after our arrival in the small, rustic town fate gifted us with a furry little bundle of joy with a long pointed tail. Clark, the new summer temp working at the Alaska Department of Fish & Game, was part of the rescue team of two who retrieved the orphaned pup from the edge of the rainforest, bringing it to my door and into my heart.

Even though she was slightly lame from an unknown accident, Tafi, as we named her, quickly set about putting our small apartment into delightful disarray. The bathroom especially, became a mass of soggy towels after her first swim in the big white bathtub.

Soon the intrepid little explorer would become a much pampered pet and well traveled, as our stay in the far north ended after a mere five months. In November, we returned from the lushness of southeastern Alaska to my hometown of Ojai, California. The mountains surrounding the small east-west facing coastal valley were still dry and thirsty; the creek beds held but a trickle of water. The first seasonal rainstorms had barely rinsed the parched and brittle foliage of their dusty coats.

By January, the storms began in earnest replenishing the lifeblood of the valley at last. The fragile arteries feeding into the Ventura River swelled to a rush, the languid brooks began to bounce and splash once again, and my spirits rose. We could now begin our quest for an otter pond—something bigger than laundry tubs or bathtubs for our displaced water rat to swim in.

Although our experience as otter parents was still shy of a year, we had learned advance preparation was essential. And so we headed out in our trusty VW van, sans otter, for a sight I remembered along the Ventura River. No, too open we thought. We wanted a secluded spot to avoid creating a spectacle for every passing motorist.

We turned and went north into Matilija Canyon where the winding two-lane road leads over the mountains of the Ojai Valley to Taft. Several miles up from the valley floor, past the turnoff to Matilija Dam soon to be deconstructed, we were far away from civilization. I began to focus more intensely on the scrub brush lining the roadside and what might lie beyond.

The north fork of Matilija Creek had passed back and forth at various intervals beneath the road but still remained well hidden in the dense growth. Finally, a sparkle of water twinkled at me between the lacy foliage, hinting of more. "Stop here," I called out to Clark. He pulled over and brought the van to a halt.

We hiked a few yards through the bramble sheltering the swollen creek from the road to find what we sought—a perfect pond. We were not in a rainforest of southeast Alaska, but I was elated to find such an ideal setting in the valley hills.

A tumble of rocks and boulders created a natural dam that formed the first little swimming hole. The mini waterfall, about eighteen inches high, cascaded to a second pool about thirty feet in diameter lined with small river rocks. The crystalline water of the creek then continued on through a culvert and under the road.

We hurried home to load the van with towels, rugs, a bowl of ice and water, and of course the object of all the activity—our furry otter. The air was brisk, the sun still shining brightly when we returned to the canyon with Tafi in my arms. She gave a puzzled, *õHarruumphõ* at all the mysterious activity, surely wondering where we were taking her.

Our vocal commands honed and bodies alert we stationed ourselves at opposite ends of the small mountain Eden confident we could respond to the unexpected. The second Tafi's eyes met the pond she shared our



Zoe and Tafi the otter

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excitement; her body wriggled in response as I put her down. Without hesitation she glided into the glassy water and with two snorts and two sniffs to clear her nostrils, flipped her tail and dove to the bottom. Her body, now released from its limited ability on land, stretched out into powerful undulations that propelled her through the cool water.

She headed for the opposite bank stirring up mud, her sensitive whiskers helping to guide her as she nosed along. Every rock protruding from the bottom had to be inspected, as if there were some sort of edible morsel to be discovered beneath it. Except for her occasional disturbance, the water was crystal clear making her antics below the surface quite visible.

I reveled in her ecstasy perhaps a little envious of this creature that seemed to be having the time of her life. Within minutes, her natural curiosity found the miniature waterfall bringing the sparkling stream into her pond. With the nimble eagerness of a wild otter, she climbed atop the boulders forming the spout and dove into the dark water with a splash. Then, over and over she repeated the routine, climbing the boulders and diving with the tumbling water into the pond; until that instant when a flash through her animal consciousness told her there must be more!

The two of us were caught off-guard, mesmerized by her obvious pleasure and realized in an instant of panic what was happening. In two shakes of an otter's tail she had scurried out of the water and was already onto the far bank traveling upstream. How fast she could move when she wanted! Clark leapt into action, tearing through the prickly, dry undergrowth in hot pursuit, his only concern capturing the runaway otter! As the pursued and the pursuer were lost in the thicket and out of my sight, all I could think of was the impending disaster of losing her in the hills forever.

Luckily her ability to travel on land more closely matched that of Clark's and he snatched her just in time by lunging forward and grabbing her by the tail; a desperation tactic learned on other occasions closer to home.

Meanwhile, I had caught up with the breathless trailblazers. After sighing with relief, I realized Tafi's motive. There before my eyes was yet another perfect otter pond! But that was enough for now she would have to wait for another time to explore her latest discovery.

The price of the day's adventure had yet to reveal itself, however. Within a few hours of our return home Clark began itching badly all over. By the next morning he was covered with red splotches. Poison oak! Being an allergic type anyway it became a royal, miserable case which ultimately needed a doctor's care.

We returned to this ideal spot other times in the future, even after moving forty miles away from Ojai, to the coastal city of Oxnard. We would load the otter and all her paraphernalia into the van and with the wisdom of experience take to the road with the well-known reminder "leaves of three, leave it be."



© Eric Peterson

River Otter Alliance Accepting Grant Proposals

The River Otter Alliance will fund grants up to \$1,000 each in the areas of otter-related research, education, reintroduction, rehabilitation, and habitat protection, thanks to donations received from the *Rocky Mountain Ark Wildlife Rehabilitation Center* and other anonymous donors. Proposals should state the purpose of the project, objectives, tactics, scientific methodology, follow up, how the results will be utilized to benefit otters, and how the funds will be used. The grant is for a period of one year and will require a written report of the findings at the end of that period, with the possibility of publishing the report or a summary of the results in the *River Otter Journal* newsletter. Proposals will be reviewed by a

research committee which will include wildlife professionals who specialize in otters and will be awarded by the River Otter Alliance Board of Directors. Grant proposals will be judged by their rationale, significance, scientific merit, benefit to the species, and the probability of the research funded by the grant being successfully completed within a one-year time period. Grant proposals may be e-mailed to riverotteralliance@gmail.com.

The Marigold Chair

By Zoe Bowers

ONE hundred sixty-five dollars
For a comfortable easy chair
Not a bad price in ø66,
We thought it reasonably fair.

And so it found its way one day
To our living room so bare
Not quite orange nor really red,
This marigold chair had flare.

Tafi the otter at three years old
Was allowed to try out this chair
Soon it became her favorite place,
One she would not share.

She rubbed and groomed
Her well-oiled pelt
On the comfy pillowed seat
The padded arms were handy too,
They helped her reach her feet.

Now the marigold chair
Was all hers for a year
Then low and behold,
She started a new career.



Tafi and Tang

Tafi joined the Navy
Where the food was free
Her crewmates were dolphins
That worked out in the sea.

Though her marigold chair
Was now far far away
Our otter was happy
Her lifeø no work and all play.

While otter had sea duty
There arrived on the scene
A cute orange kitten,
Quite feisty and lean.

Tang the cat was trained
Then soon he did claim
The marigold chair
As his ultimate domain.

Up on the pillow-back
Like a king he would sit
If Tafi only knew.
Sheød have had a gigantic fit.

Two years hence,
Tafi and Tang finally meet
On the marigold chair,
It still providing a needed seat.

He goes to his spot
And she goes to hers
Both try to ignore
The grunts and the purrs.

Tafi starts a-rubbing
Wobbling the easychair
Tang looks down at her
With his piercing glare.

Two strangers they were
Now theyøre learning to share
But oh my goodness,
They sure make an unlikely pair.

Spring/Summer 2011 Word Search Answers



B	Q	K	W	T	S	O	A	M	K	V	C	N	K	Z
L	A	C	D	C	L	A	W	Z	E	U	Q	D	P	K
G	Z	H	G	S	I	G	S	F	L	M	W	E	T	Y
B	H	E	A	W	D	B	P	U	P	A	G	O	H	I
N	A	A	R	Z	E	C	E	R	J	E	N	P	S	A
M	U	J	I	M	S	J	X	M	N	W	V	L	W	E
A	L	H	V	R	H	K	G	L	M	E	T	A	I	L
W	O	M	E	I	Y	E	H	O	Z	D	N	M	M	B
E	U	O	R	D	Q	N	K	M	G	E	K	U	P	V
U	T	R	O	U	T	F	O	B	T	N	L	A	Y	C
H	K	O	A	W	H	P	T	S	M	H	P	Z	N	X
G	Y	N	E	J	L	B	T	C	E	Y	I	B	D	R
D	N	F	I	S	H	C	E	D	S	D	E	N	B	E
C	M	U	G	F	V	X	R	O	G	R	O	O	M	I
A	S	R	V	Q	H	M	A	L	A	A	Z	P	M	O
L	B	Q	M	Y	O	E	C	D	F	G	L	K	Y	P



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