# Summary of Husbandry Guidelines for African spotted-necked Otters in Captivity.

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Photo: J. Reed-Smith, Rubondo Island National Park, Tanzania

## African spotted-necked otter (SNO) HUSBANDRY DOCUMENT

#### **OBJECTIVE**

This manual has been written by zoo and aquarium professionals to help institutions and professionals recognize and adhere to the basic minimum standard of care recommended for keeping African spotted-necked otters (SNO), *Lutra maculicollis* in wildlife facilities. The recommendations have a sound scientific basis or are the result of experience gained over many years of working with this species.

## **NATURAL HISTORY**

#### General Characteristics

The bodies of SNOs are elongated with a long, narrowing tail which is dorsoventrally flattened. Fully webbed feet have short, sharp claws on all digits. Head is short and broad at the muzzle and largely widens at the back. Ears are short and round. The nose is an upside-down trapezoid with small dips on each side; the nose pad is naked. Pelage varies individually from chocolate to reddish brown but is uniform throughout the body. The pelage often lightens becoming a more reddish brown in old animals; males generally have darker pelage than females. Typically, the throat and chest are mottled with distinctive, blotched creamy or white markings; sometimes these are absent, however. Chin and upper lip are white. Chest, throat, and facial patterns are highly variable providing an easy method of identifying individuals. Shortly after birth the throat and chest cream spots may turn orange before turning light again.

SNO are sexually dimorphic with adult males generally larger and heavier than females. Average body length is 600-730 mm, tail length averages 400 mm. Weight is roughly 6 kg for males (lighter for females), but large, wild males may be heavier.

Spotted-necked otter dentition reflects a diet specialization of capturing, crushing, and eating live aquatic prey. Dental formula is I 3/3, C 1/1, P 4/3, M 1/2, for a total of 36. Lower canines are re-curved whereas upper canines are straightened, heavy, and sharp.

#### Distribution

Spotted-necked otters are found in central and southern Africa south of 10 degrees N latitude. They are abundant in both Lake Victoria and Lake Tanganyika, and also may be found in the moister areas of sub-Saharan Africa; they are listed as a Species of Least Concern by IUCN/SSC but the population is considered to be declining and the status unknown throughout much of its range

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## Reproduction

The SNO shows at least seasonal breeding peaks in the wild. Mating has been observed in June (Tanzania) and July (South Africa). After a two month gestation period one to three cubs are born, typically one or two (captive records). Young are born blind and remain dependent upon mother for up to a year. Males do not participate in the raising of young. Females do not begin reproducing until they are two years of age (captive records).

#### Ecology

Spotted-necked otters rarely venture over 10 m from their home water source. The most common habitats of SNO are large rivers, lakes, and open water swamps. They do not occupy ocean waters or estuarine areas. The habitats of SNO are generally associated with abundant fish resources, continuous vegetation, and/or rocky shorelines providing ample cover. This species does not appear to cover great distance by going overland, something that is seen in some other otter species. However, they spend a great deal of their time on land resting and grooming between foraging bouts. Young are born in dens where they remain for the first two to three months.

Diet consists of a variety of fish, crabs, frogs, insects, birds, and mollusk species. Direct observations and scat sample analysis have determined that fish dominates the diet but location and seasonality alters dietary intake. In Lake Victoria SNO has been observed taking fish as large as themselves.

Home ranges of males are larger than females. Spotted-necked otters do not appear to defend territories with home ranges displaying strong intra- and intersexual overlap. However, they do appear to defend sections of their home ranges against unknown otters (Reed-Smith personal observations). Spotted-necked otter density per km of shoreline is geographically dependent (historically 0.4 - 2 otters per km). Geographical range overlaps that of the Congo clawless otter (*Aonyx congicus*) and Cape (African) clawless otter (*Aonyx capensis*) though direct competition does not occur.

#### Behavior

Spotted-necked otters are mostly diurnal but may be more nocturnal in areas of high human populations. Group size ranges from solitary to 20 (typically 5 or less). Group composition ranges from a mother and her cub(s), to groups of females and cubs, adolescent groups, and all male groups. Field reports indicate that larger groups tend to be all males.

Cooperative hunting has not been reported however, groups (2 or more) will frequently forage in the same area.

Grooming is performed by rubbing and rolling against grass, rocks, or other substrates. The ability of SNO to perform these activities and adequately dry off is considered key to maintaining good physical and psychological health. Defecation and urination areas (sprainting sites) are often near the water surfaces on rocks, etc. These sprainting zones are used repeatedly but scat are not typically deposited on top of previous feces, instead they are scattered over the area. Spotted-necked otters use dense vegetation, old bank dens, and rock/tree root cavities for shelter and sleeping areas.

Spotted-necked otters appear to have excellent hearing ability. Vision is believed acute at small distances (3 m) and they can see moving objects up to 10 m. Sense of smell is considered to be good. The SNO's total vocal repertoire ranges from 15-20 distinct vocalizations used in various contexts.

#### Conservation Status

The accumulation of biocontaminants, such as organochlorines, in otters is primarily due to their position in the food chain as predators of aquatic species in contaminated waters; this is presumed to be a threat to SNO in some areas. Other threats include hunting by humans for the sale of pelts, use in traditional medicine, drowning in fishing nets, and their consumption as bush meat. Increasingly it is reported that SNO are killed by fisherman because they are regarded as competition for dwindling fish resources. Previous reports indicate that SNO use in traditional medicine was marginal, however, their perceived aphrodisiac properties are increasingly being exploited and some traditional healers are now using an entire animal per customer versus the historic use of small portions per each client (Reed-Smith personal observation). These threats exist despite the fact that SNO are protected in most countries.

On rare occasions crocodiles may prey upon otters for food but this has not been confirmed. While some researchers have theorized the presence of crocodiles may be an exclusionary factor for SNO--and this may be true in riverine systems or areas of depleted resources--they were often observed swimming within 10 m of crocodiles in Lake Victoria during a three year study. In addition, fish eagles and monitor lizards have been observed attempting to prey upon juveniles.

In 1997, this species was placed on CITES Appendix II. It was placed on the IUCN Red Lists for 1999 and 2000 and listed as Vulnerable but is now listed as Least Concern (IUCN 2004); overall numbers are believed to be decreasing, however. An accurate assessment of the current status of this species in the wild has yet to be conducted.

## **SOCIAL GROUPINGS**

African spotted-necked otters are a social species typically found in somewhat fluid groups of two or more (individual animals may join/leave a specific group of animals for as yet unidentified periods of time). The most common groupings seen are females with their offspring, adolescent groups, and groups of males. In captivity, this species is best housed in pairs or as a family group. Optimal group size will vary with exhibit and holding size but consideration must be taken to ensure that the female has ample space if breeding is occurring. Females will need to be separated from the male or other group members prior to parturition until the cubs are active and swimming. If separation is not possible, the exhibit and holding area needs to be large enough to allow the female to den without coming into visual or physical contact with the other members of the group.

Family groups have been successfully housed but there have been instances of the breeding female ostracizing her older female offspring prior to the next birth. Pairs of unrelated

males and pairs of unrelated females also have been successfully housed in captivity. Unrelated groups larger than two individuals have been attempted but not successful.

This species has been successfully housed with forest buffalo, forest hogs, Red River hogs, Schmidt's spot-nosed guenon, Allen's swamp monkey, Francois langur, various bird species (some not successfully, e.g. goliath heron) and fish in very large, multi-level exhibits. There were some reports of intermittent aggression usually initiated by the otters.

## **INTRODUCTIONS**

Introductions with any species may take only a few hours, a few weeks, or it may not be successful at all. Auditory, olfactory, and visual introductions should be successful before attempting a physical introduction. Each step should take as long as is necessary to ensure positive responses from the animals before moving on to the next step. Introductions with SNO should follow these standard guidelines with auditory and olfactory exposure first. An example of this procedure is to house the otters next to each other without visual access first. During this time moving furniture or bedding between the two areas or switching the otters into each other's holding areas can be useful to help familiarize them with each other's scent. This will allow them to investigate where the other was and any feces or other smells left behind. Next, visual and limited tactile contact will allow the otters to actually interact with each other. Once positive behavior responses are seen more tactile contact can be given with actual physical introductions following. Tactile contact can be done slowly by initially allowing them the ability to touch through smaller holes in the shift doors or caging and then moving on to allow them access through larger holes. Bigger holes also may give them the ability to extend a paw through and touch each other. During this part of the introduction, the otters must be observed carefully to ensure that they to do not bite or injure each other.

Full contact physical introduction attempts should take place in a neutral territory if at all possible. If it is a new area for either otter they should be given ample time prior to the introduction to explore the area alone and become familiar with their surroundings. If a new otter is coming into a facility to live with an otter that already has an established exhibit, it is advisable to keep both in the holding area for the early introduction steps and allow the new otter ample time on exhibit before the physical introduction. It is important to have sufficient staff present during the full contact introduction to separate the otters if aggression occurs. This part of the introduction also can be done slowly by only allowing the otters to be together for limited amounts of time. Gradually increase the time together until they can successfully be left together overnight; this final step should not be taken until after no aggression is seen for a prolonged period.

Introductions between unfamiliar, adult SNO can be tricky; time and care should be taken to ensure that introductions are done safely. Groups that have been housed together can

be reintroduced after the female gives birth and the cubs are active and swimming. These reintroductions with family groups are usually relatively quick and easy although there have been instances of the female ostracizing her older female offspring prior to the next birth.

When attempting to introduce unrelated SNO it is best to attempt the introduction while the otters are young. Male introductions are most successful when they are younger than 4 months and have not been exposed to a female other than their mother. Same sex introductions done with older unrelated otters can be difficult and should be done carefully with no time restrictions; typically all introductions go more smoothly with younger animals. Some otters show preferences for certain otters and will not tolerate others.

## **EXHIBIT DESIGN**

Although slightly more aquatic than some other otter species, it is important to remember that SNO are land animals that swim using the water for foraging and movement from one location to another. Ideally, exhibits should have 5 times more land than water. Substrates should be natural (such as wood chips, soil, sand, and rock) and deep enough to allow for proper drainage and drying of the top surface (at least 20cm). Hard surfaces such as concrete or gunnite are not recommended and should be used sparingly. Shorelines should be easy for old and young animals to ingress and egress and be of varied complexities (i.e. convoluted versus straight shorelines, logs lying in water, deadfall piles, boulder piles, shrubs, etc.). Large flat rocks can be placed near pool edges to keep substrate out and to provide basking spots. Floating logs, boulder piles or PVC constructed rafts work for basking as well. Pools also should be of various depths. This allows otters to dive as well as travel in shallow streams. Exhibit complexity and the proper land/water ratio is important for maintaining proper psychological and physical health; as part of this it is recommended that a minimum of 150 m<sup>2</sup> exhibit space be provided for two animals with an additional 50 m<sup>2</sup> for each additional animal housed permanently within the exhibit.

In addition to the previously mentioned exhibit features, SNO enjoy waterfalls, islands, and mud slides; as many of these elements should be included in enclosures as possible. Otters, especially young animals, will utilize an entire exhibit. As stated previously, highly complex environments provide for their physical as well as mental stimulation.

Otters are naturally curious and thought should be given to the exhibit filtration system. Skimmers should be secure and not allow an otter to access or get a tail/paw stuck within the grate. An otter should not be able to pull any grates or coverings loose.

African SNOs are good climbers and will scale fences or climb trees. If hot wire is used along the exhibit perimeter it should be placed low enough to deter an otter from climbing; if too high an otter may touch it and fall. Hot wire also should not be placed in an area where an otter can reach it while in the water.

It is very important that otter exhibits have shaded areas to allow animals escape from the sun and heavy rain. Small plants or shrubs make for excellent and natural coverage. Natural or man made dens allow for a secure area for resting and can be bedded with hay, leaves, straw, wood wool, or mulch. SNO do well in public exhibits, but should be provided an out of public sight, quiet area large enough to accommodate the entire group, as well as smaller private areas for otters choosing to isolate themselves.

Female SNO should be provided a secluded place to den for successful cub rearing. Females will be very aggressive at keeping other animals away from her cubs. This includes other otters she is familiar with. She may however tolerate some otters from her group in the same enclosure providing the enclosure is large enough, the den site is protected, and other group members can stay out of her sight. Females will keep their cubs away from the group for approximately two months. After this age, cubs learn to swim and will accompany the dam everywhere she goes. During the cubs' integration into the group it is important to continue to provide secluded shelters for the dam to nurse.

Although otters become quite accustomed to humans, they should not be required to continuously swim in front of the public. It also is imperative to provide areas that the otters can thoroughly dry their coats. Supplying multiple dry, loose substrates such as mulch, sand and soil allows for proper grooming and healthy fur. Care should be taken to change substrates often so they do not become overly soiled and remain an attractive choice for grooming.

Spotted-necked otters do well in some mixed-species exhibits providing care has been taken to address the unique challenges these groupings provide. When attempting mixed-species exhibits care should be taken to ensure all animals are compatible and have access to all exhibit features required to meet their needs; this includes food, enrichment items, and water.

Otters enjoy digging, climbing, rubbing their bodies on substrates or furnishings, exploring exhibit features, swimming, playing and interacting with other species (care must be taken these interactions do not become aggressive). An exhibit that provides these stimulations will best ensure healthy otters.

## DIET

SNO feed primarily on fish in the wild however they also consume some crab, shrimp and, perhaps, other small vertebrates at times. In captivity they have been found to do well on a varied diet and to show some food preferences. Food amounts offered are varied based on individual preferences and to maintain a steady, healthy weight for each individual.

Animals should be fed at least twice a day, preferably three times per day. An additional enrichment feeding (e.g. scattered items or live fish/crab/crayfish/shrimp to encourage

foraging should be offered daily. Animals introduced to unfamiliar food items at a younger age are more likely to eat that food item as they age.

Enrichment foods such as peas, corn, brussel sprouts, avocado, peaches (minus pits), cheerios (cereal), etc. have been used successfully. These items may or may not be consumed but have been found to provide behavioral enrichment. The following page offers sample diets.

## • Sample Diets:

#### Diet 1

-Daily offering, per animal (approximate)

- 150g Gutted trout (highly favored)
- 150g Whole trout
- 150g Natural Balance zoo carnivore diet (commercially prepared diet)
- Pre-frozen, thawed mice and quail chicks offered on alternating days, 5 times per week

#### Diet 2

- 150g whole fish (usually capelin but sometimes trout)
- 150g Toronto carnivore diet
- 50g Science Diet light cat chow
- 75g carrots or yams
- Bones (once a week)

Offering whole food items such as whole trout, mice, and quail chicks provides a more natural diet with bones and internal organs.

## Feeding methods

Varied feeding methods have been found to be beneficial in reducing feeding associated stereotypies (e.g. pacing, etc.). This includes utilizing unpredictable methods such as feeding at random times and in random ways; for example:

- training session on exhibit
- training session in holding
- scatter feed (scavenger hunt)
- toy feed (food in toys for them to work at)
- toss out feed (no training, just toss out food)

However, care should be taken to ensure that all animals receive the appropriate amount of food daily.

## **ENVIRONMENTAL ENRICHMENT**

Environmental enrichment is defined as the process of creating a challenging and realistic environment to address a captive animal's social, psychological and physical needs. Enrichment aims to enhance naturalistic activity, provide mental stimulation, eliminate stress, reduce or eliminate aberrant behaviors, and increase the success of captive breeding of wildlife species.

The most important consideration for environmental enrichment is the safety of the animal when in the presence of an enrichment item. Questions that must be assessed according to the American Association of Zoo Keepers (AAZK) Environmental Enrichment Notebook (<a href="www.aazk.org">www.aazk.org</a>) include: Can they get caught in it? Can an animal be cut or otherwise injured by it? Can it fall on a cage mate? Can it cause gut impaction? Can they get hung up on it? Can they get trapped in it? Can it destroy an exhibit? Can this item be hazardous to juveniles? Before designing, installing and using any enrichment item contact your institution's animal management staff and evaluate all potential dangers.

Once all safety issues are addressed knowledge of a species' natural behaviors, individual's behavior, and exhibit considerations and/or constraints should become the framework when constructing an environmental enrichment program. Species specific life histories and institutional circumstances must be taken into account when implementing an effective enrichment strategy. For example, primary natural behaviors of otters include foraging for food items, sprainting (scent marking), environmental exploration, swimming/play, grooming, and resting. Also, past history of your animal(s) may influence your enrichment choices (e.g. some individuals chew up toys, obesity may limit food enrichment, etc.).

Exhibits should be designed to encourage and facilitate all natural otter behaviors as well as limit stress and exposure to environmental hot/cold extremes. Naturalistic behaviors of SNO can be encouraged or enhanced by creative exhibit design and the use of environmental Enrichment approaches include: 1) Diversifying food item types and feeding enrichment. schedules to promote activity and discourage feeding associated stereotypies. 2) Sprainting and exploration can be increased by adding new items such as logs, branches, boulder piles, shrubs, sand pits, etc. 3) Alternating items taken from other non-carnivore animal exhibits will enhance interest and scent marking to mask previous scent marks from other species. 4) Increasing swimming/play behavior can be achieved by the addition of floating objects such as rafts, PVC pipes, and ice blocks with embedded treats. Exhibit design should encourage the ability of an animal to express naturalistic behaviors such as climbing, digging, swimming, foraging, exploration or comfortable and stress-free resting. Approaches should include: 1) Regular varying of exhibit structures to promote activity and interest. 2) Inclusion of safe hiding spots from frightening stimuli and protection from excessive heat or cold. 3) Provision of natural substrates (periodically replaced for sanitation reasons) to promote natural behaviors and protect feed from abrasions.

Implementing a husbandry training program is another beneficial and functional type of enrichment to increase activity levels of captive otters.

Research on activity budgets have estimated some species of otters spend nearly 60% of the day resting. Providing proper resting areas such as nest boxes, rocks and logs to hide in or stretch out upon, and a variety of substrates to construct nests or bedding sites are all enrichment types which will decrease stress while resting on and off exhibit.

All enrichment items originally should be closely monitored to ensure none of the animals are potentially utilizing them in a dangerous manner (e.g. eating foreign objects, etc.). Group dynamics also may affect the amount or type of enrichment given to captive otters. A potential side effect of enrichment is aggression between conspecifics over toys, food, or new items added to the exhibit. Finding items that limit aggression and/or splitting aggressive individuals from the group and enriching these animals separately are options to maintain an enrichment schedule within an aggressive group situation.

Below is a list of commonly used enrichment items. All items should be monitored to ensure their safety for each individual animal they are offered to. All items should be approved by institutional management and veterinary staff.

Sample Enrichment items Used for Spotted-necked Otters	
Live fish/insects (alternate feeding schedule)	Boomer balls
Browse	PVC pipe/bamboo insect feeders
Tires	Burlap sacks
Furniture change	Fish cubes mixed with bouillon or blood
PVC pipes (for manipulation and hiding in)	Pinecones
Boxes/crates	Animal hide/antlers/feathers
Logs – alternate with other exhibits	Hide diet on exhibit
Scents – perfume, seasonings, extracts	Pumpkins/melons – hide diet
Boxes/cardboard tubes (monitor for safety)	Newspaper/shredded paper/brown paper/paper
	bags/phone books – hide diet
Seasonal items – snow, grass, approved plants,	Novel food (live and frozen) – crawfish, koi, smelt,
etc.	trout, crickets, goldfish
Sounds – CD's: rainforest, bird song, etc.	Fresh dirt, sand, mulch, etc.
Plastic items to hide in – buckets, barrels, variety	Variety of bedding materials – straw, hay, alfalfa,
of plant pots, baby pools, spools, etc.	shredded paper, mulch, etc.
Plastic whiffle balls, rings	Frozen fish treats
Dog chew toys: Kong® toys, etc. (Heavy rubber,	
monitor to ensure they are not being eaten)	

# **BREEDING/REPRODUCTION/CUB REARING**

Based on captive records, female SNO typically come into estrus at about 2 years of age. The male will breed with the female on and off for approximately 2 weeks. Breeding bouts can last up to 45 to 60 minutes and typically take place in the water. If breeding is successful, birth will occur in roughly 62 days; gestation period should be counted from the day of first breeding. It is not uncommon for a female to have a false pregnancy, especially if it is her first breeding. A female believed to be pregnant should be offered an increase in diet. Usually the male and female have an increased appetite during breeding which may need to be accommodated for with an increase in diet. Offering a wide variety of food items and a vitamin supplement (e.g. Felovite®, manufactured by Tomlyn) to pregnant females is recommended. Females nursing cubs should be fed ad libitum (as much as she wants).

A pregnant female SNO should be provided a separate place for her to have her cub(s), as typically she will become very aggressive to the male and other enclosure mates. She may tolerate some otters from her group if the enclosure is large enough and the den area is secluded, however for the safety of the other otters it is recommended she be separated. Separation should take place approximately one week (she may need to be separated earlier if she is becoming aggressive) before she is to give birth. This will allow her time to adjust to a new/changed environment.

Typically there are some symptoms to look for when a female is about to give birth; she will become more aggressive than usual, she may be more lethargic than usual, she will have an increase in her weight, her appetite may decrease, and she will begin defecating in the water regularly (some females do not begin doing this until after birth). She also may appear uncomfortable, shifting often and rolling over onto her back.

Births generally take place at night, or when no one is around. Typical litters are 1 to 3 cubs. Cubs are born with eyes closed and they are usually lighter in color than adults with flattened, wavy body fur. Cubs are very vocal the first week or so. A good mother will curl around her cub(s), using her paws to push the cub's mouth to her nipples to nurse. Cubs develop quickly. When weaning begins it is highly recommended to give vitamins to cubs (mixed in their solid food) to avoid problems with low iron.

Depending on the experience of the mother, the cubs are generally introduced to water at about 40 days old. It is recommended to block off deep water access, and offer shallow water access, particularly if the female is inexperienced. Cubs seem to enjoy the water right away, especially if they can touch bottom. Often mothers will try to nurse cubs while in the water. Deeper water should be introduced later at about 60 to 80 days (again, depending on the mother).

At about 60 to 80 days (depending on cub development) the cub can be introduced to the group or family. The cub will stay close to the female, following her closely everywhere she

goes. Typically the males are very gentle with their cubs, however it is important to be very watchful when first introducing. It also is important to provide a nesting area or den for the female and cub(s) to go to for resting and to nurse. Cubs will try to nurse as long as the female will allow it.

The female is usually ready to breed again when her cub(s) are about 1 to 2 (sometimes 3) years old. She will tolerate her cub(s) until she is ready to give birth again. This is the time when she will most likely ostracize her older female cub(s) and they should be separated.

## • Cub Development

- Cubs are born with white on their lips. At approximately 6 days patches of white hair develop on their chest or groin area. These patches change to an orange color, before changing back to cream or white as the cubs reach full growth or maturity. Often additional orange spots develop by about day 42.
- Eyes open at 34-46 days
- First crawling at about 20 days, crawling well approximately 42 days
- First teeth erupting at 23-29 days, all teeth in ~78 days
- Walking well at ~ 37 days, running 59 days
- Leaving den on own at about 57 days
- Playing in water bowl ~ 61 days
- First going into water on their own at about 57-91 days; variation comes from water tub versus pool exploration
- First pool swimming lessons ~ 86 days (timing may be due to when family is allowed into the exhibit)
- First eat solids at about 60-73 days

#### HAND REARING

Hand-rearing should not be taken on lightly. A detailed otter hand-rearing document is available from the Otters in Captivity Task Force, contact: <a href="mailto:lontracat@live.com">lontracat@live.com</a>.

Rejected or orphaned cubs should be warmed and examined for any injuries; care should be taken that they are well hydrated before any formula is offered. Formulas will vary based on cub age. There are several formulas based on commercially available feline milk replacers. Older cubs should be offered slurry consisting of boneless fish and vitamins.

Newborns will require stimulation by gentle stimulation with a warm cloth to urinate and defecate. Care must be taken that suckling animals do not aspirate formula. Nipples used should not have overly large holes and the animal should be held in a recumbent position (stomach down) mimicking a natural nursing posture.

#### **CATCHING UP**

The safest means to catch an otter is by crate training. Otters are extremely quick to learn to shift into a crate as part of their daily routine. One method is to place food inside the crate and incrementally work on lengthening the time the otter spends inside. Once the otter is comfortable in the crate, steps can be taken to accustom the otter to the crate door closing behind them. Once this behavior has been established, minimal effort is needed to maintain it and otters can be crated and moved with minimal stress or chance of injury.

If crate training has not been established at the time of catching, a push board can be used to move an otter into a crate. An otter can become extremely aggressive when scared or forced in this manner and negate all attempts to push away from the person holding the push board. Nets may then become a viable option or the combination of push boards and nets. If

netting is ultimately necessary to catch an otter, the animal should be placed into a crate as soon as possible to avoid tangling or overexertion. Netting or forcing an otter resulting in a stressful catch-up procedure should always be avoided.

Another easy way to catch an otter is using a squeeze cage through which they regularly travel to and from the exhibit. This is a narrow cage featuring sides that can be pushed in and designed to be removable (See photo, Phoenix Zoo squeeze



cage). The OCT offers a short document detailing the steps required to train otters to voluntarily enter a crate or squeeze cage, see Training document (<a href="http://www.otterspecialistgroup.org/">http://www.otterspecialistgroup.org/</a>, Library, Otters in Captivity Task Force.

#### **Products mentioned**

Felovite®, manufactured by Tomlyn, info@tomlyn.com

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