

## MONTEREY BAY AQUARIUM

# TABLE OF CONTENTSWild About Otters Press Kit

Click on headings below to go directly to a specific release within the press kit.

- 1. Main news release
- 2. Exhibit Fact Sheet
- 3. Exhibit Gallery Tour
- 4. Exhibit Animals
- 5. Aquarium hobbyist news release
- 6. Animal stories news release



## MONTEREY BAY AQUARIUM

## **NEWS RELEASE**

**FOR IMMEDIATE RELEASE** February 5, 2007

For information contact: Karen Jeffries, (831) 644-7548; <u>kjeffries@mbayaq.org</u> Angela Hains, (831) 647-6804; <u>ahains@mbayaq.org</u> Ken Peterson, (831) 648-4922; <u>kpeterson@mbayaq.org</u>

## GET 'WILD ABOUT OTTERS' IN 2007 AT THE MONTEREY BAY AQUARIUM

## *New special exhibition will feature freshwater otters and over 30 species of freshwater fishes & reptiles*

Explore the fun and fascinating world of otters – from sea otters to their freshwater cousins – when *Wild About Otters* opens at the Monterey Bay Aquarium on March 31, 2007. Visitors will meet 10 feisty freshwater otters as they enter the lush world of tropical freshwater fishes, reptiles and plants via a multi-sensory adventure through five dynamic galleries and an intriguing array of live exhibits and interactive displays.

*Wild About Otters* features six African spotted-necked otters and four Asian small-clawed otters in exhibits that represent their native lake and river habitats. Both species are sleek, curious and very active. Visitors are likely to see an entertaining range of behaviors, from elaborate water play to ambush games.

The \$3.6 million special exhibition, which is scheduled to continue into 2010, shows how wild otters – just like the aquarium's ever-popular sea otters and like people around the world – need clean water to thrive and survive. Throughout the exhibit, actor and wildlife conservation advocate John Cleese narrates high-definition video clips that share conservation messages about the global importance of clean water and how lakes, rivers and oceans are all connected.

*Wild About Otters* is Monterey Bay Aquarium's first special exhibition to feature live mammals, and its first to showcase over 30 species of tropical freshwater fishes and reptiles – including vine snakes, exotic frogs, box turtles, water lilies, papyrus, cichlids, bettas, catfish, gouramis, killifish, butterflyfish, pufferfish and archerfish – all of which share the freshwater otters' habitats in the wild.

"People already have an affinity for mammals," said Michelle Jeffries, associate curator of mammals. "So we're starting with that connection to teach visitors more about the world's many otter species and how they're doing in the wild."

Visitors to *Wild About Otters* will meet one family and one pair of African spotted-necked otters – Denny and Neema and their two pups (Kazana and Ajabu) and Kipenzi and Kamili – as well as two sets of Asian small-clawed otter brothers: Satu and Dua, and Tiga and Empat ("one," "two" "three" and "four"

#### WILD ABOUT OTTERS – Monterey Bay Aquarium – Page 2

in the Malay language). The aquarium acquired the adult otters as part of the Association of Zoos & Aquariums' (AZA) Species Survival Plan program (SSP), a cooperative effort among AZA-accredited zoos and aquariums to ensure the survival of threatened and endangered wildlife species through breeding programs, research, public education, reintroduction and field projects.

Visitors will quickly learn personal details about the lives of the eight freshwater otters via interactive graphic panels at the live exhibits. Each will tell the otters' personal stories through caretaker's journals, video and still images, touchable models and other displays.

Jaci Tomulonis, exhibit developer/writer, said the exhibition takes a storytelling approach so visitors will learn not only about the otters' natural history and native habitat, but also about their favorite foods, what certain behaviors mean and details of their journey to the aquarium.

"They'll come to know these animals personally, and hopefully learn to care for them and their kind," she said. "We hope that the stories will strengthen our visitors' connection to these animals."

The Monterey Bay Aquarium is one of only five institutions in the U.S. to exhibit African spotted-necked otters – a species is known for its animated water play and high-speed chases. Jeffries said she knew right away she wanted to feature spotted-necked otters in *Wild About Otters* as soon as she met Denny, Neema, Kipenzi and Kamili at the San Diego Zoo.

"I'm enthralled by their energy, their conniving minds and their crowd-pleasing antics," she said.

While Asian small-clawed otters are more common at American zoos and aquariums, they're always visitor favorites. *Wild About Otters* features two sets of brothers -4 and 5 years old, respectively - that are on loan from the Singapore Zoo.

"I wanted a bachelor group because of their energy level and amazing social behavior," Jeffries said. "These boys are active, kinetic and *very* vocal."

While the focus of *Wild About Otters* is on freshwater otters, that doesn't mean sea otters – the Central Coast's endearing icons – are ignored. At the entrance to *Wild About Otters*, exhibits overlooking Monterey Bay explore stories of local sea otters and highlight the work of aquarium researchers who study sea otters in the wild. Another exhibit illustrates the differences between sea otters and freshwater otters.

One large and colorful gallery of interactive displays introduces visitors to all 13 species of otters found throughout the world – from the giant otter of South America to the feisty North American river otter – and the characteristics unique to each species. Highlights include a special mirror that lets visitors see themselves as a hairy-nosed otter; a life-sized model of and audio clips of sounds made by a giant otter; a crawl-through tangle of mangrove roots, and video clips showing the difference between skill-building and play behaviors in North American river otters.

#### WILD ABOUT OTTERS – Monterey Bay Aquarium – Page 3

Other live exhibits in *Wild About Otters* explore African lake and Asian river habitats teeming with life, from feathery water plants and ferns, to slender vine snakes, exotic frogs and a rainbow of tropical freshwater fishes, many of which will be familiar to home aquarists – including cichlids, bettas, tetras, catfish, rasboras and gouramis.

One sure favorite will be the archerfish exhibit. These angular silver and black striped fish spit water to dislodge unwary prey from trees and plants above the water's surface – sometimes scoring a hit at distances up to four feet away! This exhibit is designed so visitors can watch this remarkable behavior.

Another highlight: the exhibit of Asian vine snakes, where sleek, bright green snakes live in trees but eat fish that they capture by plunging their heads into water. This exhibit, too, is designed so visitors can watch them hunt.

In a Discovery Art Room, visitors can create detailed scrapbooks as souvenirs of their *Wild About Otters* experience using stamps that depict images of freshwater otters and other animals that share their habitats, like hippos, crocodiles and egrets. A live exhibit features exotic Asian frogs, such as the Vietnamese giant tree frog, Bornean horned frog, Chinese gliding frog, White's tree frog or Vietnamese mossy frog.

*Wild About Otters* is included with regular aquarium admission of \$24.95 adult; \$22.95 senior (65+) and student (full-time college, with I.D.); and \$15.95 children 3-12 and the disabled. (**2007 rates**) Children under 3 are admitted free of charge. Discounted tickets for members of the military and their families can be purchased in advance at many California and Nevada installations.

The aquarium is located on historic Cannery Row in Monterey. It is open daily from 10 a.m. to 6 p.m. and in summer and major holiday periods from 9:30 a.m. to 6 p.m. (closed Christmas Day). Summer hours include extended weekend hours, from 9:30 a.m. to 8 p.m. on Saturdays and Sundays, between May 26 and September 3.

More information about *Wild About Otters* and the aquarium in general is available online at <u>www.montereybayaquarium.org</u>; or by calling (831) 648-4888. Advance tickets can be purchased online; by phone from the aquarium at 1-800-756-3737; and all Northern California Tickets.com outlets or by phone at 800-225-2277. Seasonal specials, details about special events and programs, family activities and live web cams can all be found online at <u>www.montereybayaquarium.org</u>.

The mission of the Monterey Bay Aquarium is to inspire conservation of the oceans.

- 30 -

Editors: Please contact Public Relations for images of *Wild About Otters*. You can also view thumbnail images at <u>http://montereybayaquarium.org/aa/aa\_pressroom/photos.asp</u>

## Wild About Otters Exhibit Facts

What: A \$3.6 million special exhibition exploring the fun and fascinating world of otters – from sea otters to their freshwater cousins - and a multi-sensory adventure into the lush world of remarkable tropical freshwater fishes, reptiles and plants. Where: Monterey Bay Aquarium, 886 Cannery Row, Monterey, California. When: March 31, 2007 through September 6, 2010; 10 a.m. to 6 p.m. daily (closed Christmas Day); 9:30 a.m. to 6 p.m. in summer (Memorial Day-Labor Day) and on major holidays. A 7,000-square-foot gallery with live displays of six African spotted-necked otters The exhibit: (including two pups) and four Asian small-clawed otters in exhibits that represent the native lake and river habitats of these active and playful animals. Interactive graphic panels tell the otters' personal stories through caretakers' journals, still images, video clips, touchable models and other exhibits. An interactive gallery introduces visitors to all 13 species of otters found throughout the world. Other live displays highlight over 30 new and unusual species of animals and plants never before exhibited at the Monterey Bay Aquarium: vine snakes, exotic frogs, cichlids, betas, tetras, glass catfish, gouramis, killifish, butterflyfish, knifefish, rasboras and archerfish, which spit water to dislodge unwary prey in trees and plants above the water's surface – sometimes scoring a hit at distances up to four feet away. Exhibits overlooking Monterey Bay share stories of local sea otters and highlight the work of aquarium researchers who study them in the wild. Video clips narrated by actor and wildlife conservation advocate John Cleese deliver conservation messages about how lakes, rivers and oceans are connected, and how we all need clean water to survive. What's The first mammals other than sea otters to be exhibited at the aquarium, the first live unique: exhibits based on tropical freshwater habitats, and the first exhibit to use personal stories about live animals to engage visitors. The aquarium is one of only five accredited aquariums and zoos in the United States to exhibit African spotted-necked otters, known for their elaborate water play and ambush games. Admission: Included with aquarium admission of: \$24.95 adult; \$22.95 senior (over 65) and student (13-17 or college ID); \$15.95 child (3-12) and disabled (2007 rates). Children under 3

admitted free. Group rates available with advance booking for parties of 20 or more.Parking/Parking in Cannery Row parking garage three blocks away. (Passenger drop-off in front<br/>of aquarium.) The free WAVE visitor shuttle links the aquarium with downtown<br/>Monterey and waterfront destinations daily during peak summer season (Memorial Day<br/>to Labor Day).

Information/<br/>advanceGeneral information, (831) 648-4888, or online at <a href="www.montereybayaquarium.org">www.montereybayaquarium.org</a>. For<br/>advance tickets inside California, call the aquarium at 1-800-756-3737; outside California<br/>call (831) 648-4937. Order online at <a href="www.montereybayaquarium.org">www.montereybayaquarium.org</a>. For<br/>advance tickets inside California, call the aquarium at 1-800-756-3737; outside California<br/>call (831) 648-4937. Order online at <a href="www.montereybayaquarium.org">www.montereybayaquarium.org</a>. For<br/>advance tickets inside California, call the aquarium at 1-800-756-3737; outside California<br/>call (831) 648-4937. Order online at <a href="www.montereybayaquarium.org">www.montereybayaquarium.org</a>; at all Northern<br/>California Tickets.com outlets or by phone at 800-225-2277). Local hotels also sell<br/>advance tickets to guests.

January 2007

## Wild About Otters Gallery Tour

*Wild About Otters* explores the fun and fascinating world of otters – from freshwater to sea – and the lush lake and river habitats of African spotted-necked and Asian small-clawed otters. The multi-sensory adventure through five different galleries features two live exhibits of freshwater otters and seven other live exhibits containing over 30 species of tropical freshwater fishes, reptiles and plants. Actor and wildlife conservation advocate John Cleese narrates video conservation messages throughout the special exhibition on the global importance of clean water, and how lakes, rivers and oceans are all connected.

#### Sea Otters on Monterey Bay

Visitors begin their *Wild About Otters* adventure with the sea otter – an icon of California's Central Coast. Exhibits overlooking Monterey Bay share stories of local sea otters, highlight the work of aquarium researchers who study wild sea otters and illustrate the differences between sea otters and freshwater otters. Interactive exhibits include binoculars, touch screens, video clips and touchable bronze models.

#### African Spotted-necked Otter Gallery

Two families of otters – Neema, Denny and their young pups (Kazana and Ajabu) and Kamili and Kipenzi – are housed in adjoining exhibits viewable through a 90-foot window span. Three other live exhibits depict the lush freshwater habitats of Lake Tanganyika, Lake Chad and Lake Victoria; live species include a variety of cichlids, catfishes, killifishes, tetras, julies, butterflyfishes and knifefishes, plus water lilies, papyrus and African water ferns. Interactive exhibits include video clips, "family" photo albums and touchable bronze models.

#### Wild World of Otters

This colorful, interactive exhibit gallery introduces visitors to all 13 species of otters found in the world – from the giant otter of South America to the feisty North American river otter – and the characteristics unique to each. Interactive components include a special mirror that lets visitors see themselves as a hairy-nosed otter; a clip from "Ring of Bright Water," a movie about a smooth-coated otter; a life-sized model and audio clips of sounds made by a giant otter; a crawl-through tangle of mangrove roots and video clips showing the difference between skill-building and play behaviors in North American river otters.

#### **Discovery Art Room**

Visitors can create their own detailed scrapbooks as souvenirs of their *Wild About Otters* experience using stamps that depict images found in classic books about otters, such as "*Samaki: The Story of an Otter in Africa*" and "*Tarka the Otter.*" A live exhibit features exotic frog species, such as the Vietnamese giant tree frog, Vietnamese mossy frog, Bornean horned frog, Chinese gliding frog or White's tree frog.

#### Asian Small-clawed Otter Gallery

Enter the realm of the Asian small-clawed otter, the most social of all the otter species, and its tropical river habitats. Visitors will meet two sets of brothers – Satu and Dua, and Tiga and Empat – housed in an exhibit with a 40-foot window and a bonus bubble window that lets visitors pop up inside the exhibit. Four other live exhibits highlight plants and animals found in the otters' rich tropical habitat, including exotic frogs, Malayan box turtles, java ferns and such fish species as the freshwater pufferfish, glass catfish, knifefish, rasboras, bettas, gouramis and barbs. One live exhibit features Asian vine snakes, another showcases archerfish, which spit a jet of water to dislodge unwary prey in trees and plants above the water's surface – sometimes scoring a hit at distances of up to four feet away. Other exhibits include video clips that show the otters' elaborate play behavior and how they eat using their incredibly dexterous front paws, plus audio clips of some of the variety of sounds these otters use to communicate.

January 2007

## WILD ABOUT OTTERS Exhibit Animals

*Wild About Otters* features nearly 35 species of freshwater fishes, reptiles, amphibians, plants and mammals from two different continents – Africa and Asia. This special exhibition marks the first time Monterey Bay Aquarium has exhibited freshwater mammals. African species represent three freshwater lakes in that country: Lake Victoria, Lake Chad and Lake Tanganyika. An additional five Asian exhibits illustrate the lush habitat surrounding Asian small-clawed otters.

#### Africa

#### African spotted-necked otter exhibit

#### African spotted-necked otter

#### Lutra maculiocollis

This otter puts the 'p' in playtime! A streamlined body aids this agile swimmer in hunting fish and frogs, and frolicking with friends. Unlike its cousins, the Asian small-clawed otters, they are clumsy on land and so choose to build their shelters near water. A typical litter consists of one to three pups; females do most of the pup rearing. The majority of their diet consists of fish. The spotted pattern on their neck, chest and/or groin area is unique to each individual. Unfortunately, their beautiful pelt is one reason these otters are classified as a vulnerable species.

Fur trappers are just one threat facing African spotted-necked otters. Nigerian fishermen see otters as competition for their livelihood, and when they put toxins directly into the water to catch fish they also poison otters. Nylon fishing nets tangle and ultimately kill otters as well. Habitat destruction, pollution and overfishing all gravely threaten this species. Wetlands are drained for homes and farms, leaving otters homeless. Sewage and PCBs leak into the rivers, killing otters and the fish they depend on for food. They're also hunted for their meat.

#### Lake Tanganyika exhibit

#### Duboisi cichlid

#### Tropheus duboisi

This black and white spotted fish could be called a polka-dotted zebra, as a juvenile, if described by coloration alone. As it matures, a yellow or white bar replaces the spots. The species is territorial and will chase other fishes away from its feeding territory. All cichlids of the *Tropheus* genus browse on algae, using their outer teeth to tear algal strands from nearby rocks.

#### Moori cichlid

#### Tropheus moori

The Moori cichlid also belongs to the *Tropheus* genus – fishes easily distinguished by the shape of their mouths. This species appears to have an overbite, or a protruding upper lip, which is used when grazing algae from rocks. Its coloration varies depending on its surroundings. More than 50 color varieties have been reported; most common is olive ornamented with a large gold or red band near its midsection.

#### Lemon cichlid

#### Neoamprologus leleupi

The deep yellow coloration of this elongated cichlid is not meant as a caution sign for other fishes. In fact, the lemon cichlid is delicate and peaceful, which makes it a challenging but compatible fish for hobbyists. Females typically protect the eggs while males guard the family's territory.

#### Golden julie

#### Julidochromis ornatus

This monogamous fish has three longitudinal brown stripes that compliment its golden coloration. The light color helps the golden julie blend well with its sandy habitat. Males are significantly larger than females and are quite territorial with fish of the same species.

#### **Checkerboard julie**

#### Julidochromis marlieri

The black and white pattern of bars and stripes is one reason why some have come to regard the checkerboard julie as one of the most beautiful fish in Lake Tanganyika. These peaceful fish typically pair for life in the wild. The females' spawning method varies between releasing bursts of a few eggs at a time or a large batch at once, perhaps depending on the surrounding conditions and the likelihood of the offspring surviving.

#### **Compressed cichlid**

#### Altolamprologus compressiceps

This species appears to have a humpback, has large lips and is commonly beige colored with multicolored vertical stripes. It prefers a high protein diet, including crustaceans, aquatic insects and small fishes.

#### Frontosa (humphead) cichlid

#### Cyphotilapia frontosa

This stunning fish develops a large hump on its forehead once it reaches sexual maturity. The humphead cichlid is a pearl white fish with a handful of broad black bands around the body and flowing long fins ranging in color. The territorial fish is known to hunt small fishes throughout the night. Crustaceans, aquatic insects and larvae make up the majority of their diet.

#### Cuckoo catfish

#### (Synodontis petricola, Synodontis eurystomus, Synodontis multipunctatus)

Cuckoo catfish acquired their common name because of a breeding style similar to cuckoo birds. In the wild these fishes will wait for a pair of cichlid mouthbrooders to spawn, after which the female will drop her eggs in with the cichlid eggs. The host female will unwittingly incubate the cuckoo catfish eggs and her own eggs in her mouth until the fry hatch. The catfish hatch sooner than the cichlids and ultimately feed on the cichlid eggs to gain strength and reduce the number of competitors for food.

#### Black-finned slender cichlid

#### Cyprichromis leptosoma

This vividly colorful fish has an elongated body with flashy colors on its face and fins, ranging from indigo blue to deep violet and bright yellow. The black-finned slender cichlid is an open water swimmer and spawner. Mating rituals begin with the female entering the male's territory, after which the male spreads his fins in hopes of wooing the female through a dance ritual.

#### **Plant Community**

Water-milfoil (*Myriophyllum* sp.), Water-celery tapegrass (*Vallisneria* sp.), Pondweed (*Potamogeton* sp.), Coon-tail (*Ceratophyllum* sp.)

Water-milfoil is a beautiful plant with feathery leaflets that vary in color. It is found in a variety of aquatic habitats. Water-celery, or tapegrass, is a submersed aquatic plant that grows long and narrow green or red leaves. The plant can be distinguished by a midriff that appears to divide each leaf down the middle. Pondweed, as this species is affectionately known, is a submerged aquatic plant that consists of thin leaves that sometimes float on the surface and provide shelter for fish. Coon-tail is an olive-green submerged plant that is oftentimes rootless and forms in dense colonies. It provides habitats for invertebrates that fishes typically feed on.

#### Lake Chad exhibit

#### **Elephantnose Community**

Elephantnose (*Campylomormyrus tamandua* and/or *Gnathonemus petersii*)

After one glance at an elephantnose, it's obvious how this nocturnal creature earned its common name. A proboscis, or trunk-like extension, is attached to the elongated and laterally compressed body of the elephantnose. This striking species relies on its trunk to release electrical pulses to help in detecting food – a necessity considering its poor eyesight and the muddy habitats where it lives. According to scientists, one species of elephant fish, the long-nosed elephant fish, was used to test the quality of drinking water in German and U.S. water departments. Apparently, the number of electrical pulses it released increased as water quality decreased.

#### **Catfish Community**

African glass catfish (*Parailia pellucida*), Synodontis catfish (*Synodontis eupterus, Synodontis nigrita, Synodontis* sp.), African suckermouth catfish (*Chiloglansi* sp.)

The cat-like appearance of this diurnal species makes it easy to distinguish among other fishes. Several species of *Synodontis* have a white band bordering all their fins and a variety of leopard patterns that function as camouflage. Scientists once thought catfish were nocturnal; further studies have proven these fish to be diurnal and light-sensitive. Catfish are able to adapt to a variety of habitats and are mainly opportunistic eaters, foraging on whatever crosses their path. Some species can become specialized in what they eat and, if put into a new habitat, need to adapt to eating other items. Otherwise, they'll starve to death.

#### **Tetra Community**

Congo tetra (*Phenacogrammus interruptus*), Yellowtail Congo tetra (*Alestopetersius caudalis*) The Congo tetra is covered with iridescent scales that create a beautiful rainbow illusion in welllit tanks. Don't mistake the small size of this fish to mean it's fragile – in fact it's a very hardy community fish that does well with larger fishes. Schooling in large numbers is the tetra's best defense in the wild and in captivity. The tiny spectacle can grow to up to three inches in length.

#### Ctenopoma

#### (Ctenopoma sp. or Microctenopoma sp.)

Ctenopoma is an African labyrinth fish. "Labyrinth" is a term used to describe fish that posses a labyrinth organ, which allows certain fish to breathe in oxygen-deprived waters by taking in air from the surface of the water. There are five known labyrinth fish families found in Africa, Asia and India. Each family has evolved unique spawning methods in order to adapt to their challenging environments, including: bubble-nest builders, mouthbrooders and open spawners.

#### African butterflyfish

#### Pantodon buchholzi

The prehistoric-looking butterflyfish is best known for gliding through the air for short distances; perhaps chasing insects, flies, spiders and other treats that make up its daily diet. The crepuscular species is a dormant, or static species, which means it has evolved to adapt to a certain habitat and may have a large range, although only a relatively small variety of types are found throughout that range.

#### African knifefish

#### Xenomystus nigri

This nocturnal feeder prefers a diet of worms, crustaceans, insects and snails. Its violet brown, laterally compressed body can make this fish hard to spot, but relying on your sense of sound will help locate the long lived species. The African knifefish emits two sounds – a barking sound when courting a partner and a bell-like chime sound when at the surface breathing air.

#### Lampeye

#### Aplocheilichthys sp.

The lampeye's beautiful bronze-green metallic scales and iridescent eyes make it a favorite among hobbyists. In aquariums, this active species does best when put in small schools of at least five females and a few males, together with other fish species.

#### African Aquatic Plant Community

African aquatic plants (Anubia sp., Bolbitis heudelotii, Crinum calamistratum, Crinum natans, Eleocharis acicularis, Ottelia ulvifolia, Nesaea pedicellata, Nymphaea lotus, Nymphaea micrantha)

These beautiful plants grow along waterways throughout the African continent. Most of the species flourish in waters that have a slight and steady current with some amount of light. Several produce flowers at or above the water surface, and each species provide shelter for fishes.

#### Lake Victoria exhibit

#### **Cichlid Community**

Lake Victoria Cichlid (Haplochromis sp., Neochromis rufocaudalis, Paralabidochromis, P. chilotes, H. chromogynos, H. nigricans, H. latifasciatus, Labrochromis ishmaeli, H. phytophagus, Pundamilia nyererei, Mbipia lutea.

Cichlids are spiny-finned freshwater fishes found in tropical waters ranging from Africa to South America. It's estimated that over 200 cichlid species reside in Lake Victoria, several of which are endemic to the nutrient-filled lake. Although all Lake Victoria cichlids rely on the same water chemistry, individual species have unique adaptations that enable them to survive in different habitats ranging from sandy floors to rock crevices, and abandoned shells to nearshore habitats.

#### **Mouthbrooder Community**

## Egyptian mouthbrooder (*Pseudocrenilabrus multicolor*), Blue Victoria mouthbrooder (*Astatotilapia nubile*).

Mouthbrooders are small cichlids that inhabit shallow inshore areas. Cichlids' unique style of caring for their young begins with the female laying eggs in the sand, after which either the male or female will carry the eggs in its mouth until they hatch, which is how the species acquired its common name. Mouthbrooders prefer a diet of plants and small insects.

#### Lake Victoria squeaker

#### Synodontis victoriae

This grey fish decorated with black spots can initially be difficult to find because its coloration blends so well with the surrounding environment. Lake Victoria squeakers feed on mollusks and insects, and are capable of extracting the flesh of snails without crushing the shell. The sly looking species has both a dorsal spine and a dorsal soft ray, as well as whiskers on the sides of its mouth that act as feelers.

#### **Catfish Community**

Synodontis catfish (Synodontis sp.), Silver catfish (Schilbe intermedius)

The common name "catfish" refers to the catlike appearance of this species. These fishes are typically described as scavengers and can usually be found lurking near the bottom of lakes and streams. Their diet consists mainly of fishes and insects. Although the silver catfish is considered a pelagic species, large numbers migrate to rivers to spawn during the rainy season. The name *Synodontis* derives from the Greek words *syn*, which means together, and *odontis*, or tooth, referring to the closely spaced teeth on the lower jaw.

#### **Plant Community**

Papyrus (*Anubia* sp.), Water lily (*Nymphaea lotus*), Water lily (*N. caerulea*) Papyrus originates in the Nile Delta of Egypt. The sticky fibrous inner stem of the plant was one of the earliest forms of paper used by Ancient Egyptians. The long palm-like plant can grow up to 15 feet tall.

Water lilies are beautiful aquatic plants that consist of long leaves and flower stalks that bloom in a variety of stunning colors. There are over 70 species of water lilies and each fall into one of three categories – night, tropical and hardy – depending on the hardiness of the species and the time of day the flower blooms.

#### Asia

#### Discovery Art Room exhibit

(Note: The five amphibians listed below will appear in rotation between the Discovery Art Room exhibit and the Exotic Frogs exhibit.)

#### Vietnamese mossy frog

#### Theloderma corticale

This stout frog is as wide as it is long – about three inches. It prefers habitats along banks of streams at elevations of approximately 3,000 feet. The bumpy texture of this colorful creature, along with the red, green and black montage of colors, helps camouflage it from predators. Unlike other frog species, mossy frogs don't typically hop to escape predators. Rather, they dive into water and hide until the coast is clear. The nocturnal frog feeds on a variety of insects.

#### **Giant tree frog**

#### Polypedates sp.

This frog was discovered less than a decade ago in Northern Vietnam. (More than 60 new species of amphibians and reptiles have been discovered in Vietnam in the last 10 years!) . In Vietnam, this frog's English translation is "largest of the wood frogs". Male giant tree frogs grow to an average size of 5 inches, while females are larger – growing to 5.5 inches. Males vocalize a ringing sound to attract mates. Once the male inseminates the female, the pair builds a foam nest for their offspring on wide leaves above the water. Monterey Bay Aquarium is one of the few zoos or aquariums in the world to exhibit these gentle giants.

#### **Bornean horned toad**

#### Megophrys nasuta

This earth-toned, leaf-like critter resembles something out of the movie *Gremlins*. The pointy nose and horn-like protrusions above each eye camouflages this species in its leafy forest surroundings. When hunting its prey, the Bornean horned toad simply has to remain still until an unwary crab, scorpion, lizard or spider crosses its path.

#### Chinese gliding frog

#### Polypedates dennysi

The physical characteristics of the Chinese gliding frog are similar to those of the White's tree frog. Both species are bright green and are similar in size – females grow up to 4 inches in length and males slightly smaller. Broad, flat, webbed feet aid this species in climbing and clinging to slick surfaces, such as palm leaves. The nocturnal creature feeds on a variety of insects, remaining less active during the day in order to hide from predators.

#### White's tree frog

#### Litoria caerulea

The bulbous shape of the White's tree frog body has earned it the nickname "dumpy tree frog." It's an abnormally large tree frog that ranges in color from light blue to emerald green and is most at home in trees near water. During the dry season it will cover itself in a mucus-packed cocoon and burrow in the mud until the rains come. Breeding commences during the wet season, after it feasts on insects. When threatened, males are capable of emitting an ear-piercing sound.

#### Archerfish exhibit

#### **Archerfish Community**

#### (Toxotes chatareus, Toxotes jaculatrix)

Archerfish have a lot in common with squirt guns: Both use water to hit specific targets. These fish have the remarkable ability to shoot insects off branches with amazing accuracy, up to a distance of four feet away. Archerfish can spot unwary prey and spit a jet of water to knock them off branches and into the water where the fish is quick to swallow its prize. This fish actually learns how to best compensate for refraction by swimming directly under its prey, where distortion from light traveling through the water is minimal.

#### Mono

#### (Monodactylus argenteus)

This tall, laterally compressed, triangular shaped fish is silver colored with festive green, orange or yellow fins. Two dark bands run laterally near the mono's large eyes. The shy fish eats a variety of foods including small fish, worms and foliage.

#### **Pufferfish Community**

Spotted green pufferfish (*Tetraodon nigroviridis*), Eyespot pufferfish (*Tetraodon biocellatus*) The ability to inflate themselves give these fishes their common name. The boxy fishes have protruding eyes and leathery skin covered with small spines that stick out when they are inflated, making them look like a pin cushion and protecting them from predators. The colorful fishes prefer a diet of crustaceans, snails and worms.

#### Scat

#### Scatophagus argus

Scatophagus, or dung-eater, is appropriately named because it commonly feeds on sewage in the wild. The opportunistic fish will eat anything that comes its way, including small fishes, plants, worms, lettuce and dung. The hardy fish prefers brackish or salt water conditions and tends to be an active and gregarious fish with species equal its size.

#### **Baung catfish**

#### Mystus wolffii

There are more than 2,000 species of catfish living in fresh and salt water environments, making them one of the largest and most adaptive fish orders. Whiskers, or barbals, are a distinguishing feature of catfish. The barbals act as feelers, and help the fish locate food in turbid waters.

#### Clown knifefish

#### Chitala ornata

This native of Southeast Asia swims in schools when a juvenile, but becomes more territorial and less social after reaching sexual maturity. Adult knifefish in the wild can grow to lengths of nearly three and a half feet. The crepuscular fish is a popular food item on Asian menus.

#### Malayan box turtle

#### Cuora amboinensis

Like most turtles, the Malayan box turtle has the ability to tuck inside its black and green checkered shell for protection. This species, however, has unique hinges joined to its carapace. The hinged plates allow the upper and lower carapaces to close tightly, leaving no vulnerable limbs unarmored. The olive skinned creature has three yellow stripes on each side of its head. An average life span for this omnivore is 30 to 35 years.

#### Asian small-clawed otter exhibit

#### Asian small-clawed otter

#### Amblonyx cinereus

This otter is the smallest and most terrestrial of all otter species in the world. Although freshwater rivers, streams, creeks and swamps are where this weasel relative resides, they are equally adept at moving on land. The Asian native is considered to be the most vocal of all 13 otter species, emitting a dozen or more calls, each with its own distinct meaning. Scientists call the Asian small-clawed otters an indicator species, meaning the health of the whole ecosystem is connected to the health of the population. Unfortunately, habitat destruction, pollution and hunting have drastically decreased the otter's population, and has led to this keystone species' status in the wild as seriously threatened.

#### Asian river & stream exhibit

#### **Rasbora Community**

Harlequin rasbora (*Trigonostigma heteromorpha*), Rasbora (*Rasbora* sp.), Scissortail rasbora (*Rasbora caudimaculata*)

Rasbora are typically a wonderful community fish that live in slow-moving waters throughout Asia. Although fairly hardy, some rasbora species are difficult to breed. An exaggerated forked tail is attached to its slender and elongated body.

#### **Betta Community**

Betta (Betta sp., Betta albimarginata, Betta coccina, Betta sp. "Mahachai")

Bettas, or the more familiar name of "Chinese fighting fish," are commonly thought of as vibrantly colored fish with bad attitudes. Most non-aquarists are surprised to learn that years of hybridization have resulted in the brightly colored bettas that are sold in local pet stores. Consumers who want a fish with flair in their home aquariums have driven hobbyists to breed betta species with specific traits in mind. Our bettas are pure or natural bettas, none of which have been crossbred, but all of which display beautiful earth-tones.

#### **Gourami Community**

Pearl gourami (*Trichogaster leerii*), Three-spot gourami (*Trichogaster trichopterus*), Kissing gourami (*Helostoma temminckii*), Paradise fish (*Macropodus opercularis*)

Gouramis are elongated, oval shaped fishes that can be found in local markets in many parts of Asia. They're hardy fishes that range in size, pattern and coloration. The pearl gourami is stunning, dotted with snow-white specks and a single black horizontal line running from eye to tail. The kissing gourami is named for the peculiar behavior males display when engaging in territorial battles – locking lips to fend off unwelcome males on their ground. Paradise fish are well-mannered with fish of other species; however, tension usually arises when two male paradise gouramis are housed together. This species was the second tropical fish to be introduced to aquariums in 1869, after the goldfish.

#### **Coolie loach**

#### Pangio kuhlii

This eel-shaped fish is salmon to yellow colored with black bands circling its slender body. Schools of the shy fish are found around root cushions of rivers. Their diet consists of bottom-dwelling worms and crustaceans.

#### **Danio Community**

#### Pearl danio (Danio albolineatus), Blue danio (Danio kerri)

Danios are small, elongated fishes native to freshwater habitats in southeastern Asia. The glistening fishes are top feeders, preferring a varied diet of shrimp, plankton and worms. Several new species of danio have recently been discovered and are still being classified.

#### **Barb Community**

Tiger barb (Puntius tetrazona), Various barbs (Puntius sp.)

Tiger barbs are triangular, disc shaped fishes that have four transverse bands running down an iridescent white body. The popular aquarium fish is active, aesthetically pleasing, playful and sometimes nippy toward other fish. One common defense mechanism of barbs is to bite at the fins of fishes when they feel threatened.

#### **Glass Catfish Community**

#### Glass catfish (Kryptopterus bicirrhis, Ompok sabanus)

This nervous catfish is scaleless and lacks body pigmentation, rendering it transparent. The backbone, internal organs and head are the only visible parts of its body. The diurnal creature prefers a diet of shrimp and worms.

#### **Plant Community**

Cryptocoryne (*Cryptocoryne* sp.), *Hydrocotyle sibthorpioides*, *Hydrotriche hottoniiflora*, *Hygrophila corymbosa*, *Hygrophila* sp., *Barclaya longifolia*, *Blyxa japonica*, *Blyxa aubertii*, *Bolbitis heteroclite*, *Rotala rotundifolia*, *Rotala wallichii*, Java fern (*Microsorium pteropus*), *Limnophila* sp.

Cryptocoryne, or water trumpet, is an aquatic plant native to tropical Asia. The genus contains nearly 60 species of aquatic plants ranging from Asia to New Guinea, each differing in shape, size and color. Some

water trumpets are capable of producing flowers, which when clustered together resemble a trumpet submerged in water. Java ferns are found throughout southeastern Asia. The leaves on this aquatic fern vary in size and shape.

Vine Snake exhibit

#### Asian vine snake

#### Ahaetulla sp.

The thin and long arboreal snake is native to rainforests in India, China and southeastern Asia. There are eight common species of vine snakes, all of which are rear-fanged. The fangs that deliver venom are set back in its jaw, instead of in the front like they are in cobras. They have unusual keyhole-shaped pupils, and intense binocular vision which helps this snake find prey items while camouflaged in trees. Asian vine snakes use their keen vision to spot fishes swimming below and are known to dart into the water after a fish while keeping their tail anchored to a branch – much like a yo-yo. Other prey items include lizards, frogs, rodents and baby birds.

#### Danios

*Danio* sp. \* See Asian river & stream exhibit

#### **Plant Community**

\* See Asian river & stream exhibit

Exotic Frogs Exhibit

\* See Discovery Art Room exhibit



## MONTEREY BAY AQUARIUM

## **NEWS RELEASE**

**FOR IMMEDIATE RELEASE** February 6, 2007

For information contact: Karen Jeffries (831) 644-7548; <u>kjeffries@mbayaq.org</u> Angela Hains (831) 64706804; <u>ahains@mbayaq.org</u> Ken Peterson (831)-648-4922; <u>kpeterson@mbayaq.org</u>

## MONTEREY BAY AQUARIUM DIVES INTO FRESHWATER HABITATS IN WILD ABOUT OTTERS

Saltwater, freshwater – does it make a difference when you're creating a beautiful aquarium display for your home, or for a public exhibit?

Yes, and the difference goes beyond salinity. From the perspective of biologists at the Monterey Bay Aquarium it's like comparing goldfish to tuna. And now they're taking the plunge.

*Wild About Otters*, the special exhibition opening on March 31, marks the first time Monterey Bay Aquarium will feature extensive freshwater habitats, as it introduces visitors to a variety of Asian and African fishes, reptiles, amphibians and otters.

"Our intention in *Wild About Otters* is to bring people close to freshwater otters and other freshwater species while telling the urgent story of the threatened sea otters just off of our shoreline," said aquarium Executive Director Julie Packard.

Disease, habitat destruction and pollution threaten California's southern sea otter population, but they aren't the only otters in danger. All 13 species of otters rely on clean water to survive. Introducing visitors to river otters will help make the connection that all streams and lakes lead to the ocean, and each ecosystem is dependent on healthy water.

For home hobbyists, the exhibit will also offer eye-popping ideas about how to create stunning freshwater displays of their own.

It's a challenge Monterey Bay Aquarium biologists faced when they set out to highlight the lush habitats where Asian small-clawed otters and African spotted-necked otters live.

Aside from the aquarium's Coastal Stream and a few small components in earlier special exhibitions, "everything we've done has relied on a saltwater system," said Aquarist Evan Tyler.

#### WILD ABOUT OTTERS FRESHWATER HABITATS – Monterey Bay Aquarium – Page 2

Creating a healthy freshwater habitat in an aquarium exhibit requires a long trial-and-error process that depends on a variety of factors, from water quality and temperature to deciding which species will coexist in a finite amount of space.

"These exhibits take months to develop and years to master," said Mark Faulkner, a marine biologist, former aquarium curator and co-founder of Tenji, Inc., an innovative aquarium design company.

In each exhibit, the species' health is the foremost concern, so researching each species was vital before aquarists intermixed fish or even introduced something as simple as new plants to the equation. Because of the abundance of freshwater fish species globally, several species have only recently been discovered. That means little is known about their life history or compatibility with other species.

The only solution for the biologists was to read the limited information at hand and spend copious amounts of time observing each exhibit behind the scenes. Not only did they gain invaluable insights necessary to sustain each habitat, they created aquatic jewels along the way.

"The freshwater planted aquariums will be the unexpected eye candy of *Wild About Otters*," said Faulkner, who is a member of the San Francisco Bay Area Aquatic Plant Society (SFBAAPS). "The staff at the Monterey Bay Aquarium succeeded in creating a totally new and intricately beautiful aquarium experience while maintaining the health of each species and communicating a vivid conservation message."

Deciding how to balance the aesthetics of a display while maintaining a naturalistic environment – the hallmark of Monterey Bay Aquarium exhibits – was a factor aquarists constantly reassessed while designing *Wild About Otters*. Aquascaping, or aquarium designing, entails arranging plants, rocks and sediment to create a harmonious and tantalizingly beautiful aquarium. It's the hottest trend with freshwater hobbyists, and there's fierce competition to create the most remarkable environments.

"Aquascaping an exhibit is creating art – it's my favorite part of the freshwater world," said Senior Aquarist Veronica Franklin. "The canvas I use just happens to start as an acrylic box. Over time – with rocks, wood, plants, colors and shapes – it transforms into a vibrant community full of life everchanging."

According to Special Exhibits Coordinator David Cripe, the first step in designing the special exhibition was to determine which species to exhibit.

"It is the initial, and perhaps the most dependent factor when building naturalistic freshwater exhibits," said Cripe.

-more-

#### WILD ABOUT OTTERS – MONTEREY BAY AQUARIUM DIVES – Page 3

Another key factor: Each of the more than 30 species in *Wild About Otters* – including vine snakes, exotic frogs, cichlids, bettas, glass catfish, gouramis, killifish, butterflyfish and archerfish – can be found in the exhibit otters' natural habitats, in Southeast Asia and on the African continent.

All of the exhibit species were collected by reputable suppliers or are on loan from partners within the Association of Zoos and Aquariums, ensuring that wild populations are not being depleted.

Conservation concerns are not just an issue for saltwater species – or for public aquarity.

"Home aquarists should be asking their suppliers: 'What methods were used to collect the fish? Where were the fish collected? Or, is it a fish that breeds in captivity and thus wasn't taken from the wild?" Cripe said.

"It's important to know if the way the fish was caught did more harm than good for the environment," Franklin added.

Because customers drive the demand for aquarium fish, if a species doesn't sell because of harmful collecting methods then suppliers will stop stocking the fish, allowing for restoration of damaged habitat.

A less critical issue that divides freshwater hobbyists is the debate between "fish purists" and those who toy with interbreeding species to promote appealing traits. Hybridization isn't an issue associated with saltwater species, but is something to consider when purchasing fish from local buyers for freshwater home aquariums.

Take bettas, for example. These popular hybrid species are commonly thought of as vibrantly colored fish. Non-aquarists are surprised to learn that years of hybridization have resulted in the brightly colored bettas now widely available in pet stores. Consumers who want a fish with flair for their home aquariums have driven hobbyists to breed betta species with specific traits in mind.

In contrast, bettas that are part of *Wild About Otters* will be "pure" or natural bettas, none of which have been crossbred, but all of which display beautiful earth-tone colors.

As many fish species there are in the world, there are nearly as many hobbyists with differing approaches to creating a home aquarium. You don't have to be a biologist to get involved; it's easy for anyone who is interested in fish to get their feet wet, so to speak.

Just ask those in the know at the Monterey Bay Aquarium – their learning curve was steep, but they loved the challenge. And they hope visitors will appreciate the results, too, when they see their handiwork in *Wild About Otters*.

#### -30-



## MONTEREY BAY AQUARIUM

**NEWS RELEASE** 

**FOR IMMEDIATE RELEASE** February 7, 2007

For information contact: Karen Jeffries, (831) 644-7548; <u>kjeffries@mbayaq.org</u> Angela Hains, (831) 647-6804; <u>ahains@mbayaq.org</u> Ken Peterson, (831) 648-4922; <u>kpeterson@mbayaq.org</u>

## EVERY OTTER HAS A STORY TO TELL: MEET THE STARS OF 'WILD ABOUT OTTERS'

Just like your relatives, the individuals that make up Monterey Bay Aquarium's family of freshwater otters in the new *Wild About Otters* special exhibition have unique personalities and habits. Most animals do, of course, but with few exceptions the aquarium hasn't told the personal tales behind the animals in its care – until now.

*Wild About Otters* is also different because it's the first special exhibition in aquarium history to feature mammals – freshwater cousins of the Central Coast's beloved sea otters – as well as the first to showcase tropical freshwater fishes, reptiles and plants.

"Most people adore mammals, and are naturally curious about their personalities," said Michelle Jeffries, the aquarium's associate curator of mammals. "*Wild About Otters* uses a storytelling approach so visitors will learn not only about the otters' natural history and native habitat, but also about their favorite foods, what certain behaviors mean and details of their journey to Monterey."

Visitors to *Wild About Otters* will quickly learn personal details about the lives of the 10 freshwater otters – six African spotted-necked otters (including two young pups) and four Asian small-clawed otters – via interactive graphic panels at the live exhibits. The otters' stories will unfold through caretaker's journals, video and still images, touchable models and other displays.

"They'll come to know these animals personally, and hopefully learn to care for them and their kind," Jeffries said. "We hope that the stories will strengthen our visitors' connection to these animals."

Through the same storytelling approach, visitors to *Wild About Otters* will also learn more about local sea otters that aquarium researchers are studying in the wild.

The Monterey Bay Aquarium is one of just five institutions in the United States to exhibit African spotted-necked otters – a species known for its animated water play and high-speed chases. Found in lakes and rivers in southern Africa, spotted-necked otters have distinct patterns of brown and white spots on their neck, chest and/or groin area so it's easy to identify individual animals. This species is especially

#### WILD ABOUT OTTERS ANIMAL STORIES -- Monterey Bay Aquarium – Page 2

vulnerable to hunting - for its meat and fur. Some organs are also sought after for medicinal purposes.

Jeffries said she knew right away she wanted to include spotted-necked otters in *Wild About Otters* when she met pairs Denny and Neema, and Kipenzi and Kamili at the San Diego Zoo. "I just <u>love</u> their energy, their conniving minds and their crowd-pleasing antics," she said.

At 10 years old, Denny is the oldest spotted-necked otter in the exhibit. He was born at an animal care facility in South Africa. Jeffries describes Denny as "easy-going and mellow." But, she added, he's sometimes wary of people and will lunge at them if he feels he's being challenged or threatened. Denny enjoys scrambling through dried grape vines – like tree roots in the wild – in the exhibit he shares with his mate, Neema.

Neema, which means "blessing" in Swahili, is about eight years old. She was collected from the wild in Africa in 1999 and is now part of the Association of Zoos & Aquariums' (AZA) Species Survival Plan program (SSP), a cooperative effort among AZA-accredited zoos and aquariums to ensure the survival of threatened and endangered wildlife species through breeding programs, research, public education, reintroduction and field projects. All otters in *Wild About Otters* came to the aquarium as part of the SSP.

Neema has an "edge" to her, said Jeffries, something she attributes to Neema being wild-born.

"The wild ones are more cautious, but in a confident way," Jeffries said. She describes Neema as an excellent and experienced mother to her two female pups, which were born November 3, 2006.

"It's so amazing to watch her mothering skills," she said. "She's a fantastic mom. She teachers her pups everything they need to know, but she also builds their confidence by letting them explore and learn a lot on their own, too."

Even at a young age, the two female pups' personalities are already visible, Jeffries said.

"Kazana is more cautious about things, where Ajabu just rushes in without fear," she said. "Ajabu is a handful for her mother, usually fighting nursing and naptime; she is very feisty."

Together, Neema and Denny have successfully raised three other other pups – all males, including Kipenzi, whom visitors will also meet in *Wild About Otters*.

Five-year-old Kipenzi, which means "favorite" in Swahili, is a good-tempered yet curiously destructive otter – he loves to chew on his toys. He's active, but clumsy – a cataract in his right eye affects his depth perception – but he runs and climbs as fast as any otter.

His exhibit-mate, Kamili, is three years old. Like Kipenzi, Kamili (which means "perfect" in Swahili) was born at the San Diego Zoo as part of the AZA's SSP program. She loves to play, Jeffries said – tug of war, hiding and tossing around stones – and is the most active otter of the bunch.

While Asian small-clawed otters are more common at American zoos and aquariums, they're always visitor favorites. *Wild About Otters* features two sets of brothers – Satu and Dua, and Tiga and Empat ("one," "two," "three" and "four" in the Malay language) – that are on loan from the Singapore

#### WILD ABOUT OTTERS ANIMAL STORIES -- Monterey Bay Aquarium - Page 3

Zoo. The brothers are five and six years old, respectively.

"I wanted a bachelor group because of their energy level and amazing social behavior," Jeffries said. "These boys are active, kinetic and *very* vocal."This otter is the smallest and most terrestrial – and the most vocal – of all 13 otter species, emitting a dozen or more calls, each with its own distinct meaning. In the wild, Asian small-clawed otters are particularly vulnerable to habitat destruction. Unfortunately, pollution and hunting have also drastically decreased the otter's population, and has led to this keystone species' status in the wild as near threatened.

Satu, Dua, Tiga and Empat have a "bad boy" reputation. Like their wild cousins, they usually move in a pack, which gives them security, Jeffries said. They also hunt in that formation, too – Satu, Dua, Tiga and Empat stalked and killed a 15-foot wild python that wandered into their exhibit at the Singapore Zoo. They may look cute, but they're formidable predators. Caretakers must keep a close eye on them to keep both otters and people safe, Jeffries said.

Satu is quiet and shy, and likes to juggle pebbles, Jeffries said. Brother Dua is calmer and very attentive to his sibling – even sharing his food with Satu. Empat is known as "the hummer" because of the sound he makes when he's uncertain. His brother Tiga is hyperactive and seems to get in the most tussles.

Jeffries said all of them are "curiously playful animals – they'll investigate anything, and seem to enjoy it when we give them new toys or change around their living quarters."

Jeffries and her team feed both the African spotted-necked otters and Asian small-clawed otters a daily diet of trout, cat kibble and a generic "carnivore diet" – ground-up meat that provides additional protein. Jeffries said individual otters have favorite foods, and a few of them – Neema and Kamili in particular – love flipping fish heads in the air before eating them.

Like their freshwater cousins, sea otters in the wild face many threats to their survival. Disease and pollution top the list, followed by shark attacks and oil spills. The Monterey Bay Aquarium has been involved in sea otter rehabilitation, research and conservation since before it opened in 1984. The aquarium's Sea Otter Research and Conservation (SORAC) program has made progress in understanding the conservation and natural history of the southern sea otter, and pioneered many of the veterinary medical and surgical procedures used to keep sea otters healthy in zoos and aquariums around the world.

The aquarium's sea otter research team has worked with colleagues for over 20 years on the foraging habits, population dynamics and movement of more than 400 individual otters. Collectively, results of their studies help provide a picture of an average day in the life of a southern sea otter, which they hope will show evidence of trends that explain why the wild population – which in 2006 numbered 2,692 animals – is rebounding so slowly.

SORAC Research Coordinator Michelle Staedler is studying otters that prefer certain prey items to see if there's a connection between what they prefer to eat and the stagnant growth rate and high mortality among females in the wild population. Her study focuses on mothers and pups, because pups

#### WILD ABOUT OTTERS ANIMAL STORIES - Monterey Bay Aquarium - Page 4

appear to favor the same prey items – such as crabs, abalone or mussels – as their mothers.

"I'm curious whether differences in how mothers care for their pups – including nursing and sharing food – is related to what the mother prefers to eat," Staedler said. "I'm also investigating if the nutritional value of what a mother eats contributes to differences in the rate and patterns of pup developmental milestones, such as foraging and grooming. Ultimately, if either of those is true, is the likelihood of a pup's survival a reflection of the differences in maternal care and food preferences?"

Visitors to *Wild About Otters* will get the inside story on some local sea otters familiar to Staedler and other researchers; several of the otters can be seen regularly just off the aquarium's oceanfront decks. Video displays will feature footage of the "locals" and share details about their lives.

For example, "Old Granny" is one of Monterey Bay's senior citizens at approximately 12 years old. Her muzzle may be grey, but she's healthy and gives birth to a new pup every year. She's mothered nine pups so far, according to researchers.

"Gremlin" is a locally born and reared sea otter, and has been part of two field studies. One study compared survival of wild-reared pups to those reared and released from the aquarium's rehabilitation program for stranded otter pups. Another study focused on diving and feeding behavior.

Researchers named some of the otters they track, but most have only numbers to identify them. As a youngster, Otter No. 351 was brought to the aquarium with a liver ailment. After being treated, he was fitted with a radio transmitter so researchers could follow his progress in the wild. Otter 356, hungry and weakened after weaning a pup, came into the SORAC program for a little "R & R." When she was healthy again, aquarium staff released her – and now she eagerly forages along the rocky shore.

The aquarium's five resident sea otters may be well known to regular visitors, but each has an interesting background, too. Mae joined the exhibit in December 2001 after she was found stranded at Corcoran Lagoon in Santa Cruz that April, when she was two days old. Despite the efforts of aquarium staff, she did not develop the survival skills she'd need in the wild.

All of the aquarium's sea otters are named after characters in John Steinbeck novels. Mae was named after a truck-stop waitress with a screeching voice in *Grapes of Wrath*.

Maggie, derived from "Margie," a fortuneteller in *The Winter of Our Discontent*, was found stranded on a beach in San Simeon State Park (San Luis Obispo County) in February 2001. She was about one week old and weighed just over three pounds. Aquarium staff released Maggie into the wild in October 2001, but recaptured her in February 2003 after receiving several reports about her interacting with divers, surfers and kayakers. Federal officials agreed that Maggie should be removed from the wild to prevent injury to herself and to people.

Rosa and Joy were also brought back to the aquarium after being in the wild because of behavioral problems similar to Maggie's.

Rosa, who joined the exhibit in June 2002, was found stranded in September 1999 near Sunset

#### WILD ABOUT OTTERS ANIMAL STORIES - Monterey Bay Aquarium - Page 5

and Manressa state beaches in southern Santa Cruz County. She was about four weeks old and weighed just over five pounds. She is named after a girlfriend of Danny, the main character in John Steinbeck's *Tortilla Flats*. Rosa is a valuable contributor to the aquarium's SORAC program as a companion and surrogate mother to rescued otters.

Joy is also a surrogate mother and companion. Rescuers found five-day-old Joy on Twin Lakes Beach in Santa Cruz in August 1998. Her name comes from a "radical" character in John Steinbeck's *In Dubious Battle*.

Toola, the fifth exhibit otter, is nicknamed after an obscure character in the Steinbeck novel *Sweet Thursday*. She was SORAC's first surrogate mother – by coincidence. Ill and tremoring, Toola was found stranded on Pismo Beach in the summer of 2001; she delivered a stillborn pup four months after she arrived at the aquarium. A day later, rescuers brought in a two-week-old stranded male pup. He needed food and Toola was still lactating, so staff put the two together and they bonded almost immediately.

Toola has toxoplasmosis, a potentially deadly disease that is spread when otters consume parasites shed in cat feces, and needs daily medication to remain seizure-free. Scientists believe that fecal matter from outdoor cats – and possibly flushing cat litter and feces down a toilet – can send those microscopic parasites into the ocean, where they are ingested by crabs and other invertebrates Sea otters eat those invertebrates – and the parasites within – which can lead to toxoplasmosis.

In 2006, California Gov. Arnold Schwarzenegger signed into law legislation that gives new protection to California's threatened sea otter population – legislation inspired by a family visit to the aquarium's sea otter exhibit and a tearful plea for action from the son of the bill's coauthor, Assemblymember Dave Jones (D-Sacramento).

Jones and his family visited the aquarium in 2005, where they learned about the threats facing the sea otter population – including the parasites in cat litter. That prompted Jones' then 5-year-old son Will to ask his dad to "do something" to help. He did, and one of the provisions of his and Assemblymember Bill Laird's bill includes putting stickers on packages of cat litter warning users about the threats that parasites in cat feces pose for sea otters.

After their *Wild About Otters* adventure, visitors can keep in touch with the aquarium's sea otters and freshwater otters via the aquarium's web site – <u>www.montereybayaquarium.org</u>.

- 30 -

## EDITORS – Contact Public Relations for still images and video footage of the aquarium's otters. Back to Top