ure, cirrhosis of the liver, diabetes, hemodialysis, malnutrition, irradiation, pregnancy, and splenectomy. There is "natural" immunoincompetence of those under six years of age and those over 80.

Another factor in the recent emergence of zoonoses is the encroachment of humans and their pets into wildlife habitat. Forced into smaller and smaller living space, wildlife populations become suburbanized and even urbanized.

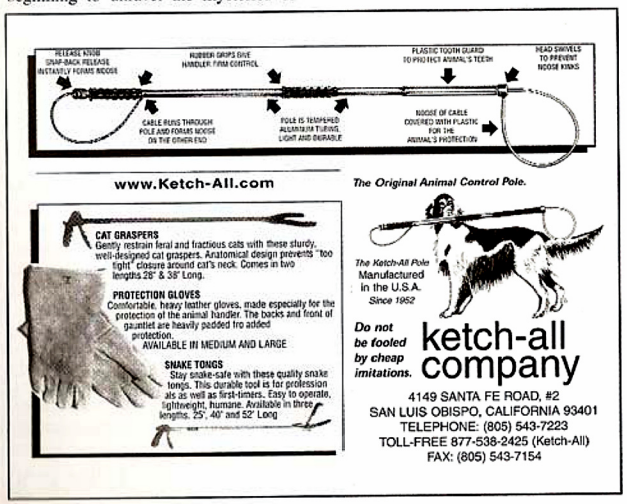
Tourism has the tremendous potential for extremely rapid movement of diseases from one country to another, one hemisphere to another. This is visited upon animals and mankind in the form of anthrax, bubonic plague, exotic Newcastle disease (formerly known as pneumoencephalitis), and West Nile Virus.

An exercise of tremendous complexity, research scientists are just beginning to unravel the mysteries of many of the emerging zoonoses. They are the result of complicated global factors influenced by pathogens, human and animal populations. It is apparent, however, that the number of people in the United States contracting zoonotic diseases is currently increasing.

Emerging zoonoses are of major public health significance and economic concern. People working with wildlife are more at risk than the rest of the population and must take proper precautions to protect themselves.

Rapid identification, control, prevention, and treatment will become even more important as the world population increases. Constant surveillance and diligent reporting are our first lines of defense. Wildlife rehabilitators can serve in an important role to help document these diseases.

Dr. Kenneth Haas is a contributing editor of Wildlife Rehabilitation Today.



CLAWING BACK FROM CRUELTY

A California veterinarian is helping declawed wild felines with her pioneering surgical technique

by Janet Hornreich Winikoff

It's a frantic morning in the operating room as Los Angeles veterinarians Jennifer Conrad, Kirk Wendelburg and their assistants finish prepping Shoshone, a twelve-year-old female mountain lion who's resting peacefully on the operating table in a deep anesthetic sleep. Shoshone is one of a handful of lucky patients from a wildlife sanctuary who will undergo surgery to repair overwhelming damage to her hind paws - the result of declawing. It's the lion's second surgery; the declawed front paws were repaired a year-and-a-half earlier. Since then she's regained mobility once thought lost forever...

Shoshone's Story

Until Jennifer Conrad and Shoshone crossed paths, the large feline with mops for paws wasn't so lucky. Declawed to make her more manageable as a pet, she was so debilitated that she could only walk a few feet at a time before collapsing in pain. Eventually surrendered to the Michigan Humane Society, Shoshone was sent to Wildlife Waystation, a rehabilitation center and animal sanctuary located on the outskirts of Los Angeles. It was here that the two met.

Shoshone was only one of many crippled cats under Conrad's care. Over the years, Conrad noticed a steady stream of wild cats entering southern California sanctuaries including the Wildlife Waystation. One after the other, she saw once graceful cats reduced to hobbling, pitiful creatures.

After conducting exhaustive research and talking to other veterinarians, she pioneered reparitive declaw surgery, a technique that reduces pain and restores mobility to these animals.

One after the other, she saw once graceful cats reduced to hobbling, pitiful creatures.

"Everyone assumed that the cats coming in to sanctuaries were lame due to conditions like arthritis," she explains. "Knowing about declaw complications can help wildlife veterinarians, rehab specialists and sanctuary staff correctly diagnose gait disorders and recognize other problems."

Scratching is a natural feline behavior that allows cats big and small to mark territory, exercise muscles and shed their outermost nail layer. Yet all of these benefits can cease once a cat is declawed. While many laypersons mistakenly believe that declaw surgery, or onychectomy, simply removes the claw, those who work with animals know that this procedure involves amputating the last joint. During onychectomy, tendons that normally allow a cat to flex and extend the paws may also be severed. There are several methods of declawing and each can present problems.

Conrad has seen firsthand how declawing amputates the claw, bone,

and ultimately the spirit - by leaving animals in a chronic state of pain and lameness. Many of the patients she treats suffer from arthritis, joint stiffness, muscle atrophy and infection around the amputation site.

Cats normally walk with the weight of their bodies supported by their toes and each step cushioned by a pad. However, declawed cats have difficulty maintaining this gait for several reasons. Conrad and colleague Wendelburg often discover and remove shards of bone remaining under the skin after the initial declaw surgery, while the tendon attached to the retained segment of the third toe bone, or phalanx, may pull that bit of bone under the foot.

"Imagine having to walk with pebbles in your shoe - that's how it must feel," she said. Conrad and Wendelburg also see cases where remnants of nail-forming tissue were left intact, causing the nail to continue to grow deep into the foot, as well as foot pads to be displaced toward the rear of the foot, causing the second phalanx to push through thinned tissue on the foot's underside.

All of these problems result in the cat shifting weight off the feet – with the animal attempting to walk on his or her "wrists," or in severe cases, placing weight even farther back. According to Conrad, complications may occur in any combination and the resulting abnormal stance often causes lameness, arthritis and other painful conditions to soon set in.

A paw can take anywhere from 2-4 hours to repair, since each toe must be meticulously examined, infected tissue and bone shards excised, tendons delicately mended, and the foot pad repositioned. While Conrad, Wendelburg, and others supportive of their efforts volunteer their time, the cost for medication and supplies can range from $1,500-$3,000 per animal.

As word has spread about reparitive declaw surgery, Conrad and Wendelburg have been inundated with calls, letters and e-mails from wildlife sanctuaries across the U.S. requesting information. With approximately 100 big cat sanctuaries in 41 states caring for many declawed wild cats, there's sadly no shortage of patients for Conrad or other vets hoping to tackle this problem.

Conrad has reviewed her technique with veterinarians at Kansas State University and at the University of Florida and there are plans in the works for an instructional video. Last October, Conrad presented a paper describing reparative surgery for big cats at the annual meeting of the American Association of Zoo Veterinarians. Recognizing that other animals are suffering from the effects of declawing, Conrad is also attempting to develop similar procedures for bears and other captive wildlife.



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Janet Hornreich Winikoff

Conrad emphasizes that since there's no way to surgically replace the amputated joints, reparitive declaw surgery should be considered a procedure that improves an animal's quality of life rather than a "cure." More importantly, Conrad doesn't want the procedure to be viewed as an acceptance of declawing by either the sanctuary community or the general public.

The Technique

In preparation for surgery like that performed on Shoshone, Conrad must clip the paws to the carpus, including the area of the former nail. Chlorhexidine solution is then sprayed on the paw before the Esmarch bandage tourniquet is wrapped from the distal paw towards the antebrachium in a binding manner so as to "milk" blood from the paw. Care must be taken to apply pressure over a broad area to avoid nerve damage.

The tourniquet is then released from the distal end toward the proximal to expose the paw. After a complete surgical scrub, an incision approximately 3 centimeters in length is made from the dorsal aspect of the paw to the Palmar aspect at the site of the former nail, while avoiding the pad.

In the case where part of the third phalanx remains, the partially amputated bone is exposed via blunt dissection and infected material is debrided. The fragment is then grasped with A-O reduction forceps to mobilize and exteriorize the deep digital flexor tendon. A cruciate suture (0-PDS) is then placed in the remaining digital flexor tendon and



Janet Hornreich Winikoff

The special surgical team headed by Dr. Conrad operates on a mountain lion's hind paws that were disfigured by declawing.

attached dorsally into the extensor tendon, or if the latter cannot be identified, into the remaining tissue in the extensor groove of the second phalanx.

Before the suture is secured, any cartilage remaining on the distal end of the second phalanx is removed by rongeur. The suture is then tightened to reposition the pad nearer to its proper anatomical position relative to the second phalanx. The incision is finally closed using tissue glue. Pressure wrap bandages are applied over the paws with tabs for easy release.

In some cases where the third phalanx has been completely amputated, the surgical technique described above is used, however, the tendons may be difficult to find. The cartilage from the second phalanx is removed by rongeur and the pad is repositioned as described above.

If the cat has had all four feet declawed, two separate surgical procedures must be performed in order to prevent anesthetic complications, with the front paws usually repaired first.

The Paw Project

In April of 2000, Conrad and activist Dr. Jim Jensvold decided to take the plight of these cats public by creating The Paw Project, a nonprofit organization to increase public awareness about the crippling effects of declawing. Since its inception, the organization has restored mobility to a variety of felines including lions, tigers, cougars, leopard and jaguars.

Banned in over 17 countries and opposed by most animal protection organizations, the declawing of animals - most frequently domestic cats - remains a routine surgery here in the U.S.. While presented to the public as either benign or beneficial, declawing domestic cats can have the same devastating consequences as on their more exotic cousins.

Last summer, California's animal activists pushed to get the introduction of local and state legislation passed to prohibit declawing. While time will tell if the legislation passes, her efforts are gaining momentum and have received attention from national media outlets such as CNN and Fox Network.

Big Cats as Ambassadors

Conrad is hoping that her big patients will help her efforts to get declawing banned. "I want the big cats to serve as ambassadors for the little cats" she said. "Most people would consider declawing a big cat cruel, yet they wouldn't hesitate to declaw their own cat, even though the procedure is essentially the same."

Attitudes about declawing seem to be slowly changing. Even animal shelters that might have once endorsed declawing as a way to entice families with fancy furniture to adopt domestic cats are now teaching the benefits of nail-trimming and scratching posts in lieu of surgery.

It's an uphill battle but Conrad is confident that The Paw Project will enlighten cat lovers and allow both wild and domestic felines to keep their claws - and their character - intact.

* * * * *

For more information about reparative declaw surgery contact The Paw Project, P.O. Box 445, Santa Monica, CA 90406 or visit www.pawproject.com. You may also call (877) 729-7765.

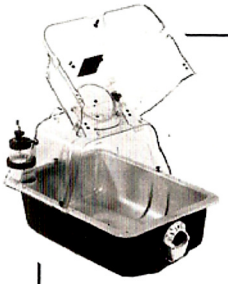
Janet Hornreich Winikoff is a humane educator in South Florida and a former public information specialist and project coordinator for The Humane Society of the United States. She wrote this article for Wildlife Rehabilitation Today.

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At presstime on April 7, 2003 the West Hollywood, California City Council voted unanimously for an ordinance that bans the practice of declawing within its borders. This reportedly is the first law of its kind ever enacted in North America.

According to the Paw Project, there was a single voice of opposition from a representative of the California Veterinary Medical Association, arguing that the decision to declaw should be a matter to be decided between veterinarian and client and should not be a matter of law. Three council members took exception to that position and said it was within the purview of government to enact anti-cruelty laws.

"The Paw Project hopes others will use this precedent to initiate legislation to end declawing in their communities," said the organization in announcing the decision.



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