

Wild Tracks

southwest wildlife rehabilitation & educational foundation, inc.

Summer 2005

Endangered Species

In the U.S., nearly 500 animal species and over 700 plant species are listed as threatened or endangered. Worldwide, over 1,000 animals are endangered. A species classified as “threatened” is at risk of becoming endangered in the foreseeable future. A species is classified as “endangered” if it is in immediate danger of becoming extinct throughout, or within a significant portion of, its native range.

What does this mean to humans? Why should we care? The answer is quite simple: We humans share our environment with plants and other animals. The loss of one species may have a negative effect upon the entire ecosystem.

This especially true of keystone species. A “keystone” species plays an integral part of the food chain within a certain ecosystem. Therefore, extinction of a keystone species may ultimately lead to the extinction of other species in that environment.

Habitat loss and/or degradation, most of which can be traced to human population growth, are the primary reasons that species become endangered. For example, grasslands, forests, and wetlands get converted to agricultural purposes in order to support the increasing number of humans. Logging eliminates forest habitats while providing lumber, paper products, etc., to meet the growing human demand. Rivers are dammed or channelized to accommodate

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Creating Javelina Herds in Captivity

As a herd species, javelina are dependent upon their herd for survival. Releasing a single javelina is a virtual death sentence for that animal. For this reason, Southwest



Wildlife has developed a program that creates new herds, which can be released back into the wild, from the many single, orphaned, displaced, and injured javelina.

So what makes a herd? Each herd

will have both a dominant male and female. The female will often be dominant over the male; she is the matriarch, the glue that holds the herd together. Javelina have very poor vision. They cannot readily see past 100 feet, and see even less in the dark (which is why they are often accused of chasing people when, in actuality, they can't see well and are just trying to get away). Because javelina can't see very well, they depend on scent and auditory communication to keep the herd together.

All javelina have a scent gland 15 cm forward from the base of their tails. Every animal in the herd will stand head to tail and rub back and forth on each other to share each others' scent. As the entire herd does this, it creates a sort of herd perfume. Each herd has its very

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own perfume, which is unlike any other javelina herd. They will not accept any javelina that are not wearing this perfume. If you don't smell like the herd, then you do not belong in it and will be run off or killed. This makes it very difficult to introduce new animals to a herd without causing them serious injury or death. When members of the herd have been separated, their reunion will include head to tail rubbing to renew the herd bond. In addition to rubbing on each other, they will also rub on scent posts in their territory to mark its boundaries.

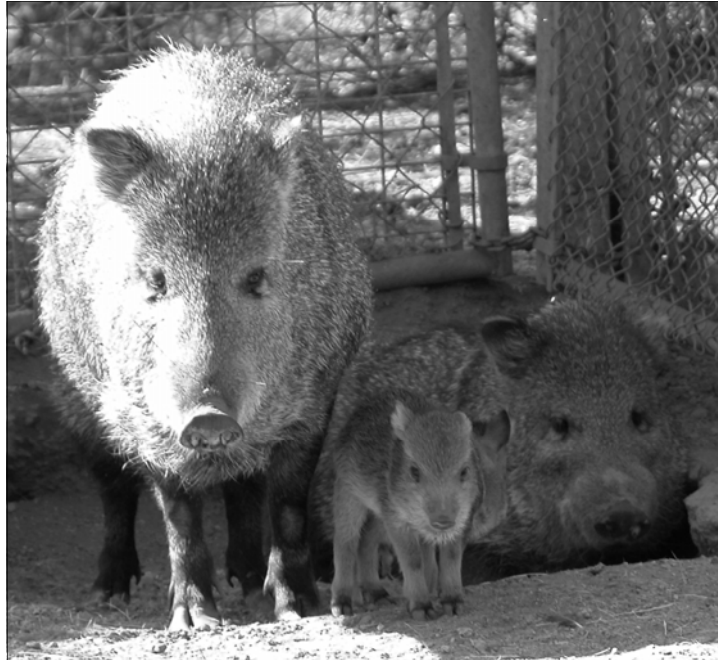
A Javelina's vocalizations include: woofing (a warning to other herd members to retreat), squealing (a signal of submission, a reaction to danger, or a distress or alarm call), tooth clicking (a sign of aggression, a return threat, and important in establishing dominance), grumbling or growling (used to establish dominance, as a retreat signal, or as a return threat), low grunting (to reassemble the herd when members have been separated), complaining (this is done by young animals if they are separated from mother, ill, or distressed), and purring (to hold the herd together—a sigh of contentment audible to up to 10-15 meters).

Southwest Wildlife's herd development program creates new herds from the individual animals that come into our rehab center. Herds are created in a release pen and usually include 8 to 12 javelina. The release pen is a round chain link enclosure with multiple satellite pens adjoining it. It also has a long fenced alley which leads into a trailer, which is provided by the Arizona Department of Game & Fish.

Once individual animals are healthy enough, they are transferred into one of the smaller satellite pens. There

they can safely interact with the other animals in the herd through a chain link fence. In the beginning, there is usually a lot of fighting through the fence. Over time, the fighting slowly subsides. We know we can then let the newcomer into the main release pen when we start hearing purring and they are rubbing head to tail through the fence.

There will often be a little disruption when the newcomer is actually let into the release pen. This is usually sorted out in a few minutes and has to do with where that animal will rank in the herd. Rank determines who eats first, who gets the best place to bed down, etc. Once that is sorted out, they become part of the herd.



A key component in our herd development program is the adult animals in the herd that were raised in the wild by their parents. These animals are extremely important. They teach hand-raised animals to be fearful of humans and how to

survive in the wild. They teach orphans everything that their parents would have taught them: to fear predators, what to eat, what not to eat, and how to find shelter.

While in the release pen, they receive minimal contact with humans. All fencing is covered with reed screens to prevent them from seeing humans. When checking on them from behind the screen, there is no talking and such visits are limited to 3 or 4 days a week. They eat out of an automatic feeder (and are supplemented with fresh greens, mesquite beans, and cactus), drink out of an automatic waterer, and have 50-gallon tubs to bath in.

Once we have a cohesive herd, we begin to prepare them for release by feeding them in the trailer. This allows the alley and trailer to become a good place, a safe zone, and gives the trailer the herd's scent. If the trailer smells like them and they associate it with good food and safety, they will always want to go in. Therefore, they will be easy to load on release day and we will be able to move them without drugs and with

minimum stress.

Prior to release, it is sometimes necessary to trim their hooves and/or put ear tags in one ear. This is always done in the release pen, not in the alley or trailer. The alley and trailer must be a safe zone where nothing bad ever happens.

On release day, Southwest Wildlife provides the Arizona Department of Game and Fish with fence panels, feed, and a water tank. The javelina are chased into the alley and the gate is closed behind them. Then they are chased into the trailer and those doors are closed. Finally, the trailer is hooked up to a truck and they are transported to the release site.

Upon arrival at the release site, the trailer is backed into the pen and unhooked from the truck. The door of the trailer is opened so they can come out whenever they are ready. Because the trailer smells like them and they are used to it, it is comforting to them. Therefore, they typically sleep in it or under it for the first several days.

After a few days, game warden Brian Anthony will open the main gate of the pen so the javelina are free to come and go as they please. They will typically remain near the trailer for several days and venture farther and farther away from the trailer and pen as days go by. This type of “slow release” gives the animals time to rest, renew their herd bond, and get used to their new surroundings.

Southwest Wildlife’s herd development program has significantly improved the success and survival rates of released herds. We could not achieve these results without the continued partnership of the Arizona Department of Game & Fish.

The Endangered Species Act of 1973

In 1973, Congress passed the Endangered Species Act (ESA). The goal of the ESA is to protect and recover threatened and endangered plant and animal species native to the U.S. by (i) identifying endangered species and habitats; (ii) providing protection for those species; and (iii) recovering endangered species and their habitats. According to the U.S. Fish & Wildlife Services website, “The ultimate goal of the [ESA] is the recovery (and subsequent preservation) of endangered and threatened species and the ecosystems on which they depend.”

Responsibility for administering the ESA is held jointly by the U.S. Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). These agencies make all decisions regarding the listing, recovery, and delisting of species under the ESA. Their actions are announced in the *Federal Register*.

Listing Species

In order to get the protection afforded by the ESA, a species must first be “listed” as threatened or endangered on the Federal List of Endangered and Threatened Wildlife and Plants. The listing process is usually completed within 27 months. Any person may submit a petition requesting that a species be listed. During a Service Review, it is determined if there is substantial information that indicates that listing *may be* warranted. If so, the species enters the Status Review phase, which includes review and information gathering. If not, the process is terminated.

Within 12 months of receiving a petition, usually during the Status Review, it must be determined whether listing *is* or *is not* warranted. If data does not support it, the finding will be that listing is not warranted; the process is terminated. If data does support it, the finding will be that listing is warranted. This finding means that either (a) the species will become a proposed listing; or (b) the proposal will be deferred.

If the species becomes a proposed listing, it enters the Peer Review phase, where the opinions of 3 species specialists will be solicited. After receiving those opinions, a 60-day comment period will begin, during which time input from the general public, the scientific community, and state & federal agencies will be heard.

Notable Quote

“If all the beasts were gone,
man would die from loneliness of spirit,
for whatever happens to the beast,
happens to the man.

All things are connected.
Whatever befalls the earth,
befalls the sons of earth.”

Chief Seattle

Finally, the final decision is made and announced. If the decision is to list the species, it will be listed 30 days later.

If, following the Status Review, the proposed listing is deferred, it is given the status of *warranted but precluded*. According to the USFWS, listing is precluded “by other listing activities” or because “other species are of higher priority”. These species are commonly referred to as candidate species. Annually, on the anniversary of submission of the petition of a candidate species, the species must be re-evaluated and determined to be warranted, warranted but precluded, or not warranted.

A 1982 Amendment to the ESA requires that determinations of the status of a species shall be made solely on the basis of scientific information, without any consideration of possible economic or other effects. However, the reality is that politics often plays a significant role in such decisions. Political opponents may attempt to weaken the effectiveness of the ESA by limiting its funding. If the money necessary to enforce the provisions of the ESA is not available, the list of species that falls under its protection cannot be expanded. If a species in Status Review is in the path of powerful special development interests or ranges over a wide area, its listing may become extremely controversial. This is often why species for which protection is warranted become candidate species instead of proposed species.

Protecting Species

The ESA protects threatened/endangered species by prohibiting the “take” of listed species. The definition for “take”, as used in the ESA, includes: harass, pursue, harm, wound, trap, capture, collect, hunt, shoot, and kill. Any action that substantially alters habitat and, in turn, results in the injury or death of a species would also be considered a take.

Additional protections were added to the ESA with the 1978 Amendment which required that, *when prudent*, critical habitat is designated concurrently with the listing of a species. “Critical habitat” is the area in which a listed species lives. The protections afforded by this amendment are limited, however, as it allows economic and other influences, in addition to biological needs, to be considered during the process of deciding upon the boundaries of the critical habitat. According to the National Wildlife Federation, fewer than half of all listed species have critical habitat designations.

Recovery

Under the ESA, the USFWS and NMFS must develop and implement recovery plans for listed species, unless “such plans would not contribute to [the species] conservation” (ESA, Section 4). “Recovery” of a species means that its population has become self-sustaining and that protection under the ESA is no longer necessary. In general, species “recovery plans” conceive of and/or determine actions and/or procedures that will lead to a species’ recovery.

Recovery plans are drafted by a team which may consist of members from academic institutions, the government agencies (federal, state, and tribal) that will be involved with the recovery program, species-welfare organizations (e.g., the National Wildlife Federation or the Center for Biological Diversity), and commercial enterprises (e.g., logging, mining, or ranching). USFWS policy is that the implementation of recovery plans should “be accomplished through the means that will provide for timely recovery of the species while minimizing social and economic impacts”.

The content of recovery plans may vary greatly between species and may include more than one species. Plans may include:

- recovery objective(s)
- additional protective measures for the species
- re-introducing the species into former habitat
- habitat acquisition, restoration, management, or preservation
- public education
- consultation with species biologists



The Desert Tortoise is classified as “threatened” in every U.S. desert except the Sonoran Desert.

- monitoring the species
- biological research
- captive breeding programs

Currently, the USFWS has a policy of “developing recovery plans within 2½ years after final listing of a species”. However, according to the National Wildlife Federation, only 79% of listed species had an approved recovery plan as of April 30, 2003.

Downlisting and Delisting

If recovery efforts for a species are successful, that species may be downlisted or delisted. When a species’ classification is down-graded from endangered to threatened, that is “downlisting”. Removing a species from the Federal List of Endangered and Threatened Wildlife and Plants is called “delisting”. Both downlisting and delisting of a species must be approved through a process similar to the listing process: assessment, Peer Review, and public input.

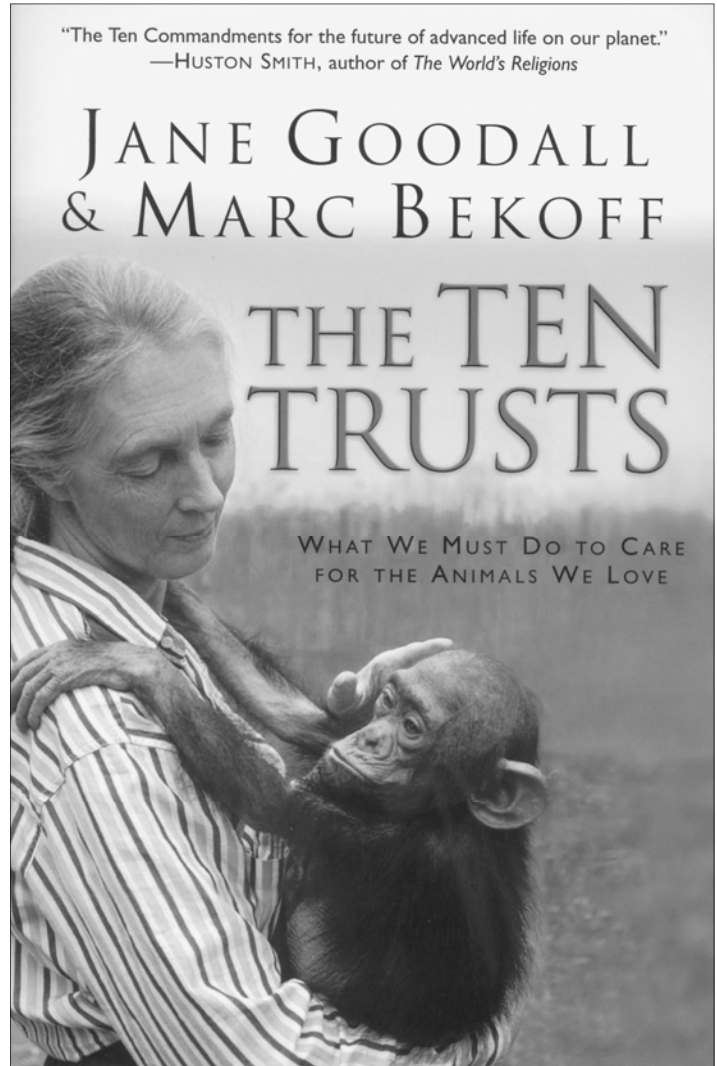
If a species is delisted due to recovery, a delisting monitoring plan is approved and put into action. The plan covers a minimum of five years, during which time the species is monitored and its ability to sustain itself without ESA protections is assessed. If deemed necessary, the species may be relisted or the delisting monitoring plan may be extended. Only sixteen species have been successfully recovered and delisted.

A species will also be delisted if it becomes extinct. Nine species that have been included on the Federal List of Endangered and Threatened Wildlife and Plants have become extinct and have been delisted.

“The goal of the ESA is the recovery of listed species to levels where protection under the ESA is no longer necessary”, according the USFWS. Recovery rates, however, are dependent upon many factors. Biological factors include current population levels, available habitat, and gestational rates. Availability of accurate scientific data and how quickly and effectively a recovery plan is implemented are some administrative factors. Politics continues to affect species recovery, from proposed listings that become controversial to limiting the funding necessary to adequately implement the ESA.

For additional information on endangered species, please visit the website sources used for these articles:
 National Wildlife Federation, www.nwf.org/wildlife/esa
 Endangered Specie, www.endangeredspecie.com
 U.S. Fish & Wildlife Service, Division of Endangered Species, www.fws.gov/endangered

BOOK REVIEW



The Ten Trusts

by
Jane Goodall & Marc Bekoff

Although the authors acknowledge that we humans are allowing ourselves to destroy this planet, they are not pessimistic. Their “10 trusts” show how each and every one of us, through our everyday actions, can help to reverse this trend. Their arguments for change are very compelling: they reveal our fundamental connection to other animals and demonstrate animals’ abilities to learn and to feel love, pain, compassion, and grief.

The Collared Peccary, aka Javelina

Peccaries are only distantly related to pigs despite some superficial similarities: they have a similar body and head shape, including their snouts, and they share some behaviors, such as wallowing and rooting. However, they developed completely separately. In addition to less noticeable but important biological differences, peccaries have virtually no tails while pigs have no scent glands. Unlike pigs, peccaries have no gall bladder. Peccaries' jaws move only up and down (so there is no chewing motion, just a crushing motion), as opposed to pigs, who's jaws move side to side (grinding their food). The lower and upper canines of peccaries work against each other which results in razor-sharp edges.

The collared peccary, *tayassu tajacu*, can now be found as far north as Flagstaff, Arizona and southwest Texas and southward through much of South America. They share much of Central and South America with another species, the white-lipped peccary. The Chacoan peccary is found only in central South America, in Paraguay and Bolivia. Both the white-lipped and the Chacoan peccaries are endangered. Of the three species of peccaries the collared peccary is the smallest.



Collared peccaries are covered with gray and/or black hairs that are white at the base and have a "collar" of yellow-white hairs around their throats. They have a black mane that extends along the top of their backs from the collar to the scent gland, which is located on the back about six inches forward from the tail stump. Males and females are nearly the same size, usually weighing 30-45 pounds. In urban areas, where they are artificially fed, there have been reports of males weighing as much as 80+ pounds.

The social nature of peccary herds is reinforced through communication and behaviors such as nuzzling or rubbing one another and wallowing or sleeping in huddles. Herds generally travel, eat, and sleep together. If a herd has a dominant member, it is usually a female; there will be a dominant male in the herd, but the female will be dominant over him.

Herds have definite home territories, which are marked by scent. When food and water are plentiful, these territories are not mutually exclusive. In fact, territories may overlap by up to 1/8 mile, especially in areas of established water holes. However, when resources are limited, a herd may aggressively defend its territory.

Although peccaries originated in tropical forests, the collared peccary has adapted quite well to desert living. Areas with thick, dense vegetation are favored for both the protection and food provided. Herds will lay up in caves and abandoned tunnels or under rocky overhangs, if available. Here in the desert, however, they most frequently lay up in shallow depressions under thick brush. Their preferred food is cactus pads, as they provide water. Fleshy cactus fruits and succulents (such as agaves) also provide water. Seeds and beans, especially from palo verde, acacia, and mesquite trees, are an important part of their diet. They will also eat tubers, hedgehog and barrel cactus, and green leafy material.

Because they developed in dense, tropical forests where vision was not of much use, their vision is very poor. Their senses of hearing and smell are quite strong, however, and are vital parts of the communication necessary for herd cohesiveness, their primary defense against predators. The musky smell secreted from their scent glands also facilitates herd cohesiveness. Paradoxically, however, it would seem to make it easier for predators to locate a herd as well.

Coyotes, bobcats, and mountain lions will predate on young or sick peccaries if they are separated from the herd. A lone adult javelina, with its strong jaws, long sharp teeth, and quick reactions, may successfully repulse an attack from a mountain lion or coyote group, but is usually unable to do so.

Togetherness calls range from the low purring and grunts used to keep track of one another while feeding to a bark, used to reassemble the herd or locate a lost member. Aggression within the group usually occurs in overcrowded situations or in the presence of a limited food source and will be exhibited by growls, tooth clicking, and squealing. The vocalization for alarm or distress is a loud woof.

Peccaries are not monogamous. Reproduction appears to be somewhat dependent upon available nutrition, which is dependent upon seasonal rains. Females generally become able to reproduce at about one year of age. Although young may be born in any month, the most common months for births are June through August. Most litters consist of 1-3 young, after approximately 145 days of gestation. The female will nurse the young for approximately 1½ months and watch closely over them until they are about 3 months old.

Southwest Wildlife Donation Form

Please help by making a tax-deductible donation.

My name is:

Our 501(c)3 No. is 86-0765249.

_____ \$25

_____ \$50

_____ \$100

_____ \$250

_____ Other

My address is:

Thanks for helping...



Please use my donation:

as needed

for an addition to the clinic

You may also make donations online at: www.southwestwildlife.org

Endangered

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agriculture and/or urbanization.

The introduction of invasive, non-native species into environments is the second leading reason that species become endangered. These plants or animals may be introduced by design (e.g., in an effort to produce a heartier, more-heat-resistant grass for his cattle, a rancher might bring in an African grass) or by accident (e.g., insects, rodents, or plant seeds may be in the feed or hair of imported animals). Either way, the results may be both economically and environmentally devastating.

Another threat to worldwide biodiversity is pollution. We continuously assault our land, air, and water by using gas-powered lawn mowers and automobiles, by attempting to increase agricultural production via the use of pesticides and fertilizers, and by utilizing dangerous chemicals for industrial production and/or natural resource extraction and dumping the resulting by-products and waste directly into the environment.

Finally, some species have become endangered simply as a result of over fishing or over hunting. Others continue to be endangered, even while they are under federal protection, due to poaching. Still others have been, and continue to be,

deliberately destroyed under predator elimination programs.

The brown bear (also called a grizzly) is no longer found in Arizona (or in most of the continental U.S.) and the Mexican gray wolf, a native of Arizona, nearly became extinct, due to predator elimination programs. Of the 39 animals native to

Arizona that are threatened or endangered, 20 are fish. This is a direct result of the destruction of the majority of the state's natural riparian areas.

The bald eagle, Mexican spotted owl, and desert tortoise are some of the Arizona natives that are considered threatened. Endangered Arizona species include: the southwest willow flycatcher, the jaguar, the ocelot, the Sonoran pronghorn, the pygmy owl, and, of course, the Mexican gray wolf.

Worldwide, species are becoming extinct, endangered, or threatened at an alarming rate. "Recovering" a species, or bringing a threatened or endangered species' natural population back to a self-sustaining level, is extremely time consuming and expensive.

As the human population of the Sonoran desert continues to grow—it is one of the fastest developing areas in North America—it would seem to be in our best interest to take note of the sage observation of one of our founding fathers: "An ounce of prevention is worth a pound of cure." Frugal Benjamin Franklin would certainly have advocated a proactive approach to the preservation of biodiversity, as it is much less expensive, fiscally and environmentally, in the long run.



Southwest Wildlife is a holding facility for the Mexican gray wolf recovery program.



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“Thank you” to all of the hardworking volunteers at Southwest Wildlife for your continued dedication to “saving our wildlife, one life at a time”.

“Thank you” to all the Eagle Scouts who continue to build houses, benches, signs, and storage containers for our animals, earning their Eagle Scout Badges.