



AWI Quarterly

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SPOTLIGHT

Canis rufus Reality: Red Wolf Status Confirmed

In March, the National Academies of Sciences, Engineering, and Medicine (NASEM) released a report titled *Evaluating the Taxonomic Status of the Mexican Gray Wolf and the Red Wolf*. The report, commissioned by the US Fish and Wildlife Service (USFWS) at the behest of Congress, found that the red wolf (*Canis rufus*) is a taxonomically distinct species. This finding is a key conservation victory—as those seeking to strip Endangered Species Act (ESA) protections from red wolves have long argued that the animal is a coyote subspecies or a gray wolf–coyote hybrid that does not merit an ESA listing. The report’s findings confirm that ESA protections are warranted.

In support of its conclusion, the NASEM report identified morphological, behavioral, dietary, and genetic differences

between red wolves, gray wolves, and coyotes. It also identified reproductive isolation mechanisms that separated red wolves from coyotes. For example, both red wolves and coyotes prefer to mate with members of their own species, and red wolves and coyotes generally occupy separate territories when both species are present in an area.

The red wolf was originally listed in 1967 as endangered under a precursor to the ESA. After the species was declared extinct in the wild in 1980, an experimental population of captive-bred wolves was reintroduced into eastern North Carolina in 1987, under USFWS management. The recovery program was initially a striking success and the wild red wolf population grew to an estimated 150 or more individuals. However, the agency has been actively undermining its own recovery program in recent years due to pressure from a few vocal landowners, the North Carolina Wildlife Resources Commission, and political appointees within the USFWS. Consequently, the wild red wolf population went into steep decline; today, fewer than 30 individuals remain within a drastically scaled-back territory.

Given the NASEM report’s findings, the USFWS has no excuse for not resuming its ESA mandate to protect and restore the red wolf. 🐾

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ABOUT THE COVER

Scientific studies agree: Companion animals contribute to our emotional well-being and physical health. In turn, we do our best to keep them happy and healthy, and to help them experience a long and full life. Eventually, though, the march of time can bring on infirmity, and an ebbing in quality of their life for our beloved friends. When that time comes, it is more important than ever to do what we can to ease their burden and not prolong suffering. See page 14 to learn more about how best to care for aged and ailing pets. Photograph by Seven Song.

CITES MEETING POSTPONED

It was our intent in this issue of the *Quarterly* to provide a summary of outcomes from the 18th meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), slated to take place in late May in Sri Lanka. (See *AWI Quarterly*, spring 2019.) The meeting, however, was postponed due to security concerns following the horrific bombings in Sri Lanka in late April that killed more than 250 people and wounded hundreds of others. AWI joins the global community in mourning the victims of this senseless act.

The CITES meeting will now take place August 17–28 in Geneva. AWI representatives will participate and we will provide a summary of outcomes in a future issue of the *Quarterly*.

BOTSWANA LIFTS BAN ON ELEPHANT HUNTING

To the intense dismay of conservationists and animal welfare advocates, Botswana has lifted a 5-year-old ban on elephant hunting.

The Botswana government claims there is growing conflict between the animals and humans; many suspect the decision is a calculated bid by President Mokgweetsi Masisi to sway rural voters before this year's elections. The hunting ban was imposed in 2014 by former president Ian Khama, a conservation-minded leader who took a strong stance against poaching and opposed trophy hunting. Masisi, his successor, evidently feels differently. Upon taking office in 2018, he immediately formed a committee to reassess the ban and has now set it aside.

Botswana is home to about 130,000 elephants, the largest elephant population of any country and roughly one-third of the entire elephant population of Africa. A recent survey conducted by Elephants Without Borders, however, indicates a dramatic uptick in poaching in Botswana. (The Botswana government, despite financing the survey, disputes its results.)

In the midst of this, the government is also seeking to reap profits from the ivory trade. Prior to this year's planned CITES meeting, Botswana joined Namibia, South Africa, and Zimbabwe in proposing to allow sales

of stockpiled ivory from those four countries without restriction. Botswana claims it would funnel the profits back into conservation, but such ill-gotten gains rarely are, and there is strong evidence that such a move would only fuel the illegal ivory trade, complicating enforcement and leading to more elephant deaths across the continent.

OPERATION BLIZZARD NABS LIZARD SMUGGLERS

A highly coordinated international operation targeting the illegal trade in reptiles has resulted in the largest reptile bust to date. Coordinated by Interpol and Europol, "Operation Blizzard" (April 12–May 22) involved law enforcement agencies from 22 countries, including the United States. Some 4,400 live reptiles were seized and 12 arrests have been made thus far out of nearly 200 suspects identified.

The live reptiles seized included 20 crocodiles and alligators, 2,700 turtles and tortoises, and 1,500 snakes, lizards, and geckos. In addition to the live reptiles, officials seized a number of live parrots, owls, falcons, and swans, as well as elephant ivory, bush meat, and products derived from reptiles.

Dylan Swain, principal compliance officer with the New Zealand Department of Conservation, quoted in Interpol's official release, stated that "Operation Blizzard clearly demonstrates that by pooling our enforcement and intelligence resources, the enforcement community firmly contributes to disrupting this destructive trade in reptiles. This operation is testimony to what can be achieved if we all work together."

A Kenyan sand boa. During Operation Blizzard, six of these snakes were intercepted after being smuggled into the United States. Thousands of reptiles were recovered worldwide.



REPTILES 4 ALL

USFWS Seeks to Strip Gray Wolves of Endangered Species Protections

In March, the US Fish and Wildlife Service (USFWS) released a proposed rule to fully delist all gray wolves (*Canis lupus*) across the contiguous United States except the Mexican wolf (*Canis lupus baileyi*) in Arizona and New Mexico. The USFWS has already delisted wolves in the northern Rocky Mountain states, with deadly consequences.

Gray wolves were nearly exterminated from the continental United States during the early 20th century, primarily as a result of aggressive eradication campaigns. Once numbering approximately 2 million and occupying the majority of US states, the species was reduced to two populations of approximately 1,040 animals in northeastern Minnesota and Michigan's Isle Royale. Their numbers have slowly increased in recent decades due to Endangered Species Act protections, but their recovery and resettlement of suitable habitat is far from complete. Even today, after nearly 50 years of protections, only about 6,100 gray wolves inhabit pockets of land in nine states.

In its proposal, the USFWS found that the regulatory mechanisms in place at the state level to protect the species and its habitat were sufficient. This determination is incorrect, as many states have prioritized the protection of livestock and recreational hunting interests over wolves, thereby jeopardizing maintenance of healthy and viable wolf populations as the species continues to recover.

In those states where the USFWS has ceded control of wolf populations to state agencies, the pretense of protection has been abandoned in favor of senseless slaughter of wolves in brutal fashion. Since 2011, nearly 3,500 wolves have been shot and cruelly trapped across Montana, Idaho, and Wyoming. In Wyoming, wolves can be killed in most of the state year-round with guns, traps, snares, and explosives, or even by running them down with trucks, ATVs, or snowmobiles. During the brief time when wolves were delisted in the Great Lakes region, wolf hunting was permitted in Michigan, Minnesota, and Wisconsin. In Minnesota, 25 percent of the state's wolves were killed during the first hunting season alone. Upon delisting, other states may also permit hunting



WAITANDSHOOT

and trapping, undermining decades of investment in rebuilding population numbers.

Many of the states' wolf management plans are vague and unenforceable, failing to (1) specify the number of wolves to be protected, (2) articulate what actions will be taken to fulfill the states' management goals, and (3) identify guaranteed sources of funding to achieve the conservation efforts required to ensure the wolves' viability. The USFWS proposal would also increase the ability of state wildlife agencies, USDA Wildlife Services, and others to remove "nuisance" wolves and entire packs when conflicts arise, as has already occurred in eastern Oregon and Washington at the behest of the ranching industry.

This delisting proposal has been met with widespread criticism, including from members of Congress. Representatives Don Beyer (D-VA) and Peter DeFazio (D-OR) wrote a letter, signed by 67 other members, asking the USFWS to maintain ESA protections for gray wolves. AWI continues to work with members of Congress to convince the USFWS to reverse its position. 🐾

Visit our website at, www.awionline.org/gray-wolves to submit comments to the USFWS by the July 15 deadline expressing your opposition to the delisting of gray wolves. You can also send comments via US mail (postmarked on or before July 15) to

**Public Comments Processing
Attn: Docket No. FWS-HQ-ES-2018-0097
US Fish & Wildlife Service Headquarters
5275 Leesburg Pike, MS: BPHC
Falls Church, VA 22041-3803**



Oral Rabies Vaccines *Humanely* Halting the Spread of Rabies

CHRIS REED

Rabies is a zoonotic disease caused by a deadly virus that attacks the central nervous system of mammals. The disease is usually transmitted by a bite from an infected animal. According to the Centers for Disease Control and Prevention (CDC), notable signs of rabies in wildlife include abnormal behavior, excessive salivation, and aggression, with death occurring within days of animals exhibiting such symptoms. Most often, rabies affects raccoons, skunks, foxes, and bats, which can then transmit the disease to other wildlife, companion animals, and livestock.

In the United States during the 1940s and 1950s, widespread rabies vaccination campaigns reduced the prevalence of the disease in domestic animals. During 2015, the CDC received 5,508 reports of rabies in animals within the 50 states, the District of Columbia, and Puerto Rico. Infected wildlife accounted for 92.4 percent of those cases, while domestic animals accounted for only 7.6 percent.

During the 1970s, a strain of rabies associated with raccoons spread across the eastern United States, with some states reporting more than 500 cases a year. In the past, rabies control efforts relied on shooting and trapping to reduce wildlife populations in an attempt to prevent disease spread. Such labor-intensive methods were not effective due to costs, compensatory reproduction in the target populations, impacts to nontarget species, and limited public support.

To humanely control and prevent the spread of rabies, the National Rabies Management Program was established through the US Department of Agriculture's Animal and

Plant Health Inspection Service (APHIS) in the mid-1990s. Consequently, APHIS's Wildlife Services program has worked with local, state, tribal, and federal governments to distribute oral rabies vaccination (ORV) baits in target areas by ground and air. The vaccine is inside a plastic packet contained within a fishmeal bait, exposing animals to the vaccine as they consume the bait. According to APHIS, "The raccoon's immune system is then tricked into thinking it has been exposed to the rabies virus and makes antibodies to fight the disease. The blueprint on how to make these antibodies is stored in the raccoon's immune system allowing the animal's body to respond quickly should it be exposed to a rabid animal." The vaccine does not cause rabies, and is safe for more than 60 species of animals, including cats and dogs.

In 2018, Wildlife Services distributed nearly 5 million fishmeal baits in eastern states including Georgia, Maine, New York, Ohio, Pennsylvania, and Virginia. A million more will be distributed in 2019 by Texas along its border with Mexico. Over the past three decades, the ORV program has saved countless lives of people and animals and made significant strides in controlling rabies, including the elimination of canine rabies, the near-elimination of gray fox rabies in Texas, and halting the spread of raccoon rabies from the eastern United States into new areas. AWI has long advocated for this humane solution for controlling rabies in wildlife. Although we remain highly critical of Wildlife Services' draconian use of lethal and inhumane methods to control wildlife in countless other circumstances, we commend the program in this instance for using technology and compassion to control rabies in wildlife. 🐾

AWI LAUNCHES INTERNATIONAL NETWORK TO COMBAT CRUEL TRAPS + SNARES

STEEL-JAW leghold traps and snares are a global brutality without a meaningful global response. Despite being prohibited in most countries, such devices are widely set in wildlife habitats across Africa, Asia, and Latin America. They remain all too common in North America and Australia as well.

Despite the suffering and death caused by steel-jaw traps and snares, and the widespread opposition to their continued use, there has been until now no global network intent upon addressing their use in wildlife habitats. To correct this shortcoming, AWI is collaborating with several government wildlife agencies and wildlife charities to create the Partnership Against Cruel Traps and Snares (PACTS).

Among its first priorities is to address widespread use of the devices by poachers. A series of questions posed during a recent discussion among PACTS members provides a window into the inherent challenges of this task: What is the best way for a park manager to deploy a de-snaring team in a park of 3,000 square miles? Where should the team start? Is it possible to locate poaching “hot spots” in such a large landscape? What sort of specialized training or equipment should team members have? What should the team do if it encounters a live animal in a trap? What should they do if that live animal is an injured and in pain 600-pound tiger?

These and many related questions confront wildlife managers and team leaders on a daily basis around the world, with varied responses. But if a team leader in Senegal’s Niokolo-

Koba National Park formulates a very good technique for detecting snares, this same technique might prove useful to a team leader in India’s Kaziranga National Park.

In addition to developing an information bank on best procedures for locating and disarming traps and snares, and sharing this information with all its partners, PACTS will also investigate new technologies that can be applied against these devices in a cost-effective manner. Recent improvements in metal-detection technology for airport security have led to portable devices that might also be useful to teams searching for concealed traps and snares in a national park. Would it be possible to strap one of these portable metal detectors to the belly of a drone and fly the machine at low altitude over suspect habitats?

The military has developed new technologies to detect “trip-wires” that are used to trigger improvised explosive devices (IEDs). There is hardly any difference between a trip-wire and a snare. Could a device used by the military to detect IED trip-wires in Afghanistan also be used in Kenya’s Tsavo West National Park to protect pangolins from wire snares?

PACTS is already facilitating the exchange of useful information based on first-hand experience and published scientific data. Our goal is to expand and strengthen this global network, and thus help protect wildlife from the excruciating trauma, frantic struggles, and eventual death following capture in these horrific devices. 🐾





FREE RUSSIAN ORCAS

Juvenile orcas held in a sea pen in Nakhodka, Russia. They were captured in the Sea of Okhotsk and face an uncertain fate.

SEEKING RELEASE FOR JAILED WHALES

AWI has been following the situation involving dozens of wild belugas and orcas captured in the Sea of Okhotsk last summer and held ever since in the so-called “whale jail” in Nakhodka, in Russia’s Far East. We were instrumental in the drafting, signing, and submission of two letters from 25–35 international scientists urging the Russian authorities to end these captures permanently and to work to release these young whales back to their families.

There has been substantial progress toward both of these goals in the past two months. The Russian government has established a moratorium on orca captures—no quota will be set, even for scientific purposes, during the summers of 2019 or 2020. The situation for the belugas is less clear, but we believe there will be no captures in 2019 at least.

A team of international experts with experience in handling distressed cetaceans in the wild and in captive situations was allowed to visit the

belugas and orcas in early April, spending several days assessing their health and suitability for rehabilitation and release. All appear releasable. A memorandum of understanding was signed between this team and the Russian authorities to work cooperatively for the benefit of these individuals. A release plan for this summer, to maximize the probability of reuniting with their families, is currently being discussed.

HB GRANDI SHEDS WHALING STIGMA AT SEAFOOD EXPO

Each year, AWI and allies attend the Seafood Expo Global—the world’s largest seafood trade exposition—in Brussels. Companies from nearly 90 countries are represented, including many with ties to shark finning, fisheries bycatch of endangered and protected species, and commercial whaling. At the event, we meet with buyers and sellers to highlight our concerns with these inhumane and unsustainable practices.

In recent years, our Don’t Buy from Icelandic Whalers campaign has urged seafood buyers not to source from Icelandic seafood giant HB Grandi due to its association with fin whaling company Hvalur, which has killed almost 900 endangered fin whales since 2009. Last year, HB Grandi finally made major changes to its shareholder and board composition that resulted in the company severing its association with Hvalur. The HB Grandi booth was large and busy this year as the company ushered in a new era disentangled from whaling.

GRIM TOLL FOR WEST COAST GRAY WHALES

As of mid-May, according to the National Oceanic Atmospheric Administration, 48 gray whales had been found dead along the coasts of California, Oregon, Washington, and Alaska. Scientists who examined carcasses think the deaths are likely due to malnourishment caused by a lack of amphipods—tiny shrimp-like crustaceans the whales feed on. Amphipods are being impacted by a decrease in algae as ice retreats due to global warming in Arctic waters. Most Eastern North Pacific gray whales spend summers feeding in Alaskan and Russian waters, while a small “resident” population of Pacific Coast Feeding Group whales occupy waters off British Columbia, Washington, Oregon, and northern California during the spring, summer, and fall months. In the fall, both stocks begin their migration south to wintering and calving areas off the coast of Baja California before migrating back north in late winter and spring.

US GOVT SET TO APPROVE GRAY WHALE HUNT

IN 1999, the Makah Tribe of northwest Washington killed a gray whale, the first killed by the tribe since the late 1920s. The kill was made after the US government obtained a quota from the International Whaling Commission (IWC), thereby allowing the United States to authorize the Makah's hunt. Whale protection groups sued, and in July 2000, the Ninth Circuit Court of Appeals ruled that— notwithstanding the quota—the gray whale hunt remained illegal under the Marine Mammal Protection Act (MMPA).

The court's ruling may soon be nullified, however, if the government grants the tribe's request for a waiver of the MMPA—which prohibits the killing of marine mammals—to permit the hunt to restart. On April 5, 2019, the National Marine Fisheries Service (NMFS) announced a hearing on the waiver and the agency's proposed rules governing the tribe's hunt.

AWI has the utmost respect for the Makah Tribe, its people, and their culture. However, we are opposed to the tribe's whaling request for several reasons. First, the killing, to be done with a harpoon followed by shooting the wounded animals with one or more 50 caliber shells, is inhumane. Second, the hunt could result in the killing of one or more members of the Pacific Coast Feeding Group, a unique and imperiled group of approximately 240 "resident" gray whales who remain off the coasts of Northern California, Oregon, Washington, and southwestern Canada during the summer months instead of migrating to the Arctic. It could also impact an even smaller population of critically endangered Western North Pacific gray whales, some of whom migrate from Russia down the West Coast of the United States to Mexico during the winter.

Third, the 2019 proposed rule contains a new scheme for the hunt that was not explicitly included in any of the six alternatives evaluated in the 2015 draft environmental impact statement. The proposed rule details a bifurcated even-odd year whaling season structure with different strike, unsuccessful strike, and landing limits among other components. It even permits the Makah to harass whales during "practice" whaling in which tribal whalers chase and throw blunt harpoons at the fleeing animals. The National Environmental Policy Act requires supplemental analysis of this new scheme to assess its impacts on the environment, public safety, tourism, whale-watching operations, and animal welfare.

Finally, the proposed hunt does not meet the requisite criteria for aboriginal subsistence whaling. The tribe has not engaged in systematic whaling since the mid-1920s and is therefore not able to show the nutritional, subsistence, and cultural need for whales—or a "continual traditional dependence on whaling and the use of whales"—that the IWC requires.

The Makah's family and tribal traditions and rituals associated with their whaling history can continue without the resumption of whaling. The Makah could, if they choose, attract and educate untold numbers of visitors to their lands by promoting nonlethal use of whales through whale watching—an exceptional opportunity to educate visitors about whales, other marine wildlife, the protection of marine ecosystems, and Makah history and culture.

AWI will be participating in the waiver hearing in Seattle in August. Check our website for important updates in this case and for your opportunity to help protect gray whales. 🐾



CREATIVE KIDS Draw Endangered CREATURES FOR “Save All Species” CAMPAIGN

AWI entered into a unique partnership with HarperCollins Children’s Books last year to produce educational materials on endangered species and what we can do to protect them. The partnership coincided with the launch of a new book series aimed at 3rd to 6th graders from Newbery Medal–winning author Katherine Applegate. (See *AWI Quarterly*, winter 2018.)

The first book in the series, *Endling #1: The Last*, told the story of Byx, a mythical creature whose doglike species, the “dairne,” has been hunted to near extinction. The just–released second book, *Endling #2: The First*, sees Byx and her friends undertake an epic quest in search of a hidden dairne colony. But they soon realize that the fate of the dairne is inextricably linked to that of other species.

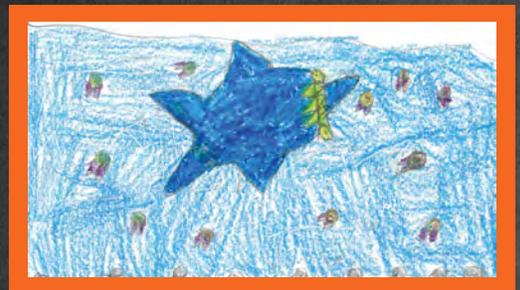
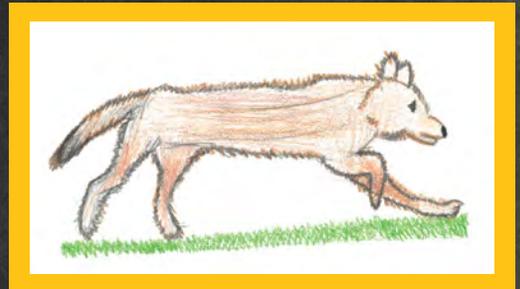
“When one is endangered, all are in peril” is the theme of the *Endling* series. To bring that message home, this spring HarperCollins and AWI partnered once again to launch the “Save All Species” campaign. The campaign called upon kids to take action to help protect endangered species and support the Endangered Species Act. Students were encouraged to draw a picture of the endangered species that matters most to them and to comment about the importance of the species selected. Hundreds of middle school students

participated in the sweepstakes, with a winning classroom selected from a random drawing.

Students drew everything from a blue–throated macaw to a chimpanzee to a southern river otter, and noted the importance of each species in its ecosystem. One student wrote that without large predators, “ecosystems can go haywire,” adding, by way of example, that “if wolves went extinct, the moose population would grow and they would eat more plants which would decrease the birds’ habitat and as a result the bird species could go down.”

The winning classroom— Lisa Brennan’s 5th Grade class from Clear Lake Elementary in Oxford, Michigan—was presented with a set of both *Endling* books for every child in the classroom and a Skype interview with author Katherine Applegate. Immediately following the interview Applegate tweeted, “Whenever I find myself fretting about the state of the world, I remind myself of the idealism and compassion displayed by young readers. The earth is going to be just fine if these kids have any say in it.” We couldn’t agree more. 🐾

Drawings submitted for the Save All Species campaign included (top to bottom) a blue–throated macaw, red wolf, scalloped hammerhead shark, ring–tailed lemur, Siberian tiger, and sperm whale.





Jo Toole

AWI and the entire conservation community were heartbroken to learn of the loss of our dear friend and colleague, Joanna Toole, a victim of the Ethiopian Airlines flight that crashed on departure from Addis Ababa in March. Jo was traveling to the United Nations Environment Assembly to speak on a panel co-chaired by the UN Food and Agriculture Organization (FAO) and the Global Ghost Gear Initiative (GGGI).

Abandoned, lost, and discarded fishing gear is a treacherous threat in our oceans; ropes and nets that don't degrade can drift unseen, sometimes for years, continuing to catch everything in their path, including whales, turtles, sharks, and seabirds. Jo worked tirelessly to drive international action to prevent these losses, eventually co-founding the GGGI and most recently working at the FAO to pursue the adoption of marking guidelines for fishing gear so it can be traced to its owners.

We first met Jo at the International Whaling Commission meetings, at which she represented World Animal Protection and, more recently, OceanCare. We immediately knew she was special—not just utterly dedicated to animal welfare and marine conservation, but bright, warm, fun, and generous. Jo was a joy to work with on a number of joint campaigns and we will cherish memories of strategizing, collaborating, and celebrating with her.

Losing Jo is a harsh blow to her loved ones, including her father, two sisters, and partner, Paul, as well as her wide circle of friends. Animal protection work can take a heavy emotional

toll and we form bonds with colleagues that comfort and sustain us. We take care of each other because we understand the investment that each of us has made in this work and know the painful disappointment we feel when our efforts don't go the way we hoped, or when the news is relentlessly bad. Jo was at the center of a family of advocates—government officials as well as NGOs—who care about each other as well as the animals we strive to protect.

Jo's death is also a blow to critically important animal welfare and conservation efforts. Her dedication to solving the problem of ghost gear and other bycatch threats, however, lives on in colleagues committed to ensuring that her legacy continues. Tragically, we will never know what other causes Jo would champion and use her considerable passion and skill to advance had she not died far too soon.

UN Special Envoy to the Ocean, Ambassador Peter Thomson of Fiji, may have best captured Jo's spirit and dedication to improving the welfare of animals and protecting the planet in his inspiring tribute. "From out of the unbearable sorrow, may you draw strength from Joanna's legacy of profound concern for the welfare of others, for overcoming the many troubles facing life in the Ocean, and thereby ultimately our own. Life is indeed short, so let us be fortified by Joanna's enduring example of doing what's right by our fellow creatures while we still have time on this wondrous planet. The fight goes on, with Joanna forever serving as our inspiration." We concur and as we continue our fight for wildlife and conservation, Jo's legacy will fuel our efforts. 🐾

HOUSE COMMITTEE FOLLOWS CORRECT COURSE ON RIGHT WHALES

The National Marine Fisheries Service (NMFS) Take Reduction Teams—composed of industry leaders, scientists, nongovernmental organizations, and state and federal officials—advise NMFS on reducing harm to marine mammals from fishing gear. In April, the Atlantic Large Whale Take Reduction Team (ALWTRT) produced a package of recommendations to prevent harm and death to the endangered North Atlantic right whale.

Traversing the entire length of the US Atlantic Coast, right whales migrate through one of the most industrialized stretches of ocean in the world. With alarming frequency, they fall victim to collisions with vessels and entanglement in fishing gear. In New England, for example, the high concentration of lobster traps and vertical line buoy gear are deadly threats to the whales as they feed and migrate. In order to reduce right whale mortalities and injuries, the ALWTRT has called for a reduction in vertical line traps and for gear modifications to reduce the strength of lines, enabling entangled whales to break free more easily while maintaining the gear's effectiveness for the intended targets.

Recognizing an urgent need to act, the House Natural Resources Committee approved the Scientific Assistance for Very Endangered (SAVE) Right Whales Act (HR 1568) on May 1, during the first bill markup of the 116th Congress. This legislation, which now awaits a floor vote by the full House, would create a grant program dedicated solely to right whale recovery. This would provide sustained federal funding for scientists, conservationists, and industry to implement steps the ALWTRT has identified and explore other actions to protect right whales.

CIRCUSES NO PLACE FOR LIONS, TIGERS, AND BEARS

Representatives Raúl M. Grijalva (D-AZ) and David Schweikert (R-AZ) have reintroduced the Traveling Exotic Animal and Public Safety Protection Act (TEAPSPA), which would amend the Animal Welfare Act to prohibit the use of exotic animals in traveling shows.

Animals in such shows often suffer enormously. They are denied the opportunity to fulfill basic physical and social needs, forced to spend endless hours in transit inside cramped trailers and train cars, and subjected to abusive training methods. Animals kept in such conditions frequently exhibit “zoochosis”—stereotypic behaviors such as rocking, swaying, pacing, and self-mutilation that indicate extreme mental distress.

Circuses also pose a hazard to the public by bringing people dangerously close to incredibly strong, stressed, and unpredictable wild animals, often with little or no effective barriers between them. There are numerous documented instances of animals escaping or running amok, sometimes causing property damage, injury, or even death.

To date, five states and more than 135 municipalities have passed laws to address the cruel treatment of circus animals or to ban exotic animal acts entirely. On May 27, Cincinnati became one of the latest to do so when it passed an ordinance prohibiting the use of wild and exotic animals in circuses. AWI had submitted testimony in support of the ordinance. The Circus Cruelty Prevention Act (SB 313), a bill to ban the use of wild or exotic animals in circuses, passed the California Senate on May 20 and is now awaiting action in the state Assembly.

Please contact your representative via email or letter and ask him or her to cosponsor TEAPSPA (postal address: The Honorable [first and last name], US House of Representatives, Washington, DC 20515). Visit AWI's Compassion Index at www.awionline.org/compassion-index for additional contact information and to take action on other important animal welfare bills.



THE WASHINGTON POST

Large driftnets kill sea turtles and other nontarget animals. The Driftnet Modernization and Bycatch Reduction Act would ban their use in US waters.

BILLS TO PROTECT MARINE SPECIES ADVANCE IN SENATE

To protect some of the world's most endangered marine species, the Senate Committee on Commerce, Science, and Transportation unanimously approved two bills: the Shark Fin Sales Elimination Act (S 877) and the Driftnet Modernization and Bycatch Reduction Act (S 906).

Up to 73 million sharks are killed each year for their fins alone. The Shark Fin Sales Elimination Act would help shark populations and remove the United States from the global shark fin trade by prohibiting the sale and use of shark fins and shark fin products in this country.

Large mesh driftnets, which can be a mile in length, indiscriminately kill or injure endangered and protected marine species such as sea turtles, sharks, and whales. The Driftnet Modernization and Bycatch Reduction Act would remove this threat to marine mammals by prohibiting their use in federal waters off California's coastline—the only place in the United States where such driftnets continue to be used.

END IN SIGHT TO RUBBER-STAMPED LICENSES?

The US Department of Agriculture published a proposed rule in March that should end the rubber-stamping of renewals for dealers and exhibitors licensed under the Animal Welfare Act, regardless of whether they comply with the law's minimal standards of



DOOHLER

animal care. AWI has long complained about this practice as, year after year, licensees that subject their animals to appalling mistreatment have had their licenses routinely renewed, resulting in the continued suffering of untold numbers of animals.

In its comments on this proposal, AWI supported this move, which would require breeders, exhibitors, and others to demonstrate compliance with the law through pre-license inspections. All applicants would be required to disclose any past violations of federal, state, or local laws pertaining to animal cruelty or neglect. The USDA would also improve certain standards for the care of dogs.

Our comments, however, noted a number of aspects of the proposal that warrant strengthening. For example, three years is entirely too long for a license to remain in effect; such a lengthy time between renewal applications invites lax oversight by the USDA. The final rule should also put an end to what the USDA has lately been

referring to as “teachable moments”—instances in which the USDA consults with (and coddles) alleged violators in order to avoid documenting noncompliances.

Robust oversight and enforcement is needed to ensure adherence to the law and to meet the intent of the new rule to “prevent individuals and businesses who are unfit to hold a license from obtaining a license or working with regulated animals.” Relying on “education” and trusting industry to correct its problems and avoid repeating them doesn't work, as the USDA's own inspector general pointed out in a 2010 audit.

And while we endorse the immediate implementation of the modest revisions to the standards for dogs pertaining to veterinary care and access to water, we strongly recommend that care standards be improved with respect to all species kept by licensees and registrants. Such an upgrade is long overdue and should be undertaken immediately.

Quality of Life Scale for Aging and Ailing Pets

We all want to do well by our furry companions. We want to have as much time as possible with them, but also want to make sure that they do not suffer when they are older and ailing. For many of us, reading the signs to determine when the time has come for euthanasia can be a harrowing experience, with feelings of anxiety, guilt, fear, and grief.

When faced with this difficult decision, animal caregivers may wish to turn to a valuable resource designed to help us make the call: the Quality of Life Scale. The scale, developed by Dr. Alice Villalobos, a renowned veterinarian oncologist specializing in the care of terminally ill pets, was created in conjunction with an animal hospice program Villalobos developed called “Pawspice” that is based on the human hospice model of palliative care.

The Quality of Life Scale provides guidelines for the assessment of an aging, ailing, or terminally ill pet. The scale examines seven key quality of life factors: hurt, hunger, hydration, hygiene, happiness, mobility, and, finally, “more good days than bad.” The animal’s well-being in relation to each factor is rated on a scale of 0–10, with 10 being ideal. Under “hurt,” for example, a zero score would indicate the most extreme pain, while a score of 10 would indicate that the animal is, in essence, pain-free. Within the Pawspice program, a score of 35 (an average of 5 on each factor) is considered sufficient quality of life to justify continuing to provide hospice care to the animal.

While people with pets—as opposed to trained veterinarians—may not feel qualified to assign numerical scores, a familiarity with the factors can still provide some guidance during a traumatic, bewildering time. The seven factors are explained below.



CRITERION	DESCRIPTION
Hurt	Adequate pain control; breathing ability is of top concern.
Hunger	Is the pet eating enough? Does hand feeding help? Does the pet need a feeding tube?
Hydration	Is the pet dehydrated? For patients not drinking enough, daily subcutaneous fluids can supplement fluid intake.
Hygiene	The pet should be brushed and cleaned, particularly after eliminations. Avoid pressure sores by providing soft bedding and turning the animal over often. Keep all wounds clean.
Happiness	Does the pet express joy and interest? Is the pet responsive to family, toys, etc.? Is the pet depressed, lonely, anxious, bored, or afraid? Can the pet's bed be moved to be close to family activities?
Mobility	Can the pet get up without assistance? Does the pet need human or mechanical help (e.g., a cart)? Does the dog feel like going for a walk? Is the pet having seizures or stumbling?
More good days than bad	When bad days outnumber good days, quality of life might be too compromised.

Original concept, Villalobos, A. (2004). Quality of Life Scale Helps Make Final Call, *Veterinary Practice News*, September. Formatted as a scale for Villalobos A. and Kaplin L. (2007). *Canine and Feline Geriatric Oncology: Honoring the Human-Animal Bond*. Ames, IA: Blackwell Publishing, revised for 2nd edition (2017), Hoboken, NJ: Wiley-Blackwell. Adapted with permission from Dr. Alice Villalobos.

Hurt. The first and perhaps most important consideration is how much pain the animal is in. Pain control must be effective and should be given preemptively. Also, an inability to breathe is rated at the top of the pain scale in human medicine. Caretakers, therefore, must be able to identify labored breathing in pets and provide timely relief when possible. If the pet cannot breathe properly, even with the help of oxygen therapy, nothing else matters.

Hunger. Malnutrition can develop quickly in animals who refuse to eat. Offering a variety of foods, hand feeding, and placing food in the pet's mouth and rubbing the neck to encourage swallowing may be very helpful.

Hydration. Caretakers should learn how to assess for proper hydration in their pets using the pinch test. In general, animals should receive 10 mL of fluids per pound per day. An animal who isn't getting enough fluids may benefit enormously from subcutaneous fluids, which can be administered via injection at home.

Hygiene. Pets should be kept clean and should not be left to lie in their own soil after elimination. Animals (in particular, cats) who are having difficulty grooming themselves can be brushed and stroked gently with a sponge dampened with a very diluted solution of lemon juice and hydrogen peroxide.

Happiness. Can the animal's wants and needs still be met? Are they depressed, lonely, anxious, or bored? Pets can have scheduled fun time that they look forward to every day, such as petting sessions from family members or low-key play (e.g., cats batting at a toy or showing interest in a moving laser light). To avoid isolation, it may help to move the animal's bed to where the humans are during the day.

Mobility. There are various options to compensate for reduced mobility. Cats can be helped into their litter box. Dogs who show interest in going outdoors can be assisted with a sling or a cart. Medication may help. Mainly, is the pet—independently or with assistance—able to get up and move around enough to satisfy normal desires?

More good days than bad. An animal's quality of life is compromised when the number of "bad" days outnumbers the number of "good" days, or when there are too many bad days in a row. Bad days might be filled with unpleasant experiences such as nausea and vomiting, diarrhea, frustration, falling down, weakness, seizures, or physical discomfort.

AWI's presentation of the Quality of Life Scale is intended only for information purposes, not as veterinary advice. As always, it is important to consult with your veterinarian on these matters. We also understand that there are no easy answers—each case is different and each individual human and companion animal relationship is different. But we have a responsibility to see that our pets don't suffer unduly. With that in mind, the Quality of Life Scale provides insight into what our pets may be dealing with and what we can and should do to help them.

We all want to give our closest companions the highest quality of life in the time they have left. We also need to know when and if to make the heart-wrenching decision that euthanasia is the kindest option when life is no longer worth living for them. It is an admittedly hard thing to do when we don't want to let go, when we want to hold tight and bargain for just a little more time. 🐾

For more information on the Quality of Life Scale, visit the Pawspace website at <http://bit.ly/2TyNoBY>.

BILL IDENTIFIES ANIMAL ABUSE AS CHILD ABUSE RISK FACTOR

To facilitate better information about the co-occurrence of child abuse and animal abuse, Representatives Ann McLane Kuster (D-NH) and John Katko (R-NY) introduced the Child and Animal Abuse Detection and Reporting Act of 2019. Recognizing that animal abuse is a risk factor for child abuse, the bill provides that information on animal abuse would form a new category in a federal database compiled from reports furnished by state child protection agencies. Weighing this additional factor can help identify opportunities to prevent both child and animal abuse or suggest when more specialized intervention is needed.

The link between violence against animals and violence against humans is well established. In a violent household, companion animals are often victims of the very same abusive behaviors that harm children, intimate partners, and vulnerable adults. The first person to identify a child in a dangerous situation may well be a law

enforcement officer responding to an animal cruelty call. There is an urgent need for more complete information about these patterns so that social service providers can understand how to intervene safely and effectively.

The US Department of Health and Human Services established the National Child Abuse and Neglect Data System (NCANDS) to compile information from the states about the nearly 700,000 American children abused annually. Case reports in NCANDS include a variety of details—such as the type of abuse a child suffered or whether the caregiver has a problem with substance abuse—that help researchers and service providers better understand the factors associated with child abuse. Animal abuse is one such known factor that currently is not considered. By tracking child abuse cases related to animal abuse as provided for under the Child and Animal Abuse Detection and Reporting Act, NCANDS would provide another valuable tool to help identify the need for prevention and intervention.

CROSS REPORTING WORKSHOPS ADDRESS ANIMAL ABUSE AND FAMILY VIOLENCE

A highly successful series of workshops in March in Ohio has led to lasting connections that could improve interventions and lead to prevention in cases of animal abuse and family violence.

AWI sponsored workshops entitled “Cross Reporting for Humane and Human Services: A Species-Spanning Approach to Safer Families and Communities,” in Cleveland, Columbus, and Toledo. These daylong programs drew social workers, humane agents, veterinarians, police, sheriffs, and prosecutors to discuss the relationship between animal abuse and interpersonal violence and the importance of cross reporting. The workshops described research, new strategies, public policy responses, and programs to prevent and respond to family violence and animal abuse. For many participants, this was their introduction to the link between these issues and the notion that all agencies—whether dedicated to protecting animals or humans—that come in contact with families in crisis should work together.

The sessions encouraged participants to connect with one another and identify future opportunities to coordinate efforts. In feedback after the workshops, many of the participants said they would incorporate the new information into their practice and committed to help launch the multidisciplinary teams that will facilitate cross reporting and cross training.

Funding for AWI’s “Cross Reporting for Humane and Human Services: A Species-Spanning Approach to Safer Families and Communities” workshops in Ohio was provided by the Kenneth A Scott Charitable Trust, a KeyBank Trust, and Maddie’s Fund.





In shows and competitions, horses are sometimes illegally "sored" to accentuate a high-stepping gait.

HSUS

Horse Protection Act Enforcement Plummet

Nearly 50 years ago, Congress passed the Horse Protection Act (HPA) to protect horses from the abusive practice of soring, which involves intentionally inflicting pain on the animal's legs to produce an exaggerated high-stepping gait for competitions involving Tennessee Walking Horses and similar breeds. Soring methods include applying diesel fuel and kerosene to burn the skin, grinding down hooves to expose sensitive tissue, and applying sharp or abrasive objects to tender areas to maximize pain.

While enforcement failings and weak punishment have long allowed soring to persist, HPA enforcement has taken a dramatic nosedive under the current administration. The situation is depressingly similar to the administration's abandonment of Animal Welfare Act enforcement (see page 18). In fact, a sea of zeroes illustrates the precipitous plunge in HPA enforcement. In fiscal year 2016, the USDA issued 956 warnings for HPA violations. In 2017, that number dropped to 213. In 2018, the USDA issued zero warnings for HPA violations.

The decline appears particularly stark in contrast to a flurry of enforcement activity in 2016. Following the 2016 National Celebration (the crowning event and largest horse show for the Tennessee Walking Horse breed), the USDA initiated 38 separate administrative complaints, noting over 600 previous official warnings.

Unfortunately, such enforcement actions and scrutiny were short-lived; the USDA also had zero new investigations—from which all enforcement actions stem—and zero administrative complaints in fiscal year 2018. In fact, through information

obtained via Freedom of Information Act requests, AWI learned that no HPA administrative complaints had been filed for over *two years*.

The notion that the show horse industry is simply cleaning up its act and that soring has become far less prevalent is an understandably enticing narrative for the USDA to promote. Indeed, in the 2018 *Animal Care Impact Report*, the USDA proudly reports that 89 percent of the horses inspected by the USDA were in compliance. It noted further that USDA inspectors issued only 3.6 percent more noncompliance findings at shows compared to "designated qualified persons"—the private inspectors chosen by the industry to self-police the shows. The USDA would have us believe that this is an indication that the self-policing scheme is working. What it actually demonstrates is that the USDA has scaled back enforcement to the point that it is barely distinguishable from an industry that has no incentive to punish its own.

AWI is pressing for much-needed enforcement of the law. We continue to advocate in Congress for passage of the Prevent All Soring Tactics (PAST) Act, which would lead to stronger punishments and more substantive enforcement by ending the horse show industry's failed self-policing scheme. The legislation has already amassed over 300 cosponsors in the House of Representatives and will receive a vote in that chamber this summer. We also spearheaded a meeting this month between USDA officials and representatives from a number of animal welfare and veterinary groups to discuss the crisis concerning the USDA's lack of oversight and the need to improve transparency with HPA enforcement. 🐾

Administration Persists with Deconstruction of Animal Welfare Act

The dismantling of the Animal Welfare Act (AWA) by the USDA continues unabated. The entire program—inspections, long-standing policies, and enforcement—is in shambles, leaving animals with virtually no protection. And gleaning what is happening is no small task given the USDA’s misleading pie charts, buried statistics, verbal (i.e., not documented) dictates, and anonymity granted to so much of industry. But here is what we’ve pieced together.

The New, Unimproved, Opaque Enforcement Statistics

The table at right is a portion of the useful and easy to understand data regarding enforcement of the AWA from the USDA’s Animal Care Enforcement Summary, which used to be readily available on the USDA website.

The dramatic decline in enforcement activity is startling, but that’s only half the story. Tracking these enforcement trends is about to get a lot harder. On April 18 of this year, the USDA’s Animal and Plant Health Inspection Service (APHIS) announced that it was revising the website for Investigative and Enforcement Services (IES) and changing the way that it will report data.

IES takes the noncompliant items documented on inspection reports and conducts investigations that theoretically lead to enforcement actions by the USDA’s Office of General Counsel: warnings, complaints, and cases brought before administrative law judges. The April 18 announcement stated, “To avoid confusion, APHIS is archiving its enforcement summaries for previous years as they cannot be readily compared to the new format.” This means that, henceforth, data will no longer be tabulated in the same way as in the table, even data that would allow a complete picture of the 2018 fiscal year.

In lieu of a table, USDA is now providing a series of pie charts such as the one at right—big, colorful graphics with little useful data. The charts contain information on other programs; the sliver of pie, labeled “AC” for Animal Care, represents data for both the AWA and Horse Protection Act (HPA) combined. The “19” figure beside “AC” corresponds to the number we added to the table above, which is no longer accessible from the IES homepage. Combining the HPA and

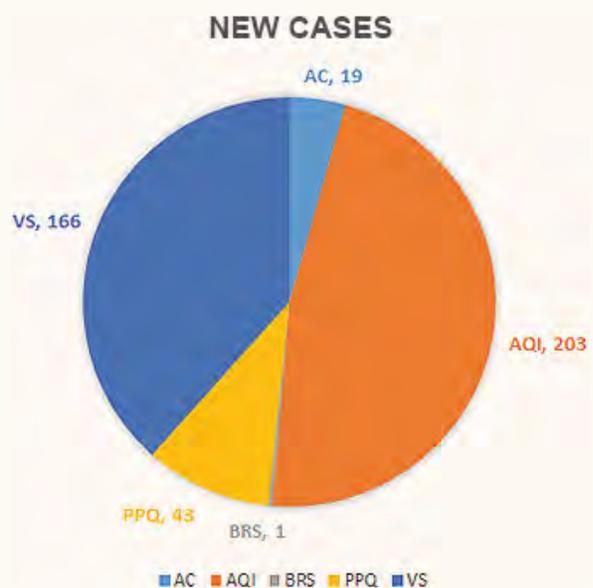
AWA data helped hide the fact that the USDA initiated no new cases under the HPA. (For more on HPA enforcement, see page 17.) And there is no longer a comparison of the most recent fiscal year with previous years, which would also clearly demonstrate the failure to enforce these laws.

Inspection Process Upended

As noted in the spring issue of the *Quarterly*, the number of citations documented on inspection reports has plummeted this past year. This is likely due, at least in part, to the fact

Totals	FY 2016	FY 2017	FY 2018*
Cases Initiated	239	205	15/19
Warnings	192	157	39/44
Settlement Agreements	32	13	7/10
Administrative Complaints	23	2	1/6
Administrative Decisions	39	35	10/11

*Note, the first figure in this column is from the USDA and covers the first three quarters of FY 2018 only. The second figure is the year-end data as pieced together by AWI after sifting through the data.



that the USDA is changing the way it monitors industry. In lieu of inspection and enforcement, the USDA made 521 “courtesy visits” to regulated facilities and 67 “compliance assistance visits,” along with providing untold numbers of “teachable moments” and “incentives,” which allow regulated entities to self-police and skirt enforcement action. The department has also shifted to conducting only partial inspections (where animals might only be observed every third year) for some registered research facilities. Inspectors are reportedly discouraged from citing noncompliances, and licensees and registrants are given ample opportunity to challenge any noncompliant items that are documented during inspections and make them disappear.

The *Animal Welfare Inspection Guide* has been revised as recently as March 2019, yet it is still missing the entire chapter that would provide guidance to inspectors on how to conduct “Specific Types of Inspections.” And the long-standing *Animal Care Policy Manual* remains “Under Review!” according to the USDA’s website, nearly a year after it was pulled from use. We anticipate that following this “review!” the policies contained in the manual will be in such a weakened state they will be ineffective as tools to clarify requirements under the law.

Search (in Vain) Tool

The appalling lack of public accountability is further exemplified by this disturbing fact: Not a single inspection report can be found via the USDA’s so-called “public search tool” for any of the respondents in the 10 AWA complaints filed from January 20, 2017, through April 30, 2019. And, since each of these 10 has been designated a “closely held business” by the USDA, the public is denied the chance to see their compliance history. This is because the administration has decided that closely held businesses—no matter their size or the seriousness of the allegations against them—have a right to stay anonymous.

The 2018 Animal Care Impact Report

The fiscal year 2018 *Animal Care Impact Report* was introduced on April 18 with the tagline, “Ensuring humane treatment. Serving people. Doing Right.” Just like last year, this administration’s definition of “impact” is debatable. The agency’s current pro-industry bias is clearly evidenced by what it calls “customer and public outreach”—which is really only outreach to “customers” (e.g., licensees and registrants) and not the public. Indeed, the USDA’s outreach consisted of attending over 100 “meetings and conferences” with “leaders and members of the breeder, exhibitor, research, transporters, veterinary, walking horse, and emergency response communities.” Meanwhile, the animal protection meeting that AWI has spearheaded for decades—a meeting in which AWI and various other organizations have engaged in a free-flowing



PETA

The only enforcement actions the USDA highlights involve complaints that were actually filed years ago, under a previous administration. One such case, against contract research lab SNBL, was settled in December 2016.

dialogue with USDA personnel and expressed our concerns about AWA enforcement—was reduced from half a day to an hour and a half with very little back-and-forth exchange.

The *Impact Report* brags that the department distributed “detailed euthanasia guidance to ensure alignment with the AWA regulations.” What it did, in fact, was gut a policy that mandated compliance with American Veterinary Medical Association euthanasia guidelines—a euthanasia policy so noncontroversial and commonsense that it was in place, enforced, and repeatedly renewed under Democratic and Republican administrations alike since at least 1997. It was not surprising, but discouraging, to find that the word “enforcement” appears in only one sentence on the last page of the 5-page document, where the USDA describes its initiative to “better assist facilities” via outreach and education as opposed to “traditional enforcement methods.”

Inspections, enforcement, public accountability—these are the cornerstones of a 53-year-old law that has long enjoyed bipartisan congressional and widespread public support. These cornerstones are now under the sledgehammer of an administration whose only goal seems to be to shield its “customers” from their obligation under the law to provide humane treatment to the animals under their care. 🐾

TALENTED *Rats* INDUCE Empathy IN HUMANS

In a laboratory, people matter: a key contributor to good animal welfare is the presence of compassionate caretakers. Research has shown that a “belief in animal mind” (BAM)—seeing animals as self-aware and capable of solving problems and experiencing a range of emotions such as fear, depression, and pleasure—leads to more empathy. Individuals with a strong BAM are more likely to show concern, establish connections, and try to understand the experience of the animals, leading to greater attentiveness and better care.

So how can BAM be fostered within the biomedical research community? Dr. Cathy Schuppli (pictured below),

a university veterinarian and clinical assistant professor at the University of British Columbia, set out to answer this question.

Schuppli tested whether exposure to well-socialized rats who displayed complex mental and behavioral abilities would increase empathy in researchers working with these animals. In a recent online seminar hosted by the Office of Laboratory Animal Welfare, Schuppli explained that, in Canada, individuals working with animals in a federally funded institution must take a hands-on course to learn how to interact with and handle the type of animal used in their lab. When training courses for rat users were taking place

at her institution, Schuppli arranged for attendees to use either “regular” rats or specially handled and trained “superstar” rats. The courses were followed by focus groups to determine whether attendees’ opinions about rats differed depending on which rats they had been exposed to. The idea was that attendees witnessing superstar rats would return to their facilities and think a little differently of their own animals and be more attentive to them.

Regular rats received no special handling or training. Beginning soon after birth, however, superstar rats were gently handled by undergraduate student volunteers, and they were trained using positive reinforcement to perform a variety of tasks, such as sitting on a scale, giving high fives, fetching a little ball, and “rescuing” a small plush toy hanging off a table by a string.

Training course attendees in the superstar group were told the names and unique personalities of the rats and watched them perform the tasks they had learned. These interventions were designed to promote elements believed to be important toward fostering empathy, such as witnessing personality traits and relationships with the handlers.

During the focus groups that followed the training course, attendees were asked eight open-ended questions; for example, “What was your experience when you handled the rats?” and “Did you learn anything new about rats?” Schuppli recorded and transcribed





these sessions and later performed a qualitative analysis of the transcripts. Three major themes emerged, described below, along with representative quotes.

THEME 1: EVIDENCE OF EMPATHY/BAM

Attendees from the superstar group expressed that rats are “amazing,” “smart,” have personalities, and are capable of experiencing emotions.

“I thought it was funny that they could respond to their names. It made them like they had their own little personalities. So when I went to handle the rat, I was like ‘who is this?’ I wanted to know, which is weird because in my lab it’s just numbers.” – RK

“So now I know they would understand if I give them love. I feel like they would understand it, so I can actually make their lives better by giving them more attention.” – RM

“I think about them differently now. We actually got to see more of what they’re capable of. I have a bit more respect for them.” – RL

Others expressed that this intervention reminded them of their moral responsibilities to their research animals.

“It’s a really good way of reminding us that these are animals, creatures. They are intelligent, they aren’t just a

tool. Treat them humanely, treat them correctly.” – RE

THEME 2: WITNESS TO HUMAN-ANIMAL RELATIONSHIP

Attendees in the superstar group expressed reduced fear of being bitten.

“When I first saw them I was a little taken aback and then I just noticed that you were comfortable with them and that made me feel like they wouldn’t bite.” – RL

However, many attendees in the superstar group also expressed concerns about the consequences of becoming “attached,” “connected,” or “bonded” to their research subjects.

“As a researcher it would be a lot harder to sacrifice them. Them having names and having that connection with them—I think I already have a hard time with the sacrifice—so I think it might make it even harder.” – NH

THEME 3: DATA VALIDITY

There was a lack of consensus in the superstar group on how the human-animal relationship would affect research data. Some expressed that the relationship would be beneficial, because more relaxed animals yield better data. Others felt that a better relationship could have a negative impact on research data.

“That’s also kind of important for us because we have to do blind study right. We shouldn’t really know them at all because that might compromise the study if you have a favorite one, then we might give them better treats or whatever.” – RY

In contrast to the comments above from attendees in the superstar group, those from the control group expressed few comments related to the animals, except that they found the rats cute. Control group attendees’ comments focused on the technical aspects of what they had learned in the course.

While Schuppli acknowledged that attendees’ concerns about becoming more attached to the animals were important to consider, she felt that this also provided positive opportunities. First, these findings highlighted the importance of providing support to caregivers so that they can cope with the challenges of their work. She suggested as well that the knowledge that one did what one could to improve the animal’s quality of life and prevent suffering could help a caregiver cope with euthanasia when it is required. Schuppli concluded that the intervention showed promise for promoting empathy and compassion, and that it reminded training course attendees of their moral obligations toward research animals. 🐾



Researchers at the University of British Columbia found that mice thrive in multi-room cages that allow them to separate their nest and their latrine.

has recently lifted its legal requirement for post-market animal testing of cosmetics. This means that finished products such as nail polish, soap, or sunscreen will no longer have to be tested on animals after entering the Chinese markets. However, lifting of the legal requirement is not the same as a ban: Products can still be taken from the shelf for testing at any time. Pre-market testing—the testing of products before they enter the Chinese market—is still required for imported products, but not for products made in China.

AWI GRANT OPPORTUNITIES FOR IMPROVED ANIMAL WELFARE

Mark your calendars! AWI is providing a second opportunity to apply for the Refinement Grant this calendar year due to a shift in our funding cycle. The deadline to apply for this second round is October 10, 2019. AWI offers grants of up to \$10,000 to develop and test innovative methods of refinement to the care, husbandry, and housing of animals in research to improve their welfare. To be eligible, applicants must be based in and the project must be conducted in the United States or Canada. For additional information, please visit www.awionline.org/refinementawards or contact refinementawards@awionline.org.

DR. BEY CHUA

GOOD MOUSE HOUSEKEEPING: EN SUITE BATHROOM MAKES FOR HAPPIER MICE

Mice have a strong preference to nest away from their own waste, and mice in laboratories should be housed in a system of cages that allows them to segregate space into clean and dirty areas, according to work led by researchers at the University of British Columbia. Current standard laboratory housing for mice consists of small, simple cages where mice are in constant contact with their waste.

The new study, published in the journal *Scientific Reports*, showed that mice housed in a system of three interconnected cages carried their nesting material into one cage, which they kept clean, and carried their bedding material into another cage, which they used as a latrine. Compared to mice housed in standard laboratory cages, mice housed in these interconnected cages also expressed more behavioral indicators of good welfare and were less disturbed by weekly husbandry procedures. The study concluded that mice are willing to work to maintain a comfortable

place to rest well away from their latrine. The researchers hope their findings will lead to improved cage designs for mice, allowing the animals to more easily perform their natural segregation behavior and thus improving their welfare.

THE COST OF BEAUTY

Cosmetics testing on animals is a few steps closer to becoming a practice of the past. The Canadian Cruelty-Free Cosmetics Act (Bill S-214) has passed the Senate and will now move forward to the House of Commons for final approval before becoming law. This measure, which is an amendment to the country's Food and Drugs Act, would prohibit cosmetic animal testing and the sale of cosmetics developed or manufactured using animal testing. If the law is passed, Canada would become the 39th country to prohibit cosmetics testing on animals. Countries with bans currently in place include all nations within the European Union, Australia, India, and Israel.

China, one of the world's largest markets for health and beauty products,

GE FISH TO HIT MARKET

The Food and Drug Administration recently cleared the way for genetically engineered (GE) salmon to come to market in the United States. Dubbed “AquaAdvantage” and engineered by Massachusetts-based AquaBounty Technologies, the GE salmon is produced by inserting a growth hormone gene from Chinook (king) salmon into Atlantic salmon. The resulting fish grow twice as fast as normal Atlantic salmon—putting added stress on their bodies. The FDA has documented high levels of skeletal deformities and elevated mortality in GE fish, but pushed ahead anyway with regulatory approval in 2015.

Congress slowed the process in 2016 when it directed the FDA not to allow GE salmon into commerce until labeling guidelines could be issued for bioengineered food. This hurdle was cleared in December 2018, when the USDA unveiled its National Bioengineered Food Disclosure Standard—requiring food manufacturers, importers, and certain retailers to disclose whether foods are bioengineered. Consequently, in March, the FDA lifted the “import alert” that had prevented AquaBounty from bringing

its salmon eggs into the country to raise and produce salmon for market.

AquaAdvantage salmon will thus become the first GE animal approved for food in the United States. GE animals remain banned in the European Union and nearly all other countries worldwide. In the United States, the future of GE food animals likely will be decided in the marketplace—provided the disclosure standard results in adequate notice for consumers wishing to avoid genetically engineered animal products.

USDA AND FDA TO MONITOR CULTURED MEAT

The Food and Drug Administration and the US Department of Agriculture recently announced a formal agreement to jointly regulate cell-cultured meat and poultry products. Cultured meat is produced by the cultivation of animal cells in a laboratory, instead of from slaughtered animals. The regulation of these products has been contentious due to concerns over safety, transparency, and the potential for the technology to replace the billions of live animals currently used in agriculture. It also

presents a jurisdictional question: The USDA traditionally regulates food safety for meat, poultry, farmed catfish, and processed egg products, while the FDA regulates other processed foods and shelled eggs.

According to the agreement, the FDA will oversee cell collection, cell banks, and cell growth processes. Once products are “harvested,” the USDA’s Food Safety and Inspection Service will oversee the production and labeling of food products created from these cells.

BUSINESS BENCHMARK SEES WELFARE GAINS

The 2018 Business Benchmark on Farm Animal Welfare (BBFAW) was recently released, revealing measured improvements to corporate commitments on animal welfare. On the key issue of animal housing, 115 global food companies have made commitments to avoid close confinement in one or more of the major markets in which they operate.

This year’s report scores 150 global food companies’ welfare commitments and places them in tiers from 1 (“leadership”) to 6 (“no evidence that [animal welfare is] on the business agenda”). Although there has been progress—82 percent of companies have moved up at least one tier since the first BBFAW in 2012—there is still much room for improvement. Seventy companies (47 percent) languish in tiers 5 and 6, including BJ’s Wholesale, Chick-fil-A, General Mills, and Sanderson Farms. No American companies achieved a Tier 1 designation, but a few did make it into Tier 2, including Cargill, Unilever, and Perdue Farms.



A genetically engineered salmon alongside a smaller normal salmon



Reducing the Use of Antibiotics in Farm Animals

In January 2018, a report released by the World Health Organization's newly minted Global Antimicrobial Surveillance System revealed widespread antibiotic resistance among people with suspected bacterial infections in nations around the world. Commenting on the report, Dr. Marc Sprenger, director of WHO's Antimicrobial Resistance Secretariat, stated, "Some of the world's most common—and potentially most dangerous—infections are proving drug-resistant."

The danger of this is enormous—and could get much worse. According to an April 2019 report prepared for the United Nations by the Interagency Coordination Group on Antimicrobial Resistance (IACG), "Drug-resistant diseases already cause at least 700,000 deaths globally a year." It warned that without a sustained effort to contain antibiotic resistance, this figure "could increase to 10 million deaths globally per year by 2050" and trigger catastrophic economic shocks.

So where are all these resistant bacteria coming from? Consider where antibiotics are most used: A 2015 study (Van Boeckel et al.) indicated that, worldwide, antibiotics are more likely to be administered to farm animals than to humans. In the United States, it is far more likely. According to a 2015 study published in the *American Journal of Public Health*, "Of all antibiotics sold in the United States, approximately 80% are sold for use in animal agriculture; about 70% of these are 'medically important' (i.e., from classes important to human medicine)."

The twist is that in animal agriculture, most antibiotics are not used for targeted disease treatment—that is, to treat individual animals who have been specifically diagnosed with a bacterial infection. On farm animals, they are often administered more broadly to control disease, prevent disease, and—most controversially—promote growth.

In disease *control*, once one or more animals has been diagnosed with a bacterial infection, the entire herd or flock may receive antibiotics to prevent more animals from becoming infected. Disease *prevention* takes it one step further: In this case, antibiotics are preemptively administered to animals during times of stress—when their immune systems are suppressed and they are thus more susceptible to bacterial infections. Within industrial agriculture operations, animals are routinely dosed with antibiotics to counter the stressful, crowded low-welfare environments to which they are condemned.

But the real revolution for antibiotics in agriculture came in 1950, when scientists at Lederle Laboratory in New York discovered—somewhat by accident—that low, "subtherapeutic" doses of antibiotics added to chicken feed accelerated growth. From that point forward, farmers began adding tiny amounts of antibiotics to animal feed. Over the decades, across an ever-expanding industry, those tiny amounts have added up to a lot of antibiotics.

Today, however, the use of antibiotics to promote growth is increasingly viewed as an unacceptable risk. The IACG report states that antibiotic use to promote growth and prevent (rather than treat) disease in healthy animals is "further contributing to the development and spread of antimicrobial resistance." As explained by the Centers for Disease Control, "When animals are given antibiotics for growth promotion or increased feed efficiency, bacteria are exposed to low doses of these drugs over a long period of time. This is inappropriate antibiotic use and can lead to the development of resistant bacteria." It appears the descendants of those 1950 chickens are coming home to roost—with antibiotic-resistant bacteria in tow.

Domestic Sales and Distribution of Medically Important Antimicrobial Drugs Approved for Use in Food-Producing Animals



Animal products are, in fact, one of the ways antibiotic-resistant bacteria get transmitted to humans. In recent years, *Consumer Reports* has tested hundreds of packages of supermarket meat, poultry, and shrimp (which, if farmed rather than wild caught, may have been dosed with antibiotics). It found antibiotic-resistant bacteria in 14 percent of beef, 14 percent of shrimp, 57 percent of chicken, and 83 percent of turkey samples tested. Proper food safety practices can help reduce this exposure. But changing the way we use antibiotics in livestock can also help. The 2005 US ban on the use of fluoroquinolones in poultry production, for example, significantly decreased the occurrence of fluoroquinolone-resistant *Campylobacter* infections in humans.

The use of antibiotics for growth promotion has now been outlawed in dozens of countries worldwide, including those within the European Union. However, a 2018 report by WHO, the UN Food and Agriculture Organization, and the World Organisation for Animal Health indicated that across the globe, only 42 percent of countries have limited antibiotic use for growth promotion. WHO “strongly recommends an overall reduction in the use of all classes of medically important antibiotics in food-producing animals, including complete restriction of these antibiotics for growth promotion and disease prevention without diagnosis.”

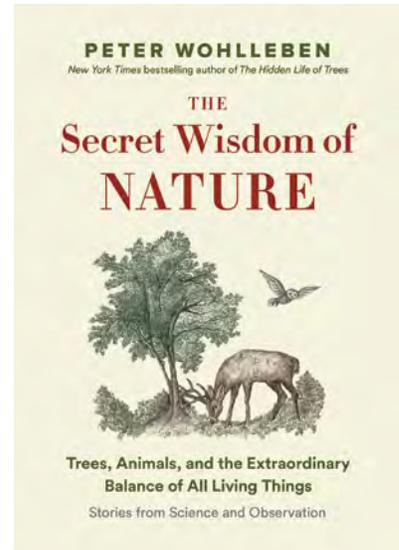
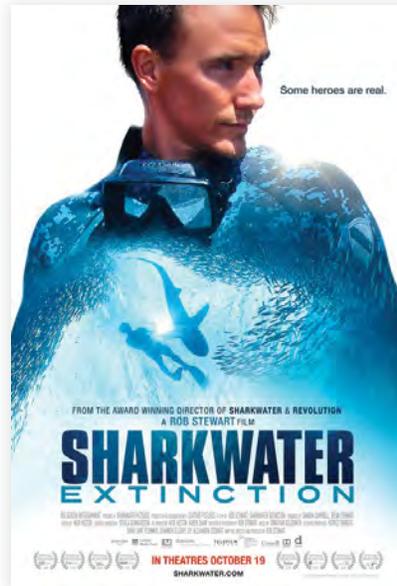
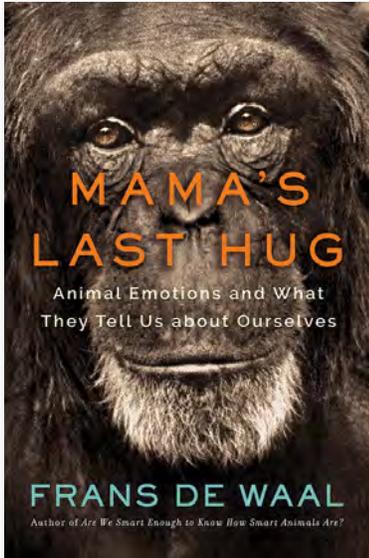
In the United States, the Food and Drug Administration implemented a voluntary plan in 2013 for pharmaceutical companies to remove information from their product labels on use for growth promotion. The FDA has since banned outright the use of antibiotics for growth promotion in feed or drinking water and stipulated that a valid veterinary-client-patient-relationship is required for all antibiotics administered to

livestock in feed or water to combat disease. This regulation, known as the Veterinary Feed Directive (VFD), went into effect on January 1, 2017. Under the VFD, a prescription from a licensed veterinarian—one who has seen the animals within the past 12 months—is required for all antibiotics added to livestock feed or drinking water. This is a significant regulatory change, as livestock producers previously could purchase antibiotics over the counter without veterinary oversight.

This has led to dramatic changes in the sale and use of medically important antibiotics intended for use in food-producing animals in the United States. The latest FDA report shows a 33 percent reduction in the quantity of these antibiotics sold between 2016 and 2017, and a 43 percent reduction since 2015, when antibiotic sales were at their peak (see graph above).

The VFD appears to have caused producers and veterinarians alike to reframe their thinking around antibiotics. As Dr. Glenn M. Rogers, president of the American Association of Bovine Practitioners, said in 2018, “Antimicrobials are a necessary tool to use appropriately when a failure occurs somewhere in the production system. Over-reliance on antimicrobials or incorporating them as a crutch for poor management should not be an acceptable option.”

A focus on preventative medicine, low-stress handling, nutrition, and effective herd/flock management can all help reduce antibiotic use. The fact is, better animal welfare goes hand in hand with more responsible use of antibiotics by the animal agriculture industry—which in turn will help preserve the antibiotic safety net upon which we, as humans, have come to depend. 🐾



MAMA'S LAST HUG

Frans de Waal / W. W. Norton & Company / 336 pages

Elderly captive chimpanzee Mama is in her last days. She is visited by an old human friend. She greets and embraces him with gestures and faces that chimpanzees and humans share. The viral video of this scene echoed deep familiarity and empathy in its millions of viewers. This is Mama's last hug and the starting point of Frans de Waal's latest book, in which de Waal has done it again: written another easy read that brilliantly illustrates the capacities of our fellow apes. In *Mama's Last Hug: Animal Emotions and What They Tell Us About Ourselves*, de Waal illuminates the continuity of emotions between humans and other animals with perfect examples of grief, humor, empathy, guilt, shame, pride, gratitude, and disgust. He describes emotional intelligence, which includes fairness, planning, and metacognition (knowing what you know or don't know).

As he has in the past, de Waal describes the rich complexity of chimpanzee and bonobo power and politics. He claims bonobos are like humans on good days and chimpanzees are like humans on bad days. In arguing that certain

characteristics of bonobos make them more like humans overall, however, he falls into the same problem that he accuses others of: value judgments and hierarchies of species with humans on top.

He ends with a question of sentience in all living organisms, including plants, and examines how we treat other beings on this planet. Bravo to de Waal for raising objections about factory farming and pointing out the vast numbers of nonhuman animals that perish in this industry. He pushes for social housing for monkeys in labs. He raises issues in conservation but uses problems in wildlife protection to argue for holding animals in zoos—going so far as to say that if he were an orangutan, he would opt for living in a zoo rather than the wild. He misses some topics that he could speak about, like what to do about retiring research chimpanzees—the ones outside his office window, for example. But a partial scientist advocate is better than none, and de Waal calls others to the cause. This book is a vital resource in helping us to understand our next of kin and our place in nature.

— Dr. Mary Lee Jensvold, AWI Board of Directors

SHARKWATER: EXTINCTION

2018 / Rob Stewart / 88 minutes

Humans kill an estimated 100 million sharks every year. *Sharkwater: Extinction*—the second shark documentary directed and written by the late Rob Stewart—seeks to expose practices that contribute to the cruel and unsustainable slaughter of the world’s sharks.

Stewart takes the viewer to Costa Rica, The Bahamas, Panama, and the US cities of Los Angeles, Miami, and Key Largo to show the main causes of shark population decline: shark finning, illegal fishing, and gillnets. The film reveals how lax enforcement, high demand, financial incentives, misinformation, and a mafia-like syndicate are enabling the illegal shark-fishing industry to flourish nearly unchecked.

The film crew collected cosmetics, pet food, fresh and canned seafood, fast food, and groceries in Miami to search for shark DNA. They found it in 30 percent of the pet food tested, as well as in many beauty products, fertilizer, and livestock feed.

The filmmaker’s commitment to animal welfare is on display throughout the film. Stewart is extremely cautious and respectful of sharks and their habitats and tries to approach each situation with a shark’s perspective in mind. He seeks to reverse media narratives that inspire a relentless fear of sharks and to help viewers fall in love with the animals.

Rob Stewart was a lifelong, tireless animal advocate whose life was tragically cut short during a diving incident while filming this documentary. He died pursuing his passions, but his work continues to raise awareness of the decimation of global shark populations.

Wohlleben takes a holistic and long-term view toward nature. Natural processes, he would argue, are not necessarily what you see when you walk through a forest or a grassland, or what you imagine you should be experiencing. Humans have modified so much of the world that “natural processes” become synonymous with “what I see today.” Humans have made radical changes to the distribution and population demographics of all species, large and small, in forests, shrublands, and grasslands over the past 10,000 years. For example, today’s interactions of large browsing animals like deer with trees and shrubs, insects, large predators, and even birds—coevolved over millennia—may only have passing similarity to the ecosystem dynamics of the past. And Wohlleben argues that you have to understand these original relationships before you can determine what “truly is worth protecting and what counts as a threat or even a disturbance.”

Like Aldo Leopold before him, Wohlleben uses a clock analogy to remind land managers that removing one little cog changes the working of the whole system. As he discusses bats and moths, the reaction of forests to climate change, how cranes are affecting the production of Iberian ham, and how trees are “aware” that they are being browsed, I found myself reflecting on another conservationist whose writings greatly influenced the environmental movement... Rachel Carson. Carson’s popular books on life in and near the sea prepared a generation to listen when she wrote *Silent Spring*. I hope Peter Wohlleben’s message of the secret wisdom of nature also stimulates discussion and debate.

— Dr. Robert Schmidt, AWI Scientific Committee

THE SECRET WISDOM OF NATURE

Peter Wohlleben / Greystone Books / 272 pages

What are the consequences of gray wolves being returned to Yellowstone National Park? How do salmon fertilize trees? Why aren’t we neck-deep in dead animals? Do trees migrate? How do earthworms affect wild boar populations?

“All animals and plants are held in delicate balance, and every entity has its purpose and role in the ecosystem.” With this statement, forester and educator Peter Wohlleben introduces us to his newest book, *The Secret Wisdom of Nature: Trees, Animals, and the Extraordinary Balance of All Living Things*.

Bequests

If you would like to help assure AWI’s future through a provision in your will, this general form of bequest is suggested: I give, devise and bequeath to the Animal Welfare Institute, located in Washington, DC, the sum of \$ _____ and/or (specifically described property).

Donations to AWI, a not-for-profit corporation exempt under Internal Revenue Code Section 501(c)(3), are tax-deductible. We welcome any inquiries you may have. In cases in which you have specific wishes about the disposition of your bequest, we suggest you discuss such provisions with your attorney.



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UN REPORT PAINTS STARK PICTURE ON EXTINCTION CRISIS

In May, the United Nations issued a grim assessment of the state of global biodiversity and ecosystem services, revealing that approximately 1 million animal and plant species are threatened with extinction, more than ever before in human history. Many of these species will be gone within decades, as the extinction rate is accelerating, with dramatic adverse impacts on ecosystem health and human well-being.

The UN assessment previews a report to be published later this year by the UN-sponsored Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The full report will provide a comprehensive overview of the impacts of economic development on the natural world—demonstrating that biodiversity loss has profound implications not only for the environment, but also for human economies, food security, livelihoods, health, social fabric, and quality of life.

According to the report, the five primary drivers of biodiversity loss, in order of impact, are (1) changes in land and sea use,

(2) direct exploitation of organisms, (3) climate change, (4) pollution, and (5) invasive alien species. These factors have resulted in catastrophic declines in species and ecosystems globally. Since 1900, the abundance of native species in terrestrial habitats has decreased by at least 20 percent, and 25 percent of all terrestrial, freshwater, and marine species are threatened with extinction. (See <http://bit.ly/2Jjc51D> for a full summary of the report's findings.)

The report emphasizes that to reverse these trends, transformative change is required—a fundamental reorganization of our economic, social, and technological systems, including shifts in society's values and goals. Although the threats to species have never been greater, Sir Robert Watson, IPBES chair, stated, "It is not too late to make a difference, but only if we start now at every level from local to global." As individuals, we can all help make a difference through conscientious choices about our consumption, encouraging responsible corporate action, and demanding that our elected officials take action as well. 🐾

