

## Supporting Information to Resolution 2009-4

Submitted by The Rev. Joseph Parrish

RESOLUTION 2009-4:

*Subject: The Merciful and Humane Treatment of God's Creatures*

*Be It Resolved*, That the 225th Annual Convention of the Diocese of New Jersey support the humane and merciful treatment of all of God's Creatures, with specific concern as to (a) actions that can lead to the extinction of species of animals in the wild and (b) housing and treatment of domestic animals that are grown for our food; and be it

*Further Resolved*, That the Diocese direct the Environmental Commission to provide information to educate our parishes about decisions that would affect the lives and health of the most vulnerable of animal life; and be it

*Further Resolved*, That each congregation be encouraged to refer this resolution to their outreach committee or other such venue in order to educate and disseminate information to their members and encourage environmentally friendly actions.

*SUBMITTED BY: The Rev'd Joseph R. Parrish, Jr. on behalf of the Environmental Commission of the Diocese of New Jersey*

*Statement in Support of Resolution 2009-4 by Proposers:*

The Christian Tradition holds that God has created the earth and all that lives herein. It teaches that all God created is "good", and further, that we are held accountable for the right stewardship of God's creation.

Endangered species are rapidly becoming extinct, several thousand species each year. As examples, the red knot bird that traverses between Tierra del Fuego, Chile, and the Canadian Arctic with a vital stopover in Cape May, New Jersey is one specific local species under siege from industrial pollution and loss of habitat, [but particularly due to overfishing of horseshoe crabs and the crab eggs]. And overdevelopment of New Jersey's virgin lands has put the indigenous bog turtle's existence in jeopardy.

Food animals continue to be cruelly and mercilessly treated: pregnant sows are totally confined in gestation crates, veal calves are penned in veal crates and are barely able to move around or even stand up; chickens are crammed together for life into battery cages in a space no larger than this page; geese are brutally force fed to make *foie gras*; grazing animals are fed antibiotics to increase size, that are then contained within their meat, passing these antibiotics on to consuming humans who become more and more vulnerable to resistant bacterial strains. Huge factory farms house animals in deplorable and unsanitary conditions resulting in foul run off and polluted ground water. Stressed food animals produce stress hormones in their flesh which are unsafe for human consumption.

By education we can make a real difference in the level of awareness of these problems and practices. Congregations can become aware of the most vulnerable of God's creation and respect the dignity of "*all things bright and beautiful, all creatures great and small, all things wise and wonderful, the Lord God made them all*" (Cecil Frances Alexander, Hymn 405 in *Hymnal 1982*).

[Additional backup information below:]

*ENDANGERED SPECIES*

<http://web.njit.edu/~ronkowitz/ENJ/define.htm>

Extinction is a natural part of life on this planet. But when extinctions are caused by the actions of people, we upset that natural order. It is estimated that 3 species of plant or animal life become extinct every hour of every day on our planet. More than 30 species become extinct while you sleep at night. That means that more than 20,000 species reach extinction every year.

What does ENDANGERED mean?

Animals (or plants) that are endangered are in danger right now of becoming EXTINCT (which means they would no longer exist) and need our IMMEDIATE attention and protection! In New Jersey there are 42 animal species currently listed as endangered.

Then what does it mean when you say a species is THREATENED?

When an animal or plant is listed as threatened it means that it may become endangered if steps are not taken to protect it. It is a kind of warning that there is a problem. Some animals, such as the American Bald Eagle, were listed as threatened and then became endangered. After action was taken to protect them and reestablish them in areas where they were endangered, they were moved back to the threatened list. That is a good sign! It means they are "coming back" from the brink of extinction. This is especially true of the bald eagle in New Jersey.

The U.S. Fish and Wildlife Service classifies about a quarter of the Nation's 836 species of migratory birds as endangered, threatened, or "of conservation concern." Habitat loss and degradation are the primary threats, but other sources of human-caused mortality exacerbate declining bird populations. Collision and electrocution at man-made structures, poisoning from environmental contaminants, and predation from feral and outdoor cats collectively kill many millions of birds each year.

All Photographs: USFWS

Piping Plover (*Charadrius melodus*)

The piping plover is one of New Jersey's endangered beach nesters. The piping plover is named for its melodic mating call. It is a small, pale-colored North American shorebird. The bird's light sand-colored plumage blends in with sandy beaches and shorelines.

There are three populations of piping plovers in the United States. The most endangered is the Great Lakes breeding population, which encompasses only 32 breeding pairs in 2000. The Northern Great Plains and Atlantic Coast populations are classified as threatened. All piping plovers winter along the southeast and Gulf coasts and are classified as threatened in their wintering habitat. In recent decades, piping plover populations have drastically declined, especially in the Great Lakes Region. Breeding habitat has been replaced by shoreline development and recreational uses causing plover numbers to plummet. Similar threats face the species on its wintering grounds where loss of habitat threatens the ability of these birds to survive to the next breeding season.

They grow to about 6-7 inches long and are grayish with white under parts and orange legs. They only live around sandy beaches! They nest in sand and lay 4, gray or buff eggs that are lightly spotted with black. They mainly feed on insects and small aquatic species that are near the water line.

Only 93 nesting pairs were recorded in 1998 (down from 115 in '97) but productivity was up to 1.04 per nest after a terrible 1998 season when only .42 birds fledged from nests.

[http://web.njit.edu/~ronkowitz/ENJ/birds.htm#PIPING PLOVER](http://web.njit.edu/~ronkowitz/ENJ/birds.htm#PIPING_PLOVER)

[http://ga1.org/njaudubon/alert-description.tcl?alert\\_id=7763950](http://ga1.org/njaudubon/alert-description.tcl?alert_id=7763950)

Each spring, red knots make a vital stop on the Delaware Bay along their migratory route, spending about two weeks fattening up on protein-rich horseshoe crab eggs before making the last leg of their journey.

If they aren't able to find enough horseshoe crab eggs to eat, they will be too weak to breed when they finally arrive at their Arctic breeding grounds in northern Canada.

Unfortunately, horseshoe crabs have long been victims of overfishing due to increased demand for eel and conch (horseshoe crabs are used as bait).

In 2005, New Jersey officials put a hold on the state's horseshoe crab harvest in order to increase the supply of eggs on the beach. And now that the moratorium has expired, they are working to pass a new regulation to extend it.

Records show that the red knot population is in worse shape now than it was two years ago -- there are fewer birds and they're having more trouble gaining the weight they need to migrate and breed successfully.

The good news is that a moratorium can work -- horseshoe crabs have been bouncing back since the harvesting ban was instituted. But it can only work if it is left in place long enough.

Since horseshoe crabs are long-lived and take years to reach breeding age, officials recognize the need for long-term recovery efforts to ensure that the moratorium is in place long enough to make a real difference for these struggling birds.

It's clear that the red knot is in crisis -- the rare rufa subspecies has plummeted from 100,000 a decade ago to approximately 33,000 today. Scientists predict that they could go extinct within five years if drastic measures aren't taken!

### Ways You Can Help

The good news is that your community can help protect migratory birds for the continued enjoyment of residents and visitors alike.

Become familiar with bird conservation plans such as the Partners in Flight, Atlantic Coast Joint Venture, U.S. Shorebird Conservation Plan, North American Waterbird Conservation Plan, North American Bird Conservation Initiative, Important Bird Areas, and New Jersey Wildlife Action Plan.

- Identify and pursue opportunities to protect, manage, and restore bird habitats and to implement provisions of the bird conservation plans listed above. Technical and material assistance may be available through federal and State programs.
- Work with the U.S. Fish and Wildlife Service (Service) and the New Jersey Office of Smart Growth, Green Acres Program, and Division of Land Use Regulation to protect important bird habitats. Support acquisition of the most sensitive areas, and consider supplementing State land-use regulations with complementary ordinances and zoning.
- Join other municipalities, the Service, the New Jersey Division of Fish and Wildlife, and the U.S. Army Corps of Engineers in the *Coastal Beach Management Initiative* to protect birds that depend on sandy beach habitats.
- Enforce and strengthen dog leash laws in sensitive wildlife habitats, support the *Cats Indoors* campaign, and consider an ordinance to prohibit free-roaming cats.
- Regulate the construction of structures that pose a potential electrocution or collision hazard to migratory birds.
- For new or replacement power lines, require *Avian Protection Plans* and consistency with the *Suggested Practices for Avian Protection on Power Lines*.
- For proposed communication towers, require consistency with the Service's tower siting guidelines, and coordinate with the Service on structures over 200 feet tall.
- For proposed wind turbines, require consistency with Service guidelines and coordinate with the Service during project review.
- For glass windows in existing buildings and proposed buildings two stories or less, encourage the adoption of practices to minimize bird collisions such as glass coverings and careful landscaping. For proposed buildings three stories or taller, coordinate with the Service during project review and require practices such as turning off indoor lights, minimizing and down-shielding outdoor lights, and using bird-friendly glass or glass coverings.
- Promote establishment of bird habitats in backyards, corporate parks, and golf courses, emphasizing native vegetation.
- Limit the use of pesticides, herbicides, and fertilizers. Promote proper disposal of household chemicals and hazardous waste.

### New Jersey's Endangered and Threatened Wildlife

<http://www.state.nj.us/dep/fgw/tandespp.htm>

Endangered Species are those whose prospects for survival in New Jersey are in immediate danger because of a loss or change in habitat, over-exploitation, predation, competition, disease, disturbance or contamination. Assistance is needed to prevent future extinction in New Jersey.

BIRDS			
Endangered		Threatened	
<a href="#">Bittern, American</a>	<i>Botaurus lentiginosus</i> BR	<a href="#">Bobolink</a>	<i>Dolichonyx oryzivorus</i> BR
<a href="#">Eagle, bald</a>	<i>Haliaeetus leucocephalus</i> BR	<a href="#">Eagle, bald</a>	<i>Haliaeetus leucocephalus</i> NB
<a href="#">Falcon, peregrine</a>	<i>Falco peregrinus</i>	<a href="#">Hawk, Cooper's</a>	<i>Accipiter cooperii</i>
<a href="#">Goshawk, northern</a>	<i>Accipiter gentilis</i> BR	<a href="#">Hawk, red-shouldered</a>	<i>Buteo lineatus</i> NB
<a href="#">Grebe, pied-billed</a>	<i>Podilymbus podiceps</i>	<a href="#">Night-heron, black-crowned</a>	<i>Nycticorax nycticorax</i> BR
<a href="#">Harrier, northern</a>	<i>Circus cyaneus</i> BR	<a href="#">Night-heron, yellow-crowned</a>	<i>Nyctanassa violaceus</i>
<a href="#">Hawk, red-shouldered</a>	<i>Buteo lineatus</i> BR	<a href="#">Knot, red</a>	<i>Calidris canutus</i> BR
<a href="#">Owl, short-eared</a>	<i>Asio flammeus</i> BR	<a href="#">Osprey</a>	<i>Pandion haliaetus</i> BR
<a href="#">Plover, piping</a>	<i>Charadrius melodus</i> **	<a href="#">Owl, barred</a>	<i>Strix varia</i>
<a href="#">Sandpiper, upland</a>	<i>Batramia longicauda</i>	<a href="#">Owl, long-eared</a>	<i>Asio otus</i>
<a href="#">Shrike, loggerhead</a>	<i>Lanius ludovicianus</i>	<a href="#">Rail, black</a>	<i>Laterallus jamaicensis</i>
<a href="#">Skimmer, black</a>	<i>Rynchops niger</i> BR	<a href="#">Skimmer, black</a>	<i>Rynchops niger</i> NB
<a href="#">Sparrow, Henslow's</a>	<i>Ammodramus henslowii</i>	<a href="#">Sparrow, grasshopper</a>	<i>Ammodramus savannarum</i> BR
<a href="#">Sparrow, vesper</a>	<i>Pooecetes gramineus</i> BR	<a href="#">Sparrow, Savannah</a>	<i>Passerculus sandwichensis</i> BR
<a href="#">Tern, least</a>	<i>Sterna antillarum</i>	<a href="#">Sparrow, vesper</a>	<i>Pooecetes gramineus</i> NB
<a href="#">Tern, roseate</a>	<i>Sterna dougallii</i> **	<a href="#">Woodpecker, red-headed</a>	<i>Melanerpes erythrocephalus</i>
<a href="#">Wren, sedge</a>	<i>Cistothorus platensis</i>		
**Federally endangered or threatened			
BR - Breeding population only; NB - non-breeding population only			

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<http://www.endangeredspecie.com/states/nj.htm>

E=Endangered

T=Threatened

Status

Listing

- E Bat, Indiana (*Myotis sodalis*)
- T Eagle, bald (lower 48 States) (*Haliaeetus leucocephalus*)
- E Plover, piping (except Great Lakes watershed) (*Charadrius melodus*)
- E Puma, eastern (*Puma concolor cougar*)
- E Sea turtle, hawksbill (*Eretmochelys imbricata*)
- E Sea turtle, Kemp's ridley (*Lepidochelys kempii*)
- E Sea turtle, leatherback (*Dermochelys coriacea*)
- T Sea turtle, loggerhead (*Caretta caretta*)

- E Sturgeon, shortnose (*Acipenser brevirostrum*)
- E Tern, roseate (northeast U.S. nesting pop.) (*Sterna dougallii dougallii*)
- T Tiger beetle, northeastern beach (*Cicindela dorsalis dorsalis*)
- T Turtle, bog (northern) (*Clemmys muhlenbergii*)
- E Wedgemussel, dwarf (*Alasmidonta heterodon*)
- E Whale, finback (*Balaenoptera physalus*)
- E Whale, humpback (*Megaptera novaeangliae*)
- E Whale, right (*Balaena glacialis*)

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<http://www.state.nj.us/dep/fqw/tandespp.htm>

MAMMALS	
Endangered	
<a href="#">Bat, Indiana</a>	<i>Myotis sodalis</i> **
<a href="#">Bobcat</a>	<i>Lynx rufus</i>
<a href="#">Whale, black right</a>	<i>Balaena glacialis</i> **
<a href="#">Whale, blue</a>	<i>Balaenoptera musculus</i> **
<a href="#">Whale, fin</a>	<i>Balaenoptera physalus</i> **
<a href="#">Whale, humpback</a>	<i>Megaptera novaeangliae</i> **
<a href="#">Whale, sei</a>	<i>Balaenoptera borealis</i> **
<a href="#">Whale, sperm</a>	<i>Physeter macrocephalus</i> **
<a href="#">Woodrat, Allegheny</a>	<i>Neotoma floridana magister</i>
**Federally Endangered	

<http://www.earthsendangered.com/list.asp>

gives the names of all animals on the federal endangered species list.

<http://www.state.nj.us/dep/fqw/ensphome.htm>

The Endangered and Nongame Species Program's (ENSP) mission is to actively conserve New Jersey's biological diversity by maintaining and enhancing endangered, threatened and nongame wildlife populations within healthy, functioning ecosystems.

The program is responsible for the protection and management of nearly 500 wildlife species found in the Garden State. These include the 73 species currently listed as endangered or threatened.

**FOOD ANIMALS**

<http://allcreatures.hsus.org/campaignendorsements/default.aspx>

[http://www.farmsanctuary.org/get\\_involved/alert\\_cruel\\_confinement.html](http://www.farmsanctuary.org/get_involved/alert_cruel_confinement.html)

**Action Alerts & Updates**

End Cruel Confinement Nationwide: Enact a Prevention of Farm Animal Cruelty Law

## The Problem

Farm animals in the U.S. are subjected to intensive confinement and crowded together so tightly that they cannot even turn around or stretch their limbs.

## Gestation Crates

The majority of sows bred to provide piglets to the pork industry spend most of their lives inside gestation crates, 2-foot-wide metal enclosures that severely restrict the animals' movement and thwart their natural behaviors.

## Battery Cages

Egg-laying hens are typically crowded together into tiny cages, where each bird is given an area smaller than an 8½-by-11-inch sheet of paper on which to live. The hens can barely move and cannot walk or even stretch their wings.

## Veal Crates

Crated veal calves are normally confined inside 2-foot-wide enclosures for their entire lives. Usually chained by their necks to the front of the stall, these animals cannot even turn around, stretch their limbs, or lie down comfortably.

<http://www.flickr.com/photos/farmsanctuary1/collections/72157604554682603/>

shows the atrocious conditions in which food animals are kept. *Caution:* the photos are quite graphic and disturbing.

## Effects of Stress On Meat Quality

There are a variety of environmental conditions which can cause stress in animals. Some of these include extremes in temperature, humidity, light, sound, and confinement. Other stressors are excitement, fatigue, pain, hunger, thirst. Movement to unfamiliar surroundings can also cause stress in animals. Stress before slaughter can cause undesirable effects on the end quality of meat such as pale, soft, exudative (PSE) meat and dark firm dry (DFD) meat.

## Effects of Stress on the Live Animal

An animal experiencing stress will have physiological changes including changes in heart rate, blood pressure, body temperature and respiration. Several stress hormones are released into the blood stream including epinephrine and norepinephrine. Epinephrine helps to break down glycogen (stored form of glucose in the liver and muscles) into glucose. The stored chemical energy in glucose and oxygen are converted to energy for the animals muscles. The normal byproducts of this conversion are carbon dioxide and water. When there is not enough oxygen present for this conversion, glucose is still converted to energy, but the byproducts are lactic acid and water.

## Effects of Stress on Final Meat Quality

To understand the effects of stress on final meat quality, it is important to understand the relationship of glycogen and lactic acid to pH decline in meat after slaughter. An animal which has not been stressed will have normal levels of glycogen in its body. When the animal is slaughtered and exsanguinated, the metabolic process continues, however there is no longer circulating oxygen. Without the presents of oxygen, the breakdown of glycogen/glucose results in a buildup of lactic acid which then causes a drop in pH of the meat.

The final quality of meat is greatly affected by the rate of pH decline in the meat after slaughter. If there was a great lactic acid buildup before slaughter, the pH of the meat declines too quickly after slaughter and a Pale, Soft, Exudative (PSE) condition may develop. As suggested by the name, the affected meat is pale, soft, and fluid may drip from the surface.

At the other extreme, if the animal is glycogen depleted before slaughter the pH may not drop quickly enough after slaughter because there is not enough lactic acid produced. In this case the meat will be very dry and dark in color. This condition is known as Dark Firm Dry (DFD) meat. An additional problem with this type of meat is that it is more susceptible to spoiling since it lacks the lactic acid which normally helps retard growth of microorganisms after slaughter. Note that glycogen deficiency may also be the result of too much physical activity or inadequate diet before slaughter.

## Prevention of Stress Related Meat Conditions

Proper handling of animals before and during slaughter can greatly reduce their discomfort and stress. This includes proper feeding and rest as well as use of proper techniques for moving and transporting animals.

### *Don't Stress*

Stress plays a major part in the development of animal respiratory disease, as well as an important role in herd health for the period of time right after calves arrive at the feedlot. While stress is an inevitable part of this early feeding period, proper handling and management will result in lower morbidity, mortality and medical costs.

Calves will start on feed quicker and gain better, which means better carcass quality and fewer days on feed. And low-stress handling means higher real-dollar returns on your investment. Here's an overview of how psychological stress affects animals, as well as a few tips on how to minimize its negative effects.

### Three types of stress

Defining and measuring stress is difficult, because what's stressful to one individual may be a positive experience for another. But the broadest way to define stress is to describe the changes that take place within an animal in response to a stimulus - for example, changes in heart rate, blood pressure, cell function or hormone levels.

Stressful events occur in three general forms:

1. Stressful events of short duration and moderate intensity - branding or tagging, for example - elicit short-term adrenal responses that generally don't affect long-term health. In such a "sympatho-adrenal response," the adrenal hormones epinephrine and norepinephrine are released along with signals from the nervous system that increase blood pressure and heart rate and divert blood and energy to help the animal "fight" or "flee."
2. Stressors that last long enough and are large enough induce a secondary stress response in addition to the sympatho-adrenal response. The effects of such acute stress or distress are more long term.

The condition is characterized by increased release of glucocorticoid hormones from the adrenal gland. Normally, glucocorticoids circulate throughout the body at low levels and play an important role in energy metabolism. Abnormal elevation of glucocorticoids changes these dynamics.

In stressful situations, increased glucocorticoid concentrations help mobilize energy stores to sustain a fight for survival, but also negatively affect the neuro-chemical pathways that regulate the immune, digestive and reproductive systems. This complex interaction of hormones in the hypothalamic pituitary region causes a decrease in the production of reproductive and growth hormones.

The trickle-down effects are a disruption of reproductive function and metabolic changes that cause anorexia and catabolization or breakdown of protein. Heart rate and metabolism increase, and energy used for things like immune function, reproduction, digestion and growth is redirected to the muscular system to help the animal fight or flee what it sees as dangerous.

Research shows that stress suppresses the immune system by inhibiting the maturation, activation and function of most types of cells in the immune system. This negatively affects cattle two ways. They're more susceptible to disease for a period of time after a stressful event, and vaccines administered to stressed cattle might not produce a reaction large enough to secure immunity.

The result is that for about a week after a stressful event, disease resistance is lower, food intake and protein accrual are reduced and reproductive cycles may be disrupted.

3. Chronic stress is an extension of acute stress; the same mechanisms control both types of stress, but chronic stress is constant.

An example of chronic stress is a "buller" steer that is selected and ridden constantly by its permeates. Being constantly under inescapable physical and psychological stress can overload the adrenal and other organ systems to

exhaustion. This makes the animal more susceptible to disease, and unable to carry out the metabolic processes necessary for survival.

If their environment isn't changed to alleviate the source of stress, chronically stressed cattle will lose weight and often die from sickness or exhaustion.

#### Shipping fever

Shipping fever, or bovine respiratory disease (BRD), is the number-one cause of morbidity and mortality in feedlot cattle in the first 45 days on feed. Largely caused by two bacteria, *Mannheimia Haemolytica* and *Histophilus Somnus*, these bacteria are normally present in the feedlot environment, but a healthy immune system is generally strong enough to prevent infection.

In times of acute stress, such as transportation or extensive handling, however, the immune system is suppressed, giving these opportunistic bacteria an opening.

The most stressed cattle in the industry are calves weaned and transported to the auction, then transported again after marketing. Each event is stressful by itself; combined with exposure to several new diseases, they're a surefire recipe for BRD.

As many as 40% of such cattle arriving at a feedlot require subsequent treatment for BRD, making mass administration of antibiotics common upon feedlot arrival. While this aids the cattle in fighting disease during the period of immune suppression following auction and transport, such mass medication is becoming increasingly unpopular because of its cost and consumer fears of developing antibiotic-resistant bacteria. This is leading buyers to look for ways to minimize stress before cattle get to the feedlot so that mass medication isn't necessary.

#### Minimizing stress

Handling and transporting cattle can't be avoided, but the stressors can be managed to minimize their impacts.

Picture at: [http://www.hsus.org/web-files/PDF/religion/allcreatures\\_pstcrd\\_lowrez.pdf](http://www.hsus.org/web-files/PDF/religion/allcreatures_pstcrd_lowrez.pdf)