

# DEPARTMENT of the INTERIOR

news release

FISH AND WILDLIFE SERVICE

FEATURE MATERIAL

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## MAN-MADE DISEASE KILLS 2 MILLION WATERFOWL ANNUALLY

Evidence amassed by the Interior Department's U.S. Fish and Wildlife Service indicates that lead poisoning may be the most common disease in waterfowl across the country, Dr. Milton Friend, Director of the National Wildlife Health Laboratory, Madison, Wisconsin, said today.

The man-made disease erupts after waterfowl ingest spent lead shot--deposited at the rate of 3,000 tons annually--which breaks down to lead salts and enters the bloodstream with lethal effects. An estimated 2 million birds are victims each year.

The Service's laboratory regularly samples specimens picked up throughout the United States. "Regardless of where we get the specimens from, a representative number of those dead birds will be positive for lead poisoning," Dr. Friend said. "We also look at all potential causes of death."

Laboratory findings disclosed a high prevalence of lead in samples from California to Massachusetts, and from South Dakota to Texas.

Dr. Friend said lead poisoning is a chronic disease process. Victims experience oxygen depletion, wing droop, bile staining of the vent, and other disorders that can be detected by trained diagnosticians. Ingested lead shot is dissolved by gastric juices and the grinding action of the duck's gizzard.

(more)

Lead poisoning primarily occurs after the hunting season, a time when sportsmen are not on the marshes to observe the deaths. During the hunting season, the pressure of human activity keeps the birds moving, thus prohibiting normal bird use of areas being hunted. Following the season, the birds resume natural feeding habits, which involves a greater use of hunted areas and exposes them to lead shot at a much higher rate.

#### Weather

Weather is an extreme variable that has a lot to do with the eruption of lead poisoning on a given marsh. During spring drought cycles waterfowl concentrate on limited areas. These water areas tend to be the deeper parts of the marsh--sites around which hunting generally occurs and which contain the major deposition of lead pellets. As a result, most waterfowl that are lost to lead poisoning die in the springtime, particularly during drought conditions. Spring losses are particularly significant because they further reduce the potential breeding population for the following year.

At Mattamuskeet National Wildlife Refuge in eastern North Carolina more than 6,000 whistling swans have been lost to lead poisoning in the last 5 years. These birds were not hunted. They simply picked up lead pellets which were deposited several years ago when waterfowl hunting for other species was permitted on the refuge.

Arguments that weigh differences between hard and soft-bottom wetlands are often inconclusive in analyzing the total picture of lead poisoning. Weather, diet, health, and stress are important factors that figure in waterfowl's vulnerability to lead poisoning.

Dr. Friend is uncomfortable with the common viewpoint which suggests that lead shot disappears in a soft-bottom marsh and is not available to the birds. "I can cite a die-off we had at a marsh north of Aberdeen, South Dakota. It was a very soft and muddy area that had been shot over for years before it was made into a State wildlife refuge.

"The species composition changed from puddle ducks to snow geese. Snow geese, because of their feeding habits, would root through the muck like pigs. They actually rooted through the soft bottom and picked up lead shot. We lost about 2,500 snow geese to a problem that started out as lead poisoning but ended up as avian cholera, which is another area of concern to us."

Die-offs of lead-poisoned birds have been associated with other disease problems, according to Dr. Friend. A chronic disease such as lead poisoning puts great stress on a bird. Stress encourages other diseases. The start of the die-off may seem to be lead; however, suppression of immune response and other interactions can cause a bird that may be a carrier of avian cholera to start shedding the disease organism, which will subsequently cause a much more serious problem in terms of infectious disease if it takes hold on the flock. But the primer, the underlying factor in such a situation begins as lead shot in the bird.

### Secondary Poisoning

Lead poisoning doesn't stop, necessarily, with the bird that dies of the disease. The Service now has several cases on record to confirm secondary lead poisoning in bald eagles. Last year Service observers witnessed 13 bald eagles feeding on the goose die-off in southern Illinois. Dr. Friend tends to believe the secondary hazard of lead poisoning does not come from ingestion of lead shot by the raptor. Eagles devour soft organs that tend initially to concentrate the lead. He said lead at 100 parts per million could be ingested by a single duck or goose. A bald eagle that consumes 15 to 20 ducks a day, not uncommon at the site of an undisturbed die-off, is getting a substantial dose of lead.

### Mortality

Every year around 20 million waterfowl die during migration--from Canada to wintering grounds and back to breeding grounds in Canada--from various causes that do not include kills by hunting. Included in this mortality, though, are 1.6 to 2.4 million birds that die of lead poisoning.

In recent years the annual harvest of waterfowl in the United States has been around 15 million.

Man's destruction of wetlands further compounds the plight of waterfowl. In the grand cumulative sense, the burden of lead poisoning is a stark loss.

"The evidence is already staggering and we're just beginning to find out what is involved. We--sportsmen, professional wildlifers, outdoor writers, naturalists--have a lot at stake here. Losses to lead poisoning are preventable. And it's a problem we can solve by eliminating the deposition of lead shot across the land," he offered.

The steel shot regulations in designated "hot spot" areas in the Atlantic and Mississippi Flyways this year are, of course, aimed at lessening the lead available to waterfowl and thereby reducing the lead poisoning that is robbing us of literally millions of birds each year, the Service says.

Resolute in his belief that nontoxic shot will be a boon to waterfowl conservation, Dr. Friend announced that he would welcome interested persons in late winter and spring periods to observe the sampling of specimens at the National Wildlife Health Laboratory in Madison.