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Patuxent Wildlife Research Center

Poisoning of Migratory Birds at Contaminated Sites

Trumpeter swan in Oklahoma later diagnosed with zinc poisoning

Historic lead mine in southeastern Missouri

Songbird (Kentucky warbler) captured near lead mine in southeastern Missouri

- ***The Challenge:*** The Department of the Interior (DOI) and the National Oceanic & Atmospheric Administration are trustees for a wide variety natural resources that belong to all Americans. Additional natural resources are overseen by Native American tribes, states, and other federal agencies. Migratory birds are an example of a trust species for DOI, under the US Fish and Wildlife Service. When wild birds have been injured by pollution, DOI may sue the party responsible for direct injury to birds, or for loss of habitat. The recovered damages are usually spent in restoring or buying habitat; in some instances funds are spent to benefit wildlife populations directly. Consequently, biologists from the USGS and the Fish and Wildlife Service have been studying various sites contaminated from mining and smelting of zinc, lead and other metals to determine if birds have been injured. Data on such injuries provide the basis for possible litigation and provide benchmarks for restoration activities.

- ***The Science:*** Lead and zinc in mining tailings and other waste products of processing ore have often been spread on land or dumped in rivers, creating toxic hazards to wildlife. In the Coeur d'Alene River Basin in northern Idaho, thousands of waterfowl, especially tundra swans, have been poisoned by ingesting lead found in contaminated sediment as they feed in the wetlands. Current work is demonstrating that ground-feeding songbirds such as robins are also being poisoned along the Coeur d'Alene River. The robins ingest lead as they feed on soil invertebrates. The Tri-State Mining District in Oklahoma, Kansas and Missouri, one of the world's largest sources of zinc and lead, is known for its piles huge of "chat" (waste rock left over from processing ore) that can be seen from miles away. Songbirds living close to the piles show evidence of lead poisoning, and waterfowl in the adjacent waters have been diagnosed with zinc poisoning.

- ***The Future:*** The restoration program provides impressive benefits to wildlife. Hundreds of millions of dollars have been recovered from the principal parties responsible for the damage at the mining sites discussed. This money, at no cost to the taxpayers, will be judiciously invested to purchase habitat for wildlife and to restore injured lands.

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