

**Lead and Wildlife:  
A Bibliography of Selected Citations**

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## Summary and Disclaimer

Primarily using the United States Fish and Wildlife Service's searchable internet database, <http://fa.r9.fws.gov/r9fwrs/>, 80 citations were collected and listed in this abridged bibliography on the subject of lead and wildlife. The intent of this document is to provide basic information for public dissemination and awareness purposes, and will not be sold. It is not a comprehensive list of papers on the subject of lead and wildlife, nor is it a comprehensive list of species affected by environmental lead. Instead it is a "cross section" of the literature showing a long list of papers, which describe somehow or another how our wildlife is affected by lead poisoning.

Birds are apparently exposed to environmental lead more so than other classes of animals, however, mammals amphibians, and fish have also been exposed. Game birds as well as non-game birds are affected. Through various ecological pathways, not described here, many species of wildlife have been reported affected by this contaminant. Some of the common names of wildlife species affected by lead historically and presently include: Wood Duck, Ring-necked Duck, Northern pintail, Mottled Duck, Blue-winged Teal, Merganser, Eider, Canada Geese, Snow Geese, Trumpeter Swan, Mute Swan, Brown Pelicans, Gull species, Tern species, Heron species, Sandhill Cranes, Rail species, Common Loon, Grouse and Quail species, Woodcock, Rock Dove, Mourning Dove, Bald Eagles, California Condors, Turkey Vultures, Red-tailed Hawks, Sharp-shinned Hawks, American Kestrels and other falcons, Owls, Cattle, Deer, Squirrels, Raccoons, Fur seals, Bats, Turtles, Frogs, and Rainbow Trout. Essentially any animal that ingests lead will be affected and may subsequently die. Though this document does not deal with the causes or affects of lead poisoning in humans, it is important to point out that *we* are not immune to this contaminant any more than our wildlife is.

- 1) **TITLE:** Bald Eagles and Waterfowl: The Lead Shot Connection  
**AUTHOR:** Pattee, O.H.; Hennes, S.K.  
**PUBL.:** 48th N. Amer. Wildl. Conf.  
**PUB DATA:** n.d. pp. 230-237
  
- 2) **TITLE:** Heavy Metal Concentrations in Ducks Wintering in the Lower Chesapeake Bay Region  
**AUTHOR:** Di Giulio, R.T.; Scanlon, P.F.  
**PUBLISHER:** Trans. Northeast Sect. Wildl. Soc.  
**SCOPE NOTE:** Abstract  
**PUBL. DATA:** n.d. pp. 111-112. Vol. 38
  
- 3) **TITLE:** Tissue Lead Concentrations and Blood Characteristics of Rock Doves  
**AUTHOR:** Kendall, R.J.; Morehead, W.B.; Jones, J.T.; Scanlon, P.F.  
**PUBLISHER:** Virginia Journal of Science  
**SCOPE NOTE:** Abstract of paper  
**PUBL. DATA:** pp. 100. Vol. 31, No. 4
  
- 4) **TITLE:** Lead Concentrations in Ruffed Grouse Collected from Southwestern Virginia  
**AUTHOR:** Kendall, R.J.; Norman, G.R.; Scanlon, P.F.  
**PUBL.:** Virginia Journal of Science  
**PUB DATA:** pp. 100. Vol 31, No. 4
  
- 5) **TITLE:** Lead and Mercury in Lesser Snow Geese Wintering in Louisiana  
**AUTHOR:** West, L.D.; Newsom, J.D.  
**PUBL.:** Proc. Ann. Conf. S.E. Assoc. Fish & Wildl. Agencies  
**PUB DATA:** n.d. pp. 180-187. Vol. 31
  
- 6) **TITLE:** The Availability of Lead Shot to Waterfowl on Mattamuskeet NWR and Its Management Implications.  
**AUTHOR:** Voros, D.J.; Hagan, P.D.  
**PUBL.:** U.S. Fish and Wildlife Service
  
- 7) **TITLE:** Ingested Shot in Waterfowl on Sauvie Island Wildlife Area, 1980-81  
**AUTHOR:** Vendshus, S.M.  
**PUBL.:** Oregon Department of Fish and Wildlife  
**PUB DATA:** n.d. 11 pp.
  
- 8) **TITLE:** Lead Shot Poisoning of American Birds  
**AUTHOR:** Stickel, W.H.  
**PUBL.:** Patuxent Wildlife Research Center  
**PUB DATA:** n.d. 8 pp.
  
- 9) **TITLE:** Lead Shot: Its Settlement, Oxidation, and General Availability to Waterfowl  
**AUTHOR:** Low, J.B.; Lind, G.; Spry, R.  
**PUB DATA:** n.d. 20 pp.
  
- 10) **TITLE:** Ingestion of Lead and Nontoxic Shotgun Pellets by Ducks in the Mississippi Flyway  
**AUTHOR:** Anderson, W.L.; Havera, S.P.; Zercher, B.W.  
**PUBL.:** J. of Wildl. Manage.  
**PUB DATA:** 2000. pp. 848-857 (10 pp.). Vol. 64, No. 3
  
- 11) **TITLE:** Lead Poisoning of Spectacled Eiders (*Somateria fischeri*) and a Common Eider (*Somateria mollissima*) in Alaska  
**AUTHOR:** Franson, J.C.; Petersen, M.R.; Meteyer, C.U.; Smith, M.R.  
**PUBL.:** Journal of Wildl. Diseases  
**PUB DATA:** 1995. pp. 268-271 (4 pp.). Vol. 31, No. 2 <1>

- 12) **TITLE:** Effects of Lead-contaminated Surface Water from a Trap and Skeet Range on Frog Hatching and Development  
**AUTHOR:** Stansley, W.; Kosenak, M.A.; Huffman, J.E.; Roscoe, D.E.  
**PUBL.:** Environ. Pollution  
**PUB DATA:** 1997. pp. 69-74 (6 pp.). Vol. 96, No. 1
- 13) **TITLE:** Environmental Contaminant Levels in Sharp-shinned Hawks from the Eastern United States  
**AUTHOR:** Wood, P.B.; Viverette, C.; Goodrich, L.; Pokras, M.; Tibbott, C.  
**PUBL.:** J. Raptor Res.  
**PUB DATA:** 1996. pp. 136-144 (9 pp.). Vol. 30, No. 3
- 14) **TITLE:** An Ecological Risk Assessment of Lead Shot Exposure in Non-Waterfowl Avian Species: Upland Game Birds and Raptors  
**AUTHOR:** Kendall, R.J.; Lacher, T.E.; Bunck, C.; Daniel, B.; Driver, C.; Grue, C.E.; Leighton, F.; Stansley, W.; Watanabe, P.G.; Whitworth, M.  
**PUBL.:** Environ. Toxicol. Chem  
**PUB DATA:** 1996. pp. 4-20 (17 pp.). Vol. 15
- 15) **TITLE:** Winter Survival of Immature Canvasbacks in Inland Louisiana  
**AUTHOR:** Hohman, W.L.; Moore, J.L.; Franson, J.C.  
**PUBL.:** J. Wildl. Manage.  
**PUB DATA:** 1995. pp. 384-392 (10 pp.). Vol. 59, No. 2
- 16) **TITLE:** Seasonal Ingestion of Toxic and Nontoxic Shot by Canada Geese  
**AUTHOR:** DeStefano, S.; Brand, C.J.; Samuel, M.D.  
**PUBL.:** Wildl. Soc. Bull.  
**PUB DATA:** 1995. pp. 502-506 (6 pp.). Vol. 23, No. 3 <1>
- 17) **TITLE:** Accumulation in and Effects of Lead and Cadmium on Waterfowl and Passerines in Northern Idaho  
**AUTHOR:** Blus, L.J.; Henny, C.J.; Hoffman, D.J.; Grove, R.A.  
**PUBL.:** Environ. Pollution  
**PUB DATA:** 1995. pp. 311-318 (8 pp.). Vol. 89, No. 3
- 18) **TITLE:** Lead in Hawks, Falcons and Owls Downstream from a Mining Site on the Coeur D'Alene River, Idaho  
**AUTHOR:** Henny, C.J.; Blus, L.J.; Hoffman, D.J.; Grove, R.A.  
**PUBL.:** Environ. Monitoring and Assessment  
**PUB DATA:** 1994. pp. 267-288 (22 pp.). Vol. 29
- 19) **TITLE:** Waterfowl Hunter Compliance with Nontoxic Shot Regulations in Illinois  
**AUTHOR:** Havera, S.P.; Hine, C.S.; Georgi, M.M.  
**PUBL.:** Wildl. Soc. Bull.  
**PUB DATA:** 1994. pp. 454-460 (8 pp.). Vol. 22, No. 3
- 20) **TITLE:** A Review of Lead Poisoning in Swans  
**AUTHOR:** Blus, L.J.  
**PUBL.:** Comp. Biochem. Physiol.  
**PUB DATA:** 1994. pp. 259-267 (10 pp.). Vol. 108C, No. 3
- 21) **TITLE:** Lead Poisoning in a Mississippi Sandhill Crane  
**AUTHOR:** Franson, J.C.; Hereford, S.G.  
**PUBL.:** Wilson Bull.  
**PUB DATA:** 1994. pp. 766-768 (4 pp.). Vol. 106, No. 4

- 22) **TITLE:** Soil Ingestion and Lead Concentration in Wildlife Species  
**AUTHOR:** Connor, E.E.  
**PUB DATA:** 1993. 109 pp.
- 23) **TITLE:** Marine Birds and Trace Elements in the Temperate North Pacific  
**AUTHOR:** Ohlendorf, H.M.  
**PUBL.:** Can. Wildl. Serv.  
**PUB DATA:** 1993. pp. 232-240 (10 pp.).
- 24) **TITLE:** Accumulation and Effects of Lead and Cadmium on Wood Ducks Near a Mining and Smelting Complex in Idaho  
**AUTHOR:** Blus, L.J.; Henny, C.J.; Hoffman, D.J.; Grove, R.A.  
**PUBL.:** Ecotoxicology  
**PUB DATA:** 1993. pp. 139-154 (16 pp.). Vol. 2
- 25) **TITLE:** Blood Lead Concentrations and Ingested Shot in Ring-necked Ducks at Catahoula Lake, Louisiana  
**AUTHOR:** Peters, M.S.; Afton, A.D.  
**PUBL.:** Southeastern Association of Fish and Wildlife Agencies  
**PUB DATA:** 1993. pp. 292-298 (7 pp.). Vol. 47
- 26) **TITLE:** Availability and Ingestion of Lead Shot by Mourning Doves (*Zenaidura macroura*) in Southeastern New Mexico  
**AUTHOR:** Best, T.L.; Garrison, T.E.; Schmitt, C.G.  
**PUBL.:** The Southwestern Naturalist  
**PUB DATA:** 1992. pp. 287-292 (6 pp.). Vol. 37, No. 3
- 27) **TITLE:** Blood Lead and Ingested and Embedded Shot in Diving Ducks during Spring  
**AUTHOR:** Havera, S.P.; Whitton, R.M.; Shealy, R.T.  
**PUBL.:** Journal of Wildlife Management  
**PUB DATA:** 1992. pp. 539-545 (7 pp.). Vol. 56, No. 3
- 28) **TITLE:** Effects of Lead Ingestion on Immune Function in Quail  
**AUTHOR:** Grasman, K.A.  
**PUB DATA:** 1992. 135 pp.
- 29) **TITLE:** Ingestion of Lead Pellets by Scaled Quail (*Callipepla squamata*) and Northern Bobwhite (*Colinus virginianus*) in Southeastern New Mexico  
**AUTHOR:** Best, T.L.; Garrison, T.E.; Schmitt, C.G.  
**PUBL.:** Texas Journal of Science  
**PUB DATA:** 1992. pp. 99-107 (9 pp.). Vol. 44, No. 1
- 30) **TITLE:** Lead Poisoning of Avian Species Other Than Waterfowl  
**AUTHOR:** Locke, L.N.; Friend, M.  
**PUBL.:** The International Waterfowl and Wetlands Research Bureau  
**PUB DATA:** 1992. 6 pp.
- 31) **TITLE:** Environmental Pathology of the Common Loon in New England  
**AUTHOR:** Pokras, M.A.; Chafel, R.M.; Gibson, M.  
**PUBL.:** Trans. NE Section of The Wildl. Soc.  
**PUB DATA:** 1991. pp. 31-38 (8 pp.). Vol.48
- 32) **TITLE:** Lead Hazards within the Range of the California Condor  
**AUTHOR:** Pattee, O.H.; Bloom, P.H.; Scott, J.M.; Smith, M.R.

- PUBL.:** The Condor  
**PUB DATA:** 1990. pp. 931-937 (8 pp.). Vol. 92
- 33) **TITLE:** Relationship of Diets and Environmental Contaminants in Wintering Bald Eagles  
**AUTHOR:** Frenzel, R.W.; Anthony, R.G.  
**PUBL.:** Journal of Wildlife Management  
**PUB DATA:** 1989. pp. 792-802. Vol. 53, No. 3
- 34) **TITLE:** Lead Poisoning of Northern Pintail Ducks Feeding in a Tidal Meadow Contaminated with Shot from a Trap and Skeet Range  
**AUTHOR:** Roscoe, D.E.; Widjeskog, L.; Stansley, W.  
**PUBL.:** Bull. Environ. Contam. Toxicol.  
**PUB DATA:** 1989. pp. 226-233 (8 pp.). Vol. 42
- 35) **TITLE:** Environmental Contaminants in California Condors  
**AUTHOR:** Wiemeyer, S.N.; Scott, J.M.; Anderson, M.P.; Bloom, P.H.; Stafford, C.J.  
**PUBL.:** Journal Wildlife Management  
**PUB DATA:** 1988. pp. 238-247. Vol. 52, No. 2
- 36) **TITLE:** Lead Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review  
**AUTHOR:** Eisler, R.  
**PUBL.:** U.S. Fish and Wildlife Service  
**PUB DATA:** 1988. 140 pp.
- 37) **TITLE:** Shot Ingestion by Dabbling Ducks Wintering in Coastal South Carolina  
**AUTHOR:** Gray, B.T.; Gordon, D.H.; Strange, T.  
**PUBL.:** Southeastern Association of Fish and Wildlife Agencies  
**PUB DATA:** 1988. pp. 368-375 (8 pp.). Vol. 42
- 38) **TITLE:** Heavy Metals in Feathers of Magpies (*Pica pica*)  
**AUTHOR:** Kooiker, G.  
**PUBL.:** J. Ornithology  
**PUB DATA:** 1986. pp. 25-36. Vol. 127, No. 1
- 39) **TITLE:** Lead and Zinc Levels in the Eggshells of California Condors  
**AUTHOR:** Ramey, R.R.  
**PUBL.:** California Dept. of Fish and Game  
**PUB DATA:** 1986. 15 pp.
- 40) **TITLE:** Early Postnatal Lead Exposure: Behavioral Effects in Common Tern Chicks (*Sterna hirundo*)  
**AUTHOR:** Burger, J.; Gochfeld, M.  
**PUBL.:** J. Toxicol. and Environ. Health  
**PUB DATA:** 1985. pp. 869-886. Vol. 16, No. 6
- 41) **TITLE:** Clinicopathologic Aspects of Lead Poisoning in Birds: A Review  
**AUTHOR:** Lumeij, J.T.  
**PUBL.:** Veterinary Quarterly  
**PUB DATA:** 1985. pp. 133-138. Vol. 7, No. 2
- 42) **TITLE:** The Breeding Biology of the Mute Swan, *Cygnus olor*, on the River Thames with Special Reference to Lead Poisoning  
**AUTHOR:** Birkhead, M.; Perrins, C.  
**PUBL.:** Biological Conservation  
**PUB DATA:** 1985. pp. 1-11. Vol. 32

- 43) **TITLE:** Tissue Distribution of Trace Elements and DDE in Brown Pelicans  
**AUTHOR:** Ohlendorf, H.M.; Anderson, D.W.; Boellstorff, D.E.; Mulhern, B.M.  
**PUBL.:** Bull. Environ. Contam. Toxicol.  
**PUB DATA:** 1985. pp. 183-192. Vol. 35
- 44) **TITLE:** Survival, Growth, and Accumulation of Ingested Lead in Nestling American Kestrels (Falco sparverius)  
**AUTHOR:** Hoffman, D.J.; Franson, J.C.; Pattee, O.H.; Bunck, C.M.; Anderson, A.  
**PUBL.:** Arch. Environm. Contam. Toxicol.  
**PUB DATA:** 1985. pp. 89-94. Vol. 14
- 45) **TITLE:** The Effects of Ingested Lead Shot on Mottled Ducks  
**AUTHOR:** Krystofik, J.J.  
**PUB DATA:** 1985. 131 pp.
- 46) **TITLE:** Report to the California Fish and Game Commission on Condor Mortality Issues, Actions and Recommendations  
**PUBL.:** California Dept. of Fish and Game  
**PUB DATA:** 1985. 58 pp.
- 47) **TITLE:** Lead Poisoning in Cattle and Geese  
**AUTHOR:** Shore, S.H.W.; Morgan, G.; Cross, P.G.  
**PUBLISHER:** Veterinary Record  
**SCOPE NOTE:** Letter  
**PUBL. DATA:** 1984. pp. 126-127. Vol. 114, No. 5  
**ABSTRACT:** A case is reported of lead poisoning involving adult cattle (cows) and geese after consuming barley contaminated with lead shot from an adjacent clay pigeon shooting area.
- 48) **TITLE:** Recent Advances in the California Condor Research and Recovery Program. Part I  
**AUTHOR:** Goodloe, R.B.  
**PUBL.:** Endangered Species Technical Bulletin  
**PUB DATA:** 1984. pp. 8-10. Vol. IX, No. 12
- 49) **TITLE:** Lead and Organochlorine Residues in Blue-winged Teal on Texas Playas  
**AUTHOR:** Wallace, B.M.; Warren, R.J.  
**PUB DATA:** 1983. pp. 45. Vol. 14
- 50) **TITLE:** Lead Toxicosis in Psittacine Birds  
**AUTHOR:** McDonald, S.E.; Lowenstine, L.J.  
**PUBL.:** Ger. Dem. Rep., Akademie-Verlag.  
**PUB DATA:** 1983. pp. 183-196
- 51) **TITLE:** Management of Avian Pox and Lead Poisoning of Laysan Albatross at Midway Islands, Northwestern Hawaiian Islands  
**AUTHOR:** Fefer, S.I.; Sileo, L.; Stroud, R.; Hansen, W.; Naughton, M.; Friend, M.  
**PUBL.:** Pac. Seabird Group Bull.  
**PUB DATA:** 1983. pp. 48. Vol. 10, No. 2
- 52) **TITLE:** Heavy Metals in Northern Fur Seals (*Callorhinus ursinus*) from the Pribilof Islands, Alaska  
**AUTHOR:** Goldblatt, C.J.; Anthony, R.G.  
**PUBL.:** Journal of Environmental Quality  
**PUB DATA:** 1983. Vol. 12, No. 4. pp. 478-482
- 53) **TITLE:** Heavy Metal Residues in Prefledgling Black-crowned Night-Herons from Three Atlantic Coast Colonies

- AUTHOR:** Custer, T.W.; Mulhern, B.L.  
**PUBL.:** Bulletin of Environmental Contaminants and Toxicology  
**PUB DATA:** 1983. pp. 178-185. Ref., Charts
- 54) **TITLE:** Lead and Cadmium in Muskrat and Cattail Tissues  
**AUTHOR:** Erickson, D.W.; Lindzey, J.S.  
**PUBL.:** J. Wildl. Manage.  
**PUB DATA:** 1983. pp. 550-555 (6 pp.). Vol. 47, No. 2
- 55) **TITLE:** Spatial and Temporal Variation in Lead and Cadmium in the Laughing Gull, *Larus atricilla*  
**AUTHOR:** Reid, M.; Hacker, C.S.  
**PUBL.:** Mar. Pollut. Bull.  
**PUB DATA:** 1982. pp. 387-389. Vol. 13, No. 11
- 56) **TITLE:** Bioaccumulation of Lead and Cadmium in the Royal Tern and Sandwich Tern  
**AUTHOR:** Maedgen, J.L.; Hacker, C.S.; Schroder, G.D.; Weir, F.W.  
**PUBL.:** Arch. Environ. Contam. Toxicol.  
**PUB DATA:** 1982. pp. 99-102. Vol. 11, No. 1
- 57) **TITLE:** Toxic Effects of Lead and Lead Compounds on Human Health, Aquatic Life, Wildlife Plants, and Livestock  
**AUTHOR:** Demayo, A.; Taylor, M.C.; Taylor, K.W.; Hodson, P.V.  
**PUBL.:** CRS Crit. Rev. Environ. Control  
**PUB DATA:** 1982. pp. 257-305. Vol. 12, No. 4
- 58) **TITLE:** Small Mammal Heavy Metal Concentrations from Mined and Control Sites  
**AUTHOR:** Smith, G.J.; Rongstad, O.J.  
**PUBLISHER:** Environmental Pollution (Series A)  
**PUBL. DATA:** 1982. pp. 121-134. Vol. 28  
**ABSTRACT:** Total body concentration of zinc, copper, cadmium, lead, nickel, mercury, and arsenic were determined for *Peromyscus maniculatus* and *Microtus pennsylvanicus* from an active zinc-copper mine near Timmins, Ontario, Canada, and a proposed zinc-copper mine near Crandon Wisconsin. Metal concentrations were evaluated with respect to area, species, sex and age group.
- 59) **TITLE:** Further Studies on Lead Poisoning in Birds of Prey  
**AUTHOR:** Meister, V.B.; Kusters, J.  
**PUBL.:** Praktische Tierartzt  
**PUB DATA:** 1981. pp. 870, 875-878. Vol. 62, No. 10
- 60) **TITLE:** Effects of Chronic Lead Ingestion on Birds of Prey  
**AUTHOR:** Reiser, M.H.; Temple, S.A.  
**PUBL.:** Chiron Publications LTD  
**PUB DATA:** 1981. pp. 21-25
- 61) **TITLE:** Body Burden of Lead in Pennsylvania Deer and Squirrels from Hair Analysis  
**AUTHOR:** McLaughlin, K.; Bauer, C.; Falk, N.W.; Oberholser, K.  
**PUBL.:** Proc. Pennsylvania Academy of Science  
**PUB DATA:** 1981. pp. 98. Vol. 55, Issue 1
- 62) **TITLE:** Lead in the Bone and Soft Tissues of Box Turtles Caught Near Smelters  
**AUTHOR:** Beresford, W.A.; Donovan, M.P.; Henninger, J.M.; Waalkes, M.P.  
**PUBL.:** Bull. Environm. Contam. Toxicol.  
**PUB DATA:** 1981. pp. 349-352. Vol. 27



- 63) **TITLE:** Cadmium, Lead, Mercury, Arsenic, and Selenium Concentrations in Freshwater Fish, 1976-77 - National Pesticides Monitoring Program  
**AUTHOR:** May, T.W.; McKinney, G.L.  
**PUBL.:** Pesticides Monitoring Journal  
**PUB DATA:** 1981. pp. 14-38. Vol. 15, No. 1
- 64) **TITLE:** Dove Hunting as a Contributor to Lead Poisoning in Waterfowl  
**AUTHOR:** Ouchley, K.  
**PUBL.:** U.S. Fish and Wildlife Service  
**PUB DATA:** 1981(?). 13 pp. Ref., Charts, Graphs
- 65) **TITLE:** Histological Effects and Lead Concentrations in Tissues of Adult Male Ringed Turtle Doves That Ingested Lead Shot  
**AUTHOR:** Kendall, R.J.; Veit, H.P.; Scanlon, P.F.  
**PUBL.:** Journal of Toxicology and Environmental Health  
**PUB DATA:** 1981. pp. 649-658. Ref., Charts, Illus.
- 66) **TITLE:** Lead Residues in Sora Rails from Maryland  
**AUTHOR:** Stendell, R.C.; Artmann, J.W.; Martin, E.  
**PUBL.:** Journal of Wildlife Management  
**PUB DATA:** 1980. pp. 525-527. Vol. 44, No. 2
- 67) **TITLE:** Lead Residue in Eastern Tent Caterpillars (*Malacosoma americanum*) and Their Host Plant (*Prunus serotina*) Close to a Major Highway  
**AUTHOR:** Beyer, W.N.; Moore, J.  
**PUBL.:** Environmental Entomology  
**PUB DATA:** 1980. pp. 10-12. Ref., Graphs
- 68) **TITLE:** Factors Affecting the Distribution, Food Habits, and Lead Toxicosis of Redhead Ducks in the Laguna Madre, Texas  
**AUTHOR:** Marsh, S.L.  
**PUB DATA:** 1979. . .
- 69) **TITLE:** Lead Poisoning in Mallard Ducks (*Anas platyrhynchos*)  
**AUTHOR:** Roscoe, D.E.; Nielsen, S.W.  
**PUBL.:** National Acad. Sci.  
**PUB DATA:** 1979. pp. 165-176
- 70) **TITLE:** Lead Levels in Primary Feathers of American Woodcocks Harvested by Hunters Throughout the United States Range  
**AUTHOR:** Scanlon, P.F.; O'Brien, T.G.; Schauer, N.L.; Oderwald, R.G.  
**PUBL.:** Bull. Environ. Contam. Toxicol.  
**PUB DATA:** 1979. pp. 683-688. Vol. 21, No. 4/5
- 71) **TITLE:** Lead Accumulation in Aquatic Plants from Metallic Sources Including Shot  
**AUTHOR:** Behan, M.J.; Kinraide, T.B.; Seller, W.I.  
**PUBL.:** Journal of Wildlife Management  
**PUB DATA:** 1979. pp. 240-244. Vol. 43, No. 1
- 72) **TITLE:** Lead Shot Poisoning in Red-tailed Hawks  
**AUTHOR:** Stein, S.  
**PUB DATA:** 1979. 77 pp.
- 73) **TITLE:** Allantoinase in Lake Trout (*Salvelinus Namaycush*): In Vitro Effects of PCBs, DDT and Metals  
**AUTHOR:** Passino, D.R.M.; Cotant, C.A.

- PUBL.:** Comp. Biochem. Physiol.  
**PUB DATA:** 1979. pp. 71-75. Vol. 62, No. 1
- 74) **TITLE:** Tissue Metal Concentrations in Two Crayfish Species Cohabiting a Tennessee Cave Stream  
**AUTHOR:** Dickson, G.W.; Briese, L.A.; Giesy, J.P.  
**PUBL.:** Oecologia  
**PUB DATA:** 1979. pp. 8-12. Ref., Charts
- 75) **TITLE:** Lead Concentration: Bats vs. Terrestrial Small Mammals Collected Near a Major Highway  
**AUTHOR:** Clark, D.R.  
**PUBL.:** Environmental Science and Technology  
**PUB DATA:** 1979. pp. 338-341. Ref., Charts
- 76) **TITLE:** Lead Poisoning in a Wild Turkey  
**AUTHOR:** Stone, W.B.; Butka, S.A.  
**PUBL.:** New York Fish and Game  
**PUB DATA:** 1978. pp. 169. Vol. 25, No. 2
- 77) **TITLE:** Lead Poisoning of Raccoons in Connecticut  
**AUTHOR:** Diters, R.W.; Nielsen, S.W.  
**PUBL.:** Journal of Wildlife Diseases  
**PUB DATA:** 1978. pp. 187-192. Vol. 14, No. 2
- 78) **TITLE:** Chronic Toxicity of Water-borne and Dietary Lead to Rainbow Trout (*Salmo gairdneri*) in Lake Ontario Water  
**AUTHOR:** Hodson, P.V.; Blunt, B.R.; Spry, D.J.  
**PUBL.:** Water Research  
**PUB DATA:** 1978. pp. 869-878. Vol. 12, No. 10
- 79) **TITLE:** Lead in Urban and Rural Song Birds  
**AUTHOR:** Getz, L.L.; Best, L.B.; Prather, M.  
**PUBL.:** Environmental Pollution  
**PUB DATA:** 1977. pp. 235-238. Vol. 12
- 80) **TITLE:** Lead Poisoning in Trumpeter Swans  
**AUTHOR:** Munro, J.A.  
**PUBL.:** Can. Field Natur.  
**PUB DATA:** 1925. pp. 160-162. Vol. 39, No. 7