

IMPACTS OF ENVIRONMENTAL CONTAMINATES OF FISH AND WILDLIFE RESOURCES. J.D. Hair, National Wildlife Federation, Washington, D.C.

ASSESSMENT OF EFFECTS IN THE LABORATORY

Session Chair: Robert K. Ringer
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Abstract not available at time of publication.

SECONDARY FEEDING HAZARD OF STRYCHNINE TO THE DOMESTIC FERRET, P.J. Savarie, G.H. Matschke, J.L. Seubert, U.S. Fish and Wildlife Service, Denver Wildlife Research Center, Denver, CO.

Domestic ferrets (*Mustela putorius*) were fed tissues from prairie dogs killed by eating 0.5% strychnine bait. One tissue complex was comprised of stomach-liver-12 inches small intestine (SLI); the second tissue complex was the remaining carcass. There were 5 male and 5 female ferrets for each of the two control and two strychnine tissue complexes. In one test, tissues were obtained from prairie dogs that were not fasted overnight before receiving strychnine bait. Ferrets fed on these tissues daily for 3 consecutive days. Control and strychnine SLI tissues were completely consumed each day and there was ample feeding on the remaining carcass. After the third day, a male ferret died that had fed on SLI tissue. In a second test, tissue was obtained from prairie dogs that were fasted overnight before receiving strychnine bait. Ferrets fed on these tissues for only 1 day; none died but 3 males that fed on SLI tissue showed sublethal symptoms and 2 females refused portions of the SLI. Strychnine acute oral LD50 (95% confidence limits mg/kg) was 0.71 (0.63-0.79) in male ferrets and 0.77 (0.67-0.88) in females. Despite high primary toxicity to ferrets, results of this study suggest that secondary feeding of strychnine may not be as toxic to mustelids as previously believed.

BREAKING STRENGTH AS AN INDICATOR OF TOXIC EFFECTS ON AVIAN EGGSHELL QUALITY. J.C. Carlisle, P.A. Toll, and D.W. Lamb, Mobay Chemical Corp., Stilwell, KS

A method for measuring breaking strength of avian eggshell will be presented, along with a brief review of the literature relating shell strength to chlorinated hydrocarbon exposure. The effect of dietary DDE on shell strength will be compared with its effect on shell thickness in the mallard duck. Results showing that shell strength was significantly reduced at a lower dietary DDE concentration than was shell thickness will be presented. The potential utility of strength measurement as an endpoint in toxicology studies will be discussed.

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