

# DEPARTMENT of the INTERIOR

news release

FISH AND WILDLIFE SERVICE  
Bureau of Sport Fisheries and Wildlife

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## PESTICIDE RESIDUES FOUND IN MALLARD AND BLACK DUCK WINGS AND STARLINGS

All mallard or black duck wings and all starlings tested in recent years have contained DDT or its metabolites, DDE or DDD, the Interior Department's Bureau of Sport Fisheries and Wildlife announced today.

Assistant Secretary Leslie L. Glasgow, who heads Interior's programs for fish, wildlife, parks and marine resources, said that residues found thus far in ducks are below levels known to be dangerous to humans. But he emphasized that long-range effects on the ducks themselves have not yet been determined.

The starlings carried a much heavier pesticide concentration, probably reflecting their feeding habits.

The Bureau has been sampling starlings and ducks as part of the National Pesticides Monitoring Program, which also involves pesticides research by State and other Federal agencies. The agency samples fish at key spots across the nation, also.

Analysis of more than 24,000 mallard and black duck wings bagged during the 1965 and 1966 hunting seasons from all over the country showed DDE to be the predominant residue, followed in order by DDT, DDD, dieldrin and heptachlor epoxide. Dieldrin, a more toxic insecticide than DDT, was found in wings from 30 States. Heptachlor epoxide occurred in samples from 16 States. Results of later seasons have not yet been analyzed.

Residues generally were highest in the Atlantic and Pacific Flyways and lowest in the Central Flyway. DDE was notably high in wings from New Jersey, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, Alabama, California and Utah. Dieldrin residues were prevalent in wings from Arkansas, Texas, Utah, California and several Atlantic Flyway States.

Almost 4,000 starlings were collected from 124 sites nationwide during August-September 1967, January-February 1968, and November 1968. Every sample contained dieldrin in addition to DDT and its metabolites. High average residues were found in the Southeast, southern New Mexico, Arizona and California, eastern Utah, and the Willamette River drainage of Oregon. Other insecticides detected in starlings were heptachlor epoxide, lindane and BHC.

Generally, DDT and metabolite residue levels in ducks were below one part per million in both adult and immature birds, with a few instances where DDT was greater than two parts per million. Dieldrin averages in ducks rarely exceeded 0.25 parts per million.

But nearly half the starling samples had total DDT greater than one part per million, reflecting the wide distribution and omnivorous feeding habits of this species. Highest readings--21 to 26 parts per million--were found in southern Arizona (where DDT has since been banned). Dieldrin levels in starlings also were greater than in duck wings, although most were below 0.5 parts per million.

Objectives of monitoring, according to Dr. Glasgow, are to determine long-range trends in distribution and amounts of persistent pesticides in the environment. These initial studies, said Dr. Glasgow, provide "yardsticks" for measuring trends in future studies.

Monitoring does not assess effects of the residues on the sample species or environment, but it does provide key information for research biologists studying pesticide effects on fish and wildlife. Periodic monitoring also aids in detecting potentially hazardous build-ups of environmental residues.

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