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Organochlorine Pesticide Contamination Patterns in Nearctic Resident Birds

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Poster Presentation P18

**ORGANOCHLORINE PESTICIDE CONTAMINATION
PATTERNS IN NEARCTIC RESIDENT BIRDS**

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Thirteen species of Nearctic resident passerines and woodpeckers collected in central Illinois and North Carolina between 1991 and 2001 were analyzed for the presence of 17 organochlorine (OC) pesticides and metabolites. OC compound residues were detected in 29 of the 32 individuals examined.

Contaminated birds contained from one to eleven different compounds, with aldrin (mean \pm SE; 97.25 ± 35.16 ng/g), beta-BHC (20.60 ± 5.36 ng/g), DDE (26.65 ± 4.53 ng/g), dieldrin (24.88 ± 7.99 ng/g), endosulfan I (24.13 ± 4.76 ng/g), heptachlor (13.02 ± 2.40 ng/g), and heptachlor epoxide (18.35 ± 2.27 ng/g) appearing most frequently. Levels of contamination for specific compounds ranged from 3.84 ng/g to 688.95 ng/g. For the 15 specimens from Illinois, there was no significant difference in total OC levels in birds collected in urban locations (370.50 ± 143.43 ng/g) compared to birds collected in rural locations (112.91 ± 25.38 ng/g; $t = -1.95$, $df = 10.63$, $P = 0.08$). There was no significant difference in total OCs in birds collected from Illinois vs. North Carolina. Likewise, in the pooled sample there was no significant effect of diet (granivorous/insectivorous vs. insectivorous), or age class (AHY vs. HY) on total pesticide levels.

Use and production of the majority of the OC compounds detected have been banned or restricted in North America for 5-30 years. The high frequency of OC contamination in Nearctic resident birds indicates the presence of OC compounds in the environment through extended persistence, atmospheric deposition or illegal usage.

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