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A Survey of Organochlorine Pesticide Contamination in a Costa Rican Conservation Area

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Oral Presentation 3.5

A SURVEY OF ORGANOCHLORINE PESTICIDE CONTAMINATION IN A COSTA RICAN CONSERVATION AREA

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Amphibians, turtles, rodents, and birds collected from a tropical conservation area in northwestern Costa Rica, where pesticides have not been directly applied, were analyzed for organochlorine (OC) pesticide contamination. Six of thirty-nine amphibians (three of eight species), three of six turtles (two species), one of eight rodents (one species), and nine of twenty-five birds (four species) contained OCs ranging from 2.77 ng/g to 277.70 ng/g in individual organisms. The most frequently detected compound (in thirteen organisms) was p,p'-DDE. Heptachlor, delta-BHC, dieldrin, endosulfan II, and p,pí-DDD were found in four or more organisms, while eight other OCs were found in one, two, or three organisms. The average body mass of contaminated amphibians was 156.40 g, compared to 56.89 g for uncontaminated amphibians, suggesting that increased body mass is indicative of greater susceptibility to contamination. The presence of OCs in taxa from the conservation area indicates the likelihood of long-distance transport of pesticides through the atmosphere. These contaminants may affect interactions between organisms in the tropical conservation area.