Contaminants in Eggs of Lesser Scaup Nesting on Lower Red Rock Lake, Red Rock Lakes National Wildlife Refuge

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North American lesser and greater scaup (Aythya affinis and A. marila, respectively) have declined at a rate of nearly 150,000 birds/yr for the last 25 years. Band recoveries indicated lesser scaup breeding in southwest Montana at Red Rock Lakes National Wildlife Refuge (Refuge) have one of the shortest migration routes of North American scaup (<1100 km), and winter in areas known to have elevated levels of contaminants. This led to concerns that contaminants obtained on wintering grounds could be negatively affecting scaup productivity on the Refuge. In 2006 lesser scaup eggs were collected on the Refuge from nests located in wetland habitats of Lower Red Rock Lake. Eggs were analyzed for organochlorine (OC; n 25) and metal (n = 10) concentrations. Egg contaminant levels were regressed against initiation date to examine contaminant depuration rates during the breeding season. Only one OC analyte, p,p'-DDE, was detected in all 25 egg samples, four analytes were detected in 4-56 percent of the samples, and 17 analytes were not detected. Geometric mean concentration of p,p'-DDE was 286.0 ng g-1 dw (range – 81.9-17600.0 ng g-1 dw). For metals, selenium was found in all samples, mercury in 7, and arsenic, cadmium, and lead were not detected. Geometric mean concentrations of mercury and selenium were 0.1 and 1.2 µg g-1 dw, respectively. Concentration levels of OCs and metals were below levels known to affect productivity in birds, excluding one egg with an elevated p,p'-DDE concentration. No trends in depuration rates during the breeding season were found.