

species apparently use intermediate proportions of endogenous reserves for clutch formation, including Lesser Scaup (*Anas platyrhynchos*; Esler et al. 2001), Canvasbacks (*Anas platyrhynchos*; Barzen and Serie 1990), and Ruddy Ducks (*Anas platyrhynchos*; Tome

picking them off rocks; these are the major diet items of Harlequin Ducks in streams (Wallen 1987, Wright et al. 2000). These samples were frozen in vials and later analyzed as aggregate prey samples for each stream.

LABORATORY TECHNIQUES

Samples for carbon and nitrogen stable isotope ratio analyses were separated into lipid and nonlipid components, if necessary, because of potential differences in allocation of these nutrients to eggs. Samples analyzed for this study included abdominal lipid ($n = 18$), cellular fraction of blood ($n = 60$), freshwater invertebrates (lipid, $n = 5$; nonlipid, $n = 9$), lipid-free egg yolk ($n = 23$), egg yolk lipid ($n = 23$), and egg albumen ($n = 23$). Cellular blood samples were dried at 60 C in an oven and homogenized by grinding to a fine powder with a mortar and pestle. Freshwater diet samples were rinsed with distilled water, dried, and then homogenized. Lipids were removed from the diet samples using a 2:1 chloroform:methanol solution (Bligh and Dyer 1959) and retrieved by evaporating the solvent in a fume hood. The lipid-free, homogenized samples

from 20 of these nests, complete clutches from the remaining two, and a single egg was received from a nest on the Skagit River, British Columbia.

Female Harlequin Ducks allocated almost entirely freshwater nutrients to egg formation. The carbon mixing model estimated that 100% (6

There is some evidence to suggest that there can be significant intraclutch variation in sources of egg nutrients. Both Barrow's Goldeneye (*B. h. a*; Hobson et al. 2005) and Redhead (*A. h. a*; Hobson et al. 2004) females allocated more endogenous stores to eggs laid early in the sequence than to later-laid eggs. Our data do not support hypotheses of opportunistic marine endogenous transfer to eggs by Harlequin Ducks because variation within clutches was small and entirely within the freshwater range of isotope values. This suggests that values from a single egg per clutch for Harlequin Ducks are representative of each individual's strategy and, when pooled, allow appropriate inference about the average strategy of the population.

Some differences in isotopic values were evident

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