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FEATURE ARTICLES

ATTENUATED OUTER PRIMARIES IN PIGEONS AND DOVES: A COMPARATIVE TEST FAILS TO SUPPORT THE FLIGHT PERFORMANCE HYPOTHESIS

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Abstract. Sharp reduction of the inner web of the outer primary feather, hereafter referred to as the attenuated primary, is present in 54 of about 300 species belonging to the family Columbidae. The flight performance hypothesis (Goodwin 1983) suggests that attenuated primaries improve flight performance in cluttered habitats, presumably by enhancing maneuverability. This hypothesis predicts that the evolution of attenuated primaries should be associated with the use of closed habitats. A comparative analysis, using the contingent states test (Sillén-Tullberg 1993), was made to test this hypothesis. We found that 15 out of 17 independent instances of evolution of attenuated primaries occurred in clades using closed habitat, but because most species live in closed habitats, chance alone could explain this result.

Key words: attenuated primary, Columbidae, doves, flight, flight performance hypothesis.

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