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Abstracts

FEATURE ARTICLES

MITOCHONDRIAL DNA VARIATION AND PHYLOGEOGRAPHY OF THE EASTERN AND WESTERN SCREECH-OWLS

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Abstract. Sequences of the mitochondrial cytochrome *b* gene (930 base pairs) were used to examine patterns of variation within and between Eastern (*Megascops asio*) and Western (*M. kennicottii*) Screech-Owls, and to assess taxonomic affinity of Flammulated Owls (*Otus flammeolus*) and Whiskered Screech-Owls (*M. trichopsis*). Analyses support monophyly of the New World *Megascops*, a sister-group relationship between *O. flammeolus* and New World forms of *Megascops*, rather than with Old World *Otus*, and a closer relationship between the mostly North American *M. trichopsis* and South American *Megascops* than between *M. trichopsis* and North American *Megascops*. *Megascops asio* and *M. kennicottii* formed two distinct monophyletic clades, supporting species-level designations as suggested by morphology and song. Evidence for distinctive subspecies of eastern and western forms of screech-owls was less compelling. In the *M. asio* group, *M. a. mccallii* was the only subspecies with a unique haplotype; other subspecies within *M. asio* were phylogenetically indistinguishable. Subspecies within *M. kennicottii* were partitioned into three geographic groups, and differences are probably the result of barriers to gene flow (e.g., mountains above 2300 m), which are more pronounced throughout the distribution of *M. kennicottii* than in the distribution of *M. asio*.

Key words: Megascops, *mitochondrial DNA,* Otus, *phylogeography, screech-owl.*