

Call for Papers:

Population Dynamics of Aerial Insectivores

Special Feature Editors: Phil Taylor and Jon McCracken

ACE-ÉCO was established to publish studies that address basic ecological hypotheses in the context of contemporary management issues. Continuing in a series that includes special features on the ecology and conservation of boreal forest and grassland birds, the Editors-in-Chief invite papers that pertain to population dynamics of aerial insectivores – a foraging guild that includes swifts, goatsuckers, swallows, and flycatchers.

Over the past 40 years or more, quantitative results from monitoring programs like the North American Breeding Bird Survey, as well as extensive field surveys such as the recently completed Atlas of the Breeding Birds of Ontario, have shown evidence for rapid and major changes in the ranges and population sizes of many species classified as aerial insectivores (Cadman *et al.* 2007; McCracken 2008; Blancher *et al.* 2009). Population declines are apparent in northeastern North America. Although their spatial extent on this or other continents is not clear, significant declines have also been reported in Afro-Palearctic migratory swifts, swallows and nightjars (Sanderson *et al.* 2006). In Canada, several aerial insectivores (Chimney Swift, Common Nighthawk, Whip-poor-will, Olive-sided Flycatcher) have been recently assigned to the federal list of species at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Several others are either at the evaluation stage (Barn Swallow) or are regarded as high-priority candidates for status assessment (Eastern Wood-Pewee, Bank Swallow).

Importantly, the mechanisms underlying population change in most of these species are unclear, and therefore it is difficult to assess whether the observed dynamics fall within a range that might be expected in the absence of effects of human-induced habitat or other changes. Many possible hypotheses might account for population declines, but there has been little empirical work that lends to sound guidance for policy and management. Potential explanations could range from sampling artefacts or analytical biases, to relaxation from historically high abundances that were the result of human activity in the first place, to declines attributable to human activity. Reliable knowledge about these facets is critical to adopt appropriate policy and management responses.

This special feature is targeted at exploring the scope and potential causal mechanisms underlying apparent declines in populations of aerial insectivores. We encourage the submission of papers exploring population change in association with factors such as habitat use, productivity, and survivorship. We particularly encourage the submission of papers that directly address mechanisms associated with changes in population size and extent, habitat use and resource selection; effects of uncertainty in COSEWIC quantitative criteria used in risk assessment; link behavioral ecology and conservation; explore aspects of “aeroecology” (see Kunz *et al.* 2008) within a relevant avian context; and that explore possible management interventions. We also welcome essays presenting hypotheses about phenomena underlying the observed trends in aerial insectivores. Please refer to ACE-ÉCO’s guidelines for details on the nature of essays.

Approach:

1. Authors contemplating manuscript submission are encouraged to visit www.ace-eco.org for instructions for submitting Research Papers, and to review the published editorials for the philosophical-editorial context at ACE-ÉCO (<http://www.ace-eco.org/vol1/iss1/art1/> and <http://www.aceeco.org/vol1/iss2/art5/>).

2. In the collective, the papers will evaluate effects of environmental changes on population trends, habitat use throughout the life cycle, and/or productivity, whether at individual (behavioural, physiological), population (presence-absence, abundance, dynamics) or community (diversity, species composition) levels, and at any spatial and/or temporal scale appropriate to the ecological question.

3. The special feature may run over more than one issue of ACE-ÉCO. .

4. All invited papers will be peer-reviewed and editorial decisions will weigh the quality of the science as well as the value of particular submissions in the context of the overall objectives of the special feature.

Literature Cited:

Blancher, P.J., R.D. Phoenix, K. Abraham, D.S. Badzinski, M.D. Cadman, T.L. Crewe, C.M. Downes, D. Fillman, C.M. Francis, A. Heagy, J. Hughes, D.J.T. Hussell, D. Lepage, D.K. McNicol, J.D. McCracken, B.A. Pond, R.K. Ross, R. Russell, L.A. Venier, and R.C. Weeber. 2009. Population trend status of Ontario's forest birds. *Forestry Chronicle* 85:184-201.

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds.). 2007. *Atlas of the Breeding Birds of Ontario, 2001-2005*. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto, xxii + 706 pp.

Kunz, T.H., S.A. Gauthreaux Jr, N.I. Hristov, J.W. Horn, G. Jones, E.K.V. Kalko, R.P. Larkin, G. F. McCracken, S.M. Swartz, R.B. Srygley, R. Dudley, J.K. Westbrook and M. Wikelski. 2008. Aeroecology: probing and modeling the aerosphere. *Integrative and Comparative Biology* 48:1-11

McCracken, J. 2008. Are aerial insectivores being bugged out? *BirdWatch Canada* 42:4-7.

Sanderson, F.J., P.F. Donald, D.J. Pain, I.J. Burfield, and F.P.J. van Bommel. 2006. Long-term population declines in Afro-Paleartic migrant birds. *Biological Conservation* 131: 93-105.