



ECOLOGICAL & EVOLUTIONARY PHYSIOLOGY

COORDINATOR: DR ANDREW MCKECHNIE

PEER-REVIEWED PUBLICATIONS

McKechnie, A.E. and Wolf, B.O. (in press). Climate change increases the likelihood of catastrophic avian mortality events during extreme heat waves. *Biology Letters*.

Smit, B. and McKechnie, A.E. (in press). Avian seasonal metabolic variation in a subtropical desert: basal metabolic rates are lower in winter than in summer. *Functional Ecology*.

Smit, B. and McKechnie, A.E. 2010. Do owls use torpor? Winter thermoregulation in free-ranging Pearl-spotted Owlets and African Scops-owls. *Physiological and Biochemical Zoology* 83: 149-156.

Jetz, W., Freckleton, R.P. and McKechnie, A.E. 2008. Environment, migratory strategy, phylogeny and basal metabolic rate in birds. *PLoS One* 3(9): e3261.

Ashdown, R.A.M. and McKechnie, A.E. 2008. Environmental correlates of Freckled Nightjar (*Caprimulgus tristigma*) activity in a seasonal, subtropical habitat. *Journal of Ornithology* 146: 615-619.

Kabat, A.P., Blackburn, T.M., McKechnie, A.E. and Butler, P.J. 2008. Phylogenetic analysis of the allometric scaling of therapeutic regimes for birds. *Journal of Zoology, London* 275: 359-367.

Smit, B. and McKechnie, A.E. 2008. Shallow torpor in free-ranging African Scops-owls. Pp 391-400 *In*: Lovegrove, B.G. and McKechnie, A.E. (eds.) Hypometabolism in animals: torpor, hibernation and cryobiology. University of KwaZulu-Natal, Pietermaritzburg.

McKechnie, A.E. 2008. Phenotypic flexibility in basal metabolic rate and the changing view of avian physiological diversity: a review. *Journal of Comparative Physiology B*. 178(3): 235-247.

Symes, C.T., Nicolson, S.W. and McKechnie, A.E. 2008. Response of avian nectarivores to the flowering of *Aloe marlothii*: a nectar oasis during dry South African winters. *Journal of Ornithology* 149: 13-22.

McKechnie, A.E., Ashdown, R.A.M., Christian, M.B. and Brigham, R.M. 2007. Torpor in an African caprimulgid, the Freckled Nightjar (*Caprimulgus tristigma*). *Journal of Avian Biology* 38: 261-266.

McKechnie, A.E., Chetty, K. and Lovegrove, B.G. 2007. Phenotypic flexibility in the basal metabolic rate of Laughing Doves: responses to short-term thermal acclimation. *Journal of Experimental Biology* 210: 97-106.

McKechnie, A.E., Freckleton, R.P. and Jetz, W. 2006. Phenotypic plasticity in the scaling of avian basal metabolic rate. *Proceedings of the Royal Society B: Biological Sciences* 273: 931-937.

EDITED BOOK

Lovegrove, B.G. and McKechnie, A.E. (eds.) 2008. Hypometabolism in animals: torpor, hibernation and cryobiology. University of KwaZulu-Natal, Pietermaritzburg.

INVITED BOOK REVIEWS

McKechnie, A.E. 2009. Book Review: del Hoyo, J., Elliott, A. and Christie, D.A. 2008. Handbook of the Birds of the World. Volume 13: Penduline-tits to Shrikes. *Condor* 111(3): 580-581.

PUBLISHED ABSTRACTS

Smit, B. and McKechnie, A.E. 2009. Avian seasonal metabolic adjustments in a subtropical desert: winter downregulation of basal metabolic rate. *Integrative and Comparative Biology* 49: e158.

McKechnie, A.E. 2007. Phenotypic plasticity in avian metabolic traits: implications for comparative analyses. *Comparative Physiology and Biochemistry A* 148: S100.

McKechnie, A.E., Brigham, R.M., Ashdown, R.A.M. and Christian, M.B. 2007. Africa's coolest bird: winter torpor in the Freckled Nightjar (*Caprimulgus tristigma*). *Comparative Physiology and Biochemistry A* 148: S154.

McKechnie, A.E. 2006. Ecological and evolutionary consequences of phenotypic flexibility in avian metabolic systems. *The Physiologist* 49(6): C1-43.

McKechnie, A.E. and Erasmus, B.F.N. 2006. Climate change and birds in hot deserts: the impacts of increased demand for thermoregulatory water on survival and reproduction. *Journal of Ornithology* 147(5, suppl. 1): 209-210.

SEMI-POPULAR PUBLICATIONS

McKechnie, A.E. 2010. A gut feeling: feeding and digestion in birds. *Africa – Birds and Birding* in press.

McKechnie, A.E. 2009. Cool tool - toucans' massive cooling bills. *Africa – Birds and Birding* 16(6): 15.

McKechnie, A.E. 2009. Cold comfort – winter strategies in birds. *Africa – Birds and Birding* 14(5): 13.

Wakelin, J. and McKechnie, A.E. 2009. Connecting the dots – tracking Blue Swallow migration patterns. *Africa – Birds and Birding* 14(5): 36-40.

McKechnie, A.E. 2009. Migrating Blackcaps keep their cool. *Africa – Birds and Birding* 14(3): 14.

McKechnie, A.E. 2009. White or brown? Reflections on ostrich eggs. *Africa – Birds and Birding* 14(2): 16.

McKechnie, A.E. 2009. Sparrows face housing crisis. *Africa – Birds and Birding* 14(1): 19.

McKechnie, A.E. 2008. Shaking up the family tree...again. *Africa – Birds and Birding* 13(6): 14.

Smit, B. and McKechnie, A.E. 2008. Cold comfort – the secret life of African Scops-owls. *Africa – Birds and Birding* 13(5): 42-46.

- McKechnie, A.E. 2008. A darker shade of green – birds and wind farms. *Africa – Birds and Birding* 13(4): 16-17.
- McKechnie, A.E. 2008. Poles apart - long-distance migrants and magnetic fields. *Africa – Birds and Birding* 13(3): 14.
- McKechnie, A.E. 2008. Juiced up - birds and succulent plants. *Africa – Birds and Birding* 13(2): 14.
- McKechnie, A.E. 2007. Stress, hormones and conservation. *Africa – Birds and Birding* 12 (6): 15.
- McKechnie, A.E. 2007. Fly-by-night. *Africa – Birds and Birding* 12(5):16.
- McKechnie, A.E. 2007. Some like it hot – Africa’s desert birds. *Africa – Birds and Birding* 12(4): 36-41.
- McKechnie, A.E. 2007. Muscling in – lessons from Red Knot. *Africa – Birds and Birding* 12(1): 13.
- McKechnie, A.E. 2006. Wanted alive – Ivory-bill update. *Africa – Birds and Birding* 11(6): 14.
- McKechnie, A.E. 2006. Out of this world – how biotelemetry reveals avian secrets. *Africa – Birds and Birding* 11(6): 14-15.
- McKechnie, A.E. 2006. Alarmed response. *Africa – Birds and Birding* 11(4): 16.
- McKechnie, A.E. 2006. Seed capital – birds, seeds and trees. *Africa – Birds and Birding* 11(2): 12.
- McKechnie, A.E. 2006. Liquid lunch, anyone? Nectarivorous birds and their diet. *Africa – Birds and Birding* 11(1): 11.
- McKechnie, A.E. 2005. Capital, income, and investment strategy - the economics of laying eggs. *Africa – Birds and Birding* 10(5): 10-11.
- McKechnie, A.E. 2005. Links in a chain - birds, plants, and insects. *Africa – Birds and Birding* 10(4): 14.
- McKechnie, A.E. 2005. Time out - hibernation and torpor in African birds. *Africa – Birds and Birding* 10(3): 14.
- McKechnie, A.E. 2005. Taking the heat - desert birds and global warming. *Africa – Birds and Birding* 10(2): 12.
- McKechnie, A.E. 2004. African stonechats: life in the slow lane. *Africa – Birds and Birding* 9(6): 12.