Bayly*, N.J., Gómez, C. & Hobson, K.A. (*in press) Energy reserves stored by migrating Gray-cheeked Thrushes at a spring stopover site in northern Colombia are sufficient for a long distance flight to North America. *Ibis*

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Abstract
Stopover sites used to store the energy that fuels migration, especially those used prior to crossing ecological barriers, are regarded as critically important for the survival of Nearctic-Neotropical migratory birds. To determine if South American stopover sites are used to store the energy required to cross the Caribbean Sea and the Gulf of Mexico to North America by a Neotropical migratory landbird, we studied Gray-cheeked Thrushes in northern Colombia through constant effort mist-netting during spring migration in 2010 and 2011. We combine stopover duration estimates and models of body mass change based on recaptures, to estimate departure body mass and potential flight range from our study site. We recaptured 62 birds in total, the majority of which gained mass. Models indicated significant differences in rates of mass gain between years (2.6% LBM/day vs. 3.5% LBM/day), age groups (2010 only) and with arrival date (2011 only). ‘Total stopover’ durations varied between 15.4 (2010) and 12.5 days (2011). Predicted departure mass ranged between 41.3 g and 44.9 g and potential flight range was estimated between 2727 km and 4270 km; consequently Gray-cheeked Thrushes departed our study site with sufficient energy reserves to cross the Caribbean Sea and the Gulf of Mexico (2550 km). As the first demonstration that birds departing from South American stopover sites can reach North America without refuelling, this has important implications for stopover site protection, i.e. that strategic conservation measures in the Sierra Nevada de Santa Marta can protect habitats where up to 40% of the energy required to complete spring migration is stored by a Neotropical migratory landbird.