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Abstracts

SHORT COMMUNICATIONS

MIGRATORY CONNECTIVITY IN BICKNELL'S THRUSH: LOCATING MISSING POPULATIONS WITH HYDROGEN ISOTOPES

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Abstract. The measurement of the abundance of naturally occurring deuterium (δD) in feathers grown in North America can provide geographical information on location where the feather was grown. Previously, we used this technique to link populations of Bicknell's Thrush (*Catharus bicknelli*) breeding in northeastern North America (to 46ºN) with wintering grounds in the Dominican Republic. That study indicated the presence of a subpopulation of wintering birds with more depleted feather δD values than those measured on their known breeding grounds. This suggested either a more northerly or a higher altitude breeding source population than previously measured. We located two populations of Bicknell's Thrush in Quebec, Canada, at Mine Madeleine (49ºN) and at Mont Gosford (45ºN). The Mine Madeleine birds had feather δD values overlapping those of the unidentified subpopulation found wintering in the Dominican Republic. At Mont Gosford, hatch-year birds were more depleted in their feather δD values than after-second-year birds suggesting their more northerly origins and capture during the early fall migration period. Our study demonstrates how the stable-isotope approach can be used to document connectivity between breeding and wintering populations of migratory birds.

Key words: Catharus bicknellii, *deuterium, migratory connectivity, stable isotopes.*