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Known Breeding and Wintering Sites of a Bicknell's Thrush

Christopher C. Rimmer^{1,2} and Kent P. McFarland¹

ABSTRACT.—We banded a Bicknell's Thrush (*Catharus bicknelli*) on its Vermont breeding home range and recaptured the same bird less than six months later on its winter territory in the Dominican Republic. The encounter provides a rare link between known breeding and wintering sites for a Nearctic-Neotropical migratory passerine. This individual was documented to return to its breeding site two successive summers and probably reoccupied the same territory during the winter following its initial recapture. We believe that the small breeding and wintering range of the Bicknell's Thrush, its specialized habitat requirements, and its documented site fidelity increase the species' vulnerability to habitat loss. *Received 10 Oct. 2000, accepted 6 Sep. 2001.*

Although recent studies have attempted to link breeding and wintering areas of some migratory songbird populations (Chamberlain et al. 1997, Hobson and Wassenaar 1997, Hobson et al. 2001), documentation of the actual sites occupied by individual migrant Nearctic-Neotropical passerines during both summer and winter is rare. Most published records (e.g., Dowell and Robbins 1998, Brewer et al. 2000) are of individuals assumed to be breeding or wintering based solely on the seasonal timing of their captures. Knowledge of specific breeding and wintering areas and habitats can be useful for conservation planning by targeting specific populations and coordinating efforts at both ends of a species' migratory range.

On 16 June 1995, we mist netted a second-year male Bicknell's Thrush (*Catharus bicknelli*) on its presumed breeding home range on Mt. Mansfield, Vermont (44° 32' N, 72° 49' W). The bird had a large cloacal protuberance, indicating that it was in breeding condition, and it was lured into a mist net with taped playbacks of conspecific songs and

calls. On 2 December 1995, we recaptured this same individual in a mist net at Estación Pueblo Viejo (18° 12' N, 71° 32' W) in Parque Nacional Sierra de Bahoruco of the Dominican Republic, a straight line distance of 2920 km from Mt. Mansfield. The bird again responded aggressively to tape recorded conspecific calls, and it almost certainly was a winter resident at this date, as territories at the site are occupied by early November (Rimmer et al. 2001). Estación Pueblo Viejo supports a dense population of wintering Bicknell's Thrushes ($\bar{x} = 1.7 \pm 0.2$ SD individuals/ha, determined from spot-mapping during December of 1995 and 1996; CCR and KPM unpubl. data), and discrete territories appear to be maintained by frequent counter-calling (CCR and KPM unpubl. data). Although this individual was not recaptured or resighted during four days of field work following its capture at Pueblo Viejo, the repeated calls of an unseen bird near the net site were likely from this individual.

Our recapture of this bird on Mt. Mansfield on 5 and 14 June 1996 and on 23 June 1997 highlights the species' strong philopatry to breeding sites in its restricted northeastern United States and Canadian Maritimes breeding range (Rimmer et al. 2001). As with other Nearctic-Neotropical migratory songbirds, e.g., Black-throated Blue Warblers (*Dendroica caerulescens*), American Redstarts (*Setophaga ruticilla*; Holmes and Sherry 1992), and Wood Thrushes (*Hylocichla mustelina*; Rappole et al. 1992), the Bicknell's Thrush also shows a high degree of annual site fidelity to specific wintering sites (Rimmer et al. 2001). Although we did not recapture or resight this individual at Pueblo Viejo after 1995, we suspected an obviously net wary bird on the same territory during December of 1996 to be this individual. On several occasions, the bird responded vocally to conspecific tape playbacks and approached within 5 m of a mist net, but eluded capture. Although

¹ Vermont Inst. of Natural Science, 27023 Church Hill Rd., Woodstock, VT 05091 USA.

² Corresponding author; E-mail: crimmer@vinsweb.org

the bird was color banded, we could not ascertain its color combination.

Summer-winter encounters of Nearctic-Neotropical migrants are well-documented for several species of shorebirds, e.g., Piping Plovers (*Charadrius melodus*; Haig and Plissner 1993), American Avocets (*Recurvirostra americana*) and Black-necked Stilts (*Himantopus mexicanus*; Robinson and Oring 1996), Semipalmated Sandpipers (*Calidris pusilla*; Bird Banding Laboratory unpubl. data), Roseate and Common terns (*Sterna dougallii* and *S. hirundo*; Hays et al. 1997), and raptors such as the Osprey (*Pandion haliaetus*; Bird Banding Laboratory unpubl. data). However, such encounters of passerines are rare. The Bird Banding Laboratory of the USGS Biological Resources Division has documentation of only 15 passerines encountered both during summer (here defined as June and July to exclude late spring and early fall transients) and winter (here defined as December through March) between the United States and countries to the south. Brewer et al. (2000) reported only seven summer-winter (as defined above) Neotropical-Canadian encounters of small landbirds among 20,607 north-south and south-north re-encounters between 1921–1995. Few, if any, of these encounters were of birds on known breeding and wintering sites, but the timing of each record is suggestive. An Ovenbird (*Seiurus aurocapillus*) banded during winter in Belize and re-encountered during late June in Pennsylvania appears to be the only other published record of a passerine encountered on both its known wintering and (presumed) breeding site (Dowell and Robbins 1998). Several unpublished records exist, including four birds banded and recovered or resighted on both known breeding (or natal) and wintering sites: two Least Bell's Vireos (*Vireo bellii pusillus*) banded in southern California as nestlings and resighted in Baja Mexico (B. Kus unpubl. data); a Kirtland's Warbler (*Dendroica kirtlandii*) banded during winter on Eleuthera Island, Bahamas, and resighted on its Michigan breeding site (P. Sykes unpubl. data); and an Indigo Bunting (*Passerina cyanea*) mist netted in Campeche, Mexico, during February that had been banded as a second-year male in Michigan during early June (D. Dawson unpubl. data).

Like the Bicknell's Thrush, the Least Bell's

Vireo and Kirtland's Warbler are taxa with small global populations, restricted breeding and wintering ranges, and narrow habitat requirements (Mayfield 1992, Brown 1993). Ongoing, intensive efforts to study such rare, at risk species within their well-defined ranges may increase the likelihood of summer-winter encounters of known individuals. The only other documented recovery of a Bicknell's Thrush was of a presumed spring migrant banded at Island Beach, New Jersey, on 24 May 1970 and recovered at Hondo Valle in the Dominican Republic on 5 March 1971 (Foy 1976). While not a bird of known breeding origin, this individual clearly was a winter resident during early March.

The documentation of a breeding Bicknell's Thrush from Vermont wintering in the Dominican Republic's Sierra de Bahoruco establishes an important link between these two geographic areas. With habitat degradation and loss occurring on both the species' breeding and wintering grounds (Atwood et al. 1996; Nixon and Seutin 1999; Rimmer et al. 1998, 2001), this discovery suggests that research and conservation efforts should be focused on both areas. The small winter range of the Bicknell's Thrush (the species is confined to the Greater Antilles; Rimmer et al. 2001), its specialized habitat requirements (mainly moist broadleaf forests; Rimmer et al. 2001), and its documented site fidelity increase the species' vulnerability to habitat loss (Warkentin and Hernández 1996). Although stable isotope analyses of Bicknell's Thrush tail feathers collected throughout both the breeding range and the Dominican Republic suggest that breeding populations are mixed during winter (Hobson et al. 2001), diminishing habitat throughout the Greater Antilles may increasingly concentrate wintering birds from different breeding areas. Conservation of the remaining large patches of preferred habitat, such as Sierra de Bahoruco, may be the key to the survival of the Bicknell's Thrush and will require concerted efforts from conservationists at both ends of the species' range.

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