

## TWO NOTEWORTHY BREEDING RECORDS OF CAPE MAY WARBLER IN BRITISH COLUMBIA

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In British Columbia, Cape May Warbler (*Dendroica tigrina*) occurs at the western edge of its North American distribution (Baltz and Latta 1998), primarily in the Taiga and Boreal plains ecoprovinces in the northeast portion of the province (Campbell et al. 2001). Its preferred habitat is mid-succession to mature white or black spruce (*Picea* spp.) with a relatively dense canopy and an open moss-dominated understory (Bennett and Enns 1996, Bennett et al. 1998, 1999). In British Columbia, Cape May Warbler is most common in the Fort Nelson Forest District (Campbell et al. 2001), and within its preferred habitat, it is one of the more common species (Bennett et al. 1999). In the Fort St. John Timber Supply Area (TSA), Cape May Warbler is very patchily distributed but locally common in mature white spruce forests (Preston in prep.), whereas further south and east in the Dawson Creek Forest District it is considered a rare to casual summer visitant (Phinney 1998, Campbell et al. 2007, Preston 2009b.), and accidental in the vicinity of Tumbler Ridge (Helm 2006). To date there has been only one nest observed in British Columbia from the Fort Nelson area in 1990 (Campbell et al. 2001), and only a few records of adults feeding recently fledged young, including those belonging to the parasitic Brown-headed Cowbird (*Molothrus ater*) (Bennett and Enns 1996, Bennett et al. 1998, 1999, Campbell et al. 2001). In this paper we describe two new breeding records for Cape May Warbler. Collectively, the records provide new information on the breeding range, breeding chronology, and nest height, in British Columbia.

The first evidence of breeding was made on 27 June 2006. While conducting songbird surveys in the

Graham River watershed in the Fort St. John TSA (UTM Zone 10, 510770 E, 6247772 N), M. Preston and J. Preston observed a male Cape May Warbler gathering food from a young lodgepole pine (*Pinus contorta*) stand that was approximately 15-20 years old. Among the regenerating pine was a small patch (~100 m long by 30 m wide) of mature white spruce (*Picea glauca*) interspersed with mid-succession trembling aspen (*Populus tremuloides*), and it was within this patch (Figure 1) that the Cape May Warbler was observed delivering food to suspected nestlings or recently fledged young. Food delivery was observed three times, with the male flying up from the same location with no food approximately 10 seconds after disappearing with food. Delivery of food was to the same location, but only about 3 m above ground. Cape May Warbler nests are mostly at heights > 10 m (Baltz and Latta 1998), suggesting that this observation of food delivery may have been to recently fledged young (but see next record). Whether this observation represents recently fledged young or an active nest, it is believed that the young did in fact belong to Cape May Warbler and not the parasitic Brown-headed Cowbird. We base this conclusion on the fact that Brown-headed Cowbird have not been observed in the Graham River watershed during surveys that have been conducted in that area between 2005 and 2008 (Preston 2009a).



**Figure 1.** Spruce patch among regenerating lodgepole pine in the Graham River watershed where an adult Cape May Warbler was observed delivering food to suspected nestlings or recently fledged young. 27 June 2006 (Michael I. Preston).

The second breeding record was on 13 July 2008. While bird-watching at Watson Slough (UTM Zone 10, 607132 E, 6235829 N), located approximately 50 km northeast of Hudson's Hope on Highway 29, A. Pomeroy observed a male Cape May Warbler delivering food to a single nestling. The nest was located near the end of a white spruce branch approximately 3 m high in a 4-m tall tree (Figure 2). The male delivered food to the large nestling twice within a relatively short (5 min) period of time. Although not examined closely, one chick was clearly present in the nest. The nest height is unusual, as nests for this species elsewhere in its range are documented as being > 10 m (Baltz and Latta 1998). Watson Slough is a low lying wetland maintained by Ducks Unlimited with public access via trails and a boardwalk. It is predominantly a bulrush marsh (*Typha* spp.), bordered by mature mixed spruce-aspens forest to the north, and younger, sparsely distributed spruce and aspen to the south. The nest was observed on the south side along the main trail in one of the small spruce clusters that occur in that area. The nest was within 25 m of the wetland edge and 50 m of highway 29.

Our two new breeding records of Cape May Warbler significantly increases the southern breeding limit for this species in British Columbia. Furthermore, it is likely that the Watson Slough record is approaching the southern breeding extent, as suitable habitat becomes increasingly less common toward Tumbler Ridge. The breeding period, previously considered from 22 June to 4 July (Campbell et al. 2001), has also been extended to as late as 13 July, for a total of 22 days. Campbell et al. (2001) speculate that it is likely from early June to late July. Our observations confirm that the minimum nesting height is considerably lower than previously documented (Baltz and Latta 1998). The Watson Slough record confirms that Cape May Warbler will nest as low as 3 m above ground, and the Graham River record, although not confirmed as a nest, may also represent an unusually low nest height.

Cape May Warbler populations are known to be tightly correlated with annual spruce budworm populations (Baltz and Latta 1998), but the use of peripheral, or edge-of-range, habitats in relation to spruce budworm outbreaks is poorly known.



**Figure 2.** Nest tree (center) at Watson Slough along highway 29 that contained a Cape May Warbler nest with at least one young. 13 July 2008 (Andrea Pomeroy).

In British Columbia, annual budworm population indices are inadequately described, both in geographic extent and in population size. It is possible that our new breeding records represent a correlation with a “good” budworm year when edge-of-range habitats would be expected to be used, but this remains largely speculative. The general lack of spruce budworm information, combined with limited annual census data for Cape May Warbler, prohibits the identification of an important component in this species’ life history. Subsequently, opportunities that could better serve the conservation and management of this spatially and temporally dynamic species may be hindered. In British Columbia, Cape May Warbler is currently red-listed (BCCDC 2008), and considered a high-priority species under the Conservation Framework (BCMOE 2008).

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### About the Authors

Michael is a wildlife biologist and consultant. Since 1998 he has worked throughout British Columbia, studying bird communities, habitat-relationships, climate change effects, and population trends. In 2004 he co-founded the Biodiversity Centre for Wildlife Studies, of which he currently serves as a director. He is also editor of *Wildlife Afield*.

Andrea grew up in southern Ontario where she caught the birding bug as a teenager in the Young Ornithologists Workshop at Long Point Bird Observatory. For her Ph.D. at Simon Fraser University she studied the feeding behaviour of migrant Western Sandpipers at stopover sites in the Fraser River Delta. She is currently conducting post-doctorate research on the effects of wind energy development on migratory birds in Northern British Columbia.

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