

**NOTE****New records of Cerambycidae in Nova Scotia**

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In recent years studies such as McCorquodale and Bondrup-Nielsen (2004), Majka et al. (2007), Webster et al. (2009), and McCorquodale (2010) have made substantial contributions to an understanding of Cerambycidae (long-horned beetles) in the Maritime Provinces of Canada. As one indicator of the rapid expansion of knowledge of this family, McCorquodale and Bondrup-Nielsen (2004) noted that prior to their examination of Nova Scotia collections, which yielded 87 species, 55 species of cerambycids had been recorded. More recently Webster et al. (2009) listed 98 cerambycids from Nova Scotia, 22 of which were newly reported in the Maritime Provinces. Majka et al. (2007) added 28 species of Cerambycidae to the previously recorded 10 species from Prince Edward Island and Webster et al. (2009) added an additional five species. The present paper adds one species to faunal list of Nova Scotia and additional records of two seldom-collected species.

Neospondylis upiformis (Mannerheim, 1843) is a distinctive long-horned beetle in the subfamily Spondylidinae. There are only two North American representatives in this subfamily, *Neospondylis upiformis* and *Scaphinus muticus* (Fabricius, 1801), characterized by short antennae, elongate jaws, feebly emarginated eyes, expanded protibiae, an unmarginated prothorax, five tarsal segments, and no stridulitrum (Yanega 1996), thus giving them a distinctly non-cerambycid-like appearance (Fig. 1). McNamara (1991) recorded *Neospondylis upiformis* from Alaska, British Columbia, Ontario, and Quebec, while in the United States it has been found in all western states except for Nevada, in western South Dakota and Nebraska, and Pennsylvania (Linsley 1962; Chemsak 1996). There is also one record from the eastern end of Lake Superior (LeConte 1850). Linsley (1962) stated that adults are almost always found in coniferous forests and larvae probably feed on the roots of pine or fir.

Given this primarily western distribution, it was of some interest when Smith and Hurley (2005) reported four specimens collected in Newfoundland near the town of Lomond on the south coast of Bonne Bay in Gros Morne National Park on 5 July 2001. Subsequently, Webster et al. (2009) reported a specimen of *Neospondylis upiformis* collected in Boiestown, Northumberland County, New Brunswick (~ 46° 27' N; 66° 25' W) by C.E. Atwood in "June." The year was not recorded on the specimen label; however, H. Atwood and M. Atwood were able to determine that it was 1933-1936.

In the last three years we have found 12 specimens of *Neospondylis upiformis* in Big Intervale, Inverness County, Nova Scotia (46° 27' 58.9" N; 60° 55' 12.2" W): 15 June 2007 – 1; 29 June 2007 – 4; 14 July 2008 – 2; 26 June 2009 – 5 (Fig. 1). All were collected by D. MacDonald employing a flight intercept trap. These are the first records of this species in Nova Scotia.

These recent discoveries in Atlantic Canada raise the question of whether this species is actively dispersing into this region, or whether it has been always been present. McCorquodale et al. (2007) reported the first records of *Neospondylis upiformis* in Ontario in the 1960's; three specimens from Searchmont, Algoma District (~ 46° 46' N; 84° 03' W). McCorquodale et al. (2007) examined records of over 18,000 specimens of Cerambycidae collected in Ontario between 1862 and 1999. Only nine of the 211 cerambycids recorded in Ontario have been found subsequent to 1950, one of which is *Neospondylis upiformis*. Although McCorquodale et al. (2007) commented on other cerambycids

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Fig. 1. Dorsal habitus of *Neospondylis upiformis* (Mannerheim) collected in West Big Intervale, Nova Scotia. Length: 9.5 mm. Photo credit: Christopher Majka, Nova Scotia Museum, Halifax, Nova Scotia

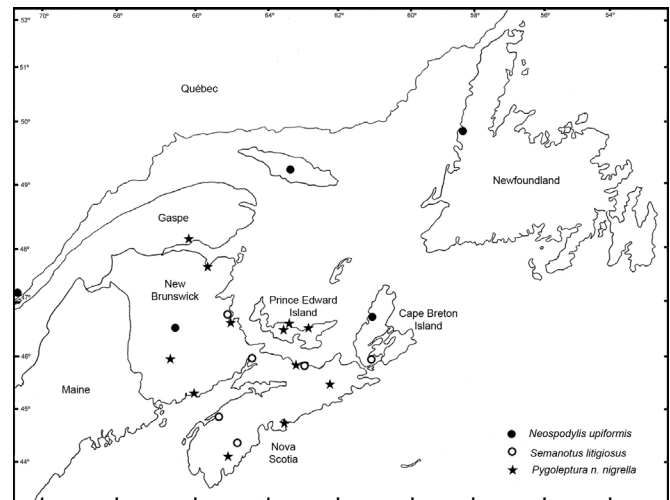


whose ranges were expanding or contracting, they did not remark on *Neospondylis upiformis*. The specimen collected in New Brunswick dates from 1933-1936, an indication that the species has been present there for at least 75 years. Records from both Québec (C. Chantal, Association des entomologistes amateurs du Québec (AEAQ), personal communication), and now Nova Scotia, appear to indicate that this species has a very local distribution, and hence may easily be missed in general collecting. Where it has been found, multiple specimens have frequently been collected, however, there appear to be large gaps in the range of *Neospondylis upiformis* in eastern Canada (Fig. 2).

A second species, newly recorded in Nova Scotia by Webster et al. (2009), was *Semanotus litigiosus* (Casey, 1891). To the three reported specimens we add the following two specimens: **Queens County:** Greenfield (44° 16' 41.6" N; 64° 49' 43.1" W), 5 June 2007, S. Spencer, flight intercept trap; **Richmond County:** Dundee (45° 43' 41.2" N; 61° 01' 11.5" W), 9 June 2009, M. Hill, flight intercept trap (Fig. 3). Although the number of records from Nova Scotia is few, it appears that *Semanotus*

litigiosus is found throughout the province (Fig 2). This is a transcontinental species, previously recorded in Canada from the Northwest Territories and British Columbia east to New Brunswick (McNamara 1991). In the United States it is widely distributed (Linsley 1964), the larvae feeding on

Fig. 2. Distribution map of collection localities of *Neospondylis upiformis* (Mannerheim), *Semanotus litigiosus* (Casey), and *Pygoleptura nigrella nigrella* (Say) in Atlantic Canada. Collection localities of *Neospondylis upiformis* in Québec are provided courtesy of C. Chantal.



white fir (*Abies concolor* Lindley ex Hildebrand), California red fir (*Abies magnifica* A. Murray), grand fir (*Abies grandis* (Douglas ex D. Don) Lindley), subalpine fir (*Abies lasiocarpa* (Hooker) Nuttall), Douglas-fir (*Pseudotsuga menziesii* (Mirb.) Franco), Sitka spruce (*Picea sitichensis* (Bong.) Carr.), and hemlock (*Tsuga* sp.). Although none of these tree species occur in the Maritime Provinces, balsam fir (*Abies balsamea* (L.) Mill.), eastern hemlock (*Tsuga canadensis* (L.) Carrière), and three species of spruce (*Picea* spp.) are found in the region and would presumably be candidates as suitable host plants for *Semanotus litigiosus*.

Pygoleptura nigrella nigrella (Say, 1826) is a robust and distinctive leptonine long-horned beetle found across Canada, from Alaska to Newfoundland and Labrador, in the western and southwestern United States, and from Michigan to New York and Maine in the east. (Linsley and Chemsak 1976; McNamara 1991; Yanega 1996). It is associated with species of spruce (*Picea*), pine (*Pinus*), Douglas-fir (*Pseudotsuga*), fir (*Abies*), and larch (*Larix*) (Linsley and Chemsak 1976). It was first recorded in Nova Scotia by McCorquodale and Bondrup-Nielsen

Fig. 3. Dorsal habitus of *Semanotus litigiosus* (Casey) collected in Dundee, Nova Scotia. Length: 15.0 mm. photo credit: Christopher Majka, Nova Scotia Museum, Halifax, Nova Scotia.



(2004) and from Prince Edward Island by Majka et al. (2007). We provide two additional records that further extend its known distribution in Nova Scotia: **Halifax County:** Point Pleasant Park (44° 37' 17.6" N; 63° 34' 11.9" W), 5 August 2001, C.G. Majka, coniferous forest (Fig. 4); **Pictou County:** Waterside Provincial Park (45° 45' 29.2" N; 62° 47' 15.9" W), 23 July 2007, K. Moore, flight intercept trap. While the number of records in the region is few, *Pygoleptura nigrella nigrella* appears generally distributed in the Maritime Provinces, although it has not been recorded on Cape Breton Island (Fig. 2).

McCorquodale and Bondrup-Nielsen's (2004) paper was entitled "Do we know beetles? Lessons and new records of Cerambycidae (Coleoptera) for Nova Scotia." The answer is that we clearly know them "better." As these new records indicate, there are further lessons yet to be learned.

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Fig. 4. Dorsal habitus of *Pygoleptura nigrella nigrella* (Say) collected in Point Pleasant Park, Nova Scotia. Length: 17.0 mm. Photo credit: Christopher Majka, Nova Scotia Museum, Halifax, Nova Scotia



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