



## NOTE

### New record of *Libytheana carinenta* (Cramer) (Lepidoptera: Nymphalidae) in Nova Scotia

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During the summers of 2003 and 2004, an extensive insect biodiversity survey was conducted on Brier Island, Nova Scotia, Canada (44.27 N, 66.33 W). Brier Island is a small island, off the western coast of Nova Scotia in the Bay of Fundy. It is situated at the apex of the North Mountain range in the province's Digby County. It is only 3 km long by 1.2 km wide and yet has a large number of varying habitats. These habitats include coastal dunes, rocky shores, spruce/fir forest, boggy barrens and a very unique inland raised bog which is home to a rich variety of orchids and a number of rare arctic-relict fauna, such as Mountain avens, *Geum peckii* Pursh (Rosaceae), and Dwarf birch, *Betula michauxii* Spach (Betulaceae).

Over the two seasons, a variety of trapping methods were used during five, 4-day visits. Terrestrial, aerial and ground-dwelling insect species were captured through a number of passive and active collecting techniques. During sample visits, vegetation in each habitat was swept with canvas nets and flying insects were collected with large diameter aerial nets.

Ground dwelling species were collected through hand collections and pitfall traps. A number of intercept traps were also established in each habitat type, including malaise, flight intercept, and light traps. These were monitored daily during each visit. Over 10,000 insect specimens were collected during the five sampling periods, several species being new provincial records or species range extensions.

On 9 August 2004, a single specimen of *Libytheana carinenta* (Cramer) (Lepidoptera: Nymphalidae), the American Snout, was captured with an aerial net, adjacent to boggy barrens, on the western end of Brier Island. Several other specimens of butterfly were collected on previous and subsequent dates from the same locale. These included other Nymphalidae species, such as *Speyeria c. cybele*, *Speyeria a. atlantis*, and *Limenitis a. arthemis*, but no other specimens of *L. carinenta* were located.

The American Snout, is a medium-sized butterfly with a wingspan of 3.5 to 5.1 cm (Fig. 1). Coloration is similar to that of other species of the family Nymphalidae. The upperside of the wings are tawny-orange and black with the forewing bearing white spots on the outer half. The tip of the forewing is squared off. The underside of the forewing is similar in color to that of the upperside. The underside of hindwing is mottled violet-gray with a scalloped margin. The most obvious characteristic of the American Snout is the beak-like snout formed from the extended palpi in front of the head.

The American Snout breeds from Argentina, north to the southern United States in forest edges, shrubby fields and roadsides (Klots 1979; Layberry *et al.* 1998; Pyle 1985). There are typically two generations per year, the first in May-June and the second in August. A strong migratory species, it has been recorded from most of the northeastern and midwestern states. In Canada, *L. carinenta* has been previously recorded only rarely from southern regions of Ontario and

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**Fig. 1.** The American Snout, *Libytheana carinenta* (Cramer) (Lepidoptera: Nymphalidae). Photo: JB Ogden



Quebec (Layberry *et al.* 1998). This collection from Brier Island is a new record for Atlantic Canada and represents the most easterly location this species has been collected in North America (Brower 1974; Layberry *et al.* 1998).

The presence of migratory butterfly species in Nova Scotia is not an infrequent occurrence. Several of the common breeding species in the province are migratory, such as the Painted Lady, *Vanessa cardui* (L.) (Lepidoptera: Nymphalidae), the Red Admiral, *V. atalanta* (L.) (Lepidoptera: Nymphalidae), and, the most notable of the migrants, the Monarch, *Danaus plexippus* (L.) (Lepidoptera: Danaidae). In the past, other migratory butterfly species have also been reported from the province: Little Yellow, *Eurema lisa* (Boisduval & LeConte) (Lepidoptera: Pieridae) four records, and Common Buck-eye, *Junonia coenia* Hübner (Lepidoptera: Nymphalidae) one record (Ferguson 1954; Layberry *et al.* 1998). Extending into the Atlantic, Nova Scotia has long been known as an excellent spot to attract migrating and vagrant bird species from all over North America (Tufts 1986). Some species, such as the Northern Cardinal, *Cardinalis cardinalis* (L.) (Passeriformes: Emberizidae), have become established

residents in southern regions of the province. The continued monitoring for migratory butterfly species in areas such as Brier Island may result in the detection of other southern butterfly species making their journey to our shores. With a changing climate, these distant travelers may eventually extend their traditional ranges and become new members to our local Lepidoptera fauna.

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## REFERENCES

- Browers, A.E. 1974. A list of the Lepidoptera of Maine-Part 1, the macrolepidoptera. Life Sciences and Agriculture Experiment Station Technical Bulletin **66**: 1-136.

- Klots, A.B. 1979. The Peterson Field Guide Series: A Field Guide to the Butterflies of North America, East of the Great Plains. Houghton Mifflin Co., Boston.
- Ferguson, D.C. 1954. The Lepidoptera of Nova Scotia. *In*: Proceedings of the Nova Scotian Institute of Science, 23(3): 161-375.
- Layberry, R.A., Hall, P.W. and Lafontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press, Toronto.
- Pyle, R.M. 1985. The Audubon Society Field Guide to North American Butterflies. A.A. Knopf, New York.
- Tufts, R.W. 1986. Birds of Nova Scotia.