

**CASTILLEJA COCCINEA (L.) SPRENG.
(SCROPHULARIACEAE),
A FIRST RECORD FOR NOVA SCOTIA***

The occurrence in Nova Scotia of Indian paintbrush or scarlet painted-cup, *Castilleja coccinea* (L.) Spreng., is reported for the first time. Hitherto, the Bruce Peninsula in Ontario was the reported eastern limit of distribution of this species in Canada, and southern Maine the eastern limit in North America (Peterson & McKenny 1968; Scoggan 1979). We have been unable to locate any casual reports or collections of *C. coccinea* in Nova Scotian herbaria prior to this record.

Castilleja coccinea (Figs 1, 2) was first sighted in late June, 1982, along route 103 at Chester Basin, Lunenburg County (44° 34'N, 64° 19'W), and identification was confirmed with Scoggan's (1979) keys. About 300 flowering stems were observed, mostly concentrated within a 20-m stretch of roadside, with outlying stray individuals bringing the total extent of the colony to about 40 m. The species grew in damp gravel bordering the shallow ditch, and also in drier, stony soil at slightly higher levels along the roadbank. Plants were up to 60 cm tall and appeared healthy; a few were branched, though most were simple. Common associates were the herbaceous species *Achillea millefolium* L., *Anaphalis margaritacea* (L.) Clarke, *Fragaria virginiana* Dcne., *Hieracium caespitosum* Dumort., *H. pilosella* L., and *Trifolium hybridum* L.; the shrubs *Comptonia peregrina* (L.) Coult. and *Salix* sp.; and young trees *Betula papyrifera* Marsh., *Picea glauca* (Moensch) Voss and *Populus tremuloides* Michx.

In 1983, the colony was about the same size as in 1982, with a probable slight increase in the number of plants. In late July, after the peak period of flowering, a number of smaller, later-blooming stems were noted. Clipping of roadside shrubs and trees by Department of Transportation maintenance staff had caused minor disturbance and some of the *C. coccinea* had been trampled in the process.

The occurrence of *C. coccinea* in Nova Scotia represents a radical eastward extension of the range of this species, and results in a widely disjunct distribution. As there is little human habitation in the immediate vicinity of the stand, and as we are unaware of attempts to cultivate *C. coccinea* as an imported wildflower in gardens of nearby Chester Basin, it is unlikely that these plants are garden escapes. The most probable origin is as a contaminant in the grass-clover seed mixtures used by the provincial Department of Transportation to consolidate roadbanks, as much of this seed is obtained from Ontario and other Canadian provinces within the range of *C. coccinea* (Nova Scotia Department of Transportation, in verb.).

Whatever the means of introduction, the question remains whether this species will become permanently established in this province. The number of individuals suggests that *C. coccinea* has been present at this site for at least several years, having multiplied from one or a few chance arrivals. The relatively acid soils, however, of this part of Nova Scotia (pH < 5.0; Soils of Nova Scotia 1972) may preclude its long-term survival and spread in this area (S. van der Kloet, in verb.). On the other hand, the associated vegetation includes a number of genera and species known to host this semiparasitic plant (Malcolm 1966). Additionally, as semiparasitic Scrophulariaceae prefer open, sunny habitat (Musselman & Mann 1977), the roadside colony at Chester Basin may benefit from the practice of pruning shrub and tree species before they overshadow the area.

Voucher specimens have been deposited in the herbaria of Acadia University, Wolfville, (ACAD), the Nova Scotia Museum, Halifax (NSPM), and the Nova Scotia Agricultural College, Truro (NSAC).

References

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Fig 2 Close-up of a flowering stem from the colony in Fig 1.
 Fig 1 Part of the stand of *Castilleja coccinea* near Chester Basin.

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