



Flora of North America

Odontites (Orobanchaceae)

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XX. ODONTITES Ludwig, Inst. Regn. Veg. ed. 2, 120. 1757

[Greek *odons*, tooth] I

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Herbs, annual; facultative root hemiparasites. **Stems** erect, not succulent, villous. **Leaves** cauline, opposite, not leathery or succulent; petiole absent; blade margins coarsely serrate.

Inflorescences terminal, loose, unilateral racemes; bracts present. **Pedicels** present; bracteoles absent. **Flowers**: sepals 4, calyx +/- symmetric, subequal, campanulate, lobes deltate; petals 5, corolla purple to pink, dorsally compressed, galeate, abaxial lobes 3, adaxial lobes 2, adaxial lip galeate; stamens 4, adnate to corolla, slightly didynamous, filaments papillose proximally with spiral hairs at apex and club-shaped hairs at connective, staminode 0; ovary 2-locular, placentation axile; stigma capitate. **Capsules** symmetric, dehiscence loculicidal.

Seeds 20--32, white, fusiform, not winged (ridged longitudinally). **x** = 9, 10.

Species 26 (1 in the flora): introduced; w Eurasia, n Africa.

Molecular phylogenetic analysis indicates a close relationship between *Odontites* and six other genera, of which *Bartsia*, *Euphrasia*, and *Parentucellia* occur in the flora area

(J. R. Bennett and S. Mathews 2006; J. Těšitel et al. 2010).
Recently, *Odontites* was subdivided into five genera, four of
which consist of one or two geographically limited species (M.
Bollinger 1996); *Odontites* in the strict sense, as treated here,
is much more diverse and geographically widespread.

SELECTED REFERENCE Bollinger, M. 1996. Monographie der
Gattung *Odontites* (Scrophulariaceae) sowie der verwandten
Gattungen *Macrosyringion*, *Odontitella*, *Bornmuellerantha* und
Bartsiella. Willdenowia 26: 37--168.

1. *Odontites vulgaris* Moench, Methodus, 439. 1794 * Red
bartsia **F I W**

Euphrasia odontites Linnaeus, Sp. Pl. 2: 604. 1753

Stems 15--50 cm; unbranched or branched, branches 3--12 pairs,
arising near base of stem, ascending. **Leaves** lanceolate, 20--50
x 5--10 mm, hispid, teeth along margins 3--5, blunt. **Racemes** of
4--10 pairs of subsessile flowers; bracts foliaceous, 5--15 x 2--
4 mm. **Pedicels** 2--3 mm. **Flowers** 8--10 mm; calyx often with
purple markings, 4--6 mm, calyx lobes less than 1/2 the length
of calyx, puberulent; corolla tube light purple, glabrescent,
lobes pink, villose, abaxial lobes 3--4 x 2--3 mm, adaxial lip
4--5 mm, divided from abaxial lip to 1/2 the length of corolla;
anthers slightly exserted, yellow, equal in size and length,

apex mucronate; style exserted, 8--10 mm. **Capsules** compressed-ellipsoid, 7--8 x 3--4 mm. **Seeds** 1--2 mm, surface reticulate.

2n = 18 (20).

Flowering Jun--Aug. Roadsides, fields, disturbed areas; 0--700 m; introduced; St. Pierre and Miquelon; Alta., Man., N.B., Nfld. and Labr. (Nfld.), N.S., Ont., P.E.I., Que., Sask.; Maine, Mass., Mich., N.H., N.Y., Vt., W.Va., Wis.; Eurasia

Accurate identification of species of *Odontites* has been made difficult by a combination of complex taxonomic history, extreme variability in morphological characters across geographic ranges, and phenotypic plasticity (M. Bollinger 1996). *Odontites vulgaris* is the only species to occur in the flora area, having become naturalized from its native range spanning from the Iberian Peninsula north to Scandinavia and east into Siberia. The rapid expansion of its range in the New World since introduction is likely to continue, especially into maritime grasslands (N. M. Hill and C. S. Blaney 2009) and elsewhere (Randolph County, West Virginia [Grafton s.n.; WVA]).

Largely due to taxonomic confusion among species that co-occur in its native range, specimens in the New World have been variously identified as either *Odontites ruber* Gilibert, *O. serotinus* Dumortier, or *O. vernus* Dumortier. The various subspecific taxa of *O. serotinus* have been synonymized with

other species, and *O. serotinus*, an illegitimate name, is treated as a synonym of *O. vulgaris* by Bollinger (1996). *Odontites vulgaris* differs from *O. vernus* in ploidy level, the latter being tetraploid ($4n = 40$), and by degree of branching (Bollinger), the latter with fewer branches occurring at acute angles. Branching characters are difficult to discern in preserved material, but specimens examined from North America appear to be *O. vulgaris*. Reported chromosome counts indicate New World *Odontites* specimens are diploid (E. H. Moss and J. G. Packer 1983), although undocumented tetraploids may also exist.

Red bartsia is classified as a prohibited noxious weed in the Canadian Seeds Act and Regulations.