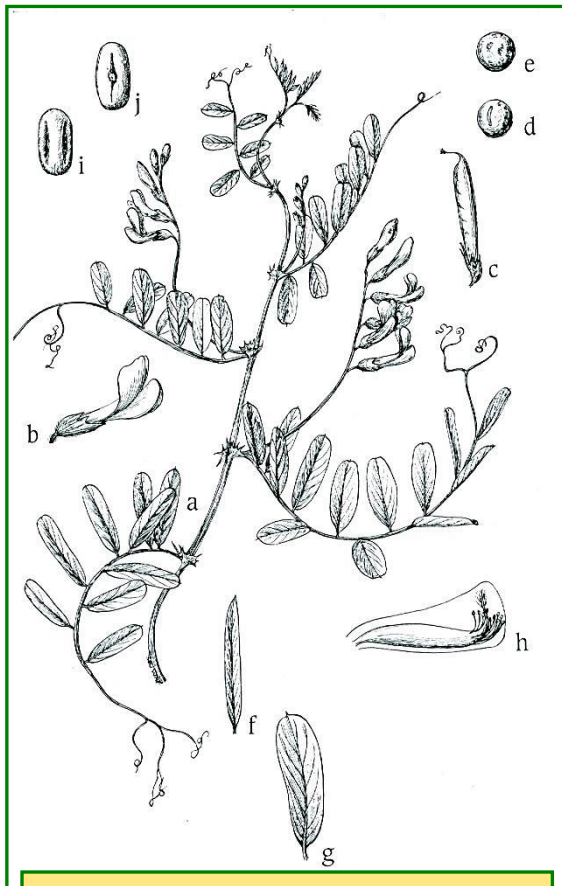


Scientific Name: *Vicia americana* Muhl.

Family: *Fabaceae*

Common Names: peavine, wild pea, American vetch, wild vetch



Vicia americana a. habit includes inflorescence and leaves b. flower c. seed pod d, e. seeds f, g. leaflets h. flower (cut-away) i, j. pollen.

Plant Description

Perennial herb with stems 30 to 100 cm high, climbing and spreading, often in tangled masses; leaflets 8 to 14, highly variable in size and shape, commonly elliptic to oblong, glabrous or pubescent, entire or sharply toothed towards the apex, the latter acute or truncate, often with an extended point; tendrils well-developed, forking; stipules commonly semi-sagitate, sharply toothed; racemes shorter than the subtending leaves, lax, with

3 to 9 reddish purple flowers, drying bluish (Moss 1983).

Fruit: 3 cm long, flat, glabrous pod.

Seed: 4 to 5 mm, spherical to elliptic, black to olive green, smooth (Pahl and Smreciu 1999).

Habitat and Distribution

Often found in open woods and meadows. Disturbances and agricultural land are also suitable habitat (Pahl and Smreciu 1999).

Seral Stage: Generally found in early seral stages but can persist to later stages.

Soils: Medium to coarse textured soils are best suited for *V. americana* (Gerling et al. 1996).

Soil pH of 5.9 to 7.2 (USDA NRCS n.d.).

Distribution: Common throughout most regions of Alberta, although not common at higher elevations (Pahl and Smreciu 1999).

Phenology

Long-lived, cool-season perennial; flowers throughout spring and summer (June, July and August); seeds mature from July through September (Pahl and Smreciu 1999).



Vicia americana as found in the wild.





Vicia americana in flower.

Pollination

Insect pollinated (Pahl and Smreciu 1999).

Seed Dispersal

Seed scattered by dehiscent fruit, spraying seed a short distance (<5 m). Some animal dispersal.

Genetics

2n=14 (Moss 1983).

Symbiosis

Currah and Van Dyk (1986) reported root associations with vesicular arbuscular mycorrhizae. Also associated with rhizobial bacteria (Pahl and Smreciu 1999).

Seed Processing

Collection: Collect pods by hand into paper bags.

Seed Weight: 14.4 g/1,000 seeds (Gerling et al. 1996). 60 PLS/g (Hammermeister 1998).

Average Seeds/Fruit: 4 to 7 (Plants for a Future n.d.).

Harvest Dates: Late July or early August.

Cleaning: Crush and screen material; winnow to remove remaining chaff. Use 8.5/64” round top screen with 1/15” round bottom screen (Pahl and Smreciu 1999).

Storage Behaviour: Orthodox (Royal Botanic Gardens Kew 2008).



Vicia americana seed, approximately 5 mm in diameter

Storage: Royal Botanic Gardens Kew (2008) suggests orthodox storage behaviour, i.e., seed can be dried

without damage and thereby increase longevity over a wide range of storage environments.

Longevity: No literature found.

Propagation

Natural Regeneration: From seed and vegetatively from creeping rhizomes (Coladonato 1993).

Germination: 78% in 3 to 7 days if scarified; 75% in 14 days without scarification (Pahl and Smreciu 1999).

Pre-treatment: Mechanical scarification.

Direct Seeding: Some emergence has been observed from directly sown seed in northeastern Alberta.

Planting Density: No literature found. Direct seeding recommended.

Seeding Rate: 100 to 150 seeds/m at 1 cm depth (Pahl and Smreciu 1999).

Vegetative Propagation: Rhizome cuttings are suggested by Pahl and Smreciu (1999).

Aboriginal/Food Uses

Food: Young shoots may be cooked and eaten. The tender seeds, mature seeds and immature pods can all be used in cooking (Plants for a Future n.d., Royer and Dickinson 1996). Some sources have indicated the seeds may be poisonous (Royer and Dickinson 1996).

Medicinal: Leaves can be applied to spider bites, or an infusion of crushed leaves in a bath can treat soreness (Plants for a Future n.d.).

Wildlife/Forage Usage

Wildlife: Excellent forage value (Gerling et al. 1996).

Livestock: High nutritional levels, protein content averaging 20% in the summer (Tannas 1997). May aid in success of associated shrubs (Schellenber and Banerjee 2002).

Grazing Response: A decreaser, disappearing from abused rangeland due to both high palatability and poor resistance to close grazing and trampling (Tannas 1997).

Reclamation Potential

Provides some erosion control (Gerling et al. 1996), colonizes disturbed sites (Pahl and Smreciu 1999), and highly drought tolerant (USDA NRCS n.d.).

Has been established on disturbed alpine rangelands and used on revegetated coal-mines and road sides (Coladonato 1993).

As a legume it has good nitrogen fixation potential for improving soil nutrient conditions (BrettYoung n.d.).

Commercial Resources

Availability: Seed is commercially available from a few sources in Alberta (ANPC 2010).

Cultivars: None are known.

Uses: The stem can be used for string (Plants for a Future n.d.).

Notes

Vicia americana is listed as 92% intact (less occurrences than expected) in the Alberta oil sands region (Alberta Biodiversity Monitoring Institute 2014).

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Photo 3: Wild Rose Consulting, Inc.

Line Diagram: John Maywood, used by permission of Bruce Peel Special Collections, University of Alberta.

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