



Common Name: CHAFFSEED

Scientific Name: *Schwalbea americana* Linnaeus

Other Commonly Used Names: American chaffseed

Previously Used Scientific Names: *Schwalbea australis* Pennell, *Schwalbea americana* L. var. *australis* (Pennell) Reveal & Broome

Family: Scrophulariaceae (snapdragon) or Orobanchaceae (broomrape)

Rarity Ranks: G2/S1S2

State Legal Status: Endangered

Federal Legal Status: Endangered

Federal Wetland Status: FAC

Description: Perennial **herb** with erect, hairy **stems** to 28 inches (70 cm) tall. **Leaves** 1 - 2 inches (3 - 5 cm) long, lance-shaped, largest at the base of the stem, gradually decreasing in size upwards, entire, alternate, without leaf stalks, overlapping in a spiral up the stem, covered with velvety hairs. **Flower spike** at the top of the stem. **Flowers** about 1 inch (2.5 cm) long, tubular,

two-lipped, cream-colored or pale yellow streaked with reddish-purple, especially near the lips; **calyx** green with 10 reddish lines. **Fruit** a capsule, about $\frac{3}{8}$ inch (1 cm) long, splitting into 4 sections.

Similar Species: Lousewort (*Pedicularis canadensis*) leaves are deeply lobed and cut, and the flowering stem is less than 1 foot tall.

Related Rare Species: American chaffseed is the only species in its genus.

Habitat: Frequently burned longleaf pine sandhills, savannas, and flatwoods; moist, grassy ecotones around ponds in these habitats. Plants are semi-parasitic on the roots of gallberry, huckleberry, St. John's-wort, silk grass, and others.

Life History: Chaffseed is a long-lived perennial herb that reproduces sexually. It flowers in response to fire and also in response to management activities, such as mowing and raking, that mimic fire by removing old chaffseed stems and competing vegetation. Chaffseed plants may remain dormant during years of low rainfall and resprout once conditions improve. Its flowers are pollinated by bumblebees but will also produce fruits and viable seeds following self-pollination. A high percentage of its seeds are viable. The larvae of buckeye butterfly (*Junonia coenia*) have been observed eating the stems, leaves, and flowers of chaffseed, sometimes destroying all aboveground vegetation.

Chaffseed is a hemiparasite – although it produces carbohydrates by photosynthesis, it extracts water and minerals, particularly nitrogen, from the roots of host plants by means of sucker-like connections called haustoria. Host plants are diverse and include shrubs such as gallberry (*Ilex glabra*) and huckleberry (*Gaylussacia dumosa*), grasses such as panicgrass (*Panicum tenui*), and composites such as grass-leaved goldenaster (*Pityopsis graminifolia*), deertongue (*Carphephorus odoratissimus*), and aster (*Symphotrichum adnatum*).

Survey Recommendations: Surveys are best conducted during flowering, usually April–June, depending on timing of recent fire. Without fire, plants remain short and do not flower. Brown, dead stems with old fruits are conspicuous for about a year after flowering.

Range: Georgia, North Carolina, and South Carolina; historically, plants were found from Massachusetts south to Florida and west to Texas, but most of these populations have been destroyed.

Threats: Conversion of habitat to pine plantations, pastures, and developments. Fire suppression.

Georgia Conservation Status: Once known from 9 counties in the Piedmont and Coastal Plain, chaffseed is currently known in only 4 counties in southwest Georgia. Two of these populations are protected on conservation land.

Conservation and Management Recommendations: Apply prescribed fire every 2 - 3 years. Avoid mechanical clearing, soil disturbance, and cutting fire lanes through habitat. Avoid placing game food plots near plants.

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Date Compiled or Updated:

L.Chafin, Aug. 2008: original account

D.Weiler, Jan. 2010: added pictures

G. Krakow. Apr 2016: updated NCNHP link



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