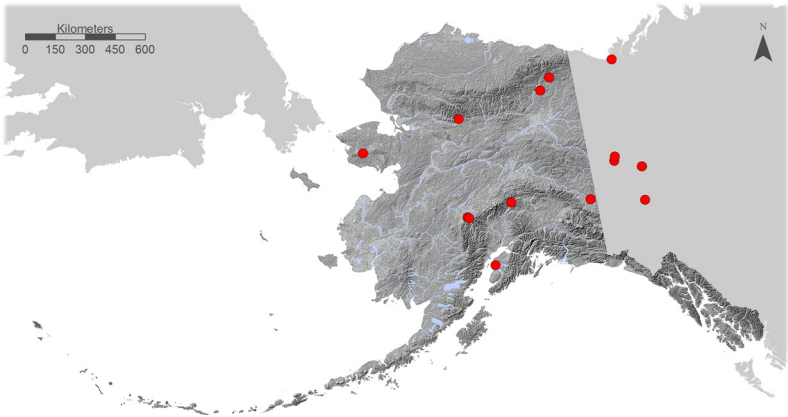
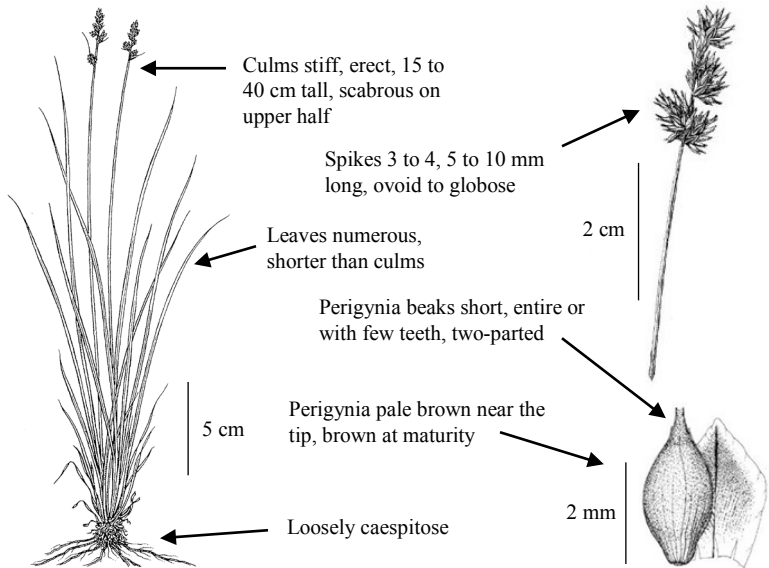


- Global Distribution:** Northern North America and Eurasia with large gaps.
- Alaska Distribution:** Arctic Tundra, Bering Tundra, Intermontane Boreal, Alaska Range Transition.
- Ecoregion Occupied:** Brooks Range, Seward Peninsula, Davidson Mountains, Kobuk Ridges and Valleys, Tanana-Kuskokwim Lowlands, Alaska Range, Cook Inlet Basin.
- Conservation Status:** S3 G4; BLM Watch.



**Description**<sup>24, 25, 69, 70</sup>

*Illustration by Susan A. Reznicek, courtesy of Flora of North America Association*



*Illustration by R. A. With, courtesy of University of Washington Press*

*Carex heleonastes*

- General:** Loosely caespitose, perennial sedge from short, ascending rhizome; culms solitary or few, erect, slender, 15 to 40 cm tall, scabrous and sharp angles on upper half.
- Leaves:** Sheaths pale brown; ligules wider than long; blades numerous, pale green to gray-green, flat or slightly rolled inward, 5 to 15 cm long, 1 to 2 mm wide, shorter than culms.
- Spikes:** Bracts scale-like or occasionally bristle-like, shorter than spikes; spikes 3 to 4 or rarely to 6, sessile, ovoid to globose, containing 5 to 10 perigynia, 5 to 10 mm long, 4 to 7 mm wide, lateral spikes gynecandrous, lower spikes slightly separated.
- Pistillate Scales:** Red-brown with lighter center and broad, white, translucent margins, oblong to ovate, not exceeding perigynia; margins rough; apex obtuse.
- Perigynia:** Appressed to ascending, green-white towards the base, pale brown towards the tip, brown when mature, elliptic to obovate, 2.5 to 3.5 mm long, 1.2 to 1.5 mm wide, widest near middle; beaks short, entire or with few teeth, two-parted.



**Ecology**

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- Elevation:** Known from near sea level to 760 m in Alaska; sea level to 1,500 m elsewhere in North America.<sup>70</sup>
- Landform:** Bogs, wet meadows, muskegs, sloughs, lake edges; burned areas, roadsides.
- Soil Type:** Peat, sand, glacial till; oligotrophic soils, minerotrophic soils,<sup>63</sup> sometimes associated with calcareous substrates.
- Moisture regime:** Saturated to wet.
- Slope:** Flat to gentle.

- Aspect:** No particular aspect.
- Vegetation type:** Black Spruce muskeg, bulrush – sedge wet meadow, *Dryas* – moss, moss.
- Associated species:** *Carex limosa*, *Carex livida*, *Dryas* spp., *Eriophorum* spp., *Kobresia simpliciuscula*, *Trichophorum cespitosum*.
- Longevity:** Perennial; most *Carex* species are long-lived.<sup>65</sup>
- Phenology:** Flowering late June through early July; fruiting late July through August.
- Population estimate:** Nine known occurrences in Alaska; population sizes unknown.
- Reproductive biology:** Most *Carex* species are wind-pollinated and self-compatible;<sup>66</sup> *Carex heleonastes* occasionally forms sterile hybrids with other members of *Carex* sect. *Glareosa*;<sup>71</sup> also reproduces vegetatively from short rhizomes.<sup>71</sup>
- Herbivory:** *Carex* species provide preferred food source for many waterfowl and mammals.<sup>68</sup>

**Similar Species**<sup>25, 70</sup>

*Carex heleonastes* can be confused with other *Carex* species that have sessile spikes clustered towards the top of culms and brownish perigynia with short or indistinct beaks. The table below shows morphological features that distinguish *Carex heleonastes* from similar species.

Species	Culms	Spikes	Perigynia	Habitat
<i>Carex heleonastes</i>	15 to 40 cm tall; stiff, erect, scabrous on the upper half	3 to 4; 5 to 10 mm long, ovoid to globose	Pale brown near the tip; brown at maturity; beaks distinct	Bogs, wet meadows, lake shores
<i>Carex marina</i>	10 to 15 cm tall; erect, scabrous on the upper half	2 to 3; 3 to 6 mm long, oblong to clavate	Pale brown near the tip; brown at maturity; beaks indistinct	Wet tundra, gravelly shores
<i>Carex glareosa</i> ssp. <i>glareosa</i>	10 to 25 cm tall; weak, arching, smooth	2 to 4; 2 to 4 mm long, oblong-linear	Light to pale brown; gray-brown at maturity	Saline marshes, gravelly sea shores
<i>Carex lachenalii</i>	10 to 40 cm tall; erect, smooth or nearly smooth below the spikes	2 to 5; 2 to 3 mm long, short-oblong to suborbicular	Brown-yellow; brown at maturity	Arctic and alpine meadows, peatlands
<i>Carex ursina</i>	2 to 10 cm tall, leaves exceeding culms	1; 4 to 7 mm long, obovoid to suborbicular	Gray-brown to brown	Seashores in sand or gravel



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