

Scientific Name: *Shinnersoseris rostrata*

Syn: *Lygodesmia rostrata*

Common Name: Beaked Annual Skeleton-weed

Element ID: 11090

Alt Com Name: Annual Skeletonweed

Alt Com Name: Skeleton weed

Taxonomy

Taxonomic class: Dicotyledoneae

Order: Asterales

Family Name: Asteraceae

Family Common Name: Aster Family

Genus Name: Shinnersoseris

Genus Common Name:

Taxonomic Comments:

Common Names: Beaked Annual Skeleton-weed; Annual Skeletonweed; Skeleton Weed. Division: Spermatophyta
Subdivision: Angiospermae Class: Dicotyledoneae Subclass: Metachlamydeae Order: Campanulatae Family: Asteraceae
(Compositae); aster, composite or sunflower family. Subfamily: Liguliflorae Tribe: Cichorieae has many pappus bristles
(not plumose), achenes columnar tapering to summit, not to base, involucre slenderly cylindrical (from Gray's Manual, which
includes this species in the genus *Lygodesmia*). Flora of the Great Plains includes S.r. [?/L.r.?] in the tribe Lactuceae.
Genus: *Shinnersoseris* was described as a new genus by Tomb in 1973. Species: *rostrata* Synonymy: *Lygodesmia juncea*
var. *rostrata* A. Gray; *Lygodesmia rostrata* A. Gray Derivation of names: [*Lygodesmia* from "Greek lygos, a pliant twig, and
desme, a bundle, from the fascicled twiggy or rush-like stems"] *Rostrata* meaning beaked (*rostrate*, having a beak).
(Fernald, p. 1558) *Shinnersoseris* ? . *Lygodesmia rostrata*,

Ranking and Protection Status

Global Rank: G5?

COSEWIC Status:

Provincial Rank: S2

Provincial Protection Status:

Diagnostic Characteristics

Identification Comments:

Shinnersoseris rostrata is a slender tap-rooted, annual herb with erect stems that may be strict or with numerous branches, usually paired to give the plant a symmetrical shape, 1-10 dm (1-3') in height. It has been described as paniculately branched in the upper two-thirds. The stems are striate, and stiff, although not as rigid as those of *L. juncea*. Leaves elongated-linear, acuminate at the tip, entire, 3-nerved, the lower (5-8) opposite pairs to 15 cm (to 20 cm, or 7") in length and 6 mm (0.1 to 0.15") wide, gradually reduced upwards to near subulate, and becoming alternate. Leaves have been described as being 2-6 times the length of the internodes. The plants are glabrous and pale green with a milky sap white or cream in color.

Heads are numerous, racemose along the branches on scaly, short, erect peduncles both terminal and axillary, to 12.5 mm (0.5") broad. Involucres are narrowly cylindrical, (10)12 to 18(20) mm (0.5-0.7") high. The principal bracts (5)7-9 in number, linear, scarious-margined, equal, slightly united at the base, with several (one or two series of) very short outer ones. The receptacle is flat and naked. Florets are 7-11 in number, purplish to pink at the tips, all ligulate and fertile. Great Plains Flora Association describes them as being lavender with yellow apices ... erect (i.e., not reflexed) at anthesis. This agrees with our material; as well the petals do not unfurl at the tips and the heads do not expand much beyond the vertical protrusion of the florets from the involucre. Anthers are dark purple, sagittate at the base. Style-branches are slender.

Achenes narrowly fusiform or subcylindrical, narrowed or somewhat beaked at the summit, scabrate below the summit, (4)5-8 ribbed or -striate, 10 to 12.5 mm (0.4-0.5") long, longer than the whitish pappus which consists of copious somewhat unequal, simple capillary bristles somewhat connate at the base.

N = 6, 2n=12.

Lookalikes:



Lamont, S. ©

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Lygodesmia juncea

Shinnersoseris rostrata was originally included in the genus *Lygodesmia*, actually as a variety of *L. juncea*. After 11 years it was granted specific status as *L. rostrata*. Finally it has been moved into a genus of its own (*Shinnersoseris*). Although these two genera are superficially somewhat similar there are some distinct differences that separate them. Firstly, *S.r.* is an annual, whereas our only species of *Lygodesmia*, *juncea* (the type species originally described as *Prenanthes juncea*), is a perennial. Next *S.r.* has leaves which are opposite in their position on the stem, at least for the lower few pairs, whereas those of *L.j.* are always alternate. Another distinction, which the floras fail to emphasize, and which seems to hold true at least in all of our material is the fact that the florets, which have been termed ray florets, do not expand as do those of *L.j.* The ray florets of *L.j.* will always unfurl both in width and over the length so that the head shows a star-like expansion at full anthesis, with the ray curving up to or more than 90 degrees. At least in our material of *S.r.* however, the contiguous tepals remain coiled in a tube. The head does not expand much beyond the vertical extension of this petal tube, so that the "rays" do not curve more than about 10 degrees beyond vertical. The head thus may show a "star-like" appearance from above, but a much smaller one with the tips of the arms being nearly pointed. The other factor here is the number of florets in *S.r.* is usually 10 or 11. In *L.j.* florets most often number 5, but frequently can be up to 9 in number; when this is the case, the "extra" florets do not usually add arms to the star-like silhouette, because they are juxtaposed above other florets in the open head.

Habitat Information and Comments**Habitat Comments:**

The habitat of the species has been described as dry, sandy prairies and plains, stream banks and canyons, where it colonizes bare to semi-bare sands, mainly in blow-outs. Open sand near edges of active sand dunes, or in recently stabilized sand near active dunes, are occupied in our area in association with *P. soralidium lanceolatum*, *Chenopodium subglabrum* and less frequently *Lygodesmia juncea*.

Threat Comments:

Habitat includes semi-active to stabilized sand dunes. TH-2, possible threat (off road vehicles?). Although an annual species grazed by cattle, this plant still produces an abundance of seeds, even on grazed plants. Stabilization of sandhills may reduce the habitat available for the species. Exotic species are becoming common in open dunes. A few noted during the survey were Russian Thistle, Blue Lettuce and Downy Brome. The status of the Bugseeds (native or exotic?) is uncertain. None of these were noted in the same areas where *S.r.* was found growing.

Protection Comments:

Some of the sites on which this species is found are Wildlife Habitat Protection Act lands and are protected from cultivation, thus ensuring that native vegetation will remain. Most of the Great Sand Hills sites are zoned Environmentally Sensitive and therefore are protected by municipal bylaw prohibiting such developments as mining (i.e. silica, petroleum etc.). Bylaws of Rural Municipalities that protect sand dune habitats, also provide limited protection to this species. Those in the Elbow Sandhills are partially protected by Douglas Provincial Park.

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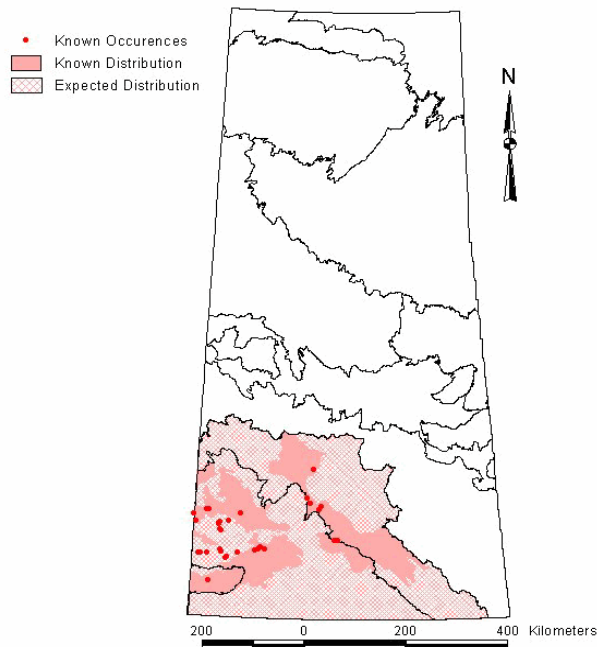
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Saskatchewan Distribution



Rural Municipalities:

BIG STICK (SK)
CARON (SK)
CLINWORTH (SK)
COTEAU (SK)
DEER FORKS (SK)
DUNDURN (SK)
ENTERPRISE (SK)
FOX VALLEY (SK)
GULL LAKE (SK)
HAPPYLAND (SK)
LOREBURN (SK)
MAPLE BUSH (SK)
MAPLE CREEK (SK)
MIRY CREEK (SK)
PIAPOT (SK)
SWIFT CURRENT (SK)
WEBB (SK)
WHEATLANDS (SK)

Range Extent Comments:

In Saskatchewan it has been found in sandhills as far north as Manito Lake (about 52°35'N) and Beaver Creek (52°N) and east only to Mortlach (106°W). Harms considers the species to be regionally restricted (RR-3).

Phenology

Time of Year

Phenology

Currently no phenology for this species.

Phenology Comments:

Anthesis occurs in late summer, (July) August and September. Late germinating plants will produce flowers and seeds when less than 1 dm tall and unbranched.

Reproduction and Ecology Comments

Reproduction Comments:

Currently no reproduction notes for this species.

Management Needs:

The continued grazing of cattle in sand dune areas should maintain enough disturbance to ensure the existence of blow-outs and shifting sand habitat needed by this annual species. The judicious use of fire should be allowed to keep shrub growth under control; it will enhance grazing capacity as well as holding the shifting balance of the sandhill complex vegetation nearer to that required for the maintenance of the rare species that depend on the open sand. Active blowouts should not be deliberately prevented from their natural course.

Management Comments:

Activity restrictions require year round **low** intensity activity be limited to **foot traffic only** adjacent to populations, **medium** intensity activities* should occur only at distances greater than **25 metres** from the population and **high** intensity activities* at distances greater than **50 metres** from the population.

*Examples of **medium** intensity activity include small vehicles <1 ton, ATVs, operating oil or gas wells, pipelines, trucks>1 ton (gravel, oil, grain), tractors (including farm tractors), pipeline construction (diameters <1 foot), operating compressor station or battery.

Examples of **high intensity activity include road construction, roads, drilling rigs, mines and quarries, construction of compressor station or battery, forest harvest, large-diameter pipeline construction, seismic exploration, blasting, rock crushing, asphalt batching, gravel pit.

References

Reference ID

Citation

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Harms, V.L., P.A. Ryan and J.A. Haraldson. 1992. The rare and endangered vascular plants of Saskatchewan. Prepared for the Saskatchewan Natural History Society. Unpubl.