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### **Recommended Citation**

Rolfsmeier, Steven B.; Kaul, Robert B.; and Sutherland, David M., "New and Corrected Records of the Flora of Nebraska" (1987). *Biology Faculty Publications*. 48. https://digitalcommons.unomaha.edu/biofacpub/48

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Transactions of the Nebraska Academy of Sciences and Affiliated Societies

Nebraska Academy of Sciences

1-1-1987

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Rolfsmeier, Steven B.; Kaul, Robert B.; and Sutherland, David M., "New and Corrected Records of the Flora of Nebraska" (1987). *Transactions of the Nebraska Academy of Sciences and Affiliated Societies*. Paper 202. http://digitalcommons.unl.edu/tnas/202

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### NEW AND CORRECTED RECORDS OF THE FLORA OF NEBRASKA

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New distributional data are provided for 27 species of vascular plants in Nebraska, eight newly recorded as growing wild in the State. The record of one species previously attributed to the State is shown to be based upon misidentified specimens, the range of another is shown to be much more restricted in Nebraska than previously reported, and nomenclature is corrected for two species.

and

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### INTRODUCTION

Continuing field and herbarium work in Nebraska has revealed the presence of species heretofore unknown in the State, and has improved our knowledge of the ranges of others. These additions and corrections are reported here as part of a series of papers that bring the State's floristic status up to date. Most of the State's flora was mapped in the *Atlas of the Flora of the Great Plains* (Great Plains Flora Association, 1977), but numerous additions and corrections have been made since then (Churchill, Kaul, and Sutherland, 1976a, b; Freeman and Churchill, 1983; Great Plains Flora Association, 1986; Sutherland and Kaul, 1986).

The distributional data follow the Atlas of the Flora of the Great Plain's (hereinafter referred to as Atlas), and the relevant map number from that book is cited for the species. (For newly–discovered species and those not mapped, no map number can be given.) The nomenclature used here follows the Flora of the Great Plains (Great Plains Flora Association, 1986). Voucher specimens are deposited at the Bessey Herbarium of the University of Nebraska–Lincoln (NEB), the University of Ne-

braska at Omaha herbarium (OMA), the Doane College herbarium in Crete, and the Concordia College herbarium in Seward.

Acorus calamus L. (Araceae). Sweet flag, calamus. Map 2125. We reported upon the status of this plant that is rare in Nebraska but common to the east (Sutherland and Kaul, 1986). We now have three more stations for it (Nance County, marsh near Loup River 4 mi southwest of Genoa, 2 May 1987, Kaul 5696 & Rolfsmeier; Seward County, transplanted and now abundant in marsh along West Fork of Big Blue River, 3 mi west of Beaver Crossing, 14 June 1986, Rolfsmeier 2064; Seward County, oxbow in floodplain forest along Beaver Creek, 1 mi northwest of the other Seward County site, and the origin of the plants in that site, 23 May 1987, Rolfsmeier 3285 & Landon; NEB).

Agrimonia pubescens Wallr. (Rosaceae). Downy agrimony. Map 545. This plant of dry woodlands was known in Nebraska only from three extreme southeastern counties. We now have a specimen from Seward County (Oak Glen, 2 mi north of Garland, 11 Aug. 1985, Rolfsmeier 1330; NEB) that is a western range extension of the species. An old specimen from Lancaster County (Lincoln, 31 Aug. 1885, Webber 7258; NEB) verifies the species' presence there.

Ambrosia grayi (A. Nels.) Shinners (Asteraceae). Bur ragweed. Map 1329. In a previous paper (Sutherland and Kaul, 1986), we erroneously cited this species as synonymous with A. tomentosa Nutt. (Map 1331). Our new records, as cited in that paper, are all of A. grayi.

Arisaema dracontium (L.) Schott (Araceae). Dragonroot. Map 2126. This rare woodland aroid was shown for Sarpy, Cass, Johnson, and Richardson counties in the Atlas. An old specimen at NEB shows that it once grew in Lancaster County (Saltillo, 7 May 1893, Pound & Saunders 3195). An old specimen from Saline County (Crete, 20 July 1883, Swezey s.n.) is in the Doane College herbarium. We have not seen this species in either county and we presume it to be extirpated there. The specimen upon which the Sarpy County record is based is at OMA and is of dubious provenance; it may have been taken from cultivation. The species is unknown today in Sarpy County.

Collomia linearis Nutt. (Polemoniaceae). Map 1055. This species is known from the northern tier of counties and from the panhandle. We have collected it in Washington County (south of Blair, 22 June 1975, Kaul 2448 & Sutherland; NEB).

Corydalis aurea Willd. var. aurea (Fumariaceae). Map 117. The specimen cited for Lancaster County in a previous paper (Sutherland and Kaul, 1986), has been re-identified as C. micrantha (Engelm.) A. Gray, the only species known in the county.

Cyperus fuscus L. (Cyperaceae). This introduced annual of moist sandy places was listed in the Appendix of the Atlas for one station each in South Dakota and Nebraska (Lincoln County), and was reported by Weedon and Stephens (1969) for those places. We now have a second Nebraska location: Douglas County (wet sand along the Platte River, Two Rivers State Recreation area, 23 Oct. 1983, Kaul 2807; NEB).

**Desmodium sessilifolium** (Torr.) T. & G. (Fabaceae). Sessile tickclover. Map 681. This species was not mapped for Nebraska in the *Atlas*, but we have three records of it at NEB: "southern Nebraska," 20 July 1891, Price *s.n.*; Jefferson County: base of west–facing bluff, near springs, 1 Oct. 1975, Churchill 6791; 5.5 miles south, 1.5 miles east of Fairbury, abundant on roadside, 20 Sept. 1986, Rolfsmeier 3026.

Echinocereus viridiflorus Engelm. (Cactaceae). Hedgehog cactus. Map 187. This cactus of the southwestern states barely enters Nebraska. It was shown in the *Atlas* for Chase and Cheyenne counties. We now have a specimen from Keith County (open prairie slope in canyons on the south side of the North Platte River below Kingsley Dam, 21 June 1981, Sutherland 5547; OMA and Cedar Point Biological Station herbarium). This is the northeasternmost locality known for this species.

Echinodorus rostratus (Nutt.) Engelm. (Alismataceae). Burhead. Map 1664. This aquatic annual is shown in the Atlas for Nebraska, Iowa, and South Dakota counties bordering the Missouri River, as well as from Dodge County, Nebraska. It is now known from Lancaster County (Sutherland and Kaul, 1986) and Seward County (pond at Oak Glen, 22 Sept. 1985, Rolfsmeier 1536; NEB). A major northwestward range extension is evidenced by a recently—discovered collection from Holt County (20 mi south of O'Neill, 20 August 1941, Tolstead 41464; NEB). Although this species usually grows in sandy soil in the Missouri and lower Platte valleys, this is our only specimen from the Sandhills.

Erechtites hieracifolia (L.) Raf. (Asteraceae). Fireweed. Map 1453. This species was known from southeastern Nebraska as far west as Lancaster and Johnson counties, as shown in the Atlas. We now have westernmost records of it from Seward County (floodplain woodland southeast of Seward, 15 Sept. 1985, Rolfsmeier 1529, and several other stations; NEB) and Jefferson County (Lake 3, Alexandria Lakes, 13 Sept. 1986, Rolfsmeier 2917; NEB). The plant is abundant in counties bordering the Missouri River, but is much less so westward.

Foeniculum vulgare Mill. (Apiaceae). Fennel. This European culinary herb was not indicated for Nebraska in the Atlas but there are three specimens of it at NEB: Brown County (Long Pine Creek, 15 Sept. 1892, Bates s.n.); Holt County (Dorsey, 2 July 1893, Clements 2744); Douglas County (Omaha, 9 July 1897, Cleburne s.n.). The Brown County specimen was certainly collected from the wild; the other two may have been from gardens. This species is grown in gardens, but we have not seen it in the wild anywhere in the State.

Fumaria vaillentii Lois. (Fumariaceae). Fumitory. Map 124. This introduced European species was not shown for Nebraska in the *Atlas*, but there is a specimen in the Concordia College herbarium from Seward County (5 mi east of Seward, 10 May 1967, Gundell 15). In the *Atlas*, this species is erroneously called F. officinalis L.

Haplopappus ciliatus (Nutt.) DC. (Asteraceae). Goldenweed. Map 1496. This native annual species of dry, open sites in the southern half of the Great Plains was known in Nebraska only from Nemaha County until its recent discovery in Seward County (Oak Glen prairie, 10 Sept. 1983, Barry 58, and 19 Aug. 1984, Rolfsmeier 855; NEB).

Holosteum umbellatum L. (Caryophyllaceae). Jagged chickweed. Map 210. This Eurasian plant has recently been found in Saline County (Crete lawn, 11 April 1986, Rolfsmeier 1615; NEB) and elsewhere in Crete. It was previously known in Nebraska only from Buffalo, Dawes, and Webster counties, but it is often collected in nearby Kansas counties and can be expected as an established member of the Nebraska flora, at least in the southeastern counties.

Hypericum canadense L. (Clusiaceae). This species was not mapped for the Great Plains in the Atlas, but it was noted in the Appendix for four Nebraska counties: Cherry, Hooker, Kearney, Thomas. The specimens upon which those records were based are now identified as H. majus (Gray) Britt., Map 343. Hypericum canadense is unknown in the flora of the Great Plains.

Lechea stricta Legg. (Cistaceae). Pinweed. Map 386. This northern plant of dry, sandy soils was known in Nebraska only from Brown and Holt counties until its recent discovery in extreme southern Nebraska (Jefferson County, sandy roadside bank 1 mi east of Powell, 13 Sept. 1986, Rolfsmeier 2924; NEB).

Leonurus marrubiastrum L. (Lamiaceae). This Eurasian plant was shown in the Appendix to the Atlas for Douglas, Nemaha, Richardson, and Washington counties of Nebraska. It has now been found for the first time away from the Missouri River (Seward County, one mi west of Seward, 4 Sept. 1983, Varner 28; NEB).

Leonurus sibiricus L. (Lamiaceae). This introduced Eurasian species was not shown for the Great Plains in the Atlas, but we have three specimens from Nebraska: Custer County (10 Sept. 1966, Lemaire 3003; NEB); Seward County (pasture 3.5 mi north and 3 mi east of Garland, 21 July 1985, Rolfsmeier 1196; NEB; and floodplain forest 0.5 mi south of U.S. Highway 34 along the Lancaster County line road, 3 July 1986, Rolfsmeier 2242; NEB).

Lespedeza cuneata (Dumont) G. Don (Fabaceae). Chinese bush clover. Map 690. This introduced plant is a troublesome weed in the southeastern Great Plains, but was known in Nebraska only from Richardson County until 1986, when three collections were made in other southeastern counties: Lancaster (dry clay bank, east side of Wagon Train Lake, 25 Sept. 1986, Kaul 5592, and roadside, SW 72nd St. at Wittstruck Rd., Rolfsmeier 3034; NEB); Seward (Twin Lakes area north of Pleasant Dale, 28 Sept. 1986, Rolfsmeier 3067; NEB).

*Mentha spicata* L. (Lamiaceae). Spearmint. This Eurasian mint was not shown for Nebraska in the *Atlas*, but we have specimens from Lancaster County (July 1916, Clark *s.n.*; NEB), and Seward County (weedy ravine in Seward, 21 Sept. 1983, Barry 61; NEB).

Menyanthes trifoliata L. (Menyanthaceae). Buckbean. This species was not mapped in the Atlas, but it was cited from North Dakota and South Dakota in the Appendix. The early Nebraska collections in NEB were overlooked: Cherry County (May 1891, Bates s.n.; July 1912, Pool & Folsom s.n.; July 1936, Tolstead 619) and Blaine County (May 1941, Jackson s.n.). This circumboreal species is common in the northern coniferous forests but is rare in the Great Plains, where it is probably relictual from cooler, early postglacial times. It has been seen recently in Cherry County.

Onopordum acanthium L. (Asteraceae). Scotch thistle. This large, coarse plant resembles musk thistle (Carduus nutans) and is known as an equally troublesome weed in other states. It was known in Nebraska only from Webster County, according to the Appendix of the Atlas, but we have found it to be abundant in the North Loup River Valley in Greeley County (along railroad and in adjacent overgrazed pasture about 1 mi southwest of Scotia, 23 June 1986, Rolfsmeier 2113 & Kaul; NEB) and Valley County (along railroad just southeast of Ord, 23 June 1986, Rolfsmeier 2115 & Kaul; NEB). According to resident Agricultural Extension Agents, this species has been abundant at least since the 1960's in Greeley and Valley counties, but does not seem to be spreading. We have not found it in the Middle Loup River Valley.

**Potentilla anserina** L. (Rosaceae). Silverweed. Map 569. This northern, circumboreal plant of sandy beaches was known in Nebraska only from Kimball County, but we have found a specimen from Garden County in the Doane College herbarium (Lewellen, 9 June 1890, Sprague *s.n.*). This species is to be sought elsewhere in the Sandhills.

Potentilla argentea L. (Rosaceae). Silvery cinquefoil. Map 570. This introduced species is uncommon in the eastern half of the United States. We have found it in Nebraska (Keith County, roadside near Ogallala, 8 August 1984, Held 160; Seward County, pasture at Oak Glen Wildlife Management Area, 26 May 1986, Rolfsmeier 1862; NEB). In the Great Plains, it has been known only from Minnesota, North Dakota, South Dakota, and Iowa.

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Rorippa austriaca (Crantz) Bess. (Brassicaceae). Austrian field cress. According to the Appendix of the Atlas, this introduced perennial was known in Nebraska only from Lancaster County, but Churchill (1977) found it in Cuming County (6 mi southeast of Beemer, 31 May 1975; NEB). We now have two locations from Seward County (pond margin north of Oak Glen, 26 May 1986, Rolfsmeier 1879; pond edge, Seward City Park, 10 May 1987, Rolfsmeier 3223; NEB).

**Ruellia humilis** Nutt. (Acanthaceae). Fringeleaf ruellia. Map 1268. This southern plant was known as far north as Lancaster County, but it is now recorded from Saunders County (pasture at Mead, 8 July 1984, Lackey 47; NEB).

Sida spinosa L. (Malvaceae). Prickly sida. Map 364. This introduced annual reaches its northern limits in the Great Plains in southeastern Nebraska, and was shown in the *Atlas* for Otoe, Nemaha, and Richardson counties. It has been collected again in Otoe County (floodplain of Hooper Creek, about 3.5 mi east of Palmyra, 10 Sept. 1983, Seevers s.n.; NEB), and a northernmost station is in Sarpy County (weedy edge of parking lot, Gretna, 17 July 1986, Rolfsmeier 2336 & Kaul; NEB).

Viola rafinesquii Greene (Violaceae). Johnny-jump-up. Map 378. We have specimens in NEB from Cass, Dodge, Douglas, Gage, Howard, Lancaster, Richardson, Sarpy, and Seward counties, but the Atlas shows this species in only Sarpy, Richardson, Howard, and Lincoln counties. It is probably more common than our records indicate, especially in the southeastern counties. Although sometimes thought to be an introduced species from Eurasia, Russell (1965) and others believe it to be a native Midwestern annual violet. Its range is from New Jersey to Nebraska south to Texas and Georgia, with remote occurrences known in Colorado and Arizona.

Vitis aestivalis Michx. (Vitaceae). Pigeon grape. Map 875. This species was shown for Brown, Cass, Douglas, Sarpy, and Richardson counties in the *Atlas*, but we have specimens from only Richardson County. Specimens attributed to the other counties are now identified as V. riparia.

Yucca smalliana Fern. (Liliaceae s.l.). Yucca. Map 2182. This species is known from many counties in the eastern quarter of Kansas but has not been collected in Nebraska except for one specimen from Richardson County (rocky soil southwest of Salem, 23 June 1975, Shildneck C-7544; NEB). It was not shown for the State in the Atlas.

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