

CIRSIIUM NUTTALLII (ASTERACEAE: CARDUEAE) AND A NEW, RELATED SPECIES FROM FLORIDA

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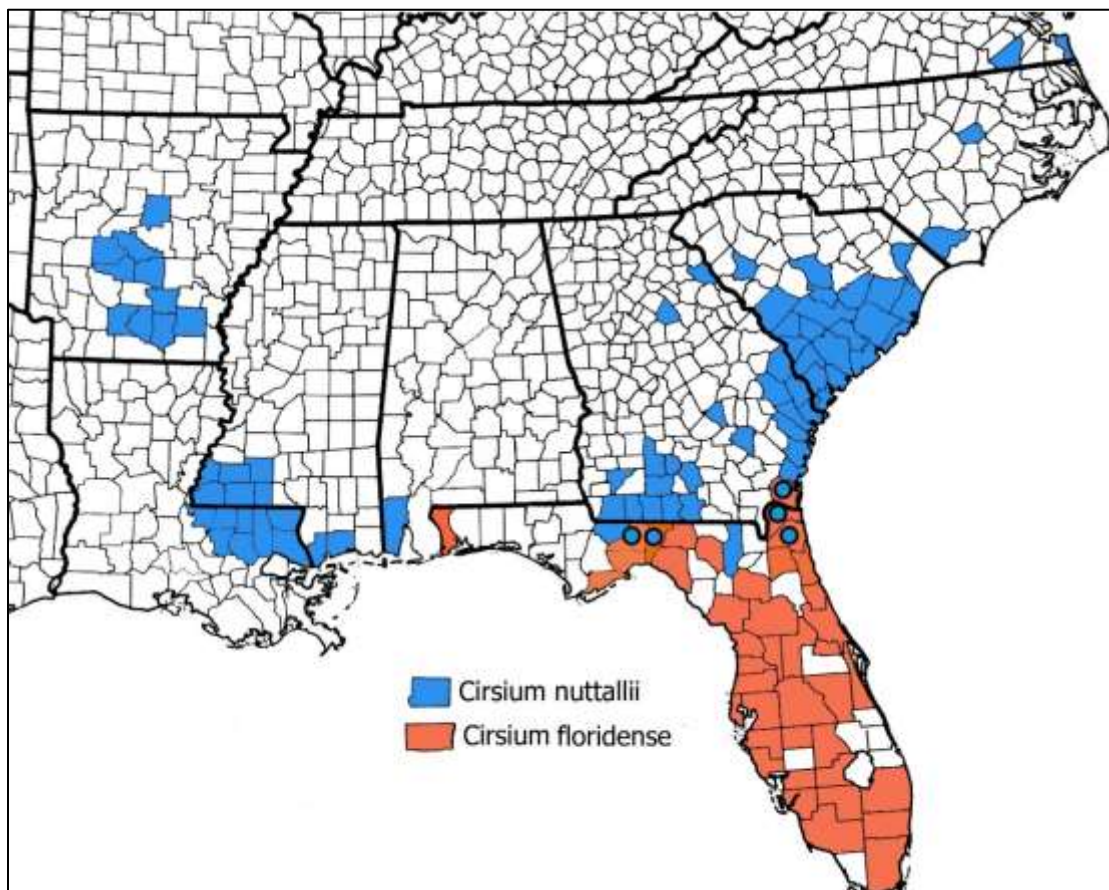
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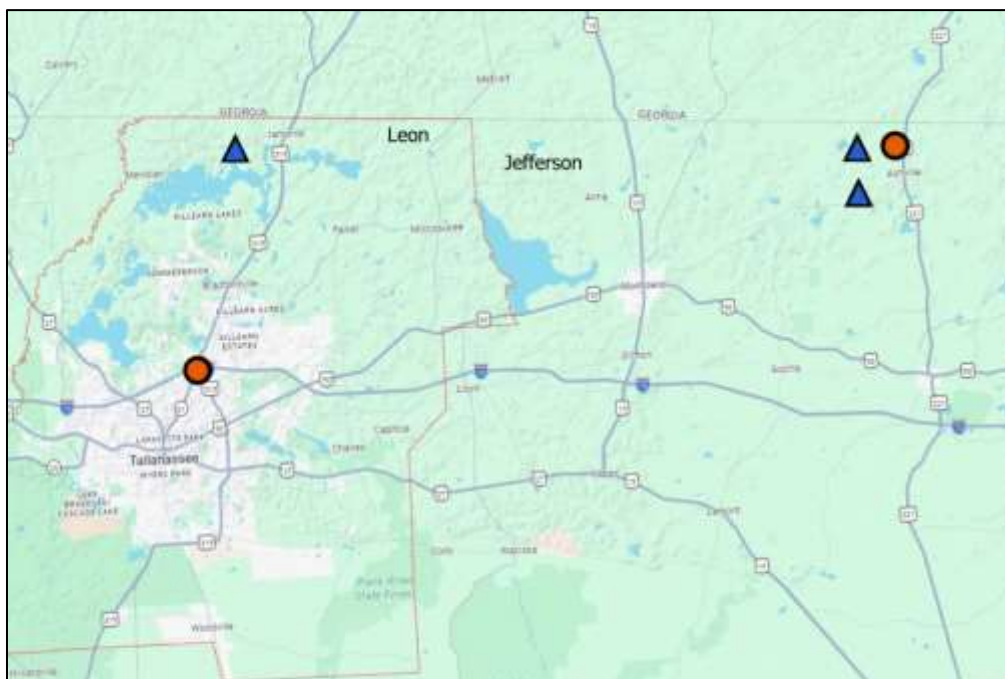
ABSTRACT

Carduus glaber Nutt. (= *Cirsium nuttallii* DC., a replacement name based on Nuttall's), is neotypified here by a collection from Charleston Co., South Carolina. *Cirsium nuttallii* ranges southward through Georgia into north-central Florida — early collections suggest that the disjunct population system in Louisiana/Mississippi is native, but the Arkansas plants may be adventive. Plants previously identified as *C. nuttallii* throughout most of Florida are described here as ***Cirsium floridense* Nesom, sp. nov.** Key contrasts, illustrations, and distribution maps are provided.

Cirsium nuttallii DC. has been regarded as a species of the southeastern USA, ranging from the Atlantic coast westward into Louisiana and Arkansas (Map 1). The plants in peninsular Florida, however, are morphologically distinct and essentially parapatric with typical *C. nuttallii*, without obvious intermediates — they are recognized as a distinct species, *Cirsium floridense*. A problem in nomenclature/typification is further addressed here, following comments by Alford (2024).



Map 1. Distribution of *Cirsium nuttallii* and *C. floridense*. Localities from SEINet records. See Maps 2 and 3 for details of sympatry (or near-sympatry).



Maps 2 and 3. Distribution of *Cirsium nuttallii* (triangles) and *C. floridense* (circles). Above: Camden Co., Georgia, and Nassau and Duval cos., Florida. Below: Leon and Jefferson cos., Florida.

Vouchers for detailed maps.

Cirsium nuttallii

Camden Co.: Bozeman 4001; Worthington 162.

Duval Co.: Creager 178; Curtiss 1581, 4973; Giannasi 1498; Ownbey 1354.

Jefferson Co.: Carter 26824; Carter 26799.

Leon Co.: Godfrey 84195.

Nassau Co.: Knight s.n.; Popenoe 2095; Rider 217; Wilbur 70741.

Cirsium floridense

Camden Co.: Carter 12446, 13096; Giannasi 909; Krakow 932.

Duval Co.: Curtiss 1584; Easley 1018; Jones 15739.

Jefferson Co.: Carter 25904.

Leon Co.: Godfrey 74992.

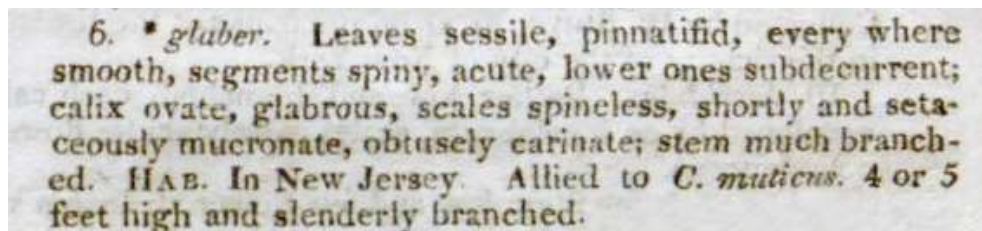
Nassau Co.: Knight s.n.; Ward 9572.

The distribution of *Cirsium nuttallii* is bimodal (or trimodal), the larger eastern system separate from the western one in Louisiana/Mississippi and Arkansas. Early collections in Mississippi were made in 1880, 1883, 1896-1890, 1900, 1900, and 1905, and a Louisiana collection was made by Thomas Drummond, thus it seems plausible that plants there are native. All of the Arkansas collections were made by John Keesling (for the Arkansas Natural Heritage Commission) in 2016 and 2017, mostly from roadside or near-roadside habitats. These were the first collections for the state, and the nativity of the species there is not clear. The plants in southeastern Virginia were collected Fernald in 1936 and 1938, the collection from Wilson Co., North Carolina, in 2002 (Krings et al. 2002) — these are plausibly part of the original/natural distribution.

Chromosome number of plants from the eastern system has been determined as $2n=24$ except for one instance of $2n=26$, presumably from accessory chromosomes, as the single variant occurred in a population where other counts were $2n=24$ (Ownbey & Olson 1969 — Florida: Hernando, Levy, Okeechobee, Putnam, and Taylor cos.; Georgia: Glynn Co.; South Carolina: Hampton Co. Moore & Frankton 1969 — Florida: Wakulla Co.). The single count from the Louisiana/Mississippi system is $2n=28$ without mention of accessory chromosomes (Moore & Frankton 1969 — Louisiana: St. Helena Par., Shinnery 29871, GH, SMU).

1. **CIRSIIUM NUTTALLII** DC., Prodr. 6: 651. 1838 [nom. nov., replacement name based on *Carduus glaber* Nutt., not *Cirsium glabrum* DC. 1815]. *Carduus glaber* Nutt., Gen. N. Amer. Pl. 2: 129. 1818. *Cnicus glaber* (Nutt.) Elliott, Sketch Bot. S. Carolina 2: 270. 1823. *Cnicus nuttallii* (DC.) A. Gray, Proc. Amer. Acad. Arts 10: 41. 1874. *Carduus nuttallii* (DC.) Pollard, Bull. Torrey Bot. Club 24: 157. 1897. **TYPE**: Notes following.

Nuttall did not cite a type for his *Carduus glaber* and Alford (2024) could not locate a type specimen for the name. Nuttall's protologue is this.



The geography of *Cirsium nuttallii* does not include New Jersey, yet the protologue description can be seen as matching *C. nuttallii*, especially the pinnatifid leaves, the lower subdecurrent, and "setaceous mucronate" phyllaries. Nuttall obviously was acquainted with *C. muticum*, which he observed to be similar to the new species (i.e., not the same species) — the features above do not match *C. muticum*.

Elliott (1824) used Nuttall's name. His account of *Carduus* included "5. GLABER ? Nutt., ... the only species whose description accords with the character of our plant. ... This species [is] by far the most common in the low country of Carolina and Georgia. Grows in cultivated lands, very common about buildings. Flowers May–August."

Mohr (1901) also included the species as *Carduus glaber* Nutt., with *Cirsium nuttallii* DC. as a synonym. He noted that it was known from "dry pine woods, Mobile County, Dauphin Island," with the overall range as "Carolinian and Louisianian areas." Another collection, identified similarly by Mohr, is from Mobile Co.: Bayou La Batre, 1891, *Mohr s.n.* (ALU).

DeCandolle clearly intended to create a replacement name for Nuttall's *Carduus glaber*. Lacking a type, however, the only collection he cited was by L.A.G. Bosc from "Carol." (G-DC, Fig. 1, originally identified as *Carduus virginianus*). In Alford's interpretation (2024), deCandolle's entry serves as the valid protologue for *Cirsium nuttallii*, typified by the Bosc collection. The Bosc specimen matches the morphology of *Cirsium nuttallii* (e.g., Fig. 2).

98. *C. NUTTALLII*, foliis sessilibus utrinque glabris aut glabriusculis ultra medium pinnatifidis, lobis lanceolatis acuminatissimis dentibusque spinosis, capitulis subpaniculatis ovato-globosis, pedunculis pilosiusculis, invol. squamis lanceolatis adpressis spinulâ brevi subreflexâ apiculatis dorso puberulis et subviscosis. ♀ in Novâ Cæsareâ (Nutt.), frequens in locis demissioribus Carolinæ et Georgiæ. *Carduus glaber* Nutt. gen. am. 2. p. 129. *Cnicus glaber* Ell. sketch 2. p. 270. Card. Virginianus Bosc! herb. Omnino differt à *C. glabro* nostro antiquiore. Cor. pallidè purpurascens. Herba 4-6-pedalis. (v. s.)

An alternative taxonomic course, adopted here, is to view Nuttall's attribution of the species (as *Carduus glaber*) to New Jersey as mistaken — perhaps he prepared the protologue from notes, without a specimen at hand, the type already misplaced. He probably had seen the species, a prominent and abundant thistle of South Carolina — he landed in 1815 at Charleston (South Carolina) and traveled westward across the state into Georgia and Alabama, returning to Savannah (Georgia) on a more southern route (Graustein 1967). A South Carolina neotype is designated here for Nuttall's original name, upon which deCandolle's replacement is based.

***Carduus glaber* Nutt., Gen. N. Amer. Pl. 2: 129. 1818. NEOTYPE** (designated here): **South Carolina.** Charleston Co.: Along railroad at SC Hwy 174, 1.8 mi S of jct of SC Hwy 164, [SW of Charleston, S of Adams Run, ca. 32.69 N, 80.35 W], 23 Jun 1968, S.W. Leonard 1696 (USCH; isoneotypes: APSC, AUA, BAL, BOON, BRY, CHRB, CLEMS, CM, COLO, DOV, DSC, ERSK, GA, GAS, IND, KANU, KE, KSP, LSU, MEM, MIN, MISS, MCU, NCU, NDA, NLU, NY, PAC, PEMB, SIU, UOS, USAM, UTCVDB, VSC, WCUH, WIS, WWC).

2. *CIRSIIUM FLORIDENSE* Nesom, sp. nov. TYPE: Florida. Pasco Co.: Werner-Boyce Springs State Park, disturbed area between planted sod and mesic flatwoods to the rear of the park shop, 18 Apr 2003, *C. vanHoek* WB312 (holotype: USF). Figure 10.

Similar to *Cirsium nuttallii* in most features but leaves on the proximal half of the stem decurrent for the full internode length.

Annual herbs. **Stems** single from the base, 1–2.5 m tall, glabrous. **Leaves:** rosette often senescent by flowering, cauline glabrous on both surfaces or light flocculent abaxially, basal and proximal cauline narrowly ovate to obovate in outline, with narrow, deeply cut lobes, 10–20 cm long, 2.5–6 cm wide (lobe tips), not clasping, congested, decurrent for the full internode length, distal not decurrent. **Heads** in a subcorymboid to paniculate terminal cluster, usually without immediately subtending bracts; peduncles (1–)4–15 cm long, usually with much reduced foliar bracts. **Involucre** 12–15 mm wide (pressed), glabrous; phyllaries narrowly oblong-ovate, with a thick glutinous dorsal ridge, glabrous, in 7–8 series of unequal length, inner 12–15 mm long, apex acute, abruptly narrowed to an acicular, spreading spinule 0.5–1 mm long. **Flowers** lilac, corollas white to light lilac or purplish,

staminal tubes light lilac to purplish, corolla 18–20 mm long, tube 7–9 mm long, throat 6–7 mm long, lobes 5–7 mm long. **Achenes** 3.5–4 mm long. Figures 10-27.

Flowering (December, March-) April-July (August). Hammocks, pine flatwoods, sand and shell ridges, roadbanks and roadsides, often wet or marshy, ditch edges, floodplains, powerline ROWs, low fields, pastures, vacant lots.

Cirsium floridense is mainly differs from typical *C. nuttallii* in a qualitative feature — leaves of *C. floridense* on at least the proximal half of the stem are decurrent for the full internode length, those of *C. nuttallii* only for 5-12 mm. The difference in appearance of the plants, however, is striking, with the decurrent leaves of *C. floridense* giving nearly the aspect of *C. vulgare*, the only other species of the eastern USA with such long-decurrent leaves, and one might be tempted to follow an identification key to *C. vulgare* based on this. Further, *C. nuttallii* and *C. floridense* are allopatric except for two small areas where their ranges come into contact, and intermediates have not been encountered, suggesting that they are genetically isolated.

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Figure 1. *Cirsium nuttallii*. Bosc s.n. (P) from "Carol," cited by deCandolle as an example of *C. nuttallii*. Vestiture of this plant is similar to that of *C. virginianum*. The difference in leaf color, adaxial vs. abaxial, reflects the glabrous adaxial surface vs. the white-tomentose abaxial one.



Figure 2. *Cirsium nuttallii*. Involucre from Bosc s.n. (P, Figure 1).



Figure 3. *Cirsium nuttallii*. Berkeley Co., South Carolina. Nelson 30736 (USCH). Similar to the Bosc specimen in Figure 1.



Figure 4. *Cirsium nuttallii*. Georgetown Co., South Carolina. Ahles 32132 (NCU).



Figure 5. *Cirsium nuttallii*. Georgetown Co., South Carolina. Leonard 1696 (NCU). Isoneotype.



Figure 6. *Cirsium nuttallii*. Lee Co., South Carolina. Horn 23845 (NBYC).



Figure 7. *Cirsium nuttallii*. Colleton Co., South Carolina, iNaturalist photo by bartlettjudy, 25 Jul 2023.



Figure 8. *Cirsium nuttallii*. Beaufort Co., South Carolina. iNaturalist photo by Bobby McCabe, 28 Jun 2023.



Figure 9. *Cirsium virginianum*. Compare prickly morphology with *C. nuttallii*. Photo by Gary Fleming, from Weakley and the SE Flora Team (2026). The key below adds distinctions between the two species.

- a. Cauline leaves mostly coarsely toothed, abaxial surface densely and persistently white-tomentose; proximal cauline leaves not decurrent; corollas and anthers bluish-purple; phyllary apex abruptly formed into a short, spreading spinule (1–2 mm) ***Cirsium virginianum***
- a. Cauline leaves with narrow lobes, abaxial surface thinly and loosely white-tomentose, glabrescent; proximal cauline leaves short-decurrent; corollas white to pale lilac, anthers pale lilac; phyllary apex an abrupt, spreading prickly (0.5 [–1] mm long) ***Cirsium nuttallii***



Figure 10. *Cirsium floridense*. Pasco Co., Florida, vanHoek WB312 (USF). Holotype.



Figure 11. *Cirsium floridense*. Collier Co., Florida, Correll 51750 (NY).



Figure 12. *Cirsium floridense*. Collier Co., Florida, Lakela 30755 (FLAS). Figure 12 for Sheet 1.



Figure 13. *Cirsium floridense*. Collier Co., Florida, Lakela 30755 (FLAS). Figure 11 for Sheet 2.

Figure 14. *Cirsium floridense*. Marion Co., Florida, Ward 3486 (FLAS).



Figure 15. *Cirsium floridense*. Marion Co., Florida, Hubbard 520 (FLA).



Figure 16. *Cirsium floridense*. Polk Co., Florida, Williams 3938 (USF).



Figure 17. *Cirsium floridense*. Polk Co., Florida, Corogin TC381 (FLAS).

Figure 18. *Cirsium floridense*. Volusia Co., Florida, Abbott 22362 (FLAS).



Figure 19. *Cirsium floridense*. Volusia Co., Florida, Kunzer 1688 (USF).



Figure 20. *Cirsium floridense*. Levy Co., Florida, Cooley 6414 (USF).



Figure 21. *Cirsium floridense*. Highlands Co., Florida, Ray 9801 (USF).

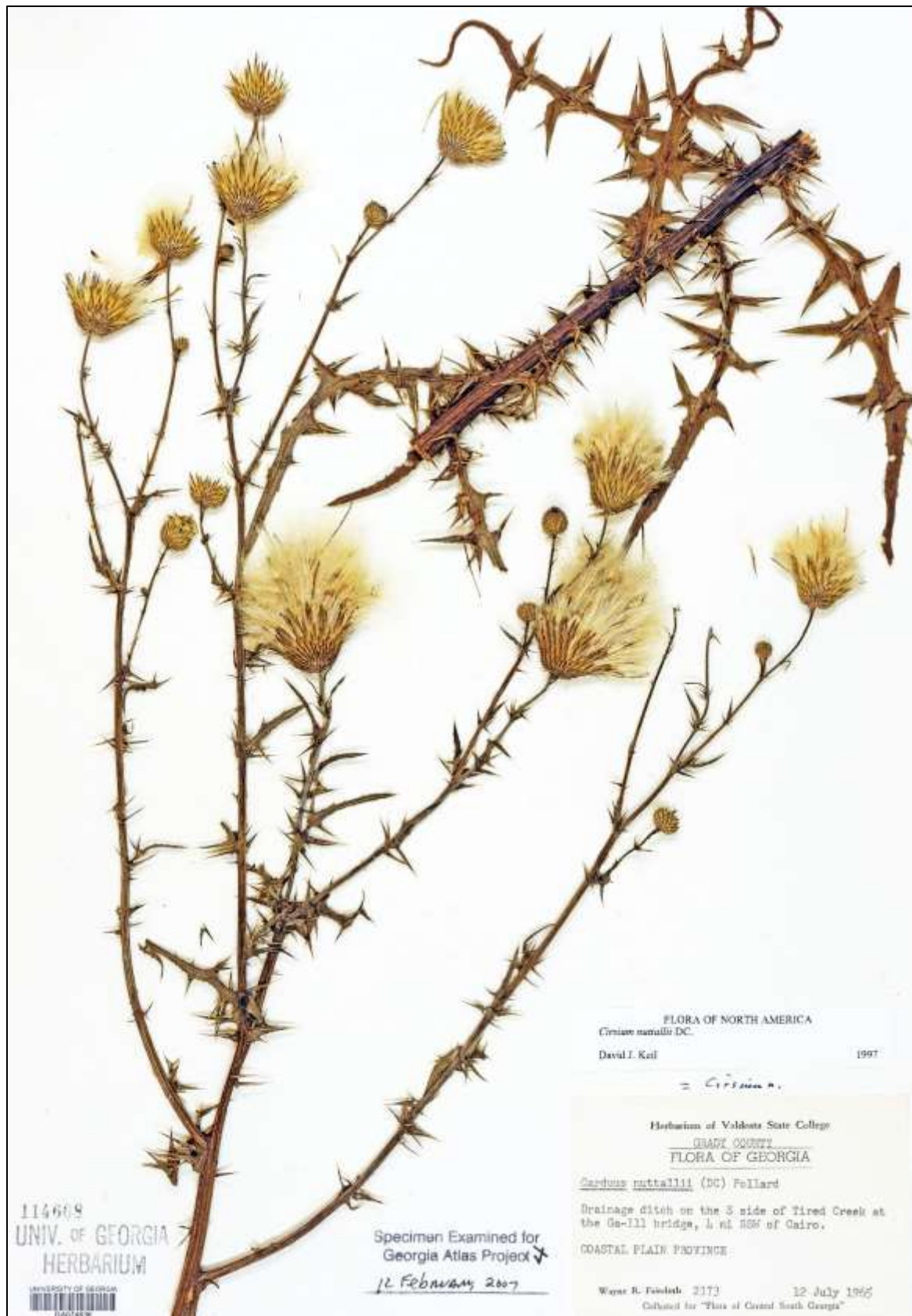


Figure 22. *Cirsium floridense*. Grady Co., Georgia, Faircloth 2173 (GA).

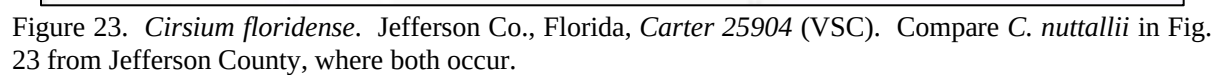




Figure 24. *Cirsium nuttallii* sensu stricto. Jefferson Co., Florida, Carter 26799 (VSC). Compare *C. floridense* in Fig. 22 from Jefferson County, where both occur.



Figure 25. *Cirsium floridense*. Duval Co., Florida. iNaturalist photo, pixiepop supreme, 17 May 2026.



Figure 26. *Cirsium floridense*. Charlotte Co., Florida. iNaturalist photo, Luke Vinko Markovina, 4 May 2026.



Figure 27. *Cirsium floridense*. St. Lucie Co., Florida. iNaturalist photo, Sheri Holmes, 6 May 2026.