

## NEW SPECIES OF *PYRROCOMA* (ASTERACEAE, ASTEREAE) FROM SOUTHWESTERN UTAH

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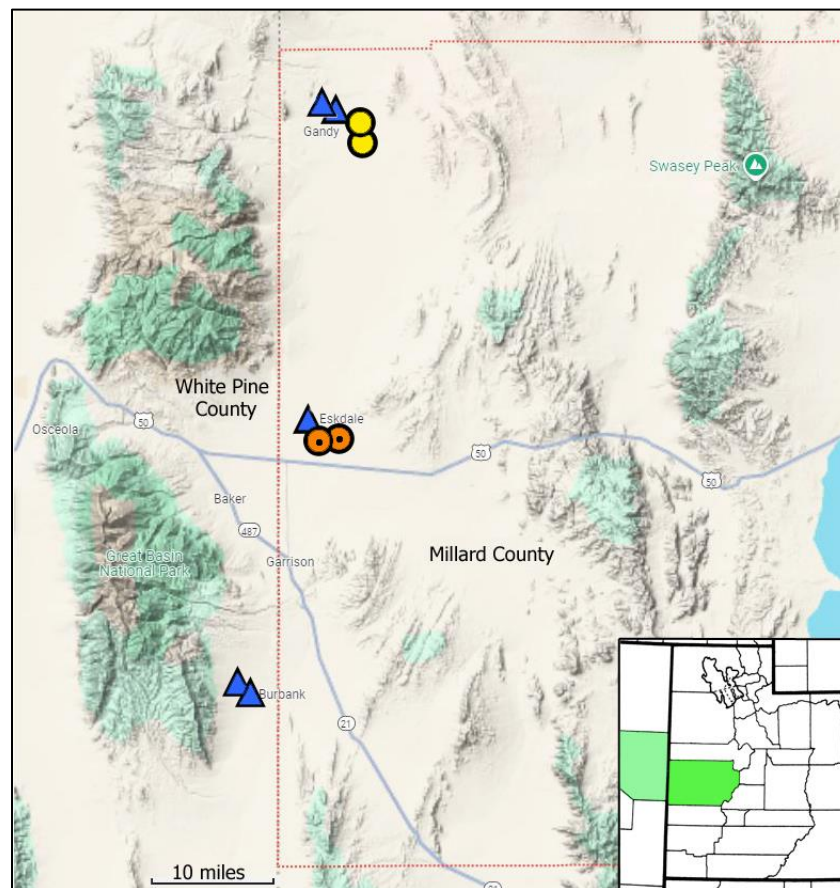
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### ABSTRACT

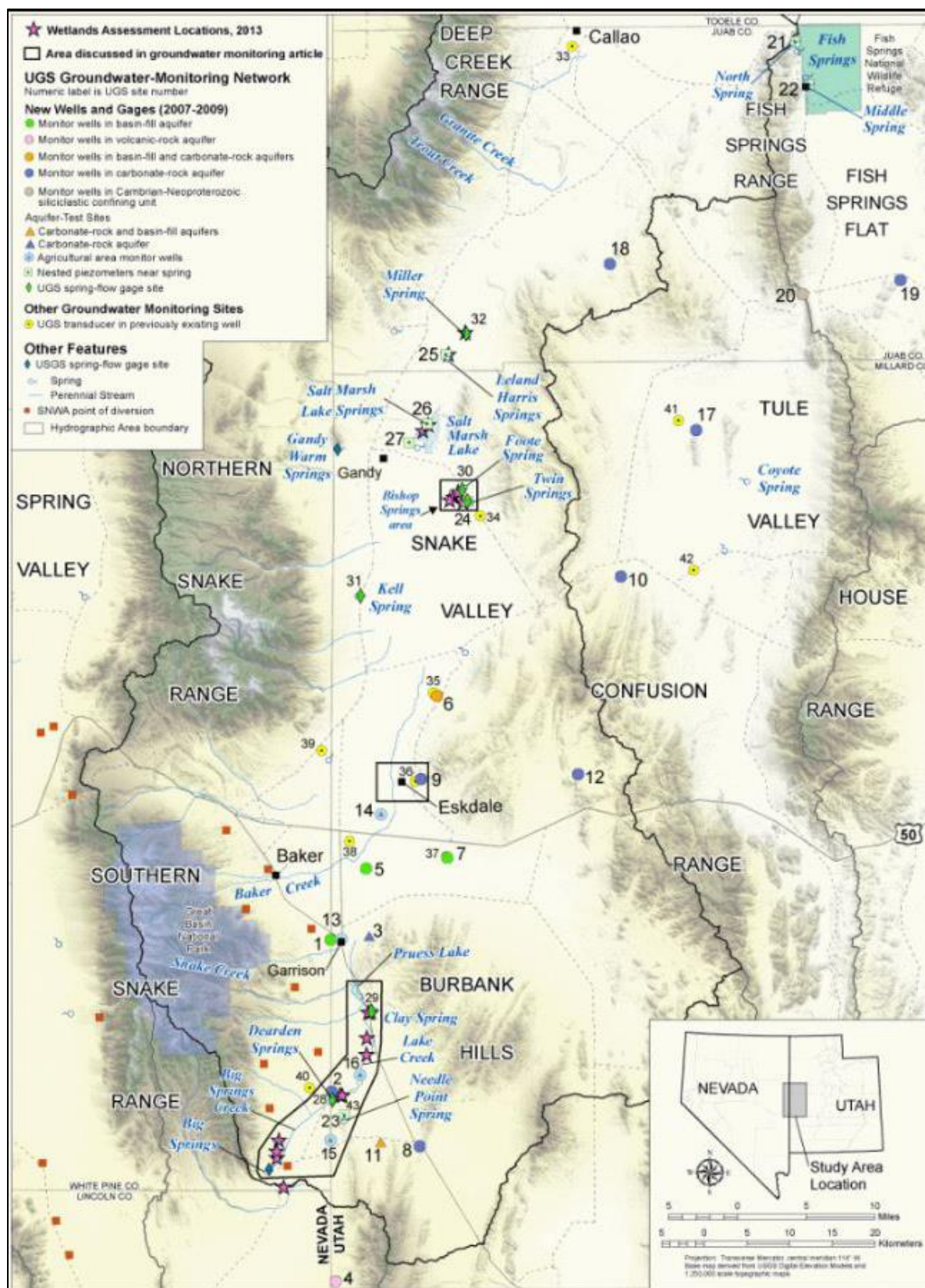
Three new species are described from the Snake Valley of southwestern Utah (Millard Co.) and immediately adjacent Nevada (White Pine Co.): *Pyrrocoma anguinea* Nesom, **sp. nov.**, *Pyrrocoma eskia* Nesom, **sp. nov.**, and *Pyrrocoma parva* Nesom, **sp. nov.**

The Snake Valley (Map 2) extends about 70 miles from north to south in Millard Co., Utah, and adjacent White Pine Co., Nevada — bounded on the west by the Snake Range and Deep Creek Mountains and on the east by the Confusion Range. Playas, hot springs, and salt marshes and wetlands are scattered through — elevations of valley-floor habitats range from about 4800 to 5500 feet.

Three species of *Pyrrocoma* are known only from the Snake Valley (Map 1) and are described here. Some of these plants are identified in Welsh et al. (2015) as *Haplopappus racemosus*, but with the caveat that they are outside the range of variation of more western entities identified as such.



Map 1. Distribution of *Pyrrocoma anguinea*, *P. parva*, and *P. eskia*. The Millard County boundary is outlined in red.



Map 2. Snake Valley (Hurlow & Jordan 2014). Millard Co., Utah, and White Pine Co., Nevada.





Figure 1. Saline habitat at south end of Salt Marsh Lake, east-northeast of Gandy, Millard Co., Utah, looking west. The isolated Spring Mountain in the background; behind that, in Nevada, is the Northern Snake Range. Photo by Nesom, 31 August 2024. Two species of *Pyrrocoma* are present here.

**1. PYRROCOMA ANGUINEA** Nesom, **sp. nov.** **TYPE: Utah.** Millard Co.: Snake Valley, E of Gandy, ca. 2.5 mi E of Gandy Road [S end of Salt Marsh Lake], 39.4467° N, 113.9318° W, in channel on *Juncus*, *Carex*, *Potentilla*, *Muhlenbergia* hummocks, 4830 ft, 4 Oct 1985, *B. Franklin* 2636 (holotype: BRY; isotype: NY).

Distinct in its persistent tufts of dense white tomentum at the stem bases, serrulate leaf margins, few heads in a loose panicle on long, mostly bare peduncles, and cupulate involucre 8–9 mm wide and sparsely tomentose.

**Stems** (10–)20–30 cm long, ascending-erect, often reddish, eglandular, sparsely tomentose, eglandular, with persistent tufts of dense white tomentum at the stem bases. **Leaves:** basal oblanceolate, 4–8 cm long, sometimes with a petiolar region ca. 1/3 the leaf length, blades 3–8 mm wide, glabrous, margins nearly entire to evenly toothed with sawtooth serrulations (e.g., Figs. 1 and 3), with persistent fibrous remnants of petiole bases, cauline diminished in size distally, not at all clasping, continuing into the inflorescence. **Heads** 1 or usually 2–5(–8) in a loosely subracemoid to paniculate array 8–18 cm long on long ((2–)5–8 cm), filiform peduncles with scattered small bracts. **Involucres** 8–9 mm wide

(pressed), cupulate, sparsely and closely tomentose, eglandular; phyllaries narrowly oblong, in 4–5 series graduate in length, inner 6–7 mm long, with an elongate distal green patch. **Ray florets** 12–14, corollas 6–8 mm long. **Disc corollas** 5 mm long. **Achenes** strigose. Figures 1–6.

**Additional collections.** **Nevada.** White Pine Co.: Snake Valley, Big Spring Wash of valley at state line, 11 air mi S of Garrison, Utah, [38.76766° N, 114.06801° W], drying saline soil, with *Allenrolfea*, *Chrysothamnus albidus*, *Chrysothamnus nauseosus* subsp. *consimilis*, 5440 ft, locally common, 28 Aug 1980, *Anderson 5071* (UNLV); ca. 1 mi SW of Dearden Ranch, 38.7563° N, 114.0744° W, 5440 ft, 28 Aug 1980, *Welsh 20162* (NY). **Utah.** Millard Co.: Ca. 1.3 air mi ENE of Gandy, Foote Ranch Road 1.9 mi E of jct with Gandy Road, S end of Salt Marsh Lake, salt-crusted soil among shrubs of *Sarcobatus*, with *Allenrolfea*, *Distichlis*, *Sporobolus*, *Muhlenbergia*, *Salicornia*, *Potentilla anserina*, 4880 ft, scattered plants, at edge of dense marsh, also with *Pyrrocoma parva*, scattered on salt crust, 31 Aug 2024, *Guy Nesom Pyr-3* with Genevieve Nesom (BRY, NY, RENO, TEX, WTU); Snake Valley, 6.5 mi E of Gandy, S of Salt Marsh Lake, 4786 ft, 5 Sep 1976, *Welsh et al. 14513* (MO); Snake Valley, ca. 4 mi W of Eskdale, 39° 06' 20" N, 114° 01' 43" W, valley bottom moist playa, gravelly silt, with *Juncus*, sand dropseed, ca. 5034 ft, 29 Jun 2004, *Welsh 28905* (BRY, SRP; 28905-KHD is *P. anguinea*).

**2. PYRROCOMA PARVA** Nesom, **sp. nov.** **TYPE:** **Utah.** Millard Co.: Snake Valley, 6.5 mi E of Gandy, S of Salt Marsh Lake, 39.44841° N, 113.9165° W, saline clay fines, 4788 ft, *Distichlis*-*Allenrolfea*-*Sporobolus* community, 5 Sep 1976, *S.L. Welsh et al. 14514* (holotype: BRY).

Distinct in its spicate to paniculate-spicate inflorescence of extremely small heads with cylindric involucre and few flowers.

**Stems** leaning-sprawling to ascending, 25–50 cm long, glabrous, without tomentum at the stem base and petiole insertion, eglandular. **Leaves:** basal narrowly oblanceolate to obovate-spatulate, 2–8 cm long, sometimes tapering to a petiolar region 1/3–1/2 the leaf length, blades 4–7 mm wide, glabrous, slightly fleshy, with persistent fibrous remnants of petiole bases, margins entire, cauline diminishing in size distally and becoming bractlike, clasping, continuing into the inflorescence. **Heads** in a spike or subspike or panicle of short, spicate branches, inflorescence 8–30 cm long, proximal head in each cluster subtended by a bract. **Involucre**s mostly 3–4 mm wide (pressed); phyllaries oblong with a triangular to rounded-deltate apex, in 3–4 series strongly graduate in length, inner 6–7 mm long, stramineous except for the distal green patch, glabrous, eglandular. **Ray florets** 6–8, corollas ca. 8–11 mm long. **Disc corollas** 5 mm long. **Achenes** strigose. Figures 7–11.

**Additional collections.** **Utah.** Millard Co.: Ca. 1.3 air mi ENE of Gandy, Foote Ranch Road 1.9 mi E of jct with Gandy Road, S end of Salt Marsh Lake, salt-crusted soil among shrubs of *Sarcobatus*, with *Allenrolfea*, *Distichlis*, *Sporobolus*, *Muhlenbergia*, *Salicornia*, *Potentilla anserina*, 4880 ft, scattered plants, at edge of dense marsh, also with *Pyrrocoma anguinea*, scattered on salt crust, 31 Aug 2024, *Guy Nesom Pyr-2* with Genevieve Nesom (BRY, NY, WTU); shores and flats S of Salt Marsh Lake, 39.4478° N, 113.9197° W, saline meadows, infrequent mostly in semi-wet marshes near the road, 4800 ft, with *Ericameria alba*, *Cleomella plocasperma*, *Sarcobatus vermiculatus*, *Distichlis spicata*, *Sporobolus airoides*, 28 Jul 2017, *Wellard 655* (BRY).

**3. PYRROCOMA ESKIA** Nesom, **sp. nov.** **TYPE:** **Utah.** Millard Co.: Snake Valley, ca 4 mi W of Eskdale, 39.10555° N, 114.02861° W, valley bottom, moist playa, gravelly silt, 5034 ft, with *Juncus*, sand dropseed, 29 Jun 2004, *S.L. Welsh 28905* (holotype: KHD)

Similar to *Pyrrocoma parva* in its glabrous vestiture and spicate to paniculate-spicate inflorescence; different in its eptiolate basal leaves, non-clasping cauline leaves, larger, broader involucre, and greater number of ray florets.

**Stems** ascending-erect, 14–45 cm long, glabrous, without tomentum at the stem base and petiole insertion, eglandular. **Leaves:** basal oblong-ob lanceolate, epetiolate, 3.5–7 cm long, blades 4–7 mm wide, glabrous, eglandular, with persistent fibrous remnants of petiole bases, margins evenly spinulose-serrulate, cauline diminishing in size distally and quickly bractlike, not clasping. **Heads** in a spike or subspike or panicle of short, spicate branches, without a subtending bract, inflorescence 8–35 cm long. **Involucres** turbinate, 7–10 mm wide (pressed); phyllaries oblong with a triangular-long-acuminate apex, in 4(–5) series graduate in length, the inner 7–8 mm long, stramineous except for the apical green patch, glabrous, eglandular. **Ray florets** ca. 12–14, corollas 11 mm long. Disc corollas 5 mm long. **Achenes** strigose. Figures 12–14.

**Additional collections. Utah.** Millard Co., Snake Valley: ca 3 mi W of Eskdale, 39.10614 N, 114.0215 W, moist area, playa bottom, silt with gravel overlay, 5034 ft, with *Juncus*, *Sporobolus*, *Haplopappus*, *Swertia*, *Thelypodium integrifolium*, *Ivesia kingii*, and *Sarcobatus*, 29 Jun 2004, Atwood 30491 (BRY, SRP); ca 7 mi W of Eskdale, 39.09644° N, 114.02812° W, moist area, playa bottom, silt with gravel overlay, with *Juncus*, *Sporobolus*, *Haplopappus*, *Swertia*, *Thelypodium integrifolium*, *Ivesia kingii*, and *Sarcobatus*, 29 Jun 2004, Atwood 30494 (BRY).

These three species can be distinguished by the following contrasts.

1. Inflorescence a loose panicle of long-pedunculate heads; persistent tufts of dense white tomentum at the stem bases ..... ***Pyrrocoma anguinea***
1. Inflorescence spicate to subspicate or a panicle of short, spicate branches; without persistent tufts of tomentum at the stem bases.
  2. Cauline leaves clasping; involucres 3–4 mm wide; ray florets 6–8 ..... ***Pyrrocoma parva***
  2. Cauline leaves not clasping; involucres 7–10 mm wide; ray florets 12–14 ..... ***Pyrrocoma eskia***

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#### LITERATURE CITED

- Hurlow, H. and L. Jordan. 2014. UGS groundwater and spring flow monitoring in Snake Valley. Survey Notes 46(2). <<https://geology.utah.gov/map-pub/survey-notes/ugs-groundwater-spring-flow-monitoring-in-snake-valley/>>
- Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins. 2015. A Utah Flora (ed. 5, rev.). Monte L. Bean Life Science Museum, Provo, Utah.





Figure 1. *Pyrrocoma anguinea*. Millard Co., Utah, near Eskdale. Welsh 28905 (BRY).



Figure 2. *Pyrrocoma anguinea*. Millard Co., Utah, south end of Salt Marsh Lake. Nesom pyr3





Figure 3. *Pyrrocoma anguinea*. Millard Co., Utah, Salt Marsh Lake. Holotype (BRY), Franklin 2636.





Figure 4. *Pyrrocoma anguinea*. Millard Co., Utah, Salt Marsh Lake. Isotype (NY), Franklin 2636.



Figure 5. *Pyrrocoma anguinea*. White Pine Co., Nevada. Welsh 20162 (NY).





Figure 6. *Pyrrocoma anguinea*. South end of Salt Marsh Lake (see Fig. 1).  
Photos by Nesom, 31 August 2024.





Figure 7. *Pyrrocoma parva*. Millard Co., Utah, Salt Marsh Lake. Holotype (BRY), Welsh 14514.



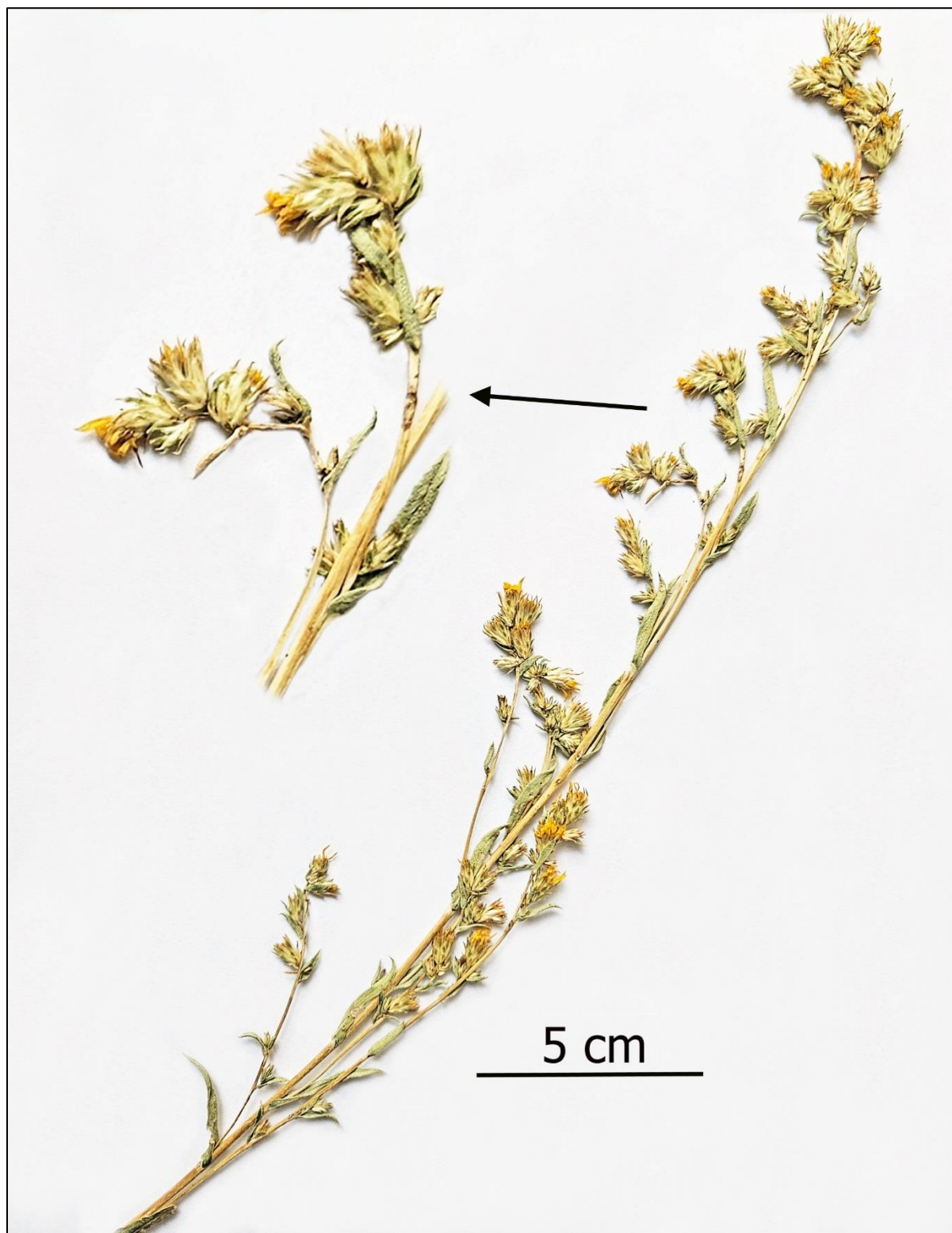


Figure 8. *Pyrrocoma parva*. Millard Co., Utah, Salt Marsh Lake. Nesom pyr2.



Figure 9. *Pyrrocoma parva*. Millard Co., Utah, Salt Marsh Lake. Wellard 655 (BRY).





Figure 10. *Pyrrocoma parva*. Cauline leaves, clasping, sub-sheathing, from Wellard 655.



Figure 11. *Pyrocoma parva*. Millard Co., Utah, Salt Marsh Lake. Photos by Nesom, 31 August 2024.



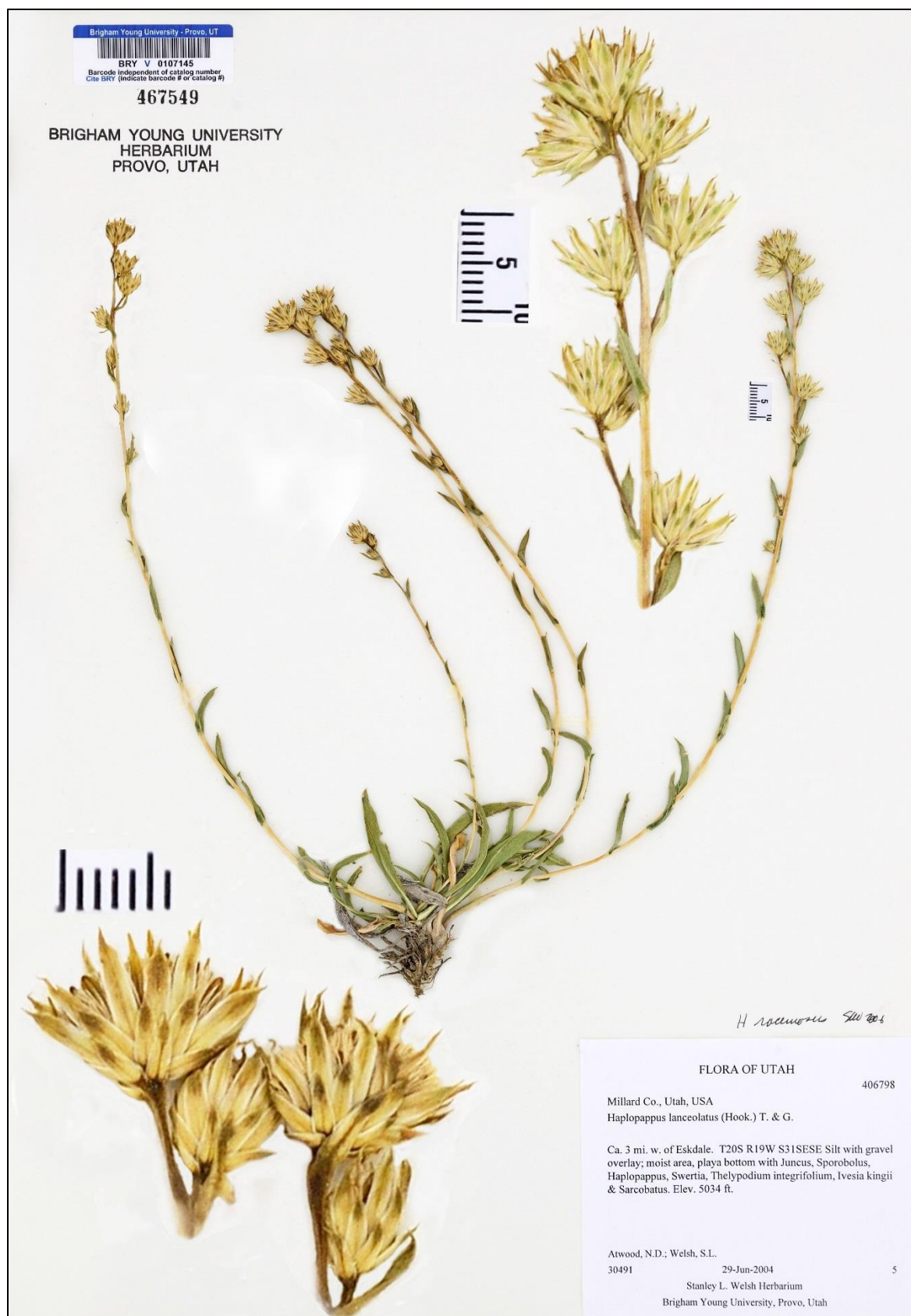


Figure 12. *Pyrrocoma eskia*. Millard Co., Utah. Atwood 30491 (BRY).



Figure 13. *Pyrrocoma eskia*. Millard Co., Utah. Welsh 28905 (KHD).





Figure 14. *Pyrrocoma eskia*. Millard Co., Utah. Atwood 30494 (BRY).