

*Juncus bufonius* L. var. *bufonius*, TOAD RUSH. Annual, fibrous-rooted, several-many-stemmed at base, cespitose, often densely tufted, ascending to decumbent, in range 5–20(–30) cm tall; shoots arising from horizontal stem at base, having 1–3 cauline leaves with ensheathing bases and a branched, terminal inflorescence, glabrous. **Stems:** horizontal stem < 2 mm diameter basal diameter  $\pm$  0.7 mm; vertical stem cylindrical at base but minutely ridged above. **Leaves:** alternate distichous, simple with sheath; sheath open, margins broad-membranous and overlapping, lacking lobes (auricles) at top; blade linear, 30–130  $\times$  0.5–1.5 mm wide, the longest above midshoot, in  $\times$ -section broadly U-shaped (channeled) to hemi-cylindric, entire and margins not membranous, parallel-veined, veins median and often red, crosswalls (septa) within blade absent. **Inflorescence:** cymelike, terminal, with 1 flower at each fork and 1–3 axes arising below each flower, bracteate, glabrous; bract subtending the lowest fork  $\geq$  the longest branch of the inflorescence, with membranous margins near base; branch length from each fork unequal; bract subtending branches decreasing upward and generally < axis, at terminal fork bract + prophyll, the lower bract ensheathing prophyll, decreasing to 3 mm long, membranous aging scarious; flower appearing short-stalked; bractlets (bracteoles) subtending flower 2, alternate distichous, ovate, ca. 2 mm long, neither completely ensheathing, membranous aging scarious, venation obscure. **Flower:** bisexual, radial, 1 mm across, closed; **tepals** 6 in 2 somewhat different whorls, erect, acuminate-lanceolate, of outer whorl at anthesis 4–4.5 mm (sepals) increasing up to 6.5 mm in fruit, back rounded, green with membranous margins, of inner whorl (petals) ca. 1 mm < outer whorl at anthesis and in fruit,  $\pm$  flat with wide membranous margins, tepals persistent; **stamens** (3–)6, free, included; filaments  $\pm$  1 mm long, whitish; anthers basifixed, dithecal, oval, ca. 0.6 mm long, yellowish, longitudinally dehiscent; pollen yellowish; **pistil** 1, 1–1.2 mm long; ovary superior, rounded 3-sided, greenish, 1-chambered with many ovules; style 3-branched, basal portion 0.3–0.5 mm long, the stigmatic branches spreading, pinkish, papillate. **Fruit:** capsule, loculicidal, dehiscent by 3 valves, many-seeded, oblong-obovoid, ca. 4  $\times$  1.5 mm,  $\pm$  rounded at tip, shorter than persistent outer tepals but sometimes exceeding inner tepals, when immature having 3 purple lines above midpoint where valves split. **Seed:** ovoid to ellipsoid, ca. 0.3–0.45 mm long, yellowish, lacking tail (appendage). Mid-April–early June.

Native. Annual occurring occasionally but locally in full-sun spots where water persists in early springtime, e.g., a shallow drainage ditch along a hiking trail, but infrequently seen except in wet years. *Juncus bufonius* is the only annual species of the genus in range, and has one flower in each fork of the inflorescence, whereas other rushes have flower clusters. Some authors do not recognize varieties of this plant, which has been spread worldwide, likely by waterfowl.

*Juncus bufonius* var. *congestus* Wahlb. was collected in range by Carl Wishner in Carlisle Canyon, but has not yet been studied. This variety grows on saline soils and has denser and more or less coiled cymes.

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