

Arthrocnemum subterminale (Parish) Standl., PARISH'S GLASSWORT. Shrub, halophytic, evergreen with fleshy new growth, rhizomatous, fibrous-rooted, canopy with opposite decussate lateral shoots (some abscising later) and new shoots growing ascending to erect, in range to 85 cm tall, with inflorescences formed on tips of some lateral shoots; shoots appearing jointed (branchlet eventually abscising as a unit at its basal node or separating cleanly at nodes, if pulled), generally not breaking apart, vegetative shoot 2–3 mm diameter, with regularly spaced, cylindric to narrowly funnel-shaped segments, each segment having 2 highly modified cauline leaves (= a stem internode + 2 decurrent, fleshy leaf bases fused to the slender, nonfleshy stem), olive or yellow green, glabrous; adventitious roots at nodes on buried decumbent stems. **Stems:** initially hidden by leaf bases, with most internodes (1.5–)3–7.5 mm long increasing 2–3× on older stems, internodes of young, nongreen stems 1–2 mm diameter, orangey brown to dark brown bearing collapsed, persistent, nonfleshy leaf bases and flaring blades. **Leaves:** opposite decussate, sessile with pair of blades fused, without stipules; decurrent leaf base sheathing and completely covering internode, constricted at base, at top cupped around node and appressed; blades highly reduced and 2 fused, forming a collarlike rim at node, the rim shallow, 0.2–0.6 mm tall, not or slightly notched where blades fuse, ± deltate and broadly obtuse to acute at tip and abruptly thinning to a scarious edge, initially appressed and on older stems spreading to 1 mm. **Inflorescence:** spikelike (sessile thyrse), shootlike with fleshy, decurrent bract bases and the sessile, opposite distichous 3(–5)-flowered cymes concealed by the bracts, glabrous; thyrse initially terminal on a short lateral shoot but eventually forming 1–several terminal vegetative internodes (sterile segments) above flowering portion, flowering axis ± cylindric, 10–40 × 2–3 mm increasing to 4 mm diameter in fruit, axis having several to many vegetative segments (internodes), (2–)3–15 fertile segments, and 1–several sterile segments at tip, the sterile portion tapered and 2–7 mm long; bracts fused and leaflike but shorter, sheath 1–2.7 mm long; cyme wedged between lower and upper fleshy bracts, concealed when immature, flowers highly reduced and horizontally arranged forming a biconvex structure with the central flower > lateral flowers, flowers fused to upper bract on inner portion of upper face, united to each other on lateral sides near edge of axis, free from lower bract along lower sides. **Flower:** bisexual, strongly protandrous; **perianth** 2–3(–4)-lobed (tepals), the 2 lateral tepals ± bladderly, united at top and bottom by thin, membranous tepals, ± wedge-shaped with a triangular to ± rectangular or trapezoidal outer face, at anthesis 1–1.2 × 0.3–0.7 mm, truncate at tip and slightly convex, mostly colorless but greenish centrally on exposed surface with a membranous edge covering vertical slit through which stamens and stigmas exerted, the lower and upper tepals membranous and fused laterally to lateral tepals, acute to obtuse at tip, ruptured at anthesis by expanding anthers; **stamens** 2, exerted on lower and upper side of pistil; filaments 1–1.7 mm long, light yellow; anthers basifixed, dithecal, oblong, 1–1.4 × 0.8–1 mm, light orange-yellow with reddish orange along line of dehiscence and connective and at tip, longitudinally dehiscent; pollen light yellow; **pistil** 1, 1.7–2 mm long; ovary superior, 0.7–1 × 0.5 mm, 1-chambered with 1 ovule; style absent; stigmas 2, exerted, spreading, ca. 1 mm long, colorless, papillate-hairy. **Fruit:** utricle dispersed within the bladderlike perianth, perianth 3-sided, ca. 1.5 × 2, fleshy; utricle positioned in inner edge of perianth, asymmetrically ovoid and 3-sided, pale yellow and

papery. **Seed:** ovoid, $\pm 1 \times 0.8$ mm, brown, minutely wrinkled, glabrous, with L-shaped green embryo next to copious perisperm. Mid-May–late September.

Native. Shrublike halophyte occurring in low numbers in Mugu Lagoon growing, on the inner margin of salt marsh. *Arthrocnemum subterminale* has slender shoots in which the green portions, even in fruit, tend to be less than four millimeter in diameter and olive to yellow-green, hence is easy to distinguish this species from other salt marsh chenopods. In addition, the inflorescence is subterminal, because there are several sterile segments above the flowers.

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