

Mesembryanthemum L. ICEPLANT

Mesembryanthemum crystallinum L., CRYSTALLINE ICEPLANT. Annual, halophytic, fleshy, taprooted, not rosetted, several–many-stemmed at base, branches unequally forked, prostrate and trailing when weighted down with heavy, watery tissues, forming large, dense mats, typically < 20 cm tall; shoots with cauline leaves distinctly unequal at each node (anisophyllous), covered with conspicuous, water-storing epidermal cells resembling colorless crystals, balloons, or water droplets (= vesicles), aging pinkish to magenta, glabrous. **Stems:** cylindric, to 10 mm diameter when young and turgid, glistening with conspicuous, bulging vesicles that collapse when broken as stem ages; old stems spongy with hollow center (not pith). **Leaves:** opposite decussate and helically alternate, simple, petiolate to sessile with pairs of unequal leaves fused across node and having a notch at midpoint, in range to 140 mm long, without stipules; petiole broad and flattened, to 60 mm long, tapered from blade; blade broadly ovate or rhombic to obovate or nearly spatulate, 30–80 × 15–70 mm, thick and fleshy, broadly tapered at base, entire and conspicuously wavy on margins (crisped), acute but typically folded at tip and curved under, typically 3-veined at base with principal veins raised on lower surface, on very young leaves initially with red vesicles, cobblestonelike, the vesicles hemispheric aging low-convex. **Inflorescence:** leafy cyme, terminal and axillary, bracteate, glabrous; bract subtending cyme and each branchlet = cauline leaf; pedicel several mm long. **Flower:** bisexual, radial, 15–24 mm across; hypanthium collarlike, ca. 5 mm long, greenish; **sepals** 5, erect, ± equal and heteromorphic, 5–6 mm long, outer 3 sepals fleshy and broadly tongue-shaped, at anthesis green or pinkish and vesicular, especially inward-facing vesicles papillate; inner 2 sepals thinner and shield-shaped or round with fleshy center and appressed, winged margin, body beet-colored; **petals** (and petaloid staminodes) > 100, free, arising from upper hypanthium, unequal, linear, 9–12 × 0.4–0.7 mm, translucent-white with greenish base, before anthesis sometimes with pink tips; **stamens** < 60, free, arising from ± midpoint of hypanthium, unequal; filaments 5–7 mm long, translucent-white to greenish white at base; anthers dorsifixed, dithecal, 1 × 1 mm, white, longitudinally dehiscent; pollen colorless; **pistil** 1; ovary ± superior partially sunken in receptacle tissue, broad-pyramidoid, 5-chambered, each chamber with many ovules attached to outer wall; styles 3–5, touching anthers in flower center, 5–6 mm long, greenish white, tapered to stigmatic tips. **Fruit:** capsule, loculicidal, 5-valved, many-seeded, persistent, miterlike, ca. 8 mm across, dehiscent downward, the valves triangular, when wetted interior keels expanding to expose and release some seeds from chambers (hydrochastic), when dry again concealing remaining seeds. **Seed:** D-shaped, 0.6–0.7 mm wide, reddish brown, minutely bumpy. Early May–mid-July.

Naturalized. Annual locally very abundant on coastal bluffs, especially at Zuma Beach, where it can form dense, prostrate mats of watery shoots and dried mats with persistent, hydrochastic capsules. When growing vigorously, leaves of *Mesembryanthemum crystallinum* glisten due to the water-storing cells covering the shoots, and the plant becomes a highly branched, dense mat that is slippery to walk on.

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