

Plantago L. PLANTAIN

Plantago major L. subsp. *intermedia* (Gilibert) Lange, COMMON PLANTAIN. Perennial herb, with a thick caudex, densely fibrous-rooted, rosetted (typically 1 rosette per plant), acaulous and scapose with 1–20+ erect to ascending, unbranched inflorescences per rosette, 6–75 cm tall; shoots with only basal leaves, the leaves spreading to ascending, sparsely puberulent (short-hirsute) often becoming glabrate and having conspicuous axillary hairs, the axillary hairs \pm 5 mm long, light golden brown to brownish or beige; caudex top-shaped, herbaceous, covered by adventitious roots. **Stems:** only with leaves in rosette. **Leaves:** helically alternate, simple, long-petiolate, without stipules; petiole U-shaped in \times -section, 5–130 mm long, to 15 mm wide and winged at base, tough and flexible, white to pale green and purplish tinged or marked at base, sometimes purplish on petiole margins, parallel-veined and strongly 3-ridged or 5-ridged on lower side; blade elliptic to broadly ovate, 30–200 \times 25–120 mm, broadly long-tapered to broadly tapered at base, entire or with remote, red, blunt teeth and \pm wavy on margins, obtuse to rounded at tip, in range typically with 5 principal veins raised on lower surface, the principal veins on each side of midrib appearing parallel and arched toward tip, the minor veins netlike and not raised, dull green, upper surface glabrous, lower surface sparsely short-hirsute when mature. **Inflorescence:** spike, axillary to a rosette leaf, cylindric, 25–300 mm long, when young 3–4 mm diameter increasing to 5–7 mm in fruit, 20–600+-flowered, flowers densely packed except near base, bracteate; peduncle mostly cylindric but elliptic in \times -section at base, 40–380 mm long, to 6 mm diameter, tough, green, next to the lowest flowers with ridges descending from bractlets, glabrate or sparsely short-hirsute, becoming hollow approaching spike; axis ridged; bractlet subtending each flower cupped-ovate to cupped-obovate 1–2.2 mm long, sometimes reaching tip of calyx, \pm fleshy medially but becoming keeled when dry, green with membranous margins becoming scarious and \pm keeled in fruit, glabrous. **Flower:** bisexual, radial, 1–1.5 mm across, strongly protogynous; **sepals** 4, \pm free, overlapping, \pm equal, broadly elliptic to ovate, 1.5–2 \times 0.9–1.5 mm, \geq bractlet, \pm fleshy medially but becoming keeled when dry, membranous on margins becoming scarious in fruit, glabrous; **corolla** 4-lobed, membranous aging scarious, glabrous; tube urn-shaped, 1.2–1.5 mm long; lobes narrowly ovate to lanceolate with inrolled margins, ca. 0.8 \times 0.4 mm, initially spreading or strongly reflexed when anthers exerted, persistent; **stamens** 4, fused to corolla tube ca. 0.5 mm from base, exerted; filaments 2.5–3 mm long, colorless, folded while in bud but unfolding after pollination of the pistil; anthers dorsifixed, dithecal, 0.8–1 mm long, yellowish aging whitish and purple, with a triangular terminal appendage, longitudinally dehiscent; pollen colorless; **pistil** 1; ovary superior, spheroid to obovoid, ca. 0.75 \times 0.6 mm, greenish, 2-chambered, each chamber with 6–11 ovules attached to center; style exerted days before stamens, 1.5–3 mm long, stigmatic with papillate hairs along all except the basal 0.5 mm. **Fruit:** capsule, dehiscent around fruit near midpoint (circumscissile), 10–30+-seeded, conic-ovoid, (2.5–)2.8–4 \times 1.5–2.1 mm, pale brown; lower portion of fruit persistent. **Seed:** irregular and \pm polyhedral, 0.7–1.1 \times 0.4–0.7 mm, brownish, shaped by packing within capsule, slightly convex on outer side and lateral sides tapered toward hilum, outline on outer side rhombic with rounded angles to 5-sided or elongated 6-sided with rounded angles; seed coat finely ridged, ridges irregularly and minutely zigzagged and discontinuous, sometimes forked and

radiating from hilum thereby forming arcs on lateral walls, the ridges becoming longitudinally oriented on outer side; mucilaginous when wet. Mid-May–early September.

Naturalized. Perennial European weed occurring throughout the range, generally in wet soil and ditches but also as an urban weed of lawns, waste areas, and parks. In range plants of *Plantago major* have tapered leaf bases with five or more principal veins at base, and the capsules have greater than fourteen seeds, so subspecies *intermedia* is used, but some authors treat this taxon instead as *Plantago intermedia* Gilibert. Whereas in this flora we use the term bractlet for a structure subtending a flower, many authors instead call it a bract.

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