

*Phalaris paradoxa* L., HOODED CANARY GRASS. Annual, fibrous-rooted, several–many-stemmed at base, cespitose, initially erect with ascending lateral branches and with branches on lateral branches, each potentially terminating in a dense inflorescence, in range 50–95 cm tall; shoots with several basal leaves and generally 5 cauline leaves, glabrous, not glaucous. **Stems (culms):** smooth-cylindric, to 3.5 mm diameter, tough, smooth, bent sharply (geniculate) at a lower node, internodes to 250 mm long at midshoot, upper portion of internode and swollen node visible (not hidden by leaf sheath); internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath open with margins overlapping at base (lower leaves) to closed < 2 mm (upper cauline leaves), distinctly < internode, smooth to finely ridged, membranous margin wider on hidden margin, without lobes (auricles) at top; ligule membranous acute and jagged, 3–8 mm long, sometimes minutely puberulent on outer surface near base, not scabrous; collar uneven with one side lower than other side, pale green, wavy and sometimes minutely puberulent on margins; blade linear and long-tapered, 70–230 × (2–)3–5 mm long, the widest near base, flat, base unequal (joined to sheath at different levels), minutely toothed and scabrous on margins, parallel-veined with midrib hardly visible and veins slightly raised on both surfaces, minutely scabrous (microhairs along veins). **Inflorescence:** spikelets, in dense, terminal panicles, panicle narrowly cylindric (ovoid), in range 30–75 × 7–9 mm in fruit, with alternate distichous nodes producing lateral branches, nodes 3–4 per 10 mm rachis, lateral branches typically 3 per node (sometimes fused at base), ascending, densely layered, to 12 mm long, of (2–)3(–4) branchlets, each branchlet having a cluster of spikelets including a central, flattened, fertile, bisexual spikelet flanked by 2 diminutive, sterile spikelets on the back side and 2(4) on the front side, sterile spikelets below panicle midpoint ± vestigial knobs (whitish and green striped) changing to sterile spikelets on upper panicle resembling aborted, winged glumes (narrower than glumes of fertile spikelet), at panicle midpoint the back sterile spikelets winged and the front spikelets remaining vestigial, at top of panicle both the back and front sterile sets of spikelets winged, fertile and winged spikelets strongly flattened with broad side facing outward, fertile spikelet with 1 floret and in range bisexual, bracteate, lacking awns; panicle at anthesis often concealed by sheath of flag leaf, peduncle later elongating, cylindric, 0.8–0.9 mm diameter, striped, with minute, ascending teeth along veins; bract subtending panicle oblique and cuplike, < 1 mm long, whitish to purplish; rachis glabrous, branch and branchlet axes angled with minute teeth and scabrous, stalk of sterile and fertile spikelet cylindric and essentially smooth, at least 2 mm long and on the uppermost panicle longer and straight, of vestigial spikelet commonly curved, branchlet with 1 fertile and 4 sterile spikelets breaking as unit but containing only 1 fruit. **Sterile spikelet: glumes** 2, of the largest spikelets erect, strongly keeled and flattened, appearing 2-toothed, ca. 3 × 0.4–0.6 mm, on outfacing surface white-scarious with an arching green stripe from near base to tip (inner tooth), outer tooth (lobe) to 1 mm long, whitish, keel and wing minutely toothed and scabrous, inner margins straight and entire, surfaces with inconspicuous, scattered minute hairs above midpoint; **lemma** absent; **palea** absent; **flower** absent. **Fertile spikelet: glumes** 2, at anthesis spreading < 30°, strongly keeled and flattened, ± broadly lanceolate or elliptic to obovate in outline, mostly 5–5.7(–6.5) mm long with ascending, acute tooth (lobe) 1 mm long just above midpoint from keel, white-scarious with 3 green veins, curved vein along keel (not entering tooth) ending at narrowly acuminate to fine point at tip + straight vein on each surface but not

converging at tip, keel and wing minutely toothed and scabrous, inner margins straight and entire, surfaces with inconspicuous, scattered minute hairs above midpoint; **lemma** strongly keeled and symmetrically folded along midvein, in range ovate in outline and ca. 3 mm long, 5-veined and greenish-membranous, glossy, appearing glabrous but sometimes with several villous hairs above midpoint and with short hairs on margins approaching tip; **palea** tightly enclosed by lemma, somewhat keeled and keel-shaped in outline (folded between veins), to 2.8 mm long, glossy, having 2 closely spaced, green veins along keel, keel with several villous hairs, membranous, and greenish. **Flower:** bisexual; **perianth (lodicules)** 2,  $\pm$  ovoid, 0.25 mm long, colorless, with several hairs to 0.5 mm long on tip; **stamens** 3, free, exerted from tips of lemma and palea; filaments initially narrowly cylindrical 3–3.5 mm long, colorless; anthers exerted but never  $>$  tips of glumes, 1.3–1.6 mm long, light yellow, dehiscent near tip; pollen pale light yellow; **pistil** 1, ca. 3 mm long; ovary superior, ovoid, ca. 0.35 mm long, pale green, tapered to style, glabrous, 1-chambered with 1 ovule; styles 2,  $\pm$  fused 0.4 mm at base, exerted from tip of keeled palea and lemma, colorless, straight and glabrous to above midpoint and feathery-stigmatic (plumose) above midpoint. **Fruit:** achene (caryopsis), 1 per branchlet of 4(6) sterile spikelets + 1 fertile spikelet having only 1 achene, achene tightly enclosed and hidden by lemma and palea, when dry glossy floret slipping easily from spikelet; floret compressed-ovoid,  $\pm 3 \times 1$  mm, glossy grayish tan, scarious with several fine veins; achene compressed-ovoid,  $\pm 2.6$  mm long, brownish. Mid-April–late May.

Naturalized. Annual seldom encountered in range, appearing with introduced tall grasses where the soil remains moist during the growing season. *Phalaris paradoxa*, when robust, can have lateral branches arising at most nodes on principal shoots and also on lateral branches, so the plant is very leafy, and a long prophyll can be found at the base of each branch. This is the *Phalaris* species in range described as heterogamous, in which on local plants the four lower spikelets on a branchlet are sterile (two front and two back) and the uppermost, central spikelet is fertile. The entire branchlet abscises to become a dispersal unit containing just one fruit from the fertile spikelet. The achene is tightly wrapped by the palea and lemma, and it is so glossy that it slips easily from the glume when disturbed. Also, *P. paradoxa* is the only local species of the genus having a prominent tooth on each glume of the fertile spikelets. If varieties are recognized, out plants fit var. *praemorsa*.  
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