

1. SYMPLOCARPUS Salisbury ex W. P. C. Barton, Veg. Mater. Med. U. S. 1: 124. 1817,
nom. cons.

臭菘属 *chou song shu*

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Ictodes Bigelow; *Spathyema* Rafinesque.

Herbs, large, glabrous, seasonally dormant. Rhizome erect, stout, with thick roots. Leaves few to several, petiolate; petiole long, with sheath; leaf blade subcordate to cordate-ovate, large, apex acute to cuspidate; midvein strong, primary lateral veins pinnate and arching toward apex, running into inconspicuous marginal vein, secondary lateral veins and higher order venation reticulate to transversely reticulate. Inflorescences 1 or 2 in a sympodium, appearing before or with leaves; peduncle long but only shortly exerted above ground; cataphylls surrounding peduncle. Spathe convolute at base, somewhat to widely gaping at apex, thick, boat-shaped or conchiform, apex 2-keeled, rostrate, curving forward. Spadix stipitate, globose to broadly ellipsoid, much shorter than spathe and hidden within. Flowers bisexual, with perigone; tepals 4, arching and imbricate. Stamens 4, free; filaments flattened; connective slender; thecae oblong, dehiscent by longitudinal slit; pollen grains ellipsoid, monosulcate, exine reticulate, apertural exine verrucate. Ovary of gynoeceum (pistil) somewhat immersed in spadix axis, 1-loculed; ovule 1, orthotropous; funicle very short; placentation apical-parietal; stylar region long attenuate; stigma punctate-disciform. Infructescence globose to broadly ellipsoid, berries densely arranged. Berry with tepals and style persistent to ripe fruiting stage, base of berry immersed in spongy spadix axis. Seed globose; testa thin, smooth; embryo globose, large; endosperm very sparse, only a single cell layer thick. $2n = 30, 60$.

Four or five species: E Asia, North America; two species in China.

The other species in the genus are *Symplocarpus foetidus* (Linnaeus) Salisbury ex W. P. C. Barton (the type species) in North America; *S. egorovii* N. S. Pavlova & V. A. Nechaev in Russia (Far East), and *S. nabekuraensis* Otsuka & K. Inoue in Japan, but the latter is very close to *S. renifolius* and is better considered as an infraspecific taxon of it.

- 1a. Leaf blade orbicular-cordate, 30–40 cm long and wide or nearly so; flowering before leaves appear in early spring; fruit ripening in summer of same year 1. *S. renifolius*
1b. Leaf blade ovate to ovate-oblong, 10–20 × 7–12 cm; flowering with leaf appearance in summer (ca. Jul); fruit ripening in spring of following year 2. *S. nipponicus*

1. *Symplocarpus renifolius* Schott ex Tzvelev, Novosti Sist. Vyssh. Rast. 28: 28. 1991.

臭菘 *chou song*

Rhizome hypogeous, to 7 cm in diam. Leaves in a rosette; petiole to 40 × ca. 1 cm; leaf blade orbicular-cordate, 30–40 cm long and wide or nearly so (to 33 cm wide), mid-green, base cordate, apex acute; venation reticulate, midvein very strong, primary veins 5 on each side, ascending toward apex, lowermost ones running into basal lobes. Flowering before leaves appear; inflorescence usually solitary; peduncle green and purplish tinged, 7–13(–20) × ca. 1 cm. Spathe plain purple to blackish purple, rarely green without any markings or with dark purple spots, boat-shaped, 8–20 × 5–12 cm, strongly leathery, apex acuminate. Spadix ellipsoid, 2–2.5 × ca. 1.2 cm. Flowers densely arranged. Flower 3–3.5 mm in diam., tepals pinkish, thecae yellow. Fl. early spring, fr. summer of same year.

Wet places, forest swamps, moist mixed and coniferous forests, swampy meadows and lands; below 300 m. Heilongjiang [Japan, Russia (Far East)].

The plant is poisonous but sometimes is used medicinally to treat swelling.

2. *Symplocarpus nipponicus* Makino, J. Jap. Bot. 5: 24. 1928.

日本臭菘 *ri ben chou song*

Rhizome hypogeous, thinner. Leaves in a rosette; petiole to 20 cm; leaf blade green, rarely variegated, ovate to narrowly ovate-oblong, 10–20 × 7–12 cm, base obtuse to cordate-subcordate, apex acute; venation reticulate, midvein strong, primary lateral veins 6 or 7 on each side. Flowering with leaf appearance; peduncle purple, long. Spathe plain purple or mottled dark purple, broadly elliptic and boat-shaped, leathery. Spadix ellipsoid, stipitate. Flowers densely arranged. Fl. summer (ca. Jul), fr. spring of following year.

Wet places; below 300 m. Heilongjiang [Japan, Korea].

