

57. PELIOSANTHES Andrews, Bot. Repos. 10: t. 605. 1810.

球子草属 qiu zi cao shu

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Bulbospermum Blume; *Lourya* Baillon; *Neolourya* L. Rodriguez; *Teta* Roxburgh.

Herbs perennial, rhizomatous, with thick roots. Stem usually short, rarely elongate and procumbent. Leaves usually basal, rarely cauline, petiolate; leaf blade linear to elliptic-ovate, subplicate veined, with conspicuous, transverse veins between main, longitudinal veins, glabrous. Scape terminating in a raceme or reduced panicle. Flowers solitary or in clusters of 2–5, subtended by a bract; pedicel articulate near apex; bracteole absent or 1. Perianth segments 6, united into a tube. Stamens 6; filaments dilated, connate in a fleshy ring (corona), rarely free; corona flat or elevated; anthers subsessile. Ovary inferior to semi-inferior, 3-loculed; ovules 2–4(or 5) per locule. Style shortly conical to columnar; stigma capitate to 3-lobed, small. Fruit bursting at an early stage and exposing young seeds. Seeds blue at maturity, berrylike, ellipsoid to globose.

About 16 species: Bangladesh, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Sikkim, Thailand, Vietnam; six species (five endemic) in China.

Jessop (Blumea 23: 141–159. 1976) united all the previously recognized species of *Peliosanthes* into a single species, *P. teta* Andrews, comprising two subspecies, subsp. *teta* and subsp. *humilis* (Andrews) Jessop ex Gandhi, because he could not find satisfactory correlations between the variations of gross morphological characters. However, according to a molecular taxonomic study by Yamashita, Vogel, and Tamura (unpublished), individuals of some species of *Peliosanthes* based on the earlier, narrower species concept clearly form clades. Therefore, in this treatment, we use the narrower species concept instead of that of Jessop. *Peliosanthes kaoi*, *P. macrostegia*, and *P. yunnanensis* are distinguishable from one another primarily by size, and *P. ophiopogonoides* is distinguished from these three species primarily by leaf venation (the diagnostic value of which in *Peliosanthes* is not well known). Further studies are needed to ascertain whether or not these four species are really distinct from one another and also from the Himalayan species *P. macrophylla* Wallich ex Baker. *Peliosanthes stenophylla* Merrill, described from Guangdong, has been transferred to *Ophiopogon*, as *O. stenophyllus* (Merrill) L. Rodriguez. The holotype specimen of *P. mairei* H. Léveillé, described from Yunnan, can be identified as *Maianthemum atropurpureum* (Franchet) LaFrankie.

- 1a. Flowers in clusters of 2–5; ovary inferior 1. *P. teta*
- 1b. Flowers solitary; ovary semi-inferior.
 - 2a. Stem procumbent, 5.5–18.5 cm 2. *P. sinica*
 - 2b. Stem erect, less than 3 cm.
 - 3a. Leaves with oblique transverse veins 3. *P. ophiopogonoides*
 - 3b. Leaves with horizontal transverse veins.
 - 4a. Perianth 12–16 mm in diam.; anthers ca. 2 mm 4. *P. yunnanensis*
 - 4b. Perianth 5.5–12 mm in diam.; anthers 0.5–1 mm.
 - 5a. Leaf blade 15–25 × 5–6 cm; petiole 20–30 cm; raceme 9–25 cm; scape 6–10 cm; pedicels 5–6 mm 5. *P. macrostegia*
 - 5b. Leaf blade 6–8 × 1.5–2 cm; petiole 3–5 cm; raceme 3–5 cm; scape 4–5 cm; pedicels 1.5–2 mm 6. *P. kaoi*

1. *Peliosanthes teta* Andrews, Bot. Repos. 10: t. 605. 1810.

簇花球子草 cu hua qiu zi cao

Peliosanthes minor Yamamoto; *P. tonkinensis* F. T. Wang & Tang; *P. torulosa* Y. Wan.

Stem short. Leaves 4–8; petiole (5–)20–30 cm, slightly compressed; leaf blade lanceolate to elliptic, (12–)16–23 × 2–4 cm, with 5 main veins, apex acute to acuminate. Scape 3–20 cm. Inflorescence a reduced panicle, (5–)10–15 cm; bracts lanceolate, 3–7 mm, membranous. Flowers in clusters of 2–5; pedicel (3–)5–8 mm; bracteole 1, ca. 2 mm. Perianth purple, 6–8 mm in diam.; tube 2–3 mm, mostly adnate to ovary; lobes oblong to ovate, 2.5–4 × 1.5–2 mm. Corona purple, ca. 0.5 mm wide; anthers ca. 0.5 mm. Style short; stigma capitate. Seeds subglobose, 5–7 mm. Fl. Jan. $2n = 36^*$.

Forests; ca. 600 m. S Guangxi, Hainan, S Yunnan [Bangladesh, NE and SE India, Laos, Malaysia, Myanmar, Sikkim, Thailand, Vietnam].

2. *Peliosanthes sinica* F. T. Wang & Tang, Fl. Reipubl. Popularis Sin. 15: 253. 1978.

匍匐球子草 pu fu qiu zi cao

Stem procumbent, 5.5–18.5 cm. Leaves 3 or 4; petiole (2–)7–20 cm; leaf blade oblong to elliptic, 11–17 × 3–6 cm, with 7 main veins. Scape ca. 3.5 cm. Inflorescence a raceme, 1.5–5 cm; bracts lanceolate, 5–10 mm, papery, apex caudate. Flowers solitary; pedicel ca. 3 mm; bracteole absent. Perianth purple, 6–7 mm in diam.; tube ca. 1 mm, proximally adnate to ovary; lobes ovate, 3–4 mm. Corona ca. 1 mm wide; anthers ca. 0.5 mm. Style short; stigma shortly 3-lobed. Seeds ellipsoid, 0.7–1.5 cm. Fr. Oct. $2n = 36^*$.

• Evergreen broad-leaved forests, rainforests, bamboo forests; 400–2100 m. S Guangxi, S Yunnan.

3. *Peliosanthes ophiopogonoides* F. T. Wang & Tang, Fl. Reipubl. Popularis Sin. 15: 253. 1978.

长苞球子草 chang bao qiu zi cao

Stem 2–3 cm. Leaves 2 or 3; petiole 15–30 cm; leaf blade linear-lanceolate, 17–30 × 2–3 cm, with 5 main veins, apex caudate. Scape 7–15 cm. Inflorescence a raceme, 8–15 cm; bracts lanceolate, 7–15 mm, herbaceous. Flowers solitary; pedicel 2–3 mm; bracteole 1, 2–3 mm. Perianth 6–8 mm in diam.; tube 3–4 mm, basally adnate to ovary; lobes deltoid-ovate, ca. 3 × 2.5 mm. Corona ca. 1 mm wide; anthers ca. 1 mm. Style ca. 1 mm; stigma capitate. Seeds narrowly ellipsoid, ca. 1.2 cm. Fl. Oct, fr. Jun. $2n = 36^*$.

• Dense forests, evergreen broad-leaved forests; 1300–1800 m. SE Yunnan (Pingbian Miao Zu Zizhixian).

4. *Peliosanthes yunnanensis* F. T. Wang & Tang, Fl. Reipubl. Popularis Sin. 15: 254. 1978.

云南球子草 yun nan qiu zi cao

Stem short. Leaves 2–5; petiole 15–25 cm; leaf blade linear-oblong, 25–35 × ca. 3 cm, with 8–10 main veins, apex caudate. Scape 10–13 cm. Inflorescence a raceme, 5–7 cm; bracts lanceolate-oblong, 5–10 mm. Flowers solitary; pedicel 1–3 mm; bracteole 1, 3–4 mm. Perianth purplish green, 1.2–1.6 cm in diam.; tube ca. 1.5 × 5–6 mm, proximally adnate to ovary; lobes ovate, 4–6 × ca. 4 mm. Corona ca. 2 mm wide; anthers ca. 2 mm. Style short; stigma capitate. Fl. Nov. $2n = 36^*$.

• Forests; 200–1800 m. SE Yunnan (Hekou Yao Zu Zizhixian, Malipo Xian).

5. *Peliosanthes macrostegia* Hance, J. Bot. 23: 328. 1885.

大盖球子草 da gai qiu zi cao

Peliosanthes arisanensis Hayata; *P. delavayi* Franchet; *P. tashiroi* Hayata.

Stem ca. 1 cm. Leaves 2–5; petiole 20–30 cm; leaf blade lanceolate-oblong, 15–25 × 5–6 cm, with 5–9 main veins. Scape 6–10 cm. Inflorescence a raceme, 9–25 cm; bracts lanceolate to lanceolate-oblong, 6–15 mm, membranous. Flowers solitary; pedicel 5–6 mm; bracteole 1, 3–5 mm. Perianth purple, 5.5–12 mm in diam.; tube ca. 2 mm, proximally adnate to ovary; lobes deltoid-ovate, ca. 4 mm. Corona undulate apically; anthers 0.5–1 mm. Style short; stigma 3-lobed. Seeds subglobose, ca. 1 cm. Fl. Apr–Jun, fr. Jul–Sep. $2n = 36^*$.

• Dense tropical forests, evergreen broad-leaved forests, bamboo forests and thickets, scrub, shady and humid cliffs; 400–1800 m. Guangdong, Guangxi, Guizhou, Hunan, NE Sichuan, Taiwan, SE Yunnan [?Vietnam].

This species probably also occurs in Vietnam: one locality is on the border between Yunnan and Vietnam. The plants here identified as *Peliosanthes macrostegia* were treated by Handel-Mazzetti (Symb. Sin. 7: 1219. 1936) as *P. macrophylla* Wallich ex Baker.

6. *Peliosanthes kanoi* Ohwi, J. Jap. Bot. 42: 317. 1967.

台东球子草 tai dong qiu zi cao

Stem short. Petiole 3–5 cm, slightly compressed; leaf blade not shining, oblong to ovate-oblong, 6–8 × 1.5–2 cm, thickly papery, with 5 main veins, apex abruptly acuminate. Scape 4–5 cm. Inflorescence a raceme, 3–5 cm; bracts lanceolate, 3–10 mm. Flowers solitary; pedicel 1.5–2 mm; bracteole 1. Perianth purple, ca. 3 mm; tube turbinate, proximally adnate to ovary;

lobes deltoid-ovate, slightly shorter than tube, apex obtuse. Corona narrow. Style short. Seeds ovoid. Fl. Jul. $2n = 34^*$, 36^* .

• Forests; 1400–1600 m. SE Taiwan (Taidong Xian).

