Taxonomic Notes on *Ophiopogon* of South Asia IV

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*Ophiopogon revolutus* F.T. Wang & L.K. Dai is treated as conspecific with *O. griffithii* (Baker) Hook.f. *Ophiopogon griffithii* is variable especially in leaf shape and width. This species is new to Myanmar. It is noteworthy that *Ophiopogon kradungensis* M.N. Tamura shares several similar features with *O. griffithii*.

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**Key words:** *Ophiopogon griffithii*, *Ophiopogon kradungensis*, *Ophiopogon revolutus*, taxonomy


(6) *Ophiopogon griffithii* and *O. revolutus*

Baker (1879) described *Flueggea griffithii* based on the specimen collected by Griffith (no. 5839; Fig. 1) in the Patkai Range of northeastern India. This species was later transferred to *Ophiopogon* by Hooker (1892). Except for the descriptions based on the type by Baker and Hooker, there has been no reliable information for this species. As the type is in the fruiting stage, floral features of this species have not been known. In these respects, *O. griffithii* has been an insufficiently known species. In the course of this survey, I could find three flowering specimens which coincide well in vegetative characters with the type of *O. griffithii*. One is from Myanmar (R.J. Swinhoe 57, K), and the other two are from southwestern Yunnan, China [A. Henry 12171, 12171A (Figs. 2, 3A), K]. In both the type and the flowering specimens leaf blades are papery and glaucous on the lower surface, and in the latter specimens the anthers are adherent laterally, forming a cylindric or slenderly conic tubular structure (Fig. 3A). In the specimens from Yunnan the tepals are widely spreading and reflexed (Figs. 2, 3A). After a close examination of all these specimens, I found that the characteristics of *O. griffithii* basically agree with those of *O. revolutus* F.T. Wang & L.K. Dai (1978) described from southwestern Yunnan. I could find no significant difference in both floral and vegetative characters between them. Therefore, *O. revolutus* is regarded here as synonymous with *O. griffithii*. *Ophiopogon griffithii* here circumscribed is variable especially in leaf width and shape. While some specimens have narrow, linear leaves [e.g., F. Kingdon-Ward 22603, BM (its scape is shown in Fig. 3B); A.F.G. Kerr 5300, BM; R. Geesink et al. 8140, K, P], others have relatively broad, narrowly elliptic or narrowly oblong leaves like the type (Fig. 1) and the specimen shown in Fig. 2.

Yang and Li (1990) and Yang (1997) recorded *O. griffithii* from southwestern Yunnan, and they regarded *O. griffithii* and *O. revolutus* as distinct species. Unfortu-
Fig. 1. Type specimen of *Ophiopogon griffithii* (Baker) Hook.f. (NE India, W. Griffith 5839, K). Scale bar (in the upper right corner) = 5 cm.
Fig. 2. A flowering specimen identified as *Ophiopogon griffithii* (SW Yunnan, China, A.Henry 12171A, K).
Fig. 3. Close-ups of a part of the inflorescence from two specimens identified as *Ophiopogon griffithii*, showing widely spreading and reflexed tepals, adherent anthers, and pedicels articulated in the lower part (articulation sites indicated by arrows). A. A specimen collected by A.Henry (12171A, K) in Yunnan, China. B. A specimen collected by F.Kingdon-Ward (22603, K) in west central Burma (Myanmar) (the scape shown here is from a small package attached to the sheet). This specimen (in Fig. 3B) has very slender linear leaves to 42 cm long and 4 mm wide. Scales in mm.

nately I have had no opportunity to examine the specimens they assigned to *O. griffithii*. So I cannot make a further remark on the identity of their specimens. Further survey on these specimens is needed.


**Mondo japonicum** (L.f.) var. *griffithii* (Baker) Farw. in Amer. Midl. Nat. 7: 42 (1921).


Glabrous perennial herb. Rootstock short, estoloniferous. Roots to 2.5 mm in diameter. Leaves fasciculate, narrowly elliptic, narrowly oblong, oblanceolate, linear-oblanceolate or linear, acute at apex, tapering to petiole, base with scarious wings forming a sheath, glaucous on abaxial surface, minutely serrulate on margins, with 5–23 longitudinal veins, papery, 20–54.5 cm long, 3–
18.5 mm wide. Scape more or less declinate, complanate, narrowly 2-winged, 14–30 cm long. Inflorescence racemose, 5–14.5 cm long. Floral buds narrowly conical. Flowers 1–3 in each axil of clustered bracts, cernuous, secund, white (A. Henry 12171, 12171A, K) or lilac (F. Kingdon-Ward 22603, BM). Bracts ovate to narrowly lanceolate, acute or acuminate at apex, minutely serrulate on margins in upper part, scarious, usually to 2 cm long. Pedicels 3.5–8.5 mm long incl. basal stalky part of perianth (true pedicels, excl. perianth part, 1.8–5 mm long), jointed around middle or in lower part. Perianth lobes 6, spreading and reflexed, lanceolate, 1-nerved, 5.5–9.7 mm long, 2.0–2.8 mm wide. Stamens 6. Anthers linear-lanceolate, adherent laterally (sometimes partially separate), 4.2–6.3 mm long. Filaments short, 0.4–1 mm long. Pistil 1. Style filiform, 5.4–8.2 mm long. Seeds with sarcotesta, globose to ellipsoid, 6.5–8 mm long, 5.5–6 mm across, dark blue (R. Geesink et al. 8140, K, P).

Distribution: NE India, Myanmar, N Thailand and SW China (SW Yunnan).

Specimens examined:

**India.** Upper Assam, Patkoye hills, alt. 4500 ft, W. Griffith 5839 *(type of O. griffithii, K).*

**Myanmar.** Mandalay Distr., 1926, fl., R.J.Swinhoe 57 (K); West Central Burma, Mindat, 3000–4500 ft, Aug. 30, 1956, fl., F. Kingdon-Ward 22603 (BM).

**Thailand.** Chiang Mai, Doi Chiang Dao, alt. 1750–2000 m, Jan. 7, 1975, fr., R. Geesink et al. 8140 (K, P); Doi Inthanon, alt. c.2100 m, May 1, 1921, fl. (buds), A.F.G. Kerr 5300 (BM); ibid., alt. 2500 m, Jan. 22, 1969, fr., H.P. Nooteboom et al. 838 (K); ibid., alt. 2400–2600 m, Dec. 28, 1974, fr., R. Geesink et al. 7970 (K).

**China.** Yunnan, Szema, fl., A. Henry 12171, 12171A (K).

(7) **Ophiopogon kradungensis**

*Ophiopogon kradungensis* was described by Tamura (1990) from northeastern Thailand. Until Tamura distinguished this species, the specimens of *O. kradungensis* had often been assigned to other species, such as *O. reptans* Hook.f. and *O. malcolmsonii* Royce ex Hook.f. (cf., Tamura 1990). As far as I am aware, *O. kradungensis* is distinct from any other species. The vegetative parts of *O. kradungensis*, particularly of its narrow-leaved form (Fig. 4), closely resemble those of *O. reptans* (cf., Tanaka 1999). But, *O. kradungensis* differs from *O. reptans* in having generally longer scapes, (almost) entire bracts, longer adherent anthers, longer and widely spreading, reflexed tepals (Fig. 4), longer styles, etc. The resemblance between *O. kradungensis* and *O. griffithii* share several similar characteristics. For example, both species possess adherent narrowly lanceolate (or linear-lanceolate) anthers (cf., Fig. 3 for *O. griffithii*), widely spreading and reflexed tepals (Figs. 3, 4), pedicels articulated usually in the lower part (cf., Fig. 3 for *O. griffithii*), complanate scapes with two narrow wings, etc. There seems to be a possibility that the two species have a close relationship.


Glabrous perennial herb. Rootsligneous, up to c.3 mm in diameter. Stem procumbent, ascending in upper part, stiff, to more than 57.7 cm, 1.8–6 mm in diameter, bearing distant tufts of leaves arranged at intervals of 3.5–10 cm. Leaves linear, acute, vaginate at base with scarious wings, 7–13-veined, whitish between veins on abaxial surface, entire or almost entire, 15–33 cm long, 2.5–6 mm wide. Scape complanate, narrowly 2-winged, 8–19 cm long. Inflorescence racemose, 2.3–12 cm long. Floral buds conical. Flowers cernuous, secund, 1–2 in each axil.
Fig. 4. Isoparatype specimen of *Ophiopogon kradungensis* (NE Thailand, K.Bunchuai 1770, K). The arrows indicate the flowering scapes. Scale bar (in the lower left corner) = 5 cm.
of clustered bracts, white (K.Bunchai 1770, K). Bracts lanceolate, acute or acuminate, entire or almost entire, scarious at margin, greenish, up to c.2 cm long. Pedicels 5.5–9.2 mm long incl. lower stalky part of perianth (true pedicels, excl. perianth part, 1.5–3.2 mm long), jointed in lower part. Perianth lobes 6, lanceolate to linear-lanceolate, obtuse, 1-veined, spreading and reflexed, 7.5–8.5 mm long, 1.6–2.6 mm wide. Stamens 6, linear-lanceolate, sagittate or cordate at base, adherent laterally, 5.7–6.2 mm long. Filaments short. Pistil 1. Style filiform, slightly attenuate, 6–7.5 mm long. Seeds with sarcotesta, globose to subglobose, 4–5.5 mm long, 7.5–8.5 mm wide, dark blue (C.F.van Beusekom et al. 4541, K, P).

Distribution: NE Thailand.

Representative specimens examined:


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References


が平開し反曲すること、花被片、薬、花柱の形など）は、O. griffithii とよく一致することから、O. kradungensis は O. griffithii と密接な類縁関係を持つ可能性がある。O. kradungensis はタイ北東部に分布する。

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