Triadenum breviflorum (Hypericaceae): First report in Korea

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ABSTRACT: *Triadenum breviflorum* (Wallich ex Dyer) Y. Kimura in Nakai & Honda (Hypericaceae), previously known only in northeast India, China and Taiwan, was found in a few wetlands of Jeju Island in 2008. Additionally, some images online of *T. breviflorum* suggest that it exists in other places on the Korean peninsula but that it has been misidentified as *Triadenum japonicum*. This species is distinguished from the latter by white petals, inflorescence from nodes 6-11, linear to narrowly elliptic leaves, and an attenuated base. The local name Huin-kkot-mul-go-chu-na-mul implies a white flower rather than the flesh-pink color of *T. japonicum*. The morphological characteristics of the species are provided with photographs of the habitat.

Keywords: *Triadenum breviflorum*, Korea, Hypericaceae

The genus *Triadenum* Raf. belongs to Hypericaceae (Clusiaceae or Guttiferae) and comprises about 6-10 taxa in eastern Asia and eastern North America (Mabberley, 1993). Only one taxon, *T. japonicum*, has been reported for Korea and for Japan, China and the Russian Far East (Satake et al., 1983; Lee, 1996; Lee, 1998). In the present study, *T. breviflorum*, which was collected from Seogwipo-si and Jeju-si, Jeju-do, is newly reported for Korea. This taxon was previously known to exist in northeast India, China (Li and Robson, 2007) and Taiwan (Robson, 1996). A number of images online of *T. breviflorum* suggest that it exists in other places on the Korean peninsula. However, it appears to have been confused with the more popular and widely known *T. japonicum*, a close relative of *T. breviflorum*. *Triadenum breviflorum* is distinguished from *T. japonicum* by its white petals, inflorescence from nodes 6-11, its narrowly elliptic leaves, and by its attenuated base. The latter has fleshy pink flowers. The given local name was 'Huin-kkot-mul-go-chu-na-mul' based on the white flower as compared to the flesh pink color of *T. japonicum* voucher specimens are preserved in the Ewha Womans University Herbarium (EWH).

Description

Triadenum breviflorum (Wallich ex Dyer) Y. Kimura in Nakai & Honda, Nov. Fl. Jap. 10: 79. 1951. (Figs. 1, 2)

Syn. *Hypericum breviflorum* Wallich ex Dyer in J. D. Hooker, Fl. Brit. India 1: 257, 1874.

Korean name: Huin-kkot-mul-go-chu-na-mul

Herbs perennial, rhizomatous, (15-)30-55 cm tall, ascending from a creeping and rooting base; stems solitary or few, unbranched or branched above middle. Stems ancipitous when young, soon terete, eglandular, with the lower part reddish brown. Leaves sessile or petiolate (1-2 mm), blade linear to narrowly elliptic, (1.5)-5.5-(6.7) × (0.6)-1.3-(1.5) cm, abaxially paler green, laminar glands scattered dots, glandular hairs, main lateral veins (4)-5-(6)-paired, tertiary reticulation lax; base attenuate, margin revolute, apex obtuse. Inflorescence 1-3-flowered at the terminal and with paired 1-3-flowered at branches with up to 6-11 nodes, spiciform; bracts and bracteoles lance-ovate; peduncles 0.5-5 mm, pedicels 1-2 mm. Flowers white, diurnal; 5-6 mm in diam., funnel-shaped; sepals erect, ovate, 4-5 × 1.5-2 mm; laminar glands 5, lines; margin entire, apex obtuse, seven-veined; petals white, ovate-oblong, 3.5-6 mm long, 2-3 mm wide; laminar glands scattered dots; margin entire. Stamens nine (3 per fascicle), 3-3.5 mm; filaments united for 2/3 (1.3 mm). Fascicleds yellowish orange, scalelike, subrectangular, 1 mm long, ca. 0.7 mm wide, emarginate. Ovary ovoid, 1.5 mm long, 1.3 mm wide; styles 3, ca. 1 mm, ca. 2/5 as long as ovary, appressed, distally spreading. Capsule ovoid, 7-8 × 3-4 mm, septicidal, carinate, apex acute. Seeds dark red-brown, ca. 1 mm, testa alveolate. Fl. Jul-Aug, Fr. Aug-Sep.

Distribution: NE India, Taiwan, China, and Korea, wetlands, usually at 200 m.

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Fig. 1. *Triadenum breviflorum* (Wallich ex Dyer) Y. Kimura. 1. Habit; 2. Flower; 3. Sepal; 4. Petal; 5. Stamen; 6. Pistil; 7. Fruit.

Fig. 2. Photographs of *Triadenum breviflorum* (Wallich ex Dyer) Y. Kimura (A) and *T. japonicum* (Blume) Makino (B).

Triadenum breviflorum (Wallich ex Dyer) Y. Kimura can be distinguished from *T. japonicum* as follows:

1. Leaves linear to narrowly elliptic ($L/W = 4.5-5.5$), leaf base attenuate; inflorescence from 6–11 nodes, flower white, diurnal *T. breviflorum*
1. Leaves ovate-oblong to oblong or oblong-lanceolate ($L/W = 1.7-2.5$), leaf base cordate-amplexicaul; inflorescence from 2–4 nodes, flower flesh-pink, nocturnal ... *T. japonicum*

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