

조도만두나무, 만두나무속의 일신종

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***Glochidion chodoense* C. Lee et Im (Euphorbiaceae), a new species from Chodo Archipelago, Korea**

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Glochidion J.R. Forst. et G. Forst. (Euphorbiaceae) consists of about 200 species and is a genus widely distributed in tropical Asia, Malaysia, the Pacific Islands, and Australia. No species in this genus has been reported in Korea. Recently, in the course of studies on the flora of Chodo Archipelago, which is located 35 Km south-west of Korean peninsula, we founded new species of *Glochidion* endemic to Korea.

***Glochidion chodoense* C. Lee et Im, sp. nov (Fig. 1)**

Frutex 2-3 metralis ramosus. Cortex cinereus longitudine fissus, hornotinus incanus. Petioli 1 mm longi pilosi, lamina supra viridis adpresse sparsim ciliolata demum secus venas tantum pilosa, infra pallida viridis pilosa, margine integerrima, elliptica vel oblonga, basi acuta, apice acuta. Flores axillari-fasciculati vel racemosi. Flos masculus pedicello 7-9 mm longo, sepalis 6 anguste cuneatis 2 mm longis intus glaber extus incanus. Flos femineus pedicello 1 mm longo, sepalis 6 imbricate dense incanus, stylis 6-fidis. Fructus depressus globulosus, pedicello 1 mm longo.

Typus: Chodo Insula, Korea (Lee C.S. & H.T. Im 93233, Herb. Chonnam Univ.)

Densely branched deciduous shrub with grayish brown branches with grayish white hairs. Leaves petiolate; elliptical to oblong, 5-8cm long, 2.5-3.5cm wide, obtuse or abruptly acute at apex, acute at base, nearly glabrous, green above, pale green beneath with spreading whitish hairs especially on nerves; petiole 1-2mm long, pubescent. Monoecious, male flowers several,

Fig. 1. Type of *Glochidion chodoense* (Lee C. S. & Im H. T. 93233).

Fig. 2. Twigs of *Glochidion chodoense* with fasciculate flowers at each node.
A: Female flowers with no pedicel. B: Male flowers with long pedicel.

fasciculate, axillary, pedicels to 7-9mm long, sepals 6, about 2 mm long, narrowly cuneate-obovate, rounded; female flowers several, fasciculate, axillary, pedicel less than 1 mm long, sepals 6, about 1 mm long, elliptical to obovate, rounded, fully covered with whitish hairs; stigmas about 6 or more, connate; ovary white-pubescent; capsules depressed-globose, 6 or more celled. Korean name; Chodo-mandunamu, Distributiun; Chodo Archipelago, Kwansado and Sangjodo, Korea.

G. chodoense resembles *G. puberum* Hutchinson, which is distributed in southern China, Taiwan, and Tsushima (Japan), in having twigs and flowers covered with short dense hairs. But pedicels in male flowers of *G. chodoense* are 7 mm long while those of *G. puberum* are 3 mm long (Ohba, 1989). And *G. chodoense* has many flowers (more than 5) which are fascicled at each node, and can be distinguished from *G. puberum* which has 1-3 flowers in clusters (Hsieh, 1977). *G. zeylanicum* (Gaetrn.) A. Juss. var. *tomentosum* Trim., which is widely distributed from Indo to Ryukyu (Japan), also has short dense hairs and fascicled many flowers. But this evergreen species has 5 mm long pedicels in female flowers while those of *G. chodoense* are less than 1 mm long (Fig. 2). Moreover, above two species blooms from May to June, although *G. chodoense* blossoms from July to August. Among *Glochidion* species in East Asia, *G. obovatum* S. et Z. blooms in summer. But this endemic Japanese species has peculiar obovate leaves and its surface is almost glabrous (Ohwi, 1965; Ohba, 1989).

G. chodoense grows on open arid slope adjacent to sandy beach, and makes shruberry zone with *Cudrania tricuspidata*, *Ficus stipulata*, *Sageretia theezans*, *Pittosporum tobira*, *Caesalpinia japonica*, *Zanthoxylum planispinum*, *Hedera rhombea*, *Vaccinium bracteatum*, and *Eurya*

emarginata. They are typical members of warm temperate zone. In Kwansado and Sangjodo, there are many other plants which are originated from tropical or subtropical region; they are *Cyperus cyperoides*, *Ficus nipponica*, *Machilus thunbergii*, *Zanthoxylum ailanthoides*, *Rhus succedanea*, *Xylosma congestum*, *Centella asiatica*, *Ardisia crenata*, *Lysimachia mauritiana*, *Lindernia crustacea*, etc..

From a phytogeographical point of view, it is interesting that there is endemic *Glochidion* species in Chodo Island, the marginal region in distribution range of *Glochidion*. The tropical originated plants like *Glochidion* were extended their distribution range to northward during Eocene, and most of them receded southward concomitant with a drop in temperature since Oligocene (Asama, 1981). A few plants were refuged to restricted place as relict, or were changed as endemic species adapted different environment. *G. puberum* is a good example in relict because it occurs at Tsushima in Japan quite disjunctly from its main distribution range which is southern China and Taiwan. And one example of endemic species in marginal region is *G. obovatum* S. et Z. which is endemic to Japan. It is distributed restrictively from Ryukyu to Kinki district, while other Japanese *Glochidion* species are distributed widely from tropical or subtropical Asia to Ryukyu (Ohwi, 1965; Ohba, 1989). It is considered that *G. chodoense* was differentiated in consequence of isolation and adaptation to changed island environment in Chodo Archipelago.

적 요

조도에서 발견된 *Glochidion*속(만두나무속; Euphorbiaceae)의 신식물을 조도만두나무(*Glochidion chodoense*)로 기재하였다. 조도 특산인 본 종은 7-8월에 긴 화경을 가진 다수의 꽃이 엽액에 속생하고, 소지, 화피편, 자방에 털이 밀생하여, 일본, 중국, 타이완의 다른 종들과는 명확히 구별된다. 우리나라에서 열대, 아열대아시아를 구분포지로 하는 *Glochidion*속의 식물이 발견된 것은 처음으로, 조도는 본 속의 분포의 북쪽 가장자리에 해당 한다.

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