

Corydalis misandra B.U.Oh: A new species of *Corydalis* sect. *Corydalis* (Fumariaceae) from Korea

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A new species of *Corydalis* sect. *Corydalis* (Fumariaceae), *C. misandra* B.U.Oh, is described from the provinces of Gyeonggi-do and Gangwon-do in Korea. The new species is distinct from its close relative *C. namdoensis* in having elliptic or linear leaflet shape, entire or slightly dentate bract apex, broad and rhomboidal lower outer petal, 14 papillate stigma, oblong stamen and linear capsule with one rowed seeds, etc.

Keywords: Fumariaceae, *Corydalis* sect. *Corydalis*, new species, *Corydalis misandra*

Korean taxa of the genus *Corydalis* were recently revised, and 20 species representing four sections and four subsections were recognized (Oh, 1999). These studies did not include *C. bungeana* Turcz., *C. buschii* Nakai, and *C. gigantea* Trautv. et Meyer because they are distributed in North Korea only. Among these 20 species, eight of them are endemic to Korea; *C. albipetala* B.U. Oh, *C. filistipes* Nakai, *C. hirtipes* B.U. Oh et J.G. Kim, *C. grandicalyx* B.U. Oh et Y.S. Kim, *C. hallaisanensis* Léveillé, *C. humilis* B.U. Oh et Y.S. Kim, *C. maculata* B.U. Oh et Y.S. Kim and *C. namdoensis* B.U. Oh et J.G. Kim (Kim and Oh, 1987; Oh, 1996; Oh and Jang, 2002; Oh *et al.*, 2004)

In the present work, a plant of *Corydalis* sect. *Corydalis* collected from many places of Province Gyeonggi-do and Gangwon-do in Korea since 2001 is described as a new species, *C. misandra* B.U.Oh. This new species is clearly distinguished from its close relative, *C. namdoensis*, by its elliptic or linear leaflet shapes, entire or slightly dentate

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bract apex, broad and rhomboidal lower outer petal, 14 papillate stigma, oblong stamen, linear capsule, one rowed seed arrangement in a capsule, short and stumpy caruncle *etc.* This plant is also easily separated from *C. albipetala* by its shapes of flowers and fruits.

***Corydalis misandra* B.U.Oh, sp. nov. (Figs. 1 and 2)**

Holotype: KOREA. Province Gyeonggi-do, Gwangju-si, Jungbu-myeon, Namhansanseong, 37°28'31.96"N, 127°14'23.19"E, 9 Apr. 2005, *B.U.Oh 2005001* (CBU)

Isotypes: CBU

Perennis, crescens et florens ab mense Aprili usque ad mensem Maium, glabra. Rhizoma 1-6 cm longa, tubere sphaerico, 1-2 cm diam., colore facie interiori alba. Cataphyllum squamiforme singulum, 0.5-1.7 cm longum. Caules 1-5, e basi cataphylli exeuntes, 10-20 cm longi, 1.5-2 mm diam., teretes. Folia caulina 2, petiolata; petiolis 2-5 cm longis; laminis 3-6 cm longis, 3-9 cm latis, ternatis usque biternatis; foliola integra. Inflorescentia terminalis, racema, floribus 2-15; bractee ellipticae, 0.4-0.8 cm longae, 2-5 mm latae, apice integro; pedicellus floralis 0.5-1.9 cm, fructifer 1.2-2.3 cm longus. Flores interdum caeruleo-albi, 1.2-1.8 cm longi; calcari 5-7 mm longo; petalo interiore apice V-forme; stigma 14 papillate. Fructus est capsula, late plano-fusiformis, 1.8-2.2 cm longa, 2.1-2.3 mm lata. Semina plana, sphaerica, nitida, 1.8-2.0 mm longa, 1.8-2.0 mm lata, fere 1 seriata.

Perennial herb, growing from April to May, glabrous. Rhizome 1-6 cm long, with tuber; tuber spherical, 1-2 cm in diam., inside color of tuber white. Squamiform leaf 1, 0.5-1.7 cm long. Stems 1-5, originated from base of squamiform leaf, 10-20 cm long, 1.5-2 mm in diam., circular in cross section. Cauline leaves 2, petiolate; petioles, 2-5 cm long; blade 3-6 cm long, 3-9 cm wide, ternate to biternate; leaflets entire at apex. Inflorescences terminal, racemes, 2-15 flowered, flowering from April to May; bracts elliptic or ovate, 0.4-0.8 cm long, 2-5 mm wide, entire or slightly dentate at apex; pedicels 0.5-1.9 cm long when flowering, 1.2-2.3 cm when fruiting. Flowers white, sky blue or whitish blue, 1.2-1.8 cm long; spur 5-7 mm long; inner petal v-shaped at apex; stigma with 14 papillae. Fruits capsule, linear, 1.8-2.2 cm long, 2.1-2.3 mm wide. Seeds flat, spherical, glossy, 1.8-2.0 mm long, 1.8-2.0 mm wide, caruncle short and stumpy, arranged in one row in a capsule.

Table 1. Comparison of major characters between *C. misandra* and *C. namdoensis*

Characters		<i>C. misandra</i>	<i>C. namdoensis</i>
	Simple unicellular hairs	absent	absent
Leaf	blade shape	ternate to biternate	ternate to biternate
	leaflet shape	elliptic or linear	very variable such as rotundiloba, lineariloba, pectinata, fumariaefolia types of leaflets
	leaflet apex	entire	entire or lobate or parted
Bract	shape	elliptic or ovate	very variable
	apex	entire or slightly dentate	entire or cleft
Pedicel	length	0.5-1.4 cm, 2.1 cm when fruiting	0.5-1.9 cm, 2.3 cm when fruiting
Flower	colour	sky blue or whitish blue	white or whitish blue
	length	1.2-1.8 cm	1.2-1.6 cm
	inner petal apex	round, V-shaped	round, V-shaped
	front edge of lower outer petal	broad and rhomboidal	broad and oval with rather undulate margin
Stigma	No. of papillae	14	12
Stamen	shape	oblong	oval
Capsule	shape	linear	broadly flattened fusiform
	length	1.8-2.2 cm	1.0-1.2 cm
	width	2.1-2.3 mm	5-6 mm
Seed	arrangement	in one row	in two rows
	width	1.8-2.0 mm	1.8-2.0 mm
	shape of caruncle	short and stumpy	long and slender
Distribution		GW: Cheongtaesan Gwangdeoksan GG: Gwangneung, Cheonmasan, Jijangbong, Gwangdeoksan Dongmakgol Namhansanseong Aengjabong Nojeokbong	CN: Seodaesan GB: Seonamsan, Ilwolsan, Ulryonsan JB: Mandeoksan

GW: Gangwon-do GG: Gyeonggi-do CN: Chungcheongnam-do GB: Gyeongsangbuk-do
JB: Jeollabuk-do

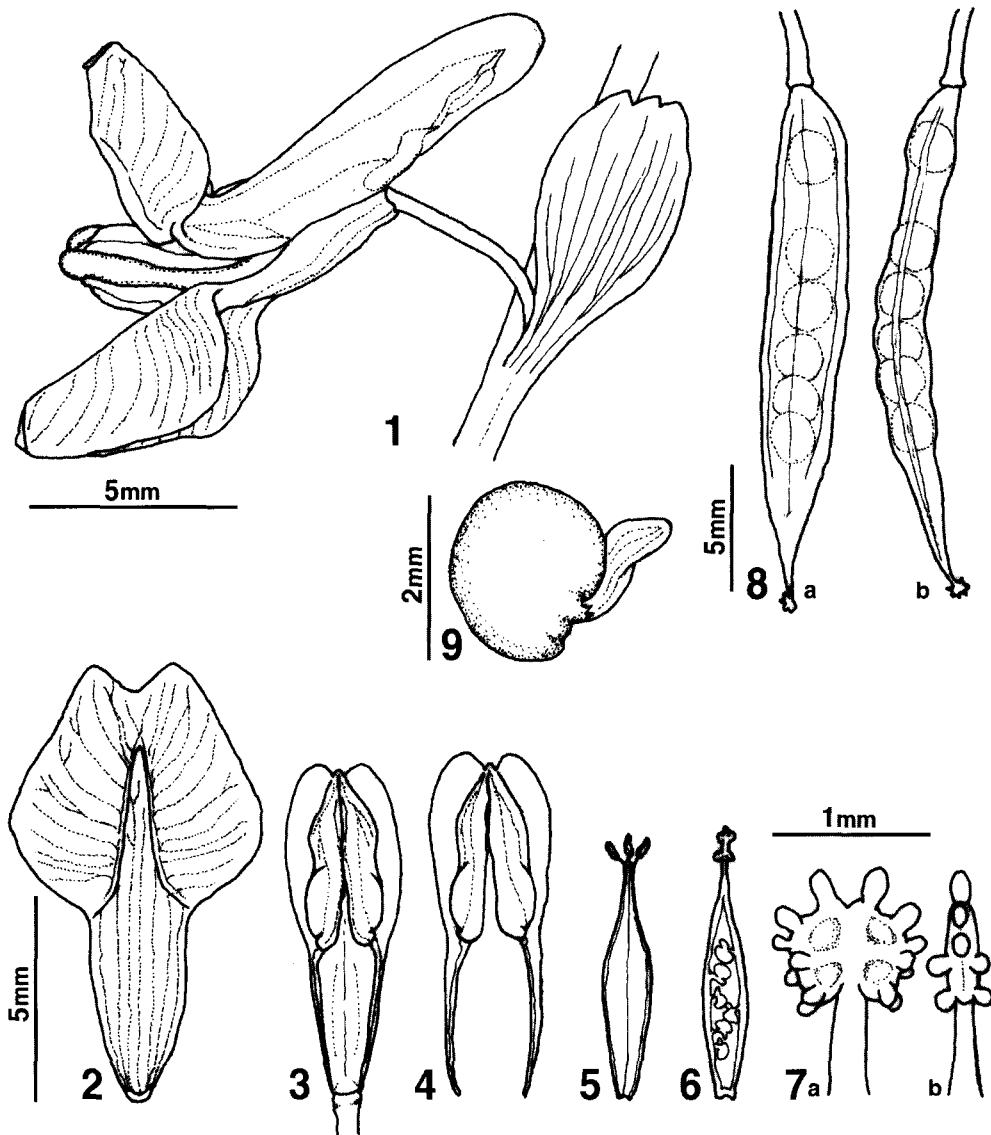


Fig. 1. *Corydalis misandra* B.U.Oh. 1. Flower and bract, 2. Lower part of outer petal, 3. Inner shape of flower which was removed outer petals, 4. Inner petals with V-shaped apex, 5. Membraneous stamen, 6. Ovary with one-rowed ovules, 7. Stigma with 14 papillae (a: front view b: lateral view), 8. Linear capsule and seed arrangement (a: front view b: lateral view), 9. Carunculate seed. Scale bar: 1 = 5 mm, 2 to 6 = 5 mm, 7 (a, b) = 1 mm, 8 (a, b) = 5 mm, 9 = 2 mm.



HOLOTYPE



From: B. U. Oh and K. Oh, 2005
 HERBARIUM OF CHUNGBUK NATIONAL UNIVERSITY (CNU)
 No. 2005001 Family: Fumariaceae(원호색과)
 Scientific Name: *Corydalis misandra* B.U. Oh
 Common Name: 각시현호색(Gak si-hyon ho-saek)
 Locality: Namhansanseong, Gwangju-si, Kyeonggi-do, Korea
 37°28'31.96"N, 127°14'23.19"E
 Date: 2005. 4. 9 Collector: B.U. Oh
 Determinator: B.U. Oh

Fig. 2. Holotype of *Corydalis misandra* B.U. Oh, *B.U. Oh* 2005001 (CNU).

Korean name: 각시현호색 (Gak-si-hyon-ho-saek)

Distribution: **Gangwon-do:** Cheongtaesan (Hoengseong-gun), Gwangdeoksan (Hwacheon-gun) / **Gyeonggi-do:** Gwangdeoksan, Gwangneung & Jijangbong

(Pocheon-si), Cheonmasan (Namyangju-si), Dongmakgol (Yoeuncheon-gun), Namhansanseong & Aengjabong (Gwangju-si), Nojeokbong (Yangpyeong-gun)

Paratypes: Nojeokbong, Yangpyeong-gun, **Gyeonggi-do**, B.U.Oh 050409-001 to -004; Namhansanseong, Gwangju-si, **Gyeonggi-do**, B.U.Oh 060422-001 to -003; Gwangdeoksan, Hwacheon-gun, **Gangwon-do**, H.J.Choi 050409-001 to -006; Cheonmasan, Namyangju-si, **Gyeonggi-do**, H.J.Choi 050415-001 to -003; Cheonmasan, Namyangju-si, **Gyeonggi-do**, H.J.Choi 060418-001 to -005; Cheonmasan, Namyangju-si, **Gyeonggi-do**, H.J.Choi 060422-001 to -009; Jijangbong, Pocheon-si, **Gyeonggi-do**, H.J.Choi 060422-011 to 013 (CBU) / Aengjabong, Gwangju-si, **Gyeonggi-do**, KNAH 014005, 014053; K0409-009, -017; Dongmakgol, Yeoncheon-gun, **Gyeonggi-do**, ParkSH 20308, 20319, 20329, 20330, 20331; Cheongtaesan, Hoengseong-gun, **Gangwon-do**, K.Heo 1519; Gwangneung, Pocheon-si, Gyeonggi-do, 9 Apr 2001, J.Y.Jeong, *s.n.*; Gwangdeoksan, Pocheon-si, Gyeonggi-do, 12 Apr 2002, S.H.Park & S.S.Jung, *s.n.* (KH)

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각시현호색: 한국에서 발견된 현호색속 현호색절의 1신종

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현호색과 현호색속 현호색절의 1신종인 각시현호색이 한국의 경기도 및 강원도에서 발견되어 기재되었다. 신종은 타원형 내지 선형의 소엽 형태, 전연 내지 선단이 약간 치아상인 탁엽 및 넓고 마름모형인 하측 외화관을 가지며, 또한 14개의 돌기가 있는 주두와 종자가 1열로 배열하는 선형의 삭과를 가짐으로써, 이와 가까운 유연관계가 있다고 판단되는 남도현호색과 뚜렷이 구별되었다.

주요어: 현호색과, 현호색속 현호색절, 신종, 각시현호색

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