

## *Chrysosplenium epigealum* J.W.Han et S.H.Kang : A New Species of *Chrysosplenium* (Saxifragaceae) from Korea

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**Abstract** - A new species of *Chrysosplenium* (Saxifragaceae), *C. epigealum* J.W.Han & S.H.Kang is described from Mt. Seoraksan, Inje-gun, Gangwon-do, Korea. This new species is distinct from *C. flaviflorum* Ohwi, its closely relative species, in having calyx 2-2.5 mm long, pistils slightly shorter than calyx, filaments 2-3 times longer than anthers and stolons epigeal.

**Key words** - Saxifragaceae, *Chrysosplenium*, New species, *Chrysosplenium epigealum*

*Chrysosplenium* L. (Saxifragaceae) is a genus which is widely distributed about 60 species mainly in the northern hemisphere, with the center of diversity in temperate Asia, including Himalaya, China, and Japan (Hara, 1957; Pan, 2001). The main taxonomic characters of this genus are leaves deposition, shapes of flowers, fruits and seeds (Hara, 1957). Korean *Chrysosplenium* was revised that they composed 7 taxa (Kim, 2007). Recently we found an unknown species from Mt. Seoraksan. This species is very similar to *C. flaviflorum* Ohwi. *C. flaviflorum* is belonging to the Ser. *Pilosa* and could be identified by shape of seed in Ser. *Pilosa*. Unknown species is very similar to *C. flaviflorum* Ohwi, but it has the characters of calyx ca. 2-2.5mm long, pistils slightly shorter than calyx, filaments 2-3 times longer than anthers (Fig. 3) and well developed epigeous stolon. In this study, we name the new species *C. epigealum* and described and illustrated from Korea (Fig. 1, 2).

***Chrysosplenium epigealum* J.W.Han & S.H.Kang, sp. nov., Fig. 1, 2**

Species *Chrysosplenio flavifloro* similis, sed differt calyce 2-2.5 mm longo, pistillo calyce paullo brevior, filamentibus antheri 2-3-plo longioribus, stolonibus epigaei bene evolutis.

**Holotype:** Moist place and valley in Mt. Seoraksan, Inje-gun, Gangwon-do, Korea. Alt. 566 m, 38°13'56.4"N, 128°23'54.6"E, 02 June. 2009, S.H.Kang et J.W.Han 20090023 (KH, Korea National Arboretum)

**Isotypes:** S.H.Kang et J.W.Han 2009020, 2009021, 2009022, 20090024 (KH, Korea National Arboretum)

**Paratypes:** Mt. Seorakan, Inje-gun, Gangwon-do, Korea, 25 Apr. 2009, S.H.Kang et J.W.Han 20090017, 20090018, 20090019 (KH, Korea National Arboretum)

Herbs, perennial. Opposite leaves. Developed sterile branches at base, stolons epigeal. Soft hairs on stem and petiole, but leaves surface glabrous. Leaves oval or elliptical, margin crenate with 5-8, leave base obtuse or subtruncate, leave top rounded, length ca. 0.8cm, width ca. 1cm at flowering stage, ca. 1.5-2.5 cm long, ca. 1-2 cm wide at fruiting stage. Height 5-15cm tall. Bract oval, ca. 9-12 mm long, ca. 7-11 mm wide. Cauline leaves 1-2 pairs, ca. 5-8 mm long, ca. 4-7 mm wide. Flowers campanulate yellow. Bracteole yellow at flowering stage and change to green at fruiting stage. Calyx erect roundish or subtruncate at top, ca. 2-2.5 mm long. Stamens 8 with ca. 1.5 mm long. Filaments 2-3 times longer than anthers. Pistil ca. 2 mm long and slightly shorter than calyx. Capsules 2-lobed. Seed brown, oval, papillae on seed-coat but no tubercle ridge.

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**Korean name:** gi-neun-gwaeng-i-nun

**Distribution:** Mt. Seoraksan, Inje-gun, Gangwon-do, Korea

In characters of seed and external morphology, *C. epigealum* is very similar to *C. flaviflorum* Ohwi, but *C. epigealum* have the characters of calyx ca. 2-2.5mm long, pistils slightly shorter than calyx, filaments 2-3 times longer than anthers (Fig. 3), stolons epigeal. For these reasons, *C. epigealum* is distinct from *C. flaviflorum*, its closely relative species. The key suggested for confirmation of difference between *C. flaviflorum* and *C. epigealum*.

**Key to the two species of *Chrysosplenium* Ser. *Pilosa***

1. Stolons hypogaeal, calyx ca. 1-1.5mm long, pistils long 1/2 as long as calyx, filaments as long as anthers.  
..... *C. flaviflorum*
2. Stolons epigeal, calyx ca. 2-2.5mm long, pistils slightly shorter than calyx, filaments 2-3 times longer than anthers.  
..... *C. epigealum*



Fig. 1. Holotype of *Chrysosplenium epigealum* J. W. Han & S. H. Kang, S. H. Kang & J. W. Han 20090017.

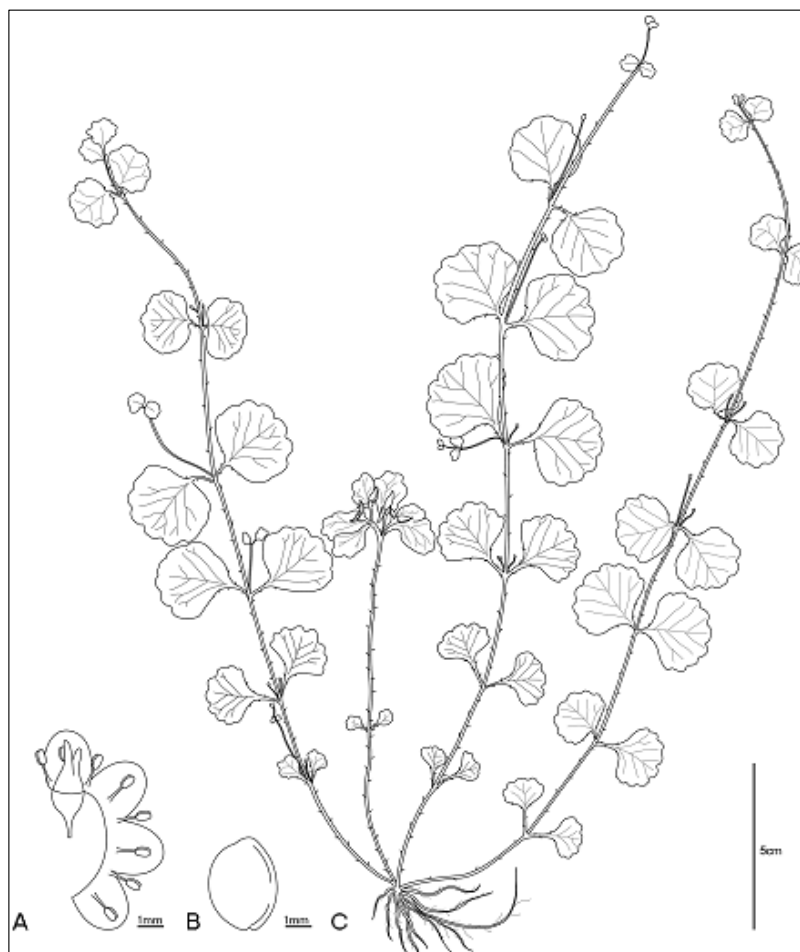


Fig. 2. *C. epigealum* J. W. Han & S. H. Kang.  
A: Pistil and filaments with opened calyx, B: Seed, C: Habit.

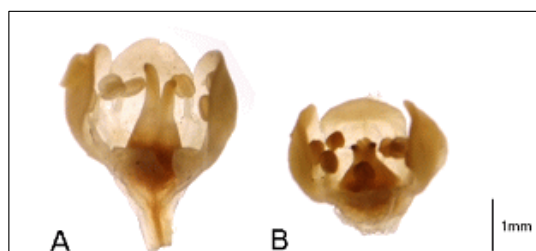


Fig. 3. Opened calyx of two species.  
A: *C. epigealum*, B: *C. flaviflorum*.

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