An unrecorded species of *Allium* (Alliaceae) in Korea:
*A. pseudojaponicum* Makino

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Here we report a previously unrecorded species of Korean *Allium* (Alliaceae) from
Geomundo, Yeosu-si, Jeollanam-do. This taxon, *A. pseudojaponicum* Makino which has
been known to distribute only in the southern part of Japan up to date, is easily
distinguished from *A. thunbergii* G. Don by lustrous evergreen leaves and lateral scapes
as well as chromosome number (2n=32). The common name, ‘Gaet-bu-chu’, was newly
given considering the property of habitat, which is the dry and rocky grasslands facing to
the sea in Korea and Japan. In this study, we redescribe morphological characters, and
provide illustrations of habit as well as photographs of habitat.

*Keywords:* *Allium*, unrecorded species, *A. pseudojaponicum* Makino

The genus *Allium* L. traditionally belongs to the tribe Allieae under the Liliaceae
(Bentham & Hooker, 1883; Vvedenskii, 1935; Lawrence, 1951; Xu, 2000), but recent many

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authors generally have placed the genus in its own family Alliaceae (Dahlgren et al., 1985; Takhtajan, 1997; Rahn, 1988). Over 700 taxa of this genus are widely distributed in N Hemisphere, especially in the temperate regions of Eurasia, and also growing in S Hemisphere such as Africa and Central and South America (Hutchinson, 1959; Ohwi, 1984; Rahn, 1988; Takhtajan, 1997; Xu, 2000). Among them, about 21 taxa except cultivated ones have been known from Korea up to date (Choi et al., 2004b). Especially, *A. linearifolium* H.J. Choi et B.U. Oh, *A. koreanum* H.J. Choi et B.U. Oh and *A. thunbergii* var. *teretifolium* H.J. Choi et B.U. Oh were described as endemic taxa (Choi & Oh, 2003; Choi et al., 2004a), and *A. longistylium* Baker was reported as an unknown species (Choi et al., 2003).

In the present study, we report another uncertain taxon of Korean *Allium* collected from Geomundo, Yeosu-si, Jeollanam-do as a previously unrecorded species. This taxon, *A. pseudojaponicum* Makino which has been known to distribute only in the southern part of Japan and also has been misidentified frequently as *A. thunbergii* G. Don. This Makino’s species, however, is a biologically distinct species. It is easily distinguished from *A. thunbergii* in having lustrous evergreen leaves and laterally developing scapes morphologically. In addition, the chromosome numbers of *A. pseudojaponicum* collected from Geomundo, Korea and Tsushima, Japan (the type locality) counted to be tetraploid (2n=4x=32; Fig. 3–1, 2; Hotta, 1998), in contrast with that of *A. thunbergii* being diploid (2n=2x=16; Fig. 3–3).

The new common name, ‘Gaet-bu-chu’, was given considering the property of habitat, that is the dry and rocky grasslands facing to the sea in Korea and Japan. In this study, we redescribe morphological characters, and provide illustrations of habit (Fig. 1) as well as photographs of the habitat of Geomundo (Fig. 2). All specimens examined in this study are now preserved in the Chungbuk National University Herbarium (CBU) and Korea National Arboretum Herbarium (KH).

**DESCRIPTION**

*Allium pseudojaponicum* Makino, Bot. Mag. (Tokyo) 24: 30 (Figs. 1, 2).

**Herbs** hermaphroditic. **Rhizomes** short, erect, 1.2–5.5 mm long. **Bulbs** elliptical solitary to clustered, ovoid without bulblets, 10.0–25.0 mm in diam.: tunics membranous, blackish brown. **Leaves** evergreen, 2–6: leaf sheaths exposed over ground, 3.0–18.0 cm high,
Fig. 2. Photographs of *Allium pseudojaponicum* in Korea. 1. General habit  2. Enlarged umbellate flowers and a pollinator *Parnara guttata* (Bremer & Grey)  3. Landscape of habitat in Geomundo.

striped; leaf blades lustrous, distorted, linear, nearly flat, 8.0~40.0 cm long, 3.0~8.5 mm wide, solid in cross-section, sessile and pale green at base, acute to obtuse at apex. **Scapes** lateral from bulbs, erect, terete, solid in cross-section, 17.0~45.0 cm long, 1.5~4.0 mm wide. **Inflorescences** umbel, subglobose, 15.0~26.0 cm high, 23.0~48.0 cm wide, without bulblets, 20~75 flowered; pedicels terete, equal in length, 7.0~17.0 mm long; bracts 6.5~13.0 mm long. **Flowers** bisexual; perianths campanulate, purple to violet, inner tepals longer than outer ones, ovately elliptical to oval, obtuse to rounded at apex, 5.5~6.8 mm long, 3.8~4.2 mm wide; outer tepals elliptical to oval, obtuse to rounded at apex, 5.0~6.0 mm long, 2.1~3.0 mm wide;
Fig. 3. Comparison of somatic chromosomes of the two *Allium* species. 1, 2. *A. pseudojaponicum*, 2n=32 (1: Geomundo, Korea 2: Tsushima, Japan; the type locality). 3. *A. thunbergii*, 2n=16.

Anthers 2.0~2.1 mm long; filaments longer than the tepals, 6.0~10.0 mm long, entire basally; ovary obovoid, green, with hood-like projections at base, 3.5~4.0 mm long, 2.8~3.2 mm wide, ovules 2 per locule: style 1, erect, terete, exsert: stigma conical. Capsules obcordiform, trigonous, 4.5~5.8 mm long, 4.8~6.1 mm wide. Seeds black, semi-ellipsoid, 3.6~4.5 mm long, 2.3~3.0 mm wide. Chromosome number 2n=32.

Type: in TI, Photocopy in CBU!

Korean name: Gaet-bu-chu (갯부추: 신청)

Distribution: Japan and Korea

Korea: Geomundo, Yeosu-si, Jeollanam-do, dry and rocky grasslands facing to the sea.


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LITERATURE CITED


부추속(부추과) 미기록 식물 1종: 켓부추

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전라남도 여수시 거문도에서 발견된 부추속(부추과) 1분류군을 국내 미기록종으로 보고한다. 이 분류군은 지금까지 일본의 남부지방에만 분포하는 것으로 알려졌던 Allium pseudoaponicum Makino로서, 근연종인 산부추(Allium thunbergii G. Don)에 비해 온이 나는 상록성의 잎, 화경에 속성하는 인정 및 2n=32의 염색체수 등의 특징으로 쉽게 구분된다. 국명은 생육지의 특성을 고려하여 '갯부추'로 신청하였다. 이 분류군에 대한 형태적 특징을 기재하였고, 도해 및 생태 사진을 제시하였다.

주요어: 부추속, 미기록종, 켓부추

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