研究報告

金門與馬祖植物誌疏漏屬-隱子草屬 (禾本科，*Cleistogenes* Keng) 及其成員

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【摘要】本文描述金門與馬祖植物誌疏漏屬：隱子草屬 (*Cleistogenes* Keng，禾本科) 及其成員：朝陽隱子草 (*C. hackelii* (Honda) Honda)；此一禾草分布於東亞與東北溫帶與亞熱帶地區，金門與馬祖產的亞族群位於向陽海濱草地與森林底層，爲金門與馬祖的新紀錄屬植物成員。

【關鍵詞】隱子草屬、疏漏種、禾本科。

Research paper

Cleistogenes Keng (Poaceae), the neglected genus and its species to the Flora of Kinmen and Matsu

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【**Abstract**】The neglected genus to the floras of Kinmen and Matsu, *Cleistogenes* Keng (Poaceae), and its species, *C. hackelii* (Honda) Honda, was described and illustrated in this article. Populations of this neglected and new-recorded grass species distributes in temperate and subtropical regions of East and Northeast Asia, and its subpopulations in the Kinmen island and Matsu archipelago locate on sunny coastal grasslands and forest floors.

【**Key words**】*Cleistogenes*; Neglected; Poaceae.

Introduction

The native and alien floras of Kinmen and Matsu archipelagos had been revised by Kuo (1994), Lu (2011), Tseng et al. (2012), Tseng et al. (2014), Fan (2017) and Jung (2017), both of these two floras are mainly composed by members of Poaceae. In author's serial botanical surveys recently, several specimens of a strange grass species were collected in Kinmen island (Figure 2) and Beigan and Xichu islands, Matsu archipelago

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(Figure 3). After revising relative literatures (Kuo 1994; Lu 2011; Tseng et al. 2012; Tseng et al. 2014; Jung 2017), the author confirmed this strange grass species as *Cleistogenes hackelii* (Honda) Honda (Cynodonteae, Chloridoideae) which was recorded as native to forest slopes in temperate area of eastern and northeastern Asia (Koyama 1987; Osada 1993; Yu & Zhao 2005; Chen & Sylvia 2006). The genus *Cleistogenes* Keng includes about thirteen species in Euasia and ten species in China, and its members are characterized by chasmogamous spikelets on the axis of upper leaf sheathes, hyaline glumes, and disarticulating above glumes (Koyama 1987; Chen & Sylvia 2006). This species was considered as neglected to the flora of Kinmen island and Matsu archipelago. Herein, the author described this neglected genus, then described and illustrated its newly recorded species to the flora of Kinmen and Matsu based on materials from local subpopulations for identification (Figure 1).

Taxonomic treatment

Cleistogenes Keng, Sinensia 5: 147. 1934. Chen and Sylvia. Fl. Reipubl. Popularis Sin. 22: 460, 2006.-*Kengia* Packer, Bot. Not. 113(3): 291. 1960. Koyama. Grasses Jap. Neighb. Reg.: 263, 1987; Yu and Zhao. Ann. Bot. Fennici 42: 47, 2005. 隱子草屬

Cleistogenes hackelii (Honda) Honda, Bot. Mag. (Tokyo) 50: 437. 1936. Chen and Sylvia. Fl. Reipubl. Popularis Sin. 22: 462, 2006; Osada. Illus. Grasses Jap. 462, 1993.-*Kengia hackelii* (Honda) Packer, Bot. Not. 113, 3: 291, 1960. Koyama. Grasses Jap. Neighb. Reg.: 266, 1987; Yu and Zhao. Ann. Bot. Fennici 42: 50, 2005.朝陽隱子草 Figure 1.

Perennial herbs, loosely tufted, bulbiferous covered with persistent sheathes. Culms erect to ascending, 30-50 cm tall, infra-sheath branched above middle part, node glabrous, internodes slender, ca. 0.5 mm in diameter, 0.5-1 cm long at base, 2-4 cm above middle part, surface purplish. Leaf sheaths columnar, margin membranous, basal leaf sheath caducous, persistent above middle part, surface pilose on middle sheath, glabrous on upper sheath; leaf blades caduceus at middle part, linear to lanceolate, base round, articulate, apex acute, 3-7×0.4-0.5 cm, glabrous; ligule apex truncate, margin serrate, 0.3-0.5 mm long. Panicle narrow to spreading, exserted, 2-4 cm long, branches to 2 cm long. Spikelets to 5 mm long (awn excluded), florets 1-3; glumes ovate; lower glume ca. 0.5 mm long, 0-veined, apex acute; upper glume to 1.5 mm long, 0-1-veined, apex acute; callus pilose, lemma of first floret lanceo-ovate, thin, 3-nerved, apex bifid, awned, ca. 4 mm long, awn straight or curved, to 2 mm long; palea of first floret ovate, thin, apex bifid, 2-keeled.

Specimens examined: TAIWAN. Kinmen, Kinmen Jinsha Hsiang, Hai-in Temple, 30 Oct 2018, *Ming-Jer Jung 6141* (TAIF), Mt. Taiwu, 30 Oct 2018, *Ming-Jer Jung 6142* (TAIF), Mt. Wuhu, 29 Oct 2018, *Ming-Jer Jung 6139* (TAIF); Matsu, Beigan Hsiang, Beigan, Luo-Shan Trail, 17 Oct 2017, *Ming-Jer Jung 6123* (TAIF), Ni-Gu-Shan, 17 Oct 2017, *Ming-Jer Jung 6124* (TAIF); Xichu, Kun-Chou Trail, 18 Oct 2017, *Ming-Jer Jung 6122* (TAIF).

Notes: *Cleistogenes hackelii* was recorded in temperate regions of China, Japan and Korea (Koyama 1987; Osada 1993; Yu & Zhao 2005; Chen & Sylvia 2006). The subpopulations of this grass species in Kinmen island distribute at shaded forest margins and full-sun rocky slopes in mountain areas (Figure 2). The subpopulations of it in Beigan island distribute at sunny grasslands in coastal regions, but that in Xichu island distributes

at forest edge, near a forest trail (Figure 3). In both Kinmen and Matsu, this neglected grass species could be determined easily from other local Poaceae taxa by bulbiferous habit, infra-sheath branching, hyaline glumes, and awned lemma with bifid apex (Figure 1).

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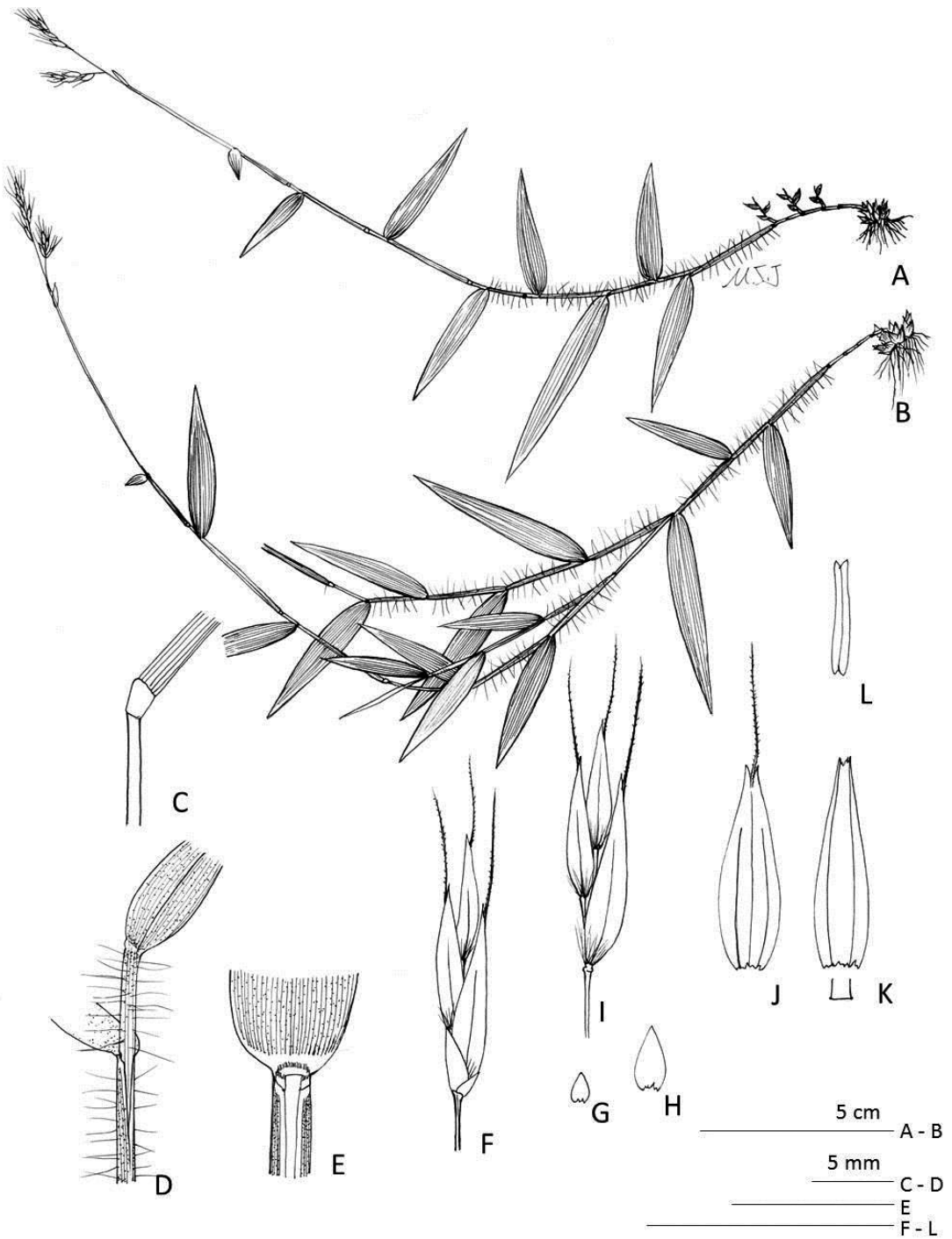

Figure 1. *Cleistogenes hackelii* (Honda) Honda. A & B: Habit. C: Node. D: Leaves at middle part of culm. E: Joint between blade and leaf sheath. F: Spikelet. G: Lower glume. H: Upper glume. I: Spikelet, glumes excluded. J: Lemma of first floret. K: Palea of first floret, L: Anther.

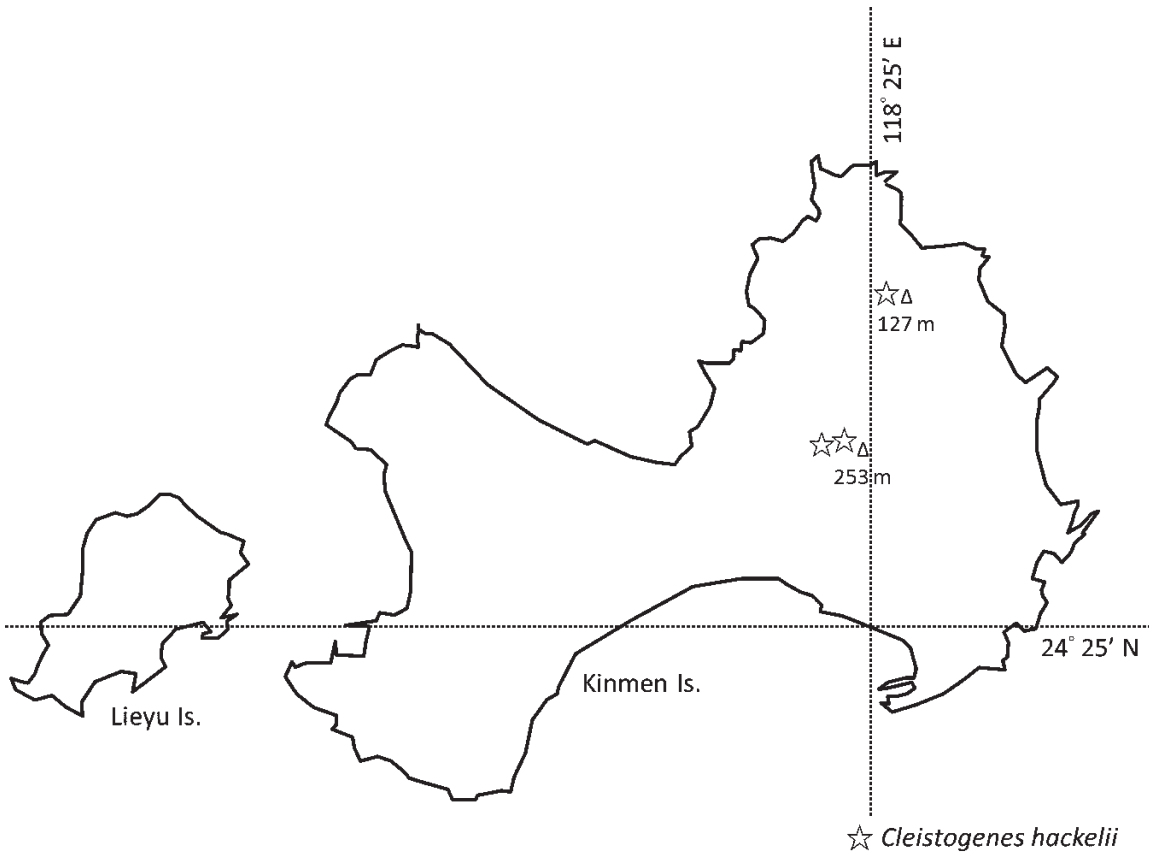

Figure 2. Distribution of *Cleistogenes hackelii* (Honda) Honda (☆) in Kinmen island.

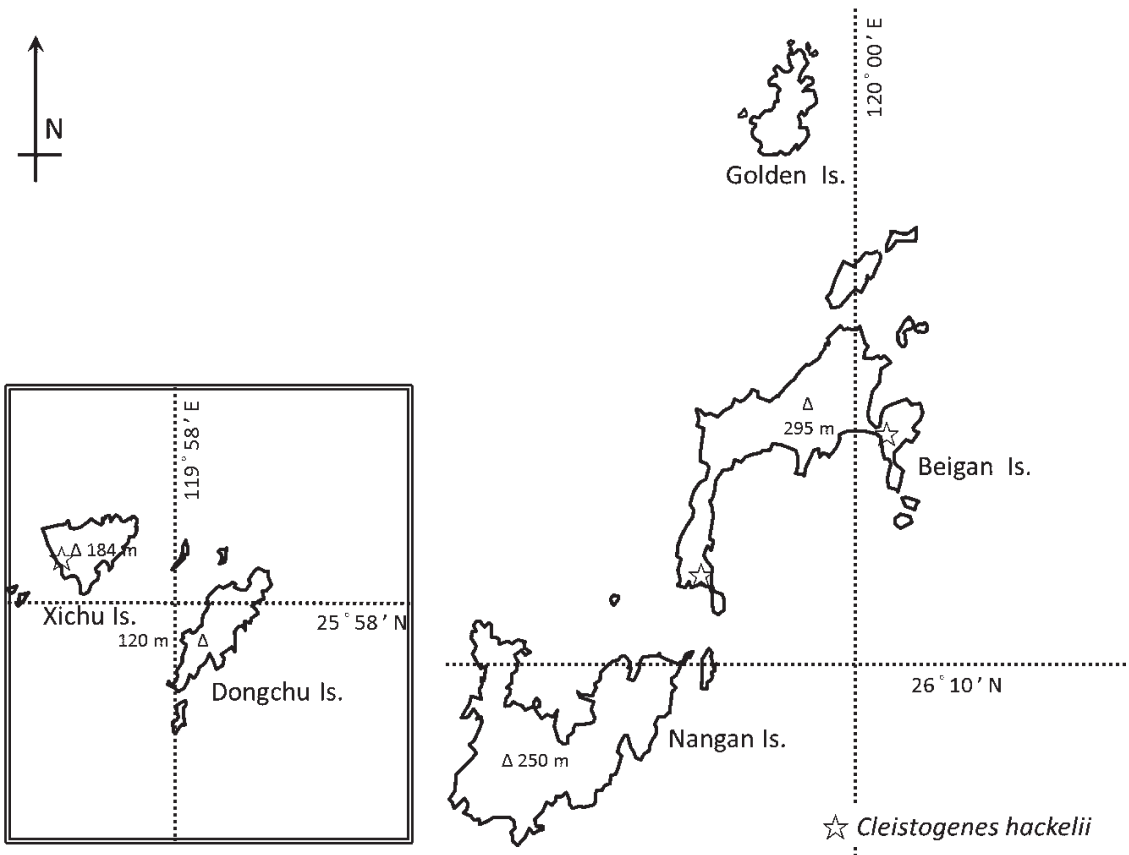

Figure 3. Distribution of *Cleistogenes hackelii* (Honda) Honda (☆) in Matsu archipelago.