

# *Aphyllodium* (DC.) Gagnep. instead of *Dicerma* DC. (Leguminosae-Papilionoideae: Desmodieae)

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**ABSTRACT:** *Aphyllodium* (DC.) Gagnepain is adopted as the correct generic name instead of *Dicerma* DC. Narrower circumscription of *A. biarticulatum* is adopted, and the following new combinations are made: *Aphyllodium australiense* (Schindl.) H. Ohashi, *A. hispidum* (Schindl.) H. Ohashi, *A. hispidum* var. *collettii* (Schindl.) H. Ohashi, and *A. novoguineense* (Schindl.) H. Ohashi. Key to all the taxa included in the genus is prepared.

**KEY WORDS:** *Aphyllodium*, *Dicerma*, Leguminosae, New combinations.

## INTRODUCTION

Recently *Dicerma* DC. is again replaced by *Aphyllodium* (DC.) Gagnepain (Pedley 1996). This treatment is correct. In the original description, *Dicerma* DC. (1825) includes two sections, *i. e.*, *Phyllodium* (Desv.) DC. and *Aphyllodium* DC. The section *Phyllodium* (Desv.) DC. is, however, published previously as a genus in 1813, hence, according to Art. 52.1 of International Code of Botanical Nomenclature (Greuter *et al.* 1994), the generic name *Dicerma* is superfluous. Nevertheless, the name *Dicerma* was traditionally adopted by Candolle (1826), Wight and Arnott (1834), and Bentham (1852) as the generic name for the section *Aphyllodium* circumscribed by Candolle. This error was already amended by Gagnepain (1916, 1920), but succeeding Schindler (1924), Hutchinson (1964), Ohashi (1973), Ohashi *et al.* (1981), Dy Phon *et al.* (1994), Yang and Huang (1995) and others have used the wrong generic name.

## MATERIALS AND METHOD

Herbarium specimens examined in this study are deposited in A & GH, BM, BO, CAL, K, L, P and TUS. Herbarium acronyms are listed in Holmgren *et al.* (1990).

## RESULTS

In this paper I adopt *Aphyllodium* (DC.) Gagnepain instead of *Dicerma* DC. and change my previous broad specific circumscription of *Dicerma biarticulatum* (L.) DC. in which

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*Dicerma hispidum* and *Dicerma novoguineense* were included to narrower sense excluding them and *Dicerma biarticulatum* var. *australiense* as distinct.

**Aphyllodium** (DC.) Gagnep. in Notul. Syst. (Paris) **3**: 254. 1916 & in Lecomte, Fl. Gén Indoch. **2**: 609. 1920; Pedley in Rev. Fl. Ceylon **10**: 166. 1996. Type species *Aphyllodium biarticulatum* (L.) Gagnep. (= *Hedysarum biarticulatum* L.).

*Dicerma* sect. *Aphyllodium* DC., Prodr. **2**: 339 (1825) & Mem. Leg. 328 (1826); Wight & Arnott, Prod. Fl. Ind. Orient. 230 (1834). Type species: *Dicerma biarticulatum* (L.) DC. nom. illeg. (= *Hedysarum biarticulatum* L.).

*Desmodium* sect. *Dicerma* (DC.) Benth. in Benth. et Hook. f., Gen. Pl. **1**: 519. 1865 Taubert in Engl. et Pr., Nat. Pflanzenfam. **3**(3): 328. 1894.

*Desmodium* subg. *Dicerma* (DC.) Baker in Hook. f., Fl. Brit. Ind. **2**: 163. 1876.

*Dicerma* DC., Prodr. **2**: 339. 1825 & Mem. Leg. 326. 1826, nom. illeg.; Schindl. in Repert. Spec. Nov. Regni Veg. **20**: 267. 1924; Hutchinson, Gen. Fl. Pl. **1**: 438. 1964; Ohashi in Ginkgoana **1**: 251. 1973; Ohashi et al. in Adv. Leg. Syst. **1**: 299. 1981; Dy Phon et al., Fl. Camb. Laos Vietn. **27**: 43. 1994; Yang et Huang in Fl. Reip. Pop. Sin. **41**: 13. 1995.

### Key to the species

1. Primary bract shorter than the flowers and pods, 2-8 mm long; bracteoles 2-4 mm long; inflorescences lax-flowered; stipules 3-divided at apex, 5-8 mm long; petioles 3-5 mm long; leaflets obovate or elliptic, obtuse at apex, 7-17 mm long, 3-8 mm wide
2. Primary bracts 3-4 mm long; bracteoles 2-3 mm long; calyx narrowly campanulate, 2.5-3 mm long, tube longer than lobes, the lowest lobe about 1 mm long, almost equal or a little longer than other lobes; appressed pubescent or pilose on inflorescences and pods ..... 2. *A. biarticulatum*
2. Primary bracts 5-8 mm long; bracteoles ca. 4 mm long; calyx broadly campanulate or funnel-shaped, about 4 mm long, tube shorter than the lobe, the lowest lobe longer than the lateral lobes, about 3 mm long ..... 3. *A. hispidum*
3. Pods glabrous except for margin; primary bracts 5-6 mm long ..... 3a. var. *collettii*
3. Pods hirsute; primary bracts 5-8 mm long ..... 3b. var. *hispidum*
1. Primary bract longer than or equal to the flowers and pods, more than 10 mm long; bracteoles 7-9 mm long; inflorescences longer and more densely flowered than above; stipules 3-7-divided at apex, 15-33 mm long; petioles more than 10 mm long; leaflets narrowly elliptic, acute at apex, more than 30 mm long
2. Primary bracts as long as flowers or pods, 10-13 mm long; bracteoles up to 7 mm long .... 1. *A. australiense*
2. Primary bracts longer than flowers and pods, 16-17 mm long; bracteoles 7-9 mm long ..... 4. *A. novoguineense*

### 1. *Aphyllodium australiense* (Schindl.) H. Ohashi, *comb. et stat. nov.*

*Dicerma biarticulatum* var. *australiense* Schindl. in Repert. Spec. Nov. Regni Veg. **20**: 267. 1924, p. p., incl. f. *genuinum* Schindl., l. c. 268.

*Desmodium biarticulatum* var. *australiense* (Schindl.) van Meeuwen in Reinwardtia **6**: 247. 1962, p. p.

*Dicerma biarticulatum* subsp. *australiense* (Schindl.) H. Ohashi in Ginkgoana **1**: 255. 1973, p. p.

Distribution: Australia (Queensland, North West Australia).

2. ***Aphyllodium biarticulatum*** (L.) Gagnep., Notul. Syst. (Paris) **3**: 254. 1916 & in Lecomte, Fl. Gén. de l. Indoch. **2**: 609. 1920; Pedley in Rev. Fl. Ceylon **10**: 167. 1996.



*Hedysarum biarticulatum* L., Sp. Pl. 747. 1753. Type: Ceylon. *Herb. Hermann* 1: 25 & 3: 15 (BM).  
*Dicerma biarticulatum* (L.) DC., Prodr. 2: 339. 1825, *nom. illeg.*; Wight & Arnott, Prodr. 230  
 (1834); Wight, Icon. 2: t. 419. 1843; Benth. in Miq., Pl. Jungh. 217 & 219. 1852; Schindl. in Repert.  
 Spec. Nov. Regni Veg. 20: 267. 1924; Ohashi in Ginkgoana 1: 252. 1973, p. p., excl. subsp.  
*australiense* (Schindl.) H. Ohashi, p. p. et subsp. *hispidum* (Schindl.) H. Ohashi; Dy Phon et al., Fl.  
 Camb. Laos Vietn. 27: 44. 1994; Ohashi in J. Jpn. Bot. 70: 115. 1995; Yang et Huang in Fl. Reip.  
 Popul. Sin. 41: 13. 1995.

*Desmodium biarticulatum* (L.) Muell., Fragm. Phyt. Austr. 2: 121. 1861; Benth., Fl. Austr. 2: 231.  
 1864; Baker in Hook. f., Fl. Brit. Ind. 2: 163. 1876; Kurz in J. Asiat. Soc. Beng. 45(2): 232. 1877;  
 Crib, Fl. Siam. Enum. 1: 403. 1928; van Meeuwen in Reinwardtia 6: 246. 1962; Verdc., Man. New  
 Guin. Leg. 392. 1979; Sanjappa, Leg. Ind. 150. 1992.

Distribution: Ceylon, South India, Indo-China (Cambodia, Laos, Thailand, Vietnam), South  
 China (Hainan), Malesia (Java, Celebes, Sumatra), and Australia.

### 3. *Aphyllodium hispidum* (Schindl.) H. Ohashi, *comb. nov.*

Fig. 1



Fig. 1. Holotype of *Dicerma hispidum* Schindl. (CAL).

*Dicerna hispidum* Schindl. in Repert. Spec. Nov. Regni Veg. 20: 269. 1924. Type: Burma. Mengoon. *Anderson s. n.* on 15 Jan. 1868 (CAL-holotype & isotype).

*D. biarticulatum* subsp. *hispidum* (Schindl.) H. Ohashi in Ginkgoana 1: 257, figs. 69-3 (petals and calyx) & 70-2 (pod and seed). 1973.

### 3a. var. *hispidum*

Distribution: Burma.

### 3b. var. *collettii* (Schindl.) H. Ohashi, *comb. nov.*

Fig. 2

*Dicerna biarticulatum* var. *collettii* Schindl. in Repert. Spec. Nov. Regni Veg. 20: 267. 1924. Type: Burma. Popah District. *Collett 881* (CAL-holotype).

Distribution: Burma.



Fig. 2. Holotype of *Dicerna biarticulatum* var. *collettii* Schindl. (CAL)



#### 4. *Aphyllodium novoguineense* (Schindl.) H. Ohashi, *comb. nov.*

*Dicerma novoguineense* Schindl. in Repert. Spec. Nov. Regni Veg. **20**: 268. 1924. Type: New Guinea. Astrolabe Range. *F. H. Brown 50*.

*D. biarticulatum* var. *australiense* f. *longibracteatum* et f. *plumosae* Schindl. in Repert. Spec. Nov. Regni Veg. **20**: 268. 1924.

*Desmodium biarticulatum* var. *australiense* (Schindl.) van Meeuwen in Reinwardtia **6**: 247. 1962, p. p.

*Dicerma biarticulatum* subsp. *australiense* (Schindl.) H. Ohashi in Ginkgoana **1**: 255. 1973, p. p.

Distribution: New Guinea and Australia.

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### 摘 要

二節豆屬(*Aphyllodium*)分佈在印度、緬甸及澳大利亞北部。大橋廣好原認為 *Dicerma* 與 *Aphyllodium* 有親緣關係。現在根據第一苞片及小苞片間之差異而重新提升亞種為種。二節豆屬學名採用 *Aphyllodium* 而捨棄 *Dicerma*。同時亦採用 *Aphyllodium biarticulatum* 狹義種之觀念，並將亞種提升為種之新組合處理，包括 *A. australiense* (Schindl.) H. Ohashi, *A. hispidum* (Schindl.) H. Ohashi, *A. hispidum* var. *collettii* (Schindl.) H. Ohashi, 及 *A. novoquineense* (Schindl.) H. Ohashi 等。本文亦提供本屬內所有分類群之檢索表，以供參考。

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