

## RESURRECTION OF HANCEA AND LECTOTYPIFICATION OF ADISCA (EUPHORBIACEAE)

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### SUMMARY

Based on phylogenetic studies with DNA sequence data, the formerly monotypic genus *Cordemoya* was recently expanded with 16 additional species previously assigned to *Mallotus*. However, the earliest legitimate generic name available is *Hancea*, and, therefore, *Cordemoya* is here reduced to *Hancea* (20 new combinations are proposed). Subsequently, the subgenus and section *Diplochlamys* from Asia are renamed to *Hancea*. Additionally, the genus *Adisca* is lectotypified with *Adisca floribundus* (= *Mallotus floribundus*).

**Key words:** Euphorbiaceae, *Adisca*, *Cordemoya*, *Diplochlamys*, *Hancea*, *Mallotus*, Madagascar, Malesia, Mascarenes.

### INTRODUCTION

Based on a well-supported clade obtained with DNA sequence data (Kulju et al., 2007, f. 2), the genus *Cordemoya* Baill. (formerly monotypic with *C. integrifolia* (Willd.) Baill. from the Mascarene Islands as single species) was expanded by Sierra et al. (2006) with sixteen additional species previously assigned to *Mallotus* Lour. Pollen and leaf anatomical studies revealed characters that are important for the delimitation of both genera. *Cordemoya* can be distinguished by the presence of pollen ornamentation with scabrae and by capitate glandular hairs with multicellular stalks and sessile peltate-stellate hairs with a central cell, while *Mallotus* is recognized by the presence of a perforate/micro-reticulate pollen ornamentation with scabrae and by spherical to disc-shaped multicellular glandular hairs. The rank of subgenus was assigned to the two strongly supported and geographically distinct *Cordemoya* clades present in the phylogeny of Kulju et al. (2007): subg. *Cordemoya* from Madagascar and the Mascarenes and subg. *Diplochlamys* (Müll.Arg.) S.E.C. Sierra, Kulju & Welzen from Asia; the latter was divided into two sections: *Diplochlamys* (former *Mallotus* sect. *Hancea* (Seem.) Pax & K. Hoffm.) and *Oliganthae* (Airy Shaw) S.E.C. Sierra, Kulju & Welzen. For a complete synonymy list of the species of subg. *Hancea* see Slik & Welzen (2001). For subg. *Hancea* sect. *Oliganthae* and subg. *Cordemoya* see Sierra et al. (2006).

The epithet '*Hancea*' was usually associated with use on the sectional level within *Mallotus*. However, its generic (and subgeneric) status must also be resurrected, as it is the earliest legitimate generic name available for the basal clade in the phylogeny by Kulju et al. (2007): *Hancea* Seem. was published in 1857 while *Cordemoya* was

published in 1861. There is even an older name, the first generic name is *Boutonia* Bojer (1837), however it was invalidly described and its later validation by Bojer in 1846 created a later homonym.

Furthermore, among the species recognized in the circumscription of *Cordemoya* by Sierra et al. (2006), *Cordemoya subpeltata* (Blume) M. Aparicio has as synonym *Adisca subpeltata* Blume. Until now the genus *Adisca* Blume was not yet lectotypified; one could decide to select *C. subpeltata* as the type of *Adisca*, and it would become the oldest available generic name for *Cordemoya*. However, we opt to appoint *Adisca floribunda* Blume as the lectotype of *Adisca*, as was implicitly done by Slik & Welzen (2001), who included *Adisca* in the synonymy of *Mallotus* sect. *Stylanthus* (Rchb.f. & Zoll.) Pax & K. Hoffm. (from the species included in *Adisca* by Blume, Airy Shaw (1968: 388) selected *A. floribunda* as the type of *Mallotus* sect. *Stylanthus*). From 1 January 2001, the International Code of Botanical Nomenclature (McNeill et al., 2006) states that one should mention “here designated or an equivalent” (Art. 7.11) and this information is lacking in the publication of Slik et al. (2001).

## NEW COMBINATIONS IN HANCEA

### HANCEA

- Hancea* Seem. (1857) 409. — *Mallotus* Lour. sect. *Hancea* (Seem.) Pax & K. Hoffm. (1914) 199. — Type: *Hancea hookeriana* Seem.
- Cordemoya* Baill. (1861) 255. — *Boutonia* Bojer (1837) 282, nom. nud.; (1846) 151, non DC. (1838). — *Mallotus* Lour. sect. *Cordemoya* (Baill.) Müll.Arg. (1865) 186. — *Echinus* Lour. sect. *Cordemoya* (Baill.) Baill. (1891) 977. — *Cordemoya* Baill. subg. *Cordemoya*: S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 526. — Type: *Boutonia mascareinensis* Bojer [= *Hancea integrifolia* (Willd.) S.E.C. Sierra, Kulju & Welzen].
- Diplochlamys* Müll. Arg. (1864) 539; (1866) 1023. — *Mallotus* Lour. sect. *Diplochlamys* (Müll. Arg.) Baill. ex T. Durand (1888) 370; Müll. Arg. ex Pax (1890) 55, isonym. — *Cordemoya* Baill. subg. *Diplochlamys* (Müll. Arg.) S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 532. — *Cordemoya* Baill. sect. *Diplochlamys* (Müll. Arg.) S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 533. — Type: *Diplochlamys griffithianus* Müll. Arg. [= *Hancea griffithiana* (Müll. Arg.) S.E.C. Sierra, Kulju & Welzen].
- Deuteromallotus* Pax & K. Hoffm. (1914) 212. — Type: *Deuteromallotus acuminatus* (Baill.) Pax & K. Hoffm. [= *Hancea acuminata* (Baill.) S.E.C. Sierra, Kulju & Welzen].
- Mallotus* Lour. sect. *Oliganthae* Airy Shaw (1968) 389. — *Cordemoya* Baill. sect. *Oliganthae* S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 535. — Type: *Mallotus subpeltatus* Blume [= *Hancea subpeltata* (Blume) S.E.C. Sierra, Kulju & Welzen].

### Subgenus *Cordemoya* (Baill.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

- Cordemoya* Baill. (1861) 255. — *Boutonia* Bojer (1837) 282, nom. nud.; (1846) 151, non DC. (1838). — *Mallotus* Lour. sect. *Cordemoya* (Baill.) Müll.Arg. (1865) 186. — *Echinus* Lour. sect. *Cordemoya* (Baill.) Baill. (1891) 977. — *Cordemoya* Baill. subg. *Cordemoya*: S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 526. — Type: *Boutonia mascareinensis* Bojer [= *Hancea integrifolia* (Willd.) S.E.C. Sierra, Kulju & Welzen].
- Deuteromallotus* Pax & K. Hoffm. (1914) 212. — Type: *Deuteromallotus acuminatus* (Baill.) Pax & K. Hoffm. [= *Hancea acuminata* (Baill.) S.E.C. Sierra, Kulju & Welzen].

**1. *Hancea acuminata*** (Baill.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Boutonia acuminata* Baill. (1858) 401. — Lectotype (McPherson, 1995): *Chapelier s.n.* (P), Madagascar.

**2. *Hancea capuronii*** (Léandri) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Deuteromallotus capuronii* Léandri (1957, '1956') 605. — Type: *SF (MAD)* [Capuron] 8713 (holo P; iso MO), Madagascar, Minombo, Amboditavolo.

**3. *Hancea integrifolia*** (Willd.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Ricinus integrifolius* Willd. (1805) 567. — Lectotype (Coode, 1982): *Unknown s.n.* (*Herb. Willd.* 17934, B, here limited to the sheet with Radlkofer's notes (IDC microfiche no. 1261)), Mauritius.

**4. *Hancea spinulosa*** (McPherson) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Mallotus spinulosus* McPherson (1995) 170. — Type: *Schatz & Lowry 1301* (holo MO; iso G, K, P, S, WAG), Madagascar, Tamatave, Ambila-Lemaitso.

### Subgenus *Hancea*

**Section *Hancea* Seem.**

*Hancea* Seem. (1857) 409. — *Mallotus* Lour. sect. *Hancea* (Seem.) Pax & K. Hoffm. (1914) 199. — Type: *Hancea hookeriana* Seem.

*Diplochlamys* Müll.Arg. (1864) 539; (1866) 1023. — *Mallotus* Lour. sect. *Diplochlamys* (Müll. Arg.) Baill. ex T. Durand (1888) 370; Müll.Arg. ex Pax (1890) 55, isonym. — *Cordemoya* Baill. subg. *Cordemoya*: S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 532. — *Cordemoya* Baill. sect. *Diplochlamys* (Müll.Arg.) S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 533. — Type: *Diplochlamys griffithianus* Müll.Arg. [= *Hancea griffithiana* (Müll.Arg.) S.E.C. Sierra, Kulju & Welzen].

**5. *Hancea cordatifolia*** (Slik) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Mallotus cordatifolius* Slik (1998) 225. — Type: *PNH (Gutierrez et al.) 117545* (holo L), Philippines, Samar Island, Mt Sohoon.

**6. *Hancea eucausta*** (Airy Shaw) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Mallotus eucaustus* Airy Shaw (1969) 80. — Type: *S (Sibat ak Luang) 23630* (holo K; iso L), Borneo, Sarawak, Third Division, Bukit Iju, Ulu Arip, Balingian.

**7. *Hancea grandistipularis*** (Slik) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Mallotus grandistipularis* Slik (1998) 227. — Type: *Burley, Tukirin et al. 2021* (holo L; iso CANB, K, US), Indonesia, Sumatra, Riau Province, Tigapulu, 5 km W of Talanglakat.

**8. *Hancea griffithiana*** (Müll.Arg.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.*

*Diplochlamys griffithianus* Müll.Arg. (1864) 539. — Type: *Griffith KD 4961* (holo K).

**9. *Hancea hirsuta* (Elmer) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus hirsutus* Elmer (1915) 2648. — Type: *Elmer 13480* (holo PNH?; iso K, L, NY), Philippines, Mindanao, Agusan Province, Cabadbaran (Mt Urdaneta).

**10. *Hancea hookeriana* Seem.**

*Hancea hookeriana* Seem. (1857) 409. — Type: *Champion s.n.* (holo K), Hong Kong.

**11. *Hancea kingii* (Hook.f.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus kingii* Hook.f. (1887) 439. — Type: *King's collector 7414* (holo K; iso G, SING), Malaya, Peak.

**12. *Hancea longistyla* (Merr.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus longistylus* Merr. (1920) 560. — Type: *BS (Ramos & Pascasio) 35173* (holo PNH†; iso K), Philippines.

**13. *Hancea papuana* (J.J. Sm.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus hookerianus* (Seem.) Müll.Arg. var. *papuanus* J.J. Sm. (1912) 787, t. 137. — Type: *Gjellerup 316* (holo L; iso A, BO, K, P, U), Irian Jaya, Bivak Hollandia.

**14. *Hancea penangensis* (Müll.Arg.) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus penangensis* Müll.Arg. (1865) 186. — Type: *Wallich 8576* (holo G; iso A, K, P), Malaysia, Pulau Penang.

**15. *Hancea stipularis* (Meijer ex Airy Shaw) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus stipularis* Meijer ex Airy Shaw (1968) 398. — Type: *Lörzing 14746* (holo K; iso L), Sumatra, N Sibajak, W of Bandarbaru.

**16. *Hancea wenzeliana* (Slik) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus wenzelianus* Slik (1998) 229. — Type: *Wenzel 2697* (holo G; iso A, UC), Philippines, Mindanao, Surigao Province, Jubud.

**Section *Oliganthae* (Airy Shaw) S.E.C. Sierra, Kulju & Welzen, *comb. nov.***

*Mallotus* Lour. sect. *Oliganthae* Airy Shaw (1968) 389. — *Cordemoya* Baill. sect. *Oliganthae* S.E.C. Sierra, Kulju & Welzen in Sierra et al. (2006) 535. — Type: *Mallotus subpeltatus* Blume [= *Hancea subpeltata* (Blume) S.E.C. Sierra, Kulju & Welzen].

**17. *Hancea subpeltata* (Blume) M. Aparicio, *comb. nov.***

*Adisca subpeltata* Blume (1826) 610. — Lectotype (Sierra et al., 2006): *Blume 1510* (holo L), Java, Krawong.

## LECTOTYPIIFICATION OF ADISCA

*Adisca* Blume (1826) 609; Slik & Welzen (2001) 31. — Lectotype (selected here): *Adisca floribunda* Blume [= *Mallotus floribundus* (Blume) Müll. Arg.].

## ACKNOWLEDGEMENTS

Special thanks are due to D.J. Mabberley for opening our eyes and to the comments of the anonymous reviewer.

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