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ONE NEW NAME AND NEW COMBINATIONS OF MALESIAN ZINGIBERACEAE

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SUMMARY

During the process of compiling a checklist of Malesian Zingiberaceae, material referred to the synonymous genus *Geanthus* was examined carefully as the presently accepted genus *Etlingera* was likely to be involved. In this process it became evident that a new name, *Amomum centrocephalum*, and eight new combinations in *Etlingera* had to be made.

Key words: Zingiberaceae, Malesia.

INTRODUCTION

Recently, a checklist of the Zingiberaceae for Flora Malesiana was compiled by Newman, Lhuillier & Poulsen (in press). Even if this work is not a thorough revision of the family, it provides a useful overview of 1644 names essential for future treatments, as the latest monograph by Schumann (1904) is already a hundred years old. The work involved a compilation of all names, synonymy if known, place of publication and herbarium of type deposition. We were not able to visit all relevant herbaria but in the process some types, descriptions and illustrations were seen that obviously needed some action. One of these was in fact already noted by Smith (1986) but not formally proposed. However, more new combinations are likely to be needed in the future when more molecular evidence has clarified generic delimitation in genera such as in *Amomum*, *Alpinia* and *Etlingera* which are likely not to be monophyletic (Kress et al., 2002).

METHODS

The genus *Etlingera* is presently morphologically distinguished by the tube formed by the filament and staminode-derived labellum above the point of insertion of the corolla lobes, and is the inclusive name of the genera *Achasma* Griff., *Geanthus* Reinw. and *Nicolaia* Horan. (Burtt & Smith, 1986). This character is often difficult to verify on herbarium specimens but can occasionally be confirmed by soaking a flower in soapy water or spirit. During work on the Malesian Zingiberaceae Checklist, I found the taxa below to be misplaced in other genera.

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NEW NAME

The illustration (Plate 8) of the original description of *Geanthus echinatus* by Valeton (1921) indicates that *Amomum* is the genus for this taxon: 1) Stilt roots can also be found in other genera but are common in *Amomum*; 2) There does not seem to be a tube above the point of insertion of the corolla lobes, but this character can be unclear in illustrations if the artist does not pay special attention to it; 3) I have so far not seen tooth-like staminodes in *Etlingera* whereas they are common in *Amomum*. Smith (1985: 303; 1986: 254) noted that this taxon was an *Amomum* with affinity to *A. pungens* R.M. Sm. and *A. hansenii* R.M. Sm. but did not take any action presumably because she had not seen any of the Sumatran material. Unfortunately, the name *A. echinatum* Willd. has already been used for a separate taxon in Sri Lanka (that is distinct for example in the anther crest arrangement) and thus a new name is needed.

Amomum centrocephalum A.D. Poulsen, *nom. nov.*

Basionym: *Geanthus echinatus* Valeton (1921) 143. — Type: *Bünnemeijer 666* (holo BO), Sumatra, Talaman, (Mt Ophir), 9 May 1917.

Of Greek derivation, the new, like the former epithet refers to the conspicuous spiny inflorescence head of for this taxon.

The following specimens at L have been seen: *Afriastini 2368*; *De Wilde & De Wilde-Duyfjes 13490, 15807*; *Lörzing 15138, 17098*; *Rahmat si Boeea 10266, 10325, 10640, 10786*.

Distribution — Sumatra.

NEW COMBINATIONS

The following new combinations are not simply done routinely but made with the impression that they are distinct species not likely to be synonymized in the future when a more thorough revision is carried out. However, as a complete revision of Malesian gingers is still far from complete, future studies may show otherwise especially if including molecular data. For the time being at least the new combinations assure that these taxa appear in the right genus.

Etlingera dalican (Elmer) A.D. Poulsen, *comb. nov.*

Basionym: *Hornstedtia dalican* Elmer (1915) 2906. — *Amomum dalican* (Elmer) Merr. (1923) 238. — Lectotype (designated here): *Elmer 11626*, (holo UC; iso BO, FI, G, GH, L, P, U), Philippines, Mindanao, Todaya, Mt Apo.

After inspecting several types, it is evident that this species belongs in *Etlingera*. Unfortunately, Elmer often divided fertile herbarium material into uninformative fractions probably to distribute his collections to as many herbaria as possible. Exceptionally intact inflorescences at FI and UC were useful to see and lectotypification is made here.

Etlingera heliconiifolia (K. Schum.) A.D. Poulsen, *comb. nov.*

Basionym: *Amomum heliconiifolium* K. Schum. (1904) 227. — *Geanthus heliconiifolius* (K. Schum.) Loes. (1930) 593. — Syntypes: *Warburg 15139* (n.v.), *Sarasin & Sarasin 620* (n.v.), Sulawesi.

Even if the types have not yet been seen, it is clear from the description in Schumann (1904) 228: "stamen cum labello tubuloso-connatum" that it must be an *Etlingera*.

Etlingera longifolia (K. Schum.) A.D. Poulsen, *comb. nov.*

Basionym: *Amomum longifolium* K. Schum. (1899) 318. — *Geanthus longifolius* (K. Schum.) Valeton (1913) 936. — Lectotype (designated here): *Beccari 952* (holo FI), West Papua, Mt Arfak at Putat, October 1872.

Inspection of the dried flowers at FI reveals that they belong to *Etlingera*. The most informative collection of the two syntypes is selected here as the lectotype. Two additional collections by Beccari (*944* and *s.n.*) from the same locality are deposited at FI. Schumann (1899: 319) thought they all belonged to the same taxon, though *Beccari s.n.* was somewhat smaller, and I agree with him.

Valeton (1913) was surprised at the tooth-like staminode cited in Schumann's (1904) description of this taxon but such a staminode was not mentioned in the original description (Schumann, 1899) and was not observed on the type material.

Etlingera pandanicarpa (Elmer) A.D. Poulsen, *comb. nov.*

Basionym: *Amomum pandanicarpum* Elmer (1915) 2899. — *Hornstedtia pandanicarpa* (Elmer) Elmer (1919) 2979. — Type: *Elmer 10508* (iso BO, FI, G, GH, L, P, U), Philippines, Mindanao, Todaya, Mt Apo, 1909.

Only fruits have been seen as Elmer lost the flowers during collecting. These fruits are typical for *Etlingera* but bigger than species so far known from the Philippines. Selection of a holotype awaits a revision of the Philippine species.

Etlingera polycarpa (K. Schum.) A.D. Poulsen, *comb. nov.*

Basionym: *Amomum polycarpum* K. Schum. (1904) 226. — *Geanthus polycarpus* (K. Schum.) Loes. (1930) 592. — Type: *Sarasin & Sarasin 410* (holo B, n.v.), Sulawesi, Tomohon.

Even if the type has not yet been inspected, the fruit illustrated looks like *Etlingera*. Also, the described hairy leaf margin confirms this.

Etlingera purpurea (Elmer) A.D. Poulsen, *comb. nov.*

Basionym: *Hornstedtia purpurea* Elmer (1919) 2984. — *Amomum purpureum* (Elmer) Merr. (1923) 240. — Lectotype (designated here): *Elmer 16819* (holo L; iso BO, C, FI, G, GH, P, U, UC), Philippines, Luzon, Irosin, Mt Bulusan, August 1916.

From what I have been able to examine till date, each set of Elmers type collections at the most consists of only one leaf and one fruit. This material, however, still confirms that this is *Etlingera* and the lectotype is selected here.

Etlingera sorsogonensis (Elmer) A.D. Poulsen, *comb. nov.*

Basionym: *Hornstedtia sorsogonensis* Elmer (1919) 2985. — Type: *Elmer 16925* (iso BO, C, FI, G, GH, P, U, UC), Philippines, Luzon, Irosin, Mt Bulusan, August 1916.

The fruits are typical of *Etlingera*. Elmer (1919) mentioned that *E. purpurea*, *E. sorsogonensis* and *E. pandanicarpa* are related but gave convincing distinguishing characters for the three species.

Etlingera valida (K. Schum.) A.D. Poulsen, *comb. nov.*

Basionym: *Amomum validum* K. Schum. (1899) 314. — *Geanthus validus* (K. Schum.) Loes. (1930) 593. — Type: *Beccari s.n.* (holo FI), Sumatra, Padang, Ayer Mancior, August 1878.

Flowers from the type were soaked, and despite their poor state, it seems convincing that they belong to *Etlingera*.

In the Malesian checklist by Newman et al. (in press), there are still species which may not be referred to the correct genus. In the future, it may be possible to establish the correct genera for Malesian taxa of Zingiberaceae that still appear in *Geanthus* and *Phaeomeria* (*G. brachypodanthus* (K. Schum.) Loes., *G. pausodipsus* (K. Schum.) Loes., *G. pubimarginatus* (Elmer) Loes., *G. stenophyllus* (K. Schum.) Loes., *G. trachycarpus* (K. Schum.) Valeton, *G. trichanthera* (Warb.) Valeton, *P. anthokophinos* Gilli and *P. novo-guineensis* K. Schum.). Even when type material of these taxa could be studied, it was either too poor to establish the correct genus or, if they clearly belonged to *Etlingera* (such as *P. anthokophinos*), at this stage a new combination might very well have resulted in additional synonymy in the future.

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