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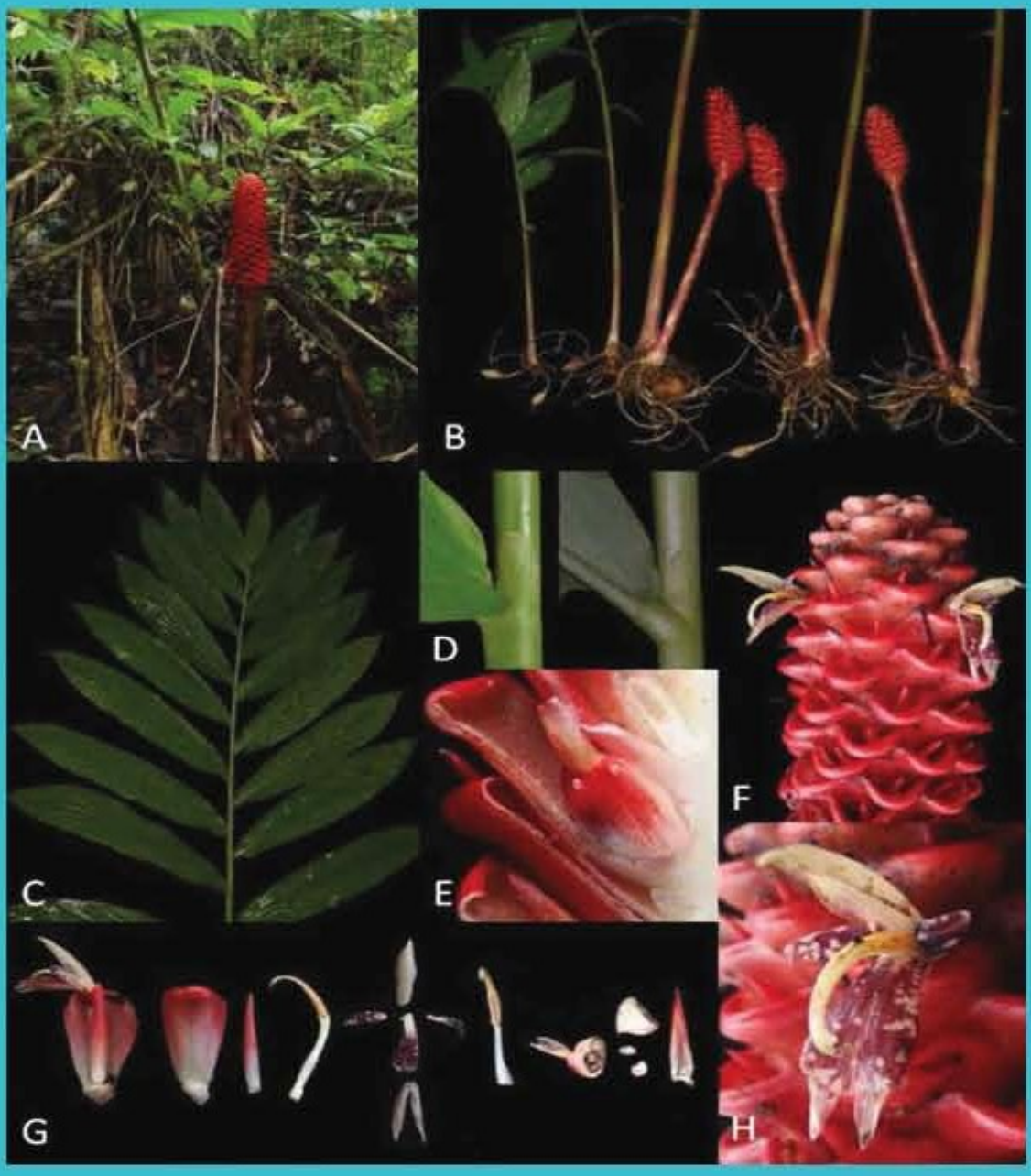

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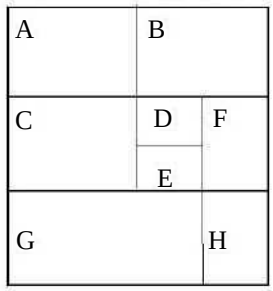

Cover images: *Zingiber engganoensis* Ardiyani. A. Habit B. Leafy shoot and the inflorescence showing rhizomes, roots and root-tuber C. Leaves D. Ligule and swollen petiole E. Dissection of inflorescence showing fruit F. Spike and flowers G. Dissection of flowers and fruits showing bract, bracteole, two lateral staminodes, two petal lobes, labellum, and the four appendages of the anther H. Flower. Source of materials: E190 (BO). Photo credits: B, C, D by Arief Supriatna. A, E, F, G, H by Marlina Ardiyani.

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NOMENCLATURE AND TYPIFICATION OF *MUSA SALACCENSIS* ZOLL. EX KURZ (MUSACEAE)

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ABSTRACT
VELDKAMP, J. F. & SULISTYANINGSIH, L. D. 2015. Nomenclature and typification of *Musa salaccensis* Zoll. ex Kurz (Musaceae). *Reinwardtia* 14(2): 299 – 302. — A nomenclatural history is given for *Musa salaccensis* (Musaceae) from Java and Sumatra, Indonesia. Previous typifications are rejected and a lectotype is designated here from original material.

Key words: Indonesia, Java, *Musa salaccensis*, Musaceae, nomenclature, Sumatra, typification.

ABSTRAK
VELDKAMP, J. F. & SULISTYANINGSIH, L. D. 2015. Tatanama dan tipifikasi *Musa salaccensis* Zoll. ex Kurz (Musaceae). *Reinwardtia* 14(2): 299 – 302. — Sejarah tatanama *Musa salaccensis* (Musaceae) dari Jawa dan Sumatera, Indonesia disajikan dalam tulisan ini. Tipifikasi yang telah dilakukan sebelumnya disanggah dan lektotipe telah dibuat dari material asalnya.

Kata kunci: Indonesia, Jawa, *Musa salaccensis*, Musaceae, Sumatera, tatanama, tipifikasi.

INTRODUCTION

Musa salaccensis Zoll. (1854; Musaceae) was first mentioned for a species named after its provenance, Gunung Salak, Java, Indonesia, a mountain south of Bogor: "M. salaccensis Zoll. (ornata Roxb.?) HZ 1353. Ex M. Salak in HB VI. Tschau solè Sund." "HZ" stands for "Herbarium Zollingerianum", "HB VI" refers to the plot in 's Lands Plantentuin (Hortus Bogoriensis, Buitenzorg), now Kebun Raya Bogor, where the plant grew. As this is a name without a diagnosis or description the combination is invalidly published and has no type. A specimen (if it exists) may be called a "voucher".

The problem was where one might be. A rather complete set of Zollinger collections is in BO. Hotta (1989) listed the *Musa* specimens present there and in KYO, L, SAN, SAR and SING, but neither *Zollinger HZ 1353* nor any other 19th century specimen of this species was mentioned for BO, while the Zollinger collection was not present in the others, either. It is therefore puzzling to note that a BO duplicate was designated as the "type" by Nasution (1993), who, however, retracted this the next year (Nasution, 1994: "no longer exist"). It is still not found there, and a worldwide search assisted by many colleagues did not turn up a duplicate anywhere (see Acknowledgements).

Teijsmann & Binnendijk (1854, 1866) recorded the presence of this species in the Bogor Botanic Garden, but gave no validating diagnose. Thus the name remained invalid. As is usual in botanic gardens the name surely had a tally bearing the name listed in their Catalogues. Miquel (1857) in the Netherlands had seen Zollinger's publication, but apparently no specimen (there is none in U, now moved to L), and he cited the name (following Zollinger with a question mark!) under *Musa ornata* Roxb.

The first validating diagnosis of *Musa salaccensis* Zoll. was provided by Kurz (1867) who between 1859–1863 worked in BO, and then in CAL, where the main set of his herbarium now is. In BO he of course had access to the plants cultivated in the Garden provided with a tally with Zollinger's binomial, and to the specimens in the Herbarium, but here there were probably none of this species. His diagnose therefore must have been based on living material and on the five specimens in his own herbarium collected in the Garden, the Salak, and Priaman, Sumatra (CAL; no Zollinger specimen there; Lakshminarasimhan, Sanjappa, in litt.). These constitute the original material and a lectotype must be selected from this.

In his diagnosis and on the sheets no reference was made to Zollinger's collection, so the latter is only by very remote inference through the use of the name and author to be regarded as "original material". However, it seems very likely that he had seen Zollinger's Verzeichniss (1854) as this was a very important contemporary work.

In this context, Nasution's designation of *Zollinger HZ 1353* in BO as the "type", but

otherwise unreported and now untraceable there, may be regarded as a neotypification (McNeill *et al*., 2012: Art. 9.9). It may be noted that an author is not required to have seen any of his "original material" (Art. 9 Note 3). The closest that we can get to the plant that was collected by Zollinger would be *Kurz s.n.* (CAL, *sh. 469332*, Fig. 1A) that was taken from specimens in the Bogor Botanic Garden, which very well may have provided the Zollinger's specimen(s). It is here designated as the lectotype. *Musa salaccensis* does not occur in the Bogor Botanic Garden any more.

Teijsmann & Binnendijk (1866) also mentioned the accession of material from Sumatra in the Garden, *β sumatrana*, again without a diagnosis. Having seen the plants side by side they apparently thought that these were two different taxa. As it is not in the Catalogue of 1854, it must have come in afterwards, but before Kurz left in 1863 as in the latter's herbarium there is a collection said to have come from Priaman (north of Padang) and collected in the Kebun Raya, labelled *β sumatrana* Kurz (CAL *sh. 469329*, Fig. 1B). This acquisition was possibly provided by Diepenhorst who lived in Priaman and sent many plants to Teijsmann (Van Steenis-Kruseman: 137. 1950).

Several later authors gave brief to lengthy descriptions, *e.g.* Baker (1893), Schumann (1900), Koorders (1911), Koorders-Schumacher (1923, illustration), Backer (1924), Ochse (1931, illustration), Meijer (1961, illustration), Backer & Bakhuizen f. (1968), Hotta (1987, map; 1989, illustration), Nasution (1993, illustration, map; 1994, map), and Nasution & Yamada (2001, map).

We now deduce from the herbarium material and field work that the species is widespread in West Sumatra from Aceh to Lampung, Krakatau after the eruption of 1883 and West Java. It would seem that it belongs to what van Steenis (1958) called "biological nomads": plants that cannot germinate under a closed canopy and generally are rare, but under changed circumstances, *e.g.* disturbances such as floods, gaps, landslides, volcanism, windfalls, or through logging or fire, may temporarily occur and then sometimes in great numbers, disappearing again after the forest has regenerated.

Häkkinen & Väre (2009) stated without any supporting evidence that it would probably be extinct in Java and would have a very vulnerable status in Sumatra. Fortunately, it is still present in West Java, where in 2009 it was observed by second author in Bodogol and Cimelati, Sukabumi, on the flanks of the Mt. Salak and Mt. Halimun (Fig. 2; HW 13760, BO), while in West Sumatra it has been reported to grow in thick stands in the Ulu Gadut area East of Padang (Itino *et al*., 1991; ornithophily) while on Mt. Sago near Payakumbu it was the most common wild banana there (Meijer, 1961). It also has been reported grow widely in Lampung (Fig. 3).

Häkkinen & Väre (2008) summarised the typification and publications of *Musa salaccensis*. They thought that names without descriptions would be illegitimate, instead they are invalid. They also referred to Nasution (1993, 1994), as if he had proposed later homonyms that would be illegitimate by the absence of a Latin description; again these names would have been invalid, supposing that Nasution had indeed intended to describe a new species, which he did not. On the contrary, he cited Kurz (1867) and some later authors. These publications apparently were not consulted by them, as in 2009 although actually even citing Kurz (1867) and later authors, they attributed the validation to Backer (1924).

They neotypified the name with *Beccari 534* (K, holo) from W Sumatra, Padang, Ayer mancior (= Anei Canyon). Neotypification of a name manifestly of a Java derivation with a Sumatra specimen which may turn out to be a different taxon is to be deplored. As there is original Kurz material in CAL, this designation is to be rejected [Art. 9.19(a)].

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Photographs of the Kurz material present in CAL were kindly provided by Drs. P. Lakshminarasimhan and M. K. Sanjappa. Ms. F. Ainsworth (K) graciously provided some essential literature. No duplicates of *Zollinger HZ 1353* were found in the virtual herbaria of A, AAU, B, E, F, K, L, M, MO, NY, P, U, US, WAG, Z, ZT. For most of these see http://herbarium.univie.ac.at/database/index.php. There were none in A (Ms. M. Peters), B (Dr. R. Vogt), BR (Dr. F. Verloove), BO (L. D. Sulistyaningsih), CAL (Dr. P. Lakshminarasimhan, Dr. M. Sanjappa), CGE (Ms. J. G. Murrell), E (Dr. G. Argent, D. J. Middleton), FI (Dr. R. M. Baldini), FR (Mr. R. Doerin, Dr. S. Dreßler), G (Dr. L. Gautier), GOET (Dr. J. Heinrichs), K (Dr. I. M. Turner, Mr. M. Xanthos), KIEL (Dr. M. Nickol), LISU (Ms. Dr. A. I. de Vasconcelos Dias Correia), M (Dr. H.-J. Esser), P (Dr. T. Haevermans), PH (Ms. Dr. A. Freire-Fierro), S (Dr. A. Anderberg), STU (Mr. M. Engelhardt), W (Dr. E. Vitek), WAG (Dr. P.J.M. Maas), WRSL (Dr. K. Swierkosz), Z (Dr. R. Nyffeler), ZT (Dr. M. Baltisberger). Many thanks to all these colleagues for their unsuccessful searches and our excuses for wasting their time. "Never shot, always missed" (Van Steenis).

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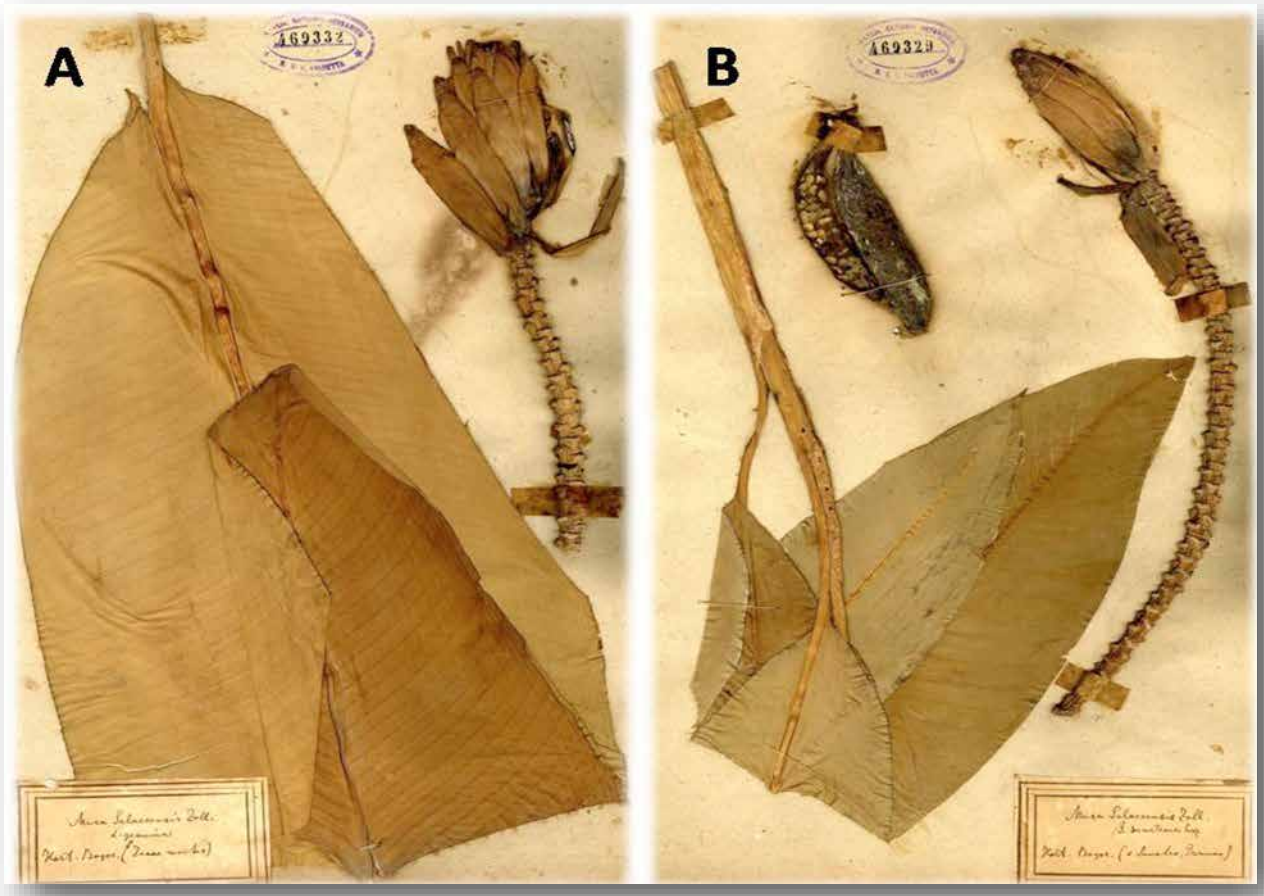

Fig. 1A. *Musa salaccensis* Zoll. ex Kurz, lectotype (label written by Kurz); 1B. *Musa salaccensis* Zoll. ex Kurz, collection originating from Priaman, Sumatra (© by permission of the Director, Botanical Survey of India).

Fig. 2. *Musa salaccensis* collected on Mt. Halimun, West Java. A. The whole plant; leaf blades *ca.* 1.2 m long B. The pink-purple male bud C. The female inflorescence (erect flowers indicate ornithophily; photo by Harry Wiriadinata).

Fig. 3. *Musa salaccensis* collected from Way Canguk, Bukit Barisan Selatan National Park, Lampung, Sumatra. A. Infrutescence B. Male bud with male flowers C. Male phase of the inflorescence (photo by Ridha Mahyuni).

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