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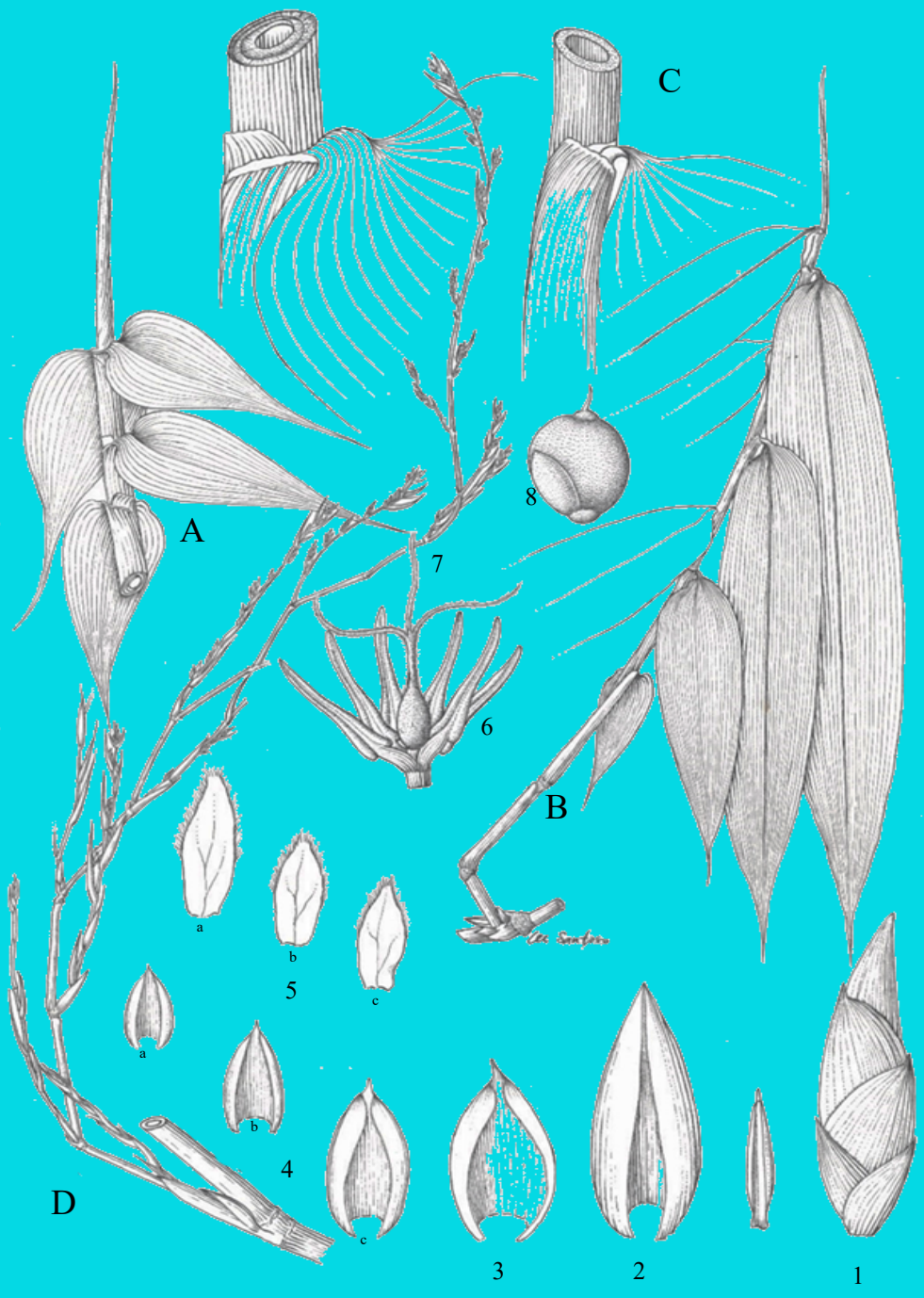

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STUDIES ON THE ARACEAE OF THE LESSER SUNDA ISLANDS II: NEW RECORD FOR *SCINDAPSUS HEDERACEUS* MIQ. IN BALI

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ABSTRACT
ERLINAWATI, I., ASIH, N. P. S., KURNIAWAN, A. & YUZAMMI. 2019. Studies on the Araceae of the Lesser Sunda Islands II: New record for *Scindapsus hederaceus* Miq. in Bali. *Reinwardtia* 18(2): 51–64. — The native Araceae of the Lesser Sunda Islands consists of 19 genera and 33 species, of which *Scindapsus hederaceus* Miq. is newly reported for Bali. This species distributed from Indo-China to West and Central Malesia. Formerly, in Indonesia the species has been found in Sumatra, Java and Borneo. Short descriptions of all species found in the Lesser Sunda Islands and a key to the genera are provided.

Keywords: Araceae, Lesser Sunda Islands, new record, *Scindapsus hederaceus.*

ABSTRAK
ERLINAWATI, I., ASIH, N. P. S., KURNIAWAN, A. & YUZAMMI. 2019. Studi Araceae di Kepulauan Sunda Kecil II: Sebuah catatan baru *Scindapsus hederaceus* Miq. di Bali. *Reinwardtia* 18(2): 51–64. — Jenis-jenis Araceae asli yang terdapat di Kepulauan Sunda Kecil terdiri atas 19 marga dan 33 jenis serta *Scindapsus hederaceus* Miq. merupakan rekaman baru untuk Bali. Penyebaran jenis ini sebelumnya telah diketahui mulai dari Indo-China sampai ke Barat dan Tengah kawasan Malesia. Di Indonesia jenis ini dapat ditemukan di Sumatera, Jawa dan Borneo. Deskripsi singkat dari semua jenis yang ditemukan di Kepulauan Sunda Kecil dan kunci marga disajikan dalam naskah ini.

Kata kunci: Araceae, Kepulauan Sunda Kecil, rekaman baru, *Scindapsus hederaceus*.

INTRODUCTION

The Lesser Sunda Islands are defined as an area situated between eastern part of Java Island and Western part of Banda Arc, consisting of group of small islands and basins. The Lesser Sunda Islands consists of islands of Bali and Noesa Penida, Lombok, Sumbawa, Sumba, Flores, Komodo, Papagaran Besar, Badjo, Sawoe, Roti, Semaoe, Solor, Adonara, Lomblen, Alor archipelago, Pantar, Timor, Wetar, Roma and Kisar, Leti, Damar, Babar and Tanimbar, most of which are part of Indonesia and are administered as the provinces of Bali, Nusa Tenggara Barat, Nusa Tenggara Timur and Maluku (van Steenis, 1950).

Many plant families, including Araceae, occurring in the Lesser Sunda Islands are still poorly known. One species, *Alocasia alba* has been added as new record for LSI by Kurniawan *et al.* (2013). Now, *Scindapsus hederaceus* Miq. is newly reported for Bali. Formerly, this species only distributed in Indo-China to West and Central Malesia, including Sumatra, Java and Borneo. This study aimed to reveal the species number of the Araceae family in the Lesser Sunda Islands and to provide a key to the genera as well as short descriptions of each species.

MATERIAL AND METHODS

The research was carried out both in the field and in detailed study of herbarium and living specimens. Several fieldworks were conducted in the islands of Bali, Lombok and Flores to collect living material in order to support the data. All

living specimens from the field were cultivated at Bogor Botanical Gardens and Bali Botanical Gardens. To support the fieldworks, detail study of herbarium specimens has been carried out on material from Herbarium Bogoriense (BO), Tabanan Herbarium Hortus Botanicus Baliense (THBB) and Herbarium of Leiden (L). Identification and description of each species were based on herbarium specimens and living collections growing in both Gardens. For some species that were not housed in these two herbaria nor, were living specimens for study in both the Gardens then results of previous research were used.

RESULTS AND DISCUSSION

Based on http://e-monocot.org (accessed 2018), there are 37 species, 19 genera of Araceae in the Lesser Sunda Islands. The genera *Aglaonema, Apoballis, Pothos, Remusatia, Sauromatum*, *Schismatoglottis, Scindapsus, Spirodela* and *Wolffia* are each represented by only one species, while *Colocasia, Epipremnum, Homalomena, Lemna* are each represented by two species. *Amorphophallus* and *Typhonium* are each represented by three species. *Alocasia* and *Rhaphidophora* are each represented by four species. Meanwhile *Arisaema* is represented by six

Table 1. List of native Araceae in the Lesser Sunda Islands based on recent study

	Name of species
1.	*Aglaonema simplex* (Blume) Blume
2.	*Alocasia alba* Schott
3.	*A. longiloba* Miq.
4.	*A. macrorrhizos* (L.) G.Don
5.	*Amorphophallus muelleri* Blume
6.	*A. paeoniifolius* (Dennst.) Nicolson
7.	*A. variabilis* Blume
8.	*Apoballis rupestris* (Zoll. & Moritzi ex Zoll.) S.Y.Wong & P.C.Boyce
9.	*Arisaema barbatum* Buchet
10.	*A. inclusum* (N.E.Br.) N.E.Br. ex B.D.Jacks.
11.	*A. laminatum* Blume
12.	*A. microspadix* Engl.
13.	*A. ramulosum* Alderw.
14.	*Colocasia esculenta* (L.) Schott
15.	*Epipremnum pinnatum* (L.) Engl.
16.	*Homalomena pendula* (Blume) Bakh.f.
17.	*Lemna aequinoctialis* Welw.
18.	*L. perpusilla* Torr.
19	*Leucocasia gigantea* (Blume) Hook.f.
20	*Pothos scandens* L.
21.	*Remusatia vivipara* (Roxb.) Schott.
22.	*Rhaphidophora floresensis* P.C.Boyce
23.	*R. montana* (Blume) Schott
24.	*R. puberula* Engl.
25.	*R. sylvestris* (Blume) Engl.
26.	*Sauromatum horsfieldii* Miq.
27.	*Schismatoglottis calyptrata* (Roxb.) Zoll. & Moritzi
28.	*Scindapsus hederaceus* Miq.
29.	*Spirodela polyrrhiza* (L.) Schleid.
30.	*Typhonium blumei* Nicolson & Sivad.
31.	*T. flagelliforme* (G.Lodd.) Blume
32.	*T. roxburghii* Schott
33.	*Wolffia globosa* (Roxb.) Hartog & Plas

species. The data presented in http://e-monocot.org (accessed 2018), not only include the native species of Araceae occurring on these islands, they also list several introduced species such as *Alocasia clypeolata* A.Hay, *Arisaema filiforme* (Reinw.) Blume, *Epipremnum aureum* (Linden & André) G.S.Bunting and *Homalomena cordata* Schott. Our current study of the Araceae family in the Lesser Sunda Islands found a new record of the genus *Scindapsus* namely *S. hederaceus* Miq. The native Araceae occurring in the Lesser Sunda Islands are listed in Table 1.

Currently, about 28 species of Araceae from the Lesser Sunda Islands are lodged at Herbarium Bogoriense (BO), Tabanan Herbarium Hortus Botanicus Baliense (THBB) and Herbarium of Leiden (L). An increasing number of BO collections could be achieved by further field studies. The BO needs to acquire eleven species of the Araceae from this region, namely *Arisaema laminatum, Lemna aequinoctialis, L. perpusilla, Rhaphidophora floresensis, R. montana, R. puberula, R. sylvestris, Sauromatum horsfieldii, Spirodela polyrrhiza, Typhonium blumei* and *Wolffia globosa*.

Kurniawan *et al*. (2011) found *Amorphophallus variabilis* during fieldworks in the islands of Bali and Lombok. Previously, the distribution of this species was only known from Java and the Philippines (http://e-monocot.org, accessed 2015). Subsequent fieldworks conducted in the islands of Bali, Lombok and Flores leaded to discovery *Scindapsus hederaceus*, a new record for Bali, which was previously known from Sumatra, Java and Kalimantan. In Bali, this species was found in several areas such as in Jembrana (Dewasana, Pasatan forest and Mt. Merbuk), Tabanan (Mt. Batukau at Wongaya Gede Village, Penebel

Identification key to the genera of Araceae in the Lesser Sunda Islands based on description of specimens deposited at Herbarium Bogoriense, Tabanan Herbarium Hortus Botanicus Baliense and Herbarium of Leiden.

1a. Climbers 2
1b. Terrestrial plants 5
2a. Leaf simple, petiole with a broad flat lamina-like wing ..... *Pothos*
2b. Leaf various, petiole without a broad flat lamina-like wing 3
3a. Ovule solitary, seed without endosperm, leaves always entire ..... *Scindapsus*
3b. Ovule two or many, seed with endosperm, leaves entire or pinnatifid 4
4a. Ovules 2–4, seeds curved ..... *Epipremnum*
4b. Ovules numerous, seeds straight ..... *Rhaphidophora*
5a. Plant with tuber, seasonally dormant or evergreen herb 6
5b. Plant without tuber, always evergreen 12
6a. Leaves rarely simple, lamina not peltate, cordate sagittate or dracontioide 7
6b. Leaves simple, lamina peltate, at least when juvenile 10
7a. Spathe usually not constricted or rarely slightly constricted 8
7b. Spathe usually constricted 9
8a. Leaves dracontioide: pinnatisect, bipinnatisect or dichotomously further divided, usually flowering without leaves, spathe clearly differentiated into tube and lamina ..... *Amorphophallus*
8b. Leaves compound, trisect, and flowering with leaves ..... *Arisaema*
9a. Leaves cordate sagittate, trifid, spathe tube with margin not fused, spathe convolute at base ..... *Typhonium*
9b. Leaves pedatifid to pedatisect, spathe tube with margin fused, spathe connate at base ..... *Sauromatum*
10a. Inflorescence solitary ..... *Remusatia*
10b. Inflorescence not solitary 11
11a. Ovule many, placentas parietal ..... *Colocasia*
11b. Ovule few, placentas basal ..... *Alocasia*
12a. Stem erect, sterile flowers absent ..... *Aglaonema*
12b. Stem rarely erect, sterile flowers present 13
13a. Plant aromatic, infructescences with spathes wholly persistent to fruit maturity ..... *Homalomena*
13b. Plant not aromatic, infructescences with spathe limb shed while lower spathe persists into fruiting ..... *Schismatoglottis*

District) and Gianyar (Pilan). Habitus of all the specimens found in Bali were climbing trees or crawling across rocks. The altitute of *S. hederaceus* ranging from 272–880 m asl.

Short descriptions of each species with distribution in the Lesser Sunda Islands and logged at Herbarium Bogoriense, Tabanan Herbarium Hortus Botanicus Baliense and Herbarium of Leiden are described below:

1. AGLAONEMA SIMPLEX (Blume) Blume – *Rumphia* 1: 152 (1837).
Synonyms. *Aglaonema angustifolium* N.E.Br., *A. birmanicum* Hook.f., *A. borneense* Engl., *A. brevivaginatum* Alderw., *A. elongatum* Alderw.

Stem erect, 15–120 cm tall. *Leaves* several to many, often clustered towards shoot apex in larger plants; petioles 4.3–21.5 cm long; petiolar sheath with a membranous margin; leaf lamina narrowly oblong, narrowly elliptic to narrowly ovate, 10–35 × 1.9–25 cm, base often unequal or oblique, obtuse, rounded or subtruncate; apex often apiculate or acuminate, thinly leathery. *Inflorescences* 1–6 together; peduncle 4–12 cm; spathe oblong-ovate, white; spadix cylindrical, equalling or slightly exceeding spathe, 1.7–4.3 cm, stipitate; stipe 2–12 mm; pistillate flower zone 3–10 mm long, with 12–38 flowers; staminate flower zone 1.5–3.8 × 0.5 cm, white, separated from the pistillate zone by a brief naked interstice. *Fruits* ovoid-ellipsoid, 1–1.7 × 0.8 cm, green, ripening through yellow to bright red.

Distribution. Bali: Dewasana, Mt. Merbuk, Mt. Masehe, Bali Barat National Park (Jembrana), Gitgit (Buleleng), Perean (Tabanan), Mt Seraya (Karangasem), Hutan Pilan (Gianyar).

Habitat. Lowland forest, on forest floor, primary, secondary and teak forest, jungles also on limestone. In Bali found at 250–700 m asl.

Uses. Commonly used as ornamental foliage plant. Several medicinal applications have been recorded (Yuzammi, 2000).

Specimens examined. Bali: Sangih, 21 May 1935, *de Vogel 2040* (BO!)*;* Bali, Sangih, 29 June 1958, *Kostermans, Kuswata, Soegeng & Soepadmo 218* (BO!)*;* Bali, Sangih, Sacred forest, 10 ha dominant stand of *Dipterocarpus hasseltii*, 22 km N. of Denpasar, 7 April 1975, W. *Meijer & Noerta 9001* (BO!)*;* Bali, G. Kelatakan*,* 18 June 1918, *Sarip & Maier 102* (BO!).

2. ALOCASIA ALBA Schott – *Oesterr. Bot. Wochenbl*. 2: 59 (1852).
Synonyms. *Alocasia bantamensis* Koord., *A. crassifolia* Engl., *Colocasia alba* Engl.

Robust terrestrial herb. *Stem* erect, 1.5–2 m tall; petiole 150–170 cm long, glabrous. *Leaf* with lamina sagittate, membranous, margin entire; posterior lobe 0.5–0.75 anterior lobe, apex obtuse. *Inflorescence* in cluster; peduncle 36–38 cm long; spathe green, 15–17 cm long; spadix shorter than the spathe, 13–14 cm long; stipe 1–2 cm long; female zone 1.7–2.2 cm, 1–1.4 cm; ovary ovoid, 2–3 mm in diam., green; style 1 mm long; stigma 2–3 lobes, lobes rounded; sterile interstice 1–1.6 mm long; male zone cylindric, 2.5–3.5 cm long; synandria rhomboid, 2–3 mm in diam.; appendix 5.5–8 cm long; fruiting peduncle 23–25 cm long, fruiting spathe 5–6 cm. *Fruit* ellipsoid.

Distribution. Bali: Batukaru Reserve, 08°22′18″S 115°06′15″E (Tabanan), Gitgit, Pengelengan Hill, 08°15′27″S 115°10′26″E (Singaraja), Mt. Masehe, Mt. Merbuk, Bali Barat National Park (Jembrana), Mt. Seraya, Munduk Pengubengan, 08°21′31″S 115°27′48″E (Karangasem), **Lombok**: Mt. Rinjani, 08°19′42″S 116°30′08″E, Natural Heritage of Rinjani – Lombok Geopark Areas.

Habitat. In forest floor of plantation and also wet disturbed area in forest.

Uses. Commonly used as ornamental foliage plant.

Specimens examined. Bali: Tabanan, Mt. Batukaru, 27 September 2012, *Ni Putu Sri Asih 30* [Bali Botanical Garden Accession E2012100004]; Bali, Badung, Pengelengan Hill, 27 June 2011, *Agung Kurniawan 338* [Bali Botanical Garden Accession E2011073]; Bali, Karangasem, Munduk Pengubengan, 10 September 2011, *Bayu Adjie 753* [Bali Botanical Garden Accession E20110952]; **Lombok**: NTB, Mt. Rinjani, 24 July 2010, *Wayan Warnata 775* [Bali Botanical Garden Accession E20100797].

3. A. LONGILOBA Miq. – *Fl. Ned. Ind*. 3: 207 (1856).
Synonyms. *Alocasia amabilis* W.Bull, *A. argyrea* Sander, *A. cochinchensis* Pierre ex Engl. & K.Krause, *A. curtisii* N.E.Br., *A. cuspidata* Engl., *A. denudata* Engl.

Small to medium terrestrial herb, 0.37–0.70 m tall. *Stem* erect. *Leaves* several together; petiole *ca.* 27.4– 50.6 cm, glabrous, green to brown; leaf lamina 11.1–19.5 × 21.2–34.9 cm, peltate, triangular-sagittate, membranous, dark green adaxially and pale green abaxially; midrib and primary venation prominent abaxially and adaxially, gray greenish to white adaxially and green abaxially. *Inflorescence* solitary; peduncle shorter than petiole, 8–18 cm long; spathe 7–17

cm long, constricted corresponding with sterile interstice of spadix, green; spadix shorter than to subequaling the spathe, *ca.* 6–13 cm long; stipitate 5 mm; female zone 1–1.5 cm long; ovary subglobose, diam. 1.5–2 mm, green; stigma 3–4 lobed, white to cream, lobe pointed; sterile interstice 7–10 mm long; male zone 1.2–2.5 cm long, cylindric; synandria 2 mm in diam., rhomboid; appendix 3.5–9 cm long, cream; fruiting peduncle 25 cm long; fruiting spathe 4–7 cm long. *Fruit* ovoid.

Distribution. Bali: Jembrana.

Habitat. In rain forest at low to medium elevation (128–682 m asl).

Uses. This species is commonly used for ornamental plant because of its beautiful leaf lamina.

Specimens examined. Bali: Jembrana, TNBB, 19 April 2018, *Ni Putu Sri Asih 280* (THBB!), Bali, Jembrana, Klatakan Hill, 27 November 2015, *Dewi Lestari 92* [Bali Botanical Garden Accession E2015110003]; Bali, Jembrana, Masehe Hill, 9 September 2011, *I Gede Tirta 3105* [Bali Botanical Garden Accession E20110938]; Bali, Jembrana, Masehe Hill, 9 September 2011, *I Gede Tirta 3108* [Bali Botanical Garden Accession E20110941].

4. A. MACRORRHIZOS (L.) G. Don – *Hort. Brit. Ed*. 3: 631 (1839).
Synonyms. *Alocasia cordifolia* (Bory) Cordem., *A. indica* (Lour.) Spach., *A. montana* (Roxb.) Schott, *Arum mucronatum* Lam., *Colocasia indica* (Lour.) Kunth.

Giant terrestrial herb, up to 4 m tall. *Stem* erect-decumbent. *Leaves* several together; petiole *ca.* 130 cm, glabrous, sheathing in the lower ⅓–½; leaf lamina sagittate, membranous; anterior lobe widest at the base; posterior lobes ½–1.3 the length of the anterior, apex acute. *Inflorescence* paired among the leaves bases; spathe 13–35 cm long, constricted corresponding with the male zone of the spadix, green; spadix shorter than the spathe, *ca.* 20–30 cm long; stipitate 5 mm; female zone 1–2 cm long; ovary subglobose, diam. 3 mm, green; stigma 3–5 lobed, lobe conically; sterile interstice 2.5 cm long; male zone 1.2–2.5 cm long, cylindric; synandria 2 mm in diam., rhomboid; appendix 3–6 cm long; fruiting peduncle 17–19 cm long; fruiting spathe 8 cm long; fruit ovoid. *Fruit* berries, scarlet.

Distribution. Bali: distributed wide in Bali; **Lombok**: Mt. Rinjani along the trail from Senaru to the summit.

Habitat. Road sides, waste places, gardens, mostly in wet sites at low to medium elevation.

Uses. *Alocasia macrorrhizos* is known as "giant taro", which is cultivated as a root crop and sometimes also as an ornamental. Several medicinal applications have been recorded in some country (Lemmens & Bunyapraphatsara, 2003). In Bali usually use for religious ceremony (Warseno, *et al*., 2013)

Specimen examined. Lombok: Mt. Rinjani along the trail from Senaru to the summit, *Tokuoka, T. et al. T 0958* (BO!).

5. AMORPHOPHALLUS MUELLERI Blume – *Rumphia* 1: 143 (1837).
Synonyms. *Amorphophallus burmanicus* Hook.f., *A. carnosus* Engl., *A. erubescens* Hett., *A. oncophyllus* Prain ex Hook.f., *Arum muelleri* Zipp. ex Blume.

Tuber globose or depressed-globose, to 28 cm diam. *Leaf* solitary, occasionally two on one tuber; petiole smooth, 40–180 × 1–8 cm, green, olive-green, brownish green or almost black, with numerous, large, elongate-elliptic, diamond shaped or stripe-like, pale green spots and, sometimes, with an additional high number of small, pale green, rounded dots; leaf lamina highly dissected, 75–200 cm diam., with epiphyllar bulbils in the centre on the major branchings and on most distal branches, rachises winged distally from the main lower main branchings; bulbils depressed, rounded or elongate, 0.5–6 cm diam., 1–40 per leaf, greyish brown. *Inflorescence* solitary, long-pedunculate; peduncle appearance as petiole, 30–60 × 0.5–3 cm; spathe broader than long, 7.5–32 × 6–36 cm; spadix sessile or stipitate or intermediate, longer than spathe, 8–40 cm long, drying in fruit and remaining; stipitate, stipe 10–15 mm long. *Infructescence* cylindrical, consisting of up to 1000 berries. *Fruit* elongate or elongate-ovate, 1.2–1.8 cm long, apex slightly depressed, ripening bright red.

Distribution. Bali: Negara, Pasatan, Bali Barat National Park, Mendoyo (Jembrana), Mt. Seraya (Karangasem), Perean (Tabanan), Sukasada (Buleleng), Kintamani (Bangli); **Flores**: Ds. Egon, Talibura, Maumere; **Timor**.

Habitat. Ruderal and open secondary seasonal forest.

Uses. As an alternative food.

Specimens examined. Flores: Maumere, Talibura, Ds. Egon, 8 February 1980, *EAW 1083* (BO!); **Timor**: *Castro 99* (BO!).

6. A. PAEONIIFOLIUS (Dennst.) Nicolson – *Taxon* 26: 337 (1977).
Synonyms. *Amorphophallus campanulatus* Decne., *A. chatty* Andrews, *A. decurrens* (Blanco) Kunth, *Arum rumphii* Oken, *Dracontium paeoniifolium* Dennst.

Tuber depressed globose, 5–50 × 3–30 cm. *Leaf* solitary or two per tuber; petiole 30–200 × 1–20 cm, surface shallowly corrugate to strongly echinate-verrucate, rarely entirely smooth; leaflets rounded, ovate, obovate, elliptic, elliptic-oblong, elliptic lanceolate or lanceolate, 3–35 × 2–12 cm, acuminate, adaxially mid green, abaxially mid green or pale green. *Inflorescence* short pedunculate; peduncle 3–20 × 1–8 cm; spathe campanulate, broader than long, 10–45 × 15–60 cm, background colour ranging from pale green to dark brown, usually with large and small, circular paler spots, base interior lower part deep maroon, upper zone dirty whitish or very pale pinkish, fleshy; spadix sessile, shorter or longer than spathe, 7–70 cm long. *Infructescence* cylindrical, 10–50 × 3–8 cm. *Fruit* elongate-ellipsoid, 1.5–2 cm × 8–10 mm ripening bright red.

Distribution. Bali: Melaya and Mendoyo (Jembrana), Kerambitan and Perean (Tabanan), Banjar, Sukasada (Buleleng), Manggis (Karangasem); **Flores:** Ds. Egon, Talibura, Maumere; **Lombok**: second author had seen this species on the road to Sendang Gile Waterfall.

Habitat. Terrestrial, in fully exposed ground – shady places, 0–550 m asl.

Uses. As an alternative food. In Bali usually use for religious ceremony (Warseno *et al*., 2013).

Specimen examined. Flores, Maumere, Talibura, Ds. Egon, 8 February 1980, *EAW 1086* (BO!).

7. A. VARIABILIS Blume – *Rumphia* 1: 146 (1837).
Synonyms. *Amorphophallus variabilis* var. *cuspi-difoliolatus* Engl. & Gehrm.; *A. variabilis* var. *immaculatus* Hassk.; *A. zeylanicus* Engl.; *Arum caeru-leopunctatum* Zipp. ex Kunth; *A. stercorarium* Zipp. ex Kunth; *Brachyspatha variabilis* (Blume) Schott

Herb, up to 1 m high. *Tuber* depressed globose, diameter to 10 cm. *Leaf* solitary or occasionally two per tuber; petiole *ca.* 120 cm long, surface smooth; leaflets elliptic to elongate elliptic, 3–34 × 2–12 cm, acuminate, adaxially glossy, abaxially mid green or pale green. *Inflorescence* solitary, long pedunculate; peduncle 50 cm; spathe erect, elongate triangular, 5–23 × 4–20 cm; spadix sessile, longer than spathe, 9–60 cm long. *Infructescence* cylindrical, 8–17 × 3–4 cm. *Fruit* berries, green and becoming orange–red when ripe.

Distribution. Bali: Buleleng and Jembrana; **Lombok**: West Lombok, Poesoekpas, 12 km N from Mataram.

Habitat. Open area, river bank and secondary forest, from 185–790 m asl.

Specimen examined. Lombok, Poesoekpas, 12 km, N. van Mataram, 18 February 1939, *Dr. S. Bloembergen 3031* (BO!).

8. APOBALLIS RUPESTRIS (Zoll. & Moritzi ex Zoll.) S.Y. Wong & P.C. Boyce – *Bot. Stud. (Taipeh)* 51: 254 (2010).
Synonyms. *Apoballis neglecta* Schott, *Schismatoglottis latifolia* Miq., *S. rupestris* Zoll. & Moritzi ex Zoll., *S. treubii* Engl., *S. wigmannii* Engl.

Herb, 0.5 m up to 1 m high. *Stem* erect to decumbent, 1 m up to 2 m long, 1–10 cm diam. with internodes 1–6 cm long. *Leaves* several together; petiole green to brownish red, 15–80 cm long, sheathing in the lower ⅓–½; wings of sheath fully attached, tapering, marcescent and crumbling; blade ovato-sagittate, sometimes slightly cordate-sagittate, green to mid-green adaxially, dull yellowish green abaxially, 21–40 cm long × 11–28 cm. *Inflorescences* 4–6 together, subtended by dried cataphylls; peduncle yellowish green, sometimes tinged red at the base, 8–14 cm long. Spathe 10–15 cm long, slightly curved, constricted at the level of sterile zone of the spadix; lower spathe 4–6 cm long, 2 cm diam., narrowly ovoid, yellowish green; the limb narrowly lanceolate, pale yellow, 11 cm long, 1 cm diam., open only slightly between male zone and lower part of appendix during anthesis, withering. Spadix subequalling the spathe, sessile; female zone light green, 4–5 cm long, 1–1.5 cm diam. at the base; ovary subcylindric, 2–2.5 mm long, 0.75 mm diam.; stigma raised on a very short style, rounded; sterile interstice almost naked, 1–2 cm long, male zone 3–cm long, *ca.* 0.6–0.8 cm diam., cylindric.

Distribution. Lombok: Jeruk Manis Waterfall.

Habitat. Terrestrial, usually near streams or waterfalls or on very moist slopes in lowland and lower montane rainforest, often forming abundant stands, *ca.* 300 m asl.

Uses. No recorded uses.

Specimen examined. Lombok, Jeruk Manis Waterfall, 08^0 30' 668" S 116^0 25' 397" E, 21 July 2003, *Tokuoka, T. et al., T 0034* (BO!).

9. ARISAEMA BARBATUM Buchet – *Notul. Syst. (Paris)* 1: 366 (1911).
Synonym: *Arisaema treubii* Engl.

Deciduous herb to 0.5 m tall. *Leaf* solitary; petiole 20–25 cm, leaf blade trifoliolate; leaflets ovate, shiny green, central leaflet 18–20 cm by 8–10 cm, with a petiolule 0.4–0.5 cm long. *Inflorescence*; peduncle shorter than the petiole, white-green with faint darker stripes; spathe tube cylindrical, 4–5 × 1.5–2 cm; white-green with dotted purple stripes; spathe limb suberect, ovate-oblong, yellow-green, limb acuminate; spadix appendix exserted from the spathe tube, but shorter than the spathe, appendix naked in the middle part, at the base 2–3 mm wide, sessile and with a few neuter flowers, these 1.5–5 mm long and inserted just above the fertile part; fertile zone staminate or pistillate, 1.5–2 cm long. *Infructescence* on an erect peduncle, cylindrical, to 7 x *ca* 2.5 cm. *Fruits* 10 × 7 mm, prismatic, red-orange when ripe, to 4 seeds per berry. Seeds globose, 2.5–3 mm diam.

Distribution. Timor: Central Part Timor, Mt. Perdida (ascent of Ossu).

Habitat. Evergreen, often seasonally dry forest; 200–1,400 m asl. (Boyce *et al.*, 2012).

Uses. No recorded uses.

Spesimen examined. Timor: Mt. Perdido (ascent of Ossu), 23 December 1953, *van Steenis 18266* (BO!).

10. A. INCLUSUM (N.E.Br.) N.E.Br. ex B.D. Jacks. – *Index Kew.* 1: 185 (1893).
Synonym. *Arisaema laminatum* var. *inclusum* N.E.Br.

Seasonal dormant tuberous herb, *ca.* 30 cm high; petiole 21–42 cm long. *Leaf* 1–2 together, 8–28 cm long and 3.5–15 cm wide; lamina trifoliolate; leaflets elliptic-oblong or ovate, the lateral ones with (usually not very) unequal. *Inflorescence:* mouth of tubular part of spathe in vivo auriculate, without cross-band; spathe altogether 10–15cm ; tube funnel-shaped, pale or purplish, striate; expanded part of spathe yellow-green or green; peduncle 18–34 cm; spadix 5–7 cm; steril part of spadix green; stamens sessile, minute; ovaries globose, very short-styled.

Distribution. Flores: Mt. Kasteno, N. W. Heelung.

Habitat. On forest; 1,150–1,600 m asl.

Uses. No recorded uses.

Specimen examined. Flores: G. Kasteno, 13 November 1932, *Dr. O. Posthumus 3226* (BO!).

11. A. LAMINATUM Blume – *Rumphia* 1: 99 (1836).
Synonyms. No synonyms are recorded for this name.

Seasonal dormant tuberous *herb*, *ca.* 40 cm high. Petiole 23–50 cm long, subtended by cataphyll, smooth, cream to brownish coloured with small vertical line pattern, leaf 1–2 together, lamina trifoliolate, leaflets ovate lanceolate to ellips, glossy mid green adaxially, pale green abaxially, 10–19.5 cm long, 3.8–11 cm wide. *Inflorescence* solitary, accompanying 1 or 2 leaves, peduncle 18–36 cm long, partly enveloped by the sheath, cream to brownish coloured with small vertical line pattern, smooth, spathe 5.5–14 cm long green brownish with small vertical line pattern, whitish green, spadix 3–7 cm long ovary green, stigma ball-like with white tufts of hairs, male zone pink purplish, appendix erect, neuter organs filiform, dark brownish below and green yellowish above.

Distribution. Lesser Sunda Island.

Habitat. Primary and secondary forests, on slopes of hills in *Dipterocarp* forest; 90–1,800 m asl.

Uses. No recorded uses.

Specimen examined. **Lombok:** TN G. Rinjani, 24 November 2012, *Tri Warseno 199* (THBB!).

12. A. MICROSPADIX Engl. – *Bot. Jahrb. Syst.* 37: 142 (1905).
Synonyms. No synonyms are recorded for this name.

Evergreen tuberous herb, 50–70 cm high. *Leaf* together with 3 leaflets, rarely 4, petiole 26–52 cm long, lamina trifoliate, coriaceous, yellowish green and shiny adaxially, pale yellowish green abaxially, leaflets lamina usually equal, ovate to broadly ovate, 15–27 cm × 6–13 cm, with caudate tip *ca.* 1.5–2 cm long. *Inflorescence* solitary, accompanying the leaf, sub-equal to or exceeding the leaves, peduncle 21–55 cm long, colour as petiole, spathe 6–16 cm long, lower spathe cylindric, convolute, yellowish-green with purple broken-lines or dark red dots outside, whitish inside, 2–7 cm long, limb somewhat triangular with caudate tip, pale yellowish-green in the middle and bright yellowish translucence toward both edges, 4–10 cm long, spadix

erect then somewhat curved at apex, 4–10 cm long, stigma sessile or on style, button-like, male flower red-purple, in clusters, 2–3-merous, more or less spirally arranged, filament raised from the spadix, appendix covered with neuter organs throughout or only in upper part or both lower and upper parts but naked in the middle, neuter organs straight, filiform sometimes bearing a stamen, green to purple. *Fruit* berry, red, *ca.* 1 cm long.

Distribution. **Bali:** Bukit Lesung, Batukahu National Reserve.

Habitat. Scatttered in shade and wet place.

Uses. No recorded uses.

Specimen examined. Bali: B. Lesung, Batukau National Reserve, Maret 1992, *J.J. Afriastini 116* (BO!).

13. A. RAMULOSUM Alderw. – *Bull. Jard. Bot.Buitenzorg III*, 4: 166 (1922).
Synonym. *Arisaema ramulosum* f. *efoliatum* Steenis.

Climbers to 15 m. *Foliage leaves* often clustered distally, petiole dark green, 18–60 cm × 3–14 mm, canaliculate, smooth; apical pulvinus 16–70 × 3–5 mm, basal pulvinus 3–7 × 1–1.5 cm; leaf blade ovate to oblong-elliptic, 10–93 × 5–60 cm, submembraneous, base slightly cordate, regularly pinnatifid to pinnatisect, apex acuminate. *Inflorescence* several together, partially obscured by netted fibers, peduncle terete, 5.5–21.5 cm × 4–10 mm, spathe yellow to mid-green, canoe-shaped, 7–23.5 × 3–15 cm, stoutly attenuate to 15mm, spadix sessile, white later glaucous gray-green to yellow, cylindric, 8–25 × 1–3.5 cm, base slightly obliquely inserted. *Flowers* 3–7 mm in diam., ovary cylindric, 4–12 × 2–7 mm, basal part slightly compressed; stylar region trapezoid, 3–7 × 1.5–4mm, rather robust, truncate. *Fruit* mid-green. *Seeds* reniform, 4.5 × 3.5 mm.

Distribution. Timor: Kapan Zuid Midden.

Habitat. Wet place, 950 m asl.

Uses. No recorded uses.

Specimen examined. Timor: Kapan, 2 February 1929, *M.G. Wasch 114* (BO!).

14. COLOCASIA ESCULENTA (L.) Schott. – Melet. Bot. 18 (1832).
Synonyms. *Arum colocasia* L., *Colocasia formosana* Hayata, *Leucocasia esculenta* (L.) Nakai, *Steudnera virosa* (Roxb.) Prain, *Zantedeschia virosa* (Roxb.) K.Koch.

Medium terrestrial herb, 1–1.5 m tall. *Stem* erect. *Leaves* several together, petiole *ca.* 35–40 cm, glabrous, sheathing in the lower ⅓–½, leaf lamina peltate, glaucous, anterior lobe widest at the base, anterior costae with 5–6 primary lateral veins on each side diverging at 45–90^0, secondary venation flush abaxially, weakly raised adaxially, interprimary collective veins absent, intramarginal vein 3–4 mm from the margin, posterior lobes ¼–½ the length of the anterior, the tip acute. *Inflorescence* forming a cluster, peduncle 10–15 cm, spathe 8–9 cm long, constricted corresponding with the sterile interstice, yellow to golden, spadix shorter than the spathe, *ca.* 4–5 cm long, stipitate 1 mm, female zone 10–15 mm long; ovary ovoid, diam. 1–2 mm, green, stigma 2–3 lobed, lobe rounded, sterile interstice 5–10 mm long; male zone 2–3 cm long, cylindric, synandria 1–2 mm in diam., hexagonal, appendix well developed, 3–5 cm long, fruiting peduncle down-curved, fruiting spathe unknown. *Fruit* ovoid.

Distribution. Timor: Alor Res. and all part of **Bali**.

Habitat. Open places in rather undisturbed primary forest. Sloping hillside, moist with shallow polls on deep clayey soil.

Uses. This species is widely cultivated as food plant. Tuber is boiled and eaten. In Bali usually use for religious ceremony (Warseno *et al.*, 2013). Some countries recorded use this species as medicinal and animal feed (Wong, 2016; Lemmens & Bunyapraphatsara, 2003).

Specimen examined. Timor: Alor, Atimelang, 24 January 1939, *Du Bois 6* (BO!).

15. EPIPREMNUM PINNATUM (L.) Engl. – *Pflanzenr.* IV, 23B: 60 (1908).
Synonyms. *Epipremnum angustilobum* K.Krause, *Monstera pinnata* (L.) Schott, *Rhaphidophora wallichii* Schott, *Scindapsus bipinnatifidus* Teijsm. & Binn., *Tornelia dilacerata* (K.Koch & Sello) Schott.

Climbers to 15 m. *Foliage leaves* often clustered distally, petiole dark green, 18–60 cm × 3–14 mm, canaliculate, smooth; apical pulvinus 16–70 × 3–5 mm, basal pulvinus 3–7 × 1–1.5 cm; leaf blade ovate to oblong-elliptic, 10–93 × 5–60 cm, submembraneous, base slightly cordate, regularly pinnatifid to pinnatisect, apex acuminate. *Inflorescence* several together, partially obscured by netted fibers, peduncle terete, 5.5–21.5 cm × 4–10 mm, spathe yellow to mid-green, canoe-shaped, 7–23.5 × 3–15 cm, stoutly attenuate to 15 mm, spadix sessile, white later glaucous gray-green to yellow, cylindric, 8–25 × 1–3.5 cm,

base slightly obliquely inserted. *Flowers* 3–7 mm in diam., ovary cylindric, 4–12 × 2–7 mm, basal part slightly compressed; stylar region trapezoid, 3 –7 × 1.5–4 mm, rather robust, truncate. *Fruit* mid-green. *Seeds* reniform, 4.5 × 3.5 mm.

Distribution. Bali: almost all forest in Bali. **Wetar**: Westkust, Klisana; **W. Sumbawa**: Mt. Batulanteh, Brang Bossang on trail from Batudulang to Pusu; **Flores**: Manau near Ruteng.

Habitat. Climbing on trees, moist forest, 400–1,500 m asl.

Uses. For medicinally to treat traumatic injuries, abscesses and rheumatic arthralgia.

Specimens examined. Bali: Bedugul, 24 Juni 1948, *Kostermans, Kuswata, Soegeng & Soepadmo (KKSS) 218* (BO!); G. Kelatakan, 19 July 1918, *Sarip 112*, (BO!); Lake Bratan, Bedugul, 20 Juni 1976, *W. Meijer 10548* (BO!); **Sumbawa**: Mt. Batulanteh, 25 April 1961, *Kostermans 18467* (BO!); Mt. Batulanteh, 29 April 1961, *Kostermans 18558* (BO!); **Timor**: Wetar, 17–18 April 1939, *Dr. S. Bloembergen 3827* (BO!); **Flores**: Manau, Ruteng, 24 April 1965, *Kostermans & Wirawan 569* (BO!).

16. HOMALOMENA PENDULA (Blume) Bakh.f. – *Bekn. Fl. Java* 17 (225): 31 (1957).
Synonyms. *Arum purpureum* Thunb., *Caladium pendulum* Blume, *Homalomena discolor* Alderw., *H. rubra* Hassk., *Zantedeschia alba* K.Koch.

Rhizomatous herb, *ca.* 1 m high. *Stem* erect, 3–5 cm in diam. *Leaves*, petiole 25–85 cm long, sheathing in the lower *ca.* ⅓, mid green to somewhat dark green, wing of sheath persistent, lamina broad ovate to cordate sagittate, mid green to yellowish green abaxially, dull mid to dark green adaxially, 16–42.5 × 12–30.5 cm, apex acuminate to apiculate, anterior lobe *ca.* 31 cm, posterior lobes 13–15 cm, acute to rounded. *Inflorescences ca*. 6 together, peduncle mid green to pinkish green, cylindric, 12–19 cm, erect, spathe very variable from greenish yellow to yellowish white or dark bright red, 6.5–9.5 cm, spadix erect, stipitate 0.5–0.7 cm, female zone cylindric, pale green to pale yellow or cream, 2–3.7 cm, 1.1 cm in diam., sterile zone present, 0.6 –1 cm long, male zone sub-cylindric, 4–5.4 cm, 1.1 –1.15 cm in diam. *Fruit* a many seeded berry, 0.3–0.5 cm.

Distribution. Wetar: Mata Lerai near Meta Lahela; **Lombok**: Jeruk manis waterfall.

Habitat. Very humid forest, 20–747 m asl.

Uses. No recorded uses.

Specimens examined. Wetar: Mata Lerai naar kamp1 aan de Meta Lahela, 6 April 1939, *Dr. S. Bloembergen 359* (BO!); **Lombok**: Jeruk manis waterfall, 08^{0}33' 42.1"S 116^{0}25'15.1"E, 25 April 2015, *HR 2099* (BO!).

17. LEUCOCASIA GIGANTEA (Blume) Schott – *Oesterr. Bot. Wochenbl.* 7: 34 (1857).
Synonyms. *Arisaema fouyou* H.Lév., *Caladium giganteum* Blume, *Colocasia prunipes* K.Koch & C.D.Bouché, *C. gigantea* (Blume) Hook.f.

Robust terrestrial herb,1.2 m tall. *Stem* erect. Petiole *ca.*100 cm. Leaf blade peltate; anterior costae with 4–6 primary lateral veins on each side, interprimary collective veins absent, intramarginal vein 1–2 mm from the margin; posterior lobes ¼–⅓ the length of the anterior. *Inflorescence* forming a cluster; spathe 9.5 cm long, lower spathe green and limb white; spadix *ca.* 6.5 cm long; ovary ovoid, pale cream; stigma 3–4 rounded lobed, sterile interstice white, male zone white, rhomboid-hexagonal, appendix vestigial, fruiting peduncle straight. *Fruit* unknown.

Distribution. **Bali:** Melaya and Dauh Waru (Jembrana), Sukasada (Buleleng), Manggis, Mt. Seraya (Karangasem), Tabanan, Pilan (Gianyar). **Lombok**: Natural Heritage of Rinjani – Lombok Geopark Areas.

Habitat. along streamline in lower montane forest *ca.* 300 – 1,000 m asl, open places, 400–700 m asl.

Uses. In Bali usually use for religious ceremony (Warseno *et al.*, 2013). In Malaysia, fruits use as flavouring (Sulaiman & Mansoor, 2002), the leaf stalks and young shoots are used in soup dishes (Wong, 2016).

Specimen examined. **Bali**: Jembrana, Mt. Merbuk, 6 October 2015, *Siti Fatimah Hanum 128* (THBB!).

18. POTHOS SCANDENS L. – *Sp. Pl.* 968 (1753).
Synonyms. *Batis hermaphrodita* Blanco, *Podospadix angustifolia* Raf., *Pothos angustifolius* (Raf.) C.Presl, *P. zollingerianus* Schott, *Tapanava indica* Raf. P.

Liana. *Leaves* bright to deep green adaxially, paler abaxially, petiole 1–14 × 0.2–2 cm, lamina-like, obovate-oblong to linear-oblong, blade 0.6–10 × 1.1–14 cm, ovate to elliptic or lanceolate. *Inflorescences* solitary in the axils of middle and distal leaves, peduncle 3–15 × 0.5–2 mm, green to

purple-tinged, spathe 4–8 × 4–7 mm, margins variously inrolled, greenish to maroon, stipe 5–10 × 1 mm, greenish to maroon, fertile portion 4–10 × 3.5–10 mm, globose or ovoid to subclavate, pale yellow-green to off-white. *Infructescence* with 1–5 berries. *Fruit* 10–17.5 × 10-14 mm, green, red when ripe. *Seeds* ellipsoid.

Distribution. **Bali**: Mt. Batukahu (Tabanan), Munduk Anyar and Mt. Merbuk (Jembrana), Seming (Gianyar); **Lombok**: Lemor Forest; **Sumbawa**: Sultanat Bima, Mt. Batulanteh, N.W. Slope trail from Batudulang to Pusu.

Habitat. On trees and rocks in primary and secondary wet to very moist forest. 0–2100 m asl.

Uses. In Bali use as traditional medicine (pers. comm), in other country this species use as treat various diseases and rope (Hanum, 2016).

Specimens examined. **Bali**: Batukaru, Road Wongaja Gede - Pura Luhur, 18 Juli 1964, *Nengah Wirawan 444* (BO!), Jembrana, Mt. Merbuk, 8 October 2015, *Siti Fatimah Hanum 130* (THBB!)*;* **Sumbawa:** Mt. Batulanteh, 7 Mei 1961, *Kostermans 1869* (BO!), Bima, 23 March 1905, *Dr. J. Elbert 3549* (BO!).

19. REMUSATIA VIVIPARA (Roxb.) Schott. – *Melet. Bot.* 18 (1832).
Synonyms. *Arum viviparum* Roxb., *Caladium viviparum* (Roxb.) Nees, *Colocasia vivipara* (Roxb.) Thwaites, *Remusatia bulbifera* Vilm., *R. formosana* Hayata.

Hemiepiphyte herb, 0.5–2 m tall. *Stem* creeping bearing bulbils. Petiole 22–51 cm, leaf blade peltate; anterior costae with 4 primary lateral veins on each side, secondary venation flush abaxially and adaxially, intramarginal vein 1 mm from the margin. *Inflorescence* solitary, peduncle 15 cm, spathe 3–4 cm long, yellow, spadix *ca.* 2–3 cm long, slightly stipitate, female zone 15–20 mm long, ovary subglobose, green, stigma 1–3 rounded lobed, sterile interstice 10–15 mm long, male zone 12 mm long, cylindric, rhomboid, appendix absent, fruiting peduncle and spathe unknown. *Fruit* ovoid.

Distribution. **Bali:** Cagar Alam Batukahu (Tabanan), Gesing, Gitgit, Bukit Silangjana, Bukit Pengelengan (Buleleng), Penelokan (Bangli), Bukit Lanying (Jembrana); **Lombok:** Mt. Rinjani along the trail from entrance of the forest to the Senaru Waterfall and Sendang Gile Waterfall.2; **Sumba**; TN. Laiwangi-Wanggameti, Katikuai surrounding Ampupu forest; **Sumbawa**: Liang Bukal-Liang Petang; **Timor**: W. Slope of Mount Timau, village of Bioba, G. Timoee, Kapang.

Habitat. Hemiepiphyte on disturbed area, on grassland and river banks, from sea level until 1,300 m asl.

Uses. In Bali usually use for religious ceremony (Warseno *et al*., 2013)

Specimens examined. **Sumba:** Laora, 10 April 1925, *Iboet 222* (BO!), TN. Laiwangi-Wanggameti, Katikuai surrounding Ampupu forest, $10^0$04' 21.3"S $120^0$14'48.8"E, 19 April 2016, *I Putu Gede Parlida Damayanto & Taufik Mahendra, IPGPD 47* (BO!); **Sumbawa** : Sumbawa Besar, Liang Bukal Liang petang, $08^0$40'912"S $117^0$28'200"E, 28 March 2004, *Wiriadinata et al., HW 11460* (BO!); **Lombok**: Mt. Rinjani, $08^0$19'01"S $116^0$24'21"E, 20 February 2005, *Tokuoka T, et.al. T 0967* (BO!); **Timor**: Laiaondja, 17 July 1938, *Greevenstuk 34* (BO!), W. Slope, Bioba, 4 March 1939, *Dr. S. Bloembergen 3389* (BO!), Soe, February 1929, *M.S. Waht 148* (BO!), Kapan, 7 May 1934, *de Vogel 1767* (BO!), Kailakuk, *Forbes 3788* (BO!).

20. RHAPHIDOPHORA FLORESENSIS P.C. Boyce – *Gard. Bull. Singapore* 52: 126 (2000).
Synonyms. No synonyms are recorded for this name.

Large, moderately robust, liane. *Petiole* 5–16.1 × 0.2–0.6 cm (dry spesimen). Lamina entire, elliptic to falcate-lanceolate. 5.5–29. 8 × 1.2–6.2 cm, base acute, apex acuminate with a prominent apiculate tubule: midrib raised abaxially, slightly sunken adaxially: primary venation pinnate, barely visible in dried specimens; secondary and tertiary venation only just visible as a faint reticulum. *Inflorenscence* solitary; peduncle *ca.* 7.2 × 0.5–0.6 cm; spathe canoe-shaped, 8.7–10.5 × *ca.* 2 cm; spadix slightly tapering-cylindrical. 8.4–9.2 × 1.3–1.5 cm sessile.

Distribution. Endemic Flores.

Habitat. Forest, 610 m asl (Boyce, 2000).

Uses. No recorded uses.

Specimens examined. Flores: Wae-Garit, Ruteng, 6 February 1971, *J. A. J. Verheijen 2973* (L!); W. Flores, L. Adjang, 23 October 1970 *J. A. J. Verheijen 3024* (L!), Tesok, 15 April 1975, *Pater E. Schmutz 3837* (L!).

21. R. MONTANA (Blume) Schott – *Ann. Mus. Bot. Lugduno-Batavi* 1: 128 (1863).
Synonyms. *Calla montana* Blume, *Rhaphidophora angulata* (Miq.) Schott, *R. burkilliana* Ridl., *R. fallax* Schott, *Scindapsus angulatus* Miq.,

S. montanus (Blume) Kunth.

Large, *petiole* 0.7–2.6 × 0.1–0.2 cm, apical and basal genicula weakly defined, lamina entire, elliptic to elliptic–lanceolate, 4.4–12.7 × 1.9–3.8 cm, base aequilateral, apex subacute with a somewhat prominent apiculate tubule; midrib raised abaxially, slightly sunken adaxially; primary venation pinnate, slightly raised abaxially and adaxially.

Distribution. Flores island.

Habitat. Open to closed, primary to disturbed secondary forest, often on steep slopes on heavy soils over granite, sandstone or limestone. 10–600 m asl (Boyce, 2000).

Uses. No recorded uses.

Specimen examined. Flores, 12 May 1966, *Pater Erwin Schmutz 128* (L!)

22. R. PUBERULA Engl. – *Bot. Jahrb. Syst.* 1: 180 (1881).
Synonyms. *Rhaphidophora batoeensis* Engl. & K.Krause, *R. hallieri* Alderw., *R. kunstleri* Hook.f., *R. pilosula* Alderw., *R. scaberula* Alderw.

Moderate to large, rather robust, liane to 5 m. *Stems* smooth. *Leaves* distichous, petiole deeply grooved to basally canaliculated, 15–20 × 0.2–0.4 cm, lamina entire, oblong-lanceolate or oblong-elliptic, oblique, 20.8–22 × 6–8.2 cm, base unequal and cuneate, apex acuminate, midrib prominently raised and pubescent abaxially, ± sunken adaxially, primary venation pinnate, slightly raised abaxially and adaxially, secondary venation tessellate to weakly reticulate, slightly raised, tertiary venation not visible.

Habitat: On trees and rocks in primary and secondary lowland to mid-elevation dipterocarp forest, often on steep slopes, on granite and limestone (Boyce, 2000), 1,000–1,200 m asl.

Distribution. Flores: Manggarai, near Ruteng.

Uses. No recorded uses.

Specimen examined. Flores: Manggarai, Ruteng, *Pater J.A.J. Verheijen 592* (L!)

23. R. SYLVESTRIS (Blume) Engl. – *Monogr. Phan.* 2: 239 (1879).
Synonyms. *Calla sylvestris* Blume, *Rhaphidophora gratissima* Becc., *R. lingulata* (Hassk.) Schott, *R. motleyana* Engl. & K.Krause, *Scindapsus sylvestris* (Blume) Kunth.

Medium to large, liane. *petiole* deeply grooved adaxially, lamina falcate-lanceolate, 4.2–18.9 × 1.4 –4.3 cm; midrib slightly raised abaxially, slightly sunken adaxially; primary venation slightly raised abaxially and adaxially; secondary and tertiary venation ± obscure in fresh material, visible as a hint reticulum in dried specimens. *Inflorescence* solitary, peduncle 1.5–3.1 cm, spathe dull yellow, spadix weakly clavate-cylindrical, sessile, inserted ± level on peduncle, 3.9–4.1 × 0.8–1.2 cm, stylar region mostly rhombohexagonal, 1–2 × 1.5–2 mm, truncate, stigma punctiform, raised, anthers exserted at anthesis.

Distribution. **Bali:** Mt. Seraya at Karangasem District; **Lombok:** East Lombok.

Habitat. Perhumid to wet lowland, in open area or shaded area, hill to sub-montane forest. 700–804 m asl.

Uses. No recorded uses.

Specimen examined. **Bali**: Karangasem, Mt. Seraya, 28 November 2014, *Ni Putu Sri Asih 221* (Herbarium and spirit collection) (THBB!), **Lombok**: East Lombok, 1 November 2003, *I Gede Tirta 1719* (THBB!).

24. SAUROMATUM HORSFIELDII Miq. – *Fl. Ned. Ind*. 3: 196 (1856).
Synonyms. *Arisaema submonoicum* Gagnep., *Heterostalis pedata* (Schott) Schott, *Pedatyphonium calcicola* (C.Y.Wu ex H.Li, Y.Shiao & S.L.Tseng) J.Murata & Ohi-Toma, *Typhonium horsfieldii* (Miq.) Steenis, *T. pedatum* Schott.

Herb, corm depressed globose, sometimes oblong, petiole *ca.* 75 cm, sheath persistent. *Leaves* compound, pedately 7–11-foliolate, leaflets sessile, lanceolate, apex acute to acuminate, *ca.* 9 × 2.7 cm to *ca.* 25 × 6 cm, margin entire, rachis 2.5–10 cm; peduncle *ca.* 30 cm, spathe *ca.* 20 cm, lower spathe ovate, green, *ca.* 6 cm, limb light green, sometimes covered with purple, *ca.* 14 cm, spadix shorter than spathe, female zone *ca.* 1 cm; ovary light yellow, with 2 ovules on each, sterile zone *ca.* 3.2 cm, covered with clavate to filiform sterile organs in the lower half, erect, suddenly papillate in upper half, male zone *ca.* 1.5 cm; anthers yellowish white or pale yellow, appendix subsessile, *ca.* 9 cm. *Fruit* unknown.

Distribution. Bali: Batukaru Nature Reserve [at the forest close to Kebun Raya Bali] (Tabanan), Pilan (Gianyar).

Habitat. Evergreen, bamboo and deciduous

forest, grasslands, on granite & limestone, 700–3,100 m asl.

Uses. No recorded uses.

Specimen examined. Bali: Tabanan, Bali Botanic Garden, 15 March 2011, *Agung Kurniawan 335* [Bali Botanical Garden Accession E2011035].

25. SCHISMATOGLOTTIS CALYPTRATA (Roxb.) Zoll. & Moritzi – *Syst. Verz.* 83 (1854).
Synonyms. *Calla calyptrata* Roxb., *Colocasia humilis* Hassk., *Homalomena calyptrata* (Roxb.) Kunth, *Schismatoglottis acutangula* Engl., *Zantedeschia calyptrata* (Roxb.) K.Koch.

Stoloniferous herb forming colonies, or clump–forming. Stems hypogeal–hapaxanthic. Petiole smooth, wings of sheath fully attached, persistent. Blade cordate to sagittate, sometimes oblong–lanceolate. Inflorescences 1–8 together, with a strong esteric odour at female anthesis.

Distribution. **Bali**: all part of Bali.

Habitat. Damp to everwet evergreen lowland forest.

Uses. The stems are used as a tonic medicine to treat lumbago and arthralgia. In Bali usually use for religious ceremony (Warseno *et al*., 2013). Roots and leaves can be eaten (Sulaiman & Mansoor, 2002).

Specimen examined. **Bali**: G. Pala, 15 September 1918, *Sarip 287* (BO!).

26. SCINDAPSUS HEDERACEUS Miq. – *Fl. Ned. Ind.* 3: 185 (1856).
Synonyms. *Scindapsus inquinatus* Schott, *S. poilanei* Gagnep., *S. pothoides* Miq.

Medium, moderately robust, leptocaul. *Stems* have epidermis pale green and drying pale brown greenish. *Leaves* rather regularly arranged on climbing stems, tending to cluster towards tips of flowering stems, petiole prominently winged, 3.4–9.5 × 0.5–1 cm, apical and basal pulvini weakly defined, petiolar sheath very prominent, spreading and wing-like, persistent, briefly ligulate at apex. *Leaf blade* lanceolate-elliptic, 6.1–15.6 × 2.2–5.5 cm, thinly coriaceous, base subacute, apex attenuate, with a prominent apiculate tubule, green, slightly glossy, midrib raised abaxially, slightly sunken adaxially, primary lateral veins pinnate, slightly raised abaxially adaxially, interprimaries parallel to primaries and only slightly less prominent, very slightly raised abaxially and adaxially, secondary and tertiary venation ± obscure in fresh material, visible as a faint reticulum in dried specimens. *Inflorescence* solitary, arising on free lateral and less often adherent shoots, subtended by a fully developed foliage leaf, peduncle compressed-cylindrical, 5.3–6.8 × 0.15–0.3 cm (dry collection), spathe dull yellow-white, caducous at pistillate anthesis, spadix cylindrical, 3.6–4.4 × 0.8–1.2 cm (dry collection), sessile, inserted ± level on peduncle, stylar *region* rhomboid-rhombohexagonal, stigma longitudinally elongated *ca.* 1.5 mm, flush to slightly raised. *Infructescence* stoutly cylindrical, 3.6–5 × 0.8–1.2 cm.

Distribution. **Bali:** Dewasana, Pasatan forest and Mt. Merbuk (Jembrana), Mt. Batukau at Wongaya Gede Village, Penebel District (Tabanan), Pilan (Gianyar).

Habitat. Climbing on the trunks or rocks, 272–880 m asl.

Uses. In Malaysia, this species is used to treat rheumatism (Sulaiman & Mansoor, 2002).

Specimen examined. **Bali**: Tabanan, Mt. Batukaru, 27 September 2012, *Ni Putu Sri Asih 29* (THBB!), Jembrana, East Dewasana, 23 July 2010, *Ni Putu Sri Asih 2* (THBB!), Jembrana, Pasatan forest, 10 June 2015, *Dewi Lestari 71* (TNBB!).

27. TYPHONIUM BLUMEI Nicolson & Sivad. – *Blumea* 27: 494 (1981).
Synonyms. *Arum flagelliforme* Lodd., *Heterostalis flagelliformis* (Lodd.) Schott, *Typhonium cuspidatum* (Blume) Decne., *T. flagelliferum* Griff., *T. sylvaticum* Voigt.

Herb to 0.3 m tall. *Tuber* subglobose, cream. *Pseudostem* pale green or magenta, cataphylls similar in colour to the pseudostem, petiole similar in colour to the pseudostem, with faint pink stripes in the upper part. *Leaf blade* trifoliolate, leaflets 10–15 × 5 cm, margins entire, apex acuminate, subsessile or shortly petiolulate, dark green, glossy above, underside paler with slightly raised veins, spathe limb ovate-lanceolate, acuminate, spadix appendix long exserted from the spathe at anthesis, cylindrical, sessile.

Distribution. **Bali:** Perean (Tabanan).

Habitat. In shaded forest, 500-600 m asl (Kurniawan & Asih, 2012).

Uses. No recorded uses.

Specimen examined. **Bali**: 3 December 2008, *Agung Kurniawan 135* [E2008125].

28. T. FLAGELLIFORME (G.Lodd.) Blume – *Rumphia* 1: 134 (1837).
Synonyms. *Arum flagelliforme* Lodd., *Heterostalis flagelliformis* (Lodd.) Schott, *Typhonium cuspidatum* (Blume) Decne., *T. flagelliferum* Griff., *T. sylvaticum* Voigt.

Stem an irregularly shaped corm (virtually a tuberous rhizome). Leaves several together, deep bright green, evergreen, petioles to *ca.* 20.2–38.8 cm long, rather slender, blade membranous, mostly sagittate, *ca.* 16 × 13.6 cm, the posterior lobes abruptly narrowing on the inside toward the sinus. Inflorescence usually displaced from the centre of the crown by continued vegetative growth after its inception, solitary or in vigorous specimens two or three among the leaves, on short peduncles, spathe with the lower convolute portion small, elliptic, green, the limb spreading, the whole limb glistening maroon purplish adaxially, greenish maroon abaxially, with very long spadix, female zone: white ovary and brown purplish stigma with crowded filiform sinuous sterile organs, below red and above yellow, then a naked interstice, yellow male flowers unistaminate, then a naked interstice again, appendix narrowly tapering, faintly swollen at the oblique base, dark maroon.

Distribution. Bali: Tukad Mungga (Buleleng), Prapat Agung (Jembrana), Bangli.

Habitat. Ruderal habitats, in shallow water by streams and moist meadows, often in ditches and along field margins, less often in wet open forest, 0–350 m asl.

Uses. Some countries use this species as medicine (Lemmens & Bunyapraphatsara, 2003) and anticancer (Wong, 2016; Sulaiman & Mansoor, 2002).

Specimen examined. Bali: Prapat Agung, 2 April 1936, *van Steenis 7625* (BO!).

CONCLUSION

There are 33 species and 19 genera of the Araceae family native in Lesser Sunda Islands, of which 28 species and 16 genera were deposited at Herbarium Bogoriense, Herbarium Hortus Botanicus Baliense and Herbarium of Leiden. *Scindapsus hederaceus* Miq. is newly reported for Bali. Previously, in Indonesia, this species was only known from Sumatra, Java and Borneo. An intensive exploration of the Lesser Sunda Island forests is needed in order to improve our knowledge of the Araceae of this region and to improve the representation of this family in the collections held at Herbarium Bogoriense (BO) and in the living collections of Kebun Raya Bogor and Kebun Raya Bali.

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