

Family 46. ZINGIBERACEAE

Literature:

- Holtum, RE. 1950. *The Zingiberaceae of the Malay Peninsula*. Gardens' Bulletin Singapore 13: 1-249.
- Smith, RM. 1985. *A review of the Bornean Zingiberaceae*. Notes from the Royal Botanic Garden of Edinburgh 42: 261-314; *ibid.* 43 (1986) 439-466; *ibid.* 44 (1987) 203-232; *ibid.* 45 (1988) 409-423.

Adelmeria Ridley

Adelmeria alpina Elmer, LPB 8 (1915) 2885; --Merr., EPFP 1 (1923) 236; --RM Sm., Edinburgh J. Bot. 47 (1990) 41. --Syntypes: Elmer 10534

Alpinia alpina (Elmer) RM Sm., *Edinburgh J. Bot.* 47 (1990) 37.

MINDANAO: Davao (Mt Apo). Forests, altitude 1200-2100m

Adelmeria gigantifolia (Elmer) Elmer, LPB 8 (1919) 2963; --Merr., EPFP 1 (1923) 236; --*Alpinia gigantifolia* (Elmer) RM Sm., Edinburgh J. Bot. 47 (1990) 65; --*Zingiber gigantifolium* Elmer, LPB 8 (1915) 2916. --Type: Elmer 9282 (BISH*, MO*, iso). Luzon: Quezon prov., Lucban, May 1907.

LUZON: Quezon, Sorsogon. Forests on talus slopes and along small streams, altitude 500-700m.

Adelmeria oblonga Merr., PJS 9 c (1914) Bot. 443; -- Merr., EPFP 1 (1923) 236. --Type: Vanoverbergh 3108 (US*, iso). Luzon: Mountain Province, Bauco, along streams, altitude c. 1500m, Apr 1913.

Alpinia oblonga (Merr.) Loesen., in Engl. & Prantl, Nat. Pflanzenfam. ed. 2, 15a (1930) 620; --RM Sm., Edinburgh J. Bot. 47 (1990) 37.

Adelmeria albida Elmer, LPB 8 (1919) 2964. --Type: Elmer 15912 (BISH*, GH*, K*, NY*, US*, iso). Luzon: Sorsogon prov., Irosin, Mt Bulusan, Apr 1916.

LUZON: Mountain Province, Benguet, Sorsogon, PANAY, NEGROS. Low and medium altitude forests, ascending to 1500m.

Adelmeria paradoxa (Ridl.) Merr., PJS 9 c (1914) Bot. 444; -- Merr., EPFP 1 (1923) 236; --*Alpinia paradoxa* (Ridl.) Loesen., in Engl. & Prantl, Nat. Pflanzenfam. ed. 2, 15a (1930) 620; --RM Sm., Edinburgh J. Bot. 47 (1990) 53; --*Hornstedtia paradoxa* Ridl., Govt. Lab. Publ. (Philip.) 35 (1905) 85. --Type: Elmer 6629 (K*, holo).

LUZON: Pangasinan, Apayao, Mountain Province, Benguet, Nueva Ecija, Rizal, Laguna (Mt Banahaw), Quezon (Lucban), PANAY, MINDANAO: Lanao. Mossy forests and damp forested ravines, altitude 1000-1800m.

Adelmeria pinetorum (Ridl.) Ridl., PJS 4 c (1909) Bot. 180; -- Merr., EPFP 1 (1923) 236; --*Alpinia pinetorum* (Ridl.) Loesen., in Engl. & Prantl, Nat. Pflanzenfam. ed. 2, 15a (1930) 620; --RM Sm., Edinburgh J. Bot. 47 (1990) 54; --*Elmeria pinetorum* Ridl., LPB 2 (1909) 569; --RM Sm., Edinburgh J. Bot. 47 (1990) 49. --Type: Elmer 8548 (K*, holo). Luzon: Benguet prov., Baguio, 'small tufts in limestone rocks of the pine region at 5000ft [=1524m], rare', Mar 1907.

LUZON: Mountain Province, Benguet. Montane thickets and open slopes about limestone boulders, altitude 1300-1500m.

Alpinia Roxburgh

Alpinia apoensis Elmer, LPB 8 (1915) 2888; --RM Sm., Edinburgh J. Bot. 47 (1990) 37; --Type: Elmer 11889.

Languas apoensis (Elmer) Merr., EPFP 1 (1922) 230.

CATANDUANES, MINDANAO: Davao (Mt Apo). Primary forests, up to c. 1200m.

Alpinia brachyantha Merr., PJS 10 c (1915) Bot. 296; --RM Sm., Edinburgh J. Bot. 47 (1990) 39; --Type: Weber 1571.

Languas brachyantha (Merr.) Merr., EPFP 1 (1922) 230.

LUZON: Cagayan. Forests at low and medium altitudes.

Alpinia brevilabris C Presl, Rel. Haenk. 1 (1827) 110, t. 17; --RM Sm., Edinburgh J. Bot. 47 (1990) 39; --Type:

Languas brevilabris (C Presl) Merr., EPFP 1 (1922) 230.

BATANES and N LUZON to MINDANAO, in most islands and provinces. Common in primary forests at low and medium altitudes.

Alpinia congesta Elmer, LPB 8 (1915) 2968; --RM Sm., Edinburgh J. Bot. 47 (1990) 41. --Type: Elmer 16144.

Kolowratia congesta (Elmer) Merr., EPFP 1 (1922) 235.

LUZON: Sorsogon. Forested slopes, c. 450m.

Alpinia copelandii Ridl., PJS 4 c (1909) Bot. 164; --RM Sm., Edinburgh J. Bot. 47 (1990) 41; --Type: Copeland *sn.*

Languas copelandii (Ridl.) Merr., EPFP 1 (1922) 231.

MINDANAO: Zamboanga. Lowland forests.

Alpinia cumingii K Schum., in Engl., Pflanzenreich 20 (1904) 315; --RM Sm., Edinburgh J. Bot. 47 (1990) 42. --Type: Cuming 859.

Languas cumingii (K Schum.) Merr., EPFP 1 (1922) 231.

LUZON: Albay.

Alpinia diversifolia Elmer, LPB 8 (1915) 2919; --RM Sm., Edinburgh J. Bot. 47 (1990) 43; --Type: Elmer 8853.

Languas diversifolia (Elmer) Merr., EPFP 1 (1922) 231; --Vanoverberghia diversifolia Elmer, LPB 8 (1915) 2913.

LUZON: Benguet. Damp ravines, c. 1000m.

Alpinia elegans (C Presl) K Schum., in Engl., Bot. Jahrb. 27 (1899) 288; --RM Sm., Edinburgh J. Bot. 47 (1990) 43; --Kolowratia elegans C Presl, Rel. Haenk. 1 (1827) 113, t. 20., EPFP 1 (1922) 235. --Type:

LUZON: Apayao, Ilocos Sur, Mountain Province, Isabela, Nueva Vizcaya, Pampanga, Bulacan, Nueva Ecija, Bataan, Rizal, Laguna, Quezon, Sorsogon, POLILLO, MINDORO, LEYTE. Low and medium altitude thickets along streams.

Alpinia elmeri RM Sm., Edinburgh J. Bot. 47 (1990) 64; --Languas longipetiolata (Elmer) Merr., EPFP 1 (1922) 232; --Alpinia longipetiolata Elmer, LPB 8 (1919) 2969, *non* Gagnep., 1909. --Syntypes:

LUZON: Sorsogon. Forests up to 600m.

Alpinia flabellata Ridl., PJS 4 c (1909) Bot. 188; --RM Sm., Edinburgh J. Bot. 47 (1990) 44. --Syntypes:

Languas flabellata (Ridl.) Merr., EPFP 1 (1922) 231, incl. var. major (Ridl.) Merr.

BATANES and N LUZON to MINDANAO. Perhaps not distinct from *A. brevilabris* C Presl. Medium altitude forests, ascending to 2000m.

Alpinia foxworthyi Ridl., PJS 4 c (1909) Bot. 189; --RM Sm., Edinburgh J. Bot. 47 (1990) 45; --Type: BS 772 Foxworthy

Languas foxworthyi (Ridl.) Merr., EPFP 1 (1922) 231.

PALAWAN. Lowland forests.

Alpinia galanga (L.) Sw., Obs. Bot. 4 (1791) 6; --RM Sm., Edinburgh J. Bot. 47 (1990) 45.

Languas pyramidata (Blume) Merr., EPFP 1 (1922) 233.

Himalayas through Malesia to the Moluccas. LUZON: Rizal, Laguna, Camarines, Sorsogon, PALAWAN, PANAY, LEYTE, MINDANAO: Lanao, Agusan. In old clearings, etc., sometimes planted.

Alpinia glabrescens Ridl., PJS 4 c (1909) Bot. 185; --RM Sm., Edinburgh J. Bot. 47 (1990) 45; --

Type: BS 3679 Fenix.

Languas glabrescens (Ridl.) Merr., EPFP 1 (1922) 231.

BATANES (BATAN, SABTAN). On slopes at low altitudes. According to Merrill (1922, l.c.) 'Endemic unless identical with some Taiwan species represented by Faurie 975 of his 1913 collection.

Alpinia graminea Ridl., PJS 4 c (1909) Bot. 189; --RM Sm., Edinburgh J. Bot. 47 (1990) 45; --Type:

FB 7267 Everett.

Languas graminea (Ridl.) Merr., EPFP 1 (1922) 232.

LUZON: Cagayan, Nueva Ecija, Laguna, Quezon, Sorsogon, CATANDUANES, PANAY, NEGROS. Forests, up to 800m.

Alpinia haenkei C Presl, Symb. 1 (1832) 66, t. 43; --RM Sm., Edinburgh J. Bot. 47 (1990) 46. --Type:

Languas haenkei (C Presl) Merr., EPFP 1 (1922) 232.

BATANES and N LUZON to PALAWAN and MINDANAO, in most or all islands and provinces. Primary forests at low and medium altitudes, often common.

Alpinia illustris Ridl., PJS 4 c (1909) Bot. 185; --RM Sm., Edinburgh J. Bot. 47 (1990) 46; --Languas

illustris (Ridl.) Merr., EPFP 1 (1922) 232. --Type: FB 544 Foxworthy.

MINDORO, PALAWAN. Forests along atreams at low altitudes; according to Merrill (1922, l.c.) very similar to *A. malaccensis* Rosc.

Alpinia luteocarpa Elmer, LPB 10 (1939) 3803; --RM Sm., Edinburgh J. Bot. 47 (1990) 49. --Type:

Elmer 17926 (BISH*, BM, K*, L, MO*, NY*, U*, --all sterile, US* poor, iso). Luzon: Laguna prov., Mt Makiling, 'in humus-covered but well-drained soil of dense woods along steep ravines at 2000ft altitude' Jul 1917.

LUZON: Laguna (Mt Makiling), in forest, altitude c. 600m.

Alpinia macroscaphis K Schum. in Engl., Bot. Jahrb. 27 (1899) 284; --RM Sm., Edinburgh J. Bot.

47 (1990) 50. --Type:

Languas macroscaphis (K Schum.) Merr., EPFP 1 (1922) 232.

MINDANAO: probably Davao (collected by Warburg, type in B, according to Merrill, 1922, l.c.)

Alpinia musaefolia Ridl., LPB 2 (1909) 604; --RM Sm., Edinburgh J. Bot. 47 (1990) 51. --Type: Elmer

9539 (SING*, holo?; BISH*, GH*, K*, MO*, NY*, US*, iso). Negros: Negros Oriental prov., Cuernos Mtns, 'in rich soil of woods at 4000ft' [=1219m], Mar 1908.

Languas musaefolia (Ridl.) Merr., EPFP 1 (1922) 232.

Alpinia edanoi RM Sm., xxxxxx. --Type: PNH 7132 Edaño (L*, holo; iso: A). Negros: Negros Oriental prov., Mt Malbug, summit, altitude 840m, 20 Jun 1948.

NEGROS: Negros Oriental (Cuernos de Negros; Mt Malbug). Forests, altitude 840-1200m.

Alpinia penduliflora Ridl., LPB 2 (1909) 570; --RM Sm., Edinburgh J. Bot. 47 (1990) 54. --Type:

Elmer 7288 (K*, SING*). Leyte: Leyte prov., Palo, Jan 1906.

Languas penduliflora (Ridl.) Merr., EPFP 1 (1922) 233.
LEYTE. Probably from forests at low altitudes.

Alpinia pubiflora (Benth.) K Schum. *in* Engl., Pflanzenreich 20 (1904) 313; --RM Sm., Edinburgh J. Bot. 47 (1990) 55.

Languas pubiflora (Benth.) Merr., EPFP 1 (1922) 233; --Hellenia pubiflora Benth. *in* Hook., London J. Bot. 2 (1843) 235.

Caroline Isls, New Guinea, Philippines. LUZON: Quezon, Sorsogon, GUIMARAS, CAMIGUIN DE MINDANAO, MINDANAO. Forests at low and medium altitudes.

Alpinia romblonensis Elmer, LPB 8 (1915) 2889; --RM Sm., Edinburgh J. Bot. 47 (1990) 56. --Type: Elmer 12050 (NY*, iso). Romblon: 'in gravelly soil along stream banks near sea level', Mar 1910.

Languas romblonensis (Elmer) Merr., EPFP 1 (1922) 233.

ROMBLON, SAMAR. Along streams at low altitudes.

Alpinia rosea Elmer, LPB 8 (1915) 2890; --RM Sm., Edinburgh J. Bot. 47 (1990) 56. --Type: Elmer 12509 (not seen).

Languas rosea (Elmer) Merr., EPFP 1 (1922) 233.

SIBUYAN (Mt Giting-giting). Dense forests, c. 1350m.

Alpinia rufa C Presl, Rel. Haenk. 1 (1827) 114, t. 21; --RM Sm., Edinburgh J. Bot. 47 (1990) 57, Fig. 8-B. --Type:

Languas rufa (C Presl) Merr., EPFP 1 (1922) 234.

LUZON: Laguna, Quezon, Camarines, Sorsogon, POLILLO, CATANDUANES, PANAY, NEGROS, LEYTE, SAMAR, BUCAS GRANDE, MINDANAO, BASILAN. Forests at low and medium altitudes.

Alpinia sibuyanensis Elmer, LPB 8 (1915) 2891; --RM Sm., Edinburgh J. Bot. 47 (1990) 58. --Type: Elmer 12316 (K*, MO*, NY*, US*, iso).

Languas sibuyanensis (Elmer) Merr., EPFP 1 (1922) 234.

SIBUYAN (Mt Giting-giting). Forests along streams, c. 225m.

Alpinia subfuscicarpa Elmer, LPB 8 (1915) 2892; --RM Sm., Edinburgh J. Bot. 47 (1990) 59. --Type: Elmer 10506 (BISH*, GH*, K*, MO*, NY*, U*, US*, iso). Mindanao: Davao, Mt Apo, Todaya, 'in fertile humus covered soil of deep damp woods at 4000ft [=1219m] altitude', May 1909.

Languas subfuscicarpa (Elmer) Merr., EPFP 1 (1922) 234.

MINDANAO: Davao (Mt Apo). Damp primary forests, c. 1200m.

Alpinia trachyascus K Schum. *in* Engl., Pflanzenreich 20 (1904) 336; --RM Sm., Edinburgh J. Bot. 47 (1990) 60. --Type: Warburg 14514 (type in B, cited by Merrill, 1922, l.c.)

Languas trachyascus (K Schum.) Merr., EPFP 1 (1922) 234.

MINDANAO: Davao. According to Merrill, he only saw the type which has the facies of *Alpinia haenkei* C Presl.

Alpinia vanoverberghii Merr., PJS 7 c (1912) Bot. 75; --RM Sm., Edinburgh J. Bot. 47 (1990) 61, Fig. 4A. --Type: Vanoverbergh 573 (PNH, holo, possibly lost; iso: GH*, K [4 sheets]*, MO*, US*).

Luzon: Mountain Province, Bauco, on hillsides, altitude c. 1250m, 11 Jun 1910.

Languas vanoverberghii (Merr.) Merr., EPFP 1 (1922) 234.

LUZON: Mountain Province. On slopes, c. 1350m.

Alpinia vulcanica Elmer, LPB 8 (1915) 2971; --RM Sm., Edinburgh J. Bot. 47 (1990) 61. --Type:

Elmer 16168 (GH*, MO*, NY*, iso). Luzon: Sorsogon prov., Irosin, Mt Bulusan, 'upper edge of a high waterfall, lodged upon the very end of the overhanging bed rocks of a very humid densely wooded gulch at 2000ft [=610m]', May 1916.

Languas vulcanica (Elmer) Merr., EPFP 1 (1922) 234.

LUZON: Camarines, Sorsogon, BUCAS GRANDE. Primary forests at low and medium altitudes, ascending to 800m.

Alpinia wenzelii Merr., PJS 9 c (1914) Bot. 353; --RM Sm., Edinburgh J. Bot. 47 (1990) 61, as 'wenzlii'. --Type: CA Wenzel 623 (L*, MO*, US*, iso). Leyte: Leyte prov., Dagami, in forest, altitude 500m, 11 Mar 1914.

Languas wenzelii (Merr.) Merr., EPFP 1 (1922) 235.

LEYTE. In forests, c. 500m.

Known only in cultivation:

Alpinia zerumbet (Pers.) Burtt & RM Sm., Notes Roy. Bot. Gard. Edinburgh 31 (1972) 204.

Languas speciosa (Wendl.) Merr., EPFP 1 (1922) 234.

China, Japan. Cultivated in other warm countries. Occasionally planted for ornamental purposes, but not a native of the archipelago and nowhere naturalized.

Doubtful species

Alpinia mollis C Presl, Rel. Haenk. 1 (1827) 110; --RM Sm., Edinburgh J. Bot. 47 (1990) 51. --Type:

Languas mollis (C Presl) Merr., EPFP 1 (1922) 232.

"Hab. in insula Luzon." The type was collected by Haenke. It is known only from the original description..." --Merrill, 1922, l.c.

Alpinia pulchella K Schum., in Engl., Bot. Jahrb. 27 (1899) 276, t. 2E; --RM Sm., Edinburgh J. Bot. 47 (1990) 55. --Type:

Languas pulchella (K Schum.) Merr., EPFP 1 (1922) 233.

New Guinea. Merrill (l.c.) cites a Warburg specimen from MINDANAO although noting that no Philippine material representing the species has been seen by him. New Guinea.

(Kolowratia) eruciformis Ridl., PJS 4 c (1909) Bot. 182; --Merr., EPFP 1 (1922) 235; --RM Sm., Edinburgh J. Bot. 47 (1990) 43. --Type: Merrill 5258 (US*, iso). Bucas Grande, 4 Oct 1906.

Material inadequate. ?sect. Kolowratia

BUCAS GRANDE. Dry slopes at the borders of forests at low altitudes.

(Languas) pendula Quisumb. & Merr., PJS 37 (1928) 138. --Type: BS 43328 Ramos (UC, holo).

Bohol: Bohol prov., Sevilla, in thickets, altitude c. 300m, 17 Sept 1923.

BOHOL (Sevilla; Bilar). Thickets and damp forests, altitude 300-700m. Under Languas subg. Probolocalyx.

(Languas) pinatubensis Elmer, LPB 9 (1934) 3225; --RM Sm., Edinburgh J. Bot. 47 (1990) 54, as 'pintatubensis'. --Type: Elmer 22058 (BM).

'Described from fruiting material and considered by Elmer to be close to *A. flabellata* Ridl. (sect. *Alpinia* subsect. *Presleia*). Since the character of the labellum cannot be checked, no new combination has been made'. --RM Sm., op. cit. 57.

(Languas) scorpioidea Quisumb. & Merr., PJS 37 (1928) 139. --Type: BS 48947 Ramos & Edaño sn (PNH, holo, lost; iso: K*, NY* UC, US*). Mindanao: Davao Oriental prov., Mati, along streams in forests at low altitudes, 16 Apr 1927.

Probably belonging to sect. *Dieramalpinia*. Labellum not described; no flowers on all extant type material.

Amomum Linnaeus

Amomum bulusanense Elmer, LPB 8 (1919) 2973; --Merr., EPFP 1 (1922) 238. --Type: Elmer

16395 (BISH*, GH*, MO*, NY*, US*, iso)
LUZON: Sorsogon. Primary forests, altitude c. 600m.

Amomum elegans Ridl., Govt. Lab. Publ. (Philipp.) 35 (1906) 84; --Merr., EPFP 1 (1922) 238. –
Syntypes:
LUZON: Bataan, MINDANAO: Lanao del Sur. Low and medium altitude primary forests.

Amomum linearifolium Elmer, LPB 8 (1919) 2975; --Merr., EPFP 1 (1922) 239. –Type: Elmer
16926 (BISH*, GH*, MO*, NY*, US*.)
LUZON: Sorsogon. Thickets bordering forests, altitude c. 300m.

Amomum loheri K Schum. in Engl., Pflanzenreich 20 (1904) 247; --Merr., EPFP 1 (1922) 239. –
Type: Loher 675 (K*). “Luzon central”, without definite locality.
LUZON. No further locality data. “I saw Loher’s specimen at Kew in 1907 and at that
time made a note that it was very similar to *A. trilobum* Ridl.” –Merrill, (1922), loc. cit.

Amomum luzonense Elmer, LPB 8 (1919) 2976; --Merr., EPFP 1 (1922) 239. –Type: Elmer 15645
(not seen). Luzon: Sorsogon prov., Irosin (Mt Bulusan), ‘well-drained ground of secondary woods
or
shrubberies’, Jun 1916.
LUZON: Sorsogon, BILIRAN. Low and medium altitude secondary forests.

Amomum mindanaense Elmer, LPB 8 (1919) 2894; --Merr., EPFP 1 (1922) 239. –Type: Elmer
10822 (BISH*, GH*, MO*, NY*, US*, iso). Mindanao: Davao, Mt Apo, Todaya, ‘in damp deeply
humus-covered ground of the oak forests at 3750ft [=1143m] altitude S of the Baruring River’, Jun
1909.
MINDANAO: Davao. Primary forest, altitude c. 1100m.

Amomum palawanense Elmer, LPB 8 (1915) 2897; --Merr., EPFP 1 (1922) 239. –Type: Elmer
12795 (BISH*, GH*, MO*, NY*, US*, iso). Palawan: Palawan prov., Puerto Princesa, Mt Pulgar
(=Thumb Peak), ‘in good soil among open thickets of woods along a creek bottom at 250ft [=76m]
altitude, Mar 1911.
PALAWAN. Lowland forests along streams. Very similar to *A. mindanaense* Elmer.

Amomum pubimarginatum Elmer, LPB 8 (1915) 2900; --Merr., EPFP 1 (1922) 240. –Type: Elmer
10546 (BISH*, K*, NY*, US*, iso). Mindanao: Davao, Mt Apo, Todaya, ‘well-drained soil of dense
woods at 4250ft [=1295m] altitude S of the Sibulan River’, May 1909.
MINDANAO: Davao (Mt Apo). Primary forest, altitude c. 1300m.

Amomum trilobum Ridl., Govt. Lab. Publ. (Philip.) 35 (1906) 85; --Merr., EPFP 1 (1922) 241. –Type:
Bolster 67 (K [2 sheets]*, US*). Luzon: Pampanga prov., Mt Arayat, May 1905.
LUZON: Ilocos Norte, Mountain Province, Pampanga, Bulacan, Rizal, Laguna,
PALAWAN, PANAY. Low and medium altitude primary forests.

Dubious or imperfectly known taxa:

Amomum deuteramomum K Schum. in Engl., Bot. Jahrb. 27 (1899) 313; --Merr., EPFP 1 (1922)
238. –Type: Warburg 15735
MINDANAO: Davao. In forest. Known only from description.

Boesenbergia Kuntze

Boesenbergia longipetiolata (Ridl.) Merr., EPFP 1 (1924) 243; --*Gastrochilus longipetiolatus*
Ridl., PJS 4 c (1909) Bot. 166. –Type: FB 9110 Whitford & Hutchinson (not seen).

MINDANAO: Zamboanga. Lowland primary forests.

Boesenbergia macropoda Merr., PJS 30 (1926) 391. --Type: BS 44394 (K*, NY*, US*, iso). Jolo: near cultivated areas at low altitudes, Sept 1924.

JOLO. Lowlands near cultivated areas.

Catimbium Jussieu =Alpinia

Curcuma Linnaeus

Curcuma domestica Valetton

Curcuma longa L., Sp. Pl. (1753) 2; --Merr., EPFP 1 (1924) 243. --Type:

Curcuma zedoaria (Christm.) Rosc., Monandr. Pl. (1828) t. 109; --Merr., Fl. Manila (1912) 158; EPFP 1 (1924) 243.

Etingera Giseke

Etingera brevilabrum (Valetton) RM Sm.

Etingera dalican (Elmer) AD Poulsen, Blumea 48 (2003) 524; --*Amomum dalican* (Elmer) Merr., EPFP 1 (1922) 238; --*Hornstedtia dalican* Elmer, LPB 8 (1915) 2906. --Type: Elmer 11626 (BISH*, GH*, K*, MO*, NY*, US*, isolecto). Mindanao: Davao, Mt Apo, Todaya, 'in fertile moist soil in open glens near springs or streamlets among the forests at 3500ft [=1067m] altitude', Sept 1909. MINDANAO: Davao (Mt Apo). Small streamlets in forests, altitude c. 1100m.

Etingera coccinea (Blume) S Sakai & Nagam.,

Etingera purpurea (Elmer) AD Poulsen, Blumea 48 (2003) 525; --*Amomum purpureum* (Elmer) Merr., EPFP 1 (1922) 240; --*Hornstedtia purpurea* Elmer, LPB 9 (1919) 2984. --Type: Elmer 16819 (BISH*, K*, MO*, NY*, US*, isolecto). Luzon: Sorsogon prov., Irosin, Mt Bulusan, Aug 1916.

LUZON: Sorsogon (Mt Bulusan). Densely forested ravines, altitude c. 450m.

Etingera pandanicarpa (Elmer) AD Poulsen, Blumea 48 (2003) 525; --*Amomum pandanicarpum* (Elmer) Elmer, LPB 8 (1915) 2899; --Merr., EPFP 1 (1922) 240, excl. syn. *Hornstedtia sorsogonensis*; --*Hornstedtia pandanicarpa* Elmer, LPB 8 (1915) 2899. --Type: Elmer 10508 (BISH*, GH*, MO*, NY*, US*). Mindanao: Davao, Mt Apo, Todaya, 'rich soil of a steep open glen among monstrous wild "abaca" or Manila hemp plants at 3500ft [=1067m] altitudes', May 1909. PANAY, MINDANAO: Bukidnon, Davao (Mt Apo). Medium altitude forests, ascending to 1100m.

Etingera philippinensis (Ridl.) RM Sm., Not. Roy. Bot. Gard. Edinburgh 43 (1986) 248; --*Amomum philippinense* (Ridl.) Merr., EPFP 1 (1922) 240; --*Hornstedtia philippinensis* Ridl., Govt. Lab. Publ. (Philip.) 35 (1906) 86, excl. fruit description; LPB 2 (1909) 605; PJS 4 c (1909) Bot. 175; --Elmer, LPB 8 (1915) 2905; *ibid.* 8 (1919) 2981. --Syntypes:

LUZON: Laguna, Quezon, Sorsogon, MINDORO, PALAWAN, PANAY, NEGROS, BILIRAN, LEYTE, MINDANAO. Low and medium altitude forests.

Etingera sorsogonensis (Elmer) AD Poulsen, Blumea 48 (2003) 526; --*Hornstedtia*

sorsogonensis Elmer, LPB 8 (1919) 2985. --Type: Elmer 16925 (GH*, K*, MO*, NY*, US*, iso).
Luzon: Sorsogon prov., Irosin, Mt Bulusan, 'in loose humus-covered damp soil of thickets along borders of woods at 1000ft [=305m] altitude', Aug 1916.

LUZON: Sorsogon (Mt Bulusan). Lowland forest, altitude c. 300m.

Known only from cultivation:

Etingera elatior (Jack) RM Sm., Notes Roy. Bot. Gard. Edinburgh 43 (1986) 244.

Phaeomeria speciosa (Blume) Koord., Exkurs.-Fl. Java 1 (1911) 332. --Merr., EPFP 1 (1922) 241.

Gecharis (K Schumann) Ridley

Gecharis fusiformis (Ridl.) RM Sm., Notes Roy. Bot. Gard. Edinburgh 43 (1986) 458; --Amomum fusiforme Ridl. in Elmer, LPB 2 (1909) 604, *nom. nud.*; PJS 4 c (1909) Bot. 171; --Merr., EPFP 1 (1922) 238. --Type:

PALAWAN, NEGROS, SAMAR, MINDANAO: Zamboanga, Surigao. Low and medium altitude forests.

Globba Linnaeus

Globba aurea Elmer, LPB 8 (1915) 2902; --Merr., EPFP 1 (1924) 244. --Type: Elmer 13243
BUSUANGA, PALAWAN. Low and medium altitude thickets and rock crevices along streams.

Globba brevifolia K Schum. in Engl., Pflanzenreich 20 (1904) 145; --Ridl., PJS 4 c (1909) Bot. 160; --Merr., EPFP 1 (1924) 244; --*Globba parviflora* C Presl var. *brevifolia* K Schum. in Engl., Bot. Jahrb. 27 (1899) 330. --Type: Warburg 14066

LUZON: Zambales, CORRIGIDOR. Low and medium altitude thickets or forests.
Apparently very close to *G. campsophylla* K Schum.

Globba campsophylla K Schum. in Engl., Pflanzenreich 20 (1904) 145; --Ridl., Govt. Lab. Publ. (Philip.) 35 (1906) 83; PJS 4 c (1909) Bot. 159; --Merr., EPFP 1 (1924) 244. --Type: Cuming 1090

LUZON: Nueva Ecija, Bataan, Bulacan, Rizal, Quezon, CATANDUANES, PANAY, SAMAR, MINDANAO. Low and medium altitude damp thickets and forests, on and about cliffs, etc.

Globba gracilis K Schum. in Engl., Pflanzenreich 20 (1904) 145; --Merr., EPFP 1 (1924) 244. --Type: Warburg 14580 (B, cited by Merr., 1924).

MINDANAO: Misamis Occidental, Davao. Primary forests, altitude 300-1000m.

Globba latifolia Ridl., PJS 4 c (1909) Bot. 161; --Merr., EPFP 1 (1924) 244. --Type: Merrill 4064
MINDORO, PANAY, MINDANAO: Zamboanga. Low and medium altitudes in damp primary forests.

Globba leucocarpa Ridl., PJS 4 c (1909) Bot. 161; --Merr., EPFP 1 (1924) 244. --Type: Elmer 6465
LUZON: Benguet, POLILLO, MINDORO, LEYTE. Low and medium altitudes, in damp primary forests, on shaded cliffs, etc.

Globba marantina L., Mant. 2 (1771) 170; --Merr., EPFP 1 (1924) 244. --Type:

Across Malesia to the Bismarck Archipelago. Introduced to the Philippines. LUZON: La Union, Pangasinan, Nueva Ecija, Pampanga, Bataan, Bulacan, Rizal, Cavite, PALAWAN, PANAY, NEGROS. Lowland and medium altitude thickets near human

settlements. Often common.

Globba merrillii Ridl., Govt. Lab. Publ. (Philipp.) 35 (1906) 83; --Merr., EPFP 1 (1924) 245. --Type: Merrill 3869

LUZON: Bataan. Along streams in primary forests and on exposed forested ridges up to 1000m. Not easily distinguished from *G. campsophylla* K Schum.

Globba parviflora C Presl, Rel. Haenk. 1 (1827) 115; --Merr., EPFP 1 (1924) 245. --Type: Merrill 2783

LUZON: Rizal, Albay, Sorsogon, LEYTE, MINDANAO. Lowland and medium altitude forests.

Globba pyramidata Gagnep., Bull. Soc. Bot. France 48 (1901) 208, t. 7, Fig. 5-7; --Merr., EPFP 1 (1924) 245. --Type:

Cambodia, Philippines. MINDANAO: Agusan, Weber 1128. Lowland primary forests.

Dubious or imperfectly known:

Globba ustulata Gagnep., Bull. Soc. Bot. France 48 (1901) 208, t. 7, Fig. 5-7; --Merr., EPFP 1 (1924) 245. --Type: Marche 227B (P, cited but not seen by Merr., 1924). Balabac.

Hedychium Koenig

Hedychium coronarium Koenig in Retz., Obs. 3 (1783) 73; --Merr., Fl. Manila (1912) 157; EPFP 1 (1922) 241.

Native of India, now widely cultivated and naturalized in many parts of the tropics. Introduced and cultivated in the Philippines for ornamental purposes. Kamia.

Hedychium philippinense K Schum. in Engl., Pflanzenreich 20 (1904) 47; --Merr., EPFP 1 (1922) 242. --Type: Vidal 3924 (K*). Jolo.

LUZON: Rizal, Laguna, Quezon, Sorsogon, POLILLO, NEGROS, LEYTE, JOLO, MINDANAO. Lowland and medium altitude humid forests, ascending to 1100m, often epiphytic or pseudoepiphytic.

Hornstedtia Retzius

Hornstedtia conoidea Ridl. in Elmer, LPB 2 (1909) 605; PJS 4 c (1909) Bot. 175; --Amomum conoideum (Ridl.) Elmer, LPB 8 (1919) 2972; --Merr., EPFP 1 (1922) 238. --Type: Elmer 10246 (K [3 sheets]*, NY*, US*, iso). Negros: Negros Oriental prov., Cuernos Mtns, 'in fertile soil of damp ravines at 2000ft [=610m] altitude, Jun 1908.

LUZON: Laguna, Sorsogon, NEGROS: Negros Oriental (Cuernos Mtns), MINDANAO: Lanao del Sur (Camp Keithley), Davao. Damp forested ravines, medium altitudes.

Hornstedtia havilandii (K Schum.) K Schum., Pflanzenreich 20 (1904) 193; --Amomum havilandii K Schum. In Engl., Bot. Jahrb. 27 (1899) 303. --Type from Sabah.

Borneo (Sabah; Sarawak), SW Philippines. JOLO. (Based on BS 44454 Ramos & Edaño). Lowland second-growth forests.

Hornstedtia irosinensis Elmer, LPB 8 (1919) 2981. --Syntypes: Amomum irosinensis (Elmer) Merr., EPFP 1 (1922) 239.

Hornstedtia peninsula Elmer, LPB 8 (1919) 2983. –Type: Elmer 16455 (MO*, US*, iso). Luzon: Sorsogon prov., Irosin, Mt Bulusan, 'wet stony ground of herbaceous thickets in a densely shaded gully between forested ridges at 1750ft [=533m] altitude', Jun 1916.

Hornstedtia subviridis Elmer, LPB 8 (1919) 2987. –Type: Elmer 16437 (not seen). Luzon: Sorsogon prov., Irosin, Mt Bulusan, 'on a well-drained stony incline among jungled woods at 1000ft [=305m] altitude', Jun 1916.

LUZON: Sorsogon (Mt Bulusan). Forested ravines, altitude 350-500m.

Hornstedtia lepicarpa (Ridl.) Elmer, LPB 8 (1919) 2979; --*Amomum lepicarpum* Ridl. in Elmer, LPB 2 (1909) 605; --Merr., EPFP 1 (1922) 239. –Type: Elmer 10044

Amomum subviridis Elmer, LPB 8 (1919) 2987. –Type:

LUZON: Laguna, Sorsogon, NEGROS, MINDANAO: Davao. **Habitat?**

Hornstedtia lophophora Elmer, LPB 8 (1919) 2973. –Type: Elmer 10365

Amomum lophophorum (Ridl.) Elmer, LPB 8 (1919) 2973; --Merr., EPFP 1 (1922) 239.

NEGROS, MINDANAO: Davao. Forested ravines, altitude c. 1200m.

Hornstedtia microcheila Ridl. in Elmer, LPB 2 (1909) 606; PJS 4 c (1909) Bot. 176. –Type: Elmer 10279

Amomum microcheila (Ridl.) Merr., EPFP 1 (1922) 239.

NEGROS: Negros Oriental (Cuernos Mtns). Seepage banks along streams, altitude c. 900m.

Hornstedtia muricarpa (Elmer) Elmer, LPB 8 (1919) 2980; --*Amomum muricarpum* Elmer, LPB 8 (1915) 2896; --Merr., EPFP 1 (1922) 239. –Type: Elmer 10947

MINDANAO: Zamboanga, Cotabato, Davao. Low and medium altitude primary forests.

Hornstedtia propinqua (Ridl.) Elmer, LPB 8 (1919) 2979; --*Amomum propinquum* Ridl., Govt. Lab. Publ. (Philipp.) 35 (1906) 84; PJS 4 c (1909) Bot. 172; --Elmer, LPB 8 (1915) 2894; --Merr., Sp. Blancoanae (1918) 111; EPFP 1 (1922) 240. –Type: Elmer 6284

Amomum echinatum Blanco, Fl. Filip. ed. 2 (1845) 3; *ibid.* ed. 3, 1 (1877) 4, *non* Willd.

Amomum aculeatum Naves, Novis. App. (1880) 224, *non* Roxb.

LUZON: Benguet, Laguna, Batangas, Quezon, Sorsogon, MASBATE, BILIRAN,

MINDANAO: Davao. Lowland and medium altitude forests.

Hornstedtia pubescens (Ridl.) Elmer, LPB 8 (1919) 2979; --*Amomum pubescens* (Ridl.) Merr.,

EPFP 1 (1922) 240; --*Amomum lepicarpum* Ridl. var. *pubescens* Ridl. in Elmer, LPB 2 (1909) 604.

–Type: Elmer 10384

NEGROS: Negros Oriental (Cuernos Mtns). Forests, altitude c. 1100m.

***Kaempferia* Linnaeus**

Kaempferia galanga L., Sp. Pl. (1753) 2; --Merr., Fl. Manila (1912) 157; EPFP 1 (1924) 242.

India through Malaya to the Moluccas. LUZON: Mountain Province, Rizal, MINDANAO: Bukidnon. Lowland and medium altitude grasslands.

Kaempferia philippinensis Merr., PJS 10 c (1915) Bot. 296; EPFP 1 (1924) 242. –Type: BS 14952

LUZON: Laguna. Lowland and medium altitude forests along streams.

Kolowratia C Presl =*Alpinia*

Languas Koenig =Alpinia

Leptosolena C Presl

Revision:

Funakoshi, H, WJ Kress, J Škorničková, AZ Liu and K Inoue. 2005. *Return from the Lost: Rediscovery of the Presumed Extinct Leptosolena (Zingiberaceae) in the Philippines and its Phylogenetic Placement in Gingers*. Acta Phytotaxonomica et Geobotanica 56: 41-53.

Leptosolena haenkei C Presl, Rel. Haenk. 1 (1827) 111, t. 28; --Merr., EPFP 1 (1922) 236; --Funakoshi et al., Acta Phytotax. et Geobot. 56 (2005) 45, Fig. 1-3. --Type: Haenke s.n., (lectotype in PR, designated by Funakoshi et. al., 2005); isolectotypes in PR (2 sheets).
Leptosolena auriculata Elmer, LPB 10 (1939) 3808, *nom. nud.*, --Voucher: Elmer 17997 (cited by Funakoshi et al., 2005: F, L, NY, W).

LUZON: Ilocos Norte, La Union, Benguet (Twin Peaks), Mountain Province (Supan; Dandanac, Besao; Alab and Balili, Bontoc; Mt Data), Cagayan (Bauan-Mt Tabuan), Nueva Vizcaya, Zambales (Villar, Mt Pinatubo), alt. 300-1300m. Abundant on sunny rocky slope in the pine belt of N Luzon.

Phaeomeria Lindley =Etlingera

Plagiostachys Ridley

Plagiostachys corrugata Elmer, LPB 8 (1915) 2908; --Merr., EPFP 1 (1922) 237. --Type: Elmer 11130
MINDANAO: Davao (Mt Apo). Forests, altitude c. 450m.

Plagiostachys elegans Ridl., PJS 4 c (1909) Bot. 178; --Merr., EPFP 1 (1922) 237. --Type: Clemens *sn.*
MINDANAO: Lanao del Sur. Forests, altitude c. 900m.

Plagiostachys escritorii Elmer, LPB 8 (1915) 2910; --Merr., EPFP 1 (1922) 237. --Type: Elmer 10516
LUZON: Laguna, Sorsogon, SAMAR, MINDANAO. Médium altitude forests, ascending to 1300m.

Plagiostachys lata Elmer, LPB 10 (1939) 3805, not validly published, no Latin diagnosis. --Syntypes: Elmer 18234 and 17618.
LUZON: Laguna (Mt Makiling). Open places or among shrubberies of the foothills.

Plagiostachys parviflora (C Presl) Ridl., PJS 4 c (1909) Bot. 178; --Merr., EPFP 1 (1922) 237. --Type: Elmer 16215
LUZON: Sorsogon, PANAY, LEYTE, MINDANAO: Agusan del Norte. Low altitude primary forests.

Plagiostachys philippinensis Ridl. in LPB 2 (1909) 571; --Merr., EPFP 1 (1922) 237. --Type: BS 33614 Ramos & Edaño
LUZON: Laguna, Quezon, Camarines, POLILLO, SIBUYAN, CATANDUANES, PANAY, SAMAR, MINDANAO. Low and médium altitude primary forests.

Plagiostachys rolfei (K Schum.) Ridl., PJS 4 c (1909) Bot. 179; --Merr., EPFP 1 (1922) 237. --

Type: Cuming 1327 (K*, 2 sheets). Luzon: Cagayan prov. (according to Merrill, 1924 not Albay as label suggests).

LUZON: Cagayan. No habitat data.

Vanoverberghia Merrill

Vanoverberghia sepulchrei Merr., PJS 7 c (1912) Bot. 76; --Merr., EPFP 1 (1922) 238. --Type: Vanoverbegh 956.

LUZON: Ifugao, Mountain Province, Benguet, Sorsogon, PANAY. Steep slopes along stream gullies, medium altitudes to 1500m.

Zingiber Boehmer

Revision:

Notes Roy. Bot. Gard. Edinburgh 45 (1988) 409—

Zingiber apoense Elmer, LPB 8 (1915) 2914; --Merr., EPFP 1 (1922) 228. --Type: Elmer 10545
MINDANAO: Davao (Mt Apo). Forests, altitude 1000-1300m.

Zingiber brevifolium NE Br., Gard. Chron. 26 (1886) 390, non K Schum. (1904); --Merr., EPFP 1 (1922) 228. --Type: W Bull *sn* (K*). ?Philippines

Described from cultivated specimens said to have originated from the Philippines. Otherwise unknown.

Zingiber bulusanense Elmer, LPB 8 (1919) 2993; --Merr., EPFP 1 (1922) 228. --Syntypes:
LUZON: Sorsogon (Mt Bulusan). Primary forests, altitude c. 450m.

Zingiber matutumense Mood & Theilade, xxxxxxxxxxx. --Type: Hepton W83P754 (AAU*, holo).
Mindanao: South Cotabato prov., Mt Matutum, altitude 830m, 1982.
MINDANAO: South Cotabato (Mt Matutum).

Zingiber molle Ridl., LPB 2 (1909) 607, *nom. nud.*; PJS 4 c (1909) Bot. 168; --Merr., EPFP 1 (1922) 229. --Syntypes:

LUZON: Mountain Province, Benguet (Mt Sto Tomas), Pampanga, Quezon (Mt Banahaw). Forested stream gullies, altitude 1100-1600m.

Zingiber negrosense Elmer, LPB 8 (1915) 2917; --Merr., EPFP 1 (1922) 229. --Type: Elmer 10421 (BISH*, K*, MO*, NY*, US*, iso). Negros: Negros Oriental prov., Cuernos Mtns, Jun 1908.
NEGROS: Negros Oriental (Cuernos Mtns), MINDANAO: Davao (Mt Apo). Forested ravines, altitude c. 1050m.

Zingiber officinale Rosc., Trans. Linn. Soc. 7 (1807) 348; --Merr., EPFP 1 (1922) 229.

Native of tropical Asia, pantropical in distribution. Widely cultivated in the Philippines but nowhere naturalized. Ginger. Luya.

Zingiber pubisquama Ridl., PJS 4 c (1909) Bot. 169; --Merr., EPFP 1 (1922) 229. --Type: MS Clemens 1163a (K*). Mindanao: Lanao del Sur, Lake Lanao, Camp Keithley, Sept 1907.

MINDANAO: Lanao del Sur prov. (Camp Keithley). Cogon grasslands, altitude c. 650m.

Zingiber sylvaticum Elmer, LPB 8 (1915) 2919; --Merr., EPFP 1 (1922) 229. --Type: Elmer 9843 (NY*, US*, iso). Negros: Negros Oriental prov., Cuernos Mtns, Jun 1908.

LUZON: Cagayan, Laguna, Quezon, Camarines, Sorsogon, POLILLO, CATANDUANES, NEGROS. Mainly in medium altitude forests, ascending to 1300m.

Zingiber zerumbet (L.) Sm., Exot. Bot. 2 (1804) 103, t. 112; --Merr., EPFP 1 (1922) 229.

Native of tropical Asia, now pantropic. N LUZON to MINDANAO, in most or all islands and provinces. Low and medium altitude thickets in and near settlements.

Doubtful occurrence:

Zingiber cassumunar Roxb., Asiat. Research 11 (1810) 347, t. 5; --Merr., EPFP 1 (1922) 229.

Native of tropical Asia, pantropic in cultivation. Reportedly in Mindanao (Misamis), but Merrill also noted having seen no Philippine material representing this species.