

AN ANALYSIS OF PHILIPPINE SEED PLANT DISCOVERIES IN THE PAST DECADE (2001-2010)

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INTRODUCTION

The recognition of the Philippines as a center of biodiversity and a biodiversity hotspot in the world has since demanded priority attention on conservation efforts at the local and global scene. Initiatives have been launched to support and strengthen policies, research, and development projects towards the conservation of biodiversity in the country. However, little direct investments have been made to address the information gap in taxonomy which is supposed to provide the basic information for decision making and biodiversity conservation efforts.

This paper presents a list of novel Philippine seed plants (gymnosperms and angiosperms) for the period 2001-2010 to highlight the continuing efforts of Filipino and foreign plant taxonomists in documenting and naming local plants. It also provides insights on the status of plant taxonomy towards biodiversity conservation in the country. This is the first publication on the subject and it hopes to come out with supplements featuring the new species described in latter years.

The list is mainly generated from the International Plant Names Index which is an electronic database of published names of plants in the world. It is a reference that can be freely accessed through the website www.ipni.org and is a collaborative endeavour of the Harvard University Herbaria, Royal Botanic Gardens, Kew, and the Australian National Herbarium. The plant-names generated from IPNI Lists can be easily accessed through a user-friendly computer program and are valuable to plant taxonomists, researchers, teachers and students interested on a comprehensive list of plant names, the latest species published, information on the original publication, and location of type specimens, collection details, and in some entries, the localities where species was collected. The list is also cross-checked with the World Checklist of Selected Plant Families (2011). For plant conservation and plant resource management, these lists are useful reference for updating checklists of plants for particular localities, including important plant areas. The information from both of these lists can give insights on the status and history of plant taxonomy of a given country such as the Philippines.

The plants are listed alphabetically according to family, genus, species, subspecies and varieties followed by citation of the original publication, year published, type locality, herbarium where the holotype specimen is deposited, collector/s, and date collected. The list, however, is limited to information about the holotype and does not cite the entire known distribution of the taxa. Information on name of collector/s, date of collection and type locality, when not provided in IPNI, is searched from the PNH database and added into the list. When information is not available, then it is marked with an asterisk (*).

LIST OF PLANTS

Acanthaceae

Strobilanthes fusca J.R.I.Wood -- Kew Bull. 64(1): 11-13 (fig. 5). 2009.
Type locality: Luzon (Zambales- Masinloc, Coto Mines)
Holotype: K
Collectors: Reynoso, Alvarez & Fernando PPI 4164
Date of collection: February 1992

Annonaceae

Cyathocalyx crassipetalus R.J.Wang & R.M.K.Saunders -- Syst. Bot. 31(2): 291 (286, 288, 292-293, figs. 1, 2a-b, 5-6). 2006.
Type locality: Samar (Mt. Coneoul)
Holotype: L
Collectors: Dutierin et al. 105
Date of collection: May 1969

Cyathocalyx samarensis R.J.Wang & R.M.K.Saunders -- Syst. Bot. 31(2): 293 (front cover, 288, 294-296, figs. 2e-f, 7-8). 2006.
Type locality: Samar (East Samar: Bo. Sta. Rosa)
Holotype: L
Collectors: Madulid et al. 1457
Date of collection: May 1971

Pseuduvaria mindorensis Y.C.F.Su & R.M.K.Saunders -- Syst. Bot. Monogr. 79: 117 -121 (figs. 58-59). 2006.
Type locality: Mindoro (Puerto Galera)
Holotype: BM
Collector: Ramos BSN 46374
Date of collection: November 1925

Apocynaceae

Carruthersia glabra D.J.Middleton -- Harvard Pap. Bot. 8(1): 1. 2003.
Type locality: Samar (Samar: Mt. Calbiga)

Holotype: A
Collector: Sulit PNH 6440
Date of collection: May 1948

Tabernaemontana ternifolia D.J.Middleton -- Harvard Pap. Bot. 9(2): 387-389 (figs. 1-2). 2005.

Type locality: Palawan (Palawan: Mt. Beaufort)
Holotype: L
Collector: Ridsdale SMHI 215
Date of collection: March 1984

Wrightia palawanensis D.J.Middleton -- Harvard Pap. Bot. 10(2): 172 (fig. 5). 2005.

Type locality: Palawan (Palawan: Mt. Beaufort)
Holotype: A
Collector: Podzorski SMHI 698
Date of collection: March 1984

Araceae

Alocasia nycteris Medecilo, G.C.Yao & Madulid -- J. Bot. Res. Inst. Texas 1(2): 817 (815-818; figs. 1-3). 2007.

Type locality: Panay (Aklan: Nabas)
Holotype: PNH
Collector: Medecilo 397
Date of collection: November 2005

Arecaceae

Heterospathe califrons Fernando -- Palms 45: 118. 2001.

Type locality: Mindanao Island, Surigao del Sur Prov., Carmen
Isotypes: LBC, BH, K, PNH, PUH
Collectors: Fernando & Sotalbo 1567
Date of collection: *

Asclepiadaceae

Hoya aurantiaca Kloppenb., Siar & Cajano -- Asia Life Sci. 18(1): 140 -144 (figs. 1-3). 2009.

Type locality: Luzon (Laguna: Siniloan, Bgy Kapatalan)
Holotype: CAHUP
Collectors: Siar & Cajano 5962
Date of collection: July 2007

Hoya benitotanii Kloppenb. -- Gard. Bull. Singapore 61(2): 330 -332 (figs. 3-4). 2010.

Type locality: *

Holotype: UC
Collector: Kloppenburg 2010-6
Date of collection: 2010

Hoya benvergarae Kloppenb. & Siar -- Asia Life Sci. 17(1): 58 -62 (figs. 1-3). 2008.

Type locality: Luzon (Quezon: Dolores)
Holotype: CAHUP 70357
Collectors: Siar & Cajano 70357
Date of collection: February 2007

Hoya fitchii Kloppenb. -- Fraterna 22(4): 16 -20 (figs.). 2009.

Type locality: cult. (Kaaawa, Hawaii, USA)
Holotype: UC
Collectors: #20096
Date of collection: *

Hoya heuschkeliana Kloppenb. subsp. *cajanoae* Kloppenb. & Siar -- Fraterna 20(4): 9 -11 (figs.). 2007.

Type locality: *
Holotype: CAHUP 56574
Collectors: Hernaez & Cajano
Date of collection: *

Hoya krohniana Kloppenb. & Siar -- Fraterna 22(4): 9 -12 (figs.). 2009.

Type locality: *
Holotype: CAHUP
Collectors: #70365
Date of collection: *

Hoya landgrantensis Kloppenb., Siar & Cajano -- Asia Life Sci. 18(1): 147 - 150 (figs. 7-9). 2009.

Type locality: Luzon (Laguna: Siniloan, Bgy. Kapatalan)
Holotype: CAHUP 70617
Collectors: Siar & Cajano 5963
Date of collection: July 2007

Hoya lazaroii Kloppenb. & Siar -- Asia Life Sci. 17(1): 66 -70 (figs. 7-9). 2008.

Type locality: Luzon (Quezon: Mt. Banahaw)
Holotype: CAHUP 70361
Collectors: Siar & Cajano 5942
Date of collection: April 2007

Hoya linavergarae Kloppenb. & Siar -- Fraterna 19(4): 11 -18 (figs.). 2006.

Type locality: *
Holotype: CAHUP 68632

Collectors: *
Date of collection: *

Hoya lucardenasiana Kloppenb., Siar & Cajano -- Asia Life Sci. 18(1): 144 - 147 (figs. 4-6). 2009.

Type locality: Luzon (Laguna: Siniloan, Bgy. Kapatalan)
Holotype: CAHUP
Collectors: Siar & Cajano 5961
Date of collection: July 2007

Hoya lucyae Kloppenb. & Siar -- Fraterna 19(4): 8 -10 (figs.). 2006.

Type locality: Cebu
Holotype: CAHUP 68633
Collector: Bicknell
Date of collection: January 1998

Hoya memoria Kloppenb. -- Fraterna 17(4): 2 (1-3; photogrs.). 2004.

Type locality: Manila
Holotype: UC 81074
Collectors: *
Date of collection: 1981

Hoya mindorensis Schltr. subsp. *superba* Kloppenb. -- Fraterna 18(3): 1-4; photos). 2005.

Type locality: Luzon, cult. In Hort. Central Point, Oregon, USA
Holotype: UC
Collectors: *
Date of collection: 2005

Hoya monetteae T.Green - -- Fraterna 17(2): 10-15 (figs.). 2004.

Type locality: Palawan (Palawan: Tumarbong River delta)
Holotype: BISH
Collector: Green 007
Date of collection: November 2000

Hoya panayensis Kloppenb. & Siar -- Fraterna 22(4): 13-14 (figs.). 2009.

Type locality: Panay
Holotype: UC
Collector: McGregor 32378
Date of collection: *

Hoya platycaulis Simonsson & Rodda -- Asklepios 106: 15 (13-18 figs.). 2009.

Type locality: Laguna, cult.
Holotype: K
Collectors: *
Date of collection: August 2009

Hoya querinoensis Kloppenb. & Siar -- *Fraterna* 20(4): 13-15 (figs.). 2007.

Type locality: *
Holotype: CAHUP 41946
Collector: Wayet
Date of collection: September 1988

Hoya ramosii Kloppenb. & Siar -- *Fraterna* 20(4): 17 -18 (figs.). 2007.

Type locality: *
Holotype: PNH 75500
Collectors: Ramos & Edano
Date of collection: *

Hoya soligamiana Kloppenb., Siar & Cajano -- *Asia Life Sci.* 18(1): 151 -154 (figs. 10-12). 2009.

Type locality: Luzon (Quezon: Atimonan)
Holotype: CAHUP 69916
Collectors: Siar & Cajano 5868
Date of collection: June 2006

Hoya stoneana Kloppenb. & Siar -- *Fraterna* 19(4): 19 -23 (figs.). 2006.

Type locality: *
Holotype: CAHUP 68636
Collectors: *
Date of collection: *

Hoya surigaoensis Kloppenb., Siar & Nyhuus -- *Asklepios* 107: 23 -26 (figs.). 2010.

Type locality: Mindanao (Surigao)
Holotype: CAHUP 71719
Collectors: *
Date of collection: *

Hoya viracensis Kloppenb. & Siar -- *Fraterna* 19(4): 5 -7 (figs.). 2006.

Type locality: Catanduanes (Catandaunes: Virac)
Holotype: PNH
Collector: Barbon, Garcia & Alvarez PPI 5658
Date of collection: December 1991

Asteraceae

Ecliptia angustata Umemoto & H. Koyama -- *Thai Forest Bull., Bot.* 35: 114 -117, 109-110 (figs. 1A, 2A, 3). 2007.

Type locality: Thailand (also found in Asia, Malesia)
Holotype: KYO
Collector: Iwatsuki T-254
Date of collection: November 1965

Begoniaceae

Begonia acclivis Coyle -- Edinburgh J. Bot. 67(1): 125 -128 (fig. 2, map).
2010.

Type locality: Palawan (Palawan: Mt. Mantalingahan)

Holotype: BRIT

Collectors: Pipoly & Romero PPI 38054

Date of collection: August 1996

Begonia androturba Coyle -- Edinburgh J. Bot. 66(2): 206 -209 (fig. 2, map).
2009.

Type locality: Palawan (Palawan: Mt. Mantalingahan)

Holotype: BRIT

Collectors: Pipoly & Romero PPI 38072

Date of collection: August 1996

Begonia cleopatrae Coyle -- Edinburgh J. Bot. 67(1): 128 -129 (fig. 2, map).
2010.

Type locality: Palawan (Palawan: Cleopatra's Needle)

Holotype: E

Collectors: Wilkie, Mendum, Argent, Cronk, Middleton, Fuentes,
Chavez PPI 25373

Date of collection: January 1998

Begonia georgei Coyle -- Edinburgh J. Bot. 66(2): 209 -210 (fig. 2, map).
2009.

Type locality: Palawan (Palawan: Brookes Pt., Mt. Mantalingahan)

Holotype: BISH

Collectors: Argent & Romero PPI 9669

Date of collection: March 1992

Begonia gutierrezii Coyle -- Edinburgh J. Bot. 67(1): 131 -132 (fig. 2, map).
2010.

Type locality: Palawan (Palawan: Lipuun Point)

Holotype: PNH

Collectors: Gutierrez & Espiritu PNH80739

Date of collection: May 1963

Begonia polilloensis Tebbitt -- Edinburgh J. Bot. 61(2-3): 99 -101 (fig. 2).
2005.

Type locality: Luzon (Quezon: Real)

Holotype: L

Collector: Lagrimas

Date of collection: June 1962

Begonia rubiteae M.Hughes -- Edinburgh J. Bot. 67(1): 134 -135 (fig. 3, map).
2010.

Type locality: Busuanga (Palawan: Coron, Mabentangen Forest Park)
Holotype: PNH
Collector: Rubite 357
Date of collection: February 2007

Begonia wilkiei Coyle -- Edinburgh J. Bot. 67(1): 138 -139 (fig. 4, map). 2010.
Type locality: Palawan (Palawan: Cleopatra's Needle)
Holotype: E
Collectors: Fuentes & Fernando PPI 25416
Date of collection: January 1998

Campanulaceae

Lobelia proctorii Argent & P. Wilkie -- Pl. Ecol. 192(2): 158 -159 (figs. 1-2).
2007.
Type locality: Sibuyan (Romblon: Magdiwang, Mt. Guiting-Guiting)
Holotype: PNH
Collectors: Argent & Reynoso
Date of collection: August 1989

Crassulaceae

Kalanchoe spathulata DC. var. *baguioensis* H. Ohba -- J. Jap. Bot. 78(5): 251.
2003.
Type locality: Luzon (Benguet: Baguio)
Holotype: US
Collector: Merrill 11647
Date of collection: *

Cucurbitaceae

Neochamandra macrantha W.J. de Wilde & Duyfjes -- Blumea 51(1): 25.
2006.
Type locality: Luzon (Benguet: Mt. Data)
Holotype: P
Collectors: Ramos & Edano BS 40215
Date of collection: September 1921

Pilogyne rizalensis W.J. de Wilde & Duyfjes -- Reinwardtia 12(5): 411 (410).
2009.
Type locality: Luzon (Rizal)
Holotype: BM
Collector: Ramos BS 2023
Date of collection: November 1914

Zehneria trichocarpa W.J.de Wilde & Duyfjes -- *Reinwardtia* 12(4): 271 -273 (fig. 2). 2008.

Type locality: Mindanao
Holotype: GH
Collectors: Ramos & Edano BS 84954
Date of collection: *

Cycadaceae

Cycas aenigma K.D.Hill & A.Lindstr. -- *Telopea* 12(1): 130 -132 (fig. 3). 2008.

Type locality: Palawan (Palawan: Puerto Princesa)
Holotype: LBC
Collector: Fernando 1617
Date of collection: June 2001

Cycas lacrimans A.Lindstr. & K.D.Hill -- *Telopea* 12(1): 136 -138 (fig. 5, map). 2008.

Type locality: Mindanao (Davao: Mati)
Holotype: NY
Collectors: Ramos & Edano BS48953
Date of collection: March 1927

Cycas nitida K.D.Hill & A.Lindstr. -- *Telopea* 12(1): 142 -143 (fig. 6, map). 2008.

Type locality: Luzon (Albay: Rapu-Rapu Is.)
Holotype: NSW 728768
Collectors: *
Date of collection: *

Cycas saxatilis K.D.Hill & A.Lindstr. -- *Telopea* 12(1): 128 -129 (fig. 2, map). 2008.

Type locality: Palawan (Palawan: St. Paul's Bay)
Holotype: L
Collector: Podzorski SMHI 2035
Date of collection: April 1984

Cycas truncata deLaub. -- *Encephalartos* 92: 17. 2007.

Type locality: Luzon (Bataan: Mariveles, Lamao Reserve)
Holotype: US
Collector: Merrill 3257
Date of collection: *

Cycas vespertilio A.Lindstr. & K.D.Hill -- *Telopea* 12(1): 134 -136 (fig. 4, map). 2008.

Type locality: Panay (Iloilo: Barotac Viejo, Bgy Lipata, Mt. Opao)
Holotype: LBC

Collector: Lindstrom AL 06/008
Date of collection: March 2006

Cycas zambalensis Madulid & Agoo -- *Blumea* 50(3): 520 (519-522, fig. 1). 2005.

Type locality: Luzon (Zambales: San Antonio)
Holotype: PNH
Collectors: Madulid & Agoo
Date of collection: 2005

Elaeocarpaceae

Elaeocarpus forbesii Merr. subsp. *ridsdalei* Coode -- *Kew Bull.* 62(2): 323 - 325 (fig. 1M-P). 2007.

Type locality: Mindoro (Mindoro: Subaan River headwaters)
Holotype: K
Collector: Coode 5663
Date of collection: May 1986

Ericaceae

Rhododendron javanicum Benn. subsp. *palawanense* Argent -- *Gard. Bull. Singapore* 56(1-2): 90 -91). 2004.

Type locality: Palawan (Palawan: Mt. Mantalingahan)
Holotype: PNH
Collectors: Argent & Romero
Date of collection: January 1998

Rhododendron mendumiae Argent -- *Gard. Bull. Singapore* 56(1-2): 82 -85 (fig. 2). 2004.

Type locality: Palawan (Palawan: Cleopatra Needle)
Holotype: PNH
Collectors: Argent, Chavez, Cronk, Fuentes, Menfum, Middleton & Wilkie 53
Date of collection: January 1998

Rhododendron reynosoi Argent -- *Gard. Bull. Singapore* 56(1-2): 84 (86-88 (fig. 3). 2004.

Type locality: Palawan (Palawan: Cleopatra Needle)
Holotype: PNH
Collectors: Argent, Chavez, Cronk, Fuentes, Mendum, Middleton & Wilkie 44A
Date of collection: January 1998

Rhododendron vidalii Rolfe subsp. *brachystemon* Argent -- *Folia Malaysiana* 4(2): 119. 2003.

Type locality: Mindoro (Oriental Mindoro: Mt. Halcon)

Holotype: PNH
Collectors: Argent, Mendum, Wilkie HAL 20, RBGE Acc. No.
19972470
Date of collection: October 1999

Rhododendron wilkiei Argent -- Gard. Bull. Singapore 56(1-2): 88 -90 (fig. 4).
2004.

Type locality: Palawan (Palawan: Thumb Peak)
Holotype: PNH
Collectors: Argent, Chavez, Cronk, Mendum, Middleton, Wilkie 48),
RBGE Acc. No. 19981810
Date of collection: January 1998

Euphorbiaceae

Acalypha pulogensis Sagun & G.A.Levin -- Blumea 52(2): 357 -359 (fig. 4).
2007.

Type locality: Luzon (Benguet: Kabayan, Mt. Pulog)
Holotype: L
Collector: Celestino PNH 4372
Date of collection: March 1948

Macaranga auctoris Whitmore -- Gen. Macaranga 82 -83). 2008.

Type locality: Palawan (Palawan: Taytay, Ibanglet., Pagdanan Range)
Holotype: L
Collectors: Soejarto & Fernando 7445
Date of collection: January 1991

Macaranga stonei Whitmore -- Gen. Macaranga 247. 2008.

Type locality: Luzon (Aurora)
Holotype: L
Collectors: Soejarto, Fernando & Fernando 7957
Date of collection: June 1993

Phyllanthus balgooyi Petra Hoffm. & A.J.M.Baker -- Blumea 48: 195. 2003.

Type locality: Palawan (Palawan: Puerto Princesa, Bacungan)
Holotype: K
Collector: Edaño PNH 178
Date of collection: March 1947

Icacinaceae

Gomphandra conklinii Schori -- Blumea 55(2): 192 - 194 (fig. 4, map). 2010.

Type locality: Luzon (Ifugao: Banaue, Amganad)
Holotype: PNH
Collectors: Banlugan et al. PNH 72486
Date of collection: September 1961

Gomphandra halconensis Schori -- Blumea 55(2): 191 - 192 (fig.3, map).
2010.

Type locality: Mindoro (Oriental Mindoro: Mt. Halcon, Ramayan Village)

Holotype: K

Collectors: Ridsdale, Coode & Reynoso 1702

Date of collection: May 1986

Juncaceae

Juncus decipiens subsp. *medianus* L.A.S.Johnson & K.L.Wilson -- Telopea 9:
377. 2001.

Type locality: non-Philippines (NG)

Holotype: NSW

Collectors: Floyd & Womersley 6297

Date of collection: November 1954

Leguminosae

Crotalaria assamica Benth. var. *philippinensis* Adema -- Blumea 51(2): 310 -
312 (fig. 1). 2006.

Type locality: Luzon (Abra)

Holotype: L

Collectors: Ramos BS 7255

Date of collection: January 1909

Crotalaria luzoniensis Adema -- Blumea 51(2): 312 -314 (fig. 2). 2006.

Type locality: Luzon (La Union: Bauang)

Holotype: L

Collector: Fenix BS 29236

Date of collection: December 1916

Indigofera erectifruca Y.Endo, H.Ohashi & Madulid -- J. Jap. Bot. 80(5): 261
-265 (figs. 1-3). 2005.

Type locality: Luzon (Mt. Province: Bontoc)

Holotype: TUS

Collectors: Nemoto, Reynoso, Endo, Iokawa, Yonekura, Ibaragi, Gaerlan
10630

Date of collection: November 1998

Meliaceae

Chisocheton maxilla-pisticis Mabb. -- Gard. Bull. Singapore 55(2): 189 -192
(fig.). 2003.

Type locality: non-Philippines (Sandakan)

Holotype: SAN
Collector: Sawan Tingki SAN 136830
Date of collection: July 1993

Moraceae

Ficus oleifolia King subsp. *monantha* Merr. & Quisumb. ex C.C.Berg --
Blumea 48(3): 541. 2003.

Type locality: Palawan (Palawan: Brooke's Point, Mt. Mantalingahan)
Holotype: L
Collector: Edano 4
Date of collection: May 1947

Ficus sohotonensis C.C.Berg -- Blumea 48(3): 561. 2003.

Type locality: Samar (Mt. Sohoton)
Holotype: L
Collectors: Gutierrez et al. 622
Date of collection: April 1970

Musaceae

Musa alinsanaya R.V.Valmayor -- Philipp. Agric. Sci. 87(1): 117. 2004.

Type locality: *
Holotype: LSU
Collector: Lelita Gonzal
Date of collection: July 2003

Myrsinaceae

Maesa stonoi Utteridge & R.M.K.Saunders -- Bot. J. Linn. Soc. 145(1): 37 -38
(fig. 5). 2004.

Type locality: Mindanao (South Cotabato: Tasaday forest)
Holotype: PNH
Collectors: Gutierrez, Yen, & Reynoso PNH 109009
Date of collection: July 1927

Nepenthaceae

Nepenthes attenboroughii A.S.Rob., S.McPherson & V.B.Heinrich -- Bot. J.
Linn. Soc. 159(2): 196 (195-202, figs. 1-2, map). 2009.

Type locality: Palawan (Palawan: Mt. Victoria)
Holotype: PPC
Collector: Robinson AR001
Date of collection: June 2007

Nepenthes gantungensis S.McPherson, Cervancia, Chi C.Lee, Jaunzems, Mey & A.S.Rob. -- Carniv. Pl. Hab. 2: 1286 -1295 (figs. 750-758). 2010.

Type locality: Palawan (Palawan: Mount Gantung)

Holotype: PPC

Collector: McPherson SRM 4

Date of collection: January 2010

Nepenthes hamiguitanensis Gronem, Wistuba, V.B.Heinrich, S.McPherson, Mey & V.B.Amoroso -- Carniv. Pl. Hab. 2: 1296 -1305 (figs. 759-766). 2010.

Type locality: Mindanao (Davao Oriental: Mt. Hamiguitan)

Holotype: CMUH 00006494

Collectors: Amoroso & Aspiras

Date of collection: March 2007

Nepenthes mantalingajanensis Nerz & Wistuba -- Taublatt 59(3): 17 -25; photos). 2007.

Type locality: Palawan (Palawan: Mt. Mantalingahan)

Holotype: TUB

Collectors: Nerz & Wistuba P001, cult. From seed

Date of collection: *

Nepenthes micramphora V.B.Heinrich, S.McPherson, Gronem. & V.B.Amoroso -- Pitcher Pl. Old World 2: 1315 (713-719, 1314-1319, figs. 387-391, 739). 2009.

Type locality: Mindanao (Oriental Davao: Mt. Hamiguitan)

Holotype: CMUH 3545

Collectors: Amoroso & Aspiras

Date of collection: January 2005

Nepenthes mindanaoensis Sh.Kurata -- J. Insectiv. Pl. Soc. 52(2): 32 -34 (fig. 2). 2001.

Type locality: Mindanao (Surigao: Mt. Carrascal)

Holotype: NDC

Collector: Mino 6838

Date of collection: August 1999

Nepenthes palawanensis S.McPherson, Cervancia, Chi C.Lee, Jaunzems, Mey & A.S.Rob. -- Carniv. Pl. Hab. 2: 1332 -1339 (figs. 783-789). 2010.

Type locality: Palawan (Palawan: Narra, Sultan Peak)

Holotype: PPC

Collector: McPherson SRM 0003

Date of collection: January 2010

Nepenthes peltata Sh.Kurata -- J. Insectiv. Pl. Soc. 59(1): 12 -17 (fig. 1; photogr. 1-10). 2008.

Type locality: Mindanao (Oriental Davao: Mt. Hamiguitan)

Holotype: KYO

Collector: Koshikawa 44
Date of collection: *

Nepenthes saranganiensis Sh.Kurata -- J. Insectiv. Pl. Soc. 54(2): 41 -44 (fig. 1, photogr. 1-7, cover page). 2003.

Type locality: Mindanao (Sarangani)
Holotype: PNH
Collector: Kurata 5008
Date of collection: October 2002

Orchidaceae

Bulbophyllum debrincatae J.J.Verm. -- Gard. Bull. Singapore 54: 114. 2002.

Type locality: Luzon (Nueva Viscaya)
Holotype: SING
Collector: Debrincat 001
Date of collection: *

Bulbophyllum ecornutoides Cootes & W.Suarez -- Austral. Orchid Rev. 71(6): 36 (figs.). 2006.

Type locality: Luzon (Quezon: Kapatalan)
Holotype: NSW 734355
Collector: Cootes JC001/2006
Date of collection: August 2006

Bulbophyllum glebulosum J.J.Verm. & Cootes -- Malesian Orchid J. 1: 147 - 149 (fig. 1). 2008.

Type locality: unknown
Holotype: WU
Collector: Hort. WU 001/069-1
Date of collection: *

Bulbophyllum pseudoconiferum W.Suarez & Cootes -- Orchideen J. 16(2): 74 -75 (figs.). 2009.

Type locality: Luzon (Nueva Vizcaya)
Holotype: NSW 741922
Collectors: *
Date of collection: *

Bulbophyllum rysyanum Roeth -- Orchidee (Hamburg) 58(4): 512 -514 (figs.). 2007.

Type locality: *
Holotype: HAL 104402
Collectors: Roeth & Rysy
Date of collection: July 2007

Bulbophyllum socordine J.J.Verm. & Cootes -- Malesian Orchid J. 1: 149 -151 (fig. 2). 2008.

Type locality: Luzon (Nueva Vizcaya)

Holotype: SING

Collector: Cootes 32

Date of collection: *

Bulbophyllum vespertilio Ferreras & Cootes – Orchideen J. 17(4): 150 (149-151; figs). 2010.

Type locality: Luzon (Isabela: Mt. Pasalaysay)

Holotype: PUH 14602

Collector: UF 781

Date of collection: February 2010

Calanthe alba W.Suarez & Cootes -- Orchideen J. 16(3): 116 -118 (figs). 2009.

Type locality: Luzon (Quezon: Mt. San Cristobal)

Holotype: NSW 773444

Collector: unknown

Date of collection: May 2005

**Coelandria armeniaca* M.A.Clem. & Cootes -- Orchideen J. 16(1): 22 -23 (fig.). 2009.

Type locality: Luzon (Aurora: Baler)

Holotype: CANB

Collector: Clare BC001/00

Date of collection: January 2000

Coelogyne alvinlokii P.O.Byrne & J.J.Verm. -- Orchid Rev. 114(1269): 170 (168-170, figs.). 2006.

Type locality: Mindanao

Holotype: SING

Collector: SBGO 5504

Date of collection: *

Coelogyne rubrolanata Elis George & J.-C.George -- Orchid Rev. 116(1280): 82 (81-83, figs.). 2008.

Type locality: *

Holotype: L

Collectors: E. & J.C. George s.n.

Date of collection: *

Coelogyne sulcata Elis George & J.-C.George -- Orchideen J. 15(4): 173 (172-175 figs.). 2008.

Type locality: Mindanao (Bukidnon)

Holotype: L

Collector: cult. In France

Date of collection: August 2008

Coelogyne usitana Roeth & O.Gruss -- Orchidee (Hamburg) 52: 211. 2001.

Type locality: Mindanao

Holotype: HAL 083742

Collectors: Vilmoor USITA

Date of collection: August 1999

Cymbidium chloranthum Lindl. subsp. *palawanense* Lubag-Arquiza -- Orchid Rev. 114(1271): 264 -265 (figs.). 2006.

Type locality: Palawan

Holotype: UPLB

Collector: Lubag-Aquiza PALM2001.021

Date of collection: March 2001

Dendrobium bicolense Lubag-Arquiza -- J. Orchideenfr. 13(4): 337 (336-343, figs.). 2006.

Type locality: Luzon (Bicol)

Holotype: UPLB

Collector: Lubag-Arquiza BR5

Date of collection: June 2000

Dendrobium davaoense Lubag-Arquiza -- Austral. Orchid Rev. 71(1): 22 -24 (figs.). 2006.

Type locality: Mindanao (Davao)

Holotype: UPLB Holo MARS2001.001

Collector: Lubag-Arquiza

Date of collection: September 2001

Dendrobium josephinae Cootes -- Austral. Orchid Rev. 73(4): 24 (figs.). 2008.

Type locality: Negros (Negros Oriental)

Holotype: NSW

Collector: Schneider s.n.

Date of collection: August 2007

Dendrobium niveobarbatum Cootes -- Austral. Orchid Rev. 73(4): 22 (figs.). 2008.

Type locality: Mindanao (Bukidnon)

Holotype: NSW 638111

Collector: Suarez s.n.

Date of collection: July 2006

Dendrobium ravanii Cootes -- Orchideen J. 15(2): 70 -72 (figs.). 2008.

Type locality: Mindoro (Oriental Mindoro: Mt. Malasimbo)

Holotype: NSW 761419

Collector: Schneider 001/2007

Date of collection: 2007

Dendrobium valmayorae D.Tiu—Philipp. Orchid Rev. 18(1): 4-5 (figs.). 2010.

Type locality: Mindanao (Bukidnon:Malaybalay)
Holotype: PNH
Collector: Ondino s.n.
Date of collection: January 2010

Dendrobium sibuyanense Lubag-Arquiza, Naranja, Baldos & Sacdalan --
Orchid Digest 70(3): 174. 2006.

Type locality: Sibuyan (Romblon: Mt. Nailog)
Holotype: Philipp. Agric. Sci. 88(4): 484-488, fig. 1. 2005.
Collectors: *
Date of collection: *

Dendrobium stricticalcarum W.Suarez & Cootes -- Austral. Orchid Rev.
73(4): 23 (figs.). 2008.

Type locality: Luzon (Laguna: Kapatalan)
Holotype: NSW 638110
Collector: Suarez s.n.
Date of collection: July 2006

Dendrochilum banksii Cootes -- Austral. Orchid Rev. 74(4): 13 -14 (figs.).
2009.

Type locality: Luzon (Laguna: Kapatalan)
Holotype: NSW 771110
Collector: Banks
Date of collection: July 2008

Dendrochilum cordatum H.A.Pedersen -- Lindleyana 16: 231. 2001.

Type locality: Luzon (Nueva Vizcaya: near Imugan)
Holotype: NSW 420797
Collector: Cootes JC004/96
Date of collection: 1996

Dendrochilum croceum H.A.Pedersen -- Orchid Rev. 113(1265): 286 -287
(fig.) 2005.

Type locality: *
Holotype: C
Collector: Warren EQ3085 (cult.)
Date of collection: *

Dendrochilum quinquecallosum H.A.Pedersen -- Orchid Rev. 115(1276): 223
-225; fig.). 2007.

Type locality: *
Holotype: C
Collector: Warren EQ5071 (cult.)
Date of collection: *

Dendrochilum ravanii Cootes -- Orchideen J. 17(3): 114 -115; figs). 2010.

Type locality: *
Holotype: NSW 863058
Collector: Schneider s.n.
Date of collection: February 2010

Dendrochilum undulatum H.A.Pedersen -- Orchid Rev. 115: 225. 2007.

Type locality: *
Holotype: C
Collector: cult. Warren EQ5035
Date of collection: *

Epicranthes glebodactyla W.Suarez & Cootes -- Orchideen J. 16(3): 118 -119; figs). 2009.

Type locality: Luzon (Nueva Vizcaya)
Holotype: NSW 773437
Collector: *
Date of collection: June 2008

Euphlebiium decoratum M.A.Clem. & Cootes -- Orchideen J. 16(1): 25 -27 (fig.). 2009.

Type locality: Luzon (Nueva Vizcaya)
Holotype: CANB
Collector: Cootes 4014 (cult.)
Date of collection: September 2002

Euphlebiium rhodochilum Ferreras & Cootes -- Orchideen J. 17(2): 54 -57 (figs.). 2010.

Type locality: Mindanao (Agusan del Sur: San Francisco, Mt. Magdiwata)
Holotype: PUH 14591
Collector: Ferreras 721
Date of collection: May 2009

Flickingeria praetermissa W.Suarez & Cootes -- Philipp. Orchid Rev. 15(2): 19. 2007.

Type locality: *
Holotype: AMES
Collector: Wenzel 65
Date of collection: *

Grammatophyllum ravanii D.Tiu -- Deciphering Script. Philipp. Grammatophyllum: 90. 2009.

Type locality: Mindoro (Mindoro: Mt. Malasimbo)
Holotype: PNH
Collector: R. Schneider
Date of collection: June 2007

Grastidium chlorinum M.A.Clem. & Cootes -- Orchideen J. 16(1): 24 -25; fig.). 2009.

Type locality: Luzon (Nueva Vizcaya)
Holotype: CANB
Collector: Cootes 001/03
Date of collection: April 2003

Liparis asinacephala W.Suarez & Cootes -- Austral. Orchid Rev. 73(4): 25 (figs.). 2008.

Type locality: Luzon (Nueva Vizcaya: Dalton Pass)
Holotype: NSW 638116
Collector: Suarez
Date of collection: July 2006

Malleola eburnea W.Suarez & Cootes -- Austral. Orchid Rev. 72(3): 18 (figs.). 2007.

Type locality: Luzon (Laguna: Kapatalan)
Holotype: NSW 741908
Collector: Suarez WS 001/2006
Date of collection: August 2006

Micropera edanoi Ormerod -- Taiwania 53(2): 159 -160; fig. 2). 2008.

Type locality: Palawan (Palawan: Puerto Princesa, Bacungan)
Holotype: AMES
Collector: Edano 716 (PNH 396)
Date of collection: March 1947

Micropera utriculosa (Ames) Garay var. *diwata* Lubag-Arquiza -- Austral. Orchid Rev. 71(6): 39 -40 (figs.). 2006.

Type locality: Mindanao (Agusan del Sur)
Holotype: UPLB Orchid Nursery
Collector: Lubag-Arquiza AGUA2001.002
Date of collection: August 2001

Mycaranthes leonardoii Ferreras & W.Suarez -- Austral. Orchid Rev. 74(6): 36 - 38; figs). 2009.

Type locality: Luzon (Nueva Ecija: Gabaldon, Mt. Mingan)
Holotype: PUH 14585
Collector: Ferreras 457
Date of collection: June 2006

Paphiopedilum philippinense (Rchb.f.) Stein var. *compactum* O.Gruss, Roellke & Roeth -- Orchidee (Hamburg) 59(3-4): 318 (316-318, figs.). 2008.

Type locality: Palawan
Holotype: HAL 100121
Collectors: Gruss & Roeth
Date of collection: March 2000

Phalaenopsis hieroglyphica (Rchb.f.) H.R.Sweet f. *flava* O.Gruss -- Orchidee (Hamburg) 60(4): 438 (fig.). 2009.

Type locality: *
Holotype: HAL 106617
Collectors: Gruss (cult. in Florida)
Date of collection: 2008

Robiquetia enigma Ferreras & W.Suarez -- Austral. Orchid Rev. 74(6): 38 - 39; figs). 2009.

Type locality: Luzon (Nueva Ecija: Gabaldon, Mt. Sawmill, Higher Inipit, Mingan)
Holotype: PUH
Collector: Ferreras 386
Date of collection: June 2006

Samarorchis sulitiana Ormerod -- Taiwania 53(2): 160 -162 (fig. 3). 2008.

Type locality: Samar: Samar: Tinane, Loquilocon, Wright)
Holotype: AMES
Collectors: Sulit & Conese 3049
Date of collection: May 1948

Santotomasia wardiana Ormerod -- Taiwania 53(2): 162 -163 (fig. 4). 2008.

Type locality: Luzon (Benguet: Mt. Santo Tomas)
Holotype: AMES
Collector: Ward
Date of collection: cult. 1913

Spathoglottis kimballiana var. *antiquensis* T.Green -- Orchid Digest 65: 89. 2001.

Type locality: Panay (Antique)
Holotype: BISH
Collector: Green 95092
Date of collection: *

Spathoglottis palawanensis Lubag-Arquiza -- Orchid Digest 70(3): 170 -171; photogr.). 2006.

Type locality: Palawan (Palawan: Puerto Princesa)
Holotype: UPLB
Collector: Lubag-Arquiza PALM 2001.020
Date of collection: March 2001

Spathoglottis philippinensis Lubag-Arquiza -- Orchid Digest 70(3): 171 -173; photogr.). 2006.

Type locality: Central Visayas
Holotype: UPLB
Collector: Lubag-Arquiza CVA2001.001
Date of collection: August 2001

Thrixspermum bromeliforme W.Suarez -- Austral. Orchid Rev. 74(3): 33 (figs.). 2009.

Type locality: Luzon (Laguna: Siniloan)
Holotype: NSW
Collector: Suarez 773441
Date of collection: *

Thrixspermum cootesii W.Suarez -- Austral. Orchid Rev. 74(3): 34 (figs.). 2009.

Type locality: Mindoro (Oriental Mindoro: Pola)
Holotype: NSW
Collector: Suarez 773443
Date of collection: *

Trichoglottis apoensis T.Hashim. subsp. *alba* Agoo -- Philipp. Scientist 43: 35-36, 39; plate 1). 2007.

Type locality: Palawan (Palawan: Puerto Princesa)
Holotype: PNH 172170
Collector: Majaducon
Date of collection: April 2001

Trichoglottis intermedia L.O.Williams var. *marginata* Agoo -- Philipp. Scientist 43: 36-37, 40; plate 2). 2007.

Type locality: Luzon (Ifugao)
Holotype: PNH 172172
Collectors: Madulid & Agoo
Date of collection: November 2000

Trichoglottis mindanaensis Ames f. *lutea* Agoo -- Philipp. Scientist 43: 37-39, 41; plate 3). 2007.

Type locality: Mindoro (Oriental Mindoro: Puerto Galera)
Holotype: PNH 172174
Collectors: Madulid & Agoo 2021
Date of collection: *

Tuberolabium phillipsii Choltco -- Orchids (West Palm Beach) 76(3): 220 - 221 (fig. 1). 2007.

Type locality: Palawan
Holotype: PSU
Collector: Choltco
Date of collection: November 2006

Tuberolabium quisumbingii (L.O.Williams) Christenson var. *xanthum* Choltco -- Orchids (West Palm Beach) 76(3): 221 (fig. 2). 2007.

Type locality: Palawan
Holotype: PSU
Collector: Choltco

Date of collection: *

Tuberolabium woodii Choltco -- Orchids (West Palm Beach) 75(12): 924-925 (fig. 4). 2006.

Type locality: Palawan

Holotype: PSU

Collector: Choltco

Date of collection: *

Pinaceae

Pinus merkusii Jungh. & de Vriese subsp. *ustulata* Businský -- Acta Průhon. 88: 7 (fig. 28 C-D & photos 20, 35-36). 2008.

Type locality: Luzon (Zambales: High Peak)

Holotype: PR

Collector: Businsky 49104

Date of collection: March 2000

Poaceae

Cyrtochloa mindoroensis S.Dransf. -- Kew Bull. 58(4): 981. 2004.

Type locality: Mindoro (Mindoro: Mt. Calavite)

Holotype: K

Collector: Ramos 39366

Date of collection: April 1921

Rafflesiaceae

Rafflesia aurantia Barcelona, Co & Balete -- Gard. Bull. Singapore 61(1): 18 (17-27 (figs. 1-3)). 2009.

Type locality: Luzon (Quirino: Matmad, Mangitaguid, Sierra Madre Mountains)

Holotype: PNH

Collectors: Bartolome & Balete 2543

Date of collection: June 2004

Rafflesia baletei Barcelona & Cajano -- Kew Bull. 61(2): 232 (231-237 (figs. 1-5)). 2006.

Type locality: Luzon (Camarines Sur: Ocampo, del Rosario, Mt. Isarog National Park)

Holotype: PNH

Collectors: Candelaria et al. 5526

Date of collection: March 2005

Rafflesia banahaw Barcelona, Pelsner & Cajano -- *Blumea* 52(2): 346 (345-350 (fig. 1, plate 1). 2007.

Type locality: Luzon (Quezon: Dolores, Kinabuhayan, Mt. Banahaw)

Holotype: PNH

Collectors: Barcelona, Cajano & Mendua 3345

Date of collection: 2007

Rafflesia banahawensis Madulid, Villariba & Agoo -- *Philipp. Scientist* 43: 45-49 (figs 1-3). 2007.

Type locality: Luzon (Quezon: Kinabuhayan, Mt. Banahaw)

Holotype: PNH

Collector: MSEUF 101

Date of collection: 2006

Rafflesia banoana Malabrigo -- *Asia Life Sciences Suppl.* 4:139-146. 2010.

Type locality: Luzon (Kalinga: Balbalan)

Holotype: LBC

Collector: Malabrigo 605

Date of collection: 2010

Rafflesia leonardii Barcelona & Pelsner -- *Blumea* 53(1): 224 (223-228, figs.). 2008.

Type locality: Luzon (Cagayan: Gattaran, Balos Point, Kanapawan)

Holotype: PNH

Collectors: Barcelona et al. 3355

Date of collection: 2008

Rafflesia lobata R.Galang & Madulid -- *Folia Malaysiana* 7(1-2): 2 (1-8 figs.). 2006.

Type locality: Panay (Antique: Sebaste, Idio, Mt. Igtuog)

Holotype: PNH

Collectors: Galang et al. 001

Date of collection: June 2006

Rafflesia magnifica Madulid, Tandang & Agoo -- *Acta Manilana* 53: 3 (1-6; figs. 1-3). 2005.

Type locality: Mindanao (Compostela Valley: Maragusan)

Holotype: PNH

Collector: Badilla 1

Date of collection: October 2005

Rafflesia mira Fernando & Ong -- *Asia Life Sci.* 14(2): 267 -269 (figs. 1-2). 2005.

Type locality: Mindanao (Compostela Valley: Mt. Candalaga)

Holotype: LBC

Collectors: Fernando & Ng 1653

Date of collection: *

Rafflesia panchoana Madulid, Buot & Agoo -- Acta Manilana 55: 44 (43-47; figs. 1-2). 2007.

Type locality: Luzon (Laguna: Mt. Makiling)

Holotype: US 0090412

Collectors: Brown

Date of collection: 1914

Rafflesia verrucosa Balete, Pelsner, Nickrent & Barcelona – Phytotaxa 10: 50 (49-55; 2A-F, 3A-F). 2010.

Type locality: Mindanao (Davao Oriental: Mt. Kampalini)

Holotype: PNH

Collector: Balete 17

Date of collection: March 2010

Rubiaceae

Gardenia elata Ridl. var. *longipedicellata* K.M.Wong -- Gard. Bull. Singapore 61(1): 115 -116 (fig. 3). 2009.

Type locality: Luzon (Cagayan)

Holotype: A

Collector: Ponce FB 28435

Date of collection: May 1921

Mussaenda ustii Alejandro -- Bot. J. Linn. Soc. 158(1): 88 -90 (fig. 1). 2008.

Type locality: Panay: (Aklan: Nabas, Mt. Laserna)

Holotype: L

Collectors: Alejandro & Castro 028

Date of collection: September 2002

Mussaenda viridiflora Alejandro -- Bot. J. Linn. Soc. 158(1): 90 -91 (fig. 2). 2008.

Type locality: Panay (Aklan: Buruanga, Tigum, Mt. Mangamura)

Holotype: USTH

Collectors: Alejandro & Castro 049

Date of collection: October 2002

Psychotria alabatensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 142 (fig. 74). 2007.

Type locality: Luzon (Quezon:Alabat)

Holotype: K

Collectors: Ramos & Edano BS 48006

Date of collection: September 1926

Psychotria alzapaniensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 123 -125 (fig. 64). 2007.

Type locality: Luzon (Quezon: Mt. Alzapan)

Holotype: BM

Collectors: Ramos & Edano BS 45688
Date of collection: May 1925

Psychotria banahaensis Elmer var. *montalbanensis* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 188 (fig. 100). 2007.

Type locality: Luzon (Aurora: Dingalan, Sierra Madre Mountains)
Holotype: L
Collector: Jacobs 7846
Date of collection: March 1968

Psychotria bayombongensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 203 - 204 (fig. 109). 2007.

Type locality: Luzon (Nueva Vizcaya: Bayombong)
Holotype: K
Collectors: Vidal 3068
Date of collection: March 1886

Psychotria casiguraensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 208 (fig. 112). 2007.

Type locality: Luzon (Quezon: Casiguran)
Holotype: BM
Collectors: Ramos & Edano BS 45291
Date of collection: May 1925

Psychotria catanduanensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 184 - 186 (fig. 98). 2007.

Type locality: Catanduanes (Masanganbahi)
Holotype: NY
Collectors: Ramos & Edano BS 75589
Date of collection: August 1928

Psychotria christarusselliae Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 39 - 41 (fig. 15). 2007.

Type locality: Bohol
Holotype: P
Collector: Ramos BS 43230
Date of collection: August 1923

Psychotria conglomeratiflora Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 120 (fig. 62). 2007.

Type locality: Samar (Western Samar: Bagacay)
Holotype: PNH
Collector: Sulit PNH 6306
Date of collection: April 1948

Psychotria crassifolia Miq. var. *culionensis* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 157 (fig. 83). 2007.

Type locality: Culion (Palawan: Culion)

Holotype: L

Collector: Ramos BS 41319

Date of collection: October 1922

Psychotria dingalanensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 171 (173-174 (fig. 91). 2007.

Type locality: Luzon (Aurora: Dingalan, Sierra Madre Mountains)

Holotype: K

Collector: Jacobs 7654

Date of collection: March 1968

Psychotria foxworthyi Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 145 -147 (fig. 76). 2007.

Type locality: Palawan

Holotype: NY

Collector: Foxworthy BS 657

Date of collection: March 1906

Psychotria frakei Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 147 (149-150 (fig. 78). 2007.

Type locality: Mindanao (Zamboanga del Norte)

Holotype: A

Collector: Frake PNH 38038

Date of collection: January 1958

Psychotria galintanensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 188 -191 (fig. 101). 2007.

Type locality: Mindanao (Davao: Mt. Galintan)

Holotype: UC

Collectors: Ramos & Edano BS 48899

Date of collection: June 1927

Psychotria hilonghilongensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 220 (fig. 119). 2007.

Type locality: Mindanao (Agusan: Mt. Hilong-Hilong)

Holotype: A

Collectors: Mendoza & Convozar PNH 10760

Date of collection: April 1949

Psychotria iridensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 134 (fig. 70). 2007.

Type locality: Luzon (Rizal: Mt. Irid)

Holotype: A

Collectors: Ramos & Edano BS 48443

Date of collection: November 1926

Psychotria madulidii Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 60 (fig. 26). 2007.

Type locality: Luzon (Cagayan: Mt. Cagua)
Holotype: A
Collector: Edano BS 78408
Date of collection: October 1929

Psychotria mendozii Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 214 -215 (fig. 116). 2007.

Type locality: Mindanao (Agusan del Norte: Mt. Hilong-Hilong)
Holotype: A
Collectors: Mendoza & Convozar PNH 10789
Date of collection: April 1949

Psychotria merrittoides Sohmer & A.P.Davis -- -- Sida, Bot. Misc. 27: 142 - 145 (fig. 75). 2007.

Type locality: Luzon (Kalinga-Apayao: Mt. Magnas)
Holotype: PNH
Collector: Edano PNH 19774
Date of collection: June 1953

Psychotria olsenii Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 20 (fig. 3). 2007.

Type locality: Tawi-Tawi (Tawi-Tawi: Tarawakan)
Holotype: L
Collector: Olsen 758
Date of collection: November 1961

Psychotria palimlimensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 223 (225-226, fig. 122). 2007.

Type locality: Luzon (Ilocos Norte: Mt. Palimlim)
Holotype: A
Collector: Ramos BS 33364
Date of collection: August 1918

Psychotria paloensis Elmer var. *bukidnonensis* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 196 -197 (fig. 105). 2007.

Type locality: Mindanao (Bukidnon: Bgy Kibangay, Mt. Kitanglad)
Holotype: A
Collector: Sulit PNH 9977
Date of collection: March 1949

Psychotria paloensis Elmer var. *ovatifolia* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 197 (199, fig. 107). 2007.

Type locality: Mindoro (Occidental Mindoro: Paluan)
Holotype: US

Collector: Ramos BS 39564
Date of collection: April 1921

Psychotria paloensis Elmer var. *subelliptifolia* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 199 -201 (fig. 108). 2007.

Type locality: Leyte (Ormoc: Lake Danao)
Holotype: A
Collector: Edano PNH 11913
Date of collection: March 1950

Psychotria paloensis Elmer var. *wenzeliana* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 201 (fig. 106). 2007.

Type locality: Mindanao (Surigao: Tubud, Placer)
Holotype: MO
Collector: Wenzel 3261
Date of collection: April 1928

Psychotria paracalensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 20 (22-23, fig. 4). 2007.

Type locality: Luzon (Camarines: Paracale)
Holotype: A
Collectors: Ramos & Edano BS 33697
Date of collection: November 1918

Psychotria patulinervia Merr. & Quisumb. ex Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 206 -208 (fig. 111). 2007.

Type locality: Mindanao (Davao: Mt. Apo, Miran River)
Holotype: L
Collector: Edano PNH 1420
Date of collection: November 1946

Psychotria pilosella Elmer var. *samarensis* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 108 (fig. 56). 2007.

Type locality: Samar (Northern Samar: Mt. Cansayao)
Holotype: A
Collector: Sulit PNH 14346
Date of collection: April 1951

Psychotria quisumbingiana Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 136 (138, fig. 72). 2007.

Type locality: Bohol (Bohol: Sevilla)
Holotype: UC
Collector: Ramos BS 43188
Date of collection: September 1923

Psychotria reynosoi Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 191 -194 (figs. 2e, 103). 2007.

Type locality: Luzon (Zambales: Mt. Marayep)
Holotype: UC
Collectors: Ramos & Edano BS 44808
Date of collection: December 1924

Psychotria rubiginosa Elmer var. *jacobsii* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 129 -131 (fig. 67). 2007.

Type locality: Luzon (Quezon: Dingalan, Sierra Madre Mts.)
Holotype: L
Collector: Jacobs 7847
Date of collection: March 1968

Psychotria sohotonensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 228 (230-231, fig. 125). 2007.

Type locality: Samar (Western Samar: Mt. Sohoton)
Holotype: L
Collectors: Madulid et al. PNH 117798
Date of collection: April 1970

Psychotria sulitii Merr. & Quisumb. ex Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 100 -103 (fig. 52). 2007.

Type locality: Samar (Western Samar: Mt. Calbiga)
Holotype: A
Collector: Sulit PNH 6408
Date of collection: May 1948

Psychotria surigaoensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 100 (fig. 51). 2007.

Type locality: Mindanao (Surigao del Norte)
Holotype: BM
Collectors: Ramos & Pascasio BS 34581
Date of collection: April 1919

Psychotria tayabensis Elmer var. *pinagteponanensis* Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 88 (fig. 42). 2007.

Type locality: Luzon (Cagayan: Pinagteponan River)
Holotype: A
Collector: Edano BS 78343
Date of collection: October 1929

Psychotria yagawensis Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 66 (fig. 30). 2007.

Type locality: Mindoro (Mt. Yagaw)
Holotype: PNH 18678
Collector: Conklin
Date of collection: July 1953

Psychotria yenii Sohmer & A.P.Davis -- Sida, Bot. Misc. 27: 68 (70-71, fig. 32). 2007.

Type locality: Mindanao (South Cotabato: Tasaday forest)

Holotype: BISH

Collector: Yen 173

Date of collection: 1972

Sapotaceae

Pouteria ridsdalei Vink -- Blumea 47: 136. 2002.

Type locality: Mindoro (Mt. Halcon)

Holotype: L

Collector: Ridsdale 1695

Date of collection: September 1986

Taxaceae

Taxus obscura Spiut -- J. Bot. Res. Inst. Texas 1(1): 235 -237 (fig. 23). 2007.

Type locality: Luzon (Quezon: Mt. Banahao)

Holotype: A

Collector: de Laubenfels P668

Date of collection: August 1978

Zingiberaceae

Zingiber banhaoense Mood & Theilade -- Nordic J. Bot. 21: 129. 2001.

Type locality: Luzon (Quezon: Dolores, Mt. Banahao)

Holotype: AAU

Collector: Mood 506

Date of collection: September 1993

Zingiber matutumense Mood & Theilade -- Nordic J. Bot. 21: 130. 2001.

Type locality: Mindanao (Mt. Matutum)

Holotype: AAU

Collector: Hepton W83P754

Date of collection: 1982

DISCUSSION

There are about 193 new species and varieties of seed plants (gymnosperms and angiosperms) under 31 families named in the past decade (Table 1). The most number of species fall under the families Orchidaceae (55), Rubiaceae (39), Asclepiadaceae (22), Rafflesiaceae (11), Nepenthaceae (9), Begoniaceae (8), Cycadaceae (7), Ericaceae (5), and Euphorbiaceae (4). The other families have 1-3 taxa each. The publication of these new taxa peaked in the second half of the decade (Figure 1).

Most of the new taxa of Philippine orchids belong to genera *Bulbophyllum*, *Dendrobium*, and *Dendrochilum* with types collected only in the last 15 years. The new discoveries brought the total number of the Philippine orchid flora to 1,143 species and varieties in 152 genera. Research peaked in the second half of the decade, particularly in 2008. Three new monotypic endemic genera, namely *Schuitemania*, *Santotomasia*, and *Samarorchis*, were also added to the inventory which already includes *Ceratocentron*, *Megalotus*, and *Phragmorchis*.

A revision on Philippine *Psychotria* (Rubiaceae) by Sohmer and Davis (2007) yielded 36 new species, all of which were based on holotypes collected from 1886, a Vidal collection, to 1968 deposited in various herbaria around the world. This only shows that historical specimens deposited in herbaria are a rich source of novel biodiversity information for the Philippines. On the other hand, the new species of *Hoya* are mainly based on specimens collected in the last 30 years. The new species of *Nepenthes* and *Rafflesia* were collected only in the last 10-15 years (except for the type of *Rafflesia panchoana* which was a Merrill specimen deposited in the US).

The surge in the number of species discovered in the second half of the decade could be attributed to increase in the interest in Philippine plant diversity as well as to collaboration between local and foreign researchers. This observation suggests that more collaborative research should be initiated and supported to ensure wider access to resources, particularly herbarium specimens and literature materials deposited in foreign herbaria, which otherwise are not readily available to Filipino researchers. In this aspect, the digitized literature available free or through electronic subscriptions, and herbarium resources, particularly type collection and species databases, made available through the internet by major herbaria and other taxonomic institutions, have also been very helpful for local scientists. This trend can be noted to start in the 1990s.

The holotype of these new species and varieties are deposited in 38 different herbaria around the world (Table 2). But only 71 out of the 193 holotypes are deposited in the Philippines, and among these only 30 are deposited in the Philippine National Herbarium. Within the country, the **PNH** and the University of the Philippines Herbaria (**CAHUP**, **UPLB**, **PUH**) house many of these holotypes. Outside of the country, many of the holotypes are deposited in **L** (Nationaal Herbarium Nederland, Leiden University Branch), **NSW** (National Herbarium of New South Wales, Royal Botanic Gardens, Sydney; for orchids), and **A** (Herbarium of the Arnold Arboretum, Harvard University).

This highlights the need to review the effectivity and implementation of R.A. 4846 and P.D. 374- Cultural Properties Preservation and Protection Act, R.A. 10066 - Philippine National Cultural Heritage Act, E.O. 247 -

Guidelines for Bioprospecting, and R.A. 9147 - Wildlife Resources Conservation and Protection Act. These laws prescribe, among others, that holotypes must be maintained by the Philippine National Museum, Manila.

PD374, otherwise known as the Cultural Properties Preservation and Protection Act, in particular, states among other things, that holotypes of natural history specimens are classified as Cultural Properties and considered property of the Philippine government. As such, the holotypes must be deposited or kept at the Philippine National Museum. Even with this specific provision of the law, only few follow this provision and many foreign taxonomists deposit the holotypes in institutions abroad. A number of local scientists also do not bother to send the holotypes to the Philippine National Museum because they are not aware of the law or they perhaps just totally ignore it. Both the Philippine National Museum and the Protected Areas and Wildlife Bureau must develop a strategy to ensure that these provisions are implemented through closer coordination and cooperation.

These data also show that the rate of seed plant discoveries in the country is about 19.3 new species in a year or one new species every 20 days. This figure is very much less compared to Brazilian plant discoveries which is one new species every two days! (Sobral and Stehmann, 2009).

The Philippine entries also represent only 0.3-1.9% or an average of 0.95% of the total discovered for the world for the period 2004-2010 (IPNI, 2010). This figure could, however, be an underestimate as the world data included ferns.

Small as it seems, these new discoveries have increased our knowledge of the Philippine flora by an approximate average of 2.41% from baseline figures of 7,620 (Myers et al., 2000) – 8,000 species (Madulid, 2000). Also, in lieu of the botanical collecting density index, this figure can serve to highlight the botanical species richness in the country. A total of 7,813-8193 species for the seed flora of the country translates into a ratio of 260-270 species per 10,000 km². This is much higher than that of Brazil, which is 70.5 species per 10,000 km² based on a figure of 60,000 plant species by Sobral and Stehmann (2009) citing various estimates and the Tropical Andes with 195 species per 10,000 km² based on an estimate of 30,000 plant species by Brooks et al. (2007). A more accurate count of the gymnosperm and angiosperm flora of the Philippines is given in an updated checklist by Madulid (in press) which includes new species, new combinations, and new records for the Philippines.

It could also be noted that these were contributions of 13 local and 71 foreign taxonomists who are affiliated with research institutions (e.g. Philippine National Herbarium, Royal Botanic Gardens Kew, Edinburgh, Sydney, National Herbarium of the Netherlands, Botanical Research Institute of Texas, among others), academic institutions (e.g. University of the Philippines, University of Santo Tomas, Central Mindanao University, De La

Salle University, among others) and private individuals and hobbyists. Some of these studies are results of taxonomic revision projects undertaken as part of academic requirements for graduate degrees, long term or continuous taxonomic studies of botanists based in the different herbaria or research institutions, as well as random discoveries in the course of botanical forays. Most of these efforts clearly cannot be sustained with the lack of manpower resources, financial support for taxonomic infrastructures and field and herbarium research.

Given these data, there is, therefore, a need to reassess local and global investment priorities for generating taxonomic information towards more meaningful conservation activities. A balance between floristic inventories and systematic or taxonomic revisions should be pursued. Poorly botanized places, in both protected and non-protected sites, and vegetation types like peat swamps, forest over limestone and ultramafic soils will definitely yield new species. But at the same time, efforts should also be focused on families or genera which have not been covered in modern revisions. The latter will however take more time, as the taxonomist should conduct herbarium, laboratory, and field work to complete a revision. A more structured project to cover the entire flora of the country, rather than piecemeal contributions, can then be undertaken. Such endeavour can benefit from the gains of the Flora of the Philippines project which was based at the PNH and funded by the US National Science Foundation and USAID. This project accumulated at least 75,000 collections from different parts of the country in 1990-2000 which are available at the PNH and with duplicates deposited at CAHUP and other herbaria abroad.

Table 1. Number of New Species and Varieties per Family

Family	Number of Species/ Varieties	Family	Number of Species/ Varieties
Orchidaceae	55	Acanthaceae	1
Rubiaceae	39	Araceae	1
Asclepiadaceae	22	Arecaceae	1
Rafflesiaceae	11	Asteraceae	1
Nepenthaceae	9	Campanulaceae	1
Begoniaceae	8	Crassulaceae	1
Cycadaceae	7	Elaocarpaceae	1
Ericaceae	5	Juncaceae	1
Euphorbiaceae	4	Meliaceae	1
Annonaceae	3	Musaceae	1
Apocynaceae	3	Myrsinaceae	1
Cucurbitaceae	3	Pinaceae	1
Leguminosae	3	Poaceae	1
Icacinaceae	2	Sapotaceae	1
Moraceae	2	Taxaceae	1
Zingiberaceae	2		

Table 2. Herbaria where holotypes of new taxa are deposited (2001-2010)

Herbarium Acronym	Herbarium Name	Number of Holotypes
PNH	Philippine National Herbarium, National Museum (Manila, Philippines)	31
CAHUP	University of the Philippines Los Banos (Museum of Natural History, UPLB, Laguna, Philippines)	13
UPLB*	may refer to University of the Philippines Los Banos (Laguna, Philippines)	7
PUH	Jose Vera Santos Memorial Herbarium, University of the Philippines (Quezon City, Philippines)	4

LBC	Forestry Herbarium, University of the Philippines at Los Banos (Museum of Natural History, UPLB, Laguna, Philippines)	5
CMUH*	may refer to Central Mindanao University Herbarium (Bukidnon, Philippines)	2
PPC	Palawan State University (Puerto Princesa City, Philippines)	3
PSU*	may refer to Palawan State University (PSU is registered as Prince of Songka University, Thailand)	3
LSU*	may refer to Leyte State University (LSU is registered as Louisiana State University, USA)	1
NDC*	may refer to Notre Dame College Herbarium (Cotabato, Philippines)	1
USTH*	University of Santo Tomas Herbarium (Manila, Philippines)	1
PAS J*	Philippine Agricultural Scientist Journal	1

Foreign Herbaria

L	Nationaal Herbarium Nederland Leiden University Branch (Leiden, Netherlands)	21
NSW	National Herbarium of New South Wales, Royal Botanic Gardens (Sydney, Australia)	17
A	Herbarium of the Arnold Arboretum, Harvard University (Cambridge, Massachusetts, USA)	16
K	Royal Botanic Gardens (Kew, England, UK)	9
UC	University Herbarium, University of California (Berkeley, California, USA)	8
BM	The Natural History Museum (Department of Botany, the Natural History Museum, London, UK)	5
US	United States National Herbarium, Smithsonian Institution (Washington, D.C., USA)	5
AMES	Orchid Herbarium of Oakes Ames, Harvard University (Cambridge, Massachusetts, USA)	4
BISH	Herbarium Pacificum, Bishop Museum (Honolulu, USA)	4
NY	William and Lynda Steere Herbarium, New York Botanical Garden (Bronx, New York, USA)	3
HAL	Martin Luther Universitat (Institut für Geobotanik und Botanischer Garten, Martin Luther Universitat, Halle, Germany)	4
C	University of Copenhagen (Botanical Garden and Museum, University of Copenhagen, Denmark)	3

CANB	Australian National Herbarium (Canberra, Australia)	3
SING	Singapore Botanic Gardens (Singapore)	3
AAU	University of Aarhus (Department of Biological Sciences, University of Aarhus, Denmark)	2
BRIT	Botanical Research Institute of Texas (Texas, USA)	2
E	Royal Botanic Garden Edinburgh (Scotland, UK)	2
KYO	Kyoto University (Botany Department, Kyoto University, Kyoto, Japan)	2
P	Herbier National de Paris, Muséum National d'Histoire Naturelle (Paris, France)	2
GH	Gray Herbarium, Harvard University (Cambridge, Massachusetts, USA)	1
MO	Missouri Botanical Garden (Missouri, USA)	1
PR	National Museum in Prague (Prague, Czech Republic)	1
SAN	Forest Research Center (Forest Department, Forest Research Center, Sandakan, Malaysia)	1
TUB	Eberhard Karls Universität Tübingen (Institut für Biologie, Lehrstuhl Spezielle Botanik, Tübingen, Germany)	1
TUS	Tohoku University (Botanical Gardens, Tohoku University, Sendai, Japan)	1
WU	Universität Wien (Faculty Center Botany, Dept of Plant Sciences and Evolution, Universität Wien, Austria)	1

*Not registered or not the official herbarium code as registered in Index Herbariorum (Thiers, continuously updated)

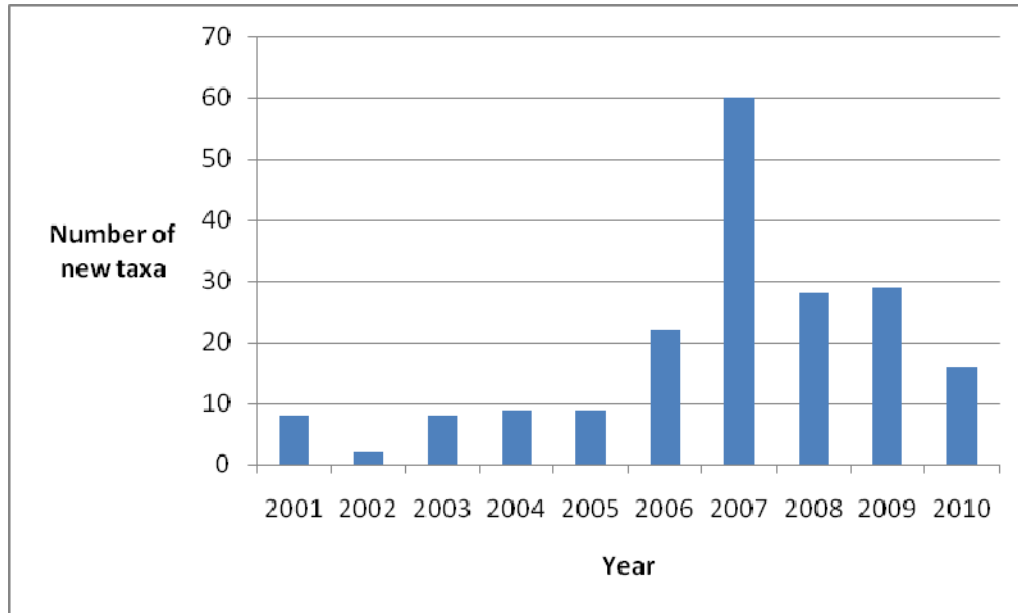


Figure 1. Number of new taxa discovered or named from 2001-2010

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