

Supplementary Table 4. State of knowledge of larger (≥ 40 spp.) vascular plant genera in New Guinea.

Genus	Family	State of knowledge
<i>Aeschynanthus</i>	Gesneriaceae	No modern revision in New Guinea.
<i>Agalmyla</i>	Gesneriaceae	Revised by Hilliard & Burt (2002).
<i>Aglaia</i>	Meliaceae	Monograph by Caroline Pannell (1992); also in Flora Malesiana (1995).
<i>Agrostophyllum</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Alpinia</i>	Zingiberaceae	Only partly revised by Burt & Smith (1983). The Zingiberaceae Resource Centre (https://padme.rbge.org.uk/ZRC/) contains information on New Guinea species.
<i>Alsophila</i>	Cyatheaceae	Revised under <i>Cyathea</i> as subg. <i>Cyathea</i> in Flora Malesiana Ser. II, 1(2) by Holttum (1963). It was an exhaustive effort including nearly all herbarium material available at that time, but recent new discoveries show that it was far from complete (Lehnert & Cámara-Leret 2019).
<i>Appendicula</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Archidendron</i>	Fabaceae	Most recent revision by Nielsen (1984), but further study desirable.
<i>Ardisia</i>	Primulaceae	Sleumer regarded his 1988 revision of this and other New Guinea Myrsinaceae as ‘preliminary’. Many collections could not fully be named.
<i>Asplenium</i>	Aspleniaceae	No modern revision. Copeland’s treatment (1949a) needs revision; currently being revised by Daniel Ohlsen for Flora Malesiana.
<i>Astronia/Astronidium</i>	Melastomataceae	Revised by J.F. Maxwell & J.F. Veldkamp (1990).
<i>Begonia</i>	Begoniaceae	No consolidated treatment and many species await to be described. Species described mainly by Irmscher. SE Asia checklist by Hughes (2008). Revision of Sect. <i>Symbegonia</i> in New Guinea by Gagul et al. (2018). The Begonia Resource Centre (https://padme.rbge.org.uk/Begonia/home) contains information on New Guinea species.
<i>Beilschmiedia/Endiandra</i>	Lauraceae	No treatment since Teschner (1923). Many additional species described by Allen & Kostermans. There may be generic delimitation problems vs. <i>Endiandra</i> .
<i>Bulbophyllum</i>	Orchidaceae	J.J. Vermeulen is revising this genus. de Vogel et al. are making a checklist for Malesian orchids in general, including illustrations on CD-ROMs.
<i>Calamus</i>	Areaceae	Important contributions by Beccari and Burret in numerous publications. Thirty five new species have been described since 2002 (e.g. Baker & Dransfield 2014, 2017). A complete monograph is in preparation by Baker & Dransfield.
<i>Casearia</i>	Salicaceae	Sleumer’s Flora Malesiana treatment is now over 60 years old.
<i>Ceratostylis</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Corybas</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Crepidium</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Cyperus</i>	Cyperaceae	Revised for Flora Malesiana by Kern (1974).
<i>Cryptocarya</i>	Lauraceae	No treatment since Teschner (1923). Many additional species described by Allen & Kostermans; now 96 named in all but no key available.
<i>Cyrtandra</i>	Gesneriaceae	No treatment since Schlechter (1923), except for Bismarck Archipelago. Species in New Guinea under revision by G. Bramley (Kew).
<i>Dendrobium</i>	Orchidaceae	Parts have been revised in relatively recent years.
<i>Dimorphanthera</i>	Ericaceae	Revised in Flora Malesiana by Sleumer (1967), with recent additions, including an updated key to accepted taxa, by Stevens (2004).
<i>Diospyros</i>	Ebenaceae	Last formally revised by Bakhuizen van den Brink (1936-1955), with additions by Kostermans (1977). The situation remains unsatisfactory and genus is being revised by C. Puglisi (Kew).
<i>Diplazium</i>	Athyriaceae	No modern revision. Copeland’s treatment (1949b) needs revision; Peter Hovenkamp had started work on an account for Flora Malesiana.
<i>Dysoxylum</i>	Meliaceae	Flora Malesiana treatment published (1995).
<i>Elaeocarpus</i>	Elaeocarpaceae	Coode (1978) in need of revision.
<i>Elatostema</i>	Urticaceae	Last treatments by Winkler (1922) and Schröter & Winkler (1935, 1936).

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<i>Endiandra</i>	Lauraceae	See <i>Beilschmiedia</i> .
<i>Ficus</i>	Moraceae	Revised in Flora Malesiana 17.2 by Corner & Berg.
<i>Freycinetia</i>	Pandanaceae	No modern revision. First checklist of accepted species by Stone (1982). Further progress made by K.-L. Huynh & A.P. Keim. The situation remains unsatisfactory with several binomials that need taxonomic evaluations.
<i>Garcinia</i> & allies	Clusiaceae	Treatment by Lauterbach (1922). Some additions have been made, e.g., by M. Nazre (2018).
<i>Glochidion</i>	Phyllanthaceae	First modern treatment by Shaw (1980), but needs more study.
<i>Glomera</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Guioa</i>	Sapindaceae	Revised by van Welzen (1989), also in Flora Malesiana 11(3).
<i>Hedyotis</i>	Rubiaceae	No treatment since Valetton (1927). Generic limits require review (with particular reference to <i>Exallage</i>).
<i>Hoya</i>	Apocynaceae	Forster & Liddle (1990) examined Australian species, some of which also occur in New Guinea. Contribution to a revision of New Guinea species by Simonsson & Rodda (2017).
<i>Hydnophytum</i>	Rubiaceae	Revised by Jebb & Huxley (2019).
<i>Hymenophyllum</i>	Hymenophyllaceae	Flora Malesiana revision in progress.
<i>Licuala</i>	Arecaceae	Last comprehensive revision by Odoardo Beccari (1931) and published posthumously as part of his general work on Coryphoid palms in SE Asia.
<i>Liparis</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Litsea</i>	Lauraceae	No treatment since Teschner (1923). Many additional species described by Allen & Kostermans; now 65 named in all but no key available.
<i>Macaranga</i>	Euphorbiaceae	First modern treatment by Whitmore (1980) but by specialist's admission needs more study. Prodrum by Whitmore (2008); Online resource maintained by P.C. van Welzen: www.nationaalherbarium.nl/euphorbs
<i>Marsdenia</i>	Apocynaceae	Revision by P.I. Forster (1995a, b). A new phylogeny of the genus is in preparation and <i>Marsdenia</i> s.l. in New Guinea might be split into a few separate genera.
<i>Melicope</i> & allies	Rutaceae	Revision by Hartley (2001).
<i>Medinilla</i>	Melastomataceae	Last treatment by Bakhuizen van den Brink (1943).
<i>Mussaenda</i>	Rubiaceae	Some work towards a revision has been carried out by O. Gideon.
<i>Myristica</i>	Myristicaceae	Flora Malesiana revision (1998).
<i>Oberonia</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Ophiorrhiza</i>	Rubiaceae	Last revised by Valetton (1925).
<i>Oreogrammitis</i>	Polypodiaceae	Revised by Parris (1983), Flora Malesiana revision in progress.
<i>Pandanus</i>	Pandanaceae	Partly revised by St. John (1960) and Stone (1974); further progress being made by M. Jebb & M.W. Callmander.
<i>Phreatia</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Piper</i>	Piperaceae	Key by M. Jebb in Johns, Flowering plants of Papuasias. Partial revisions by Wee-Lek Chew (1972, 1992, 2003) and Gardner (2003, 2013).
<i>Pouteria</i>	Sapotaceae	Considerably enlarged by addition of <i>Planchonella</i> . Pennington's Genera (1991) does not, however, contain a full new revision.
<i>Psychotria</i>	Rubiaceae	Non-climbing species revised by Sohmer (1988). Generic limits remain a problem.
<i>Rhododendron</i>	Ericaceae	Revised by Sleumer in Flora Malesiana 6 (8–10). New taxa added by Argent.
<i>Riedelia</i>	Zingiberaceae	No modern treatment. Last revised by Valetton (1913, 1914). Additions by van Royen (1979).
<i>Saurauia</i>	Actinidiaceae	Last full treatment by Diels (1922).
<i>Selaginella</i>	Selaginellaceae	Alston (BM) had identified all Malesian material, now it needs to be written up and subsequently described species included.

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<i>Schefflera</i>	Araliaceae	Last full treatment by Harms (1920-21); many additions by D.G. Frodin; alpines revised in 1980s. Perhaps 175 species in Papuasias; dozens still coming to light; no overall key.
<i>Solanum</i>	Solanaceae	Revised by Symon (1985). <i>Solanum ferocissimum</i> group by Bean (2016).
<i>Sphaerostephanos</i>	Thelypteridaceae	Revised by Holttum in Flora Malesiana (1981) Ser. II, 1(5).
<i>Syzygium</i>	Myrtaceae	Hartley & Perry (1973) was only a first attempt. J. Byng (L) presently revising Malesian specimens. Y.W. Low and collaborators (SBG, Univ. of Aberdeen, Kew, BALITBANGDA Papua Barat, and Universitas Papua) are revising species from the Bird's Head Peninsula since 2017. Kipiro Damas (LAE) and collaborators are working on Papua New Guinea species.
<i>Taeniophyllum</i>	Orchidaceae	See Orchids of New Guinea http://www.orchidsnewguinea.com (continuously updated).
<i>Timonius</i>	Rubiaceae	S.P. Darwin (1993, 1994, 2010) is publishing in parts a revision.
<i>Vaccinium</i>	Ericaceae	Revised by Sleumer in Flora Malesiana 6 (8–10). New taxa added by Argent.

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