XI. KEY TO THE GENERA OF ORCHIDACEAE OF NEW GUINEA

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INTRODUCTION

With roughly 2300 known species in 133 genera (see Appendix), New Guinea is the richest area in the palaeotropics as far as orchids are concerned.

Up to the present the only useful key with which orchids from New Guinea can be identified to genus level is that published by J.J. Smith in 1934. This key is now obsolete in several respects because of changes in nomenclature and in taxonomic views. Besides, Smith’s key is not always very practical; frequent use is made of characters which are difficult to evaluate in preserved material or which easily may be misunderstood. Yet, many orchid genera can be recognized at a glance, a fact which is not at all obvious from most keys that I have seen.

I have tried to write a key in which the use of ‘difficult characters’ is avoided as far as possible. As many genera are polymorphic with respect to ‘easy characters’, this means that they had to be included repeatedly. Purists may consider this a loss of efficiency, but I am of the opinion that a key is a tool which should above all be useful. The use of some terminology peculiar to orchids was unavoidable. An excellent survey of orchid morphology and biology is found in Dressler (1981). A drawback of the following key is that one needs complete specimens, because frequently vegetative as well as floral characters are to be evaluated. Please note that the key may not work for species from outside New Guinea, even if they belong to genera listed in the appendix.

I will be very grateful to those who inform me of errors and omissions encountered in this key. Material from New Guinea which seems to defy identification may be sent to me at the Rijksherbarium (compliance with CITES is required, of course).

Note: Characters after the — (long dash) are exclusive for that part of the lead, but are variable in the opposing one.

REFERENCES

Fig. 1. A. Orchid flower (*Agrostophyllum elatum*): a. lip; b. petal; c. column; d. dorsal sepal; e. lateral sepal. — B. Column with foot, lip attached to the top of the latter (*Pteroceras cladostachyum*, not from New Guinea). — C. Lip divided into a hypochilium and an epichilium (*Agrostophyllum earinoides*). — D. Flower with mentum (*Appendicula aberrans*). — E. Flower without mentum (*Coelogyne veitchii*). — All drawn by the author.
GLOSSARY

Caudicle — An appendage of the pollinia, formed within the anther. Often rather soft and shapeless.

Column-foot — A basal extension of the column, often at right angles to the ovary (see Fig. 1B).

Convolute — Margins of the leaves overlapping in bud.

Duplicate — Folded along midrib only (as in leaf of Paphiopedilum).

Ephemeral — Flower lasting a single day or less.

Epichilium — Apical part of a lip which is divided in two parts by a transverse fold or crest (see Fig. 1C).

Hypochilium — Basal part, often strongly concave, of a lip which is divided into two parts by a transverse fold or crest (see Fig. 1C).

Large — Flower more than 5 cm across.

Medium-sized — Flower c. 2.5-4 cm across.

Mentum — Chin-like structure formed by strongly oblique lateral sepals, usually together with the column-foot (see Fig. 1D, compare Fig. 1E).

Minute — Flower a few mm across.

Mobile — Said of a lip which is hinged to the column or column-foot and as a consequence can easily be moved upward and downward without severing the connection between lip and column (often a mere breeze suffices to put such a lip into motion).

Plicate — Folded along several veins (as in the leaf of Phaius tankervilleae).

Resupinate — Said of a flower in its natural position in which the lip is positioned below the column (the usual condition in orchids, as in Fig. 1A).

Rostellum — The part of the column which separates the anther from the stigma.

Sectile — Said of pollinia which consist of very many discrete parts.

Small — Flower c. 1-1.5 cm across.

Stipe — An appendage of the pollinia, formed outside the anther. Often rather stiff and of characteristic shape. Usually attached to a viscidium.

Viscidium — A sticky piece of tissue, formed outside the anther, to which the pollinia are attached, either directly or via the caudicles or the stipe.

KEY

1 Plant with leaves or plant epiphytic ........................................... 2
   — Terrestrial plant without leaves ........................................... Key I

2 Plant with less than 6 leaves per shoot, not monopodial, stem not climbing, leaves not laterally flattened, OR, when shoots 6- to many-leaved, leaves not arranged in two rows along an elongated stem (but spirally arranged, or on top of a pseudobulb, or in a basal, possibly distichous, rosette or on a very short stem) ............... 3
   — Plant with 6 or more leaves per shoot, arranged in two rows along an elongated stem, OR plant monopodial (see Key II lead 27 for a circumscription), OR a leafless epiphyte, OR plant with climbing stems (not just climbing rhizomes), OR leaves laterally flattened .................................................. Key II

3 Shoots 1- or 2-leaved, OR all leaves inserted above the base of a pseudobulb, OR lip insect-like ........................................... Key III
   — Shoots with 3 or more leaves which are not all inserted above the base of a pseudobulb. — Lip not insect-like ........................................... Key IV
KEY I

Leafless terrestrials (some of these may develop leaves after the flowering period)

1 Sepals and petals all connate ......................................................... 2
   — Sepals and petals free ......................................................... 4

2 Plant with a tuberous rhizome and a few roots, all subterranean. Inflorescence terminal. Spur absent ......................................................... 3
   — Plant consisting of a fascicle of exposed roots and a rudimentary stem from which the very slender inflorescences arise laterally. Spur present .......... Microtatorchis

3 Floral tube deeply split between the lateral sepals and the petals. Stigma near the top of the column. Pollinia 4 .......................... Didymoplexis
   — Floral tube not deeply split between the lateral sepals and the dorsal petal. Stigma near the base of the column. Pollinia 2 ...................... Gastrodia

4 Stems climbing .................................................................................. 5
   — Stems not climbing ....................................................................... 6

5 Inflorescence and flowers at least partly hairy. Lip cup-shaped .............. Galeola
   — Inflorescence and flowers glabrous. Lip not cup-shaped ............... Pseudovanilla

6 Flower outside at the base without a collar-like structure ...................... 7
   — Flower outside at the base with a collar-like structure ............... Lecanorchis

7 Dorsal sepal and lateral sepals similar. Lip not spurred, or spur 1 .............. 8
   — Dorsal sepal very different from the lateral sepals. Lip with two short conical spurs.
      — Inflorescence a single flower .............................................. Corybas

8 Lip not beard-like, not blue at the base ............................................. 9
   — Lip beard-like, metallic blue at the base .................................. Calochilus

9 Column glabrous. Pollinia 2 or 4 ..................................................... 10
   — Column finely pubescent. Pollinia 8. — Ovary and sepals finely pubescent ......................................................................................... Pachystoma

10 Top of the column obtuse in lateral view. Pollinia either without a stipe, or solid-waxy ......................................................... 11
   — Top of the column pointed in lateral view. Pollinia sectile, attached with a stipe to a distinct viscidium ......................................... Cystorchis

11 Lip at the base with a short spur or sac ........................................... 12
   — Lip not spurred nor saccate ....................................................... 13

12 Lip entire. Pollinia sectile .............................................................. Epipogium
   — Lip 3-lobed. Pollinia solid-waxy, cleft at the base ....................... Eulophia
13 Flowers glabrous outside, resupinate. — Inflorescence not branched ......... 14
   — Flowers brown-mealy outside, not resupinate ............................. Cyrtosia

14 Lip not as below ................................................................. 15
   — Lip entire, at base with 2 warts, otherwise smooth, narrowly elliptic  Stereosandra

15 Lip not clearly divided into two parts ........................................ 16
   — Lip divided into a concave, bilobed basal part and a less concave, often 3-lobed api-cal part .................................................. Aphyllorchis

16 Very tall plant (0.6 to 1.5 m or more). Leaves absent. Base of the lip not clasping the column. Pollinia solid-waxy, cleft at the base, attached to a bifid stipe, with viscidium ............................................. Dipodium
   — Plant much smaller. Reniform or suborbicular leaves present after the flowering period. Base of the lip clasping the column. Pollinia sectile, without appendages, without viscidium ........................................ Nervilia

KEY II

Plants with elongated stems which carry at least 6 clearly distichous leaves, OR plants monopodial, OR plants with climbing stems, OR leaves laterally flattened.

1 Leaves laterally flattened or filiform ...................................... 2
   — Leaves dorso-ventrally flattened, or more or less fleshy-terete, or absent .... 9

2 Inflorescence a terminal raceme ............................................. 3
   — Inflorescence 1-flowered or exclusively lateral (sometimes produced on the leafless top part of a stem, this may resemble a raceme, but the ‘rhachis’ is then covered by brownish scales) ........................................ 6

3 Inflorescence without laterally flattened bracts. Flowers small to minute. Pollinia 4 ................................................................. 4
   — Inflorescence with laterally flattened bracts. Flowers medium- sized, Pollinia 2. — Flowers ephemeral, produced successively on a very short raceme, bracts laterally flattened ................................ Bromheadia section Aporodes

4 Inflorescence with numerous open flowers. Lip not enclosed by the lateral sepal-s. Column without a foot ............................................. 5
   — Inflorescences with a few open flowers only. Lip enclosed by the lateral sepals. Column with a distinct foot .................................. Podochilus

5 Column long and slender. — Plant with a creeping rhizome ........... Hippeophyllum
   — Column very short .............................................................. Oberonia

6 Column with a foot .............................................................. 7
   — Column without a foot. — Leaves not grooved above .................. Octarrhena
7 Leaves not grooved above. Inflorescence few-flowered. Flowers small to medium-sized ......................................................... 8
    Leaves grooved above. Inflorescence many-flowered. Flowers minute  Phreatia

8 Inflorescence with 1 or 2 flowers, or, if a raceme, shoots 1-leaved. Pollinia 4 in two pairs .................................................. Dendrobium
    Inflorescence a 3–many-flowered raceme. Pollinia 8. — Shoots several-leaved  Eria section Aporodes

9 Plant leafless and stemless (except for inflorescence) ........................................... 10
    Plant with leaves or with climbing stems ........................................ 11

10 Pollinia 2. — Sepals and petals connate .......................... Microtatorchis
    Pollinia 4 ........................................ Taeniophyllum

11 Leaves, when present, widely spaced on a climbing stem, not attached to sheaths 12
    Stem, when climbing, with leaves attached to sheaths ...................... 13

12 Stem yellow or brown, opposite each root with a greenish or yellowish scale ....
    Stem green, opposite each root with a thick fleshy green leaf ............ Vanilla

13 Inflorescences terminal or both terminal and lateral .......................... 14
    Inflorescences exclusively lateral ........................................... 26

14 Stems not creeping, or flower with a distinct mentum ........................... 15
    Stems creeping. Flowers without a mentum. — Plant almost always terrestrial, with herbaceous leaves which are not articulated with their sheaths. Inflorescence an elongated raceme. Flowers not resupinate ......... Malaxis

15 Inflorescence a raceme. Flower without a mentum. Lip neither strongly concave nor spurred ........................................... 16
    Not this combination of characters ........................................... 18

16 Flowers several open at the same time. Pollinia 8. — Flowers medium-sized or small ..................................................... 17
    Flowers appearing one at a time from a gradually elongating raceme. Pollinia 2. — Flowers medium-sized to rather large ...................... Bromheadia

17 Rhachis of inflorescence covered with bracts. Flowers small. Pollinia clavate, attached to a common viscidium ........................ Agrostophyllum
    Rhachis of inflorescence naked. Flowers medium-sized. Pollinia ellipsoid, without a viscidium ........................................ Dilochia

18 Leaves duplicate. Pollinia 4–8, solid-waxy ............................................. 19
    Leaves plicate, convolute. Pollinia 2, sectile. — Inflorescence a raceme. Lip strongly concave at the base. Column without a foot .............. Tropidia
19 Either the rhachis of inflorescence glabrous, or inflorescence not a raceme. Lip without mealy callosities ........................................ 20
   — Inflorescence a raceme (often several at the same time), rhachis pubescent. Lip with mealy callosities. — Ovary pubescent. Pollinia 8 ....... Eria section Mycaranthes

20 Bracts at the base of the inflorescence, if any, not dissolving into fibres. Pollinia 4–6. — Lip not divided into a hypochilium and an epichilium .......................... 21
   — Bracts at the base of the inflorescence soon dissolving into fibres. Pollinia 8. — Spur absent. Lip normally with a hypochilium and an epichilium, often separated by a transverse wall .......................... Agrostophyllum

21 Inflorescences very short. Lip with a spur or sac at the base ............... 22
   — Inflorescences short or elongated. Lip without a spur or sac at the base (but flower sometimes with a spur-like mentum). — Margins of leaf-sheaths not ciliate or fimbriate .......................................................... 23

22 Inflorescence with 2 or more flowers. Sepals and petals hardly spreading Glomera
   — Inflorescence reduced to a single flower. Sepals and petals usually wide-spreading. — Leaf sheaths with fimbriate or ciliate margins ................. Glossorhyncha

23 Flower with a mentum. — Inflorescence a single flower or a raceme. Pollinia 4 or 6 ......................................................... 24
   — Flower without a mentum. — Inflorescence 1- or 2-flowered. Lip boat-shaped. Pollinia 4, more or less ellipsoid ............................... Aglossorhyncha

24 Pollinia clavate, with flattened caudicles or attached to a viscidium. — Stem at most slightly fleshy. Leaves always attached to sheaths. Flowers small to very small. Pollinia 4 or 6 ......................................................... 25
   — Pollinia oblong, cohering in two pairs, naked, without viscidium. — Stem often distinctly fleshy. Flowers small to large. Pollinia 4 ............. Dendrobium

25 Plant not moss-like. Pollinia 6 ........................................ Appendicula
   — Plant very small, often almost moss-like, with the leaves usually less than 8 mm long. Pollinia 4. — Lip without callosities or hairs ............... Podochilus

26 (13). Not as below .......................................................... 27
   — Stem climbing spirally along tree trunks. Leaves strap-shaped. Inflorescence a raceme with rather large, spotted flowers. Flower without a mentum. Lip not spurred, 3-lobed, in the top part with a hairy median longitudinal crest. Pollinia 2, cleft at the base, attached to a bifid stipe, with a viscidium ............ Dipodium

27 Monopodial orchids. — Rhizome absent. Roots glabrous, rarely warty-papillose, never hairy, never subterraneous. Stems almost absent to much elongated, never swollen, with indefinite top growth, sparsely branched or not branched at all, with the branches arising above the very base of the stem. Leaves attached to sheaths, articulated, duplicate. Inflorescences lateral. Pollinia 2 or 4, solid-waxy, in spheri-
cal or ellipsoid masses, attached to a stipe with viscidium (if seemingly monopodial, but with 8 club-shaped pollinia, use Key IV lead 4: more or less fan-shaped plants with elongated racemes of small to minute white, greenish or yellowish flowers without spur) .............................................. 28
— Symподial orchids. — Stems well-developed. Pollinia 2–8 ................. 64

28 Leaves dorso-ventrally flattened .............................................. 29
— Leaves terete. — Inflorescence very short. Spur absent ..................... Luisia

29 Bracts not laterally flattened, not in 2 rows, or spur present .......... 30
— Bracts laterally flattened, in 2 rows. Spur absent. — Flowers ephemeral
........................................................................ Thrixspermum section Thrixspermum

30 Margins of leaves and petals not serrate ..................................... 31
— Margins of leaves (usually) and petals serrate. — Spur present ... Hymenorchis

31 Peduncle and rhachis very short. — Inflorescence 1–few-flowered ....... 32
— Peduncle and/or rhachis elongated. — Inflorescence few–several-flowered (flowers may appear successively) ............................ 36

32 Lip saccate or strongly concave at the base ............................... 33
— Lip almost flat, without basal concavity ..................................... Adenoncos

33 Column without a foot ............................................................... 34
— Lip movably attached to a long column-foot
........................................................................ Sarcochilus section Monanthochilus

34 Lip immobile ............................................................................. 35
— Lip mobile. — Flowers large ...................................................... Arachnis

35 Flowers ephemeral. Lip without a lamella at the base
........................................................................ Tuberolabium (Trachoma)
— Flowers not ephemeral. Lip at the base with a hairy lamella ........ Trichoglottis

36 Lip with a hollow sac or spur at the base .................................... 37
— Lip without a sac or spur at the base .............................................. 55

37 Inflorescence elongated, branched. Flowers bright purple or reddish. Lip sac-shaped, with a very small midlobe, without callosities in the spur ................................................................. 38
— Not as above ............................................................................. 40

38 Flowers red or brownish red. Sepals and petals patent .................. 39
— Flowers bright pinkish purple. Sepals and petals reflexed .......... Ascoglossum

39 Flowers very small, not resupinate. Pollinia 2 ......................... Porphyrodesme
— Flowers medium-sized, resupinate. Pollinia 4, in two spherical masses
........................................................................ Renanthera
40 Stem climbing or not, but then spur not as below ................................. 41
  — Stem not climbing. Spur at the mouth almost closed by an adaxial callus, inside api-
cally the top with a longitudinal dividing membrane .................... Cleisostoma

41 Sepals and petals free ................................................................. 42
  — Sepals and petals connate ...................................................... Microtatorchis

42 Column with a very distinct foot, about as long as the column itself or longer 43
  — Column-foot very short or absent ........................................ 45

43 Lip sac-shaped, without distinct sidelobes ..................................... 44
  — Lip distinctly spurred, with well-developed sidelobes .................... Aerides

44 Lip immobile. Column-foot broad, concave .................................. Bogoria
  — Lip mobile. Column-foot narrow, flat ..................................... Rhinerrhiza

45 Lip not mobile ............................................................................. 46
  — Lip mobile. — Spur pointing forward ...................................... Brachypeza

46 Flowers small ............................................................................... 47
  — Flowers large ........................................................................... Vanda

47 Stem not climbing. Spur inside without a longitudinal dividing membrane 48
  — Stem very long, climbing. Spur inside at the top with a longitudinal dividing mem-
brane ................................................................. Micropera

48 Spur inside adaxially without a callus ........................................ 49
  — Spur inside adaxially with an obliquely erect, tongue-shaped callus  Pomatocalpa

49 Rhachis of inflorescence elongated. — Flowers not appearing periodically in suc-
cessive clusters, not ephemeral ..................................................... 50
  — Rhachis of inflorescence very short, or, when elongated, flowers ephemeral and
appearing periodically in successive clusters on one inflorescence .......... 53

50 Pollinia in two masses. — Inflorescence usually unbranched or with a single branch
  .................................................................................................. 51
  — Pollinia in 4 clearly separated masses. — Inflorescence often with several branches
  ................................................................................................. Schoenorchis

51 Plant with a well-developed stem. Sepals and petals rather fleshy. Pollinia not com-
pletely split into two parts ................................................................. 52
  — Plant almost stemless. Sepals and petals thin-textured. Each of the two pollinia split
into two very unequal parts .......................................................... Saccolabiopsis

52 Flowers widely opening. Spur apically not inflated. Pollinia entire ........ Malleola
  — Flowers not widely opening. Spur apically inflated. Pollinia more or less deeply
cleft ......................................................................................... Robiquetia
53 Flowers ephemeral. Midlobe indistinct, or not flat .......................... 54
   — Flowers not ephemeral. Lip with a large, flat midlobe. (Occurrence in New Guinea highly doubtful) ......................................................... Acampe

54 Peduncle elongated. Lip inside with a callus Thrixspermum section Dendrocolla
   — Peduncle short. Lip inside without a callus .......................... TuberoLABium (Trachoma)

55 (36). Lip at the base fused with the footless column .......................... 56
   — Column either with a distinct foot, or lip clearly articulated with the base of a footless column .................................................. 58

56 Rhachis of inflorescence elongated, flowers more than 2.5 cm diam. .... 57
   — Rhachis of inflorescence very short, flowers small. (Occurrence in New Guinea highly doubtful) ......................................................... Acampe

57 Base of the lip swollen, without a transverse lamella ............... SarcANThopsis
   — Base of the lip concave, with a transverse lamella ..................... Vandopsis

58 Column with a foot ............................................................... 59
   — Column without a foot. — Plant large, with strap-shaped leaves. Flowers large .......................................................... Arachnis

59 Flowers small to medium-sized. Pollinia either in four separate masses, or in two masses which are completely split into two halves ...................... 60
   — Flowers large. Pollinia in two masses, never completely split into two halves. — Lip 3-lobed, with a bilobed callus between the lateral lobes .... Phalaenopsis

60 Lip mobile .............................................................................. 61
   — Lip not mobile ........................................................................ 63

61 Rhachis of inflorescence not swollen. Flowers largely opening simultaneously. — Inflorescence usually branched ......................................................... 62
   — Rhachis of inflorescence swollen. Flowers appearing successively, one or a few at a time. — Inflorescence never branched ................................. Dryadorchis

62 Inflorescence usually branched. Anther extended at the back. Pollinia in four equal masses .............................................................. Calymmanthera
   — Inflorescence not branched. Anther not extended at the back. Pollinia in two masses which are split into two unequal parts ........................... Gunnarellla

63 Lip inside without a callus. Rhachis of inflorescence elongated ........... Bogoria
   — Lip inside in the centre with a callus. Rhachis of inflorescence very short .......................................................... Thrixspermum section Dendrocolla

64 (27). Leaf-blades attached to sheaths ............................................. 65
   — Leaf-blades not attached to sheaths .................................. Key III, lead 23

65 Leaves and sheaths hairy, at least along their margins ..................... 66
   — Leaves and sheaths glabrous .................................................. 67
66  Hairs only on the sheaths, blackish. Pollinia 4 . . . *Dendrobium* section *Conostalix*
   — Hairs usually on the leaves, sheaths, and inflorescence brown, rarely whitish. Pollinia 8 ................................. *Trichotosia*

67  Column at most at its base fused with the base of the lip ............... 68
   — Column throughout its length fused with the base of the lip. — Spur present ....

68  Characters not as below ........................................... 69
   — Very large plant with duplicate leaves. Stem swollen, more than 1.5 m long. Inflorescence a tall raceme with large, spotted flowers. Column without a foot. Pollinia 2, cleft, attached to a bifid stipe, with a viscidium ............ *Grammatophyllum*

69  Stems not climbing .................................................. 70
   — Stems climbing, not swollen. — Leaves convolute, not plicate. Column without a foot. Lip entire, flat. Pollinia 4, solid-waxy, naked ........... *Pseuderia*

70  Leaves plicate, convolute. Column without a foot .......................... 71
   — Leaves duplicate. Column with a foot .................................. 74

71  Inflorescence an erect raceme. Flowers variously coloured, but not uniformly white or yellowish. Top of column obtuse. Pollinia 8, waxy .................. 72
   — Inflorescence a short patent raceme or a panicle. Flowers uniformly white or yellowish. Top of column acute, bidentate. Pollinia 2, sectile ............ 73

72  Lip immobile, concave or spurred at the base ............................... *Phaius*
   — Lip elastically hinged to the column, not concave at the base ........... *Plocoglottis*

73  Lip flat, spathulate .................................................. *Corymborkis*
   — Lip strongly concave at the base, more or less boat-shaped ............ *Tropidia*

74  Pollinia 6 or 8, with caudicles or a viscidium. — Roots glabrous or hairy. Flowers small and not brilliantly coloured .......................... 75
   — Pollinia 4, in two oblong pairs, naked. — Roots glabrous (sometimes warty). Flowers often large and brilliantly coloured ..................... *Dendrobium*

75  Characters not as below ............................................... 76
   — Inflorescence an erect (never patent) raceme of several to many very small white or greenish flowers. Lip simple, with a short claw. Pollinia 8, narrowly club-shaped ..................................... *Phreatia*

76  Pollinia 6, when 8 inflorescences not as below ............................. 77
   — Pollinia 8. Inflorescence filiform, producing several flowers in succession ............. *Poaeephyllum*

77  Pollinia 6. — Inflorescence never arising from a cavity in the stem; rhachis glabrous ........................................... *Appendicula*
   — Pollinia 8. — Inflorescence often arising from a cavity in the stem; rhachis often hairy ........................................ *Eria*
Plants non-monopodial with 1- or 2-leaved shoots OR all leaves inserted above the base of a pseudobulb, OR lip insect-like.

1 Plant not as below ......................................................... 2
   Stemless terrestrial plants without pseudobulbs. Leaves and inflorescences arising from a cluster of thick hairy roots. Leaf petiolate, not plicate. Inflorescence a tall raceme. Flowers not resupinate, a few cm across, with narrow petals and sepals and a much broader lip ...................... Cryptostylis

2 Inflorescences exclusively lateral (or at apparently so: some inflorescences are produced on specialized, leafless shoots, and are actually terminal, but appear to be lateral, e.g. in Mediocalcar spp.) ........................................... 3
   Inflorescences terminal or both terminal and lateral .................... 37

3 Leaves not as below ..................................................... 4
   Leaves reniform or suborbicular, plicate, arising from a subterranean tuberous rhizome ............................. Nervilia

4 Pseudobulb subterranean. — Leaves plicate. Inflorescence a raceme or a panicle 5
   Pseudobulb not subterranean. — Leaves duplicate. Inflorescence a raceme, panicle, reduced to a single flower, or a fascicle of 1-flowered inflorescences .............. 23

5 Flowers and column-foot not as below ...................................... 6
   Flowers large, urn-shaped. Column-foot bent upwards, very long .................. Acanthephippium

6 Column not flattened at the top. — Pseudobulbs 1–several-leaved ............. 7
   Column at the top broadened and flattened, forming a hood which overtops the anther. — Pseudobulbs 2-leaved. Spur absent. Pollinia 4, without viscidium ........... Coelogyne

7 Column at most at its base fused with the lip .................................. 8
   Column throughout its length fused with the lip ......................... Calanthe

8 Lip immobile, often 3-lobed, when mobile, column-foot spurred. — Pollinia 2, 4, or 8 ...................................................... 9
   Lip elastically hinged to the base of the column, not distinctly 3-lobed, column-foot not spurred. — Pollinia 4 .............................. Plocoglottis

9 Lip, when 3-lobed, without a pair of calli at the base of the midlobe .......... 10
   Lip 3-lobed, with a pair of calli at the base of the midlobe. — Pollinia 8 ................................................................. Spathoglottis

10 Pollinia 2 (partly cleft or not) or 8 ....................................... 11
   — Lip entire, not concave, without crests, not spurred. Pollinia naked ................................................................. Liparis section Heteroblastos
11 Leaf solitary, attached to a distinct ovoid or petiole-like pseudobulb ............................. 12
  — Leaves either 2–more, or solitary, then arising from a subterranean rather amorphous swollen rhizome ................................................................. 18

12 Leaf glabrous .................................................................................................................. 13
  — Leaf conspicuously hairy ..................................................................................... Pilophyllum

13 Leaf more or less gradually narrowed to the base. — Pollinia 2 or 8 ............................ 14
  — Leaf cordate at the base. — Pollinia 8 .............................................................. Mischobulbum

14 Pollinia 2 .......................................................................................................................... 15
  — Pollinia 8 .................................................................................................................. 17

15 Lip clawed. Column-foot with a spur-like nectary .................................................... 16
  — Lip not clawed. Column-foot not spurred .......................................................... Diglyphosa

16 Lip mobile, margins of the claw pleated ................................................................. Chrysoglossum
  — Lip not mobile, margins of the claw flat ........................................................... Collabium

17 Pseudobulb of more than one internode. Spur short ............................................... Ania
  — Pseudobulb of one internode. Spur absent ......................................................... Tainia

18 Lip not basin-shaped. — Inflorescence straight. Lip often 3-lobed. Pollinia 2 or 8 .................................................................................................................. 19
  — Lip basin-shaped. — Inflorescence usually nodding. Lip entire, not spurred. Pollinia 2, cleft, attached to a stipe, with viscidium .............................. Geodorum

19 Pollinia 2, cleft, ellipsoid, attached to a stipe, with a viscidium ............................. 20
  — Pollinia 8, with indistinct caudicles, without a viscidium ..................................... 21

20 Lip 3-lobed .................................................................................................................. Eulophia
  — Lip 4-lobed ............................................................................................................ Oeceoclades

21 Shoots with sometimes rather narrow and stem-like pseudobulbs. — Column at least dorsally glabrous ................................................................. 22
  — Shoots without pseudobulbs, arising from a swollen subterranean rhizome. — Ovary, sepals and column pubescent .................................................. Pachystoma

22 Flower without a hollow nectary or spur. Column with a distinct foot .......................... Eria section Eria
  — Base of the lip fused with the base of the column, producing a hollow nectary, or spur present. Column without a foot. — When lip petal-like: peloric form of Calanthe) ................................................................. Phaius

23 (4). Inflorescence 1-flowered (sometimes a fascicle of 1-flowered inflorescences) 24
  — Inflorescence a raceme or a panicle ................................................................. 29
24 Inflorescence arising from the upper part of the shoot .................. *Dendrobium*
   — Inflorescence arising from the very base of the shoot or from a stem-like rhizome 25

25 All sepals connate: flower tubular ........................................... 26
   — At most two sepals connate ............................................. 27

26 Petals and lip not as below. Pollinia 2 or 4. — Flowers not orange or bright red ..
   — Petals linear to subspathulate, entire, without appendages. Lip strongly concave or
     saccate in the centre. Pollinia 8. — Flowers usually orange or bright red with dif-
     ferently coloured apices .............................................. *Mediocalcar*

27 Top of column with at most two slender appendages .......................... 28
   — Top of column with several slender appendages. — Lip saccate, thin-textured, with-
     out basal or apical appendages ..................................... *Saccoglossum*

28 Lip not slipper-shaped ....................................................... *Bulbophyllum*
   — Lip slipper-shaped, with a short apical appendage ..................... *Pedilochilus*

29 Inflorescence arising from the upper part of the shoot ................... 30
   — Inflorescence arising from the very base of the shoot or from the rhizome .... 31

30 Roots glabrous, sometimes warty. Flowers often brilliantly coloured. Base of the
   lip often fused with the column-foot. Column short and straight, not distinctly
   widened at the top. Pollinia 4 ............................................. *Dendrobium*
   — Roots hairy. Flowers not brilliantly coloured. Base of the lip not fused with the
     column-foot. Column often slender and curved, often distinctly widened at the top.
     Pollinia 8 ................................................................. *Eria*

31 Pseudobulbs of more than one internode .................................... 32
   — Pseudobulbs of one internode, sometimes only a few mm long ............. 34

32 Lateral sepals free. Column not swollen at the base. — Inflorescence not branched
   — Lateral sepals connate. Column swollen at the base. — Inflorescence usually branch-
     ed ................................................................. *Acriopsis*

33 Lip with 2 keels. — Pseudobulbs usually hidden by the leaf- sheaths ........
   — Lip with 1 broad, flattened keel or with 3 keels. — Pseudobulbs large, exposed ..
     ................................................................. *Grammatophyllum*

34 Inflorescence not branched. — Pseudobulb 1- or 2-leaved at the top .......... 35
   — Inflorescence branched. — Pseudobulb 2-leaved at the top ............... *Ridleyella*
35 Column with a foot ................................................................. 36
   Column without a foot. — Lip not mobile ............................... Thelasis

36 Lip mobile. Pollinia 2 or 4, ellipsoid ................................. Bulbophyllum
   Lip immobile. Pollinia 8, narrowly club-shaped ...................... Phreatia

37 (2). Leaves articulated at the base, carried by a pseudobulb (which may look petiole-like, however). — Plant without a subterranean rhizome or tuber. Pollinia solid-waxy .................................................. 38
   Leaves not articulated at the base, not carried by a pseudobulb ........ 55

38 Inflorescence a raceme .......................................................... 39
   Inflorescence a single flower or a fascicle of 1-flowered inflorescences .... 45

39 Combination of characters not as below ................................. 40
   Leaves plicate. Column-foot distinct. Pollinia 8 .................... Eria section Eria

40 Leaves convolute. Column either more or less winged and hood-like flattened at the top, with the hood overtopping the anther, or with two lateral arms, foot indistinct ......................................................... 41
   Leaves duplicate. Column not flattened at the top, without lateral arms, foot either entirely absent or distinctly present ........................................ 43

41 Column without lateral arms ................................................. 42
   Column with two lateral arms. — Flowers small ........................ Dendrochilum

42 Lip not sharply divided in a concave hypochilium and a flat epichilium  Coelogyne
   Lip sharply divided in a hypochilium and an epichilium. — Lip without distinct lateral lobes .......................................................... Pholidota

43 Column with a foot ............................................................... 44
   Column without a foot .......................................................... Liparis

44 Roots glabrous, sometimes warty. Column short and straight, never distinctly widened at the top. Pollinia 4. — Flowers often brilliantly coloured. Base of the lip often fused with the column-foot ........................................... Dendrobium
   Roots hairy. Column often slender and curved, often distinctly widened at the top. Pollinia 8. — Flowers never brilliantly coloured. Base of the lip not fused with the column-foot ........................................ Eria

45 (38). At least the dorsal sepal free from the lateral sepals ................ 46
   All three sepals connate: flower urn-shaped .............................. Mediocalcar

46 Inflorescences either arising from a mature shoot, or not forming a fascicle ... 47
   Inflorescences arising in a fascicle from the developing shoot ........ Epiblastus
47 Roots hairy. Pollinia 8 ................................. 48
— Roots glabrous. Pollinia 4 ................................. 49

48 Stems not swollen into pseudobulbs. Column at the top with two rounded arms ............................. Ceratostylis
— Stems with pseudobulbs. Column without arms ....................... Éria

49 Leaf-blades not attached to sheaths .......................... 50
— Leaf-blades attached to sheaths ................................ Dendrobium

50 Pseudobulbs ellipsoid or of uniform width ......................... 51
— Pseudobulbs to the top drawn out in narrow ‘neck’ ............... Diplocaulobium

51 Rhizome very short, or creeping, or pendulous, not stem-like ....................... 52
— Rhizome with erect or patent stem-like branches which carry distant pseudobulbs .................................. Flickingeria

52 Sepals not white or, when white, lip with 2 or 3 lamellate keels. Column glabrous in front below the stigma. — Stems not sharply 4-winged. Ovary terete, glabrous .......................... 53
— At least the sepals, and usually the whole flower pure or creamy white, if sepals yellowish, then ovary papillose. Lip without lamellate keels. Column hairy in front below the stigma. — Stems sometimes sharply 4-winged. Ovary usually sharply 3- to 6-winged or strongly papillose ................................ Cadetia

53 Dorsal sepal ovate or elliptic ................................ 54
— Dorsal sepal narrowly lanceolate to caudate. — Lip with lamellate keels .................. Diplocaulobium

54 Flowers not ephemeral. Lip entire or obscurely 3-lobed, without longitudinal keels Dendrobium section Microphytanthe
— Flowers ephemeral. Lip distinctly 3-lobed, with longitudinal keels .................................. Flickingeria (F. convexa)

55 (37). Inflorescence 1-flowered. Dorsal sepal very different from the lateral sepals ........................................ 56
— Inflorescence usually a raceme. Dorsal sepal similar to the lateral sepals, at most the lateral sepals somewhat oblique .......................... 58

56 Lip immobile. Column without a foot .................................. 57
— Lip mobile, attached to a long column-foot ...................... Pterostylis

57 Shoot with one leaf. Lateral sepals not spurred ....................... Corybas
— Shoot with two almost opposite leaves. Lateral sepals spurred ........ Disperis
58 Rhizome absent. Column obtuse in lateral view, or, when pointed, leaves plicate. — Inflorescence, ovary, and sepals glabrous ............................. 59
   — Rhizome creeping with a thick hairy root at each node. Column pointed in lateral view. — Leaves not plicate. Inflorescence, ovary, or sepals often glandular-hairy

59 Spur present. — Leaves not plicate ........................................ 60
   — Spur absent ......................................................................... 62

60 Stigma separate, on two cushion-shaped or stalked processes .......... 61
   — Stigma confluent, more or less concave ................................. Platanthera

61 Base of the lip free from the stigma. — Spur never subglobose ........ Habenaria
   — Base of the lip fused with or touching the lower margin of the stigma. — Spur often subglobose .................................. Peristylus

62 Lip dissimilar to sepals and petals. Top of the column without appendages .... 63
   — Lip similar to the sepals and petals. Top of the column with two brush-like appendages .................................................. Thelymitra

63 Lip not as below ................................................................. 64
   — Top of the lip insect-like, flexibly jointed with the basal part. — Flowers not resupinate ................................................... Arthrochilus

64 Lip not as below ................................................................. 65
   — Lip beard-like, metallic blue at the base ............................... Calochilus

65 Either the lip not strongly concave at the base, or column much less than half as long as the lip. Column obtuse in lateral view .......................... 66
   — Lip strongly concave at the base. Column at least about half as long as the lip, pointed in lateral view ........................................ Tropidia

66 Lip bilobed, or entire, or with a toothed margin. Anther with an easily detached cap ................................................................. 67
   — Lip 3-lobed at the top. Anther immovably attached to the column. — Underground tuber present. Leaves not plicate .............................. Herminium

67 Flowers resupinate. Lip without basal auricles, not clasping the column .... 68
   — Flowers not resupinate. Lip with basal auricles which clasp the column ................................. Malaxis

68 Column not laterally flattened. Lip at the base at most with a low ridge-like callus. Pollinia solid-waxy. — Shoot 1- to several-leaved .................. Liparis
   — Column laterally flattened. Lip at the base with a raised and often lobed callus. Pollinia sectile. — Shoot 1-leaved ......................................... Pantlingia
KEY IV

Plants non-monopodial, with more than 2 leaves per shoot which are neither distichous on an elongated stem, nor inserted on the top half of a pseudobulb. Stems not climbing. Leaves not laterally flattened. Lip not insect-like.

1 Plants not as below ................................................................. 2
   — Stemless terrestrial plants. Leaves and inflorescences arising from a cluster of thick hairy roots. Leaf petiolate, not plicate. Inflorescence a tall raceme. Flowers not resupinate, a few cm across, with narrow petals and sepals and a much broader lip (the shoots are actually 1-leaved, but this is often difficult to see) ... Cryptostylis

2 Inflorescences exclusively lateral ............................................ 3
   — Inflorescences terminal (or at least apparently so) .................... 15

3 Stem very short. Leaves distichous, more or less arranged in a fan, duplicate. Inflorescence a raceme of very small to minute flowers. Pollinia 8 ................. 4
   — Not this combination of characters. — Leaves usually plicate ........... 6

4 Column pointed in lateral view, foot very short or absent ............... 5
   — Column obtuse in lateral view, foot distinct ......................... Phreatia section Phreatia

5 Column-foot present. — Plant without a pseudobulb ........... Rhynchophreatia
   — Column-foot absent. — Plant usually with a laterally flattened pseudobulb hidden by the leaf-sheaths ........................ Thelasis

6 Leaves duplicate ................................................................. 7
   — Leaves plicate ................................................................. 8

7 Stem not swollen ................................................................. Key II, lead 27
   — Stem more or less swollen ................................................ Key III, lead 23

8 Column pointed in lateral view. Pollinia sectile.— Flowers uniformly white or yellowish. Spur indistinct ................................................. 9
   — Column obtuse in lateral view. Pollinia waxy. — Flowers white or variously coloured ......................................................... 10

9 Lip flat, spathulate ............................................................... Corymborkis
   — Lip strongly concave at the base, more or less boat-shaped .......... Tropidia

10 Column at most at its base fused with the lip ........................... 11
   — Column throughout its length fused with the lip ....................... Calanthe

11 Lip immobile. Pollinia 2 or 8 ............................................. 12
   — Lip elastically hinged to the base of the column. Pollinia 4. — Spur absent .................................................. Plocoglottis
12 Lip, when 3-lobed, without a pair of calli at the base of the midlobe .......... 13
   - Lip 3-lobed, with a pair of calli at the base of the midlobe. — Pollinia 8 .......... Spathoglottis

13 Base of the lip not fused with the column. Pollinia 2, partly cleft .......... 14
   - Base of the lip fused with the base of the column, producing a hollow nectary, or spur present. Pollinia 8 ........................................ Phaius

14 Lip not basin-shaped. — Inflorescence straight. Lip often 3-lobed ...... Eulophia
   - Lip basin-shaped. — Inflorescence usually nodding. Lip entire, spur absent .......... Geodorum

15 (2). Flowers not as below ........................................ 16

16 Flower with 2 or 3 fertile anthers. Lip not very different from sepals and petals. — Leaves plicate ........................................ 17
   - Flower with 1 fertile anther. Lip usually very different from the sepals and petals 18

17 Fertile anthers two. Ovary glabrous .......................... Apostasia
   - Fertile anthers three. Ovary glandular-hairy .......................... Neuwiedia

18 Leaves articulated with the sheaths. — Leaves not spirally arranged. Pollinia solid-waxy .............................................. 19
   - Leaves not articulated with the sheaths. — Leaves not duplicate. Inflorescence not branched ........................................ 21

19 Inflorescence glabrous. Lip without mealy calli .......................... 20
   - Inflorescences hairy. Lip with mealy calli. — Leaves not plicate. Pollinia 8 .......... Eria section Mycaranthes

20 Leaves duplicate. Pollinia 8 ........................................ Agrostophyllum
   - Leaves plicate. Pollinia 4. — Shoots distant along a very long creeping or climbing rhizome ........................................ Claderia

21 Inflorescence a raceme, very rarely 1-flowered. Column without a foot, lip not mobile ........................................ 22
   - Inflorescence 1-flowered. Lip attached to a long column-foot, mobile. Pterostylis

22 Lip spurred, the blade flat, narrowly tongue-shaped or, more often, distinctly 3-lobed (with the lateral lobes often split into several filiform lobules). — Underground tuber present, rhizome absent ........................................ 23
   - Spur absent, or, when present, plant with creeping rhizomes and lip at least a partly concave ........................................ 25
23 Stigmata separate, on two cushion-shaped or stalked processes .......... 24
   — Stigmata confluent, more or less concave .......................... Platanthera

24 Base of the lip free from the stigmata ............................ Habenaria
   — Base of the lip fused with or touching the lower margin of the stigmata Peristylus

25 Lip bilobed, or entire, or margin dentate. Anther with an easily detached cap .. 26
   — Lip 3-lobed at the top. Anther immovably attached to the column. — Subterranean tuber present .................................................. Herminium

26 Leaves plicate. Sepals and petals patent or reflexed. Column terminated by the anther. Pollinia waxy, naked or with indistinct caudicles. — All parts of the inflorescence, including the flowers, glabrous. Spur absent. Pollinia 4 .................. 27
   — Leaves not plicate. Petals and dorsal sepal convergent. Column terminated by the more or less beak-shaped rostellum. Pollinia sectile, with stipes and viscidium. — Pollinia 2 or 4 .................................................. 28

27 Flowers resupinate. Lip without basal auricles, not clasping the column ... Liparis
   — Flowers not resupinate. Lip with basal auricles which clasp the column .. Malaxis

28 Flowers bilaterally symmetric ............................................... 29
   — Lip and column asymmetric, more or less twisted. — Sepals glandular hairy outside .................................................. Macodes

29 Lip uppermost, i.e. flower not resupinate .................................. 30
   — Lip lowermost or more or less horizontal, e.g. flower partly to completely resupinate .................................................. 31

   — Leaves with whitish reticulate veins. Lip outside near the top on either side with an irregularly toothed crest. Stigma 1 .................. Papuaea

31 Lip at most with two basal tufts of hair-like papillae or with a single transverse row of such papillae ................................. 32
   — Lip inside entirely or largely covered with hair-like papillae ........ Goodyera

32 Lip not spurred or without lateral, blister-like swellings at the base of the spur 33
   — Lip spurred, at the base of the spur with 2 lateral, blister-like swellings . Cystorchis

33 Lip with a distinct spur projecting from between the lateral sepals .......... 34
   — Lip not spurred, sometimes more or less saccate, but then the sac enclosed by the lateral sepals .................................................. 38

34 Lip not as below ................................................................. 35
   — Lip with a narrow median claw which is toothed or provided with a comb-like row of slender appendages ............................ Anoectochilus
35 Top of spur not bilobed or, if bilobed, tips of sepals obtuse, swollen. Spur always with warts or glands inside ............................................. 36
   — Top of spur bilobed. Spur usually without glands or warts inside. Tips of sepals acute, not swollen. — Stigma 1 .................................. Erythrodes

36 Spur inside with two warts. Stigma 1 ............................................. 37
   — Spur inside with 2 stalked glands. Stigmata 2 ........................ Vrydagzynea

37 Stigma cup-shaped, with a distinct rim at the base. Spur distinctly projecting from between the lateral sepals .................................. Eurycentrum
   — Stigma not cup-shaped, without a distinct rim at the base. Spur only slightly projecting from between the lateral sepals ........................ Kuhlhasseltia

38 At least the lateral sepals free from each other ................................ 39
   — All sepals connate .............................................................. Cheirostylis

39 Lip inside at the base with two tufts of hair-like papillae or with a transverse row of elongated papillae ........................................ 40
   — Lip inside glabrous, at the base with or without two warts ............. 42

40 Plant small. Leaves not as below. Lip inside with two tufts of hair-like papillae. — Usually with a distinct creeping rhizome ................................ 41
   — Plant very large (more than 50 cm high) with a basal rosette of many linear-lanceolate leaves which are not narrowed towards the base. Lip inside with a transverse row of elongated papillae. — Creeping rhizome absent ........................ Lepidogyne

41 Concave basal part of the lip laterally constricted below the middle. Stigma 1 ................................................................. Moerenhoutia
   — Concave basal part of the lip not laterally constricted. Stigmata 2 ........................ Zeuxine

42 Lip not sac-shaped, at the base with two warts ................................ 43
   — Lip sac-shaped, with a very short endlobe, inside without warts ....... Hylophila

43 Lip not spurred, at most with a very short subglobose sac at the base .......... 44
   — Lip at the base with a short conical spur .................................. Kuhlhasseltia

44 Plant usually with a distinct rhizome, not arising from a fascicle of fleshy roots. Flowers in a dense spiral ........................................ 45
   — Plant arising from a fascicle of fleshy roots. Flowers in a dense spiral. — Rhizome absent ......................................................... Spiranthus

45 Lip not as below, inside with basal warts or papillae. — Stigmata 1 or 2  .......... 46
   — Lip simple, ovate, petal-like, without warts or papillae inside. — Leaves with coloured or white reticulate veins. Stigma 1 ............ Peloric form of Anoectochilus
Narrow middle part of the lip not much longer than the width of the endlobe (usually much shorter), not toothed. Stigmata 2
— Lip in the middle with a narrow claw which is usually much longer than the width of the endlobe and often conspicuously toothed. Stigma 1

Pristiglottis

Lip just below the midlobe with two short parallel crests
— Lip not with two parallel crests below the midlobe

Rhomboda

Zeuxine

APPENDIX

List of orchid genera recorded from New Guinea

Notes: For each genus an estimate of the number of species occurring in New Guinea is given between brackets. The synonymy in the following list is limited to names frequently used in the past or to be found in recent literature. Misapplied names are indicated by preceding the authority with 'auct. non'. This means that species from New Guinea have been incorrectly attributed to the genus in question. For example, Gynoglottis palaelabellata (Gilli) Garay & Kittr. does not belong to Gynoglottis J.J. Smith, which is endemic in Sumatra, but rather to Calanthe sect. Aceratochilus (pers. obs.).

Following the number in brackets the relevant key-entries are indicated.

Acampe Lindley (?1 - occurrence in New Guinea doubtful) II53, II56
Acanthephippium Blume (1) III5
Acianthus auct. non R. Br. = Pantlingia
Acroptis Reinw. ex Blume (1) III32
Adenoncos Blume (1) II32
Aerides Lour. (1) II43
Aglossorhyncha Schltr. (10) II23
Agrostophyllum Blume (40) II17, II20, IV20
Ania Lindley (1) III17
Anoectochilus Blume (2) IV34, IV45
Aphyllorchis Blume (4) I15
Apostasia Blume (1) IV17
Appendicula Blume (40) II25, II77
Arachnis Blume (2) II34, II58
Arthrochilus F. Muell. (2) II63
Ascoglossum Schltr. (1) I138
Aulostylis Schltr. = Calanthe
Bogoria J. J. Smith (1) II44, II63
Brachypeza Garay (1) I45
Bromheadia Lindley (2) I13, II16
Bulbophyllum Thouars (600) III26, III28, III36
Cadetia Gaud. (35) III52
Calanthe R. Br. (30) II67, II77, IV10
Calochilus R. Br. (1) I8, III64
Calymanthera Schltr. (5) II62
Camarotis Lindley = Micropera
Ceratostylis Blume (60) III48
Chamaeanthus auct. non Schltr. ex J. J. Smith = Gunnarella
Cheirostylis Blume (3) IV38
Chilopogon Schltr. = Appendicula
Chitonanthera Schltr. = Octarrhena
Chitonochilus Schltr. = Agrostophyllum
ChrysoGLOSSUM Blume (1) III16
Cirrhopetalum Lindley = Bulbophyllum
Claderia Hook. f. (1) IV20
Cleistostoma Blume (6) II40
Codonosiphon Schltr. = Bulbophyllum
Coelogyne Lindley (8) III6, III42
Collabium Blume (1) III16
Corybas Salisb. (45) I7, II57
Corymborkis Thouars (1) I173, IV9
Corysanthes R. Br. = Corybas
Cryptostylis R. Br. (10) III1, IV1
Cymbidium Sw. (2) III33
Cyphochilus Schltr. = Appendicula
Cyrtosia Blume (1) I13
Cystopus Blume = Pristiglottis
Cystorchis Blume (5) II10, IV32
Dactylorhynchus Schltr. = Bulbophyllum
Dendrobium Sw. (350) II8, II24, II66, II73, II24, II130, II44, III49, III54
Dendrochilum Blume (1) III41
Didymoplexis Griff. (4) I3
Diglyphosa Blume (1) III15
Dilochia Lindley (1) III7
Diplocaulobium Kraenzl. (50) III50, III53
Dipodium R. Br. (2) II16, II26
Disperis Sw. (1) III57
Dryadorchis Schltr. (4) I161
Ephemerantha Hunt & Summerh. = Flickingeria
Epiblastus Schltr. (10) III46
Epicranthes Blume = Bulbophyllum
Epipogium Gmel. ex Borkh. (1) I12
Eria Lindley (40) II8, II19, II72, II22, III30, III39, III44, III48, IV19
Erythrodes Blume (10) IV35
Eucosia auct. non Blume = Anoeoctochilus
Eulophia R. Br. ex Lindley (4) I12, II20, IV14
Eurycentrum Schltr. (7) IV37
Ferruminaria Garay, Hamer & Siegerist = Bulbophyllum
Flickingeria A. D. Hawkes (9) III51, III54
Galeola Loure. (1) I5
Gastrodia R. Br. (2) I3
Geissanthera Schltr. = Microtatorchis
Geodorum Jackson (1) III18, IV14
Giulianettiia Rolfe = Glossorhyncha
Glomeria Blume (40) II22
Glossorhyncha Ridl. (50) II22
Goodyera R. Br. (15) IV31
Grammatophyllum Blume (3) II68, II33
Gunnarella Senghas (3) II62
Gynoglossis auct. non J. J. Smith = Calanthe
Habenaria Willd. (20) III61, IV24
Hapalochilus (Schltr.) Senghas = Bulbophyllum
Herminium Guett. (1) III66, IV25
Hetaeria Blume (3) IV30
Hippephyllum Schltr. (4) I15
Hylophila Lindley (2) IV42
Hymenorhizis Schltr. (7) II30
Ischnocentrum Schltr. = Glossorhyncha
Kerigomnia P. Royen = Octarrhena
Kuhlhaseltia J. J. Smith (1) IV37, IV43
Lecanorchis Blume (4) I6
Lectandra J. J. Smith = Poeaphyllum
Lepidogyne Blume (1) IV40
Liparis L. C. Rich. (60) III10, III43, III68, IV27
Luisia Gaud. (1) I128
Macodes (Blume) Lindley (4) IV28
Malaxis Sol. ex Sw. (60) II14, III67, IV27
Malleola J. J. Smith & Schltr. (4) I152
Mediocalcar J. J. Smith (15) III26, III45
Micropera Lindley (1) I147
Microstylis (Nutt.) Eaton = Malaxis
Microtatorchis Schltr. (35) I2, II10, I141
Mischobulbum Schltr. (1) III13
Moerenhoutia Blume (4) IV41
Monomeria auct. non Lindley = Bulbophyllum
Monosepalum Schltr. = Bulbophyllum
Nephelaphyllum auct. non Blume = Collabium
Nervillia Comm. ex Gaud. (10) I16, III3
Neuwiedia Blume (1) IV17
Oberea Lindley (70) I15
Octarrhena Thwaites (35) I16
Oceocladus Lindley (1) I120
Osyricea Blume = Bulbophyllum
Oxyanthera Brongn. = Thelasis
Pachystoma Blume (1) I19, III21
Pantlingia Prain (3) III68
Paphiopedilum Pfitz. (4) IV15
Papuaea Schltr. (1) IV30
Pedilochilus Schltr. (35) III28
Peristylus Blume (15) III61, IV24
Phaius Loure. (4) II72, III22, IV13
Phalaenopsis Blume (1) I159
Pholidota Lindley (3) III42
Phreatia Lindley (100) III7, III75, III36, IV4
Pilophyllum Schltr. (1) III12
Platanthea L. C. Rich (3) III60, IV23
Platyplepis auct. non A. Rich. = Moerenhoutia
Plocoglossis Blume (15) II72, III8, IV11
Poeaphyllum Ridl. (4) I176
Podochilus Blume (15) II4, III25
Pomatocalpa Breda (4) I148
Porphyrodesme Schltr. (1) I139
Pristiglossis Cretz. & J. J. Smith (4) IV46
Pseuderia Schltr. (12) I169
Pseudovanilla Garay (3) I5, I112
Pteroceras auct. non Hassk. = Sarcochilus
Pterostylis R. Br. (3) III56, IV21
Renanthera Loure. (2) I139
Rhinehrhiza Rupp (1) I144
Rhomboida Lindley (4) IV47
Rhyncophreatia Schltr. (6) IV5
Ridleyella Schltr. (1) III34
Robiquetia Gaud. (5) II52
Saccoglossum Schltr. (5) III27
Saccolabiopsis J. J. Smith (7) II51
Sarcanthopsis Garay (1) II57
*Sarcanthus* Lindley = Cleisostoma
Sarcochilus R. Br. (4) II33
Schoenorchis Blume (2) II50
*Sepalosiphon* Schltr. = Glossorhyncha
Spathoglottis Blume (12) III9, IV12
Spiranthes L. C. Rich. (1) IV44
Stereosandra Blume (1) II4
*Stigmatodactylus* Maxim. ex Makino = Pantlingia
Taeniophyllum Blume (80) II10
Tainia Blume (1) III17
*Tapeinoglossum* Schltr. = Bulbophyllum

Thelasis Blume (7) III35, IV5
Thelymitra Forst. (1) III62
Thrixspermum Lour. (12) II29, II54, II63
*Trachoma* Garay = Tuberalabium
Trichoglottis Blume (3) II35
Trichotokia Blume (25) II66
Tropidia Lindley (6) II18, II73, III65, IV9
Tuberalabium Yamamoto (2) II35, II54
Vanda R. Br. (3) II46
Vandopsis Pfitz. (1) II57
Vanilla Sw. (5) II12
*Vesicisepalum* (J. J. Smith) Garay, Hamer & Siegerist = Bulbophyllum
*Vonroemeria* J. J. Smith = Octarrhena
Vrydagzynea Blume (12) IV36
Zeuxine Lindley (7) IV41, IV47