

Contributions to Knowledge of the Orchid Flora of Sumatra

Rudolf Schlechter

A translation into English of

***Beiträge zur Kenntnis der Orchidaceen-Flora
von Sumatra***

as published in

**Engler's Beiblatt zu den Botanischen Jahrbüchern
Nr. 104, Vol XLV (1911), pp 1-61**

with genera index, locality listing and map.

H J Katz & J T Simmons



Rudolf Schlechter
(1872-1925)



Sumatra, Indonesia



The Australian Orchid Foundation

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Manuscript completed: 1986

First published: 1989 (hardcopy)

Digital version: 2021

Publisher: The Australian Orchid Foundation

www.australianorchidfoundation.org.au

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R. SCHLECHTER : CONTRIBUTIONS TO KNOWLEDGE OF THE ORCHID FLORA OF SUMATRA.

The flora of western mountain regions of the island of Sumatra is still little-known, even though these areas are now easily reached by rail and excellent roads. Although botanists and other collectors have made both large and small collections there, only a very small part has been so far processed, just as if they were under a bad omen. Thus the major part of the beautiful collections made by Beccari is still in Florence waiting to be processed. Likewise, an immense amount of material has accumulated in Buitenzorg, usually from small collections sent in by Dutch civil servants. To date, only a few families have been processed, mainly the orchids where J.J. Smith has published the new species in various small issues. When I reached Padang on January 11th 1907, to stay there for a month, I therefore used the opportunity to investigate the orchid flora of the ranges in the interior, as far as the short time would permit. The results of these investigations are presented here as a compilation of the collected species and descriptions of the new species.

The number of endemic species found in these ranges is quite surprising. Even accepting that one or other of the species may still turn up in Java, it is still surprising that under those species listed here, over one half are missing in Java. Considering that in the short period from January 11th to February 9th, within a very small area, I was able to collect 150 orchids in flower, I do not think I am far from the mark if I surmise that Sumatra is richer than Java in species of this family, all the more so since from my previous travels I know that the orchid flora of the lower-lying area of the eastern coast, e.g. Indragiri, has a multitude of species which appear to be lacking on the west coast.

In the ranges of Padang, certain groups are present in an abundance of forms, e.g. the Coelogyninae, the Dendrobiums of section Desmotrichum and the Erias of the two sections Cylindrolobus and Urostachya, although the Hymenariae also often are represented. On the other hand, a few very peculiar forms also are found, e.g. Microstylis chamaeorchis Schltr., Liparis leucophea Schltr. and Liparis Lepanthes Schltr. Very interesting, furthermore, is the occurrence of Eria lasiorhiza Schltr. a species of the section Bryobium, which is closely related to the Indian Eria muscicola Lindl.

The species of the genus Eria appear to be most frequent at an altitude of 700-1000m, but on some of the higher mountains, a few interesting forms of the section Urostachya are also found. Dendrobiums likewise appear to diminish in wealth of species above 1000m. The opposite behaviour is shown by the Coelogyninae, particularly those of the Dendrochilum genus and the Coelogyne of the section Longifoliae, which appear to be content on the airy mountain summits, which daily are covered by cold mists. The Ceratostylidinae also appear to prefer the exposed

high ridges. Other groups such as Liparidinae, Podochilinae, Phajinae, and Bulbophyllinae are represented uniformly at all altitudes above 700m, but gradually diminish, as generally for orchids, in the lower and dryer regions.

For the number of species listed here, I am indebted to the kindness of Major Wichers of the Dutch Colonial Army, who at the time was stationed at Padang-Pandjang and made an extremely interesting collection of living orchids from the area and who was most generous in giving me material. Unfortunately, this collection was disbanded later with the departure of the owner to Europe. However, science owes Wichers much gratitude for the zeal with which his collection was gathered and where I was able to study many an interesting species. Again I should like to publically express my thanks for the assistance that I thereby gained for my investigations. Likewise, I would here also like to thank our German Consul in Padang, Mr. J. Schild for the kind help given during my stay on the west coast of Sumatra.

Let us hope that other Europeans will soon be found in those areas to further investigate the orchid flora of these interesting and rich regions. It is certain that we can expect many more new species from there.

Rudolf Schlechter

Paphiopedilum Pfitz.

Paphiopedilum Chamberlainianum Pfitz. var. latifolium Schltr., var. nov.

Differt a forma typica foliis haud tessalatis brevioribus latioribusque, auri-culis labelli obtusis.

On limestone faces below the summit of the Bukit Djarat [Mount], near Padang-Pandjang, alt. c. 1600m - R. Schlechter no. 15991, flowering on 1st Feb. 1907.

The plant differs slightly from the Type, both in habit and colour.

Habenaria Willd.

Habenaria goodyeroides Don

Between Alang near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15933, flowering on 22nd Jan. 1907.

Habenaria sumatrana Schltr.

Platanthera sumatrana Schltr., in Bull. l'Herb. Boissier, 1906, p. 296.

Between Alang near Sungei Gajo, not far from Padang, alt. c. 8m - R. Schlechter no. 15858, flowering on 13th Jan. 1907.

On living material, I was able to establish that the plant has stigmatic appendages and thereby belongs to the genus Habenaria. The flowers are pure white. Peristylus candidus J.J.Sm. also belongs here, however, I could not use this species name, since a Habenaria candida Lindl. already exists.

Nervilia Gaud.

Nervilia Aragoana Gaud.

In the forest near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15937, flowering on 22nd Jan. 1907.

Cystorchis Bl.

Cystorchis variegata Bl. var. purpurea Ridl.

In humus of the forests of Bukit Djarat [Mount], not far from Padang-Pandjang, alt. c. 1200m - R. Schlechter no. 16013, flowering on 1st Feb. 1907.

Coelogyné Lindl.

Coelogyné integræ Schltr., sp. nov.

Epiphytica, in ramis truncisque arborum repens, usque ad 50 cm alta; rhizomate crassiusculo, vaginis arcte amplectentibus obtecto, pseudobulbis approximatis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis erectis e basi ovoidea in collem plus minusve longum attenuatis, lageniformibus, 3—7 cm altis, supra basin 1,2—1,5 cm diametrientibus, spicis bifoliatis; foliis erecto-patentibus ellipticis vel ovato-ellipticis, acuminatis, basi petioliformi-angustatis, 7—25 cm longis, medio laminae 2,5—6 cm latis; scapis cum bulbis jam bene evolutis synanthis, gracilibus, plus minusve flexuosis, elongatis, multifloris, pedunculo ipso omnino ebracteato;

bracteis mox deciduis lanceolatis acuminatis, flores longitudine excedentibus; floribus in genere inter minores, succedaneis, salmoneis; sepalis oblongis subacutis, glabris, 1,2 cm longis, medio c. 0,4 cm latis, lateralibus paulo obliquis, dorso extus carinatis; petalis patentibus anguste linearibus obtusis, paulo obliquis, c. 1 cm longis, vix 0,1 cm latis; labello circuitu ovato acuto, marginibus basin versus incurvis, integro, omnino ecarinato et etuberculato, sepalis basi aequilato, sed petalis aequilongo; columna brevi, 0,6 cm longa, semitereti, apicem versus alata, clinandrio trilobulato, lobulo intermedio majore truncato; stigmate marginato; anthera cucullata dorso gibbo obtuso donata, antice obtusata, glabra; ovario cum pedicello glabro clavato, leviter 6-costato, c. 1 cm longo.

On trees in the mountains, between Padang-Pandjang and Kampong Tengah, alt. c. 1200m - R. Schlechter no. 15908, flowering on 19th Jan. 1907; on trees in the forests on the summit of Bukit Djarat [Mount], alt. c. 1600m - R. Schlechter no. 16014, flowering on 1st Feb. 1907; - Wickers.

This extremely interesting species of the group [section] Longifoliae, together with C. stenobulbon Schltr., described below, should head the genus, since both are distinguished by their undivided labellum. C. integra Schltr., furthermore, is noteworthy in having a lip without crests or other ridges, as otherwise usual in the genus.

Coelogyne stenobulbon Schltr., sp. nov.

Epiphytica, in arboribus decumbens, usque ad 30 cm alta; rhizomate radicante, dense vaginis arce amplectentibus obtecto, laxe pseudobulbis obpresso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis cauliniformibus cylindraceis, 3,5—4 cm diametentibus, basi interdum paulo ampliatis, usque ad 0,7 cm diametro, 6—13 cm longis, apice bifoliatis; foliis erecto-patentibus, late ellipticis, acutis vel breviter acuminatis, basi acutatis, petiolum haud formantibus, 7—12 cm longis, medio fere 3,4—5 cm latis, glabris; scapis pseudobulbis maturis synanthis, erectis gracilibus, folia plus minusve superantibus, plurifloris; pedunculo ipso omnino evaginato, glabro, tereti, foliis paulo breviore; bracteis mox deciduis, lanceolatis acuminatis, glabris, flores superantibus; floribus in genere inter minores, succedaneis, salmoneis, labello brunneo picturato; petalis ovato-lanceolatis subacutis, dorso carinatis, glabris, c. 2 cm longis, lateralibus obliquis, intermedio paulo angustioribus; petalis anguste linearibus acutis, obliquis, sepalis paulo brevioribus, labello circuitu oblongo-ligulato integro, curvato, apice subacuto, 1,7 cm longo, supra medium 0,7 cm lato, lamellis 2 subparallelis e basi usque ad apicem decurrentibus haud flexuosis, linea intermedia incrassata interjecta; columna gracilis, paulo curvata, 0,7 cm longa, semitereti, clinandrio ampliato obscure trilobulato, concavo; anthera cucullata, obtusa, dorso gibbo parvulo donata; ovario cum pedicello glabro, clavato, 6-costato, c. 1 cm longo.

On solitary trees in the mountains near Padang-Pandjang, alt. c. 1200m - R. Schlechter no. 15997, flowering on 31st Jan. 1907.

Related to C. integra Schltr., but immediately recognised by the larger flowers and by the labellum. The stem-shaped pseudobulbs are very characteristic.

Coelogyne vagans Schltr., sp. nov.

Epiphytica, in arboribus longe decumbens vel dependens, ramosa, usque ad 40 cm longa, 20—30 cm alta; rhizomate pro planta crasso, tereti, vaginis amplectentibus dissitis, brevibus donato, pseudobulbis usque ad 10 cm distantibus obpresso; radicibus haud numerosis flexuosis, elongatis, glabris; pseudobulbis fusiformibus teretibus, glabris, apice bifoliatis, 5—8 cm longis, medio fere 0,8—1,2 cm diametentibus; foliis erecto-patentibus, ellipticis, acutis vel acuminatis, eptiolatis, glabris, 9—13 cm longis, 2,7—4,7 cm medio fere latis; scapis erectis, cum bulbis bene evolutis synanthis, folia vulgo dimidio fere superantibus, plurifloris; pedunculo omnino evaginato foliis paulo breviore; bracteis mox deciduis lanceolatis acuminatis, flores vulgo paulo excedentibus; floribus in genere inter minores, brunnescentsalmoneneis, succedaneis; sepalis lateralibus oblique lanceolatis subacutis, glabris, 4,3 cm longis, extus carinatis, intermedio magis oblongo, obtusiusculo, 4,5 cm longo; petalis obliquis e basi dilatata anguste linearibus acutis, glabris, 1,2 cm longis; labello obscure subpandurato-trilobato, lobis lateralibus humilibus obtusissimis erectis, intermedio magno subquadrato antice retuso, carinis 2 e basi usque ad apicem labelli decurrentibus, medio divergentibus apice ipsa sursum approximatis, c. 4 cm longo, infra apicem 0,6 cm lato, ad lobos laterales 0,7 cm lato; columna semitereti, gracili, 6,5 mm longa, apice paulo dilatata, clinandrio pro genere haud multo ampliata, obscure trilobata; anthera cucullata, antice minute excisa; ovario cum pedicello glabro, clavato, c. 1,3 cm longo, 6-costato.

On trunks of palms in the vicinity of Fort de Kock, alt. c. 1000m — R. Schlechter no. 15927, flowering on 22nd Jan. 1907.

Both in habit and shape of the labellum, this species is strikingly reminiscent of *C. rhizomatosa* J.J.Sm. However, the latter differs in the shape of the labellum and in the length of the crests, furthermore, the column is relatively more slender and appreciably in the clinandrium.

Coelogyne cuprea Wendl. et Krzl.

On trees in the mountains near Padang-Pandjang, alt. c. 1200m — Wichers, R. Schlechter no. 15894, flowering on 17th Jan. 1907; on tree-trunks near Fort de Kock, alt. c. 1000m — R. Schlechter no. 15929, flowering on 22nd Jan. 1907.

In European collections the plant has, to date, been a great rarity, but in the vicinity of Padang-Pandjang, it is far from rare. I suspect that those specimens imported by Sander were initially forwarded by Micholitz from this area, since he often visited the Padang Highlands, so that they did not come from Malacca, as stated by Kränzlin.

Coelogyne bella Schltr., sp. nov.

Epiphytica, erecta, 20—30 cm alta; rhizomate brevi, dense pseudo-bulbis obpresso; radicibus filiformibus elongatis, flexuosis, glabris; pseudo-bulbis oblique ovoides vel ellipsoideis, paulo compressis, obscure quadrangular-sulcatis, glabris, unifoliatis, basi vaginis paucis amplis mox decadentibus, primum vestitis, 3,5—4,5 cm altis, supra basin 1,5—2 cm latis; foliis erectis ellipticis, acutiusculis, plurinerviis, basi in petiolum satis longum canaliculatum sensim angustatis, glabris, petiolo inclusu 24—26 cm longis, medio laminae 4—4,5 cm latis; scapis more *C. speciosae* Ldl. proteranthis brevibus, pauci-(2—4-)floris, petiolum foliorum vix superantibus; bracteis mox de-

ciduis ellipticis, acuminatis, 2—2,5 cm longis; floribus speciosis in genere inter majores, illis *C. speciosae* Lindl. similibus, sed paulo minoribus; sepulis lanceolato-oblongis subacutis, extus carinatis, c. 3,5 cm longis, infra medium c. 0,9 cm latis, lateralibus obliquis, basi concavis; petalis linearibus oblique obtusiusculis, c. 3,2 cm longis, dimidio superiore paululo dilatatis, 3,5 mm latis; labello e basi cuneata concava dimidio anteriore trilobo, lobis lateralibus erectis obliquis, rotundatis, intermedio fere 3—4-plo maijore, rhombeo-elliptico, margine minute crenulato-undulato, antice breviter exciso apiculo interjecto, labello toto 3,2 cm longo, inter lobos laterales 2,3 cm lato, lobo intermedio medio fere 1,3 cm lato, cristis 2 in lobo intermedio leviter arcuatis multilaceratis e basi usque ad apicem labelli decurrentibus apicem versus subintegris, carina brevi mediana basi interposita; columna leviter arcuata semitereti, gracili, 1,9 cm longa, apice bene dilatata, clinandrio truncato; anthera cucullata, dorso gibbo donata; ovario cum pedicello brevi glabro, clavato, 1,2 cm longo.

On trees above Padang-Pandjang, alt. c. 1000m — R. Schlechter no. 15921, flowering on 20th Jan. 1910 [1907].

The colour of the flowers is pale cinnamon, with a white labellum having yellow veins at the base and golden-yellow longitudinal ridges. A very nice species, related to *C. speciosa* Lindl.

Coelogyne speciosa Lindl. var. fimbriata J.J.Sm.

On trees above Padang-Pandjang, alt. c. 1000m — R. Schlechter no. 15922, flowering on 20th Jan. 1907.

Coelogyne padangensis J.J.Sm. et Schltr., sp. nov.

Epiphytica, erecta vel patula, ramosa 30—40 cm longa; rhizomate elongato, vaginis arcte amplectentibus obtecto, pseudobulbis distantibus obsesso; radicibus filiformibus elongatis flexuosis, glabris; pseudobulbis erectis, anguste oblongoideis, 4-angulatis, apicem versus paulo attenuatis, 3,5—6 cm longis, supra basin 0,7—0,9 cm diametentibus, apice bifoliatis; foliis erecto-patentibus, elliptico-lanceolatis lanceolatisve, subacutis, basi in petiolam brevem sulcatum angustatis, petiolo inclusu 9—18 cm longis, medio fere 2,3—3,2 cm latis; pedunculis apicalibus synanthis, basi vaginis pluribus ovatis vel ovato-lanceolatis, imbricantibus protectis, apice pauci(3—5-)floris; floribus in genere inter mediocres illis *C. longeciliatae* T. et B. fere aequimagnis; sepalis 3,2 cm longis, glabris, intermedio ovato-lanceolato acuto, lateralibus paulo angustioribus obliquis, dorso carinatis; petalis anguste linearibus subacutis, sepalis paululo brevioribus; labello e basi concava late cuneata infra medium trilobo, lobis lateralibus oblique triangulis obtusis, erectis, longeciliatis, intermedio subtriplo longiore elongato, obtusissimo, apice retuso, margine toto longeciliato, carinis 2 irregulariter sinuosus in lobo medio leviter arcuatis, e basi usque infra apicem labelli decurrentibus, carina brevi crenulata mediana basi interjecta, labello toto 2,1 cm longo, inter apices loborum lateralium 1,7 cm lato, lobo medio 1,2 cm longo; columna semitereti, 1,5 cm longa, apice dilatata obtuse trilobulata, lobulo intermedio denticulato; anthera cucullata dorso gibbo donata, glabra; ovario cum pedicello brevi glabro, clavato, 6-costato, c. 1,2 cm longo.

On trees in the mountain forests near Kampong Tengah, alt. c. 1200m — R. Schlechter no. 15950, flowering in Jan. 1907.

I found only very sparse material of this interesting novelty, but through the

generosity of donation of flowers by the Buitenzorg Garden, I was able to prepare a more precise description of the species. The plant is closely related to Coelogyne longeciliata Teysm. et Binnend., which also I would consider to be the species described by J.J.Smith as C. fuliginosa J.J.Sm. (Orch. of Java, p. 144).

Coelogyne pulverula Teysm. et Binnend.

On tree-trunks near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15925, flowering on 21st Jan. 1907.

Coelogyne sumatrana J.J.Sm.

On trees in the forests of Bukit Djarat [Mount], alt. c. 1200m - R. Schlechter no. 16016, flowering on 1st Feb. 1907.

Coelogyne Rochussenii De Vries.

On trees near Tambangan, alt. c. 1000m, not rare - R. Schlechter no. 15890, flowering on 17th Jan. 1907.

Dendrochilum Bl.

Dendrochilum rhodobulbon Schltr., sp. nov.

Epiphyticum, in ramis arborum decumbens vel dependens, ramosum; rhizomate elongato squamis amplectentibus mox fisis densius obtecto; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis c. 2—3,5 cm distantibus erectis, cylindraceis, rubidis, apice unifoliatis, 2—2,5 cm altis, supra basin 3,5—4 mm diametentibus, apicem versus paululo attenuatis; foliis erectis lanceolatis, acutis, basi in petiolum brevem sensim angustatis, petiolo inclusio 8—11 cm longis, medio fere 0,9—1,3 cm latis, glabris; racemis arcuatulis, usque supra basin floriferis multifloris, 10—12 cm longis; bracteis patulis ovatis obtusiusculis, ovario duplo vel plus duplo brevioribus; floribus flavescenti-albidis, patentibus, distichis; sepalis oblongis obtusiusculis, glabris, 0,5 cm longis, lateralibus obliquis subfalcatis; petalis falcatis ligulatis, obtusis, dimidio superiore vix dilatatis, sepalis subaequilongis; labello arcuato oblongo, obtuso, medio paululo constricto, carinis 2 obtusis parallelis e basi usque ad medium decurrentibus, vix 3 mm longo, medio constricto 1 mm lato, supra basin et supra medium vix 1,5 mm lato; columna brevi 0,3 cm alta, steliis subulatis, clinandriuim trilobulatum subexcedentibus; ovario cum pedicello glabro, cylindrico, 0,4 cm longo.

On trees near Padang-Pandjang - Wichers, being cultivated in his garden, flowering on 3rd Feb. 1907.

One of the species of the affinity of D. pallide-flavens Bl. The individual species of this group are all very similar to each other, but appreciably constant in their minor characters, as already observed by Ridley and J.J.Smith.

Dendrochilum sulfureum Schltr., sp. nov.

Epiphyticum, ramosum, in ramis arborum decumbens vel dependens; rhizomate crassiusculo, vaginis satis longis mox fisis primum dense obtecto, 0,4 cm crasso; radicibus filiformibus, flexuosis, glabris; pseudobulbis 2,5—4 cm dissitis, cylindraceis, basi interdum paulo incrassatis, unifoliatis

flavidis, 2,3—2,5 cm altis, supra basin 0,5—0,7 cm diametentibus; foliis lanceolato-ligulatis, subacutis vel bidentatis, basi in petiolum perbrevem angustatis, glabris, 8—14 cm longis, medio fere 0,8—1,8 cm latis; racemis basilaribus usque supra basin floriferis, multifloris, 10—15 cm longis; bracteis ovatis, acuminatis vel apiculatis, ovario nunc aequilongis vel in basi racemi subduplo brevioribus; floribus sulfureis patentibus; sepulis angustis ligulatis obtusiusculis, glabris, 0,6 cm longis, lateralibus obliquis; petalis linear-i-falcatis subspathulatis, subacutis, sepalis paulo brevioribus; labello late ligulato obtuso apicem versus distincte angustato, medio paulo constricto, carinis 2 obtusis e basi usque supra medium decurrentibus, 0,2 cm longo, supra basi 0,1 cm lato; columna brevi vix 0,2 cm alta, stelidiis brevibus linearibus, clinandrio acuminato distincte brevioribus; ovario cylindrico, glabro, cum pedicello 2—2,3 mm longo.

On trees in the forests of Gunong-Merapi [Mount], alt. c. 1200m — R. Schlechter no. 15974, flowering on 29th Jan. 1907.

This species of the section Eu-Dendrochilum is characterised by the labellum being distinctly narrowed towards the front; the sepals are conspicuously narrow.

Dendrochilum Wichersii Schltr., sp. nov.

Epiphyticum, ramosum, in rami arborum decumbens vel dependens; rhizomate elongato, vaginis imbricantibus satis magnis primum obtecto, 0,3—0,4 cm diametente; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis cylindraceis apicem versus paulo attenuatis, unifoliatis, 2—3 cm altis, basi 0,5—0,7 cm diametentibus; foliis elliptico-lanceolatis lanceolatisve, obtusiusculis, basi in petiolum brevem angustatis, glabris, 10—12,5 cm longis, medio vel infra medium laminae 1,3—2,3 cm latis; racemis basilaribus, usque supra basin floriferis, multifloris, 9—17 cm longis; bracteis patulis, ovatis, acuminatis, ovario subduplo brevioribus; floribus distichis patentibus, pallidi-flavis; sepalis anguste oblongis subacutis, glabris, 0,5 cm longis, lateralibus obliquis, petalis linear-i-spathulatis, falcatis, subacutis, sepalis paulo brevioribus; labello oblongo obtusissimo, apicem versus paulo dilatato, glabro, carinis 2 parallelis obtusis usque supra medium decurrentibus 2,5 mm longo, infra apicem 1 mm latitudine paulo excedente; columna perbrevi 0,2 cm alta, stelidiis subfalcato-subulatis, clinandrium apice bifidum distincte superantibus; ovario cylindrico glabro, cum pedicello 0,4 cm longo.

On trees near Padang-Pandjang, alt. c. 850m — Wichers, R. Schlechter no. 15901, flowering on 18th Jan. 1907.

The most common of the three species of Eu-Dendrochilum that I know from Padang-Pandjang. It is distinguished by the multiplicity of flowers and has good specific characters in the labellum, broadened towards the front, and in the very short column, with long stelidia and bifid clinandrium apex.

Dendrochilum elegans Schltr., sp. nov.

Epiphyticum, dependens, usque ad 40 cm longum, ramosum; rhizomate elongato gracili, basi tantum radicante, vaginis amplis arete amplectentibus obtecto; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis longe distantibus cylindraceis, vagina singula ampla primum vestitis, unifoliatis, 2—3,5 cm longis, supra basin 3—4 mm diametentibus; foliis ellipticis apiculatis, basi in petiolum brevem angustatis, glabris, 6,5—14 cm longis, medio fere 2,2—4,4 cm latis; racemis apicalibus gracilibus arenatis, dense multifloris, folia multo excedentibus; pedunculo evaginato, gracillimo,

filiformi, glabro, foliis subdupo longiore; bracteis ellipticis acutis, ovarium amplectentibus et paulo superantibus; floribus distichis in genere medio-cribus, erecto-patentibus; sepalis lanceolatis acutis, glabris, 4,5 mm longis, lateralibus obliquis, interdum acuminatis; petalis oblique ligulato-lanceolatis obtusiuscule acuminatis, glabris, sepalis paulo brevioribus; labello e basi sublobato-dilatata infra medium valde constricto deinde in lobum elliptico-lanceolatum acutum expanso, intus supra basin callis 2 brevibus auriculiformibus ornato, 0,3 cm longo, supra basin 1,5 mm lato, supra medium 1 mm lato; columna brevi 1,5 mm alta, stelidiis falcatis linearibus, androclinium breviter et obtuse bilobulatum distincte superantibus; anthera cullata, antice breviter excisa; ovario glabro cylindraceo 0,2 cm longo.

On trees in the forests of Bukit Djarat [Mount], near Padang-Pandjang, alt. c. 1200m - R. Schlechter no. 15990, flowering on 1st Feb. 1907.

The plant belongs to the section *Monochlamys* and should be placed next to *D. acuminatum* J.J.Sm.

Dendrochilum glossorhynchum Schltr., sp. nov.

Epiphyticum, erectum, 20—55 cm altum; rhizomate abbreviato, dense pseudobulbis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis oblongoideo-cylindraceis, unifoliatis, 2—2,5 cm altis, 0,4—0,6 cm diametentibus; foliis erectis lanceolato-linearibus subacutis, 15—30 cm longis, medio fere 1,5—2,4 cm latis, basi in petiolum 1,5—4 cm longum sensim angustatis; racemo gracillime pedunculato, foliis yetustioribus breviore, synantho, subdense 10—20-floro, erecto; pedunculo evaginulato, 13—17 cm longo; bracteis patentibus ellipticis, subacutis, floribus paulo brevioribus; floribus illis *D. Kingii* (Hk. f.) Pfitz. fere aequimagnis, virescenti-flavidis; sepalis lanceolatis acuminatis glabris, 5,5 mm longis, lateralibus obliquis; petalis sepalis similibus oblique elliptico-lanceolatis breviter acuminatis, glabris; sepalis paulo minoribus; labello e quarta parte basilari trilobo, lobis lateralibus parvulis auriculiformibus, obliquis, divergentibus, breviter acutatis, intermedio multo majore, late elliptico apice brevissime acuminato, lamellis 2 semiovatis brevibus intus supra basin labelli, labello toto 0,4 cm longo, inter apices lobarum lateralium 0,3 cm lato, lobo intermedio 0,2 cm lato; columna brevi 0,2 cm vix superante, stelidiis nullis, apice dilatata, clinandrio apice dentato; rostelllo linguiformi satis conspicuo; ovario cylindrico, glabro, vix 0,2 cm longo.

On trees in the forests of Gunong Merapi [Mount], alt. c. 1800m - R. Schlechter no. 15949, flowering on 21st Jan. 1907.

This species, belonging to the section *Aphanostelidion*, is well characterised by its labellum and is best placed next to *D. Kingii* Pfitz.

Dendrochilum merapiense Schltr., sp. nov.

Epiphyticum, pusillum, c. 10 cm altum; rhizomate valde abbreviato; radicibus filiformibus elongatis, glabris, flexuosis; pseudobulbis oblongoideo-cylindraceis, unifoliatis, 0,8—1,8 cm longis, infra medium 3,5—5 mm diametentibus, apice paulo attenuatis; foliis erectis, linearibus, acutis, basi subpetiolato-angustatis, glabris, 5—8 cm longis, medio fere 0,4—0,5 cm latis; scapis synanthis gracilibus, erectis, apicem versus curvatis, foliis fere aequilongis vel paulo longioribus, laxius 10—15-floris; scapo evaginulato, gracillimo, glabro, bracteis lanceolatis acuminatis, ovarium plus minusve superantibus; floribus in genere inter minores, brunneis; sepalis ovato-lanceolatis, intermedio acuto, lateralibus obliquis acuminatis, glabris, 0,3 cm longis; petalis oblique subfalcato-ligulatis, breviter acuminatis, glabris, sepalis distincte

brevioribus; labello elliptico acuto, basi utrinque in lobulum divaricatum subulatum margine exteriore minute unidentatum expanso, apicem versus margine irregulariter subdentato, basi squamis & semiovatis brevibus et callo parvulo mediano orbiculari ornato, 2 mm longo, inter apices loborum basilarium 2 mm lato, supra medium 1,5 mm lato; columna perbrevi, 1,5 mm alta, stelidiis linearibus obtusis, clinandrio ampio apice subdentato paulo brevioribus; ovario cum pedicello glabro, clavato, 0,2 cm longo.

On trees in the forests of Gunong Merapi [Mount], alt. c. 1500m - R. Schlechter no. 15975, flowering on 29th Jan. 1907.

This species is admirably distinguished by the shape of the labellum. It is not directly related to any of the previously described species.

Dendrochilum Micholitzianum Krz1.

On trees in the environs of Padang-Pandjang - Wickers, cultivated in [his] garden, flowering on 4th Feb. 1907.

var. longispicatum Schltr., var. nov.

Differet a forma typica spicis valde elongatis (c. 45cm longis) floribusque majoribus, carina mediana obsoleta.

On trees in the environs of Padang-Pandjang - Wickers, cultivated in his garden, flowering on 4th Feb. 1907.

I consider it possible that this variety may prove to be a separate species, when better material is available. D. Micholitzianum Krz1. differs from D. longifolium Rchb.f. in the smaller leaves, but in the flowers is very closely related, if my determination is correct. My plants agree well with Kränzlin's species, but I have unfortunately not seen the Type.

Dendrochilum longifolium Rchb.f.

On trees in the Karbauen-Gat [Creek], near Fort de Kock, alt. c. 900m - R. Schlechter no. 15963, flowering on 27th Jan. 1907.

A relative of this species is D. formosanum Schltr., which I described in Bull. Herb. Boiss. (1906) VI, p. 302 as Platyclinis formosana Schltr. Since it has been ascertained, without doubt, that Platyclinis cannot be separated generically from Dendrochilum, it is opportune to change the names of the two other species described there, viz. Platyclinis dolichobrachia Schltr. to Dendrochilum dolichobrachium Schltr. and Playyclinis microchila Schltr. to Dendrochilum microchilum (Schltr.) Ames. These three species, together with Dendrochilum micranthum Schltr. also published there, and Coelogynexylobioides published by Kränzlin himself, are omitted in his Monograph of the Coelogyninae.

Pholidota Lindl.

Pholidota globosa Lindl.

On trees in the forests of Gunong Merapi [Mount], alt. c. 2600m - R. Schlechter no. 15955, flowering on 25th Jan. 1907.

Pholidota imbricata Lindl.

On trees near Tambangan, alt. c. 1200m - R. Schlechter no. 15889, flowering on 17th Jan. 1907.

Microstylis Nutt.Microstylis chamaeorchis Schltr., sp. nov.

Terrestris, pusilla, 5—18 cm alta, erecta, simplex; radicibus teretibus carnosulis, villosulis; folio basilari singulo, rarius foliis 2, extus basi vagina obtecto, elliptico vel oblongo, acuto vel acuminato, caulem basi amplectente, 1—2,5 cm longo, 0,6—1 cm medio fere lato, ut videtur sub anthesi nondum omnino evoluto; scapo e basi paulo incrassata tereti, glabro, stricto, vulgo evaginulato; racemo ipso laxe pluri-multi-floro, elongato, qua-quaverso; bracteis patulis lanceolatis acutis vel acuminatis, glabris, vulgo ovario aequilongis; floribus in sectione inter minores, inversis, violaceis, patentibus, mox patulis; sepalis patentibus oblongis obtusis, glabris, 2,5 mm longis; petalis linearibus obtusis, glabris, patentibus, sepalis subaequilongis; labello ovato-oblongo obtuso, basi subcordato, callo minuto transverso donato, lineis 6 atroviolaceis longitudinaliter picto, sepalis paululo breviore; columna brevi, biauriculata; anthera subreniformi-cordata obtusa; pollinis oblique ovoideis; ovario clavato glabro, cum pedicello 0,3 cm longo.

On steep, moist earth walls on Gunong Merapi [Mount], alt. c. 1800m - R. Schlechter no. 15942, flowering on 24th Jan. 1907.

This species is quite isolated in the genus and is so characteristic in habit and floral structure, that I would like to make it the Type of a new section, *Glossochilum*, which is characterised by the flat, undivided, linguiform lip.

Microstylis merapiensis Schltr., sp. nov.

Terrestris, erecta, 14—23 cm alta; radicibus flexuosis, crassiusculis, villosulis; caule valde abbreviato, vaginis foliorum omnino obtectis; foliis 3—5, erecto-patentibus, oblique ovatis vel ovato-ellipticis vel ovato-lanceolatis, acutis vel acuminatis, basi in petiolum basi dilatata caulem vaginantem angustatis, lamina 3—6,5 cm longa, medio vel infra medium 1,5—3,3 cm latis, textura herbaceis; scapo e basi teretiuscula angulato, squamulis paucis dissitis, bracteiformibus obsesso; pedunculo folia bene superante; racemo ipso subdense multifloro, quaquaversa, usque ad 8 cm longo, c. 1,3 cm diametente; bracteis mox deflexis anguste lanceolatis, acuminatis, glabris, ovarium longitudine superantibus; floribus in sectione mediocribus; sepalis oblongis obtusis, glabris, intermedio 0,3 cm longo, lateralibus paulo brevioribus latioribusque, obliquis; petalis oblique linear-ligulatis obtusis, glabris, sepalo intermedio fere aequilongis, basin versus paululo angustatis; labello circuitu suborbiculari, obscure trilobato, basi auriculato-cordato, auriculis triangulis obtusiusculis, 0,2 cm longo, supera basin 0,3 cm lato, auriculis 0,1 cm longis; columna brevi, auriculis erectis oblongo-quadratis; anthera cordata obtusa, cucullata; ovario cum pedicello clavato, glabro, leviter 6-costato, 0,4 cm longo.

On steep, moist loam walls on Gunong Merapi [Mount], alt. c. 1800m - R. Schlechter no. 15943, flowering on 24th Jan. 1907.

This species is distinguished by the round, weakly trilobed labellum. The colour of the flowers, also is very characteristic, the sepals and petals, together with the column are violet, the labellum orange-yellow.

Oberonia Lindl.Oberonia padangensis Schltr., sp. nov.

Epiphytica, erecta, multicaulis, 12—15 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, glabris; caulinis erectis, omnino foliorum basibus obtectis, 6—8-foliatis; foliis distichis, approximatis, egut-tantibus, falcato-lanceolatis, acutis, usque ad 7 cm longis, supra basin 0,6 1 cm latis; spica curvato-deflexa dense multiflora, cylindrica, 10—13 cm longa, c. 0,8 cm diametente, pedunculo abbreviato; bracteis lanceolatis acuminatis lacerato-ciliatis, extus papilloso-puberulis, ovarii dimidium vulgo superantibus; floribus patentibus brunneis, illis O. spathulatae Ldl. sive aquimagnis; sepalis ovatis obtusiusculis, extus sparsim papilloso-puberulis, c. 4,5 mm longis, lateralibus obliquis; petalis oblique oblongis obtusi, glabris, sepalis subaequilongis; labello e basi subquadrata, subreniforme-dilatata, antice bilobo, lobis suborbicularibus, glabro, basi utrinque auricula brevi obtuso donato, 0,2 cm longo, supra medium 2,5 mm lato; columna brevi, subquadrata; anthera reniforme-cucullata; ovario cylindrico papilloso-puberulo, c. 2,5 mm longo.

On trees near Padang-Pandjang, alt. c. 900m — R. Schlechter no. 16019, flowering on 2nd Feb. 1907.

This species should be placed close to O. spathulata Lindl., but from which it differs in the longer, long-acuminate leaves of thinner texture, brown flowers and in the appreciably broader labellum.

Oberonia merapiensis Schltr., sp. nov.

Epiphytica, acaulis vel subacaulis, erecta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caule subnullo vel valde abbreviato, omnino vaginis foliorum obsesso, 5—7-foliato; foliis articulatis suberectis, linearibus vel linear-lanceolatis, acutis vel subacutis, usque ad 10 cm longis, 0,3—0,7 cm latis; spica valde elongata brevi-pedunculata, usque ad 30 cm longa, pro genere laxa multiflora; bracteis oblongis apiculatis, subintegris, ovarium vulgo paulo superantibus; floribus inversis patentibus, viridibus, in genere inter minores; sepalis ovato-oblongis obtusiusculis, glabris, vix 0,1 cm longis, lateralibus obliquis; petalis oblongis, truncato-obtusatis, margine subdentato-irregularibus, sepalis subaequilongis, glabris, labello e basi cordata supra medium valde constricto, et antice in lobos 2 falcato-divergentibus, quadrato-oblongos, antice alte fissos expanso, margine dimidio inferiore lacerato-dentato, glabro, sepalis paulo longiore, supra basin vix 0,1 cm lato, inter apices loborum apicalium aequilato; columna brevi, glabra; anthera late ovato-cucullata; ovario cylindrico, glabro, 0,2 cm longo.

On trees on the slopes of Gunong Merapi [Mount], alt. c. 1300m — R. Schlechter no. 15977, flowering on 29th Jan. 1907.

A very characteristic species, standing somewhat isolated in the shape of the lip. This division of the genus Oberonia into Acaules and Caulescentes, is not very satisfactory, since both these groups [sections] are linked by a number of short-stemmed species. I therefore suggest the following two groups [sections] :-

- § 1. Apotemnophyllum : characterised by the articulated leaves, where the lamina separates from the base of the leaf and drops off.
- § 2. Menophyllum : characterised by the non-articulated leaves, which remain on the

stems and decompose gradually.

The genus Hippeophyllum which I established, also has articulated leaves, but differs from Oberonia in floral structure. Oberonia Scortechini Hook.f. also belongs to this genus Hippeophyllum, and so I rename it Hippeophyllum Scortechini (Hook.f.) Schltr.

Oberonia pallideflava Schltr., sp. nov.

Epiphytica erecta, acaulis; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; foliis 3—5, erectis, articulatis, linearibus, acutis, usque ad 15 cm longis, 0,3—0,5 cm latis, spicis elongatis breviter pedunculatis, folia sere duplo excedentibus, usque ad 25 cm longis, dense multilloris, c. 0,8 cm diametentibus; bracteis lanceolatis acuminatis, margine irregularibus, subdentatis, glabris, ovario vulgo paulo brevioribus; floribus patentibus pallide flavidis, in genere inter minores; sepalis oblongis obtusis, glabris, vix 0,4 cm longis, lateralibus obliquis; petalis sepalis similibus oblique oblongis obtusissimis, sepalis paululo brevioribus; labello quinquelobulato, sepalis paulo longiore, lobis basalibus oblique oblongis obtusis, brevibus, intermedio e basi oblongo-quadrata trilobulato, lobulis lateralibus falcato-divergentibus, linearibus, obtusis, intermedio 3—4-plo minore, triangulo, obtuso, labello inter apices loborum basarium bene angustius quam inter apices loborum apicalium; columna brevi oblongoidea; anthera late ovoidea, cucullata, glabra, ovario cylindrico, glabro, longitudine 0,3 cm subattingente.

On trees near Padang-Pandjang, alt. c. 900m — R. Schlechter no. 15916, flowering on 30th Jan. 1907. [probably 20th Jan.].

A very interesting species reminiscent of O. Valetoniana J.J.Sm. in labellum structure; it belongs to the section Apotemnophyllum, established above.

Oberonia Costeriana J.J.Sm.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15867, flowering on 15th Jan. 1907.

This species also belongs to the section Apotemnophyllum.

Liparis L.C.Rich.

Liparis geophila Schltr., sp. nov.

Terrestris, longe-repens, 7—9 cm alta; rhizomate gracili, tereti, vaginis arcte amplectentibus obtecto, distanter pseudobulbis obsesso; pseudobulbis ovoides vel ellipsoideis, erectis, 1—1,3 cm altis, infra medium c. 0,5—0,6 cm diametentibus, 5—7 cm distantibus; foliis ad basin pseudobulborum 2, petiolatis, petiolo 2—3 cm longo, basi dilatata pseudobulbum vaginante, inferiore pseudobulbum omnino obtegente, lamina late ovata, acuminata vel apiculata, basi leviter cordata, 2,5—4 cm longa, infra medium 1,7—2,7 cm lata, glabra, textura herbacea, tenui; scapo folia plus minusve excedente ex apice pseudobulborum terminali, teretiusculo, glabro, apice dense plurifloro; bracteis patentibus, lanceolatis, acuminatis, glabris, ovario vulgo duplo sere brevioribus; floribus in genere mediocribus, pallide violaceis, columna viridi, erecto-patentibus; sepalo intermedio erecto, lancolato, acuto, glabro, sepalis lateralibus decurvis, intermedio aequilongis sed paulo latioribus, acutis, basi valde obliquis; petalis reflexis, linearibus, obtusiusculis, basin versus paulo dilatatis, obliquis, sepalis aequilongis; labello ample-

subquadrato, antice breviter apiculato, margine dimidio anteriore hinc inde denticulo minuto donato, glabro, basi intus callo parvulo obtuso donato, 0,7 cm longo, basi et medio 0,7 cm lato; columna leviter curvata, antice plana, basi valde dilatata, labello fere duplo breviore; anthera subreniformi-cucullata antice apiculata, glabra; ovario cum pedicello glabro, cylindraceo, leviter costato, 0,7 cm longo.

Sumatra : In humus of the forest on Gunong Merapi [Mount], alt. c. 2500m - R. Schlechter no. 15953, flowering on 25th Jan. 1907.

This very distinctive species of the section Rachidibulbon is related to L. montana Bl., and together with it has distinctive habit characteristics, yet both are well distinguishable by their lip, which for L. montana Bl. is closely ciliated, of a more oval shape and with a long small tip in front. For the colour of the flowers I noted : pale violet with a green column.

Liparis leucophaea Schltr., sp. nov.

Epiphytica, erecta vel patula, pusilla; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis brevibus, ellipsoideis vel cylindraceo-ellipsoideis, 0,6—1 cm altis, infra medium 0,3—0,4 cm diametentibus, vaginis foliorum primum omnino obteclis; foliis 3—4 erecto-patentibus, articulatis, ellipticis, breviter acuminatis, basi angustatis sensim in vaginam abeuntibus, 2,7—5 cm longis, 0,7—1,8 cm medio fere latis; scapo terminali elongato, folia 2—6-plo excedente, laxe 9—25-floro, secundo, pedunculo foliis breviore squamis bracteiformibus 2—3, erecto-patentibus obsesso; bracteis erecto-patentibus ovato-lanceolatis acuminatis, glabris, ovario bene brevioribus, superioribus sensim decrescentibus, floribus erecto-patentibus secundis; sepalis late oblongis, obtusis, glabris, 3,5 mm longis, intermedio erecto, lateralibus deflexis margine inferiore ima basi connatis; petalis oblique linearibus obtusis, glabris, sepalis fere aequi-longis, patenti-reflexis; labello late quadrato, basi constricta margine reflexa, callo quadrato erecto, truncato, cum anulo parvulo incrassato in medio donato, margine antice truncatissimo, angulis acutis, apiculo mediano parvulo, labello toto 2,5 mm longo, apice 2,5 mm lato, glabro; columna brevi lata; labello subaequimagna, alis 2 divergentibus triangulis obtusis latere ornata; anthera cucullata obtusa; ovario cum pedicello glabro, cylindraceo, c. 0,5 em longo.

On trees in the forests on Bukit-Djarat [Mount], alt. c. 1300m - R. Schlechter no. 15992, flowering on 1st Feb. 1907.

This delightful little plant should be placed next to L. decurrens Ridl. in the section Platystylis. The flowers have a beautiful brown-red colour, the labellum with a white spot in the middle, the protruding auricles of the column likewise white, the anther, on the other hand, is yellow.

Liparis Lepanthes Schltr., sp. nov.

Epiphytica, erecta, gracilis, usque ad 18 cm, alta; rhizomate abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis valde approximatis, ovoideis vel ellipsoideis, 0,7—1 cm altis, infra medium 0,4—0,6 cm diametentibus, vulgo vaginis 2 foliis similibus aequimagnisque obteclis, apice vulgo 2-foliatis; foliis articulatis, oblanceolato-ellipticis vel ellipticis, erecto-patentibus, acuminatis, basin versus sensim angustatis, glabris, textura tenuibus; racemo terminali folia multoties superante, laxe 6—15-floro,

pedunculo angulato, rhachi compressa; bracteis triangulis subacutis, glabris, ovario vulgo paulo brevioribus; floribus secundis aurantiaco-brunneis, patentibus, flores generis *Lepanthes* in mentem revocantibus; sepalo intermedio, late ovato obtusiusculo, glabro, 0,6 cm longo, supra basin 0,5 cm lato, lateralibus oblique oblongis, obtusiusculis 0,6 cm longis, supra basin 0,3 cm latis; petalis anguste linearibus acutis, basi margine anteriore paulo dilatatis, sepalis fere aequilongis, recurvis; labello carnosulo circuitu e basi late ovata antice lanceolata, valde acuminata, intus infra apicem medio dentibus 2 subulatis, recurvis, parvulis donato, supra basin intus medio anulo incrassato parvulo ornato, c. 0,5 cm longo, supra basin 0,3 cm lato, columna brevi, lata, dentibus 2 subulatis divaricatis infra apicem donato; anthera cucullata; ovario costato, glabro, c. 0,4 cm longo.

On trees in the forests of Gunong Merapi [Mount], alt. c. 1300m - R. Schlechter no. 15976, flowering on 29th Jan. 1907.

This really delightful small species is distinguished from all the others of the section *Platystylis*, by the structure of the lip.

Liparis merapiensis Schltr., sp. nov.

Epiphytica, erecta, 20—30 cm alta; rhizomate valde abbreviatu; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis approximatis, paulo compressis, anguste oblongoideis, apicem versus sensim paulo angustatis, basi vaginis mox dissolutis primum obtectis, apice unifoliatis, 4—6,5 cm altis, infra medium 0,7—1 cm latis; folio erecto vel suberectu, elliptico-ligulato, acuto, basin versus paulo angustato, 10—20 cm longo, medio fere 1,7—2,4 cm lato; racemo terminali erecto, folia vulgo superante, sublaxe 10—20-floro, subsecundo, pedunculo tereti, brevi, glabro; bracteis lanceolatis acuminatis, glabris, ovario paulo brevioribus; floribus patentibus vel erecto-patentibus, brunnescenti-flavidis, labello brunneo, illis *L. latifoliae* Ldl. bene minoribus; sepalis oblongis obtusiusculis, reflexis, glabris, 0,5 cm longis, lateralibus obliquis; petalis anguste linearibus obtusiusculis, reflexis, glabris, sepalis fere aequilongis; labello e basi quadrato-oblonga in lobos 2 oblique oblongos, margine crenatos, minutissime ciliatos, producto, basi callo hippocrepiformi parvulo ornato, sepala lobis distincte superante, supra basin 2,5 mm lato, ad medium loborum 4,5 mm lato; columna labello fere duplo breviore, leviter arcuata, basi dilata, anthera cucullata, glabra, antice obtusa; ovario leviter 6-costato, cylindraceo, glabro, c. 0,9 cm longo.

On trees in the forests of Gunong Merapi [Mount], alt. c. 2000m - R. Schlechter no. 15959, flowering on 25th Jan. 1907.

This species belongs to the 'form-circle' of *L. latifolia* Lindl., to which it is probably most closely related. However, it has much smaller flowers and a differently shaped column, whilst the colour of the flowers also differs.

Liparis latifolia Lindl.

On trees near Tambangan, alt. c. 1200m - R. Schlechter no. 15888, flowering on 17th Jan. 1907; Padang-Pandjang - Wichers.

Liparis parviflora Lindl.

On trees near Tambangan, alt. c. 1000m - R. Schlechter no. 15887, flowering

on 17th Jan. 1907.

The raceme of the specimen collected there is 50cm long.

Liparis confusa J.J.Sm.

On trees near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15932, flowering on 22nd Jan. 1909 [1907]; near Padang-Pandjang - Wickers.

Liparis caespitosa Lindl.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15866, flowering on 15th Jan. 1907.

var. cleistogama Schltr., [var. nov.]

Diffrer a forma typica floribus cleistogamis, rostello in columnna deficiente.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15868, flowering on 15th Jan. 1907.

In the Padang Highlands I repeatedly found specimens of this variety in large numbers. On none of the inflorescences was an open flower to be found.

Liparis compressa Lindl.

On trees near Padang-Pandjang, alt. c. 800m - Wickers, R. Schlechter no. 15919, flowering on 20th Jan. 1907.

Podochilus Bl.

Podochilus tmesipteris Schltr., sp. nov.

Epiphyticus, pluricaulis, usque ad 14 cm altus; rhizomate decumbente brevi; radicibus filiformibus elongatis, flexuosis, glabris; caulis erectis gracilibus, simplicibus vel pauci-ramosis, bene foliatis, vaginis foliorum amplectentibus, persistentibus omnino obtectis; foliis erecto-patentibus distichis, oblongo-ligulatis, apiculatis, glabris, 0,5—0,7 cm longis, medio fere 2—2,5 mm latis; inflorescentiis lateralibus apicalibusque patentipalulis, laxè paucifloris, gracillimis, folia multo excedentibus, usque ad 4,5 cm longis; bracteis ovato-lanceolatis obtusiusculis, ovario vulgo paulo brevioribus, glabris; floribus in genere inter minores, illis *P. tenuis* Bl. similibus; sepalo intermedio ovato, obtusiusculo, 1,5 mm longo, glabro, lateralibus intermedio aequilongis, basi margine anteriore valde dilatata mentum obtusissimum sacciforme, 0,2 cm longum, cum columnae pede formantibus; petalis oblique, obovatis obtusis, glabris, sepalo intermedio subaequilongis; labello elliptico basi in appendicem brevem quadratum, margine posteriore leviter undulatum supra locum insertionis producto, intus infra apicem gibbo minuto donato, appendice basali inclusu 2,5 mm longo; columna brevi, pede gracili; rostello satis alto; anthera cordata ovato-lanceolata acuta; polliniis 4, stipite excavato, linearis, gracili, glandula minuta; ovario cum pedicello brevi glabro, clavato, ca. 0,2 cm longo.

On trees not far from Kampong Tengah, alt. c. 700m - R. Schlechter no. 16020, flowering on 3rd Feb. 1907.

This species is distinguished in habit from most of the other species of the section Apista by the erect, rhizomes which are reminiscent of Tmesipteris,

furthermore, by the characteristic inflorescences which protrude obliquely downwards. The whole plant has the habit, so-to-speak, of a miniature of the Podochilus species of the affinity of P. pendulus (Bl.) Schltr.

Podochilus muricatus (Teysm. et Binnend.) Schltr.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1500m - R. Schlechter no. 16010, flowering on 1st Feb. 1907.

In labellum structure, this is a typical species of the section Appendicula, but on account of its four pollinia, is better placed in the section Apista. When without flowers, it can hardly be distinguished from P. rubens Schltr., described below, with which it grows together.

Podochilus rubens Schltr., sp. nov.

Epiphyticus, erectus vel patulus, pluricaulis, usque ad 23 cm longus; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caulis teretibus vulgo paulo curvatis, omnino vaginis foliorum obtectis, dense foliatis; foliis patentibus oblique ovatis, apice inaequaliter bilobulatis, apiculo interjecto, glabris, textura rigidiusculis, 0,8—1,2 cm longis, infra medium 0,5—0,7 cm latis; racemis vulgo lateralibus rarius apicalibus abbreviatis, dense plurifloris, foliis brevioribus; bracteis ovatis vel ovato-lanceolatis subacutis, glabris, mox reflexis, ovarium superantibus; floribus in genere inter minores, rubidis; sepalis ovato-triangulis obtusiusculis, glabris, 2,5 mm longis, lateralibus obliquis, basi margine anteriore dilatata mentum per breve obtusissimum formantibus; petalis obliquis latius oblongis obtusis, glabris, sepalis paulo brevioribus; labello circuitu late oblongo, basi concavo, supra medium paulo dilatato antice obscure trilobato, obtuso, glabro, intus supra basin lamella transversa hippocrepiformi, usque infra medium utrinque decurrente donato, ca. 2,5 mm longo, supra medium 0,2 cm latitudine subattingente; columna brevi, apice utrinque breviter unidentata, rostello ovato, bicuspidato; anthera lanceolato-ovoidea acuminata; polliniis 6 oblique clavatis, stipite singulo excavato, pollinaria aequilongo; glandula rotundata parvula; ovario cum pedicello glabro, clavato, ca. 0,3 cm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1500m - R. Schlechter, Wickers no. 16006, flowering on 1st Feb. 1907.

This species is probably best placed next to Podochilus lucidus (Ridl.) Schltr.

Podochilus reflexus (Bl.) Schltr.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 1628 [probably 10628], flowering on 7th Feb. 1907.

P. politus (J.J.Sm.) Schltr. (Appendicula polita J.J.Sm.) also belongs to this affinity.

Podochilus cornutus (Bl.) Schltr.

On trees on the mountains near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15913, flowering on 19th Jan. 1907; on trees near Kampong Tengah, alt. c. 700m - R. Schlechter no. 16026, flowering on 3rd Feb. 1907.

Podochilus anceps (Bl.) Schltr.

On trees in the forests of Bukit Djarat [Mount], alt. c. 1400m - R. Schlechter no. 15998, flowering on 1st Feb. 1907.

Podochilus effusus Schltr., sp. nov.

Epiphyticus, erectus, pluricaulis, 20—25 cm altus; radicibus filiformibus elongatis, flexuosis, glabris; caulis teretibus omnino vaginis foliorum amplectentibus vestitis, dense foliatis; foliis patentibus, late oblongis vel late ellipticis, apice inaequaliter bilobulatis, basi rotundatis, 0,5—0,8 cm longis, medio fere 0,3—0,5 cm latis, textura crassiusculis; racemis versus apicem caulinum longissime pedunculatis, dense 6—15-floris; pedunculis flexuosis, vaginis pluribus alte vaginantibus obtectis, teretibus, glabris, usque ad 9 cm longis; bracteis ovato-lanceolatis subacutis, glabris, mox reflexis, ovario aequilongis vel paulo longioribus; floribus virescentibus in genere inter minores; sepalis ovatis obtusis, glabris, dorso apiculatis, 0,2 cm longis, lateralibus basi margine anteriore dilatata, mentum per breve obtusissimum formantibus; petalis oblique oblongo-spathulatis obtusissimis, sepalis paululo brevioribus, glabris; labello subquadrato-latioblongo, obtusissimo, intus lamella hippocrepiformi concava infra medium versus margines decurrente, basin labelli paulo superante aucto, apice gibbo minuto obtuso donato, glabro, 2,5 cm longo, medio fere ca. 2 cm lato; columna brevi, pede producto, rostello triangulo pro genere mediocri, apice exciso; anthera ovoidea obtusiuscula, cucullata; ovario cylindracco, glandulis sparsis sessilibus primum ornato, ca. 0,2 cm longo, subsessili.

On trees in the forests of Gunong Merapi [Mount], alt. c. 1200m - R. Schlechter no. 16035, flowering on 29th Jan. 1907.

This species should be placed next to P. elegans (Rchb.f.) Schltr.

Podochilus infundibuliformis (J.J.Sm.) Schltr.

Appendicula infundibuliformis J.J.Sm., in Ic. Bogor. Vol. III (1901), p. 217.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15865, flowering on 15th Jan. 1907.

In habit, this species has a certain similarity to P. cristatus (Bl.) Schltr., but otherwise, as already stated by J.J. Smith, is related to P. longus (J.J.Sm.) Schltr. (Appendicula longa J.J.Sm.).

Podochilus panduratus Schltr., sp. nov.

Epiphyticus, erectus, pluricaulis, habitu P. pendulum (Bl.) Schltr. imitans, usque ad 40 cm altus; radicibus filiformibus elongatis, flexuosis, villosulis; caulis simplicibus dense vaginis foliorum alte amplectentibus obtectis, dense foliatis; foliis erecto-patentibus oblongis, apice inaequaliter bilobulatis, glabris, textura tenuioribus, 2,5—3,5 cm longis, medio fere 0,7—1,2 cm latis; racemis ad apices caulinum breviter pedunculatis vel subsessilibus, laxe 15—20-floris, usque ad 6 cm longis, subpatulis vel erecto-patentibus; bracteis patulis ellipticis obtusiusculis, glabris, ovario fere aequilongis; floribus illis P. penduli (Bl.) Schltr. minoribus, subpatentibus; sepallo intermedio ovato obtuso glabro, 3,5 mm longo, lateralibus obliquis; triangulis, breviter acuminatis, basi margine anteriore dilatata, mentum obtusum, 1,5 mm longum formantibus, sepallo intermedio aequilongis; petalis oblique oblongis apice subtruncato-obtusatis, glabris, 0,3 cm longis, medio

fere vix 1,5 mm latis, glabris; labello pandurato, infra medium bene constricto, antice oblongo, apiculato, lamella hippocrepiformi basi cucullato-incubente, antice ad constrictionem labelli decurrente supra basin instructo, 4,5 cm longo; columnna brevi, pede bene producto, rostello triangulo subacuminato, apice exciso, pro genere mediocri; anthera ovata acuminata, cucullata, glabra; polliniis 6 inaequalibus, sine stipite glandulae minutae affixis; ovario cum pedicello glabro, clavato, 0,4 cm longo.

On mountain rocks near Kampong-Tengah, alt. c. 800m - R. Schlechter no. 15912, flowering on 19th Jan. 1907.

In habit this species has much similarity to P. pendulus (Bl.) Schltr., but differs in the structure of the labellum. The flowers are greenish, the petals with a violet margin, the labellum golden-yellow, and in front violet-red.

Podochilus pendulus (Bl.) Schltr.

On trees in the forests on Bukit-Djarat [Mount], alt. c. 1400m - R. Schlechter no. 16009, flowering on 1st Feb. 1907.

Podochilus ovalis Schltr.

On rocks near Tambangan, alt. c. 1000m - R. Schlechter no. 15885, flowering on 17th Jan. 1907.

Ceratostylis Bl.

Ceratostylis lateralis Schltr., sp. nov.

Epiphytica, in ramis arborum decumbens, usque ad 13 cm longa; rhizomate crassiusculo radicante, vaginis arcte amplectentibus demum in fibros reticulatos solutis omnino obtecto, ca. 8,6 cm diametiente; radicibus filiformibus elongatis, flexuosis, pilosis; pseudobulbis ca. 1,5—2 cm distantiibus, cylindraceis, unifoliatis, primum vaginis altis, mox siccis, reticulato-nervosis obtectis, 1,7—2 cm altis, ca. 3,5—4 mm diametentibus; foliis erectis oblanceolato-ligulatis, obtusiusculis, inaequaliter bilobulatis, basin versus sensim angustatis, glabris, textura carnosulis, 5—7 cm longis, supra medium 0,8—1 cm latis; floribus fasciculatis succedaneis, lateraliter versus medium pseudobulborum natis, basi vagina mox desicata protectis; pedunculo filiformi puberulo, 2—2,3 cm longo, unifloro; bractea ovata breviter acuminata, ovario subsessili breviore; floribus in genere inter majores, albis, sepalo intermedio oblongo-lanceolato obtusiusculo, extus puberulo, 1,2 cm longo, lateralibus intermedio aequilongis, obliquis, basi margine anteriore dilatata, mentum breve, obtusum formantibus, extus puberulis, quarta parte anteriore inter se connatis; petalis, oblique oblongis, obtusiusculis, glabris, 1,2 cm longis; labello e basi breviter unguiculato-angustata, concava, intus puberula in laminam lanceolatam obtusam antice subincrassatam dilatato, lineis 3 parallelis puberulis in medio ornato, 1,3 cm longo, lamina infra medium 0,4 mm lata; columnna brevi, glabra, 0,2 cm alta, brachiis antheram paululo tantum superantibus, concavis, ovario subsessili puberulo vix 0,4 cm longo.

On trees in the forests of Gunong-Merapi [Mount], alt. c. 2700m - R. Schlechter no. 15956, flowering on 25th Jan. 1907.

This species differs from all others, so far known, in having the inflorescences appearing laterally at about half the height of the bulbs. The floral segments

have a certain similarity to those of C. grandiflora J.J.Sm., which has also been described from the Padang Highlands, but with the latter, the leaves and flowers are appreciably larger and the labellum has no raised crests.

Ceratostylis radiata J.J.Sm.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15864, flowering on 15th Jan. 1907.

Ceratostylis leucantha Schltr., sp. nov.

Epiphytica, erecta, caespitifica, usque ad 35 cm alta; rhizomate valde abbreviato; radicibus siliformibus elongatis, flexuosis, glabris; caulis subsiliformibus, teretibus, glabris, apice unifoliatis, basi vaginis 2—3 ovatis et ovato-lanceolatis, acuminatis, glabris, nervis reticulatis prominulis pictis protectis, 15—30 cm longis, 1—2 mm diametentibus; folio erecto tereti, subulato, acuto, basin versus leviter canaliculato, glabro, usque ad 8 cm longo, crassitudine caulem aequante; floribus ad apices caulinum fasciculatis, niveis, pro sectione magnis; vaginis ovatis vel lanceolatis, acutis protectis, bracteis parvulis hyalinis, ovatis, breviter acuminatis, glabris; sepalo intermedio oblongo-ligulato obtusiusculo, glabro, c. 0,8 cm longo, lateralibus intermedio aquilongis similibusque, sed basi margine anteriore paulo dilatatis, mentum per breve obtusissimum formantibus, ima basi tantum connotatis; petalis oblique oblongo-ligulatis obtusiusculis, glabris, 0,7 cm longis; labello e basi brevissime unguiculata lanceolato, tertia parte apicali paulo angustato, subtereti-incrassato, obtuso, glabro, 0,9 cm longo, medio sere 2,5 mm lato; columna brevi, glabra, brachiis antheram excedentibus concavis, obtusis, pede per breve; ovario puberulo cylindrico, c. 0,4 mm longo.

On trees in the forests of Gunong Merapi [Mount], alt. c. 2700m - R. Schlechter no. 15954, flowering on 25th Jan. 1907.

Within the section Acaules, this species is quite isolated with its large, white flowers and conspicuously short mentum.

var. djaratensis Schltr., var. nov.

Differ a forma typica habitu graciliore, floribusque minoribus, 0.5cm longis.

On trees in the forests on the summit of Bukit Djarat [Mount], alt. c. 1600m - R. Schlechter no. 15995, flowering on 1st Feb. 1907.

Ceratostylis ampullacea Krzl.

On trees near Tambangan, alt. c. 900m - R. Schlechter no. 15892, flowering on 17th Jan. 1907.

The specimens I collected differ from the Type preserved at the Berlin Herbarium in narrower stemlets, but otherwise the flowers agree well.

Agrostophyllum Bl.

Agrostophyllum sumatrana Schltr. et J.J.Sm.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15881, flowering on 16th Jan. 1907.

Agrostophyllum trifidum Schltr., sp. nov.

Epiphyticum, erectum, multicaule, usque ad 20 cm altum; rhizomate decumbente, dense vaginis imbricantibus obtecto, tereti; radicibus filiformibus elongatis, flexuosis, glabris; caulis plus minusve approximatis, simplicibus, praesertim apicem versus paulo compressis, dense vaginis foliorum imbricantibus utrinque in dentem subulatum, acutum, stipuliformem productis obtectis, dense foliatis; foliis oblongo-ligulatis, inaequaliter bilobulatis, basi subito truncato-obtusatis, usque ad 0,8 cm longis, supra basin 2,5—3 mm latis, glabris, textura chartaceis; floribus in spicis unifloris ad apicem caulis capitiformi-congestis, vaginis exterioribus oblongis obtusis; bracteis brevibus subhyalinis; floribus erectis, illis *A. stipulati* (Griff.) Schltr. fere aequimagnis, similibus; sepalo intermedio oblongo, obtuso, c. 4,5 mm longo, glabro, lateralibus intermedio fere aequilongis, subfalcatis, apiculatis, basi margine anteriore valde dilatata in mentum obtusum sacciforme, c. 0,3 cm longum productis; petalis subfalcatis e basi paulo dilatata linear-ligulatis obtusis. 4,5 cm longis; labello e basi saccato-concava in laminam late ovato-triangularem, obtuse acuminatum dilatato, intus appendice magno cuneato alte trifido, segmentis linearibus obtusis, laminam labelli excedentibus, glabro ornato, rostellum apice fere aequante; columna subtereti, 0,5 cm longa, rostello dactyliformi erecto; ovario cylindraceo costato, lepidoto, c. 0,7 cm longo.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 16029, flowering on 7th Feb. 1907; no. 15964, flowering on 28th Jan. 1907.

This species is particularly well distinguished from its closest relative *A. stipulatum* (Griff.) Schltr., by its labellum.

J.J. Smith changed Appendicula callosa Bl. to Agrostophyllum callosum (Bl.) J.J.Sm., even though there was an earlier Agrostophyllum callosum Rchb.f. According to the rules of nomenclature, this was not possible and, furthermore, the name Agrostophyllum bicuspidatum J.J.Sm., which he gave it earlier must be disallowed, since he should have considered the name of Appendicula stipulata given by Griffith. Therefore, I herewith rename the previous Appendicula callosa Bl. as Agrostophyllum stipulatum (Griff.) Schltr.

Agrostophyllum javanicum Bl.

On trees above Kampong Tengah, alt. c. 1000m — R. Schlechter no. 15967, flowering on 28th Jan. 1907.

Agrostophyllum globiceps Schltr., sp. nov.

Epiphyticum, erectum, pluricaule, validum, usque ad 70 cm altum; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caule stricto vel substricto, tereti, c. 0,5 cm diametente, dense vaginis foliorum amplis amplectentibus, apice utrinque auriculato-angulatis obtecto, dense foliato; foliis erecto-patentibus vel suberectis, lanceolato-ligulatis, obtusiusculis, inaequaliter bilobulatis, 12—14 cm longis, medio fere 1—1,4 cm latis; floribus in spicis vulgo bifloris ad apicem caulis capitiformi-congestis; capitibus c. 3—4 cm diametentibus extus vaginis foliaceis ovatis protectis; vaginulis spicarum 3—4 ovatis, obtusiusculis, imbricantibus; bracteis ovatis ovario subaequilongis, glabris; floribus albis erectis; sepalis ovatis, acutis glabris, 4,5 mm longis, lateralibus oblique apiculatis margine anteriore basi paululo ampliantibus; petalis obliquis anguste oblongo-ligulatis, supra

medium margine anteriore paulo angustatis, obtusis, glabris, sepalis paululo brevioribus; labello basi in hypochilium sacciforme excavato, infra medium subtus peralte constricto, antice in epichilium subcucullatum, obscure trilobatum, margine denticulatum, antice acuminatum producto, longitudine columnam distinete superante; columna semitereti, glabra, basin versus subdilatata, apice utrinque breviter et obtusissime auriculata; rostello suberecto perbrevi, exciso, stigmate transverso angustissimo, bicruri, cruribus formiter divergentibus; anthera cucullata obtusiuscula, glabra; polliniis oblique clavatis, glandulae oblongae parvulae affixis; ovario cylindraceo, costato, glabro, c. 0,5 cm longo.

On trees near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15930, flowering on 22nd Jan. 1907.

In floral structure, this species is very similar to A. javanicum Bl., but quite different in outwards appearance. I was for a long time, in doubt, whether to consider it as a form of A. javanicum Bl., but then finally decided to set up a new species, since apart from the appreciable differences in habit, it has many characters in the flower, which differ from A. javanicum Bl.

Agrostophyllum longifolium Rchb.f.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15883, flowering on 17th Jan. 1907.

Agrostophyllum djaratense Schltr., sp. nov.

Epiphyticum erectum, pluricaule, c. 35—50 cm altum; rhizomate valde abbreviato; radicibus filiformibus, elongatis, flexuosis, glabris; caulis paulo compressis, vaginis foliorum peralte vaginantibus omnino oblectis, subdense foliatis; foliis ligulatis, subacutis vel obtusiusculis, minute et inaequaliter bilobulatis, glabris, textura chartaceis, usque ad 20 cm longis, medio vel infra medium 1—1,5 cm latis, ima basi cuneato-angustatis; floribus albis in spicis numerosis, 4—3-floris, capitato-congestis ad apicem caulis, capite semigloboso usque ad 3 cm diametente; vaginis exterioribus ovatis, breviter acuminatis; vaginis spicularum paucis bene longis; bracteis ovato-lanceolatis acuminatis, ovarium subaequantibus; sepalis patentibus ovatis, acuminatis, vel intermedio acuta, 0,5 cm longis, glabris, lateralibus obliquis, basi margine anteriore paulo dilatatis; petalis erecto-patentibus e basi paulo-dilatata oblique linearis-ligulatis obtusis, 0,5 cm longis, labelli hypochilio semi-globoso, 0,2 cm longo, lobis lateralibus erectis, brevibus, obtusis, epichilio (lobo intermedio) late ovato, subcordato, breviter acuminato, basi excavato; 3,5 cm longo, supra basin 4,5 mm lato, lamella emarginata, lobos laterales inter se conjungente ab hypochilio separato; columna satis longa, 0,5 cm alta, infra medium paululo constricta, glabra, stigmate oblongo magno basi ligula brevi rotundata terminato, rostello brevi porrecto; anthera cucullata glabra, brevissime et obtuse acuminata; ovario cylindraceo breviter costato, c. 0,8 cm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1400m - R. Schlechter no. 16003, flowering on 1st Feb. 1907.

A species from the affinity of A. longifolium Rchb.f., but differing in the leaves and in the labellum.

Polystachya Hook.Polystachya flavesiensis (Bl.) J.J.Sm.

On trees near Padang, alt. c. 20m - R. Schlechter no. 15855, flowering on 12th Jan. 1907.

Polystachya siamensis Ridl.

On trees near Tambangan, alt. c. 900m - R. Schlechter no. 15899 [cf. p. 47, same number], flowering on 17th Jan. 1907; on trees near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15926, flowering on 21st Jan. 1907.

Phaius Lour.Phaius flavus Lindl.

In humus of the forest near Padang-Pandjang, alt. c. 900m - Wickers, in cultivation in his garden, in Feb. 1907.

Phaius Incarvillei (Bl.) O.K.

Between Alang near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 16025, flowering on 3rd Feb. 1907; - Wickers.

Phaius callosus (Bl.) Lindl.

In forest humus of Bukit-Djarat [Mount], alt. c. 1300m - R. Schlechter no. 15994, flowering on 1st Feb. 1907; - Wickers.

Phaius corymbioides Schltr., sp. nov.

Terrestris, erectus, pluricaulis, usque ad 1,30 m altus, habitu generis *Corymbis* Bl.; rhizomate abbreviato; caulis substrictis, striatis, basi vaginis arcte amplectentibus, dissitis ob sessis, apicem versus 6—8-foliatis, 0,6 cm diametentibus; foliis erecto-patentibus patulis, ellipticis, acuminatis, basi sensim subpetiolato-angustatis, glabris, plicato-nervosis, usque ad 25 cm longis, medio fere usque ad 6 cm latis; racemis lateralibus in medio et versus apicem caulis, erecto-patentibus vel curvato-patulis, 3—4 floris, 5—7 cm longis; pedunculo brevi, vaginulis paucis ovato-ellipticis acuminatis dissitis ob sesso; bracteis ovalis, acuminatis, glabris, ovario bene brevioribus; floribus illis *P. pauciflori* Bl. similibus aequinagnisque; sepalis oblongis apiculatis, glabris, 2,8 cm longis, lateralibus obliquis; petalis sepalis similibus oblique oblongis, apiculatis, glabris, c. 1,8 cm longis; labello cuneato antice rotundato, apice exciso, ima basi tantum columnae adnato, lineis 2 leviter incrassatis, parallelis e basi usque supra medium decurrentibus, c. 1,5 cm longo, infra apicem c. 4,6 cm lato, glabro, calcare cylindraceo conico, leviter incurvo, c. 1 cm longo, subacuto, glabro; columna semitereti subrecta, medio paulo constricta, apice dilatata, glabra, c. 1,2 cm longa; anthera ovoidea cucullata, breviter acuminata, glabra; polliniis oblique clavatis; ovario cum pedicello glabro, clavato, c. 2 cm longo.

On the mountains between Padang-Pandjang and Kampong-Tengah, alt. c. 1000m - R. Schlechter no. 15909, flowering on 19th Jan. 1907.

In habit, this species has much similarity with *P. pauciflorus* Bl., but is

characterised by the undivided labellum, which has two crests. There are also differences in the colour of the flowers. In our species, they are white with yellowish tips, the front half of the labellum is yellow.

Calanthe R.Br.

Calanthe vestita Lindl. var. sumatrana Schltr., var. nov.

Terrestris, erecta, valida, c. 60 cm alta; rhizomate perbrevi; radicibus filiformibus elongatis, flexuosis, villosis; pseudobulbis oblongoideis, vaginis foliorum primum obtectis, c. 7 cm longis, c. 2,5 cm diametentibus; foliis articulatis c. 4, in pseudobulbis supra medium, basi dilatata vaginantibus, erectis, lanceolato-ellipticis acuminatis, glabratris, basi in petiolum sensim angustatis, usque ad 40 cm longis, medio laminae usque ad 5 cm latis; scapo tereti, villoso, vaginis 6—8-dissitis, arete amplectentibus, acuminatis, minute puberulis obsesso, basi 0,8 cm diametente; racemo laxe 10—20-floro erecto; bracteis lanceolatis vel ovato-lanceolatis acuminatis, puberulis, inferioribus florum longitudine, superioribus sensim brevioribus; floribus illis *C. vestitae* Ldl. similibus, patulis; sepalis ellipticis acuminatis, extus sparsim pilosis, 2,5 cm longis, lateralibus paulo obliquis; petalis sepalis similibus oblique ellipticis, apiculatis glabris, 1,9 cm longis; labello e basi breviter unguiculata, marginibus columnae adnato late cuneato, trilobo, lobis lateralibus rhomboides subtruncato-obtusatis, lobo intermedio late cuneato antice profundius emarginato, apiculo minuto, lineis 3 parallelis incrassatis e basi laminae usque ad apicem labelli decurrentibus, labello toto glabro, ungue inclusu 2,2 cm longo, inter apice loborum lateralem 1,9 cm lato, lobo intermedio 0,7 cm longo, calcare filiformi incurvo piloso, c. 1,6 cm longo; columna semitereti, sparsim pilosa, clinandrio lobulato; anthera ovata, obtusiuscula, cucullata, glabra; polliniis oblique clavatis, glandula oblonga satis magna; ovario cum pedicello clavato, villoso, c. 3 cm longo.

On rocks on the mountains between Padang-Pandjang and Kampong-Tengah, alt. c. 1000m — R. Schlechter no. 15910, flowering on 19th Jan. 1907.

To be considered as a variety of *C. vestita* R.Br. [Lindl.], but distinguished from it by the white flowers, with the labellum sulphur-yellow at the base and by the three parallel lines which run from the apex of the adnate claw, down to the apex of the labellum.

Calanthe truncicola Schltr., sp. nov.

Epiphytica erecta, usque ad 50 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, villosis, caulinis vel pseudobulbis abbreviatis, incrassatis, c. 2 cm altis, omnino foliorum vaginis obtectis; foliis erectis vel erecto-patentibus c. 4, lanceolato-ellipticis, acuminatis, basi in petiolum usque ad 15 cm longum angustatis, glabris, nervosis, petiolo inclusu usque ad 45 cm longis, lamina medio fere usque ad 6 cm lata; scapis basilaribus erectis 20—25 cm altis, pedunculo vaginis c. 5 amplectentibus, breviter acuminatis, obsesso, tereti, glabro, racemo oblongo vel ovato, 4—6 cm longo, c. 3 cm diametente, subdense 15—20-floro; bracteis ovato-lanceolatis acuminatis, mox caducis; floribus aureis, illis *C. angustifoliae* Ldl. similibus; erecto-patentibus; sepalis oblongis subacutis, glabris, c. 1 cm longis, lateralibus obliquis; petalis oblique ellipticis, obtusiusculis, glabris, sepalis subaequilongis, sed paulo latioribus; labello 0,9 cm longo, e basi bene unguiculata trilobo, lobis lateralibus divergentibus subquadratis, obtusissimis, intermedio cuneato, antice rotundato, apice breviter exciso, callis

2 parallelis lanceolatis haud bene definitis, in basi laminae glabrae, 0,6 cm longae, inter apices lobarum lateralium 5,5 cm latae, lobo intermedio 0,3 cm longo, antice 2,5 mm lato, calcare dependente cylindrico apice paulo inflato, obtuso, glabro, 0,9 cm longo; columna brevi glabra, 0,5 cm longa, clinandrio trilobulato, rostello subulato, porrecto; ovario cum pedicello glabro, clavato, c. 1,3 cm longo.

On tree-trunks in the forests on the summit of Bukit Djarat [Mount], alt. c.

1600m - R. Schlechter no. 16001, flowering on 1st Feb. 1907.

Probably most closely related to C. angustifolia Lindl., but easily recognised by the labellum and spur.

Calanthe graciliscapa Schltr., sp. nov.

Terrestris, erecta, usque ad 60 cm alta; rhizomate valde abbreviatu, radicibus filiformibus elongatis, flexuosis, puberulis; foliis basilaribus 3-5, ovato-ellipticis, acuminatis, basi in petiolum 5-8 cm longum angustatis, glabris, petiolo incluso usque ad 25 cm longis, medio fere usque ad 7 cm atis; scapo gracili, stricto vel substricto, simplici, tereti, vaginulis paucis dissitis obsesso, e basi glabrata, apicem versus sensim puberulo, folia multo superante; racemo cylindraceo, subdense 10-20-floro; bracteis lanceolatis, acuminatis puberulis, ovario fere aequilongis; sepalis oblongis obtusis, glabris, intermedio 0,5 cm longo, lateralibus obliquis 0,6 cm longis; petalis oblique obovato-spathulatis obtusis, glabris, sepalo intermedio fere aequilongis; labello e basi breviter unguiculata, marginibus columnae adnata trilobo, c. 0,5 cm longo, lobis lateralibus divaricatis, oblongis, subtruncato-obtusissimis, lobo intermedio cuneato antice bilobulato, sinu rotundato, lobulis antice obtuse truncatis, carunculis 3 majoribus ad ostium calcaris, carunculis multis antepositis, carunculique 2 majoribus ad basin lobi intermedii, labello toto glabro, inter apices lobarum lateralium c. 1 cm lato, lobo intermedio 0,4 cm longo, apice 0,4 cm lato, calcare decurvo cylindrico pilosulo, apice paulo ampliato, obtuso, c. 0,6 cm longo; columna brevi antice biauriculata, glabra, 0,3 cm longa, clinandrio brevi; anthera ovoideo-cucullata, antice breviter emarginata; ovario arcuato puberulo, subclavato, c. 1 cm longo.

In forest humus of Bukit-Djarat [Mount], alt. c. 1200m - R. Schlechter no. 16002, flowering on 1st Feb. 1907.

The flowers are white, later-on cream-yellow, the labellum with yellow warts. Undoubtedly the plant belongs to the affinity of C. flava Hassk., but is distinguished from it by the white flowers, the narrower, divergent side lobes of the labellum and by the spur, distinctly swollen at the apex. Soon I shall have further species of this affinity to describe from New Guinea.

Calanthe veratrifolia R.Br. var.?

In the forest near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15880, flowering on 15th Jan. 1907.

The 'form-circle' of these Calanthe, always described as C. veratrifolia R.Br., needs a closer check. Apparently several species are involved under this name and perhaps only the Australian form should be included. The plant listed here is distinguished by very small side lobes of the labellum and perhaps should be

considered as a separate species.

Calanthe Caeciliae Rchb.f.

Grassy slopes at borders of the forest on Gunong-Merapi [Mount], alt. c. 1500m - R. Schlechter no. 15940, flowering on 24th Jan. 1907; in the forests of the summit of Bukit-Djarat [Mount], alt. c. 1600m - R. Schlechter no. 16003, flowering on 1st Feb. 1907.

Spathoglottis Lindl. [Bl.]

Spathoglottis plicata Bl.

In Alang near Sungai-Gajo, not far from Padang, alt. c. 80m - R. Schlechter no. 15859, flowering on 13th Jan. 1907.

Spathoglottis microchilina Krz1.

On moist slopes of Gunong-Merapi [Mount], alt. c. 1500m - R. Schlechter no. 15939, flowering on 24th Jan. 1907.

I consider this one specifically different from S. aurea Lindl., with which J.J. Smith united it. The front lobe of the labellum is appreciably narrower and pointed, changing gradually from the base to the apex, whereas for S. aurea Lindl. it is distinctly broadened towards the front. Furthermore, the calli at the base of the middle lobe appear to me to be more separated. Kränzlin, however, did not mention the relationship with S. aurea Lindl.

Spathoglottis sp.

On the slopes of Gunong-Merapi [Mount], alt. c. 2200m - R. Schlechter no. 15958, flowering on 22nd Jan. 1907.

Acanthephippium Bl.

Acanthephippium chrysoglossum Schltr., sp. nov.

Terrestre, erectum, c. 60—70 cm altum; rhizomate abbreviato; radicibus filiformibus elongatis, flexuosis, pilosis; pseudobulbis cylindraceis vaginis 3—4, mox desiccantibus primum obtectis, apice bifoliatis; c. 7 cm longis, medio fere c. 1 cm diametentibus, apicem versus paulo attenuatis; foliis ellipticis vel ovato-ellipticis acuminatis, basi in petiolum usque ad 15 cm longum angustatis, lamina usque ad 40 cm longa, medio fere usque ad 9 cm lata; scapis basilaribus cum pseudobulbis novellis synanthis, erecto-patentibus, 12—15 cm altis, 2—3-floris; pedunculo tereti, glabro, basi vaginis obtecto; bracteis ellipticis acuminatis glabris, ovario scre duplo brevioribus; floribus erectis illis *A. parviflori* Hassk. paulo majoribus; sepalis usque ad quartam partem apicalem connatis, oblongis, obtusis, glabris, 2,5 cm longis, lateralibus dimidio inferiore margine dilatatis, mentum obtusum ventricosum, a facie paulo compressum formantibus; petalis oblique elliptico-spathulatis, glabris, 2,3 cm longis, medio fere 0,9 cm latis; labello curvato ex ungue brevi cuneato, trilobo, lobis lateralibus anguste oblongis, basi bene lobatis, utrinque obtusis, c. 0,5 cm longis, intermedio oblongo-ligulato ob-

tuso, lateralia multo excedente, glabro, carinis 2 subparallelis, pluridendatis (dentibus lineam medianam versus conniventi incurvulis) e basi usque ad basin lobi intermedii decurrentibus, labello toto c. 1,2 cm longo, inter lobos laterales expanso c. 0,9 cm lato; columna semitereti, carnosula, glabra, clinandrio obscure trilobulato, rostello triangulo, brevi, pede valde elongato, antice abrupte genuflexo-erecto; ovario torto cylindrico, c. 4,5 cm longo.

Between shrubs near Kampong-Tengah, alt. c. 800m - R. Schlechter no. 16027, flowering on 3rd Feb. 1907.

A very beautiful species with white flowers suffused with red at the apices and with a golden-yellow labellum. It is related to A. parviflorum Hassk., but completely different in the shape of the labellum.

Dendrobium Sw.

§ Desmotrichum

Dendrobium convexum Lindl.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15896, flowering on 18th Jan. 1907.

Dendrobium padangense Schltr., sp. nov.

Epiphyticum vagans, ramosum; rhizomate more sectionis elongato, tereli, vaginis alte amplectentibus appressis primum obtecto, distanter pseudobulbis obpresso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis valde compressis, late ellipticis, lucidis, apice unifoliatis, 3—3,5 cm longis, medio fere 1,5—1,8 cm latis; foliis ellipticis subacutis, basi angustatis, glabris, 8—10,5 cm longis, medio fere 2,5—3 cm latis; floribus in fasciculis ad apicem pseudobulborum in dorso foliorum, succedaneis; bracteis mox fisis; sepalis ovato-oblongis subacutis, glabris, 1,1 cm longis, lateralibus basi margine anteriore bene dilatata cum columnae pede mentum obtusum, conicum, 0,5 cm longum formantibus; petalis elliptico-ligulatis obtusiusculis, obliquis, c. 1 cm longis; labello e basi cuneata dimidio superiore trilobo, lobis lateralibus triangulis truncatis, margine antice leviter undulatis, lobo intermedio multo majore, e basi ligulato-unguiculata, 0,4 cm longa in laminam alte bilobulatam extenso, lobulis subdivaricatis oblongis, obtusis, leviter undulatis c. 3,5 mm longis, lamellis 2 parallelis e basi labelli, versus apicem sensim paulo dilatatis et leviter undulatis, apice ipsa approximatis, usque ad apicem decurrentibus, lamella mediana minore versus apicem interjecta, labello toto glabro, 1,2 cm longo, inter apices lobarum lateralium 0,6 cm lato, lobo intermedio apice 7,5 mm lato; columna brevi, clinandrio trilobulato, lobulis lateralibus obtusis, dorsali deltoideo; anthera subquadrato-cucullata, glabra; ovario cum pedicello brevi subclavato, glabro, 0,9 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15870, flowering on 15th Jan. 1907.

Related to D. bifidum Ridl. and D. angustifolium Lindl. The flowers are pale yellow, with a golden-yellow labellum.

Dendrobium trilamellatum Schltr., sp. nov.

Epiphyticum patulum ramosum; rhizomate more sectionis caulinormi, tereti, vaginis truncatis alte amplexentibus, internodiis paulo brevioribus primum vestito; pseudobulbis teretiusculis subcylindraceis leviter longitudinali-rugosis, lucidis, 2,5—3 cm longis, medio fere 0,5—0,6 cm diametribus, basi apiceque paulo attenuatis, unifoliatis; foliis elliptico-lanceolatis obtusiusculis, basi subpetiolato angustatis, glabris, 11—15 cm longis, medio fere 1,4—1,8 cm latis; floribus fasciculatis, juxta apicem pseudobulborum in dorso foliorum, succedaneis, pallide roseis; sepalo intermedio ovato obtuso, glabro, 0,7 cm longo lateralibus vix longioribus subfalcato-obliquis, subacutis, basi margine anteriore valde dilatata cum columnae pede mentum rectum obtusum conicum, c. 0,5 cm longum formantibus; petalis oblique ligulatis obtusiusculis, 0,7 cm longitudine subaltingentibus, labello e basi cuneata tertia parte anteriore trilobato, lobis lateralibus brevibus rotundatis, intermedio subquadrato-unguiculato in laminam alte bilobulatam expanso, lobulis subfalcato-subdivergentibus, rotundatis, c. 3,5 mm longis, lamellis 3 e basi labelli parallelis, ad apicem unguis lobi intermedii conjunctis et terminatis, glabris, labello toto c. 1,4 cm longo, inter apices loborum lateralium 0,5 cm lato, lobo medio antice 0,7 cm lato; columna brevi, clinandrio trilobulato, lobulis lateralibus rotundatis obtusis, dorsali deltoideo acuminato; anthera rotundato-cucullata, glabra; ovario cum pedicello clavato, glabro, 0,9 cm longo.

On trees in the vicinity of Padang-Pandjang, alt. c. 800m — Wickers, in cultivation in his garden, flowering on 7th Feb. 1907.

A new species from the affinity of D. angustifolium Lindl., distinguished by the habit of the pseudobulbs and leaves, as well as by the lip and narrower petals.

Dendrobium piestobulbon Schltr., sp. nov.

Epiphyticum, ramosum, vagans; rhizomate more sectionis caulinormi, rigido, primum vaginis mox dissolutis obtecto, laxe pseudobulbis obsesso; pseudobulbis valde compressis, oblique ellipticis, longitudinaliter rugulososulcatis, apice unifoliatis, 2,5—3,5 cm longis, medio fere 0,8—1,2 cm latis; foliis ligulatis obtusiusculis, basi angustatis, glabris, 6—10 cm longis, medio fere 1,3—2 cm latis; floribus pallide flavidis, in fasciculis juxta apicem pseudobulborum in dorso folii, succedaneis; bracteis mox fissis; sepalo intermedio ovato obtusiusculo, glabro, 1 cm longo, lateralibus intermedio aequilongis, apiculatis, margine anteriore basin versus valde ampliata cum columnae pede mentum rectum, conicum obtusum, c. 0,6 cm longum formantibus; petalis oblique elliptico-oblongis obtusis, glabris, sepalis paululo brevioribus; labello e basi cuneata dimidio anteriore trilobo, lobis lateralibus triangulis antice truncatis subdentatis, intermedio multo majore, e basi ligulato-unguiculata, 4,5 mm longa, antice in laminam alte bilobulatam expanso, lobulis subparallelis semiovatis antice obtusis, 3,5 mm longis, lamellis 2 parallelis in ungue lobi intermedii bene undulatis e basi labelli usque infra apicem decurrentibus, labello toto (lobulis apicalibus inclusis) 1,4 cm longo, inter apices loborum lateralium 0,6 cm lato, lobo intermedio apice acquilato; columna brevi, clinandrio acutius trilobulato; anthera rotundato-cucullata, glabra; ovario cum pedicello glabro, subclavato, c. 0,8 cm longo.

On trees in the vicinity of Padang-Pandjang, alt. c. 800m — Wickers, in cultivation in his garden, flowering on 7th Feb. 1907.

This species, likewise, is related to D. angustifolium Lindl., but the shape of the pseudobulbs is appreciably different.

Dendrobium flabellum Rchb.f.

On trees in the vicinity of Padang-Pandjang, alt. c. 800m - Wickers, in cultivation in his garden, flowering on 29th Jan. 1907.

Dendrobium sematoglossum Schltr., sp. nov.

Epiphyticum vagans, multiramosum; rhizomate more sectionis cauliniformi, rigido, tereti, vaginis mox fisis alte amplectentibus primum obtecto; pseudobulbis cylindraceis longitudinaliter rugoso-sulcatis, 3,5—5 cm longis, medio fere 0,5—0,7 cm diametentibus, unifoliatis; foliis ellipticis subacutis, basi angustatis, 11—17 cm longis, medio fere 3—4,3 cm latis; floribus in fasciculis pluribus ad apicem pseudobulborum, in axillis et in dorso foliorum necnon infra apicem pseudobulborum; bracteis mox fisis; sepalis oblongis acutis, glabris, 1,3 cm longis, lateralibus obliquis, basi margine anteriore dilatata cum columnae pede mentum breve, obtusum 0,5 cm longum formantibus; petalis oblique ligulatis acutis, sepalis paululo brevioribus; labello e basi paulo angustata cuneato, infra medium trilobo, lobis lateralibus subfalcato-triangulis, obtusiusculis, margine interiore subdentatis, lobo intermedio e basi ligulato-unguiculata, 0,4 mm longa antice in lobum subreniformem, apiculatum, transversum, marginibus inferioribus flabellato-plicatum, irregulariter alticrenato-incisum dilatato, carinis 2 e basi parallelis in basi unguis lobi intermedii approximatis, deinde sursum disjunctis et in margine unguis usque ad basin laminae flexuoso-decurrentibus, lamella tertia intermedia minore in basi labelli usque infra basin unguis, labello toto 1,6 cm longo, 0,6 cm inter apices loborum lateralium lato, lobo intermedio c. 1,3 cm lata; columna brevi, clinandrio obtuse trilobulato; pede apice excavatione oblonga donato, anthera rotundato-cucullata, glabra, antice microscopice serrulata; ovario cum pedicello glabro, subclavato, c. 0,9 cm longo.

On trees near Padang-Pandjang, alt. c. 750m - R. Schlechter no. 15996a, flowering on 31st Jan. 1907.

Dendrobium schistoglossum Schltr., sp. nov.

Epiphyticum, fruticiforme, usque ad 45 cm altum; rhizomate more sectionis cauliniformi rigido, ramoso, tereti, glabro, vaginis arcte amplectentibus mox fisis primum omnino obtecto, laxe pseudobulbis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis valde compressis, ellipticis, unifoliatis, 3,5—4,5 cm longis, medio fere 1,7—2,2 cm latis; foliis erectis elliptico-ligulatis, obtusiusculis, 9—13 cm longis, medio fere 2,2—3,4 cm latis; floribus in fasciculis plurifloris ad apices pseudobulborum in axi folii, succedaneis, pallide sulfureis; sepalo intermedio oblongo subacuto, glabro, 1,1 cm longo, lateralibus obliquis, intermedio aequilongis, basi margine anteriore valde dilatata cum columnae pede mentum obtusum, c. 0,4 cm longum formantibus; petalis oblique ligulatis acutis, glabris, sepalis paululo brevioribus; labello e basi cuneata supra medium trilobo, lobis lateralibus oblique ovatis obtusis, intermedio multo longiore, e basi quadrato-unguiculata in laminam circuitu subreniformem antice alte excisam, marginibus lateralibus alte inciso-laceratam et undulatam expanso, carinis 2 parallelis dimidio anteriore leviter flexuosis e basi labelli usque ad apicem unguis lobi intermedii decurrentibus, labello toto 4,3 cm longo inter apices loborum lateralium 7,5 mm lato, lobo medio 9 mm lato; columna brevi, clinandrio leviter denticulato, pede producto; anthera rotundato-cucullata, glabra; ovario cum pedicello glabro, clavato, c. 1 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - Wickers, R. Schlechter no. 15923,

flowering on 20th Jan. 1907.

A species from the affinity of D. comatum Lindl., but with different pseudo-bulbs and differently lacerated lip-lobes. The colour of the flowers is a pale sulphur-yellow.

§ Bolbodium

Dendrobium pumilum Roxb.

On trees near Kampong Tengah, alt. c. 600m - R. Schlechter no. 15988, flowering on 30th Jan. 1907.

Recently Ridley has transferred to D. quadrangalare Par. et Rchb.f. all those specimens previously designated as D. pumilum Roxb. I do not agree with him in this, since on Singapore [I.] and different localities of the Malay Peninsula, I repeatedly collected the true D. pumilum Roxb., which differs completely from D. quadrangalare Par. et Rchb.f. in the markedly four-edged bulbs.

§ Sarcopodium

Dendrobium Wichersii Schltr.

On trees near Padang-Pandjang, alt. c. 800m - Wickers, R. Schlechter no. 15989, flowering on 31st Jan. 1907.

§ Oxystophyllum

Dendrobium carnosum Rchb.f.

On trees near Sungei-Gago, not far from Padang, alt. c. 80m - R. Schlechter no. 15860, flowering on 13th Jan. 1907.

Dendrobium tropidoneuron Schltr., sp. nov.

Epiphyticum erectum pluricaule, c. 10—13 cm altum; rhizomate valde abbreviato; radicibus filiformibus, elongatis, flexuosis, glabris; caulis simplicibus omnino vaginis foliorum persistentibus obtectis; foliis more sectionis equitantibus, lanceolato-triangulis acutis, carnosis, glabris, usque ad 2,4 cm longis, supra basin usque ad 0,7 cm latis; floribus in capitulis plurifloris subsessilibus ad apicem caulis, atropurpureis, vaginis exterioribus mox fisis; bracteis ovatis acuminatis vel apiculatis, floribus brevioribus; sepalo intermedio ovato-oblongo, apiculato, nervis 3 medianis extus carinato-incrassatis, 0,5 cm longo, lateralibus intermedio aequilongis apiculatis, oblique triangulis, basi margine anteriore dilatata cum pede columna mentum; obtusum c. 0,5 cm longum formantibus, extus nervis 3 carinato-incrassatis; petalis oblique oblongo-ligulatis, apiculatis, glabris, extus nervo medio carinato-incrassatis, 0,4 cm longis; labello ligulato, apicem versus subdilatato, dimidio anteriore margine minute subcrenulo-irregulari, speculo anguste oblongo mediano lucido e basi usque infra apicem, apicem versus leviter excavato, subtus infra apicem gibbo parvulo donato, labello toto c. 0,7 cm longo, infra apicem c. 0,3 cm lato; columna brevi, pede producto, clinandrio subangustato, trilobato, lobis lateralibus obtusissimis; anthera galeato-cuculata, glabra; ovario cum pedicello glabro, c. 4,5 cm longo.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15970, flowering on 28th Jan. 1907.

This species is apparently often mistaken for D. carnosum Lindl., to which it is, in fact, very similar. However, whilst D. carnosum Lindl. has yellow flowers, the floral segments of D. tropidoneuron Schltr. are always coloured dark purple and the sepals, particularly in the dried state, always have three, keel-shaped swollen veins. Also inside the labellum, on drying, the three central veins become apparent.

§ Aporum

Dendrobium indivisum Miq.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15069, [probably no. 15969], flowering on 28th Jan. 1907.

Dendrobium hymenopetalum Schltr., sp. nov.

Epiphyticum, erectum, pluricaule, 10—25 cm altum; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caulis tenuisculis vel subangulatis, gracilibus, vulgo paulo flexuosis vel curvatis, vaginis foliorum alte amplectentibus, carinatis obtectis, dimidio inferiore, ima basi excepta, laxe foliatis, dimidio superiore vaginis mox desiccantibus, arcte appressis, dissitis donatis, fasciculis florum laxe obsecisis; foliis equitantibus erecto-patentibus, subfalcato-subulatis, lateraliter paulo compressis, carnosis, 1,5—3 cm longis, 1,5 mm medio altis, internodia superantibus; floribus illis D. teloensis J. J. Sm. similibus aequimagnisque, hyalinis, in fasciculis paucifloris in dimidio superiore esfoliato caulis, succedaneis; bracteis mox fisis ovario pedicellato multoties brevioribus; sepalo intermedio ovato obtusiusculo, 3,5 mm longo, glabro, lateralibus aequilongis, basi margine anteriore maxime dilatata mentum conicum, curvatum, obtusum, 0,9 cm longum cum pede columnae formantibus; petalis oblique ligulatis obtusiusculis, glabris, margine subintegris; labello longe cuneato, antice rotundato-bilobato, lobis margine leviter undulatis, fascia mediana paululo incrassata e basi usque infra apicem decurrente, 1 cm longo, infra apicem 4,5 mm lato; columna perbrevi, clinandrio trilobulato, lobulis lateralibus brevibus, obtusis, dorsali deltoideo longiore, pede perlongo, anthera rotundato-cuculata, glabra; ovario cum pedicello gracili 0,8 cm longo, clavato, glabro.

On the trunks of palms near Fort de Kock, alt. c. 1000m - R. Schlechter no. 15934, flowering on 22nd Jan. 1907.

D. teloense J.J.Sm. can be regarded as the most closely related species.

D. hymenopetalum Schltr. differs from it in the narrower labellum being bilobed in front and in the further separated, less tall leaves.

Dendrobium subulatum Lindl.

On trees not far from Fort de Kock, alt. c. 1000m - R. Schlechter no. 15927a, flowering on 22nd Jan. 1907.

D. acerosum Lindl. is probably identical. I am not sufficiently aware of what what Hooker understands under 'D. subulatum Hook.f.' in *Flor. Br. Ind.*

Dendrobium capitellatum J.J.Sm.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15879, flowering on 16th Jan. 1907.

Despite their thick, subulate leaves, I include both D. hymenopetalum Schltr. and D. capitellatum J.J.Sm. in the section Aporum; the flowers of these two species are typical Aporum flowers. I am completely of the opinion that most of the species placed in the section Strongyle, would be better placed in Aporum and partly in Crumenata. The latter group is very closely related to Aporum in floral structure.

§ Crumenata

Dendrobium crumenatum Sw.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15875, flowering on 16th Jan. 1907.

Dendrobium linearifolium Teysm. et Binnend.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15869, flowering on 15th Jan. 1907.

Dendrobium strigosum Schltr., sp. nov.

Epiphyticum, gracile, macrum, 20—30 cm altum; rhizomate abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caulis gracilibus, tenuibus, teretibus, vaginis foliorum alte amplectentibus parte basali excepta omnino vestitis, supra basin breviter fusiformi-incrassatis, incrassatione usque ad 3 cm longa, medio fere vel infra medium 0,5—0,8 cm diametente; foliis erecto-patentibus linearibus, apice inaequaliter bidentatis, 1,5—3,5 cm longis, medio fere 1,5—3 mm latis, glabris, textura pro sectione tenuibus; floribus ad apicem caulis vel interdum in caule denudato infra apicem caulis in fasciculis paucifloris, succedaneis, pro sectione inter minores; bracteis mox fisis ovario pedicellato vulgo brevioribus; sepalo intermedio ovato-oblongo obtusiusculo, glabro, c. 5,5 mm longo, lateralibus obliquis, intermedio aequilongis, basi margine anteriore maxime dilata^{ta} mentum rectum obtusum, c. 0,6 cm longum formantibus; petalis oblique ligulatis, subacutis, glabris, sepalis aequilongis; labello e basi cuneata tertia parte anteriore trilobo, lobis lateralibus rotundatis, obtusissimis, brevibus, margine serrato-ciliatis, intermedio laterales duplo excedente, subquadrato, antice paulo dilatato, leviter emarginato, lobulo interjecto, margine toto serrato-ciliato, fascia incrassata liguliformi, obtusa e basi labelli usque ad basin lobi intermedii decurrente, labello toto 1,1 cm longo, infra apices loborum lateralium 0,9 cm lato; lobo intermedio 3,5 mm longo, infra apicem 0,4 cm lato; columna brevi, clinandrio lobis brevibus, lateralibus obtusissimis, pede elongato; anthera subquadrato-cucullata, glabra; ovario cum pedicello clavato, c. 0,5 cm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1200m - R. Schlechter no. 16011, flowering on 1st Feb. 1907.

This very characteristic species is readily distinguished from all its relatives by the labellum, which is ciliated in front. It is reminiscent of D. clavipes Hook.f. in the shape of the leaves.

§ Grastidium

Dendrobium isomerum Schltr., sp. nov.

Emphyticum erectum, pluricaule, 25—40 cm altum; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caulis strictis vel substrictis teretibus, omnino vaginis foliorum arcte amplectentibus obtectis; bene foliatis; foliis linearibus vel lanceolato-linearibus, acutatis, apice inaequaliter bidentatis, glabris, 4—9 cm longis, infra medium 0,4—0,6 cm latis; inflorescentiis more sectionis bisporus, e spatha brevi oblonga, pedunculo brevi, spatham vulgo haud superante; floribus sulfureis, patentibus; sepalis ovato-lanceolatis, glabris, c. 1 cm longis, intermedio acuto, lateralibus acuminate obliquis; petalis e basi oblique elliptica longius acuminate, glabris, sepalis paulo brevioribus; labello petalis valde simili acuminate, glabro, ecarinato, petalis fere aequilongo; columna brevi apoda, rostello triangulo brevi; anthera reniformi-cucullata, antice altius bifida, glabra; ovario clavato, cum pedicello glabro, 1,2 cm longo.

On trees near Padang-Pandjang, alt. c. 900m — R. Schlechter no. 15980, flowering on 30th Jan. 1907.

Although I have seen hundreds of specimens of this species, I never found a flower on them that had not been pelorially transformed. In its normal form, it could probably be compared with D. salaccense Lindl., but has leaves acuminate in front and also is less robust than D. salaccense Lindl.

Dendrobium salaccense Lindl.

On trees near Fort de Kock, alt. c. 1000m — R. Schlechter no. 15936, flowering on 22nd Jan. 1907.

Dendrobium acuminatissimum Lindl.

On trees near Padang-Pandjang, alt. c. 750m — R. Schlechter no. 15906, flowering on 19th Jan. 1907.

§ Distichophyllum

Dendrobium connatum Lindl.

On trees near Padang-Pandjang, alt. c. 850m — R. Schlechter no. 15905, flowering on 19th Jan. 1907.

§ Goldschmidtia

Dendrobium hercoglossum Rchb.f.

On a tree near Padang, alt. c. 30m — R. Schlechter no. 15862, flowering on 14th Jan. 1907.

§ Nobilia

Dendrobium gemellum Lindl.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15907, flowering on 19th Jan. 1907.

Eria Lindl.

§ Convolutae

Eria inamoena Schltr., sp. nov.

Terrestris, erecta, usque ad 1 m alta; rhizomate brevi, crasso; radicibus flexuosis, elongatis, dense papilloso-puberulis; pseudobulbis cylindraceis, basi vaginis altis obtectis, apicem versus c. 3-foliatis, usque ad 12 cm longis, medio vel infra medium 2—2,5 cm diametentibus, apicem versus paulo angustatis; foliis ellipticis vel lanceolato-ellipticis, 25—35 cm longis, medio fere 5—7 cm latis, basin versus sensim angustatis; scapis versus apicem pseudobulborum lateralibus, folia bene superantibus, usque ad 90 cm longis; pedunculo tereti glabro, vaginis bracteiformibus pluribus dissitis obpresso, versus inflorescentiam angustato; racemo laxe multifloro, elongato; bracteis lanceolatis, vel ovato-lanceolatis acuminatis, glabris, ovarium bene superantibus; floribus albidis, extus fulvo-squamulosis vel squamuloso-puberulis, in speciminibus visis, cleistogamis; sepalis lanceolatis acutis, 1,8 cm longis, intus glabris, lateralibus basi margine anteriore valde dilatata cum columnae pede mentum obtusum, 0,5 cm longum formantibus; petalis oblique lanceolato-ligulatis obtusiusculis, glabris, 1,7 cm longis; labello e basi cuneata infra medium trilobo, lobis lateralibus subfalcato-oblongis, obtusis, intermedio fere 4-plo longiore, oblongo-ligulato, obtuso, lamellis 2 leviter arcuatibus e basi labelli usque ad medium lobi intermedia decurrentibus, intermedia minore aequilonga interjecta, labello toto 1,6 cm longo, inter apices lobi orum lateralium 0,8 cm lato, lobo intermedio 0,9 cm longo, vix 0,3 cm lato; columnae brevi glabra, clinandrio dorso in dentem triangulum producto, dentibus paucis minutis juxtapositis; ovario cum pedicello squamuloso-puberulo, clavato, c. 0,8 cm longo.

In the vicinity of Padang-Pandjang - Wickers; on the grassy slopes of Gunung-Merapi [Mount], alt. c. 1200m - R. Schlechter no. 15941, flowering on 24th Jan. 1907.

A cleistogamic species related to E. rugosa Lindl.; the long middle lobe of the lip is very characteristic.

§ Trichotosia

Eria microphylla Bl.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 16023, flowering on 3rd Feb. 1907.

§ Cylindrolobus

Eria rhodobractea Schltr., sp. nov.

Epiphytica, erecta vel patula, usque ad 60 cm longa, multicaulis; caulinibus simplicibus basi vaginulata excepta dense foliatis, carnosulis, tertiusculis, versus apicem paulo compressis, vaginis foliorum arcte amplectentibus obtectis, vulgo plus minusve flexuosis; foliis erecto-patentibus lanceolato-ligulatis longius acutatis, basi angustatis, glabris, textura coriaceo-carnosulis, 5,5—8 cm longis, infra medium 0,6—0,9 cm latis; racemis lateralibus more sectionis valde abbreviatis, vulgo bifloris; bracteis pluribus patentibus, lanceolatis, subacutis, rubris, ovario brevioribus; floribus pro sectione magnis, albis, illis E. rigidae Bl. similibus; sepalo intermedio oblongo obtuso, extus leviter carinato glabro, 2,4 cm longo, lateralibus falcato-triangulis obtusiusculis glabris, basi margine anteriore dilatata cum pede columnae mentum obtusissimum, c. 1,2 cm longum formantibus, c. 1,9 cm longis; petalis subfalcato-obliquis, obovato-ellipticis, apiculatis,

margine posteriore supra medium sublobato-excisis, glabris, 1,9 cm longis; labello brevi e basi subreniformi dimidio anteriore trilobo, glabro, lobis lateralibus erectis semiorbicularibus, intermedio subreniformi, antice breviter rotundato-bilobulato, carina antice subulata mediana e basi labelli usque supra basin lobi intermedii decurrente, lamella paralleli breviore antice subulata utrinque in medio aucta, labello toto 1,1 cm longo, inter lobos laterales 1,5 cm lato, lobo intermedio c. 1 cm lato; columna 0,7 cm longa crassiuscula, clinandrio trilobulato; ovario cylindraceo, rubro, glabro, 21 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15897, flowering on 18th Jan. 1907.

This species differs from E. rigida Bl. in the labellum.

Eria cyrtosepala Schltr., sp. nov.

Epiphytica vel saxicola, erecta vel patula, multicaulis; caulis simplicibus, ima basi excepta dense foliatis, teretibus, vaginis foliorum alte amplectentibus arce obtectis; foliis erecto-patentibus ligulatis, apice valde inaequaliter bilobatis, basi breviter angustatis, 8—13 cm longis, medio fere 1—1,7 cm latis; racemis more sectionis valde abbreviatis, vulgo unifloris, bracteis pluribus patentibus, lanceolatis, acutis, glabris, ovario subdupo brevioribus; floribus mediocribus, albis, sepalis petalisque medio longitudinaliter rubro-fasciatis; sepalo intermedio oblongo-ligulato obtuso, glabro, 1,7 cm longo, lateralibus falcatis, basi margine anteriore dilatata cum pede columnae mentum breve, obtusum formantibus, 1,3 cm longis; petalis subfalcato-ligulatis, medio margine anteriore paulo dilatatis, apice obtusiusculis, glabris, sepalis lateralibus fere aequilongis; labello circuitu oblongo, lobis lateralibus minutis, intermedio amplio subquadrato, leviter undulato, antice rotundato, carinis 3 parallelis e basi labelli, intermedia usque ad apicem, lateralibus usque ad basin lobi intermedii decurrentibus, basi inter se in callum brevem conjunctis, labello toto glabro, 1,1 cm longo, inter apices lobarum lateralium 0,6 cm lato, lobo intermedio 4,5 mm lato, 0,5 cm longo; columna glabra, c. 0,5 cm alta, clinandrio sublobulato; anthera ovoideo-cucullata, glabra; ovario cylindrico, glabro, 1,2 cm longo.

On trees and rocks near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15863, flowering on 19th Jan. 1907.

E. valida Lindl. is probably the closest relative of the species described here.

Eria pilifera Ridl.

On rocks near Tambangan, alt. c. 1000m - R. Schlechter no. 15886, flowering on 17th Jan. 1907.

§ Mycaranthus

Eria padangensis Schltr., sp. nov.

Epiphytica, erecta, pluricaulis, usque ad 30 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; caulis simplicibus, teretibus, laxe 4—7-foliatis, vaginis foliorum alte amplectentibus obtectis; foliis suberectis lanceolato-linearibus linearibusve, apice inaequaliter et obtuse bilobulatis, basi paululo angustatis, usque ad 18 cm longis, medio vel infra medium 0,5—0,7 cm latis, glabris; racemis singulis vel geminatis

ad apicem caulum, folia superiora vix vel paulo superantibus, subdense multifloris, cylindraceis; pedunculo vaginulis pluribus distantibus, bracteiformibus obpresso, racemo ipso fere aequilongo, pilis stellatis brevissime tomentosulo; bracteis erecto-patentibus, anguste lanceolatis, longius acuminate, floribus brevioribus; floribus in sectione inter minores erecto-patentibus, extus stellato-tomentosulis; sepalis ovatis obtusiusculis, intus glabris, 2,5 mm longis, lateralibus obliquis, basi margine anteriore cum pede columnae mentum breve, obtusissimum formantibus; petalis oblique lanceolato-ligulatis subacutis, glabris, sepalis paulo brevioribus; labello e basi cuneata supra medium trilobo, lobis lateralibus oblique oblongis, obtusis, intermedio multo majore transverso antice sublobulato-apiculato, callo oblongo farinoso in basi labelli, callo altero farinoso oblongo in basi lobi intermedii cum callo basili carina farinosa conjuncto, labello toto 2,5 mm longo, inter apices loborum lateralium 2 mm lato, lobo intermedio 2 mm lato, 4 mm longitudine vix superante; columna brevi, glabra, pede producto; anthera subreniformi-cucullata, ovario cum pedicello stellato-tomentosulo, clavato, c. 0,3 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15877, flowering on 16th Jan. 1907.

An extremely characteristic small species within the section. It is easily recognised by its habit, which incidentally is somewhat reminiscent of E. obliqua Lindl., as well as by the labellum. The species is fairly common in the vicinity of Padang-Pandjang.

Eria schistoloba Schltr., sp. nov.

Epiphytica, erecta vel patula, pluricaulis, usque ad 45 cm longa: rhizome valde abbreviato; caulis simplicibus teretiusculis, dimidio inferiore vaginis alte amplectentibus vestitis, dimidio superiore densius 5—7-foliatis, c. 0,7 cm diametentibus; foliis erecto-patentibus linear-loratis, apice inaequaliter et obtuse bilobulatis, glabris, usque ad 22 cm longis, medio fere 1—1,3 cm latis; racemis ad apices caulum 2—3-nis, dense multifloris, elongatis, quaquaversis, foliis nunc aequilongis nunc longioribus; pedunculo racemo ipso fere aequilongo, vaginulis distantibus bracteiformibus obpresso, tereti, pilis stellatis brevissime tomentosulo; bracteis mox dellexis ovatis, breviter acuminate, ovario duplo fere brevioribus; floribus in sectione mediocribus patentibus; sepalis ovatis, breviter et obtusiuscule acuminate, extus stellato-puberulis, 0,4 cm longis, lateralibus valde obliquis margine anteriore basi valde ampliata mentum obtusum c. 2,5 mm longum cum pede columnae formantibus; petalis oblique oblongo-ligulatis obtusis, margine leviter undulatis, glabris, sepalis paulo brevioribus; labello e basi cuneata supra medium trilobo, lobis lateralibus subfalcato-oblongis obtusis, intermedio paulo longiore late cuneato, subtrapeziformi, antice margine irregulariter profundius lacerato-crenato, truncato, callo linguiformi farinoso in basi labelli, callulo semigloboso parvulo utrinque aucto, lobo medio infra apicem callo erecto, ovato, obtuso, farinoso intus ornato, linea incrassata farinosa per medium callos conjungente, lamellis 2 lateralibus e basi labelli cum apice libera usque ad sinus loborum decurrentibus; labello toto 0,4 cm longo, inter apices loborum lateralium 0,5 cm lato, lobo intermedio apice 2,5 mm lato; columna brevi glabra; ovario cum pedicello stellato-tomentosulo, clavato, c. 0,4 cm longo.

In the vicinity of Padang-Pandjang - Wichers, flowering in his garden, on 3rd Feb. 1907.

An interesting species from the affinity of E. celebica Rolfe, easily recognis-

ed by the irregularly, but deeply lacerated middle lobe of the labellum.

§ Aeridostachya

Eria odontoglossa Schltr., sp. nov.

Epiphytica, habitu omnino *E. aeridostachya* Ldl.; foliis oblongo-ligulatis, basin versus paulo angustatis, c. 27 cm longis, medio c. 3 cm latis; racemis cylindricis, dense multifloris, curvatis, densissime pilis brevibus stellatis, brunneis tomentoso, foliis ut videtur vulgo aequilongo, c. 2 cm diametente, pedunculo racemo ipso fere aequilongo, tereti, brunneo-tomentoso; bracteis minutis ovatis, acuminatis, brunneo-tomentosis, ovario multo brevioribus; floribus patentibus flavidis; sepalo intermedio oblongo, subacute, extus stellato-puberulo, 0,4 cm longo, lateralibus falcatis, intermedio aequilongis, basi margine anteriore valde dilatata in lobum oblongum obtusum productis, cum pede columnae mentum obtusum, apice subampliatum, 0,5 cm longum formantibus; petalis falcatis, ligulatis, obtusis, glabris, sepalo intermedio aequilongis; labello oblongo-ligulato apiculato, basi concavo, infra medium constricto, marginibus incurvulis, antice in laminam oblongam, leviter undulatam expanso, tertia parte basilari squama transversa, dentiforini, recurva ornato, 0,6 cm longo, supra medium latitudine vix 0,2 cm excedente, glabro; columna brevi, stigmate reniformi, pede apicem versus angustato; ovario cum pedicello brunneo-tomentoso, clavato, 0,7 cm longo.

On trees in the mountain forests near Padang-Pandjang - Wichers, cultivated in his garden, flowering on 19th Jan. 1907.

Of this species, I have only a single leaf and one inflorescence, so that the description will need augmenting when better material is available. The species differs from the related *E. falcata* J.J.Sm. in the labellum having a dentate scale.

Eria trichotaenia Schltr., sp. nov.

Epiphytica, erecta, valida; rhizomate perbrevi; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis cylindraceis, paulo compressis, apice c. 3-foliatis, 8—9 cm altis, 2—2,5 cm latis; foliis ligulatis obtusis, basin versus angustatis, 40—45 cm longis, medio 4—5 cm latis; racemis versus apicem pseudobulborum, erectis, cylindraceis, dense multifloris, foliis vulgo paulo brevioribus, c. 2,5 cm diametentibus; pedunculo tereti, pilis stellatis dense rufo-tomentosulo; bracteis minutis, ovatis, rufo-tomentosulis, ovario multo brevioribus; floribus flavidis, columna atropurpurea, extus pilis stellatis rufo-puberulis; sepalo intermedio oblongo, obtuso, 0,4 cm longo, lateralibus falcatis, basi margine anteriore valde dilatata cum pede columnae mentum obtusum oblongum, a facie compressum, 0,5 cm longum formantibus; petalis falcatis oblongo-ligulatis obtusis, basi paululo dilatatis, glabris, sepalis aequilongis; labello oblongo, medio marginibus incurvulis, antice obscure trilobato, obtuso, c. 0,5 cm longo, medio explanato 0,3 cm latitudine subattingente; columna brevi, stigmate transverso, pede angustato a basi columnae fascia semilunata, incrassata, puberula separato, ceterum glabro; ovario cum pedicello breviter stellato-tomentosulo, clavato, c. 0,7 cm longo.

On trees in the forests on the summit of Bukit-Djarat [Mount], alt. c. 1600m - R. Schlechter no. 16015, flowering on 1st Feb. 1907.

A characteristic of this species is the half-moon shaped, swollen band at the base of the column, which in contrast to the otherwise glabrous columns has short hairs.

§ *Cymboglossum**Eria cymbiformis* J.J.Sm.

On trees near Padang-Pandjang, alt. c. 1000m - R. Schlechter no. 15982, flowering on 30th Jan. 1907.

I find myself obliged to base a new section on this species, which is characterised by the habit of the plant, which is reminiscent of those of the section *Aeridostachya*, and by the cymbiform labellum.

§ *Urostachya**Eria Schildiana* Schltr., sp. nov.

Epiphytica, erecta, valida, 30—50 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, minute puberulis; pseudobulbis cylindraceis, dimidio superiore vulgo paululo ampliatis, apicem versus 3—7-foliatis, basi vaginis arcte amplectentibus, dissitis obtectis, 17—35 cm longis, dimidio superiore 0,8—1,5 cm diametentibus; foliis erecto-patentibus ligulatis, obtusiusculis, basin versus paulo angustatis, 15—23 cm longis, medio fere 2,4—3,7 cm latis, racemis versus apices pseudobulborum, foliis vulgo brevioribus, erectis vel erecto-patentibus, plus minusve flexuosis, 8—15 cm longis, c. 0,8 cm diametentibus, dense multifloris; pedunculo brevi; bracteis deflexis, ovatis vel oblongis, subacutis, ovario brevioribus; floribus roseis, illis *E. multiflora* Lindl. vix majoribus, patentibus: sepalo intermedio ovato, obtusiusculo, glabro, 0,3 cm longo, lateralibus fere aequilongis, obtusiusculis, glabris, basi margine anteriore valde dilatata cum pede columnas mentum oblongum obtusum, c. 0,3 cm longum formantibus; petalis oblique oblongo-ligulatis obtusis, glabris, sepalis vix brevioribus, labello erecto, e basi concava trilobo, lobis lateralibus brevibus, oblique triangulis, obtusis, lobo intermedio e basi longius linear-unguiculata subito in laminam semiorbicularem, obtusissimam, margine leviter undulatam, basi truncatam expanso, labello toto glabro, 0,4 cm longo, inter apices loborum lateralium 1,5 mm lato, lamina lobi intermedii 2,5 mm latitudine subattinente; columna brevi, pede elongato conspicue angustato, glabro; anthera subquadrato-cucullata; ovario cum pedicello per breve, sparsim stellato-puberulo, cylindracco, 0,3 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15983, flowering on 30th Jan. 1907.

This species is related to *E. multiflora* Lindl., but differs in the flowers having a longer mentum, and in the shape of the lip. With it's beautiful rose-red flowers, the whole plant is more imposing than *E. multiflora* Lindl. I have dedicated the species to J. Schild, the German Consul at Padang, who assisted me in every possible way, during my stay on the south-western coast of Sumatra.

Eria merapiensis Schltr., sp. nov.

Epiphytica, erecta, 25—30 cm alta; rhizomate valde abbreviato; radicibus filiformibus, elongatis, flexuosis, puberulis; pseudobulbis cauliformibus cylindraceis, apice c. 4-foliatis, ceterum vaginis paucis alte amplectentibus primum vestitis, 13—17 cm altis, supra medium 0,7—0,8 cm diametentibus; foliis erecto-patentibus ligulatis, obtusiusculis, basin versus paulo angustatis, glabris, 8—11 cm longis, medio fere 0,7—1,1 cm latis, racemis brevibus versus apicem pseudobulborum, subdense pluri-(5—8-)floris, foliis

duplo vel plus duplo brevioribus; pedunculo abbreviato, bracteis mox deflexis ellipticis, acuminatis, ovarium vulgo superantibus; floribus in sectione inter majores, aureis, erecto-patentibus; sepalo intermedio ovato, obtusiusculo, glabro, 5,5 mm longo, lateralibus aequilongis, apiculatis, late triangulis, basi margine anteriore valde dilatata cum pede columnae mentum obtusum, c. 5 mm longum formantibus, glabris; petalis oblique oblongis, obtusiusculis, glabris, sepalis subaequilongis; labello 0,8 cm longo, lobis lateralibus basilaribus triangulis, obtusiusculis, intus inter se membrana tenui conjunctis, lobo intermedio e ungue linearis, medio paululo dilatato, basi excavato, in laminam rhomboeo-quadratam cum angulis obtusis dilatato, 0,6 cm longo, lamina medio 0,4 cm lata, glabro; columna brevi, pede apicem versus angustato; anthera cucullata glabra; ovario cum pedicello brevi subclavato, glabro, 0,9 cm longo.

On trees in the forests of Gunong-Merapi [Mount], alt. c. 2500m - R. Schlechter no. 15957, flowering on 25th Jan. 1907.

On account of their golden-yellow flowers, this species and the one following are somewhat isolated in the section. It is remarkable that the section has developed so many shapes and colours in the ranges of south-western Sumatra. We can definitely expect many more new species from these areas.

Eria chrysanthia Schltr., sp. nov.

Epiphytica erecta, 15—30 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, minutissime pilosis; pseudobulbis caulinibus, cylindricis, vaginis paucis dissitis infra medium obsessis, apice 3—4-foliatis, 6—18 cm altis, supra medium 0,3—0,5 cm diametrientibus; foliis erecto-patentibus vel suberectis, lanceolato-ligulatis, acutis, basin versus angustatis, 6—12 cm longis, medio fere 0,5—1 cm latis; racemis versus apices pseudobulborum, erectis, subdense 8—15-floris, foliis subdupo vel plus duplo brevioribus; pedunculo abbreviato; bracteis mox deflexis ellipticis vel oblongo-ellipticis, ovario paulo brevioribus; floribus aureis illis *E. merapiensis* Schltr. similibus, sed paulo majoribus, sepalo intermedio oblongo obtuso, glabro, 1 cm longo, lateralibus triangulis, falcatis, basi margine anteriore valde dilatata, cum pede columnae mentum obtusum 0,6 cm longum formantibus, glabris; petalis oblique ligulatis obtusiusculis, 0,8 cm longis, labello petalis fere aequilongo glabro, lobis basilaribus triangulo-subfalcatis, obtusiusculis, brevibus, intus paulo incurrentibus, lobo medio e basi linearis-unguiculata elliptico-lanceolato, subacuto, 0,6 cm longo, 2,5 mm medio lato; columna brevi, pede conspicue angustato, glabra; anthera subquadrate-cucullata, antice breviter excisa, glabra; ovario cum pedicello subclavato, glabro, c. 1,2 cm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1300m - R. Schlechter no. 15996, flowering on 1st Feb. 1907.

Well separated from *E. merapiensis* Schltr. by the larger flowers, narrower dorsal sepal and petals and, above all, by the labellum.

Eria sarcophylla Schltr., sp. nov.

Epiphytica erecta, 25—30 cm alta; rhizomate valde abbreviato; radicibus filiformibus, elongatis, flexuosis, minute puberulis; pseudobulbis caulinibus, subclavatis, apicem versus paululo compressis, ima basi paululo incrassatis, vaginis paucis dissitis, brevibus, obsessis, apice 4—5-foliatis; foliis erecto-patentibus erectis, anguste lanceolato-ligulatis, acutis, glabris, carnosis, 12—16 cm longis, medio fere 0,5—0,8 cm latis; racemis erectis vel suberectis, dense multiploris, cylindraceis foliis brevioribus, c. 1 cm

diametentibus; pedunculo brevi; bracteis deflexis ellipticis vel oblongo-ellipticis apiculatis, ovario plus duplo brevioribus; floribus patentibus, illis *E. cepifoliae* Ridl. similibus, albis, columna apice violaccis; sepalo intermedio ovato, obtuso, glabro, vix 2,5 mm longo; lateralibus aequilongis triangulis obtusis, basi margine anteriore valde dilatata cum pede columnae mentum obtusum, 0,2 cm longum formantibus; petalis oblique oblongo-ligulatis obtusis, margine anteriore basi paulo dilatatis, glabris, sepalo intermedio subaequilongis; labello erecto vix 0,3 cm longo, glabro, lobis basilaribus parvulis erectis acutis intus inter se membrana tenui conjunctis, quasi lamellam erectam bicuspidatam forinantibus, lobo intermedio e basi breviter unguiculata in laminam late rhombbeam, angulis obtusam expanso, c. 1,5 mm lato; columna brevi, pede angustato, glabra, stigmate amplio; anthera cucullata, antice obtuse rostrata, glabra; ovario cum pedicello subclavato, brevissime stellato-puberulo, 0,3 cm longo.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 16034, flowering on 7th Feb. 1907.

Related to *E. cepifolia* Ridl., which likewise belongs to the section Urostachya, but readily distinguished from it by the broad, non-terete leaves.

Eria euryantha Schltr., sp. nov.

Epiphytica, erecta, valida, 50–60 cm alta; rhizomate valde abbreviato; pseudobulbis cauliniformibus, crassis, cylindraceis, vaginis alte amplectentibus acutis, dissitis primum obsessis, apice 5–6-foliatis, 35–45 cm longis, medio fere c. 1,5 cm diametentibus; foliis erecto-patentibus vel erectis, elliptico-lanceolatis, obtusiuscule acutatis, basin versus angustatis, glabris, textura subcoriacea, 20–25 cm longis, medio fere 3,5–4,5 cm latis; racemis in dimidio superiore pseudobulborum lateralibus, erecto-patentibus vel suberectis, dense multifloris, 10–15 cm longis, c. 1,5 cm diametentibus; pedunculo abbreviato; bracteis deflexis oblongo-ellipticis subacutis, ovario paulo brevioribus; floribus roseis, patentibus; sepalo intermedio late ovato-elliptico obtusiusculo, glabro, 0,4 cm longo, lateralibus oblique triangulis basi margine anteriore valde dilatata cum pede columnae mentum obtusum, antice bene latum, 0,4 cm longum formantibus, sepalo intermedio aequilongis, glabris; petalis oblique ovatis subacutis, glabris, sepalo intermedio subaequilongis; labello erecto glabro, sigmoideo-curvato, e basi concava trilobo, lobis lateralibus recurvato-erectis concavis, obtusiusculis, inter se lamella tenui emarginata conjunctis; lobo intermedio e basi cumento-unguiculata in lobum rhombo-transversum subacutum expanso, labello toto 0,4 cm longo, lobo intermedio infra apicem 0,3 cm lato; columna brevi, pede angustato, facie minute puberulo; anthera transversa, cucullata, antice breviter et obtuse apiculata, glabra; ovario cum pedicello pilis stellatis puberulo, subclavato, 0,6 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 16033, flowering on 7th Feb. 1907.

This species belongs to the affinity of *E. erecta* Lindl., but is distinguished by the conspicuous, broad, glabrous flowers, when viewed from the front.

Eria djaratensis Schltr., sp. nov.

Epiphytica, erecta, valida, usque ad 50 cm alta; rhizomate valde abbreviato; radicibus filiformibus, elongatis, flexuosis, glabris, pseudobulbis cylindraceis, paulo compressis, basi vaginis pluribus obsessis, dimidio superiore 5–7-foliatis, 10–17 cm altis, medio fere 2–2,5 cm crassis; foliis

erecto-patentibus, lanceolatis vel elliptico-lanceolatis, acutis, basi angustatis, glabris, 18—30 cm longis, medio fere 2,5—4,3 cm latis; racemis versus apice in pseudobulborum lateralibus, suberectis, 10—13 cm longis, dense multifloris, c. 1,5 cm diametribus; pedunculo brevi; bracteis deflexis oblongis, subacutis, ovario brevioribus; floribus patentibus, roseis; sepallo intermedio ovato, obtuso, glabro, c. 0,5 cm longo, lateralibus oblique triangulis, glabris, basi margine anteriore valde dilatata cum pede columnae mentum oblongum, obtusum, latum formantibus, sepallo intermedio fere aequilongis; petalis oblique elliptico-ovatis, obtusis, glabris, 0,4 cm longis; labello erecto, glabro, e basi cucullato-concava trilobo, lobis lateralibus brevibus obtusis, incurvis, inter se intus in lamellam bilobatam connatis, lobo intermedio e basi cuneato-unguiculata rhombeo-elliptico, obtuso, dimidio superiore defracto, labello toto 0,5 cm longo, in medio lobi intermedii 0,3 cm lato; columna brevi, glabra, pede paululo angustato, glabro; anthera semigloboso-cucullata, antice breviter bidentata; ovario cum pedicello clavato, pilis stellatis puberulo, 0,7 cm longo.

On trees in the forests on the summit of Bukit-Djarat [Mount], alt. c. 1500m — R. Schlechter no. 15999, flowering on 1st Feb. 1907.

Related to E. euryantha Schltr., but with quite a different labellum.

§ Hymeneria

Eria chrysocardium Schltr., sp. nov.

Epiphytica, erecta, 25—30 cm alta; rhizomate brevi; radicibus filiformibus elongatis, flexuosis, hispidulis; pseudobulbis cauliformibus, teretibus, vaginis dissitis, pluribus, alte vaginantibus obsessis, apice vulgo trifoliatis; foliis erecto-patentibus, elliptico-lanceolatis vel lanceolatis, acuminatis, glabris, 8—16 cm longis, medio fere 1—1,8 cm latis; racemis laxe pluri (6—12-)floris, erecto-patentibus, curvatis, foliis aequilongis vel paulo brevioribus; pedunculo vaginis paucis bracteiformibus obsesso, usque ad 2,5 cm longo, stellatim puberulo; bracteis ovatis vel ellipticis, acutis, decurvis, ovario brevioribus; floribus albis, erecto-patentibus; sepalis oblongo-ligulatis obtusiusculis, glabris, lateralibus subfalcatis, basi margine anteriore bene dilatata, mentum obtusum, c. 3,5 mm longum formantibus; petalis falcato-ligulatis, obtusis, 9,5 mm longis, glabris; labello e basi oblongo-cuneata tertia parte apicali trilobo, lobis lateralibus breviter oblongis, obtusis, intermedio plus duplo longiore, subquadrato, apiculato, incrassatione quadrato-cordata aurea omnino obtecto, lamellis 2 parallelis apice acutis e basi labelli usque infra basin lobi intermedii decurrentibus, nervo medio paulo incrassato, labello toto 1,1 cm longo, ad apices lobarum lateralium 0,7 cm lato, lobo intermedio 0,4 cm lato; columna 0,4 cm alta, glabra, clinandrio dorso crenulato; anthera cucullata, glabra, dorso subgibbosa; ovario cum pedicello stellatim puberulo, subclavato, c. 1,5 cm longo.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15981, flowering on 30th Jan. 1907.

Related to E. oligotricha Schltr. from New Guinea, but in habit, also reminiscent of E. Elmeri Ames with its slender pseudobulbs. Both the lamellae on the labellum are orange-yellow, the middle lobe golden-yellow.

Eria euryloba Schltr., sp. nov.

Epiphytica, erecta, 30—40 cm alta; rhizomate brevi; radicibus filiformibus elongatis, flexuosis, puberulis, pseudobulbis cauliformibus, cylindricis,

vaginis pluribus dissitis obsessis, apice 3—4-foliatis, vulgo subflexuosis, 15—20 cm longis, medio fere 0,5—0,6 cm diametentibus; foliis erecto-patentibus ellipticis vel lanceolato-ellipticis, subacutis, basin versus bene angustatis, 12—17 cm longis, medio fere 2,8—4,3 cm latis, glabris, textura tenuioribus; racemis versus apicem pseudobulborum lateralibus erecto-patentibus, dense c. 20-floris, cylindraceis, in exemplario singulo c. 5 cm longo, 1,7 cm diametente; pedunculo perbrevi; bracteis deflexis ellipticis subacutis, ovario subaequilongis; floribus patentibus albis, roseo-nervatis, labello lutescente; sepalis oblongis obtusiusculis, glabris, 0,7 cm longis, lateralibus subfalcatis, basi margine anteriore bene dilatata cum pede columnae mentum obtusum c. 0,3 cm longum formantibus; petalis elliptico-ligulatis subacutis, glabris, 0,6 cm longis; labello e basi late oblonga dimidio superiore trilobo, glabro, lobis lateralibus falcato-oblongis, obtusis, lobo intermedio perlato, reniformi, apice bilobulato, lobulis rotundatis, carinis 3 parallelis e basi labelli lateralibus apicem versus interdum interruptis, usque ad medium lobi intermedii decurrentibus, incrassatione v-formiter bicruri, brevi in apice lobi intermedii anteposita, labello toto, 0,6 cm longo, ad apices lobarum lateralium 0,4 cm lato, lobo medio 2,5 mm longo, 0,4 cm lato; columna brevi glabra, 2,5 mm longa, clinandrio obtuse trilobulato, pede producto, anthera reniformi-cucullata, dorso gibbo donata, antice excisa, glabra; ovario cum pedicello stellatim puberulo, cylindrico, 0,6 cm longo.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15915, flowering on 20th Jan. 1907.

A very characteristic species, distinguished by the structure of the labellum, with very broad front lobes and the lateral keels interrupted in front. It is probably best placed next to E. flavescens Lindl.

Eria Wichersii Schltr., sp. nov.

Epiphytica, erecta, c. 40 cm alta; pseudobulbis cauliformibus cylindraceis, vaginis dissitis arce amplectentibus primum obsessis, apice c. 4-foliatis, 20—25 cm longis, medio c. 1,3 cm diametentibus; foliis erecto-patentibus . patentibusve, ellipticis, obtusiuscule subacuminatis, basi angustatis, glabris, 13—15 cm longis, medio fere 3,2—4,3 cm latis; racemis suberectis versus apicem pseudobulborum, lateralibus, foliis brevioribus, subdense c. 20-floris; pedunculo abbreviato; bracteis deflexis oblongis, obtusis, ovario paulo brevioribus; floribus flavidis patentibus; sepalo intermedio ovato-oblongo, acuto, glabro, 0,8 cm longo, lateralibus aequilongis, subfalcatis, late triangulis, acutis, basi margine anteriore valde dilatata mentum conicum, obtusum, 0,7 cm longum cum pede columnae formantibus; petalis oblique oblongis, acutis, glabris, sepalis paulo brevioribus; labello e basi oblonga cuneato, trilobo, lobis lateralibus oblique oblongis obtusis, lobo intermedio suborbiculari apice exciso, apiculo minuto obtuso interjecto, lamellis 3 parallelis apicem versus ampliatis, antice obtusis, aequilongis e basi labelli usque ad basin lobi intermedii decurrentibus, lineis 3 carunculatis in lobo intermedio usque ad apicem antepositis, labello toto glabro, 1,1 cm longo, ad apices lobarum lateralium 0,8 cm lato, lobo intermedio 4,5 mm lato; columna glabra, 0,4 cm longa, clinandrio dorso denticulato, dente dorsali subulato brevi, pede longius producto; anthera cordato-cucullata obtusiuscula, glabra; ovario cum pedicello minutissime et sparsim puberulo, subcylindrico, 1,3 cm longo.

Epiphytic, in the vicinity of Padang-Pandjang — Wichers, in cultivation in his garden, flowering on 7th Feb. 1907.

This species is probably best placed next to E. flavescens Lindl., from which it is distinguished by the short sepals and by the labellum. The flowers are pale yellow, with the middle lobe of the labellum golden-yellow and the side lobes brown.

§ Nutantes

Eria genuflexa J.J.Sm. ?

On trees near Kampong-Tengah, alt. c. 800m - R. Schlechter no. 16024, flowering on 3rd Feb. 1907.

The specimens do not agree completely with J.J. Smith's description, so perhaps we may actually have a new species here.

§ Bryobium

Eria lasiorhiza Schltr., sp. nov.

Terrestris, perpusilla, 1,5—4 cm alta; rhizomate decumbente vaginis arcte amplectentibus mox desiccantibus primum obteclo, pseudobulbis laxè obpresso; radicibus teretibus, flexuosis, longe villosis; pseudobulbis c. 0,5 cm distantibus minutis, depresso-globosis, c. 0,2 cm diametentibus, vagina erecta acuminata, primum omnino obteclis, apice bifoliatis; foliis erecto-patentibus ellipticis breviter acuminatis, basi in petiolum plus minusve bene evolutum angustatis, glabris, textura tenuibus, petiolo inclusio 4—3 cm longo, lamina medio fere 0,4—0,7 cm lata; scapis apicalibus, 2—3-floris, erectis, folia paulo superantibus; pedunculo gracilissimo, glabro, foliis fere aequilongo; bracteis ovatis acuminatis, ovarium vulgo paulo superantibus; floribus illis E. muscicola Ldl. similibus et fere aequimagnis, brunneis, erectis; sepallo intermedio ovato, apiculato, glabro, 3,5 mm longo, lateralibus triangulis, breviter acuminatis, glabris, basi margine anteriore dilatata mentum obtusum, 1,5 mm longum formantibus; petalis subfalcato-ligulatis obtusis, sepalis distinete brevioribus; labello oblongo-ligulato obtuso, supra medium paulo dilatato, intus papillis minutis asperato, c. 2,5 mm longo, supra medium 1,8 mm lato; columna perbrevi glabra, clinandrio dorso in lobum rotundatum producto, pede elongato; anthera cucullata antice breviter excisa; ovario cylindraceo, glabro, c. 3 mm longo.

On steep, moist declines of Gunong Merapi [Mount], between grasses and low ferns, alt. c. 1500m - R. Schlechter no. 15938, flowering on 24th Jan. 1907.

This interesting, delicate species is related to E. muscicola Lindl. and E. karikouyensis Schltr. and is characterised by the labellum. The long root-hairs are conspicuous, and are especially strongly developed where the roots enter moist hollows.

Bulbophyllum Thou.

Bulbophyllum Lobbii Lindl.

On trees near Padang-Pandjang, alt. c. 800m - Wickers; R. Schlechter no. 15920, flowering on 20th Jan. 1907.

Bulbophyllum phaeanthum Schltr., sp. nov.

Epiphyticum, in ramis arborum decumbens, 15—20 cm altum; rhizomate elongato, tereti, vaginis arcte amplexentibus primum obtecto; radicibus siliiformibus elongatis, flexuosis, glabris; pseudobulbis 2—3 cm distantibus oblongoideis, apicem versus attenuatis, teretibus, demum longitudinaliter rugulosis, apice unifoliatis, 1,7—2,5 cm altis, supra basin 0,6—0,9 cm diametentibus; foliis oblongo-ligulatis inaequaliter bilobulatis, basi in petiolum 1—2,5 cm longum angustatis, glabris, petiolo inclusio 1,2—1,8 cm longis, medio fere 1,4—2,4 cm latis; pedunculis in rhizomate, nunc ad basin pseudobulborum natis, erectis vel patentibus, vaginis paucis 4—6, dorso carinatis, amplexentibus bene vestitis, teretibus, glabris, 1—1,5 cm altis, unifloris; bractea ovata apiculata, cucullato-amplectente, ovario pedicellato multoties breviore, glabra; floribus erectis brunneis, rubro-striatis, illis *B. pileati* Ldl. fere aequimagnis; sepalo intermedio late elliptico, apiculato, glabro, c. 1,3 cm longo, lateralibus oblique ellipticis, apiculatis, intermedio aequilongis; petalis oblique ellipticis apiculatis, glabris, sepalis subaequilongis; labello carnosulo e basi auriculato-cordata late oblongo subacuto, subtus dimidio anteriore carina alta, medio subito genuflexa ad margines decurrente ornato, c. 1 cm longo, medio fere 0,5 cm lato, glabro; columna brevi, glabra, brachiis falcatis decurvis, antherum duplo fere superantibus; anthera cordato-cucullata, medio gibbo oblongo donata, glabra; ovario cum pedicello glabro, subclavato, c. 4 cm longo.

On trees above Padang-Pandjang, alt. c. 1300m — R. Schlechter no. 15973, flowering on the 29th Jan. 1907.

I would like to place this species next to *B. cornutum* Lindl., yet it is appreciably different from the latter in the shape of the labellum. Very different species are included in the so-called section *Sestochilus*, but without a closer investigation of a large number of species, a systemic division of the genus is extremely difficult. It will be the task of a future monographer to provide a better classification of the genus.

Bulbophyllum Stormii J.J.Sm.

On trees above Padang-Pandjang, alt. c. 1000m — R. Schlechter no. 15904, flowering on 19th Jan. 1907.

Bulbophyllum violaceum Lindl.

On trees in the forests of Gunong-Merapi [Mount], alt. c. 1200m — R. Schlechter no. 15972, flowering on 29th Jan. 1907.

Bulbophyllum diploncos Schltr., sp. nov.

Epiphyticum, in truncis ramisque arborum decumbens, c. 4 cm altum; rhizomate elongato omnino pseudobulbis depressis obtecto; radicibus siliiformibus elongatis, flexuosis, glabris; pseudobulbis oblongoideis cum rhizomate arcte connatis, tertia parte apicali tantum libera, unifoliatis, 0,5—0,8 cm longis, medio fere 2,5—3,5 mm latis; foliis erectis elliptico-ligulatis, obtusis, basi angustatis, 1,5—1,8 cm longis, medio fere 0,4—0,6 cm latis; pedunculis erectis gracilibus, glabris, basi vaginulis paucis obsessis, ceterum nudis, foliis aequilongis vel paulo longioribus, unifoliatis; bractea ovata apiculata arcte amplexente, glabra, ovario longo pedicellato multoties breviore; floribus illis *B. ovalifolii* Bl. similibus, flavis, labello brunneo, folia sub-

duplo superantibus; sepalو intermedio ovato, acuto, glabro, c. 0,4 cm longo, lateralibus oblique ovato-oblongis, subacutis, glabris, 0,6 cm longis; petalis oblique ovato-ellipticis, subacutis, glabris, sepalو intermedio duplo fere brevioribus; labello curvato carnosو, e basi cordato-auriculata ovato, obtuso, leviter verruculoso, antice marginibus cucullato-recurvis, e basi toris 2 lanceolatis in medium labelli decurrentibus glabris ornato, 2,5 mm longo; columna brevi, brachiis subfalcato-porrectis subulatis, antheram plus duplo superantibus, glabro, pede elongato; anthera cordato-cucullata, gibbo oblongo, ampio antice ornato; ovario cum pedicello gracili c. 1,2 cm longo.

On trees near Kampong Tengah, alt. c. 700m - R. Schlechter no. 16021, flowering on 3rd Feb. 1907.

Closely related to B. ovalifolium Lindl., but distinguished by the broader petals and by the labellum, which has two pads.

Bulbophyllum phaeoneuron Schltr., sp. nov.

Epiphyticum, perpusillum, in cortice arborum decumbente, 1—1,5 cm altum; rhizomate omnino pseudobulbis depressis obtecto; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis oblongoideis, ima apice tantum liberis, ceterum cum rhizomate connatis, unifoliatis, 0,3—0,4 cm longis, medio fere 0,2 cm latis; foliis erectis oblongo-ellipticis apiculatis, basi angustatis, 0,6—0,9 cm longis, medio fere 0,2—0,3 cm latis; pedunculis gracillimis setiformibus, basi vaginulis paucis obtectis, ceterum nudis, 0,9—1,2 cm altis; bractea minuta ovata, apiculata, ovario multoties breviore; floribus pallide brunneis, nervis brunneis pictis; sepalо intermedio ovato, apiculato; glabro, 3,5 cm longo, lateralibus oblique oblongis subacutis, glabris, 4,5 mm longis; petalis oblique ovato-lanceolatis, obtusiuscula acutatis, vix 0,2 cm longis; labello curvato, late ovato-ligulato, obtuso, glabro, marginibus dimidio anteriore reflexis, 2,5 mm longo; columna brevi, glabra, brachiis lanceolato-subulatis falcato-porrectis, antheram plus duplo superantibus, anthera reniformi-cucullata, glabra, dorso gibbo oblongo obtuso donata; ovario cum pedicello gracillimo, glabro, c. 0,5 cm longo.

On trees near Kampong-Tengah, alt. c. 700m - R. Schlechter no. 16022, flowering on 3rd Feb. 1907.

A very small, extremely delicate species which, like the previous one, is related to B. ovalifolium Lindl. The differences relate to the shape of the petals and glabrous labellum, smooth above.

Bulbophyllum papuliferum Schltr., sp. nov.

Epiphyticum, in ramis fruticum longe repens, 1,5—2 cm altum; rhizomate flexuoso, filiformi, valde elongato, laxe pseudobulbis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis c. 0,4—0,8 cm distans, ovoido-oblongoideis, parvulis, unifoliatis, 0,2—0,3 cm altis, supra basin 1—2 mm latis; foliis erectis oblongo-ligulatis, apiculatis, basi angustatis, glabris, 0,7—1,2 cm longis, medio fere 2,5—4 mm latis; floribus in rhizomate natis singulis, pedunculo filiformi, gracillimo, 0,7 cm longo, basi vaginulis paucis obsesso, ceterum glabro; bractea ovata, apiculata parvula, ovario fere duplo breviore; floribus virescenti-albis erectis, folia vulgo haud excedentibus; sepalо intermedio e basi ovato-lanceolata longe acuminato, 0,6 cm longo, glabro, lateralibus e basi triangula salientis elongato-acuminatus, glabris, sepalо intermedio aequilongis; petalis oblique elliptico-lanceolatis acutis, glabris, c. 2,5 mm longis; labello e basi brevissime unguiculata lanceolato subacuto, margine dimidio inferiore papulis minu-

tissimis dense ciliato, superne basi sulcato, 0,4 cm longo, infra medium 1,5 mm lato; columna brevi, glabra, brachiis erectis linearibus, apice inaequaliter bilobulatis, antheram paulo excedentibus; anthera reniformi-cucullata glabra, dorso gibbo oblongo donata; ovario subsessili cylindraceo glabro, c. 1,5 cm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1500m - R. Schlechter no. 16000, flowering on 1st Feb. 1907.

Belongs to the affinity of B. tenuifolium Lindl.

Bulbophyllum delicatulum Schltr., sp. nov.

Epiphyticum, in cortice arborum longe repens; rhizomate filiformi elongato flexuoso laxe pseudobulbis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis 1—1,5 cm distantibus, ovoideo-oblongoideis, erectis, leviter sulcatis, unifoliatis, 0,4—0,5 cm altis, infra medium 0,2—0,3 cm diametrientibus; pedunculis in rhizomate natis, setiformibus, basi vaginulis paucis obsesso, ceterum nudo; bractea ovata subacuta arcte ovarium amplectente, ovario multoties breviore; floribus suberectis, parvulis; sepalo intermedio ovato-lanceolato acuminato, glabro, 0,3 cm longo, lateralibus falcatis, ovato-lanceolatis, acuminatis, glabris, sepalo intermedio fere aequilongis; petalis oblongo-spathulatis, obtusis, glabris, sepalis duplo fere brevioribus; labello anguste oblongo-ligulato obtuso, glabro, margine dimidio inferiore minute serrato-ciliolato, subtus minute granuloso-papilloso, 2 mm longo; columna brevi glabra, brachiis subulatis falcato-porrectis, antheram dimidio excedentibus; anthera cordato-cucullata, antice gibbo oblongo obtuso donato; ovario cum pedicello cylindraceo, glabro vix 1,5 mm longitudine excedente.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1400m - R. Schlechter no. 16012, flowering on 1st Feb. 1907.

Related to B. ciliatum Lindl., but differing in the blunt petals, and also quite different from B. grudense J.J.Sm. The flowers are greenish, with the petals and labellum having violet apices.

Bulbophyllum kirroanthum Schltr., sp. nov.

Epiphyticum, longe repens, c. 4 cm altum; rhizomate elongato, flexuoso, filiformi, laxe pseudobulbis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis erectis, 1,5—2 cm distantibus, anguste ovoideis, leviter sulcatis, unifoliatis, 0,5—0,8 cm altis, infra medium 0,3—0,4 cm diametrientibus; foliis erectis ligulatis, obtusis, 1,5—3,5 cm longis, medio fere 0,3—0,4 cm latis; pedunculis ad basin pseudobulborum natis, erectis, foliis subaequilongis, gracilibus, teretibus, glabris, vaginulis paucis dissitis dimidio inferiore obsessis, subumbellatum 4—7-floris; bracteis patentibus lanceolatis acutis, glabris, vulgo ovario paululo brevioribus; floribus erecto-patentibus, pallide flavidis; sepalis lanceolatis, glabris, 0,6 cm longis, intermedio acuto, lateralibus obliquis acuminatis; petalis oblique oblongo-ligulatis, obtusiusculis, 2,5 mm longis, glabris; labello valde curvato, late ovato, obtuso, apice recurvo, petalis fere aequilongo, glabro; columna brevi, brachiis subulatis subfalcato-porrectis, antheram subduplo excedentibus; pede elongato; anthera subreniformi-cucullata, glabra, antice gibbo oblongo donata; ovario cum pedicello subclavato, c. 2,5 mm longo, glabro.

On trees near Padang-Pandjang, alt. c. 850m - R. Schlechter no. 15871, flowering on 15th Jan. 1907.

This species is related to B. Romburghii J.J.Sm.

Bulbophyllum dianthum Schltr., sp. nov.

Epiphyticum, dependens, 5—8 cm longum; rhizomate elongato tereti, radicante, pseudobulbis densius obsesso; radicibus filiformibus elongatis, flexuosis, glabris, superioribus rhizomate appressis; pseudobulbis rhizomate plus minusve appressis ovoideo-oblongoideis, unifoliatis, 0,4—0,5 cm longis, infra medium 2—2,5 mm diametentibus; foliis ligulatis, minute apiculatis, 1,7—3 cm longis, 2,5—0,4 cm latis, basi subpetiolato-angustatis; racemis valde abbreviatis, bifloris; pedunculo brevissimo; bracteis ovato-lanceolatis subacutis, ovario fere aequilongis; floribus parvulis erectis, flavidis; sepalis intermedio oblongo, obtuse acutato, apice leviter incrassato, 0,3 cm longo, lateralibus fere aequilongis, obliquis, ovato-lanceolatis, obtuse acuminatis, apice ipsa paulo incrassatis; petalis oblique ovatis, obtusis, glabris, 1,5 mm longis; labello minuto curvato, explanato, late ovato, obtuso, marginibus medio et apice decurvis, 0,4 cm longo, glabro; columna brevi, glabra, brachiis subulatis erectis, antheram subduplo excedentibus, pede elongato bene attenuato; ovario subsessili, cylindraceo, c. 1,5 mm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1400m — R. Schlechter no. 16007, flowering on 1st Feb. 1907.

To be placed next to B. mutabile Lindl., but otherwise differing appreciably from it in the flowers.

Bulbophyllum mutabile Lindl.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15902, flowering on 19th Jan. 1907.

Bulbophyllum Smithianum Schltr., sp. nov.

Bulbophyllum angustifolium Lindl. var. nanum J.J.Sm., in Bull. Agric. Dep. Ind. Néerl. no. V (1907), p. 16.

On trees near Fort de Kock, alt. c. 1000m — R. Schlechter no. 15934, flowering on 22nd Jan. 1907.

This plant has already been described by J.J.Smith. I consider it as a separate species. Not only are the flowers smaller and of different proportions, but the leaves also have a quite different shape.

Bulbophyllum xanthanthum Schltr., sp. nov.

Epiphyticum patulum, 20—25 cm longum; rhizomate flexuoso, tereti, axe pseudobulbis obsesso; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis cylindraceis, erecto-patentibus, basi vulgo rhizomati plus minusve appressis; 1,5—2 cm longis, infra medium c. 0,3 cm diametentibus, apicem versus paulo attenuatis, unifoliatis; foliis oblanceolato-ligulatis vel elliptico-ligulatis, obtusis, cum apiculo, basin versus subpetiolato-angustatis, 5—7 cm longis, supra medium 1—1,3 cm latis; inflorescentiis subumbellatis, 3—5-floris, pedunculo brevi, vaginis paucis obsesso, glabro, dimidium pseudobulborum longitudine vix attingente; floribus patentibus aureis; sepalis lanceolatis, longe acutatis, glabris, intermedio 0,8 cm longo, lateralibus obliquis 1 cm longis; petalis oblique oblongo-ligulatis, obtusis, margine anteriore dimidio superiore paulo dilatatis, 0,4 cm longis, glabris; labello rhomboeo antice paulo rostrato-angustato, curvato, glabro, medio sulcato, fasciis 2 leviter incrassatis usque infra medium decurrentibus, 0,3 cm

longo; columna brevi, brachiis subulatis, falcatis, antheram plus duplo superantibus; anthera cordato-cucullata, antice gibbo oblongo donata, glabra; ovario cum pedicello clavato, glabro, 0,3---0,4 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 16017, flowering on 2nd Feb. 1907.

Distinguished from the closely related B. angustifolium Lindl. by the golden-yellow flowers and the labellum extended in front in a rostrate manner.

Bulbophyllum parvilabium Schltr., sp. nov.

Epiphyticum, patulum, 20--25 cm longum; rhizomate flexuoso, tereti, pseudobulbis laxe obsesso; radicibus filiformis elongatis, flexuosis, glabris, superioribus rhizomati appressis; pseudobulbis cylindraceis erectis, vulgo rhizomati parallelis, unifoliatis, 2--2,5 cm longis, medio fere 3,5--5 mm diametentibus, apicem versus interdum paulo attenuatis; foliis ellipticis vel oblanceolato-ellipticis, obtusis, basi angustatis, glabris, 4,5--7,5 cm longis, medio fere 0,7--2 cm latis; inflorescentiis subumbellatis, 2--4-floris, pedunculo brevi, vaginulis paucis obsesso, glabro, longitudine pseudobulbis fere triplo breviore; floribus patentibus aurantiacis, basin versus pallidioribus; sepalis lanceolatis acuminatis, glabris, intermedio c. 0,7 cm longo, lateralibus obliquis paulo longioribus; petalis oblique elliptico-ligulatis, obtusiusculis, glabris, vix 0,3 cm longis; labello curvato, minuto, e basi cuneata medio distincte sublobato-dilatato, antice obtuso; vix 0,2 cm longo, medio 2,5 mm lato, toris 2 late linearibus e basi usque infra apicem labelli decurrentibus; columna perbrevi, glabra, brachiis subulatis antheram paulo superantibus, pede elongato bene angustato; anthera cordato-cucullata glabra, antice gibbo oblongo donata, glabra; ovario cum pedicello c. 0,3 cm longo.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15891, flowering on 17th Jan. 1907.

Very closely related to B. angustifolium Lindl., but distinguished by the thicker pseudobulbs, the shape of the petals and the labellum much broadened in the middle. The species of this group are all closely inter-related, but as far as I could observe, are fairly constant in floral characters.

Bulbophyllum flavescens Lindl.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15872, flowering on 13th Jan. 1907.

Bulbophyllum gibbosum Lindl.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15917, flowering on 20th Jan. 1907.

Bulbophyllum unguiculatum Rchb.f.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15903, flowering on 19th Jan. 1907; on trees near Fort de Kock - R. Schlechter no. 15935, flowering on 22nd Jan. 1907.

Acriopsis Reinw.Acriopsis javanica Reinw.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15900, flowering on 18th Jan. 1907.

Cymbidium Sw.Cymbidium pubescens Lindl.

On trees near Padang, alt. c. 20m - R. Schlechter no. 15857, flowering on 12th Jan. 1907.

Grammangis Rchb.f.Grammangis stapeliiflora (Teysm. et Binnend.) Schltr.Cymbidium stapeliaeflorum Teysm. et Binnend.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15899, flowering on 18th Jan. 1907. [cf. p. 21, same number].

This is probably better placed in the genus Grammangis.

Phreatia Lindl.

§ Ebulbosae

Phreatia secunda Lindl.

On trees near Tambangan, alt. c. 900m - R. Schlechter no. 15893, flowering on 17th Jan. 1907.

P. minutiflora Lindl., at least in the manner understood correctly by Ridley, should not be separated from this species.

Phreatia stenostigma Schltr., sp. nov.

Epiphytica, erecta, acaulis, usque ad 27 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; foliis lineariligulatis apice inaequaliter bilobulatis, vaginis articulatim affixis, 10—18 cm longis, medio fere 0,4—0,9 cm longis, glabris, textura charlaceis; racemis erecto-patentibus erectisve, gracilibus, folia vulgo paulo superantibus, densius multifloris elongatis, c. 0,7 cm diametribus; pedunculo tereti, glabro, vaginulis paucis dissitis, parvulis obsesso, racemo ipso vulgo longiore; bracteis lanceolatis acuminatis, inferioribus ovario aequilongis, superioribus sensim decrescentibus; floribus patentibus minutis, niveis; sepalo intermedio late ovato, obtuso, glabro, vix 1,5 mm longo, lateralibus triangulis obtusis, glabris, intermedio aequilongis, basi margine anteriore dilatata, cum pede columnae mentum obtusum, breve formantibus; petalis oblique ellipticis, obtusis, glabris, sepalis paulo brevioribus; labello late rhomboe angulis obtusis, basi vix concavo, petalis fere aequilongo; columna brevi, dorso androclinii rostellum paulo superante; stigmate transverso angusto; anthera subreniformi-cucullata glabra; polliniis 8, oblique obpyriformibus, stipite linearis fere aequilongo, glandula rotundata, parvula; ovario cum pedicello clavato, glabro, c. 2,5 mm longo.

On trees in the forests on Bukit-Djarat [Mount], alt. c. 1500m - R. Schlechter no. 15993, flowering on 1st Feb. 1907.

This species is related to P. densiflora Lindl., but from which it differs in the shape of the labellum and the narrow stigma.

Phreatia padangensis Schltr., sp. nov.

Epiphytica, acaulis, erecta, c. 13 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; foliis carnosulis erecto-patentibus, 6—8, articulatis, linearibus, obtusiusculis, glabris, basi paulo angustatis, 8—10 cm longis, medio fere c. 0,3—0,4 cm latis, vaginis apice angustatis, basin versus conspicue dilatatis; racemis gracilibus foliis fere aequilongis, elongatis, subdense multifloris; pedunculo racemo ipso fere aequilongo, vaginulis paucis, dissitis, parvulis obpresso; bracteis ovatis apiculatis vel acuminatis, ovario aequilongis; floribus in genere inter minores suberectis, albis; sepallo intermedio late ovato, obtuso, vix 1,5 mm longo, lateralibus triangulis obtusis, glabris, obliquis, basi margine anteriore dilata timentum obtusum breve formantibus; petalis oblique ovato-triangulis obtusis, glabris, sepalis paulo minoribus; labello e basi linearis unguiculato, ungue basi concavo, in laminam ovatam obtusam intus minute papilloso-puberulam dilatato, ungue c. 0,5 mm longo, lamina 1 mm longa; columna brevi glabra, pede angustato, elongato, clinandrio dorso rostello brevi bifido fere aequilongo; anthera reniformi-cucullata, glabra; ovario cum pedicello brevi glabro, clavato, c. 0,2 cm longo.

In the vicinity of Padang-Pandjang - Wichers, in cultivation in his garden, flowering on 7th Feb. 1907.

A very insignificant species, which is interesting in being reminiscent of the section Sacco-Phreatia in the labellum-claw, as well the lip-lamina being papillose-haired inside, even though the plant otherwise in habit is a typical species of the group [section] Ebulbosae.

§ Bulbosae

Phreatia sumatrana Schltr., sp. nov.

Epiphytica, erecta, caespitifica, c. 8 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis minutis omnino foliorum basibus obtectis; foliis c. 5, loratis, obtusiusculis, interdum minute apiculatis, usque ad 6,5 cm longis, medio fere 0,5—0,7 cm latis, vaginis basin versus paulo dilatatis; scapis e rhizomate natis, erecto-patentibus, interdum arcuatis, cum racemo folia vulgo paulo superantibus, teretibus glabris, vaginis pluribus amplectentibus acuminatis internodiis subaequilongis; racemo ipso secundo, dense multifloro; bracteis lanceolatis acuminatis, inferioribus flores superantibus, superioribus sensim paulo brevioribus; floribus niveis parvulis; sepallo intermedio late ovato, breviter acutato, 1,5 mm longo, lateralibus oblique triangulis, breviter acuminatis, glabris, basi margine anteriore valde dilatata mentum oblongum obtusum, c. 0,4 cm longum formantibus; petalis oblique ovato-oblongis, breviter et obtusiuscule acuminatis, glabris, sepalis paulo brevioribus; labello unguiculato, glabro, ungue oblongo, apicem versus paulo angustato, lamina reniformi, obtusiuscule apiculata, c. 0,1 cm lata; columna brevi, crassa, rostello erecto bicuspidato, clinandrio dorso haud ampliato, pede angustato, elongato; ovario cum pedicello glabro, clavato, c. 0,2 cm longo.

On trees above Padang-Pandjang, alt. c. 1000m - R. Schlechter no. 15978, flowering on 20th Jan. 1907.

This species belongs to the Bulbosae, even though the pseudobulbs remain

covered by the leaf-sheaths and are very difficult to recognise on dried material. The inflorescence appearing directly from the base and not between the leaves, nevertheless then reveals the relationship with the section Bulbosae.

§ Sacco-Phreatia

Phreatia sulcata J.J.Sm.

On trees near Padang-Pandjang, alt. c. 900m - R. Schlechter no. 15898, flowering on 18th Jan. 1907.

Thelasis Bl.

Thelasis elongata Bl.

On tree-trunks near Padang, alt. c. 20m - R. Schlechter no. 15854, flowering on 12th Jan. 1907.

Thelasis capitata Bl.

var. erostris Schltr., var. nov.

Diffrerit a forma typica floribus cleistogamis, rostellum obsoleto.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15878, flowering on 16th Jan. 1907.

Oxyanthera Brongn.

I retain the genus Oxyanthera Brongn. next to Thelasis Bl. There is no doubt that the two genera are extremely alike in floral structure, but the whole impression of the habit of the Oxyanthera species and consisting of the plants, as well as the plate-shaped pseudobulbs is so different from Thelasis, that I consider it advisable to keep the two genera separate.

Oxyanthera micrantha Brongn.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15895, flowering on 18th Jan. 1910 [1907].

Oxyanthera rhomboglossa Schltr., sp. nov.

Epiphytica, erecta, 35—40 cm alta; rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabris; pseudobulbis oblongis, valde compressis, c. 2—3 cm longis, medio 1 cm latis, unifoliatis; foliis loratis, acutatis, apice inaequaliter et subacute bilobulatis, glabris, 25—35 cm longis, medio fere 4,7—1,8 cm latis; inflorescentiis erectis, folia demum distincte superantibus, basilaribus, in axillis vaginarum exteriorum natis; pedunculo tereti glabro, gracili, vaginulis paucis dissitis acuminatis obsesso, racemo ipso dense multilloro, elongato, usque ad 16 cm longo; bracteis ovato-deltoides acuminatis, ovario paulo brevioribus; floribus erecto-patentibus, olivaceis, illis O. carinatae (Bl.) Schltr. similibus; sepalo intermedio late ovato, obtuso, glabro, vix 2,5 mm longo, lateralibus oblique oblongis, obtusiusculis, glabris, intermedio vix longioribus; petalis oblique

oblongis obtusis, glabris, sepalis paululo brevioribus; labello late rhombico angulis obtusis, basi leviter incrassato, 2 mm longo, medio 2 mm lato; columna brevi, rotundata, rostello bidentato, glabra, pede producto; anthera cordato-cucullata subacuta, glabra, dorso gibbo magno cordato donata; ovario cum pedicello brevi glabro, clavato, tricostato, c. 2 mm longo.

On trees in the forests of Bukit-Djarat [Mount], alt. c. 1300m - R. Schlechter no. 16004, flowering on 1st Feb. 1907.

A species closely related to O. javanica (J.J.Sm.) Schltr. (Thelasis javanica J.J.Sm.), but distinguished by the rhombic labellum. The specimen I collected was already so withered that I could no longer find any pollinia in the few useful flowers.

Arachnanthe Bl.

Arachnanthe Sulingii (Bl.) J.J.Sm.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 16032, flowering on 9th Feb. 1910 [1907].

The plant does not fit very well into the genus Arachnanthe and later on will probably be removed. It is generally vital that those genera grouped around Vanda and Rhenanthera [Renanthera], as well as around Saccolabium be critically sorted out.

Vanda R.Br.

Vanda leucostele Schltr., sp. nov.

Epiphytica, erecta, valida, usque ad 45 cm alta; caule tereti, dense foliato, vaginis foliorum persistentibus omnino obtecto, c. 1 cm diametente; foliis loratis, falcato-curvatis, patentibus, apice valde inaequaliter bilobatis, lobis paucidentato-excisis, usque ad 25 cm longis, medio fere 2,3—2,7 cm latis, racemis laxe 2—4-floris curvatis, foliis fere duplo brevioribus, penduculo, tereti, basi vaginulis paucis obsesso; bracteis semiorbicularibus apiculatis, minutis; floribus in genere mediocribus, brunnescensibus, columna alba; sepalis e basi angustata in laminam late obovatam, obtusam dilatatis, glabris, c. 2,5 cm longis, supra medium c. 1,5 cm latis, lateralibus obliquis; petalis e basi unguiculato-angustata ovato-ellipticis, apiculatis, glabris, sepalis fere aequilongis, 1,3 cm latis; labello trilobo, lobis lateralibus parvulis, semiorbiculari-quadratis, c. 0,4 cm longis, lobo intermedio hastato, apice bilobulato, basi subcordato-truncato, angulis basilaribus rotundatis, costis 2 obtusis, incrassatis ab ostio calcaris usque supra medium decurrentibus, dimidio inferiore papilloso-puberulo, c. 1,6 cm longo, supra basin c. 2 cm lato, calcare lateraliter valde compresso, subfalcato-oblongo obtuso, glabro, 0,6 cm longo, basi paululo constricto; columna basi valde dilatata, subconica, glabra, rostello brevi-bidentato; anthera cucullato-ovata subrostrata, obtusa, glabra; polliniis oblique oblongoideis, stipite obovato-oblongo, glandula plerumque oblonga antice truncata; ovario cylindrico, torto, c. 5 cm longo, glabro.

On trees between Padang-Pandjang and Kampong-Tengah, alt. c. 900m - R. Schlechter no. 15979, flowering on 30th Jan. 1907.

Related to V. helvola Bl., principally in the shape of the labellum.

Vanda sumatrana Schltr., sp. nov.

Epiphytica, erecta, usque ad 30 cm alta; caule tereti dense foliato, vaginis foliorum persistentibus omnino obtecto, c. 1,3 cm diametente; foliis falcato-patentibus, loratis, apice valde inaequaliter tricuspidatis, bilobatis, glabris, usque ad 30 cm longis, medio sc̄re 2,2—2,5 cm latis; racemis erecto-patentibus foliis fere duplo brevioribus, 2—4-floris; pedunculo crassiusculo, tereti, glabro; bracteis minutis, late ovato-deltoides, apiculatis; floribus brunnescensibus, columna alba; sepalis e basi breviter unguiculata, late ovatis obtusis, margine undulatis, c. 2,5 cm longis, medio c. 2 cm latis; petalis sepalis similibus obliquis, vix minoribus; labello trilobo, lobis lateribus oblique quadratis antice obtusissimis, c. 0,4 cm longis, lobo intermedio hastato, medio constricto antice in laminam suborbicularē obtusissimam explanato, glabro, c. 2 cm longo, supra basin 2,3 cm lato, supra medium 2 cm lato, infra medium c. 4,3 cm lato, costis 2 ab ostio calcariis usque ad medium decurrentibus, callis 2 in ostio puberulo calcariis, calcare lateraliter valde compresso, oblongo, obtuso, c. 0,8 cm longo; columnā conica, glabra; anthera cucullato-ovata, subrostata, glabra; polliniis oblique quadrato-rotundatis, stipite obtuse, glandula semioblonga antice truncata, stipiti aequilonga; ovario cum pedicello glabro, cylindraceo, torto, c. 5,5 cm longo.

On trees on Karbauen Creek, near Fort de Kock, alt. c. 900m — R. Schlechter no. 15962, flowering on 27th Jan. 1907.

This species is related to V. limbata Bl., but well distinguished outwardly by the colour of the flowers.

Trichoglottis Bl.

Trichoglottis scandens J.J.Sm.

On trees above Kampong-Tengah, alt. c. 900m — R. Schlechter no. 15966, flowering on 28th Jan. 1907; on trees above Padang-Pandjang, alt. c. 1000m — R. Schlechter no. 15918, flowering on 20th Jan. 1907.

Saccolabium Bl.

Saccolabium muticum (Rchb.f.) Schltr.

Echioglossum muticum Rchb.f.

Epiphytic, on trees near Padang-Pandjang — Wichers, in cultivation, flowering in his garden on 30th Jan. 1907.

Saccolabium ramulosum Lindl.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15874, flowering on 16th Jan. 1907.

Saccolabium latifolium Ridl.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15924, flowering on 20th Jan. 1907.

Thrixspermum Lour.

Thrixspermum bigibbum Schltr., sp. nov.

Epiphyticum, brevicaule, usque ad 13 cm altum; radicibus filiformibus elongatis, flexuosis, glabris; caule valde abbreviato, dense foliato; foliis lorato-ligulatis, obtuse acutatis, plus minusve distincte bilobulatis, basi paulo angustatis glabris, textura carnosulis, 9—10,5 cm longis, medio fere 0,6—1 cm latis; scapis foliis aequilongis vel paulo longioribus, gracilibus, pedunculo gracili, dense muriculato-papilloso, hinc inde vaginula minuta obpresso; racemo brevi, usque ad 2,5 cm longo, densius multifloro, quaqua-verso; bracteis minutis obtusis, muriculato-papillosis, ovario multoties breviribus; floribus succedaneis, aureis, labello albo, anthera aurantiaca; sepalis anguste oblongo-ligulatis, apiculatis, glabris, 6,5 cm longis, lateralibus paulo obliquis; petalis sepalis similibus, oblique oblongo-ligulatis, acutis, glabris, 0,5 cm longis, glabris; labello e basi ovata, concava dimidio anteriore trilobo, lobis lateralibus oblique falcato-oblongis, intus pilis albis flexuosis sparsim ciliatis, intermedio multo longiore, lanceolato, obtusiusculo, carnosus, glabro, basi gibbis 2 obtusis carnosis ornato, labello toto 0,5 cm longo, lobo medio c. 0,2 cm longo, infra apices loborum lateralium 3,5 cm lato, fascia brevi puberula in medio labelli; columna apicem versus paulo attenuata, glabra, pede producto; anthera cucullata glabra, antice truncata; polliniis oblique oblongoideis, stipite linearis, polliniis longiore, glandula oblonga parvula; ovario cum pedicello glabro, cylindraceo, c. 0,4 cm longo.

On trees near Kampong-Tengah, alt. c. 600m — R. Schlechter no. 15987, flower-ing on 31st Jan. 1907.

A very distinctive species to be placed next to T. blepharolobum Schltr.

(Dendrocolla ciliata Ridl.), with which it has much similarity, but the labellum is appreciably different in many details.

Thrixspermum lucidum Schltr., sp. nov.

Epiphyticum patulum c. 15 cm longum; radicibus filiformibus elongatis, flexuosis, glabris; caule omnino vaginis foliorum obtecto, bene foliato, brevi, tereti, c. 9,5 mm diametente; foliis patentibus oblongis, obtusis, glabris, lucidis, subtus carinatis, textura carnosa, 8—11 cm longis, medio fere 2—2,8 cm latis; scapis adscendentibus cum inflorescentia folia superantibus; pedunculo teretiusculo glabro, vaginulis dissitis paucis obpresso; racemo ipso compresso, disticho, multifloro; bracteis equitantibus oblique triangulis obtusis, ovario paulo brevioribus, 0,5—0,6 cm longis; floribus succedaneis albis, erecto-patentibus; sepalis oblongis obtusiusculis, glabris, c. 1,2 cm longis, lateralibus intermedio paulo latioribus, obliquis; petalis oblique obovato-oblongis obtusis, glabris, sepalis fere aequilongis; labello e basi saccato-concava obtusissima late cuneato trilobo, lobis lateralibus erectis, oblique triangulis, obtusis, lobo intermedio lateralia vix superante breviter triangulo obtuso, antice bene incrassato, callo subulato, pilis glanduliferis obpresso in basi labelli, callo altero reniformi, transverso, glabro, supra medium, labello toto 0,9 cm longo, inter apices loborum lateralium 1,4 cm lato; columna lata, clinandrio contracto, glabra; anthera cucullata glabra; polliniis oblique oblongoideis, stipite linearis, polliniis vix aequilongo, glandula parvula; ovario cum pedicello cylindraceo, glabro, c. 0,8 cm longo.

On trees in the mountain forests near Kampong-Tengah, alt. c. 900m — R. Schlechter no. 15911, flowering on 19th Jan. 1907.

I should like to consider T. carinatifolium (Ridl.) Schltr. (Dendrocolla carinatifolia Ridl.) the closest relative of this species. In floral structure, the small T. carnosum (Ridl.) Schltr. (Dendrocolla carnosa Ridl.) also has certain

similarites. The inflorescences of both species are non-distichous and the bracts are different.

Thrixspermum pensile Schltr., sp. nov.

Epiphyticum, directe pensile, usque ad 1 m longum, simplex; radicibus ad basin caulis filiformibus elongatis, flexuosis, glabris; caule ancipiti, omnino vaginis foliorum arcte appressis obtecto, c. 1 cm lato; foliis patentibus ellipticis, breviter acuminatis, basi cucullato-concavis, dorso carinatis, glabris, textura carnosulis, 5—6,5 cm longis, medio fere 2,3—2,7 cm latis; racemis lateralibus, horizontaliter patentibus, ut videtur vulgo 2—3-floris, fasciculatis, foliis duplo brevioribus, pedunculis c. 1,5 cm longis compressis, bracteis minutis deltoideis, ovario brevioribus; floribus flavidis, succedaneis; sepalis oblongis obtusiusculis glabris, c. 1,1 cm longis, lateralibus obliquis; petalis oblique oblongo-ligulatis, basin versus paululo angustatis, glabris, c. 1 cm longis; labello a basi saccato-concava obtusa cuneato, trilobo, lobis 1 cm longis; columna glabra, clinandrio dorso in lobum brevem obtusum producto, rostello bidentato, pede producto; anthera ovato-cucullata, antice excisa, glabra; ovario cylindraceo glabro, c. 1,2 cm longo.

On trees in an orchard near Fort de Kock, alt. c. 1000m — R. Schlechter no.

15928, flowering on 22nd Jan. 1907.

This peculiar species is probably most closely related to T. subulatum (Bl.)

Rchb.f.

Sarcochilus R.Br.

Sarcochilus sumatranus Schltr., sp. nov.

Epiphyticus, dependens vel patulus, usque ad 15 cm longus; radicibus filiformibus elongatis, flexuosis, glabris; caule usque ad 10 cm longo, tereti, glabro, omnino vaginis foliorum obtecto; foliis erecto-patentibus, oblique elliptico-ligulatis, obtusis, basin versus paulo angustatis, 8,5—12 cm longis, medio fere 1,4—2,5 cm latis; racemis elongatis, folia plus minusve excedentibus, usque ad 25 cm longis, multifloris, paulo compressis, illos S. teretis Rchb. f. imitantibus; pedunculo brevi, bracteis semiobtusis abbreviatis, ovario multoties brevioribus; rhachi paulo incrassata; floribus succedaneis, distichis, illis D. compressi Rchb. f. similibus sed paulo majoribus; sepalis obovato-ellipticis obtusis, glabris, c. 1 cm longis, lateralibus obliquis, apice obtuse acuminatis; petalis oblique obovatis obtusis, 0,8 cm longis; labello a basi trilobo, lobis lateralibus erectis, falcatis, oblongis, obtusis, c. 0,4 cm longis, intermedio perbrevi, obtusissimo, transverso, in calcar carnosum, circuitu ovato-lanceolatum, obtusum, glabrum, porrectum, ima carnosum, tantum saccato-concavum, 0,6 cm longum producto, lamellis 2 divergentibus carnosis a basi labelli usque ad basin calcaris decurrentibus; columna brevi apice valde incrassata, pede 0,5 cm longo, attenuata; anthera cucullata glabra, antice breviter et obtuse rostrata; polliniis subglobosis, stipite linearis, basin versus paulo angustata, glandula suborbiculari ampla; ovario cylindrico glabro, c. 0,6 cm longo.

On trees near Padang-Pandjang, alt. c. 800m — R. Schlechter no. 15965, flowering on 28th Jan. 1907.

Closely related to S. compressus Rchb.f., but well separated in the colour of the flowers and in the shape of the labellum. The flowers are white, with a red

spot at the base of each of the sepals, the petals and on the swollen spur, respectively an extension of the middle lobe of the lip.

Sarcochilus teres Rchb.f.

On trees near Padang-Pandjang, alt. c. 800m - R. Schlechter no. 15968, flowering on 28th Jan. 1907.

Taeniophyllum Bl.

Taeniophyllum rhodantherum Schltr., sp. nov.

Epiphyticum, acaule, perpusillum; radicibus applanatis, flexuosis, glabris, usque ad 30 cm longis, 2—2,5 mm latis; racemis erectis, fractiflexis, 1,5—2,5 cm altis, densius multifloris, rhachi muriculato-scaberula; pedunculo perbrevi; bracteis patentibus lanceolatis acuminatis, extus muricato-scabridis; floribus flavis, albo-calcaratis, anthera rubra, in genere inter minores, erecto-patentibus, distichis, more generis succedaneis; sepalis oblongis, extus carinatis, sparsim muriculatis, intus glabris, c. 0,3 cm longis, intermedio obtuso, lateralibus obliquis breviter acuminatis; petalis oblique lanceolato-ligulatis obtusis, glabris, margine irregulariter subdentatis, sepalis paululo brevioribus; labello ovato- vel late oblongo-subcucullato, antice in gibbum apiculiformem producto, marginibus incurvis, 2,5 mm longo, fere aequilato, calcare cylindraceo, obtususcule, glabro, ostium versus paululo attenuato, 0,5 cm longo; ovario cylindraceo tricostato, costis muriculatis, 0,4 cm longo.

On trees near Kampong-Tengah, alt. c. 700m - R. Schlechter no. 15984, flowering on 31st Jan. 1907.

I found only a solitary diminutive specimen of this very interesting species, with a single flower. It is quite isolated amongst the species of the region, but shows a certain similarity in habit to T. obtusum Bl.

Taeniophyllum merapiense Schltr., sp. nov.

Epiphyticum, perpusillum, acaule; radicibus filiformibus applanatis, flexuosis, glabris, usque ad 10 cm longis, 1,5—2 mm latis; scapis gracillimis, setiformibus, usque ad 2,8 cm longis, laxe 2—5-floris; pedunculo 1—1,5 cm longo, vaginulis perpaucis minutis obsesso, glabro; bracteis ovato-lanceolatis acuminatis glabris, ovario brevioribus; floribus erecto-patentibus virescenti-flavidis; sepalis oblongo-lanceolatis, obtususculis, 0,3 cm longis, glabris, lateralibus cum intermedio et ungue petalorum ad medium usque connatis; petalis e basi linearis-unguiculata cum sepalis connata liberis, in laminam oblique subhastato-lanceolatam acutam dilatatis, sepalis paululo brevioribus; labello ovato-lanceolato, obtususcule, glabro, apice intus appendice subulato, infracto, brevi ornato, sepalis aequimagno, ad ostium calcari lamella humili transversa bilobulata ornata, calcare subgloboso obtusissimo glabro, labelli laminae fere duplo breviore; columna brevi, dorso minute puberula apice biauriculata, rostellum brevi adscendente; anthera late ovoideo-cucullata glabra, apice adscendente; polliniis 4 oblique pyriformibus, stipite linearis, polliniis breviore, glandula rotundata minuto; ovario cylindraceo glabro, c. 0,2 cm longo.

On tree-trunks in the forests of Gunong-Merapi [Mount], alt. c. 2600m - R. Schlechter no. 15951, flowering on 25th Jan. 1907.

This very distinctive species belongs to a section which appears again mainly

further eastwards and which is distinguished by the connate sepals and petals. I suggest the name *Codonosepalum* for this section, in contrast to *Eu-Taeniophyllum* where the sepals and petals are free.



APPENDIX IR. SCHLECHTER : CONTRIBUTIONS TO KNOWLEDGE OF THE ORCHID FLORA OF SUMATRA

Sumatra localities mentioned in text :

	<u>S.</u>	<u>E.</u>
Bukit-Djarat, Mount., near Padang-Pandjang	0° - 27'	100° - 25'
Fort de Kock, Town., now Bukit Tinggi	0° - 19'	100° - 22'
Karbauen (Gat), Creek., near Fort de Kock.		
Indragiri, (Inderagiri), River, mouth of.	0° - 30'	102° - 30'
Merapi (Gunong), Mount., near Bukit Tinggi.		
Padang, Town.	1° - 00'	100° - 21'
Padang-Pandjang, Village.	0° - 27'	100° - 25'
Tambangan, Village.		
Tengah (Kampong), Village., near Padang-Pandjang.		
Sungei Gajo, Village., near Padang.		



