# VIII. REAPING THE HARVEST RETRIEVAL OF NAMES AND IDENTIFICATIONS BY MEANS OF IDENTIFICATION AND COLLECTION LISTS

Among past acquisitions of the larger herbaria there are frequently duplicate collections which at the time of the distribution of the sets were not or very inadequately named. Examples of some famous large collections which were handled this way are those of Beccari, Forbes, Sieber, Dietrich, Zenker and others. They were either unnamed or only provisionally named with pre-identifications in approximate degree of accuracy to family and sometimes to genus.

As a matter of fact, this is for large collections still current procedure as it would create an impossible situation to have all such bulky collections shelved as a whole for some decades, or even many decades and postpone distribution of sets until all numbers are named by specialists. This would also be detrimental to progress of science: the earlier the sets are distributed the better because by 'coming into circulation' they will attract attention which means research.

It means also greater safety to the collections if they are represented in various places. Though disasters destroying herbaria are very rare, they have happened and can happen again. The herbarium of Vidal in the Philippines was destroyed by fire in 1897; fortunately sets had been distributed without names to various European herbaria. A big undistributed African collection by Peter was, however, totally lost in the first World War. During the second World War for example the important undistributed Celebes collections of the Sarasins (made half a century earlier!) were lost at Berlin and a huge New Guinea collection of Clemens disappeared in that island. In Manila the destruction of the Bureau of Science Herbarium deprived our Philippine colleagues of a magnificent Herbarium, but fortunately. Merrill's wisdom to distribute sets on a large scale has guaranteed that previously made collections survived as duplicates in many herbaria except for a very small number of unicates. Merrill's policy of early disposal of duplicates, aiming at two goals: safety and circulation, is still in general use in all Malesian centres.

This early distribution of duplicate sets brings of course along the necessity or at least responsibility of a trustworthy pre-naming, so that anyway duplicates are pro-vided with the proper family name, so that they can be filed in herbaria at least under incertae sedis of the family.

Of course no herbarium, except possibly Kew, has been sufficiently manned and has sufficient eminent botanists of wide knowledge to keep up with naming the duplicates either

by identification or by consulting the literature and transferring names found there on the labels of duplicates. For most fairly large herbaria this is a technical as well as a scientific impossibility, as this task alone would require all time of the staff for a decade or more. No herbarium can afford to dig out from literature all collections which were named later; besides not all these later identifications have been published. And I will by no means advocate this policy which would lame the creative production of the staff.

However, it is still useful to consider the swiftest way to improve the naming of not or inadequately named specimens

if desired.

What means do we have for retrieval of identifications, how can the work performed by our predecessors and colleagues be utilized, how is reaping of the harvest possible?

This can only be done with specimens which have a collecting number or otherwise fixed number sometimes not given

in the field but later in the herbarium.

These numbers are the key for retrieval, as unnumbered specimens fall beyond retrieval or almost so and can only be

tentatively correlated on the basis of clear additional data (collector's name, locality, date of collection, etc.).

There are four sources, viz (i) the monographs or revisions, (ii) identification lists, (iii) personal collecting lists. (iv) serial lists.

First a word on the proportional usefulness of monographs and identification lists.

Already in the former century the idea evolved to add to a local or regional revision or monograph a listed account of collector's numbers examined by the author. See for example the monographs in De Candolle's Monographia Phanerogamarum. This method was also followed in the monographs of the Pflanzenreich and many specialists are keeping up this documentary service to botany, whereby they simultaneously give a clear account of the namings on which their work rests and for which they are responsible.

Such numbers are often quoted twice in monographs, viz in the text under the species and in an appended 'Identification List'. For lack of printing space, the latter identification list is not seldom omitted. This is a nuisance, because having for example a numbered but unnamed specimen of Rhododendron or Vaccinium or other large genus, it is extremely time-consuming to locate this swiftly in such monographs of hundreds of species.

Though I will not deny that there is some advantage in quoting specimens in the text, it is for me very questionable whether the composition of such distributional minutiae is really worthwhile in our days when printing space is limited, if compared with an 'Identification List'. I would

prefer to replace such detailed accounts of specimens with copyings of field data, by a concise generalized account of distribution and ecology and a map of distribution which more clearly exposes the range of a species, while condensing the account of the material in an 'Identification List' because the latter much better serves all herbaria where duplicate specimens have been deposited.

We have for our Flora Malesiana revisions almost always given identification lists, sometimes in printed form at the end of the paper, but also in a cheaply produced (stencilled) but very important series of 'Identification Lists of Malesian Specimens', of which now over forty numbers have been published. They are freely distributed to the more important herbaria over the world for use by their curators.

herbaria over the world for use by their curators.

The reliability of such 'Identification Lists' rests of course on the reliability of the collecting numbers and that

of the botanist and typist copying the numbers.

The fact that in a very small number of specified collectors there has been a considerable confusion and muddling with both collections and duplicates induced my learned friend Arthur Exell to write a paper titled 'Isopleths and Isotypes' (in Taxon 18, 1969, 284-285). In this he warns against designating duplicate specimens as isotypes if they carry the same collecting number, unless the describing author has seen and signed them. If the latter is not true, he suggests that the identity of these 'isopleths' is a matter of opinion and that they have no juridical status.

I believe that the two examples he mentions, those of Welwitsch and of Moller & Quintas, are very rare exceptions to the rule. It is clear that for these collections the collecting numbers of the duplicates cannot be utilized without checking. I want to point out, however, that in any case retrieval of names cannot be automatic; nothing can be automatic in taxonomic botany, even not in designating types: examination and comparing with the original description must show whether this agrees with the specimen at hand, as labels can have been misplaced, mounting renewed, specimens replaced by better ones, etc.

In every regional flora a few of such collecting series are found in which collecting numbers must be used with great caution. In Indo-Australia this is for instance the case with the Wallich numbers, which are in almost all cases species numbers, not numbers of specimens. Truly Wallich, in his famous Catalogue, distinguished under each number by letters a, b, etc. the collector and provenance of the specimens put together under one number, but in the distribution of the sets these letters were often not copied. So extra caution is necessary with these numbers.

In the Zollinger and Wight numbering confusion can be found, because they have two numberings in different sets, as both authors had a herbarium proprium with a numbering differing from the normal duplicate sets.

In two other cases collectors started more than one number list, for instance Beccari for his Sumatra, Borneo and New Guinea collections which we note as the P.S., P.B. and P.P. series respectively. A similar procedure is found in the H.O.Forbes collections whose New Guinea series is indicated by us as the P.P. series. It may be that there are also double numbers in the collections of M.S.Clemens who collected in the Philippines, then in North Borneo and in New Guinea.

But the number of such cases is extremely small and among the 4000 odd collectors of Malesia it can be counted on the fingers of one hand. And as they are known duplicate numbers of these collections deserve and get extra care.

Another thing is the reliability of the homogeneity of the collections which were divided up into sets.

Fortunately here, again, there are in Malesian botany only a few cases in our experience where reliability leaves to be desired. This is partly due to the fact that there is an overwhelming preponderance of woody plants, some 60-70%. This involves that generally a collecting number consists of flowering or fruiting twigs of one individual plant, ensuring homogeneity. Collectors are usually well on the alert if picking for instance fallen flowers from the forest floor and adding these to the collection, or fallen fruit to flowering specimens. Anyway the herbarium botanist should always be aware that detached parts may not belong to the specimen even if there is no note on the label indicating such addings.

There is of course the danger that a collector aiming at making sets of 5-10 specimens will combine at the end of the day or the tour specimens taken from different individual plants if flowering or fruiting is scarce. Generally he will do so with great care and this is certainly allowed but its application admittedly holds some danger as all depends on the question whether he is capable of deciding in situ on specific identity.

In only one collection I know that errors must have crept in, viz with the orchids of the North Borneo sets of Clemens. Mr. Clemens was responsible for making the sets and in his zeal to make sets he avoided for financial reasons to have too many unicates. I witnessed at Bogor, in assisting him, that he mixed for example single specimens of Eria, collected for them by Dayak collectors, of which I could not tell without further study whether they belonged to the same species.

Our long experience has led us to conclude that in the great majority of cases numbered duplicate collections, also of herbaceous plants, are fully trustworthy. It is for this reason that I have felt compelled to collect the sources from which names of numbered Malesian specimens can be retrieved.

These three sources are:

(i) The identification lists, either published in our series or appended to revisions and monographs. I have not aimed at completeness and have not incorporated very old lists, especially not if they are superseded by more recent listings of the same group. I have not incorporated, partly for this reason, the lists in the Monographia Phanerogamarum and the Pflanzenreich. The latter work was largely based on the collections at Berlin and contains a very low representation of Malesian specimens.

On the other hand I am afraid that I had not sufficient time to scan all revisions and monographs on presence of identification lists. Therefore, the present account is ten-

tative.

The list is arranged alphabetically to families; in many cases only identifications for specified genera can be retrieved.

(ii) The second list is the access to the field books or collection lists of specified collectors, arranged alphabet-ically by their names. Here again there are considerable gaps, as in many cases these lists are not completely filled and hardly ever well kept up to date. Quite a number have been derived from literature by my endeavour to unearth number identifications. I can assure, and my staff members can bear testimony, that these lists have been a considerable help to retrieve names.

I should add that when I arrived at Bogor in 1927 there were already a number of such collection lists which procedure was obviously started by the late Dr. J.G.B. Beumée and kept up to date as good as possible by himself. Unfortunately at Leyden we have no copies of all the lists formerly

made at Bogor.

The keeping up to date of names in such lists requires scanning of published literature and is time-consuming. Now-adays the chain of Malesian herbaria disperses also among themselves lists of additional identifications to keep each other informed.

To each entry I have added some brief notes on provenance and completeness.

(iii) The third list is that of <u>institute series</u> in which collections were incorporated from a large number of collectors, both professional botanists and native collectors.

Epilogue. All in all the present lists are a tool to provide help and to save time. It can never be the aim to make these lists complete. The merit of the enumerations is to concentrate useful information, they have no other pretension.

As said before, it should not lead to make the copying of names a fully automatic process, as for example writing or typing errors, errors in copying etc. may lead to undesirable results. A cursory botanical control remains necessary.

#### 1. Identification lists

#### Acanthaceae

Elytraria. Reinwardtia 3 (1955) 257-261 (Bremekamp).
Nelsonia. Reinwardtia 3 (1955) 257-261 (Bremekamp).
Staurogyne. Reinwardtia 3 (1955) 257-261 (Bremekamp).
Thunbergia. Verh.Kon.Ned.Ak.Wet.A'dam II, 504 (1955) 86-90 (Bremekamp).

Various (New Guinea). Nova Guinea, n.s. 8 (1957) 155 (Bremekamp).

#### Alangiaceae

Alangium. Bull. Jard. Bot. Btzg III, 16 (1939) 225-232 (Bloembergen).

Annonaceae (Malaya). Gard.Bull.Sing. 14 (1955) 477-508 (Sinclair).

## Apocynaceae

Carissa. Ident.Lists no 39 (1971) (Markgraf).
Catharanthus. Ident.Lists no 39 (1971) (Markgraf).
Chilocarpus. Ident.Lists no 39 (1971) (Markgraf).
Kopsia. Ident.Lists no 42 (1972) (Markgraf).
Leuconotis. Ident.Lists no 39 (1971) (Markgraf).
Melodinus. Ident.Lists no 39 (1971) (Markgraf).
Rauwolfia. Ann.Mo.Bot.Gard. 42 (1956) 347-352 (A.S.Rao)
Urnularia. Ident.Lists no 42 (1972) (Markgraf).
Willughbeia. Ident.Lists no 42 (1972) (Markgraf).

Aponogetonaceae. Blumea 18 (1970) 486 (H.W.E.van Bruggen).

#### Araceae

Aglaonema. Smithson.Contr.Bot. 1 (1969) 61-63 (Nicolson). Amydrium. Blumea 16 (1968) 127 (Nicolson). Homalomena. Gard.Bull.Str.Settl. 10 (1939) 230-235 (Furtado).

Spathiphyllum. Blumea 16 (1968) 121 (Nicolson). Xenophya. Blumea 16 (1968) 118 (Nicolson).

Araliaceae (China). Sargentia 2 (1942) 120-129 (Li).

#### Bombacaceae

Durio. Reinwardtia 4 (1958) 423-424 (Kostermans). Neesia. Reinwardtia 5 (1960) 495 (Soepadmo).

Burmanniaceae. F.P. Jonker. A monograph of the Burmanniaceae. Thesis (1938) 263-273.

Burseraceae. Bull. Jard. Bot. Btzg III. 12 (1932) 534-546 (Lam).

Canarium (Pacific). B.P.Bish.Mus.Bull. 216 (1955) 52 (Leenhouts).

Garuga. Blumea 7 (1953) 470-471 (Kalkman).

Haplolobus. Blumea 7 (1953) 456-457 (Lam & Husson).

— Blumea 9 (1958) 271 (Lam).

Protium. Rec. Trav. Bot. Néerl. 39 (1942) 435-440 (Swart). -- Blumea 7 (1952) 160 (Leenhouts).

Campanulaceae. Ident. Lists no 11 (1961) (Moeliono & Tuvn).

Capparaceae. Ident.Lists no 7 (1960) (Jacobs).

Capparis. Blumea 12 (1965) 534-539 (Jacobs). Crateva. Ident.Lists no 21 (1964) (Jacobs). Stixis. Blumea 12 (1963) 12 (Jacobs).

#### Caprifoliaceae

Viburnum. Reinwardtia 1 (1951) 167-169 (Kern).

Celastraceae (incl. Hippocrateaceae). Ident.Lists no 24 (1965) (Ding Hou).

Bhesa. Blumea Suppl. 4 (1958) 152-153 (Ding Hou).

## Compositae

Adenostemma, Ageratum, Centratherum, Elephantopus, Ethulia, Eupatorium, Mikania, Pseudelephantopus, Rolandra, Struchium, Vernonia. Blumea 1 (1935) 520-536 (Koster). Bidens. Field Mus. Nat. Hist. Bot. ser. 16, pt 2 (1937) 649-692 (Sherff).

Connaraceae. Ident.Lists no 3 (1959) (Leenhouts).

Convolvulaceae. Blumea 5 (1943) 398-411 (van Ooststroom).

Erycibe. Ident.Lists no 13 (1961) (Hoogland). Evolvulus. S. J. van Ooststroom. A monograph of the genus Evolvulus. Thesis. Utrecht (1934) 247-262.

#### Cornaceae

Mastixia. Blumea 1 (1934) 70-71 (Danser).

Corsiaceae. Webbia 27 (1972) 254 (van Royen).

Cyperaceae (Thailand). Reinwardtia 6 (1962) 80-83.154 (Kern).

Cyperus. Ident.Lists no 15 (1961) (Kern).

Fimbristylis. Ident.Lists no 2 (1958) (Kern).

Scleria. Blumea 11 (1961) 212-216 (Kern). Various. Blumea 9 (1958) 235 (Kern). Various. Ident.Lists no 6 (1959) (Kern).

Various. Blumea 16 (1960) 649 (Kern).

Daphniphyllaceae. Taiwania no 12 (1966) 224-234 (Tseng-Chieng Huang).

#### Dilleniaceae

Dillenia. Blumea 7 (1952) 137-142 (Hoogland). Tetracera. Ident.Lists no 12 (1961) (Hoogland).

#### Ebenaceae

Diospyros (& Maba). Bull. Jard. Bot. Btzg III, 15 (1941) 468-486 (Bakhuizen van den Brink Sr).

#### Ericaceae

Diplycosia. Reinwardtia 4 (1957) 158-161 (Sleumer). Gaultheria. Reinwardtia 4 (1957) 185-188 (Sleumer).

#### Eriocaulaceae

Eriocaulon (New Guinea). Nova Guinea. n.s. 10 (1959) 44 (van Royen).

Erythroxylaceae. Ident.Lists no 1 (1958) (Pavens).

## Euphorbiaceae

Endospermum. Ident.Lists no 36 (1970) (Schaeffer). Galearia. Kew Bull. 26 (1971) 163-165 (Forman).

Fagaceae. Ident.Lists 41 (1971) (Soepadmo).

Castanopsis. Reinwardtia 7 (1968) 405-409 (Soepadmo). Ouercus. Gard. Bull. Sing. 22 (1968) 416-417 (Soepadmo).

## Gentianaceae

Gentiana (New Guinea). Nova Guinea. Bot. no 17 (1964) 414-415 (van Royen).

Geraniaceae. Ident.Lists no 23 (1964) (Carolin).

## Gramineae

Panicoideae (New Guinea). J.Arn.Arb. 29 (1948) 387-392 (Reeder).

## Guttiferae

Cratoxylum. Ident.Lists no 31 (1967) (Gogelein). Hypericum. Ident.Lists (in press) (Robson).

Haloragaceae. Ident.Lists no 30 (1967) (van der Meijden & Caspers).

Illiciaceae. Sargentia 7 (1947) 211-218 (A.C.Smith).

Juglandaceae. Ident.Lists no 10 (1960) (Jacobs).

#### Lecythidaceae

Planchonia. Bull.Bot.Surv.India 7 (1965) 186-187 (Kuswata).

#### Leguminosae

Aeschynomene. Reinwardtia 5 (1959) 34-35 (Rudd). Crotalaria. Reinwardtia 6 (1962) 218-221 (de Munk). Cynometra. Ident.Lists no 38 (1970) (Knaap-van Meeuwen). Desmodium. Reinwardtia 6 (1962) 267-273 (Knaap-van Meeuwen). Hardwickia. Ident.Lists no 38 (1970) (Knaap-van Meeuwen). Kingiodendron. Ident.Lists no 38 (1970) (Knaap-van Meeuwen). Maniltoa. Ident.Lists no 38 (1970) (Knaap-van Meeuwen). Ormosia. Reinwardtia 6 (1962) 237-238 (Knaap-van Meeuwen). Saraca. Ident.Lists no 32 (1967) (Zuyderhoudt). Sindora. Ident.Lists no 40 (1971, dating from 1941) (de Wit).

Loganiaceae. Ident.Lists no 18 (1962) (Leenhouts).

Loranthaceae (Indo-China & Siam). Bull.Jard.Bot.Btzg III, 16 (1938) 59-61 (Danser).

(Neth.Indies & Malaya). Bull.Jard.Bot.Btzg III, 11 (1931) 499-509 (Danser).

(Philippines). Philip. J.Sc. 58 (1935) 144-146 (Danser).

(Pacific). Bull.Jard.Bot.Btzg III, 14 (1936) 96-97 (Danser).

Korthalsella (suppl.). Bull.Jard.Bot.Btzg III, 14 (1937) 156-158 (Danser).

-- (suppl.). Bull.Jard.Bot.Btzg III, 16 (1940) 341 (Danser).

Viscum (India). Blumea 4 (1941) 315-318 (Danser).

Malvaceae. Ident.Lists no 25 (1966) (van Borssum Waalkes).

Melastomataceae. Rec. Trav. Bot. Néerl. 40 (1943) 368-374 (Bakhuizen van den Brink Jr).

#### Meliaceae

Lansium (Aglaia sect. Lansium). Reinwardtia 7 (1966) 265-266 (Kostermans).

#### Moraceae

Ficus (Malesia). Ident.Lists no 37 (1970) (Corner).
— (Asia). Ident.Lists no 43 (1972) (Corner).

Myristicaceae (Malaya). Gard.Bull.Sing. 16 (1958) 451-466 (Sinclair).

Gymnacranthera. Gard.Bull.Sing. 17 (1958) 115-119 (Sinclair).

Knema. Gard.Bull.Sing. 18 (1961) 309-327 (Sinclair). Myristica. Gard.Bull.Sing. 23 (1968) 489-511 (Sinclair).

Myrsinaceae (East Asia). Philip.J.Sc. 73 (1940) 207-243 (Walker).

#### Myrtaceae

Eugenia (Malaya). Gard.Bull.Str.Settl. 12 (1949) 274-288 (Henderson).

Melaleuca (leucadendron et al.). Contr. Queensl. Herb. 1 (1968) 75-79 (Blake).

Najadaceae. Ident.Lists no 14 (1961) (de Wilde).

Nyctaginaceae. Ident.Lists no 22 (1964) (Stemmerik).

Nymphaeaceae. Nova Guinea, Bot. no 8 (1962) 124 (van Royen). Ochnaceae. Ident. Lists no 34 (1968) (Kanis).

#### Oleaceae

Osmanthus. Notes R.Bot.Gard.Edinb. 22 (1958) 538-540 (Green).

#### Orchidaceae

Apostasioideae. Blumea 17 (1969) 349-350 (de Vogel).

Oxalidaceac. Ident.Lists no 33 (1968) (Voldkamp).

#### Palmae

Calamus (Malaya). Gard.Bull.Str.Settl. 15 (1956) 259-262 (Furtado).

Daemonorops p.p. (Malaya). Gard.Bull.Str.Settl. 8 (1935) 366-367 (Furtado).

Daemonorops & Cymbospathae (Malaya). Gard.Bull.Str.Settl. 9 (1937) 180 (Furtado).

Licuala (Malaya). Gard. Bull. Str. Settl. 11 (1940) 72-73 (Furtado).

Podocarpaceae. J.Arn.Arb. 50 (1969) 360-369 (de Laubenfels).
Podocarpus. Blumea 4 (1941) 472-476 (Wasscher).

## Polygalaceae

Polygala (herbaceous spp.). Ident.Lists no 26 (1966) (Adema).

Portulacaceae. Ident.Lists no 35 (1969) (Geesink).

Primulaceae. Ident.Lists no 16 (1962) (Bentvelzen).

#### Proteaceae

Helicia, Heliciopsis, Blumea 8 (1955) 86-91 (Sleumer).

Ranunculaceae. Bibl. Bot. Heft 124 (1958) 102-105 (Eichler).

Rhizophoraceae. Ident. Lists no 4 (1959) (Ding Hou).

Bruguiera. Nova Guinea. n.s. 8 (1957) 169-170 (Ding Hou).

#### Rosaceae

Fragaria. Blumea 16 (1968) 354 (Kalkman).
Parinari. Reinwardtia 7 (1965) 185-186 (Kostermans).
Potentilla (& Duchesnea). Blumea 16 (1968) 353-354

(Kalkman).

Prunus (Pygeum). Blumea 13 (1965) 108-112 (Kalkman).

#### Rubiaceae

Acranthera. J.Arn.Arb. 28 (1947) 307-308 (Bremekamp). Gaertnera. Ident.Lists no 29 (1967) (van Beusekom).

Ixora. Bull. Jard. Bot. Btzg III. 14 (1937) 362-367 (Bremekamp).

Pleiocarpidia. Rec. Trav. Bot. Néerl. 37 (1940) 235-236 (Bremekamp).

Pomazota. J. Arn. Arb. 28 (1947) 203 (Bremekamp).

Praravinia (Borneo & Celebes). Rec. Trav. Bot. Néerl. 37 (1940) 277-278 (Bremekamp).

Streblosa. J. Arn. Arb. 28 (1947) 184-185 (Bremekamp).

Tribe Vangueriae. Bull. Jard. Bot. Brux. 11 (1928) 335-347 (Robyns).

Wendlandia, Bull. Jard. Bot. Btzg III. 14 (1936) 42-45 (Cowan).

## Rutaceae

Flindersia. J.Arn.Arb. 50 (1969) 524-526 (Hartley). Lunasia. J.Arn.Arb. 48 (1967) 474-475 (Hartley). Zanthoxvlum. J. Arn. Arb. 47 (1966) 217-221 (Hartley).

## Sabiaceae

Meliosma. Ident. Lists (to be published) (van Beusekom). Sabia. Sargentia 3 (1943) 69-72 (L.Chen).

## Santalaceae

Dendromyza & Cladomyza. Nova Guinea, n.s. 6 (1955) 277 (Danser).

Osyrideae. Nova Guinea, n.s. 4 (1940) 149 (Danser). Phacellaria. Blumea 3 (1939) 234-235 (Danser).

## Sapindaceae

Pometia. Reinwardtia 6 (1962) 142-144 (Jacobs).

#### Sapotaceae

Burckella. Blumea 6 (1952) 593 (Lam & van Royen).
Chrysophyllum. Blumea 9 (1958) 70-71 (Vink).
Diploknema. Blumea 9 (1958) 87 (van Royen).
Ganua. Blumea 7 (1953) 399-400 (van den Assem).
Krausella. Blumea 8 (1957) 451 (Herrmann-Erlee & Lam).
Leptostylis. Nova Guinea, n.s. 8 (1957) 98 (Vink).
Manilkara. Blumea 7 (1953) 411-412 (van Royen).
Payena. Blumea 9 (1958) 133-135 (A.C.van Bruggen).
Planchonella. Blumea 8 (1957) 434-437 (van Royen).
Pouteria. Blumea 8 (1957) 503-504 (Herrmann-Erlee & van Royen).
Pycnandra. Nova Guinea, n.s. 8 (1957) 124 (Vink).
Xantolis (SE. Asia). Blumea 8 (1957) 233 (van Royen).

Sarcospermataceae. Blumea 7 (1952) 153 (Lam & van Royen). Schisandraceae. Sargentia 7 (1947) 211-218 (A.C.Smith).

## Scrophulariaceae

Limnophila. Kew Bull. 24 (1970) 163-168 (Philcox). Lindernia. Kew Bull. 22 (1968) 64-70 (Philcox).

Simaroubaceae. Ident.Lists no 17 (1962) (Nooteboom).

Staphyleaceae. Ident.Lists no 8 (1960) (van der Linden).

## Sterculiaceae

Heritiera. Reinwardtia 4 (1958) 537-539 (Kostermans).

Styracaceae. Bull.Jard.Bot.Btzg III, 12 (1932) 269-271 (van Steenis).

Taccaceae. Ident.Lists no 44 (1972) (Drenth).

## Theaceae

Schima. Reinwardtia 2 (1952) 180-181 (Bloembergen). Thymelaeaccae. Ident.Lists no 9 (1960) (Ding Hou).

## Tiliaceae

Brownlowia. Commun. For. Res. Inst. Bogor 73 (1961) 32 (Kostermans).

Pentace. Commun. For. Res. Inst. Bogor 87 (1964) 45-47 (Kostermans).

Schoutenia. Reinwardtia 7 (1965) 122-123 (Roekmowati-Hartono).

## Trimeniaceae

Trimenia. Blumea 19 (1971) 15 (Rodenburg).

Triuridaceae. Pflanzenreich Heft 104 (1938) 80-82 (Giessen). Umbelliferae. Blumea 2 (1936) 210-215 (Buwalda).

#### Urticaceae

Dendrocnide. Gard. Bull. Sing. 25 (1969) 97-104 (Chew Wee-Lek).

Elatostema. Fedde. Repert. Beih. 83<sup>2</sup> (1936) 160-169 (Schröter & Winkler). Leucosyke. Bot. Jahrb. 73 (1943) 252-257 (Unruh).

Nothocnide. Gard. Bull. Sing. 24 (1969) 369-373 (Chew Wee-

Procris. Fedde. Repert. 45 (1938) 292-298 (Schröter).

#### Verbenaceae

Congea. Gard. Bull. Sing. 21 (1966) 313-314 (Munir Ahmad Abid).

Sphenodesme. Gard. Bull. Sing. 21 (1966) 375-378 (Munir Ahmad Abid).

Symphorema. Gard. Bull. Sing. '22 (1967) 171 (Munir Ahmad Abid).

#### Violaceae

Rinorea. Ident.Lists no 27 (1966) (Jacobs). Viola, Ident. Lists no 28 (1967) (Moore).

## 2. Personal collection lists or field books

A.G.L.Adelbert -- 1-520 -- Java -- Identified.

C.A. Backer -- Java. Madura. Kangean Is. -- Rather complete.

M.M.J.van Balgooy -- 1-1151 -- New Guinea -- Identified.

H.H.Bartlett -- 6374-8746 -- North Sumatra -- Identified. rather incomplete.

- O.Beccari, P.B. (piante bornensi) series -- 1-4070 --Sarawak -- Largely derived from literature, fairly complete.
- O.Beccari, P.P. (piante papuana) series -- 1-986 -- Mt Arfak in NW. New Guinea -- Partly derived from literature. partly identified. almost complete.
- O.Beccari, P.S. (piante sumatrana) series -- 1-980 -- Central Sumatra -- Partly derived from literature, partly identified. fairly complete.
- C.F.van Beusekom -- 1-1364 -- Thailand -- Identified.
- S. Bloembergen -- 1-1010 -- Thailand (Kwai Noi River Basin Exp.) -- Identified.

- S.Bloembergen -- 3000-4800 -- Lesser Sunda Is., Central West Celebes, Sula Is. -- Identified, rather complete.
- L.J.Brass -- 500-1564, 2550-14130, 18151-20362, 21611-25166, 25361-26099, 27000-28942, 29101-32702 -- New Guinea -- Partly from literature, largely identified, received from Miss Perry, Arnold Arboretum.
- B.Britton -- 1-500 -- Philippines -- Complete, identified.
- W.M.A.Brooke -- 8000-10919 -- Sarawak -- Identified.
- C.E.Carr -- 11001-16533, 16683-17231 -- East New Guinea -- Complete, almost all identified, small part from literature; beyond 16683 the list is very incomplete.
- R.Cinatti -- 1-380 -- Portuguese Timor -- Complete and identified.
- M.S.Clemens -- 26000-30448, 31546-35772, 40000-40360 -- Kinabalu, North Borneo -- Identified, but very incomplete and not kept up to date.
- M.S.Clemens -- 1-7000, 10085-12500, 40620-41950 -- New Guinea -- Very incomplete indeed, received from Miss Perry, Arnold Arboretum.
- L.A.Craven & R.Schodde -- 1-543, 1194-1374 -- New Guinea -- Incomplete.
- H.Cuming -- 430-2153 -- Philippines -- From S. Vidal, Phane-rogamae cumingianae philippinarum. Manila 1885, pp. 3-83.
- C.Curtis -- 1-4000 -- Malaya -- Incomplete, derived from literature.
- P.J.Darbyshire -- 30-1250 -- New Guinea -- Identified.
- J.Elbert -- 530-4700 -- East Java, Lombok, a few from Celebes -- A very incomplete list, not kept up to date.
- F.H.Endert -- 1400-5400 -- Central East Borneo -- Identified, fairly complete.
- P.J. Eyma -- 300-5467 -- Celebes, Ceram, New Guinea -- Identified but names very incompletely filled.
- H.O.Forbes -- 1-4160 -- Java, South Sumatra, Timor -- Largely from literature, fairly complete.
- H.O.Forbes, P.P. series -- 1-956 -- East New Guinea -- Largely derived from literature, fairly complete.
- <u>H.P.Fuchs</u> -- 21000-21682 -- Borneo -- Identified.

- J.D.Haviland (partly Haviland & Hose, but consecutively numbered, originally with letter combinations) -- 1-3760
  -- Sarawak -- Fairly complete, largely derived from literature.
- E.Hennipman -- 3001-4013 -- Thailand -- Identified.
- P.C. Heyligers -- 1029-1400 -- New Guinea -- Identified.
- C.Holstvoogd -- 1-880 -- Java -- Identified.
- A.Hoogerwerf -- Java, South New Guinea (Kurik), Bawean, Java -- Complete and identified. Unfortunately all collections start with number 1.
- R.D.Hoogland -- 3169-6280, 6411-6442, 6587-8611, 8825-10171, 10337-11161 -- New Guinea -- Identified, incomplete.
- Ch. Hose -- 1-829 -- Sarawak, Brunei, a few from Celebes -- Partly from literature, but mostly checked.

  See also Haviland.
- Ding Hou -- 115-869 -- Sarawak -- Identified.
- R. Hullett -- 1-900 -- Malaya -- Derived from literature, very incomplete.
- O.Jaag -- 1-1960 -- Lesser Sunda Is. -- Almost complete, from identifications.
- M. Jacobs -- 4301-4688, 4701-4992, 5001-5792, 7001-8020, 8021-8515 -- Central Sumatra, East Java, Borneo, Luzon, South Sumatra -- Complete, private field books.
- C.Kalkman -- 4001-5570 -- New Guinea (4601-5324 Doma Peaks)
  -- Identified.
- W.Kaudern -- 1-530 -- Celebes -- Identified, but there are gaps.
- King's Coll. -- 1-11000 -- Malaya -- Derived from literature, rather complete.
- S.H.Koorders -- 1-c.40000 -- Java, Sabang, NE. Celebes -- Complete.
- C.W.Kooy -- 1-700 -- Timor -- Identified, complete.
- A.J.G.H.Kostermans -- 1-22226 -- Borneo, Sumatra, New Guinea, Morotai, Java, Bali, Flores -- Identified. The list is very incomplete and shows considerable gaps; there are also some field books.
- H.Kunstler -- See King's Coll.
- H.J.Lam -- 401-8011 -- West New Guinea, Sangihe & Talaud Is.,
  Madagascar and South Africa -- Identified.

- W.J.Lutjeharms -- 3591-5433 -- largely from Enggano I. (South Sumatra) -- Very incomplete, but absent numbers probably relate to separate Fungi collection; identified, not kept up to date.
- A.C.Maingay -- 1-3500 -- Malaya -- From literature, very incomplete save for the first 1300.
- H.S.McKee -- 1000-5682, 7723-8239, 9748-10120 -- Australia, New Caledonia, New Guinea -- Identified.
- J.Metzner -- 1-270 -- Timor -- Identified.
- W.Meijer -- 3000-7700 -- Central Sumatra -- Identified.
- J.P.van Niel -- 3375-4415 -- Brunei -- Identified.
- H.P.Nooteboom -- 630-2340 -- Thailand, Malaya, Borneo -- Identified.
- S.J.van Ooststroom -- 12473-14600 -- Java -- Identified.
- L.Otto-Surbeck -- 1-400 -- North Sumatra -- Identified.
- K.Paymans -- 197-415 -- New Guinea -- Identified, incomplete.
- R. Pullen -- 117-4250, 5000-7528 -- New Guinea -- Identified.
- Rahmat si Boeea -- 25-940, 1600-6340, 6400-11425 -- North Sumatra -- Identified, but very incomplete.
- R.G.Robbins -- 1-3400 -- New Guinea, some from Philippines -- Identified. but very incomplete list.
- P.van Royen -- 3000-5571 -- New Guinea -- Identified.
- P.van Royen & H.Sleumer -- 5625-8260 -- New Guinea -- Identified.
- J.V.Santos -- 3985-6215 -- Luzon -- Identified.
- E.Schmutz -- 1-2450 -- Flores, some in Timor -- Identified, complete.
- R.Schodde -- 1170-3580 -- New Guinea -- Identified.
- R.Schodde & L.A.Craven -- 3581-5090 -- New Guinea -- Identified.
- O.Scortechini -- 1-2200 -- Malaya -- Derived from literature, incomplete.
- H. Sleumer -- 4125-4560 -- New Guinea -- Identified.
- C.G.G.J.van Steenis -- 1-12940, 17329-20990 -- Anambas & Natura Is., Java, North Sumatra, South Sumatra, Bali, Portuguese Timor, Luzon, Celebes, Taiwan -- Complete, identified.

- H. Surbeck -- 1-1276 -- North Sumatra -- Identified.
- J.A.J. Verheyen -- 1-2912 -- Flores -- Identified, incomplete.
- W. Vink -- 16001-16583, 16800-17642 -- New Guinea -- Identified.
- C.N.A.de Voogd -- 1-2873 -- South Sumatra, Central & East Java, Lesser Sunda Is. -- Identified, almost complete.
- M.E.Walsh -- 1-588 -- Indonesian Timor -- Identified, fairly complete.
- L.Wray Jr -- 1-4300 -- Malaya -- Rather incomplete, derived from literature.
- H.Zollinger -- 1-4000 -- Java, Sumatra, Lesser Sunda Is. -- Incomplete, mostly derived from literature.

## 3. Serial collection lists \*)

- ANU (Australian National University, Canberra) -- 350-7800
  -- New Guinea -- Identified, but many serious gaps and distinctly incomplete.
- b.b. (Bossen Buitengewesten, islands outside Java, Forestry Research Institute, Bogor) -- 1-35000 -- Sumatra, Borneo, Celebes, Lesser Sunda Is., Moluccas, New Guinea -- Identified.
- Brunei Forestry Service -- 1-7900 -- Brunei (Borneo) -- Identified, the early numbers up to 3000 very incompletely filled.
- B.S.I.P. (Honiara, Solomons) -- 500-19280 -- Identified.
- B.W. (Boswezen, Neth. New Guinea, Manokwari) -- 1-15750 -- New Guinea -- Identified.
- N.G.F. (New Guinea Forests, Botany Division, Lae) -- 1-1000 (incomplete), 1001-2000 (fairly complete), 2001-2112, 2400-34023, 35000-36232, 36700-41100, 41500-42400, 42501-43626, 44001-44500, 45501-46136, 46501-46675, 47001-47099, 47501-48411, 50101-50200 -- East New Guinea, New Britain, Bougainville.
- Phytochemical Survey New Guinea (coll. T.G. Hartley) -- 9601-13305 -- New Guinea -- Identified, rather complete.
- R.S.N.B. (Royal Society Exp. Kinabalu) -- 1-3008, 5725-8464
  -- North Borneo -- Identified, the higher series very incomplete.
- \*) See for the abbreviations: Jacobs, Fl.Mal.Bull. no 22 (1968) 1571-1578.

- Sandakan -- A-series 1-4954, later collection 15000-71100 -- North Borneo -- Identified, on the whole rather complete.
- Sarawak Forest Institute, Kuching -- 1-30438 -- Sarawak -- Identified, unfortunately in many places very incomplete.

C.G.G.J. van Steenis.