

I. BRIEF SKETCH OF THE TJIBODAS MOUNTAIN GARDEN

by

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It is remarkable that, though on several occasions rather full accounts have been given of the history and activities of the Botanic Gardens at Bogor (Buitenzorg), "Kebun Raya Indonesia", up till now nothing comparable has been published on its Mountain Garden Tjibodas.

This is the more striking as the establishment of a guest-house annex biological laboratory in the Mountain Gardens by Melchior Treub, in 1890, which gave Tjibodas a definite claim to be recognized as a scientific institution, has sometimes been declared to be one of the greatest achievements in Treub's period of office.

Everybody who has visited Tjibodas - and its visitors number many thousands - with its magnificent lay-out on the edge of the primary rainforest ranging to the lofty summits of the twin-volcano Gedeh-Pangrango has been impressed with the admirable site. Professional and amateur scientists as well as tourists the world over share the view that Tjibodas is a pearl in the crown of Indonesia.

Practically none of the very numerous scientific visitors of the Treub Laboratory of the K.R.I. (Visitors' Laboratory) at Bogor has failed to visit Tjibodas, and many of them did not confine their visit to excursions to the rain-forest, the waterfalls, the hot wells, the summits, the crater area, the eraceous ridge forest, and the Anaphalis valleys. They often made special collections and studies *in situ* in their fields of interest, and not seldom performed actual, prolonged laboratory research at Tjibodas. Tjibodas has thus played a vital role in the development of the natural sciences in tropical East Asia.

In this respect the numerous data assembled in volume 45 of the "Annales du Jardin Botanique de Buitenzorg", which refer to the research done at the Foreigners' Laboratory at Bogor by scientific visitors during half a century, are partly representative for Tjibodas. However, many specialized subjects relating to Tjibodas were not incorporated in this memorial volume, e.g. the work accomplished by the staff-members. Still, nevertheless, these studies are of eminent importance for the biological

knowledge of the plant life on tropical mountains.

At present, now the rehabilitation of Tjibodas, through the building of a new visitors' laboratory (see the frontispiece) is completed, the moment seems appropriate to write an essay on its history, assets, and possibilities, preliminary to a more detailed account which should be composed at some future date.

An essay of that nature ought to include an extensive report on, and possibly some survey of the results of, the numerous long-range experiments, carried out at Tjibodas in relation to agriculture, arboriculture, and horticulture. Many details are to be found in the published official records (17) and in several other publications and are, at present, of limited use being unordered and hard to find.

We have limited ourselves here to botanical research and, being not on the spot, we had to rely on comparatively few printed sources. We found it useful to add a bibliography selected from our files and from some existing bibliographies. However, a great amount of details not easily traced, is hidden in scattered literature.

But even from the present bibliography it is clear, that Tjibodas has given tremendous impetus to scientific botanical work in the tropics. Its facilities, its cool climate, the riches of untouched primary forest, and last not least the unique body of previous work done by prominent botanists in all fields of botany and laid down in a wealth of technical papers pre-destined it to one of the most attractive biological field stations in the tropics.

At this moment we have feelings of deep gratitude to the Indonesian Government for having acknowledged the eminent importance of this branch of the Gardens for both national and international biological research work in giving the opportunity to rebuild the Laboratory in a better state than it was ever before.

We know that both nationally and internationally the leading botanists feel deeply indebted to the present Director of Kebun Raya Indonesia, Prof. Ir. Kusnoto, who got things done and who made real what was the ardent wish of all friends of the Gardens.

(1) The present state of Tjibodas

The Mountain Garden is situated on the north-western slope of the twin volcano Mt Pangrango-Gedeh, in West Java.

The area belongs to the everwet tropics with an average annual rainfall of about 1300 inches. The average temperature is 18 centigrades.

The soil consists of weathered lava with alluvial deposits from ancient mudstreams (lahars). In many places it is rich in humus.

The base of the Gardens covering ca 80 ha (200 acres), is situated at about 1425 m altitude and can be reached by car

over an asphalt road via a former tea-plantation. The old path, starting at Tjipanas is no longer the main entrance. The distance from Djakarta is about 100 km, from Bogor 40 km. From the garage a 10-minute climb over a metalled forest path leads to the upper part of the garden where on the forest border the 2-storeyed curators house annex office (frontispiece of F.M. Bull. no 9) has been built.

The garden is laid out on a broad ridge between two streams, Tjiwalen and Tjibodas, the last and eastern one of which is gorge-like. It comprises big lawns with single trees and tree groups, with a high percentage of conifers, on undulating sloping country, through which the metalled paths wind their way. In the lower part is an artificial lake, dug 1895-1897, enlarged 1925. There is also a small stand where refreshments can be had.

On the big ridge beyond an old magnificent alley of densely planted Araucaria bidwillii (planted 1866) an appreciable area is planted with Eucalypts. Above these, near the look-out over the Krawang plains is the camphor garden with numerous Japanese imports of Ph.Fr. von Siebold. Besides, the Arboretum contains quite some S.American plants imported by J.K.Hasskarl and Australian plants imported by F. von Mueller. There are many beds with annual and perennial ornamentals. Some remarkable plants are a truly impressive grass-tree (*Xanthorrhoea*), splendid specimens of Montezuma pine (well over 150 ft), Mo-Nabs cypress (200 ft), and tall Eucalypts (over 200 ft). All plants are numbered and labelled.

Near the Curator's house where office is held there are several greenhouses.

The site of the old laboratory is now planted with succulents.

The new laboratory is built in the neighbourhood of the Eucalypts, at a few minutes climb from the Curator's house near the meteorological instruments (installed 1900). Indonesian personnel is housed with their families in modern brick buildings on the edge of the Gardens.

Adjoining the Gardens, above it, is a big section of mixed primary rain forest reaching from the Gardens at 1450 m altitude to the summits of Mts Gedeh and Pangrango at resp. 2958 and 3018 m. This nature reserve belongs to the Garden. It is interspersed by several forest trails. A map of this area, indicating the trails and also the numbered trees facilitates rapid orientation.

Variation is brought into this tall, gloomy, epiphyte-loaded forest through some foaming streams and perpendicular rock-faces, a big reed swamp, partly with a sphagnum peat, at Tjibeureum and behind this a perpendicular moss-covered rock-face over which 3 large waterfalls, 40-50 m high, rush down, at ca 1625 m altitude. Here is also in an underground cavity a small pool below an ancient lava-stream inhabited by bats.

At ca 1800 m in a more E-direction there is a place called "Huis ten Bosch" said to be the site of a former hunting hut; of the latter no trace is extant.

Above Tjibeureum at ca 2150 m several steaming hot wells and some morasts are found. At 2400 m, on the forested saddle between the twin peaks there is a hut at a place called Kandangbadak where visitors can stay overnight. Here are also meteorological instruments, installed 1911. East is the semi-circular wall of the active crater of Mt Gedeh proper with behind it an older parallel ridge, Mt Gemuruh; between the ridges is a little streamlet winding through the ca 2 km long open Anaphalis (Edelweiss) valley. On the summit of Gemuruh ridge is a cemented cellar dating back to ca 1840 when it was built for recuperating ill silk-worms; it was recommended by P. Diard, Inspector of Silkworm cultivation 1833-1841, but it did not suit the purpose. At present this is the aim of annual pilgrimage of the Sundanese.

Onwards of 1832 Mt Gedeh had for about 20 years a period of volcanic activity, culminating in the eruptions of 1840(14).

After 1866, another distinct eruptive period started about 1941 and there are still many signs of activity. This latest eruption destroyed the local laboratory at Lebaksaät which was situated just on the edge of the stricken area.

The conical peak of the extinct volcano, Mt Pangrango, is covered by crooked mossy forest, and here and there by light-green Gleichenia-thickets which conceal earth- and stone-slides. The top of Pangrango which is hollow, bears an open miniature Anaphalis valley. Here is a small hut which Dr W.M. Docters van Leeuwen had built and used for shelter when making studies of the summit vegetation. Since 1911 there are semi-automatic meteorological instruments on the summit which are controlled weekly.

(2). Main events in the chronology

Good things grow slowly.

A remarkable parallel exists between the development of the Botanic Gardens at Bogor and those of Tjibodas, both being in the initial stage connected with the Palace gardens of the Governor General, both being due to the energy of J.E. Teysmann and both owing their present status and admirable scientific tradition to the efforts of Melchior Treub.

Originally there was a Palace Garden at Tjipanas belonging to the country-residence of the Governor General at ca 1100 m altitude and at about 6 km distance from Tjibodas; after 1826 this garden was tended by the personnel of the Buitenzorg Botanic Gardens.

Between the years 1830 and 1839, according to Treub (§ 3 Sources, no 1), Teysmann planted several fruit trees at Tji-

panas. Onwards of 1838 he also transferred other plants to Tjipanas which were important botanically and could not be grown in the tropical garden at Bogor. This is typical of Teysmann who combined an intense scientific interest with a very practical attitude. Apparently he had in view to make experiments on the acclimatisation of plants. July 1839 he laid out another garden for the same aim on the flat ground below the Tjibeureum falls, at ca 1700 m, covering over one ha (2 "morgen") and in Nov.-Dec. 1839 another one on the summit of Mt Pangrango at 3000 m, covering originally 3 ha, extended to 7 ha in 1842. Aug. 1840 he laid out a fourth intermediate garden on the saddle between the peaks at Kandangbadak at 2400 m, covering 2 ha.

In the same year there was an eruption of Mt Gedeh and Hasskarl reported (7) that a section of forest was destroyed as far as the saddle.

Also between Tjipanas and Bogor Teysmann had a garden, thereby completing the whole series from the tropical lowland high up into the subalpine zone. These experiments are probably among the oldest of their kind made in the tropics. Though much has disappeared, remnants of Teysmann's gardens are still to be traced; at Tjibeureum a fine Conifer is still found, now incorporated in the forest canopy, and a few specimens of *Neomarica coerulea*. At Kandangbadak *Rumex alpinus* and some fine *Cupressus* are still thriving. Until recently there was, on summit of Mt Pangrango, a miniature bush-like beech (*Fagus silvatica*) planted 1840; also *Rubus fruticosus* vel aff. and two *Fragarias* still maintain themselves. The beech was destroyed by a local fire some years ago.

The laying-out of these gardens was severely criticized by F. Junghuhn (6) who deplored the local destruction of the vegetation. Hasskarl says (7) that the path to Pangrango summit was in a good condition in 1840 and that the ascent could be done on horse-back. In passing it may be remarked that the experiments with the fruit trees failed: in this wet area these trees grew very stunted and were rapidly overgrown by lichens. Huts were apparently built near the acclimatisation gardens; in 1854 v.d.Bor found a log-cabin on summit of Mt Pangrango (see bibl.).

In 1852 Teysmann received a living specimen (through the Leiden Botanical Gardens) of *Cinchona calisaya*, collected by Weddell. From this single specimen Teysmann could grow some cuttings which he transferred to the place where is now Tjibodas.

When in 1855 Hasskarl returned from his South American collecting tour with fresh *Cinchona* seed this was sown at Tjibodas and grown together with Teysmann's plants, and Hasskarl came officially in charge of this quinine plantation. Tjibodas then temporarily ceased to form part of the Botanic Gardens.

In 1856 Junghuhn was put in charge of the cinchona plantations. Save a few specimens the whole Tjibodas stock was gra-

dually transferred to the Priangan mountains above Bandung.

Some years later⁺ Tjibodas was officially returned to the administration of the Botanic Gardens and this was the actual start of the present Tjibodas.

In 1868 the botanical section of the Palace Gardens was definitely abandoned and the specimens were all transferred to Tjibodas, which transfer was accomplished by 1871, no less than 1300 species being represented! Tjibodas had then since 1870 its own European gardener, but in 1874 this man was dismissed and not replaced, the management being left to the Bogor staff, and Indonesian labour at Tjibodas itself. A period of 30 years followed during which Tjibodas had no manager of its own; several overseers were tried, but each worked there for a short period and with little success: in 1883 a gardener was appointed but died before he reached Tjibodas; from 1885-1888 there was A. Liefold; from 1888-1889 A. Bounin took his place; from 1889-1893 H.J. Lefèbre was in charge; from 1893-1897 H.W.L. Couperus was "temporary administrator"; from 1897-1899 J.W. Heijl. Then came Tj. A. Wouters who was in charge of Tjibodas till 1907 when he was sent temporarily to Merauke(S. New Guinea) to erect a branch of the Bogor Gardens. After two years he went on leave in 1909 to be replaced at Tjibodas in 1910, but he definitely left Tjibodas in 1911. During his absence L.C. Martens was temporarily employed, and in 1908 P. Holten, a retired captain, and the first half year of 1909 J.G. Droste. In Oct. 1909, W.W. Westerman was temporarily charged with the supervision till July 1910. He was replaced by a Mr Nieuwenhuis till in 1913 A. Schwarz was appointed, who remained in charge till 1921. The main reason of so many changes in personnel was their underpayment; almost all left for more remunerative posts.

The definite lay-out of the Gardens, still largely maintained till the present day, was mostly realized (according to Docters van Leeuwen (3)) through the care of Dr R.H.C.C. Scheffer, Director of the Bogor Gardens and his very able curator Mr H.J. Wigman, Teysmann's successor.

Treub, Scheffer's successor, gradually added to the equipment and extension and gave Tjibodas its definite scientific status.

In 1889 it was officially approved that the primary forest above the gardens, with a surface of 240 ha, reaching to the hot wells at 2100 m, were incorporated.

In connection with this Dr S.H. Koorders started, with Mr H.A. des Amorie van der Hoeven, in 1890, to collect, label and measure trees in this forest reserve; many of these trees are still alive. A renewed period of numbering and labelling followed in 1898-1903. Koorders published a list of these (12) and included them in his floras of Java and Tjibodas (8). In

⁺) The exact year is unknown to me (1856, 1860, or 1862).

the years 1921-1926 the then Curator Mr M.L.A. Bruggeman added other labelled trees and published a revised list (11). These data later served for a study by the later Director Prof. Dr. L.G.M. Baas Becking on the average life span of tropical trees in connection with the natural shift in forest composition.

In 1890 a house was built for an overseer.

In 1891 a spacious wooden resthouse annex laboratory was erected, containing 4 sleeping rooms, a laboratory, a reading room, a veranda (later closed for sitting room), a dining room, and a kitchen. The building materials for both were obtained from the old country residence of the Governor General which was replaced by a new one. Without extra funds Treub succeeded to build and furnish it through efforts of his Bogor personnel.

Since the eighties Treub had an idea for the composition of a "Flore de Buitenzorg" covering the native flora of Buitenzorg up to the summit of Mt Pangrango-Gedeh, thus including the Tjibodas flora. The publication of this Flora started in 1898 and various groups of Cryptogams were revised (Penzig: Myxomycetes; Raciborski: Pteridophyta; Schiffner: Hepaticae (partly); E. de Wildeman: Algae; Fleischer: Musci). Of the flowering plants only the Orchidaceae were revised by J.J. Smith (1905). See further 1918.

In 1897 and 1898 Dr J.G. Boerlage spent a month at Tjibodas for making a preliminary catalogue of the cultivated plants which was published in the annual report (15). In 1899 he was again there for a month to start work for the "Flore de Buitenzorg". His untimely death in 1900 prevented further preparations.

In 1901 a stand with view on the slope and lake was built.

About 1903 semi-automatic self-registering meteorological instruments were placed at Tjibodas; in 1914 a similar outfit was placed on top of Mt Pangrango.

In 1904 the resthouse at Kadangbadak was built, replacing former primitive huts..

In 1906 J.J. Smith spent a fortnight at Tjibodas to collect plants for a local herbarium. Important later contributors to this herbarium were Bruggeman, Docters van Leeuwen, van Woerden, etc.

Tjibodas has always had some specially schooled and talented Indonesian mantris on its staff. In Treub's time it was the famous Arsin. He was succeeded by Sapiin, who guided many biologists. In the thirties it was Rossidi and at present there is Nurta. They were often largely responsible for valuable collections.

In 1917 at the occasion of the centenary celebration of the Buitenzorg Botanic Gardens, scientists from all over the world and many Netherlands Plantation Companies contributed funds towards the erection of a new visitors' laboratory at Tjibodas of which the building started 1919; it was opened officially on Aug. 12th, 1920 (3). A library was presented by

the Director of Agriculture, Mr J. Sibinga Mulder.

In 1918 Koorders started the publication of a "Flora von Tjibodas", largely based on his "Exkursionsflora von Java" (8). After his death in 1919 it was further edited by Mrs A. Koorders-Schumacher.

In the same year Docters van Leeuwen, Director of the Gardens, started studies on the biology of animals and plants living in the summit zone of the mountains. This line of research he continued until his retirement in 1932 and the observations were published in an imposing work in 1933 (9).

In 1921 the curator Mr A. Schwarz was succeeded by Mr M. L.A. Bruggeman who remained till Nov. 1927, when he was transferred to Bogor. He greatly improved the local herbarium and, as said above, he made a new survey of the numbered trees, lianas, and shrubs of the forest reserve (11). He also composed an illustrated guide to the gardens (5).

In Nov. 1927 he was succeeded by Mr C.L.L.H. van Woerden who remained in charge till 1939. He established a large collection of succulents and added many sheets to the herbarium.

In 1924 the position of Tjibodas became very critical through the economic depression of the twenties; it was contemplated to close Tjibodas! Thanks to the influence of Dr J.C. Koningsberger, former Director of the Gardens, Prof. J. Cosquino de Bussy and Dr Jansen, a Planter's Committee collected funds from private sources to cope with this temporary difficulty.

I am almost sure that Dr F.A.F.C. Went, then professor of botany at Utrecht, foremost Dutch promoter of biological research in the tropics, had a hand in meeting this emergency.

In 1926 the primary forest area belonging to the Gardens was extended to the summits of Mt Pangrango-Gedeh covering now ± 1200 ha.

In 1929 a field laboratory was built at ca 2400 m specially for scientific purposes and furnished with a local library and herbarium: Lebaksaät. Hitherto scientists had always used the hut at Kadangbadak (the old garden place of Teysmann) which was ill-fitted for the purpose, partly through lack of equipment, partly through an increasing number of tourists.

In the same year a catalogue of the plants cultivated in the Hortus Bogoriensis, composed by the Curator P.W.M. Dakkus was published (16). In this catalogue the plants cultivated at Tjibodas were incorporated.

In 1930 a brick building adjoining the curator's house was built serving as office.

In 1939 Mr van Woerden was transferred to Bogor; he was succeeded at Tjibodas by Mr A.M. Neervoort, who remained there till early Dec. 1941 when he came under arms. He was released from the camp, Aug. 11th, 1942; keeping the status of a P.O.W., and was ordered to maintain office at Tjibodas where he served (under the guard of two Korean soldiers) until about 1944 when he was again transferred to the camp. During the war Prof. T.

Nakai was in charge of the Bogor Gardens and so also of Tjibodas. During this period Neervoort composed a new garden catalogue; the name of many living specimens was verified by Dr H.C.D. de Wit.

When the war was over the gardens and buildings were in excellent condition, but in the disturbed circumstances following the Japanese occupation unauthorized persons deliberately set on fire all buildings of the gardens, including the curator's house, the resthouse and the laboratory, July 7th, 1946. Through this deplorable action the new garden catalogue, all archives and files, the zoological exposition, the valuable guestbooks, the library, the local herbarium, and all instruments were entirely lost.

Late in the same year Neervoort was back at Tjibodas which was put under a small guard. Under very difficult circumstances he succeeded, in two years, to rehabilitate the garden, to make a new Garden herbarium, to build an admirable new curator's house and to convert the rather bad metalled road into a good one of asphalt. Neervoort had to stay several attacks of armed groups and had on some occasions to defend personally gardens and personnel; his stengun never left him. His tremendous energy and his brave behaviour to defend at the risk of his own life in this most difficult and unsettled period what is unanimously regarded as a unique cultural monument, is beyond praise.

During 1948 and 1949 the renewed volcanic activity of the Gedeh Crater was surveyed by volcanologists and by Mr A. Hoogerwerf, head of the Division of Nature Preservation of the Kebun Raya Indonesia.

In these years also a large-scale collection of Musci (3000 packets) in the forest section was organized by Neervoort. For the new local herbarium a big collection of Phanerogams was made by Dr S. Bloembergen.

Early in 1950 Neervoort deserved a much-needed long leave to Europe. He was replaced by a very promising youngish Swiss-born curator Mr Carl Schröter, a grandson of the famous former professor of botany of the same name at Zürich. Unfortunately Tjibodas would only very temporarily profit by the energetic and capable work of this enthusiastic man. Through unfortunate circumstances he was shot, Sept. 15th, 1950 during an attack of a gang of robbers (4).

In 1951 the wooden houses of the Indonesian personnel were rebuilt into brick houses.

March 1952 the building of the new laboratory was started; it was under the roof in June, and practically finished by Nov. 1st. Instruments for the laboratory were granted by Unesco in 1949, and had already arrived in 1950. A local herbarium was selected through the care of the Herbarium Bogoriense. Part of the library was supplied from the stock of the Central Library at Bogor. A score of institutions and

friends of Kebun Raya Indonesia from all over the world supplied books, serials and reprints as gifts on this occasion.

The new laboratory occupies a space of approximately 1000 sq.m. It is built somewhat higher on the ridge planted with Conifers and Eucalypts, close to the meteorological instruments. It is a combined laboratory and resthouse, comprising 4 work-rooms, 4 guest-rooms, a dining room, a conversation room, a darkroom, and rooms for library, zoological exposition, and herbarium. Besides there are a kitchen and store-rooms.

The laboratory thus affords a unique opportunity for continuing the tradition as it is well-adapted to receive both native and foreign scientists.

(3) Sources

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- (14) W.J.M. Taverne, Vulkaanstudies op Java. 1926, p.84-90, fig. 22-28.
- (15) J.G. Boerlage, Voorloopige lijst der planten gekweekt in den bergtuin van Tjibodas, behorende bij 's Lands Plantentuin (Verslag 's Lands Plantentuin over 1898. Batavia 1899, p.112-132).
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- (17) Verslagen omtrent de staat van 's Lands Plantentuin 1868-1932.
- (18) F.A.C. Went, Tjibodas, voorheen en thans (Vakblad v.Biologen 11, 1929, p.57-63).

(4) Tentative list of scientific visitors
and plant collectors
of Tjibodas and Mt Pangrango-Gedeh

The books, in which since about 1880 the visitors had entered their names, were destroyed in July 1946. A most interesting collection of memorial comments, rhymes, and anecdotes, some serious and many in a lighter vein, which many of these visitors composed, disappeared forever, from every point of view a very regrettable loss.

It seems worthwhile to make an attempt towards a new, more prosaic, less accurate, and less illustrative list of scientific visitors who are on record as having stayed at Tjibodas.

We are quite aware that this list is very incomplete, specially for the years posterior to 1935. Still, it shows very strikingly that many people from widely different nationalities have found it profitable to do some kind of research, either by collecting plants, by working on the anatomy, morphology, ecology, or physiology of plants and animals.

Many visitors have published papers based on their work at Tjibodas or have incorporated data obtained at Tjibodas in their studies. In this connection this list can be checked with the bibliography, which, however, is restricted to botanical papers.

We have refrained from giving comments on the nature of

the work and duration of the stay of the visitors. And we have started the chronicle before 1862 when Tjibodas actually became a divisional botanical garden, belonging to "'s Lands Plantentuin" at "Buitenzorg", now "Kebun Raya Indonesia", "Bogor", and we have included early visitors of Mt Pangrango-Gedeh.

1797. L.A.Deschamps, Surgeon-naturalist on the French exp.of "La Recherche". (Visited Mt Gedeh and Tjipanas.)
1818. Th.Horsfield, American Medical Doctor employed in Java.
1821. J.C.van Hasselt, Member of the "Natuurkundige Commissie". (Climbed Mt Gedeh-Pangrango.)
- H.Kuhl, Ditto.
1823. Dr C.L.Blume, Dir.Bot.Gard. Buitenzorg. (Mt Gedeh-Pangrango.)
- +1825. A.Zippel (Zipelius), Ass.Cur.Bot.Gard.Buitenzorg. (Mt Gedeh.)
1831. P.W.Korthals, Member of the "Natuurkundige Commissie". (climbed Mt Gedeh.)
- Ch.Millett, Official of the Engl.E.I.C. (Collected on Mt Gedeh.)
- S.Müller, Taxidermist of the "Natuurkundige Commissie". (With Korthals on Mt Gedeh.)
- 1831-69. J.E.Teysmann, Curator of the Bot.Gard.Buitenzorg.
1836. L.Horner, Surgeon-geologist of the "Natuurkundige Commissie". (Mt Gedeh-Pangrango.)
- P.W.Korthals, Botanist of the "Natuurkundige Commissie". (Mt Gedeh-Pangrango.)
- S.Müller, Taxidermist of the "Natuurkundige Commissie". (Mt Gedeh-Pangrango.)
- +1836 J.B.Spanoghe, Civil officer in the D.E.I. (Visited crater and summit of Mt Gedeh)
1839. Dr E.A.Forsten, Dutch zoologist. (Mt Pangrango.)
- F.W.Junghuhn, Member of the "Natuurkundige Commissie".
- A.W.Kinder (de Camarecq), Officer of the Civil Service in Java.
1842. E.Meijer, from Basel. (Mt Gedeh-Pangrango.)
- 1844-45, 1847. H.Zollinger, Swiss plant collector and botanist.
- +1845. Th.Lobb, Professional collector of Veitch. (Mt Pangrango.)

1846. H.J.Rink, Geologist of the Danish "Galathea" Exp.
+1848. H.van Gesker, Curator at Tjipanas.
1850. S.Binnendijk, Curator Bot.Gard.Buitenzorg.
1854. J.Motley, British engineer at Bandjermasin (Borneo).
1858. F.von Hochstetter, Geologist of the Austrian "Novara" Expedition.
---- F.Jagor, Traveller-ethnologist, Berlin.
---- A.Jelinek, Horticulturist of the Austrian "Novara" Expedition.
+1860. W.S.Kurz, Assistant Bot.Gardens Buitenzorg.
1861. Dr F.Junghuhn, Dir.Cinchona Cultivation.
---- A.R.Wallace, Collector-zoologist, England. (Climbed Mt Gedeh-Pangrango.)
---- M.E.Wichura, Botanist of the "Preussische Exp. nach Ostasien".
F.von Richthofen, Geologist and geographer of the same expedition.
1866. J.C.Ploem, Physician, Sindanglaja, Java.
1870-80. Dr R.H.C.C.Scheffer, Dir.Bot.Gardens, Buitenzorg.
1872,1874. O.Beccari, Traveller-botanist, Florence.
1875. C.E.O.Kuntze, Merchant-botanist, Germany.
1878. T.Ottolander, Planter, Java.
1879. Arsin, Indonesian employee Bot.Gard. Buitenzorg.
1880-1909. Prof.M.Treub, Director Bot.Gard. Buitenzorg.
1884. H.Graf zu Solms-Laubach, Prof.Bot., Göttingen.
1886. B.Balansa, Naturalist, Toulouse.
---- K.I.E.Ritter von Goebel, Ass.Prof. Marburg.
---- Dr H.Mayer, Botanist, Munich.
---- Dr O.Warburg, Botanist, Germany.
1888. Dr J.G.Boerlage, Curator Rijksherbarium, Leyden.
---- M.W.C.Weber, Prof.Zool., Amsterdam.
---- Mrs A.A.Weber-van Bosse, Phycologist, married to Prof. Weber.
1888-89. Dr W.O.A.Tschirch, Lecturer pharmacy, Berlin.
1888-90. Dr G.H.H.Karsten, Botanist, Rostock.
1889. Dr A.F.W.Schimper, Prof.Bot., Bonn.

1889. Dr E.Selenka, Prof.Zool., Erlangen.
- 1889-90. Dr C.E.Stahl, Prof.Bot., Jena
----- A.Strubell, Zoologist, Leipsic.
- 1889-91. H.A.des Amorie van der Hoeven, Ass. for foresttree investigation, Buitenzorg.
- 1889-93. H.(J.)Lefèbre, Curator Mountain Gard. Tjibodas.
- 1889-99. Dr J.M.Janse, Bot.Ass. Bot.Gard.Buitenzorg.
1890. P.de Monchy, Employee Herbarium Buitenzorg.
- 1890-91. Dr W.Burck, Ass.Dir.Bot.Gard.Buitenzorg.
----- J.Z.Kannegieter, Amsterdam.
----- F.A.F.C.Went, Teacher in Nat.Hist., The Hague.
- 1890-1903. Dr S.H.Koorders, Forest Officer, Buitenzorg.
1891. Dr C.W.S.Aurivillius, Uppsala.
----- J.van Breda de Haan, Leyden.
----- Forestier, Cochinchina.
----- G.Haberlandt, Prof.Bot., Graz.
----- Pa Idan, Indonesian plant collector Bot.Gard.Buitenzorg.
----- Verkerk Pistorius, Holland.
----- A.Ward, Oxford.
1892. Dr J.C.Costerus, botanist, Amsterdam.
----- Dr R.Semon, Prof.Zool., Jena.
1893. Col.Sir H.Collett, of the Bengal Army, India.
- 1893-94. Dr Th.Adensamer, Prof.Zool., Vienna.
----- Dr W.Figdor, Vienna.
----- Dr L.von Graff, Prof.Zool., Graz.
----- Dr G.Kraus, Prof.Bot., Halle.
----- Dr J.Wiesner, Prof.Bot., Vienna.
- 1893-97. H.W.L.Couperus, Curator, Tjibodas.
1894. R.W.Hullett, Schoolmaster, Singapore.
----- V.F.Schiffner, Temp.botanist Herbarium Buitenzorg.
----- Dr A.Willey, Zoologist, Oxford.
- 1894-95. J.G.Hallier(Hans), Botanist Herbarium Buitenzorg.
----- Dr J.Massart, Prof.Bot., Brussels.
----- V.A.Poulsen, Prof., Copenhagen.

1895. Dr E.Giltay, Teacher Agric.College(Bot.), Wageningen.
- 1895-96. Dr C.Holtermann, Prof.Bot., Berlin.
1896. D.G.Fairchild, Explorer Bur.Pl.Ind., Washington,DC.
- J.Z.Kannegieter, Berkenstein Mus., Rijsenburg (near Utrecht).
- H.Raap, Gardener Bot.Gard.Genoa.
- 1896-97. G.Clautriau, Pharmacist, Brussels.
- Dr A.J.Ewart, Botanist, Liverpool.
- O.Penzig, Mycologist Bot.Gard. Padua.
- 1896-1924. Sapiin, Indonesian collector Bot.Gard.Tjibodas.
1897. Hj.A.Möller, Bryologist, Lund.
1897. M.Raciborski, Botanist Bot.Gard.Buitenzorg.
- Miss M.C.Serrurier, Holland.
- 1897-98. Dr J.G.Boerlage, Ass.Dir.Bot.Gard.Buitenzorg.
- 1897-99. Dr J.P.Lotsy, of the Cinchona Experiment Stat., Tjin-Jiroean (W.Java).
1898. Dr H.Molisch, Prof.Bot., Graz.
- Dr E.O.A.Nyman, Botanist, Uppsala.
- C.J.Schröter, Prof.Bot., Zürich.
- 1898-99. M.Fleischer, German bryologist, Buitenzorg.
- S.Nawaschin, Prof.Bot., Kiew.
1899. Dr K.Giesenhausen, Curator Herb. Munich.
- P.E.O.W.Knuth, Prof.Bot., Kiel.
- M.Pernod, Student Techn.College, Zürich.
- Dr Richardson, U.S.A.
- 1899,1906. J.J.Smith, Ass.Bot.Gard.Buitenzorg.
- 1899-1911. Tj.A.Wouters, Overseer, Tjibodas.
1900. Dr A.Preyer, Berlin.
- 1900-01. E.Haeckel, Prof.Zool., Jena.
1901. F.R.R.Schlechter, Collector-botanist, Berlin.
- F.L.Stuhlmann, Zoologist, Germany.
- 1901 or 1902. G.L.A.Volkens, Prof.Bot., Berlin.
- 1901-02. E.P.Frans Dierckx, Teacher Fac.Sci., Namur.
1902. Dr L.Diels & E.Pritzel, Berlin.

- Prof.M.Büsgen, Dir.Bot.Inst.Hannöversch Münden.
- 1903. D.G.J.M.Bois, Prof.Agric., Paris.
- Ch.S.Sargent, Dir.Arnold Arboretum, Jamaica Plain, Mass.
- Dr J.C.Schoute, Botanist, Groningen.
- A.Usteri, Hortic.-botanist, Reinach (near Basel).
- Dr Th.Weever, Botanist, Amsterdam.
- 1903-04. Dr E.J.L.Heinricher, Prof.Bot., Innsbrück.
- B.P.G.Hochreutiner, Bot.Ass.Bot.Gard.Buitenzorg.
- Dr Hans Winkler, Botanist, Germany.
- 1903, 1908, 1911. Dr Th.Valeton, Head Herbarium Buitenzorg.
- 1904. Fr.Ramaley, Prof.Biol.Colorado Univ., Boulder (U.S.A.)
- Dr J.C.Willis, Dir.Bot.Gard.Peradenyia.
- 1904 or 1905. Dr W.Detmer, Prof.Bot., Jena.
- 1904-05. M.I.Golenkin, Prof., Moscow.
- 1905. Dr A.Ernst, Prof.Bot., Zürich.
- 1905-07. Dr Ch.J.Bernard, Head Foreigners' Laboratory, Buitenzorg.
- 1905-24(at intervals). C.A.Backer, Botanist Herbarium Buitenzorg.
- 1906. Dr D.H.Campbell, Prof.Bot., Stanford, Cal.
- H.Deistel, German gardener in Cameroon.
- H.G.A.Engler, Prof.Bot., Berlin.
- V.Jakovleff, Naturalist, St Petersburg.
- Dr A.A.Pulle, Teacher Nat.Hist., Utrecht.
- 1906-07. Dr M.W.Koernicke, Lecturer Bot., Bonn.
- 1907. Miss L.von Graevenitz, Botanist, Berlin.
- Dr Ph.van Harreveld, Teacher, Holland.
- H.Morin, Nat.Hist.teacher, Munich.
- Miss E.Stein, Botanist, Berlin.
- H.J.Wigman Jr, Ass.Cur.Bot.Gard.Buitenzorg.
- 1907-08. Dr F.Czapek, Prof.Bot.Čzernowitz (Austria-Hungary).
- H.Fitting, Prof.Bot., Tübingen.
- F.von Höhnel, Prof.Bot., Vienna.
- 1908. H.P.Kuyper, Head Bot.Lab. of Bot.Gard.Buitenzorg.

- Dr Hubert Winkler. Lecturer Bot., Breslau.
1909. L.G.den Berger, Chem.engineer Rice Exp.Stat., Buitenzorg.
- O.Bryant, of Cohasset, Mass., Leader Owen Bryant Exp.
- Dr K.Domin, Univ.Lecturer, Prague.
- Dr J.Kuyper, Botanist, Utrecht.
- W.Palmer, Taxidermist U.S.Nat.Mus., Washington,DC.
- K.W.Rothert, Prof.Bot., Riga and Odessa.
- Dr H.H.Zeijlstra, Ass.Treub Lab.Bot.Gard.Buitenzorg.
- 1909-10. Dr H.R.H.A.Miehe, Prof.Bot., Leipsic.
- 1910(previous to). Hj.Jensen, Botanist Bot.Gard.Buitenzorg.
- Jaheri, Indonesian collector, Herbarium Buitenzorg.
- Noerkas, Indonesian collector, Bot.Gard.Buitenzorg.
- Sakaran, Employee Bot.Gard.Buitenzorg.
- 1910-11. Dr G.Klebs, Prof.Bot., Heidelberg.
- Dr G.Senn, Botanist, Basel.
- S.von Simon, Botanist, Göttingen.
- 1910-19. Dr F.C.von Faber, Head Treub Lab., Buitenzorg.
1911. A.E.Finet, Paris.
- Dr G.van Iterson, Prof.Techn.Bot., Delft, Holland.
- T.Kawakami, Botanist, Formosa.
- Dr G.Klebs, Prof.Bot., Heidelberg.
- H.Lecomte, Prof.Bot., Paris.
- 1911-12. Dr A.H.Blaauw, Botanist, Utrecht.
1912. Dr H.von Buttel Reepen, Prof.Zool., Oldenburg(Germany).
- Ch.G.Matthew, Retired fleet-surgeon, England.
- Dr Vermoesen, Botanist, Belgian Congo.
- 1912-13. W.Karawaiew, Kiew.
1913. Dr J.Doposcheg-Uhlar, Botanist, Munich.
- A.J.Koens, Schoolteacher, Batavia.
- Mrs M.C.L.Lang, Employee Herbarium Buitenzorg.
- Mr & Mrs Ph.L.de Vilmorin, French nurseries, Paris.
- 1913-14. Dr H.A.Gleason, Ass.Prof.Bot.Univ.Michigan.
- 1913,1915. Dr S.H.Koorders, Forest Officer, Buitenzorg.

- 1913-21. A.Schwartz, Ass.Curator Mountain Gard., Tjibodas.
1914. Dr C.E.B.Bremekamp, Phytopathologist, Pasoeroean (E. Java).
- Dr H.Cammerloher, Bot.Ass., Czernowitz, accompanied Prof.Porsch.
- Dr A.J.B.Chevalier, Agric.-botanist, France.
- Dr E.Goldstein, Prof., Berlin.
- C.Ledermann, Collector, Berlin.
- J.A.Lörzing, Employee Forest Service, D.E.I.
- Dr E.D.Merrill, Botanist, Manila.
- Dr O.Porsch, Prof.Bot., Czernowitz.
- Dr J.Walther, Prof.Geol., Halle.
- Miss L.Werner, Berlin.
- Miss Dr J.Westerdijk, Dir.Phytopath.Lab.W.C.Scholten, Amsterdam.
- 1914-15. Dr K.Zimmermann, Zoologist, Teacher, Shanghai.
- 1914-34. S.Leefmans, Institute Plant Diseases, Buitenzorg.
1915. F.J.Bley, Bot.student, Zürich.
- Dr E.B.Copeland, Prof.Bot., Los Baños (Philippines).
- Dr K.Gehrman, Dir.Bot.Gard. Rabaul (Bism.Archipelago).
- D.T.Fullaway, Entomologist, Exp.Stat., Hawaii.
- Dr A.Leber, Prof.Medicine, Göttingen.
- Miss C.P.Sluiter, Bot.Ass.Central Bur.for Fungi Cultures, Amsterdam.
1916. E.R.Jacobson, Amateur zoologist, Ft de Kock, Sumatra.
- H.C.Robinson, Dir.Fed.Mal.Stat.Mus., Perak.
- W.F.Winckel, Planter, Java.
1917. Dr W.H.Brown, Bur.Science, Manila.
- Dr P.A.A.F.Eyken, Civil Health Dept, Batavia.
- Mrs C.Feith, Botanist, Groningen.(Assisted F.C.v.Faber.)
- Dr MacCallum, Prof.Zool., Univ.of N.Y.
- Dr Mitsunaga Fujioka, For.Exp.Stat., Meguro, Tokyo.
- K.Shibata, Prof.Bot., Tokyo.
- H.S.Yates, Mycologist Bur.Sci., Manila.
- 1917, 1918. Dr B.T.Palm, Ass.Inst.Plant Diseases, Buitenzorg.

- 1917-24. Dr W.Bobilioff, Bot.Rubber Exp.Stat., Buitenzorg.
- 1918-32. Dr W.M.Docters van Leeuwen, Dir.Bot.Gard.Buitenzorg.
- Miss C.C.Reynvaan, private Ass.of Docters van Leeuwen,
Buitenzorg.
1919. Dr E.A.Gäumann, Dept Agric., Buitenzorg.
- Dr H.J.Lam, Botanist Herbarium Buitenzorg.
- Dr T.Nakai, Botanist, Tokyo.
- E.M.M.Paravicini, Inst.Plant Diseases, Buitenzorg.
- Miss H.Ch.Ch.la Rivière, Ass.Bot., Leyden.
- J.F.C.Rock, Botanist, Hawaii.
- C.D.LaRue, Botanist U.S.Rubber Co., Sum.East Coast.
- Dr D.F.van Slooten, Botanist Herbarium Buitenzorg.
- C.van Zijp, Pharmacist, Malang (E.Java).
1920. Dr K.Heusser, Medan Exp.Stat., Deli, Sumatra.
- Dr W.Seifriz, Botanist, John Hopkins Univ., Baltimore,
U.S.A.
- Dr Th.Wurth, Dir.Exp.Stat. Malang (E.Java).
- +1920. Dr W.Vischer, Botanist Rubber Exp.Stat.West Java, Bui-
tenzorg.
- 1920-21. Dr H.Boschma, Zoologist, Amsterdam.
- Dr A.Rant, Temp.botanist Bot.Gard.Buitenzorg.
1921. O.W.Arrhenius, Botanist, Sweden.
- P.M.W.Dakkus, Curator Bot.Gard.Buitenzorg.
- Dr E.A.Gäumann, Dept Agric., Buitenzorg.
- C.Hartley, Temp.ass.Inst.Plant Diseases, Buitenzorg.
- H.J.Joosten, Wellington (New Zealand).
- Dr D.Rands, Temp.ass.Inst.Plant Diseases, Buitenzorg.
- Dr C.Yampolski, Ass.Rubber Exp.Stat.A.V.R.O.S., Medan
(Sumatra).
- 1921-23. Dr A.J.Ultée, Head Phytochem.Lab.Bot.Gard.Buitenzorg.
- 1921-24. Dr H.Cammerloher, Bot.Ass., of the Herbarium Bogor-
iense at Buitenzorg.
- 1921-27. M.J.A.Bruggeman, Curator, Tjibodas.
- 1921, 1923, 1927. Dr H.H.Karny, Zool.Mus., Buitenzorg.
- 1921, 1927, 1928. Dr R.Menzel, Tea Exp.Stat., Buitenzorg.

1922. I.H.Burkhill, Dir.Bot.Gardens Singapore.
---- Dr O.Th.J. Mortensen, Curator Carlsberg Inst., Copenhagen, Leader Danish Exp. to Kai Islands.
---- E.M.M.Paravicini, Ass.Inst.Plant Diseases, Buitenzorg.
- 1922, 1930, and later. Dr L.J.Toxopeus, Entomologist.
1923. F.Heide, Copenhagen
---- Miss Dr Th.R.Resvoll, Lecturer Univ.Oslo.
---- Dr Th.J.Stomps, Prof.Bot., Amsterdam.
1924. E.H.B.Brascamp, Forest Officer, Buitenzorg.
---- Dr Ch.Coster, Forest Officer, Buitenzorg.
---- Dr Dupon.
---- Miss Dr L.Müller, Botanist, Bonn.
---- Prof.H.Nakano, Japan.
---- C.N.A. de Voogd, Forest Officer, Buitenzorg.
- 1924-25. K.I.E.Ritter von Goebel, Prof.Bot., Munich.
---- A.J.P.Oort, Bot.student, Utrecht.
---- Dr Hans Winkler, Prof.Bot., Hamburg.
1925. Dr J.Jeswiet, Geneticist Sugar Exp.Stat.Pasoeroean (E. Java).
---- Miss D.Sorgdrager, Biol.student, Amsterdam.
---- Dr Th.Valeton, Botanist, Leyden.
- 1925-26. Dr O.Posthumus, Botanist, Groningen.
- 1925, 1928. Mrs S.J.Geerts-Ronner, Soerabaja (E.Java).
---- Dr J.M.Geerts, Agric.Adviser of Sugarcane Cultiv. Comp., Soerabaja (E.Java).
1926. Dr W.H.Arisz, Exp.Stat., Djember (E.Java).
---- Dr B.H.Danser, Botanist Herbarium Buitenzorg.
---- Mr E.R.Dunn, Northampton, U.S.A.
---- Dr D.Fairchild Jr, Entomologist, Washington, DC.
---- P.F.Franck, Taxidermist Zool.Mus. Buitenzorg.
---- Dr J.W.Harms, Prof.Zool., Tübingen.
---- Dr B.B.Marcovitch, Prof.Inst.Appl.Bot., Leningrad.
---- R.Nakazawa, Prof.Mycology, Formosa.
---- K.S.Rouppert, Prof.Bot., Krakau.
- 1926-27. Miss Dr A.G.Vorstman, Ass.Zool.Mus. Buitenzorg.

- 1926, 1930. Mr J.H.C.Taylor, Entomologist, Fiji.
1927. Miss H.van Blommestein, Bot.student, Utrecht.
- J.K.Budde, Curator Univ.Gard., Utrecht.
- Dr H.Burgeff, Prof.Bot., Würzburg.
- Dr L.Cosquino de Bussy, Prof.Bot., Amsterdam.
- Dr G.L.Funke, Teacher Nat.Hist., Schiedam (Holland).
- Dr E.Heberer, Zoologist, Halle a/S.
- Dr H.Kampf, Chemist, Vienna.
- Dr H.Kniep, Prof.Bot., Berlin.
- Prof.Miyazawa, Japan.
- Mrs I.Rensch-Maier, Member German Exp. Lesser Sunda Islands, Berlin.
- Dr B.Rensch, Zoologist, Berlin.
- C.J.Schröter, Prof.Bot., Zürich.
- A.Thorenaar, Forest Officer, Buitenzorg.
- Miss C.J.Tonkes, Bot.student, Utrecht.
- Miss Dr M.Zuelzer, Govt Health Dept, Berlin.
- 1927-31(at intervals). W.A.Visser, Pupil second.school, Java.
- 1927, 1931, 1939. Dr L.van der Pijl, Teacher Nat.Hist., Bandung (W.Java).
- 1927-40. C.L.L.H.van Woerden, Curator, Tjibodas.
1928. G.A.Best, Curator Bot.Gard., Singapore.
- Dr Shi Inchi Hibino, Prof.Bot. Taihoku, Formosa.
- Dr Sir Arthur W.Hill, Dir.Bot.Gard., Kew.
- J.S.Ramaer, Geneticist Rubber Exp.Stat., Buitenzorg.
- C.L.Rümke, Selectionist Java Sugar Exp.Stat.
- Dr A.Steinmann, Tea Exp.Stat., Buitenzorg.
- J.W.Taylor, Ass.Curator Bot.Gard., Kew.
- H.S.Yates, Phytopathologist U.S.Rubber Co., Asahan (Sum.East Coast).
- 1928-29. Dr H.von Guttenberg, Prof.Bot., Rostock.
- 1928-32. Dr F.W.Went, Botanist Bot.Gard. Buitenzorg.
- 1928-40. Dr C.G.G.J.van Steenis, Botanist Herb.Buitenzorg.
- 1928 or 1929. Dr V.E.van Straelen, Prof.Univ.Brussels.

1929. Dr R.N.Aldrich.
---- onwards. Dr K.B.Boedijn, Mycologist Herb.Buitenzorg.
---- Dr E.Christophersen, Prof.Bot., Honolulu.
---- J.H.Colebrook.
---- Y.Emoto, Japan.
---- Dr H.J.Feuerborn, Prof.Zool., Münster (Germany).
---- onwards. M.A.Lieftinck, Entomologist, later Head Zool. Mus.Buitenzorg.
---- Dr F.Ruttner, Prof. & Leader Biol.Stat. Lunz a/S.(Austria).
---- Dr A.Thienemann, Prof.Hydrobiol., Plön (Holstein).
---- 126 members of the 4th Pac.Sci.Congress.
- 1929-30. Dr O.Stocker, Plant physiologist, Bremerhaven.
1930. Dr G.Kjellberg, Bot.explorer, Lidköping (Sweden).
---- Miss Dr B.Polak, Peat specialist, Amsterdam.
---- Miss E.A.M.Veldhuis, Bot.student, Utrecht.
---- Fr.Verdoorn, Bryologist, Utrecht.
- 1930-31. G.Blum, Prof.Bot., Freiburg (Switzerland).
---- Dr A.Ernst, Prof.Bot., Zürich.
---- Dr M.Ernst-Schwarzenbach, Lecturer Bot., Zürich.
---- Dr O.Renner, Prof.Bot., Jena.
- 1930-32. Miss W.S.S.van Benthem Jutting, Malaco-zoologist, temp. Zool.Mus., Buitenzorg.
- +1930-33. Dr D.R.Koolhaas, Phytochemist, Bot.Gard. Buitenzorg.
- 1930-42. C.Holstvoogd, Teacher biol., Java.
1931. Dr R.Bouillenne, Prof.Bot., Luik (Liège) and Mrs Dr M. Bouillenne, chemist.
---- Miss J.Collier, Zoologist, and Miss B.Collier.
---- Dr A.F.Frey-Wijssling, Botanist A.V.R.O.S. Rubber Exp. Stat. Medan, Deli (Sumatra).
---- Dr C.A.Gehlsen, German planter, Java.
---- Dr M.Ogata, Tokyo.
- 1931-32. Dr R.Holkwitz, Prof.Phycology, Berlin.
- 1931,1937. Miss Dr A.G.Stokey, Prof.Bot.Mount Holyoke Coll., South Hadley, Mass.
1932. Prof.J.M.Benade.

- Mrs M.S.Clemens and Chapl. J.Clemens, Plant collectors.
- onwards. A.Hoogerwerf, Taxidermist Zool.Mus., Buitenzorg.
- Miss Dr A.Kleinhoonte, Curator Lab.Techn.Bot., Delft (Holland).
- Dr P.Metzner, Prof.Bot., Greifswald.
- Dr R.Wolttereck, Prof.Zool., Leipsic.
- 1933. Dr M.W.Koernicke, Prof.Bot., Bonn-Poppelsdorf.
- 1933-34. Dr F.A.Süffert, Zoologist, Freiburg (Bavaria).
- 1934. C.E.McClung, Prof. in Philadelphia, and his Ass. Miss J.Corey.
- Dr A.Schierbeek, Teacher Nat.Hist., The Hague.
- 1935. D.A.L.Houwink, Botanist, Utrecht.
- (posterior to). Dr Th.M.Meijer, Chemist, Chem.Lab., Buitenzorg.
- 1936. Dr A.N.J.Heyn, Botanist, Utrecht.
- Dr W.L.Lütjeharms, Curator Rijksherbarium, Leyden.
- 1937. Dr P.J.Eyma, Botanist, Utrecht.
- 1938. F.Fagerlind, later Prof.Bot., Stockholm.
- Dr O.Jaag, Bot.Ass.Techn.Coll., Zürich.
- 1938-39. Dr E.Bünning, Prof.Bot., Tübingen.
- 1938-41. Dr C.J.van Hulsen, Chemist, Chem.Lab., Buitenzorg.
- 1939. Dr L.G.M.Baas Becking, Dir.Bot.Gard. Buitenzorg.
- Dr C.E.M.Burret, Prof.Bot., Berlin.
- onwards. Dr M.A.Donk, Mycologist, later Head Herb.Buitenzorg.
- onwards. Miss Dr J.Ruinen, Bot.Gard. Buitenzorg.
- 1939-50. A.M.Neervoort, Curator Mountain Gard., Tjibodas.
- 1940-41. Dr J.B.Thomas, Plant physiologist, Utrecht.
- 1941 onwards. Dr S.Bloembergen, Botanist, Herb.Buitenzorg.
- 1950-52. J.H.Kern, Botanist Herb.Bogoriense, Bogor.
- Dr S.J.van Ooststroom, Curator, Rijksherbarium,Utrecht.
- C.Schröter Jr, Curator Mountain Gard., Tjibodas.
- Dr C.G.G.J.van Steenis, General Editor, Fl:Nat.:Teyden.
- 1952. Dr R.van der Wijk, Prof.Bot., Groningen.

(5) Selected botanical bibliography

- Anonymous, Crater map of G.Gedé (Jaarversl.Topogr.Dienst over 1906, 1907, 60).
- , De opening van het nieuwe Laboratorium te Tjibodas. 12 Aug. 1920. 8°. pp.11, 4 photographs, 1 map.
- , Gedeh tocht Afd. Buitenzorg (Trop.Natuur 17, 1928, 103-105, 1 fig.).
- , Coloured crater map of G.Gedé-Pangrango (Jaarversl. Topogr.Dienst 25, 1929, 122).
- , The Tjibodas Biological Station and Forest Reserve. By various contributors (In: Honig & Verdoorn Science & Scientists in the Netherlands Indies 1945, 403-416. Cf. F.W.Went, Docters van Leeuwen, and Dakkus).
- , Buitenzorg scientific centre. Chapt.I 5. Mountain Gardens at Tjibodas. 1860 (Buitenzorg 1948, 23-25).
- Baas Becking, L.G.M., Note on the endophyte of Gunnera macrophylla Bl. (Biol.Jaarb.Dodonaea 14, 1947, 93-96, 1 pl.).
- , Notes on jungle trees I (Chron.Nat. 104, 1948, 271-277).
- Backer, C.A., Sawah planten (Trop.Natuur 3, 1913, 83, 118).
- , Callitrichaceae (Fl.Mal. I, 4, 1951, 251-252).
- Beccari, O., in Malesia 1, 1878, 219.
- Bergdolt, E., Karl von Goebel. Berlin 1942 (Tjibodas: pp.52-55, 197-202, 231-232).
- Bernard, Ch., Protococcacées et Desmidiées d'eau douce ré-coltées à Java. Batavia 1908.
- Blaauw, A.H., Das Wachstum der Luftwurzeln einer Cissus-Art (Ann.Jard.Bot.Btzg 26, 1912, 266-293, 2 fig.etc.).
- , De tropische natuur in schetsen en kleuren. Amsterdam, 1913 (Tjibodas on p.58); 2nd ed. 1917.
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