

INTERNATIONAL DIRECTORY  
OF  
BOTANICAL GARDENS

*Regnum Vegetabile* vol. 28

**REGNUM VEGETABILE**

**A Series of Publications for the use of Plant Taxonomists and Plant Geographers**

***Volume 28***

**INTERNATIONAL DIRECTORY  
OF  
BOTANICAL GARDENS**



# **INTERNATIONAL DIRECTORY OF BOTANICAL GARDENS**

**COMPILED BY**

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**UTRECHT — NETHERLANDS**

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## INTRODUCTION

The International Association of Botanical Gardens was formed at the 8th Botanical Congress in Paris, France in 1954. The first president, Dr. W. ROBYNS of Brussels, reviewed the goals of the organization in a report in *Taxon* (3:249-250) in 1954. A first project of the young Association was the compilation of an up-to-date list of the botanical gardens and arboreta of the world giving the physical characteristics as well as names of staff members and their research interests. A questionnaire was circulated by Dr. Robyns to the gardens listed in the *Index Seminum* of the Museum of Paris. The replies were few and often long delayed so that the compilation was not completed in the interval between Congresses.

At the 9th Botanical Congress in Montreal, Canada a new cadre of officers was elected with whom Dr. Robyns pledged cooperation in a renewed effort to obtain data on existing botanical gardens and to issue this volume. The officers of the Association for the present inter-congress period received the earlier work of Dr. Robyns and utilized not only the list of gardens at his disposal but also additional references. New circulars were sent to all the gardens listed in *Index Herbariorum*, the second edition of Gager's *Botanical Gardens of the World* (*Brooklyn Botanic Garden Record* 27:151-406, 1938), Wyman's *The Arboretums and Botanical Gardens of North America* (Arnold Arboretum, 1959), and Stephenson's *The Gardener's Directory* (Hanover House, N. Y. 1960). Additional sources were used when available. When a few replies were received, a second letter was sent to these correspondents listing the gardens known to us in their countries or in adjacent ones. In this manner obsolete gardens, those no longer functioning, those with incorrect addresses or those listed under synonymous titles became known. Gardens which did not reply were sent a maximum of three questionnaires. Regrettably, some gardens known to be functioning are not listed in this directory due to their failure to reply to any of these questionnaires. We are grateful to the numerous individuals who did cooperate. In particular, we express our thanks to Dr. N. V. Tsitsin of the Moscow Botanical Garden who arranged for the collecting, translating and forwarding of the data requested from the gardens of the Soviet Union.

For the purposes of this compilation a simple definition of a botanic garden or arboretum was assumed to be one open to the public and in which the plants are labelled. The questionnaire requested the name and complete address of the garden, as well as the following information: ownership, longitude, latitude, altitude, mean annual rainfall, annual temperature range, area, number of species and varieties grown, time of greatest floral display, collections of special interest, chief objectives of the institution, hours of exhibition, publications of seed lists, descriptive booklets or periodicals, the size and type of library, herbarium and greenhouses, and the names of the director and staff with their fields of interest. The replies as reproduced here have been edited

slightly. The titles of many staff members have been shortened for the sake of economy. If a question was unanswered it has been deleted in this text. The question relating to the annual temperature range was apparently poorly worded. It was intended to elicit the extremes of temperature as an indication of the nature of the local environment. Frequently it was answered with a single figure in which case the reply has not been given. The replies were received in many languages and many types of handwriting. We regret and apologize for errors of translation or interpretation which may have occurred.

We are indebted to many people for the final appearance of this report. Miss EILEEN CARROLL, Miss KATHERINE HERRON, Mrs. THOMAS WALSH and Miss JUDITH KROLL of the staff of the Arnold Arboretum typed and retyped the many questionnaires. Miss CARROLL prepared the index. Dr. FRANS STAFLEU undertook the final editing of the manuscript and its publication. Finally, our indebtedness must be expressed to the International Union of Biological Sciences for a grant to assist in the cost of publication.

RICHARD A. HOWARD

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## Argentina

### ALGERIA

**HAMMA:** *Jardin d'Essais du Hamma*, Rue de Lyon, Hamma, **Algeria**.

Status: Governmental.

Area: 62 ha; Long.: 3° E, Lat.: 36° 47' N; Alt.: 10–100 m; Rainfall: 800 mm.

Taxa: Ca. 8,000; Special: Ornamental trees and shrubs, cycads, palms, Ficus, exotic fruit trees, native Algerian plants (plant museum affiliated with the garden).

Open to the public: 8 A.M.–11:30 A.M., 2 P.M.–4:30 P.M.

Herbarium: Yes.

Greenhouses: 500 sq. m. (display and service).

Publications: Articles in the Revue de la Société d'Horticulture d'Algérie; seed lists, guide book.

Director: ROGER HAMÈS.

### ARGENTINA

**BUENOS AIRES:** *Instituto de Botánica Agrícola - I.N.T.A. - Araoz 2875*, Buenos Aires, **Argentina**.

Status: Governmental.

Area: 10 ha; Long.: 58° 40' W, Lat.: 34° 36' S; Rainfall: 917 mm; Temp.: 23.2° to 9.6° C.

Taxa: 5,000; Special: Salicaceae.

Open to the public: Monday–Friday 9 A.M.–5 P.M.

Herbarium: 18,000.

Greenhouses: 2 (display).

Publications: Seed lists planned.

Director: ARTURO E. RAGONESE (agronomical engineering, forestal industry).

Staff members: ANTONIO M. COLLURA (agronomical engineering, aromatic plants).

ANGEL MARZOCCA (agronomical engineering, medicinal plants).

**BUENOS AIRES:** *Jardín Botánico "Carlos Thays", Dependiente del Instituto Municipal de Botánica*, Santa Fe 3951, Buenos Aires, **Argentina**.

Status: Municipal institution.

Area: 8 ha; Long.: 59° W, Lat.: 34° S; Alt.: Sea level; Rainfall: 900 mm.

Taxa: 4,000; Special: Plants of the subtropical region of Argentina.

Open to the public: 7 A.M.–6 P.M. daily.

Herbarium: 6,000.

Greenhouses: 2 display, 2 service.

Publications: Seed lists, technical papers.

Director: Ing. Agr. RAMÓN M. RUSSO.

Staff members: Ing. Agr. ROBERTO G. MONTANI (systematics of Phanerogams).

Ing. Agr. ENRIQUE L. RATERA (systematics, anatomy and biology of Phanerogams).

Ing. Agr. LUIS Q. CRISTIANI (anatomy of Phanerogams).

**BUENOS AIRES:** *Jardín Botánico de la Facultad de Agronomía y Veterinaria*, Av. San Martín 4453, Buenos Aires, **Argentina**.

Status: Governmental, affiliated with University of Buenos Aires.

Area: 1.5 ha; Long.: 58° 29' W, Lat.: 34° 35' S; Alt.: 25 m; Rainfall: 996 m.

Taxa: Ca. 1,200; Special: Grasses.

Open to the public: 7 A.M.–1 P.M. daily.

Herbarium: Included in general herbarium.

Greenhouses: 1 (service).

Director: LORENZO R. PARODI, Ing. Agr., Prof. Emeritus (taxonomy of grasses).

Staff members: OSVALDO BOELCKE, Ing. Agr., Assoc. Prof. Botany (taxonomy of Cruciferae).

ELISA NICORA DE PANZA (grasses, Eragrostis).

Prof. CLEOFÉ CALDERON (grasses).

ANA MARÍA TÜRPE (grasses).

ANA MARÍA RAGONESE (plant anatomy).

LIONEL GIUSTI, Ing. Agr. (weed seeds, Chenopodium).

JULIÁN CÁMARA, Ing. Agr. (Bromus, native cultivated plants).

**LLAVALLOL:** *Jardín Agrobotánico de Santa Catalina, Instituto Fitotécnico de Santa Catalina*, Llavallol, FNGR, **Argentina**.

Status: Affiliated with the University of La Plata.

Area: Ca. 12 ha.

Taxa: Ca. 300.

Herbarium: None.

Greenhouses: Being planned.

Publications: Seed list in preparation.

Director: Ing. Agr. ENRIQUE C. CLOS.

## Argentina

**SAN ISIDRO:** *Instituto de Botánica Darwinion Lavardén y Del Campo*, San Isidro, Provincia de Buenos Aires, **Argentina**.

*Status:* Governmental, affiliated with the Academia Nacional de Ciencias exactas, físicas y naturales de Buenos Aires.

*Area:* 2,000 sq. m.; *Long.:* 58° 30' W, *Lat.:* 34° 30' S; *Alt.:* Ca. 25 m; *Rainfall:* 950 mm.

*Taxa:* Ca. 200; *Special:* Indigenous perennials of the Argentine flora and some ornamentals.

*Open to the public:* With permission of the director.

*Herbarium:* Included in the general herbarium.

*Greenhouses:* None.

*Publications:* Darwinia, descriptive booklet.

*Director:* Dr. ARTURO BURKART (Leguminosae of Argentina and extra-tropical South America, forage plants).

*Staff members:* Dr. NÉLIDA SARA TRONCOSO (Verbenaceae of Argentina and surrounding countries).

Prof. NÉLIDA BACIGALUPO (Rubiaceae).

Prof. SUSANA CRESPO.

JUANA S. DE LICHTENSTEIN (Pteridophyta of Argentina).

## AUSTRALIA

**ADELAIDE:** *Botanic Garden*, North Terrace, Adelaide, **South Australia**.

*Status:* Governmental, Board of Governors.

*Area:* 240 acres (including Mt. Lofty Annex); *Long.:* 138° 38' E, *Lat.:* 34° 56' S; *Alt.:* 150 ft; *Rainfall:* 21–22 in; *Temp.:* 110° to 30° F. (Mt. Lofty Annex: 90° to 25° F.)

*Taxa:* 7,000–8,000; *Special:* Australian native plants especially those from dryland areas and Western Australia; drought resistant and salt tolerant plants, cacti, succulents and bulbs; at Mt. Lofty Annex, temperate and sub-alpine, herbaceous and woody plants.

*Open to the public:* Weekdays 7 A.M.–sunset, weekends and holidays 9 A.M.–sunset.

*Herbarium:* Planned (currently included in general herbarium).

*Greenhouses:* 5 display (including 1 conservatory), 7 service.

*Publications:* Seed lists, Guide to the Garden.

*Director:* T. R. N. LOTHIAN (Australian plants, drought resistance and salt tolerance).

*Staff members:* Dr. HJ. EICHLER (Ranunculaceae, hydrophytes).

PAUL WILSON (Rutaceae, Compositae).

D. F. FRANCIS (ornamental plants).

**ADELAIDE:** *Waite Agricultural Research Institute*; Private Mail Bag 1, Adelaide, **South Australia**.

*Status:* Affiliated with University of Adelaide.

*Area:* 56 acres; *Long.:* 138° 38' E, *Lat.:* 34° 58' S; *Alt.:* Ca. 400 ft; *Rainfall:* 24.5 in; *Temp.:* 69.6° to 53° F.

*Taxa:* 700; *Special:* Eucalyptus (260 spp.).

*Open to the public:* Daylight hours, daily.

*Greenhouses:* Research.

*Publications:* Report of the Waite Agricultural Research Institute.

*Director:* Dr. J. MELVILLE.

*Staff members:* D. E. SYMON.

**BRISBANE:** *Botanic Gardens*, Brisbane, Queensland, **Australia**.

*Status:* Municipal, Brisbane City Council.

*Area:* 46 acres; *Long.:* 153° E, *Lat.:* 27° 30' S; *Alt.:* 30 ft; *Rainfall:* 42 in; *Temp.:* 90° to 52° F.

*Taxa:* 75,000; *Special:* Palms, succulents, ornamentals, foliage plants, Australian native plants.

*Open to the public:* Sunrise–sunset.

*Herbarium:* None.

*Greenhouses:* 2 display, 3 service.

*Publications:* Annual seed list, index of plants.

*Director:* R. T. M. PEScott.

*Staff members:* H. W. CAULFIELD (Australian plants).

F. W. MARIEN (succulent plants).

W. G. TRAPNELL (aquatic plants).

**BRISBANE:** *Sherwood Arboretum*, Sherwood, Brisbane, Queensland, **Australia**.

*Status:* Municipal, Brisbane City Council.

*Area:* 33 acres; *Long.:* 153° E, *Lat.:* 27° 30' S; *Alt.:* 25 ft; *Rainfall:* 44 in; *Temp.:* 78° to 59.8° F.

*Taxa:* 500; *Special:* Eucalyptus spp.

*Open to the public:* Daily.

*Herbarium:* None.

*Greenhouses:* None.

*Director:* R. T. M. PEScott.

## Australia

*Staff members:* H. W. CAULFIELD, Curator.

H. O. OAKMAN, Manager, Park Department.

**CANBERRA:** *Canberra Botanic Garden, Parks and Gardens Section, Department of the Interior, Canberra, A.C.T., Australia.*

*Status:* Governmental, Department of Interior.

*Area:* 87 acres; *Long.:* 149° 6' E, *Lat.:* 35° 18' S; *Alt.:* 1,875–2,220 ft; *Rainfall:* 24.66 in; *Temp.:* 82.5° to 33.9° F.

*Taxa:* Ca. 1,000; *Special:* Eucalyptus, Acacia, Grevillea.

*Open to the public:* With permission of the director.

*Herbarium:* 6,000 specimens of native Australian spp.

*Greenhouses:* To be established.

*Publications:* Seed list.

*Director:* D. W. SHOEBRIDGE.

*Staff members:* Dr. MARIE E. PHILLIPS (systematics, propagation of native species).

R. W. BODEN (breeding and improvement of ornamental native species).

**CANBERRA:** *Plant Introduction Section, Division of Plant Industry, C.S.I.R.O., P.O. Box 109, Canberra, A.C.T., Australia.*

*Status:* Governmental, Commonwealth of Australia.

*Area:* 10 acres; *Long.:* 149° 10' E, *Lat.:* 35° 15' S; *Alt.:* 2,000 ft; *Rainfall:* 23 in; *Temp.:* 69° to 42.6° F.

*Taxa:* 400 spp. and varieties of herbage plants.

*Open to the public:* With permission of the director.

*Herbarium:* Included in Divisional Herbarium.

*Greenhouses:* 4 rooms for quarantine checking of introductions.

*Publications:* Seed list.

*Director:* W. HARTLEY (taxonomy and distribution of Gramineae).

*Staff members:* Dr. N. T. BURBIDGE (general taxonomy, phytogeography).

Dr. H. S. McKEE (economic and general botany, tropical and sub-tropical plants).

C. A. NEAL-SMITH (agronomy of pasture species, evaluation of new introductions).

**HOBART:** *Tasmanian Botanical Gardens, Queen's Domain, Hobart, Tasmania. Australia.*

*Status:* Semi-governmental.

*Area:* 30 acres; *Long.:* 147° 20' E, *Lat.:* 42° 52' S; *Alt.:* Sea level.

*Taxa:* 1,200; *Special:* Conifers, oaks, Eucalyptus.

*Open to the public:* 8 A.M.–6 P.M., daily.

*Herbarium:* In general herbarium.

*Greenhouses:* 7 (including 2 conservatories).

*Publications:* Seed list.

*Director:* WALTER ARTHUR TOBIAS (native flora, garden design).

*Staff members:* BRIAN HALLIWELL (native flora, propagation).

**MELBOURNE:** *Royal Botanic Gardens and National Herbarium, South Yarra, S.E. 1, Melbourne, Victoria, Australia.*

*Status:* Governmental, state of Victoria.

*Area:* 87.5 acres; *Long.:* 144° 58' 24" E, *Lat.:* 37° 49' 53" S; *Alt.:* Sea level–100 ft; *Rainfall:* 25.90 in; *Temp.:* 102.7° to 31.9° F.

*Taxa:* Ca. 20,000; *Special:* Australian native plants, rhododendrons, camellias, Quercus, cacti, succulents.

*Open to the public:* Monday–Friday 9 A.M.–5 P.M.

*Herbarium:* Included in National Herbarium.

*Greenhouses:* 4 (display).

*Publications:* Muelleria, seed list, guide book, Melbourne's Garden.

*Director:* RICHARD T. M. PEScott.

*Staff members:* FRANK P. MORRIS (general taxonomy).

JAMES H. WILLIS (Australian plants).

RAY SMITH, Botanist.

ARTHUR B. COURT, Botanist.

HELEN I. ASTON, Botanist.

WILLIAM H. GREY, Garden Supervisor.

**PERTH:** *Botanic Gardens of Western Australia, King's Park, Perth, Western Australia.*

*Status:* Governmental.

*Area:* 1,100 acres; *Long.:* 116° E, *Lat.:* 32° S; *Alt.:* 500 ft; *Rainfall:* 33 in.

*Taxa:* Garden established in 1961, being developed; *Special:* Wild flowers of Western Australia.

*Herbarium:* Planned.

*Greenhouses:* Planned.

*Director:* Dr. J. S. BEARD (ecology).

## Australia

**SYDNEY:** *Royal Botanic Gardens*, Sydney, New South Wales, **Australia**.

*Status:* Governmental, Department of Agriculture.

*Area:* 66 acres; *Long.:* 151° E, *Lat.:* 34° S; *Alt.:* Ca. sea level; *Rainfall:* 45 in; *Temp.:* 71.1° to 56.3° F.

*Taxa:* 3,000–4,000; *Special:* Palms, cycads, Australian trees.

*Open to the public:* 7 A.M.—sunset, daily.

*Herbarium:* 15,000–20,000.

*Greenhouses:* Yes.

*Publications:* Contributions from the New South Wales National Herbarium, seed list.

*Director:* R. H. ANDERSON.

*Staff members:* K. MAIR (Orchidaceae, seashore species).

Dr. JOYCE VICKERY (Gramineae).

MARY TINDALE (Pteridophytes, Aca-

cia).

L. JOHNSON (Eucalyptus, Casuarina, Proteaceae).

N. FORD (Euphorbiaceae).

B. BRIGGS (Ranunculaceae).

**TOOWOOMBA:** *Toowoomba Botanical Gardens*, Toowoomba, Queensland, **Australia**.

*Status:* Semi-governmental.

*Area:* 44 sq. mi; *Long.:* 151° 54' E, *Lat.:* 27° 35' S; *Alt.:* 2,000–2,500 ft; *Rainfall:* 36.5 in; *Temp.:* 73.2° to 51.5° F.

*Herbarium:* None.

*Greenhouses:* 3.

*Director:* KENNETH BRYAN TRAFFORD (Propagation, street trees).

**TOWNSVILLE:** *Botanic Gardens*, Townsville, North Queensland, **Australia**.

*Status:* Governmental.

*Area:* 10 acres; *Long.:* 146° 58' E, *Lat.:* 19° 10' S; *Rainfall:* 43.06 in.

*Special:* Hibiscus, Codiaeum, Acalypha, aroids.

*Open to the public:* Daily.

*Herbarium:* Planned.

*Greenhouses:* Service.

*Publications:* Seed list.

*Director:* A. E. WILSON, Superintendent (landscape design).

## AUSTRIA

**GRAZ:** *Botanischer Garten d. Universität Graz*, Holteigasse 6, Graz, **Austria**.

*Status:* Governmental.

*Area:* 20,000 sq. m; *Alt.:* 360 m; *Rainfall:* 873 mm; *Temp.:* 30° to -15° C.

*Taxa:* Ca. 4,000.

*Open to the public:* April–October.

*Herbarium:* None.

*Greenhouses:* 2 cold houses, 2 warm houses, 1 palm house.

*Publications:* Seed list.

*Director:* Prof. Dr. FELIX WIDDER (Spermatophytes, Myxomycetes, morphology).

*Staff members:* Dr. ADOLFINE BUSCHMANN (Gramineae, Eumycetes).

**INNSBRUCK:** *Botanischer Garten der Universität Innsbruck*, Botanikerstr. 10, Innsbruck, **Austria**.

*Status:* Affiliated with University.

*Area:* 3 ha.

*Taxa:* 5,000; *Special:* Alpines, parasites.

*Open to the public:* With permission of the director.

*Herbarium:* None.

*Greenhouses:* 5 display, 1 service.

*Publications:* Seed list.

*Director:* Prof. Dr. ARTHUR PISEK.

**ST. VEIT:** *Alpengarten Rannach*, St. Veit bei Graz, Steiermark, **Austria**.

*Status:* Private.

*Area:* 4 ha; *Alt.:* 650 m; *Rainfall:* 1,045 mm.

*Taxa:* Ca. 500; *Special:* East and West Alpine plants.

*Open to the public:* In season, with the permission of the director.

*Herbarium:* None.

*Greenhouses:* None.

*Publications:* Der Alpengarten, seed lists, descriptive booklet.

*Director:* FRANZ PRATTL, Baumeister.

*Staff members:* Dr. WILHELM KRIECH-BAUM.

**WIEN:** *Alpengarten im Belvedere*, Wien III, Prinz-Eugen Strasse 27, **Austria**.

*Status:* Governmental.

*Area:* 2,400 sq. m; *Long.:* 16° 21' E, *Lat.:* 48° 11' N; *Alt.:* 200; *Rainfall:* 750 mm.

*Taxa:* 2,700.

*Open to the public:* April 15–June 30, 8 A.M.–6 P.M.

*Herbarium:* None.

*Greenhouses:* None.

*Publications:* Seed list.

*Director:* Dipl. Ing. Hofrat EMIL PLANCKH.

## Belgium

*Staff members:* ADOLF MUNSCH, Garden Administrator.

FERDINAND HODAC, Chief Gardener and Collector.

**WIEN:** *Botanischer Garten der Universität Wien*, Wien III, Rennweg 14, **Austria**.

*Status:* Governmental.

*Area:* 8 ha; *Long.:* 16° 22' E, *Lat.:* 48° 12' N; *Alt.:* 170 m; *Rainfall:* 648 mm.

*Taxa:* Ca. 5,500; *Special:* Succulents, Orchidaceae.

*Open to the public:* April–October.

*Herbarium:* Ca. 4,000.

*Greenhouses:* 13 (service).

*Publications:* Seed list.

*Director:* Prof. Dr. LOTHAR GEITLER.

*Staff members:* Prof. LOTHAR HOFMEISTER (physiology).

Prof. Dr. GEORG CUFODONTIS (plant geography, systematics).

Prof. Dr. WALTER LEINFELLNER (morphology).

Prof. Dr. ELISABETH TSCHERMAK-WOESS (cytogenetics).

JOSEF HONOMANN, Chief Gardener.

**WIEN:** *Verwaltung der Bundesgärten*, Wien XIII, Schönbrunn, **Austria**.

*Status:* Governmental.

*Area:* 200 ha; *Long.:* 16° 21' E, *Lat.:* 48° 11' N; *Alt.:* 200 m; *Rainfall:* 750 mm.

*Special:* Display houses.

*Open to the public:* Display houses - 9 A.M. - 6 P.M.; Park - 6 A.M. - 9 P.M. summer, 6 A.M. - 6 P.M. winter.

*Herbarium:* None.

*Greenhouses:* 2,000 sq. m. display, 6,000 sq. m. service.

*Publications:* Descriptive booklet.

*Director:* Dipl. Ing. Hofrat EMIL PLANCKH.

*Staff members:* Dr. ERHARD SPRANGER, Administrator.

## BELGIUM

**BONCELLES:** *Domaine du Sart Tilman, Université de Liège*, 134 Route du Condroz, Boncelles, **Belgium**.

*Status:* Governmental.

*Area:* Ca. 200 ha; *Long.:* 5° 35' E, *Lat.:* 50° 35' N; *Alt.:* 160–260 m; *Rainfall:* Ca. 900 mm.

*Open to the public:* With permission of the director.

*Herbarium:* None.

*Greenhouses:* None.

*Director:* P. GATHY (forest genetics).

**BRUSSELS:** *Arboretum Géographique de Tervuren*, Drève du Duc, 106, Brussels 17, **Belgium**.

*Status:* Governmental, Ministère des Finances, Administration de la Donation Royale.

*Area:* Ca. 100 ha; *Long.:* 4° 28' E, *Lat.:* 50° 48' N; *Alt.:* 100 m; *Rainfall:* 835 mm.

*Taxa:* Ca. 325; *Special:* Displays of important forest associations of the northern temperate zone.

*Open to the public:* Sunrise–sunset, daily.

*Herbarium:* None.

*Greenhouses:* 1 (service).

*Publications:* Catalogue of the Arboretum Tervuren.

*Director:* UL. G. LIENARD, State Forest Engineer.

**BRUSSELS:** *Jardin Botanique de l'Etat*, 236 Rue Royale, Brussels 3, **Belgium**.

*Status:* Governmental.

*Area:* 7 ha. (Brussels), 50 ha. (Meise); *Long.:* 4° 21' E, *Lat.:* 50° 50' N; *Alt.:* 100 m; *Rainfall:* 835 mm.

*Taxa:* 13,500; *Special:* Greenhouse plants, succulents, Begonia, orchids.

*Open to the public:* Garden, sunrise–sunset; greenhouses 2 P.M. – 5 P.M. summer, 2 P.M. – 4 P.M. winter.

*Herbarium:* 5,000.

*Greenhouses:* 13 large display, 22 small display, 18 service.

*Publications:* Seed list.

*Director:* Prof. W. ROBYNS (flora and vegetation of tropical Africa).

**GENT:** *Plantentuin der Rijksuniversiteit Gent*, Ledeganckstraat 33, Gent, **Belgium**.

*Status:* Governmental.

*Area:* 3 ha. 50 a.; *Long.:* 3° 42' E, *Lat.:* 51° 3' N; *Alt.:* 20 m; *Rainfall:* 824 mm.

*Taxa:* 15,000; *Special:* Succulents, Bromeliaceae, Araceae.

*Open to the public:* Garden, Sunday 1 P.M. – 5 P.M., Thursday 1 P.M. – 10 P.M.; greenhouses, Sunday 9 A.M. – 12 noon, Thursday 2 P.M. – 5 P.M.

*Herbarium:* Included in general herbarium.

*Greenhouses:* 12 (display).

*Publications:* Seed list.

## Belgium

*Director:* Prof. Dr. G. VERPLANCKE (systematics of lower fungi).

*Staff members:* Dr. FRYNS.

GUSTAAF BEKE, Horticulturist.

### KALMTHOUT: Arboretum, Kalmthout, Belgium.

*Status:* Private.

*Area:* 9 ha; *Long.:* 4° 25' E, *Lat.:* 51° 10' N; *Alt.:* 12 m; *Rainfall:* 790 mm.

*Taxa:* 5,000; *Special:* Rhododendron, conifers, Hamamelis, woodland plants, Prunus, Malus, Rosa, Rubus.

*Open to the public:* Thursday and Sunday 9 A.M.–sunset.

*Herbarium:* None.

*Greenhouses:* None.

*Publications:* Seed lists.

*Director:* GEORGES DE BELDER.

*Staff members:* ROBERT DE BELDER.

Ir. JELENA DE BELDER.

### LIÈGE: Jardin Botanique de l'Institut de Botanique de l'Université de Liège, 3 rue Fusch, Liège, Belgium.

*Status:* Governmental.

*Area:* 4 ha; *Alt.:* 70 m; *Rainfall:* 800 mm.

*Taxa:* 2,111 in greenhouses, 1,908 in the garden; *Special:* Bromeliaceae, Begoniaceae.

*Open to the public:* Daily.

*Herbarium:* None.

*Greenhouses:* 11 display, 4 service.

*Publications:* Archives de l'Institut de Botanique de l'Université de Liège, seed list.

*Director:* Prof. Dr. RAY. BOUILLENNE.

*Staff members:* J. DAMBLON, Horticulturist.

H. CAES, Chief Gardener.

Mme. M. BOUILLENNE-WALRAND, Curator.

M. BERNIER.

M. PARMENTIER.

Mlle. LEYH.

Mme. EL TANNIR.

## BRAZIL

### BELEM: Museu Paraense "Emilio Goeldi", Caixa Postal 399, Belem, Para, Brazil.

*Status:* Governmental.

*Area:* 4.5 ha; *Long.:* 48° 27' W, *Lat.:* 1° 28' S; *Alt.:* 2,804 mm.

*Taxa:* 2,000; *Special:* Amazonian flora, including many types described by J. Huber and A. Ducke.

*Open to the public:* 7 A.M.–11 A.M., 1 P.M.–5 P.M., daily exc. Saturday afternoon.

*Herbarium:* 30,000.

*Greenhouses:* None.

*Publications:* Boletim do Museu Paraense Emilio Goeldi.

*Director:* Dr. EDUARDO GALVÃO.

*Staff members:* PAULO BEZERRA CAVALCANTE (Diospyros).

### RIO DE JANEIRO: Divisao de Botânica do Museu Nacional - Horto Botânico, Quinta da Boa Vista, Rio de Janeiro, Guanabara, Brazil.

*Status:* Governmental.

*Area:* 35,000 sq. m; *Long.:* 43° 12' W, *Lat.:* 22° 50' S; *Alt.:* 10 m; *Rainfall:* 1,250 mm.

*Taxa:* Ca. 1,000; *Special:* Flowering trees, Heliconia, Scitaminae, aquatic and medicinal plants.

*Open to the public:* With permission of the director.

*Herbarium:* 500.

*Greenhouses:* 1 (service).

*Publications:* Boletim do Museu Nacional - Nova Serie - Botanica.

*Director:* Dr. LUIZ EMYGDIO DE MELLO FILHO (Heliconia and curarigenic plants).

*Staff members:* Prof. ALBERTO CASTELLANOS.

ALVARO XAVIER MOREIRA (palynology, Compositae).

MARGARETE EMMERICH (Euphorbiaceae, Raputia).

AYDIL GRAVE DE ANDRADE (Sapotaceae, Calyceraceae).

EMILIA ALBINA ALVES DOS SANTOS (Bombacaceae).

### RIO DE JANEIRO: Jardim Botânico do Rio de Janeiro, Rio de Janeiro, Guanabara, Brazil.

*Status:* Governmental.

*Area:* 54 ha; *Long.:* 43° 17' W, *Lat.:* 22° 57' S; *Alt.:* Sea level; *Rainfall:* 1,727.3 mm.

*Taxa:* 7,263; *Special:* Orchidaceae, Araceae, Cactaceae, Palmae, Marantaceae, Musaceae, Filicales.

*Open to the public:* Monday–Friday 11 A.M.–5 P.M.

*Herbarium:* Included in general herbarium.

*Greenhouses:* 3 display, 4 service.

*Publications:* Arquivos do Jardim Botânico, Rodriguesia.

*Director:* Prof. P. CAMPOS PORTO (Orchidaceae, Cactaceae).

## British Guiana

*Staff members:* G. M. BARROSO (Compositae).

JOR. GOMES (Bignoniaceae, pollen).

R. D. MACHADO (submicroscopic cytology).

F. A. MATTOS (wood anatomy).

F. R. MILANEZ (anatomy, cytomorphology of lacticifers).

E. PEREIRA (Melastomataceae).

C. T. RIZZINI (morphology, taxonomy, phylogeny).

I. DE VATTIMO (Lauraceae).

**SAO PAULO:** *Jardim Botânico de São Paulo, Instituto de Botânica, Caixa postal 4005, São Paulo, Brazil.*

*Status:* Governmental, State of São Paulo, Brazil.

*Area:* 240 ha; *Long.:* 46° 37' W, *Lat.:* 23° 39' S; *Temp.:* 25.3° to 14.7° C; *Rainfall:* 1,550 mm.

*Taxa:* Ca. 1,000; *Special:* Orchidaceae, Begoniaceae.

*Open to the public:* 9 A.M.-5 P.M. daily except Monday.

*Herbarium:* Included in general herbarium.

*Greenhouses:* 2 (display).

*Publications:* O Jardim Botânico de São Paulo, descriptive booklet.

*Director:* Dr. ALCIDES RIBEIRO TEIXEIRA (Mycology, taxonomy of Polyporaceae).

*Staff members:* Prof. WILSON HOEHNE (succulents).

OSWALDO HANDRO (taxonomy of flowering plants, Orchidaceae).

Dr. GEORGE EITEN (Oxalidaceae).

LIENE T. EITEN (Cyperaceae).

JOÃO RODRIGUES DE MATTOS (Myrtaceae).

NILZA RODRIGUES DE MATTOS (Leguminosae).

BEULAH COE TEIXEIRA (Lauraceae).

CARLOS ALBERTO F. DE MOURA (Turneraceae).

NEUSA DINIZ DA CRUZ (Labiales).

OSWALDO FIDALGO (mycology, Polyporaceae).

MARIA ENEYDA P. K. FIDALGO (mycology, Polyporaceae).

JOÃO SALVADOR FURTADO (mycology, Polyporaceae).

CARLOS E. BICUDO (phycology, taxonomy of fresh water algae).

ROSA MARIA TEIXEIRA (phycology, taxonomy of fresh water algae).

MARILZA CORDEIRO (phycology, taxonomy of marine algae).

ADOLFO MARTINI (phycology, taxonomy of marine algae).

DOUGLAS A. ZAGO (lichenology, taxonomy of tropical lichens).

OSWALDO ASTORINO (taxonomy of Bryophytes).

Dr. LUIZ F. G. LABOURIAU (physiological ecology, germination, water balance, developmental physiology, particularly of ferns).

GIL M. FELIPPE (physiological ecology).

IVANY M. VÁLLIO (physiological ecology).

MARIA LEA LABOURIAU (physiological ecology).

SÔNIA M. DE CAMPOS (physiological ecology, water balance, dew effect on plants, palynology of Gramineae).

SACHIKO JIMBO (physiological ecology, plant dispersal, germination).

JULIA FRANCESCHI (physiological ecology, physiology of transpiration).

LUIZ GUIMARÃES AZEVEDO (plant geography, vegetation maps, palynology).

RENATO SIQUEIRA JACCOUD (pharmacognosy).

MARINA T. ANDREUCCI (plant anatomy).

ALEXANDRA LOUISA HODGSON (wood anatomy).

JOSÉ FERNANDO B. DE MELLO CAMPOS (plant anatomy).

MOYSÉS KUHLMANN, Director of the Division of the São Paulo Botanical Garden (general plant biology).

PEDRO LUIZ CIANCILLI, Chief of the Section of plant introduction (Pinus).

IRINA SCHEMTSCHUSCHNIKOVA (tropical weeds).

Dr. HAMILTON DIAS BICALHO, Chief of the section of the State Orchid Garden (cytogenetics and taxonomy of Orchidaceae).

HAMILTON J. TARGA (cytogenetics and taxonomy of Orchidaceae).

EDUARDO KÜHN, Chief of the section of Biological and Experimental Stations.

## BRITISH GUIANA

**GEORGETOWN:** *Botanic Garden, Department of Agriculture, Georgetown, British Guiana.*

*Status:* Governmental, Ministry of Agriculture.

## British West Indies

*Area:* 184 ha.  
*Taxa:* 300.  
*Open to the public:* 7 A.M.–6 P.M.  
*Herbarium:* Yes.  
*Greenhouses:* Yes.  
*Publications:* Guidebook.

*Director:* GEORGE E. W. WOLSTENHOLME.

*Staff members:* TWAHIR ALLY.

## BRITISH WEST INDIES

**KINGSTOWN:** *St. Vincent Botanic Gardens*, Kingstown, St. Vincent, **British West Indies**.

*Status:* Governmental.

*Area:* 30 acres; *Long.:* 61° W, *Lat.:* 13° N; *Alt.:* 120–150 ft; *Rainfall:* 85 in; *Temp.:* 92° to 65° F.

*Special:* Hibiscus, Bougainvillea, Ixora.

*Open to the public:* 6 A.M.–7 P.M., daily.

*Herbarium:* None.

*Greenhouses:* None.

*Publications:* Historical booklet.

*Director:* H. S. McCONNIE, Superintendent of Agriculture.

*Staff members:* S. F. PETERS, Foreman in Charge.

**ROSEAU:** *Botanic Gardens*, Roseau, Dominica, **British West Indies**.

*Status:* Governmental.

*Area:* 46 acres; *Long.:* 61° 23' 30" W, *Lat.:* 15° 17' 50" N; *Alt.:* 65 ft.

*Taxa:* Ca. 750; *Special:* Trees, roses, flowering shrubs and palms.

*Open to the public:* 6 A.M.–dark, daily.

*Herbarium:* None.

*Greenhouses:* Service.

*Publications:* Official guide.

*Director:* H. A. L. FRANCIS.

*Staff members:* GEORGE FARLEY, Curator.

S. O. PRINGLE.

J. A. JOHN.

**ST. GEORGE'S:** *Botanic Gardens*, Department of Agriculture, St. George's, Grenada, **British West Indies**.

*Status:* Governmental.

*Area:* 14.1 acres; *Long.:* 61° W, *Lat.:* 12° 3' N; *Alt.:* 25–200 ft.

*Open to the public:* 7:30 A.M.–6:30 P.M., daily.

*Herbarium:* None.

*Greenhouses:* 500 sq. ft.

*Director:* GARTH A. SOUTHWELL.

*Staff members:* NEVILLE BURRIS, Foreman.

## BURMA

**RANGOON:** *The Agri-Horticultural Society of Burma (Kandawgalay)*, Rangoon, **Burma**.

*Status:* Private, aided by Government of Union of Burma, Rangoon Corporation and Board.

*Long.:* 96° 10' E, *Lat.:* 16° 46' N; *Alt.:* 77 ft; *Rainfall:* 103.07 in; *Temp.:* 104° to 77° F.

*Open to the public:* 7 A.M.–11 A.M., 2 P.M.–5:30 P.M., daily.

*Herbarium:* None.

*Greenhouses:* 2.

*Publications:* Annual report.

*Director:* The Hon. Justice U THAUNG SEIN, President.

*Staff members:* Lt. Col. W. CHIANG, Vice President.

U BA GYAN, Secretary and Superintendent.

U HLA TUN AUNG.

## CAMEROONS

**VICTORIA:** *Victoria Botanic Gardens*, Victoria, **S. Cameroons**.

*Status:* Governmental, Department of Agriculture.

*Area:* Ca. 120 acres; *Long.:* 9° 12' 08" E, *Lat.:* 4° 0' 40" N; *Alt.:* 0–300 ft; *Rainfall:* 160–180 in; *Temp.:* 90° to 70° F.

*Special:* Plants formerly of economic importance.

*Open to the public:* Dawn–dusk, daily.

*Herbarium:* In general collection.

*Greenhouses:* 1.

*Publications:* Descriptive booklet, seed lists.

*Director:* J. T. SWARBRICK.

## CANADA

**EDMONTON:** *Botanic Garden and Field Laboratory*, Dept. of Botany, University of Alberta, Edmonton, **Canada**.

*Status:* Affiliated with the University of Alberta.

*Area:* 80 acres; *Long.:* 113° 30' W, *Lat.:* 53° 33' N; *Alt.:* 2,219 ft; *Rainfall:* 17.38 in.

*Herbarium:* None.

*Greenhouses:* None.

## Canada

**Publications:** Seed list, descriptive booklet.

**Director:** Dr. J. H. WHYTE (plant physiology).

**HAMILTON:** *Royal Botanical Gardens*, Hamilton, Ontario, **Canada**.

**Status:** Affiliated with the Board of the Royal Botanical Gardens.

**Area:** 1,900 acres; **Long.:** 79° 53' W, **Lat.:** 43° 15' N; **Alt.:** 246 ft; **Rainfall:** 31 in; **Temp.:** 100° to -10° F.

**Special:** Iris, late flowering tulips, trial plantings of summer annuals.

**Open to the public:** Sunrise-sunset daily.

**Herbarium:** Ca. 300.

**Greenhouses:** None.

**Publications:** Special Bulletins, The Gardens' Bulletin, seed list, descriptive pamphlet.

**Director:** LESLIE LAKING (horticulture, taxonomy).

**Staff members:** JAMES REDMAN, Supervisor (planning, design, plant breeding).

W. J. LAMOUREUX, Conservationist (nature trails, nature interpretation program).

RAY HALWARD, Plant Propagator.

**INDIAN HEAD:** *Forest Nursery Station*, Indian Head, Saskatchewan, **Canada**.

**Status:** Governmental, Department of Agriculture.

**Long.:** 103° 41' W, **Lat.:** 50° 31' N; **Alt.:** 1,936 ft; **Rainfall:** 13.5 in; **Temp.:** 98° to -34° F.

**Taxa:** 100-150.

**Open to the public:** 8 A.M.-5 P.M. daily.

**Herbarium:** None.

**Greenhouses:** 1 display, 1 research.

**Publications:** General and summary reports.

**Director:** Dr. W. H. CRAM (plant breeding).

**Staff members:** Dr. R. GROVER (plant physiology, herbicides).

T. F. SALISBURY, Pathologist (seedbed diseases).

L. O. T. PETERSON, Entomologist (shade tree insects).

M. J. NACY (ornamental plants).

**MACDONALD COLLEGE:** *Morgan Arboretum*, Box 240, Macdonald College, Quebec, **Canada**.

**Status:** Affiliated with the Macdonald College of McGill University.

**Area:** 600 acres; **Long.:** 73° 57' W, **Lat.:** 45° 26' N; **Alt.:** 125-150 ft; **Rainfall:** 40.6 in; **Temp.:** 85° to -30° F.

**Taxa:** Ca. 800; **Special:** Native trees of Canada, especially *Betula* spp.

**Open to the public:** Automobiles 9 A.M.-5 P.M., no restrictions for pedestrians.

**Herbarium:** None.

**Greenhouses:** None.

**Publications:** Descriptive booklet.

**Director:** Dr. W. H. BRITAIN, Curator (silviculture, small native fruits, ornamental horticulture, *Betula*, entomology, landscape architecture).

**Staff members:** A. R. C. JONES (forest management, reforestation).

**MONTREAL:** *Montreal Botanical Garden*, 4101 Sherbrooke St. E., Montreal, Quebec, **Canada**.

**Status:** Municipal.

**Area:** 165 acres; **Long.:** 73° 35' W; **Lat.:** 45° 37' N; **Alt.:** 145 ft; **Rainfall:** 35 in.

**Taxa:** 20,000; **Special:** Economic plants, ferns, cacti, aroids, bromeliads, orchids.

**Open to the public:** 10 A.M.-sunset daily.

**Herbarium:** 4,000.

**Greenhouses:** 9 display, 23 service.

**Publications:** Memoirs of the Montreal Botanic Garden, Bulletin of the Montreal Botanical Garden, Leaflets of the Montreal Botanical Garden, seed list, descriptive booklet.

**Director:** Dr. ANDRÉ CHAMPAGNE.

**Staff members:** HENRY TEUSCHER, Curator (Orchids, begonias, trees and shrubs).

Dr. MARCEL RAYMOND (Cyperaceae of the world, ferns, gesneriads, tropical plants).

**MORDEN:** *Experimental Farm, Research Branch, Canada Department of Agriculture*, Morden, Manitoba, **Canada**.

**Status:** Governmental.

**Area:** 627 acres; **Long.:** 98° 40' W, **Lat.:** 49° 20' N; **Alt.:** 970 ft; **Rainfall:** 15.12 in; **Temp.:** 111.2° to -41.5° F.

**Taxa:** Ca. 3,000; **Special:** *Syringa*, *Malus*, *Prunus*, *Rosa*, *Chrysanthemum*.

**Open to the public:** 8 A.M.-8 P.M.

**Herbarium:** None.

**Greenhouses:** 3 (service).

**Publications:** Progress reports, descriptive booklet.

**Director:** Dr. W. J. MORRISON (cytogenetics).

## Canada

*Staff members:* W. A. CUMMING (ornamentals).

C. R. URE (fruit crops).

**OTTAWA:** *Dominion Arboretum and Botanic Garden, Plant Research Institute, Central Exp. Station, Ottawa, Canada.*

*Status:* Governmental.

*Area:* 65 acres; *Long.:* 75° 43' W, *Lat.:* 45° 24' N; *Alt.:* 260 ft; *Rainfall:* 34.42 in; *Temp.:* 102° to -38° F.

*Special:* Flowering crab apples, lilacs, lilies, hedges.

*Open to the public:* Greenhouses, Monday-Friday 8:30 A.M.-5 P.M.; garden 8:30 A.M.-9 P.M., daily.

*Herbarium:* Included in general herbarium.

*Greenhouses:* 1,600 sq. ft. display, 2,750 sq. ft. service, 30,000 sq. ft. research.

*Publications:* Seed list.

*Director:* Dr. R. A. LUDWIG.

*Staff members:* Dr. A. P. CHAN (greenhouse, ornamental plants).

W. R. OLIVER (ornamentals).

A. R. BUCKLEY (ornamentals).

S. I. KHAN (plant introduction).

Dr. S. H. NELSON (propagation, nursery).

W. J. CODY (herbarium).

J. H. BOYCE (turf).

Dr. J. W. GROVES (mycology).

Dr. J. T. SLYKHUIS (phytopathology).

Dr. R. J. MOORE (cytotaxonomy).

Dr. W. M. BOWDEN (cytotaxonomy).

**VANCOUVER:** *Botanical Garden, University of British Columbia, Vancouver 8, British Columbia, Canada.*

*Status:* Affiliated with University of British Columbia.

*Area:* 600 acres; *Long.:* 123° 10' W, *Lat.:* 49° 11' N; *Alt.:* 300 ft; *Rainfall:* 58 in; *Temp.:* 85° to 11° F.

*Special:* Rhododendrons, trees and shrubs of British Columbia, Japanese garden, rose garden.

*Open to the public:* Monday-Friday 8 A.M.-5 P.M., Saturday 8 A.M.-12 noon.

*Herbarium:* In general herbarium.

*Greenhouses:* 1 display, 2 service.

*Publications:* Seed list.

*Director:* Dr. T. M. C. TAYLOR (taxonomy).

*Staff members:* Dr. J. W. NEILL (landscape design, floriculture).

## CEYLON

**GAMPAHA:** *Botanic Garden, Heneratgoda, Gampaha, Ceylon.*

*Status:* Governmental.

*Area:* 35 acres; *Long.:* 80° E, *Lat.:* 7° 5' N; *Alt.:* 30 ft; *Rainfall:* 93 in; *Temp.:* 91° to 62° F.

*Taxa:* 1,000; *Special:* Rubber, natural jungle.

*Open to the public:* 7 A.M.-6:30 P.M.

*Herbarium:* None.

*Greenhouses:* 1 (display).

*Director:* G. O. W. RANASINGHA (horticulture).

**HAKGALA:** *Botanic Gardens, Hakgala, Ceylon.*

*Status:* Governmental, Department of Agriculture.

*Area:* 75 acres; *Long.:* 81° E, *Lat.:* 7° N; *Alt.:* 5,581 ft; *Rainfall:* 90 in.

*Special:* Conifers, cinnamon, Acacia, Eucalyptus.

*Open to the public:* 6 A.M.-6 P.M. daily.

*Herbarium:* Yes.

*Greenhouses:* Yes.

*Publications:* Illustrated guide book, seed list.

*Director:* A. V. RICHARDS, Department of Agriculture.

*Staff members:* D. M. A. JAYAWEERA (in charge of all botanic gardens in Ceylon).

S. B. TENNEKON, Curator.

**PERADENIYA:** *Royal Botanic Gardens, Peradeniya, Ceylon.*

*Status:* Governmental.

*Area:* 147 acres; *Long.:* 80° 35' E, *Lat.:* 7° 17' N; *Alt.:* 1,550 ft; *Rainfall:* 119 in.

*Taxa:* 4,000; *Special:* Orchids, palms, gymnosperms, flowering trees.

*Open to the public:* 7 A.M.-6 P.M., daily.

*Herbarium:* 3,000.

*Greenhouses:* 3 display, 2 service.

*Publications:* Seed lists, illustrated guide.

*Director:* D. M. A. JAYAWEERA (floral morphology and orchidology).

*Staff members:* D. T. EKANAYAKE (ecology of Patana).

S. B. TENNEKON (ferns).