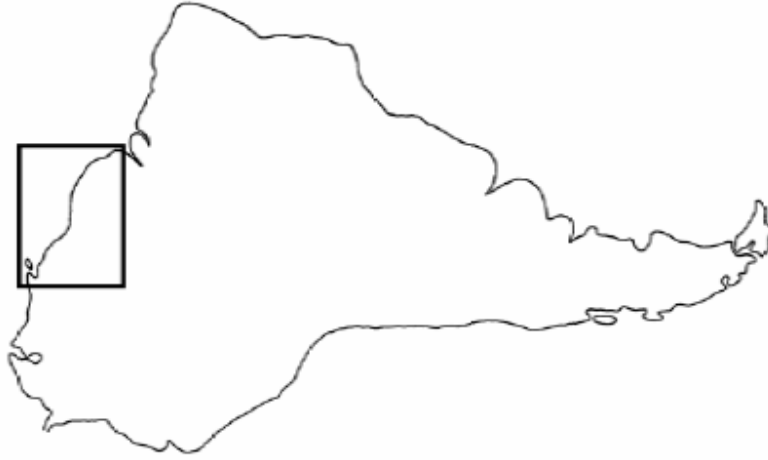


**FLORA OF THE GUIANAS
NEWSLETTER N° 16
SPECIAL WORKSHOP ISSUE**



The Flora of the Guianas is a co-operative project of the Botanischer Garten and Botanisches Museum Berlin-Dahlem, Berlin; Institut de Recherche pour le Développement, Cayenne; University of Guyana, Georgetown; Herbarium, Royal Botanic Gardens, Kew; New York Botanical Garden, New York; National Herbarium, University of Suriname, Paramaribo; Muséum National d'Histoire Naturelle, Paris; Nationaal Herbarium Nederland, Leiden branch, Leiden; and Systematic Biology, Botany Section, Smithsonian, Institution, Washington, D.C.

For further information see the website

www.bio.uu.nl/~herba/Guyana/Flora_of_the_Guianas/index.htm

Flora of the Guianas Newsletter 15 (April 2009)

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Paramaribo, June 2008

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Preface

The present issue of the Flora of the Guianas Newsletter is a report of the Project meeting in Paramaribo in June 2008 alongside the Association of Tropical Botany congress. This report includes the minutes of the board meeting, reports of the participating institutions, and abstracts of lectures held during the symposium.

The editor



Participants of the 2008 Symposium (photo Odile Poncy)

FLORA OF THE GUIANAS MEETING, PARAMARIBO, 11 JUNE 2008

1. THE MEETING PROGRAM

WEDNESDAY 11 June

Board Meeting [minutes see below]

- Agenda:
1. Participants/Apologies
 2. Opening
 3. Report of the previous meeting in Berlin 2008 (see Newsletter no. 15)
 4. Board personnel changes
 5. Report by the executive editor / publication affairs
 6. State of affairs at the participating institutions (including closure of U)
 7. Publishing affairs
 8. Next meeting
 9. Other business
 10. Closing

Workshop

2. MINUTES OF THE ADVISORY BOARD MEETING

11 June 2008

2.1. Participants

Pedro Acevedo (US), Marion Jansen-Jacobs (U), Eve Lucas (K), Scott Mori (NY), Odile Poncy (Paris), Caroline Rahan-Chin (BBS), Hans ter Steege (U), Tinde van Andel (U).

Apologies: Harrie Sipman (B), Phillip da Silva (BRG), Sophie Gonzalez (CAY),

2.2. Opening

Caroline Rahan-Chin (BBS) welcomed delegates; Eve Lucas thanked Caroline for organising the meeting. Eve thanked Harrie Sipman for producing the Flora of the Guianas Newsletter No. 15 from the 2006 workshop in Berlin; these were agreed to be accurate with no corrections necessary.

2.3. Board personnel changes

Scott Mori regretted that he would no longer be able to serve on the FOG Board as representative of the New York Botanical Garden and suggested he may be replaced by Benjamin Torke. Eve thanked Scott on behalf of the board for all his input and service to the FOG to date. Subsequent to the meeting, Ben Torke was invited and agreed to take up this post. Also subsequent to the meeting, Hans ter Steege resigned as representative from U, he is replaced by Tinde van Andel; Sophie Gonzalez resigned from CAY and has been replaced by Piero Delprete. The board extends sincere thanks to Hans and Sophie for their contributions to the Flora.

2.4. Report by the executive editor

New publications:

- 2007: Series A, Fasc. 24, pp. 214: 7. Hernandiaceae by A.S.J. van Proosdij /
8. Chloranthaceae by C.A. Todzia / 9. Piperaceae by A.R.A. Görts van Rijn, including Wood & Timber by A.M.W. Mennega and J. Koek-Noorman

2007: Series A, Fasc. 25, pp. 149: 105a. Loranthaceae / 105b. Eremolepidaceae / 106. Viscaceae by J. Kuijt

In press:

2008: Series A, Fasc. 26: 155. Gesneriaceae by L.E. Skog & C. Feuillet

In the editorial process:

Series A, Fasc. 27: 71. Cyrillaceae by J.C. Yesilyurt/ 79. Theophrastaceae by B. Ståhl / 86. Rhabdodendraceae by G.T. Prance / 90. Proteaceae? by G.T. Prance / 100. Combretaceae by C.A. Stace / 113. Dichapetalaceae by G.T. Prance / 167. Limnocharitaceae and 168. Alismataceae by R.R. Haynes & L.B. Holm-Nielsen, including Wood and Timber by F. Lens, I. Poole and J. Koek-Noorman.

Series A, Fasc. 28: 87. Mimosaceae by R.C. Barneby, J.W. Grimes, O. Ponce & G.P. Lewis.

Series C, Fasc. 2: Musci 4 by J. Florschütz-de Waard & I. Bruggeman-Nanninga & R.Zielman.

Submitted manuscripts:

163. Rubiaceae part I, A-L by P. Delprete (ca. 250 pages)
Wood anatomy of the Rubiaceae by I. Poole, J. Koek-Noorman, L. Westra & P.G. Delprete (ca. 55 pages text + 67 pages illustrations).
41. Ochnaceae by C. Sastre (not complete).
63. Caricaceae
+ several manuscripts from R.A. DeFilipps without illustrations: 14. Ceratophyllaceae / 57. Lacistemataceae / 83. Crassulaceae / 120. Ixonanthaceae / 199. Liliaceae / 199a. Aloaceae / 201. Velloziaceae / 202. Agavaceae / 203. Taccaceae / 204. Smilacaceae

Comments:

Rubiaceae (P. Delprete), can be published in 3 parts: first A-L, submitted in 2007; second M-Z, expected 2009. The wood chapter is submitted in 2008 and can fill a third part (more than 100 pages).

See for complete overview the website of the Flora of the Guianas:

www.bio.uu.nl/~herba/Guyana/Flora_of_the_Guianas/index.htm

2.5. State of affairs at the participating institutions

CAY - Report on the activities of IRD, Herbar de Guyane, AUG 2006 – JUN 2008

FLORISTIC TREATMENTS

ARECACEAE - Coord. J.-J. de GRANVILLE, 8 contributors, 1 fascicle, 95 taxa listed - and CARYOCARACEAE - J.-J. de GRANVILLE (CAY) – Little progress since the last meeting. Final list of palms settled per country, one new species published : *Bactris nancibaensis*.

PTERIDOPHYTES - Coord. G. CREMERS (P), 12 contributors, 9 fascicles, 630 taxa - No new fascicle has been published since the last meeting. The 6 fascicles still to be published are:

- Fasc. 1 (Generalities, Dicksoniaceae, Marattiaceae, Ophioglossaceae) : Marattiaceae. Although M. CHRISTENHUSZ (TUR) has published his thesis on the genus *Danaea*, the general revision of the family is still in progress and is expected to be completed by 2008 or 2009.
- Fasc. 2 (Cyathaceae, Gleicheniaceae, Lygodiaceae, Marsileaceae, Metaxiaceae, Schizaeaceae). Cyathaceae: the general work has not yet been carried out, but a few issues have been solved. Gleicheniaceae : this family is waiting for the revision in Flora Neotropica by J. GONZALES (NY). Schizaeaceae : waiting for revision, currently in progress, of the genus *Anemia* by J. T. MICKEL (NY). Other families are completed.
- Fasc. 5 (Pteridaceae, Vittariaceae) : Pteridaceae : This family is now in progress as the material from CAY in loan at B for more than 10 years has been sent back to CAY. M. BOUDRIE and G. CREMERS will deal with the *Adiantum* "complex" and prepare the manuscript, in collaboration with J. PRADO (SP), from Sao Paolo and B. ZIMMER (B). A new *Adiantum* species has been published. In addition, the genus *Doryopteris* from the Neotropics is currently under revision by J. YESILYURT (K).
- Fasc. 7 (Aspleniaceae, Blechnaceae, Elaphoglossaceae, Lomariopsidaceae): All families are almost completed by M. BOUDRIE and G. CREMERS, as well as by J. T. MICKEL (NY) for the Elaphoglossaceae. The completion of this fascicle is expected by the end of 2008., as texts have been already reviewed by Neotropical pteridologists. Drawings are in progress.

● Fasc. 8 (Grammitidaceae, Polypodiaceae): Grammitidaceae: the texts of this family are currently in progress by C. KELLOFF (US) since 2006.

Polypodiaceae: Still under compilation, due to a recent revision on Neotropical Polypodiaceae.

● Fasc. 9 (Azollaceae, Isoetaceae, Lycopodiaceae, Psilotaceae, Salviniaceae, Selaginellaceae): Isoetaceae: This family is still under treatment, but W. C. TAYLOR (MIL) has stopped any further work on Isoetes. The publication on the French Guiana plants is still in progress. Lycopodiaceae: The treatment of this family is almost completed by B. ØLLGAARD (AAU). Selaginellaceae: currently studied in collaboration with M. BOUDRIE. Two new taxa published in 2007.

● Since the first three fascicles have been published, many new taxa have been recorded in French Guiana as well as in Guyana. In consequence, G. CREMERS has planned to prepare an addendum.

HUMIRIACEAE (22 taxa), HUGONIACEAE (4 taxa), IXONANTHACEAE (3 taxa in the Guianas s.s.; 6 taxa if considering the bordering areas) - D. SABATIER, IRD Montpellier : No progress since the last meeting.

TURNERACEAE - M. HOFF (STR), (19 taxa). No progress since the last meeting.

THE «AUBLET2» DATABASE

More than 6 000 collections, mostly from French Guiana were recorded in the database during the period (C. DELNATTE)

The AUBLET2 database is becoming richer from year to year with

bibliography on the flora of the Guianas. A new interface allows recording of references in literature, cited specimens, vernacular names, herbaria of deposit of the types.

Nearly 500 photographic images of living plants related to herbarium specimens, as well as images of the type specimens have been integrated to the database and can be accessed online.

Verification of all the herbarium specimens and the corresponding records in the database, a job which started in 2001, is regularly progressing. So far, all the collections of Pteridophytes as well as 25 families of Spermatophytes (8 since the last meeting) have been checked and completed : Acanthaceae, Agavaceae, Alzooaceae, Alismataceae, Amaranthaceae, Anacardiaceae, Annonaceae, Apiaceae, Cabombaceae, Caricaceae, Casuarinaceae, Cyclanthaceae, Ebenaceae, Lecythidaceae, Marantaceae, Melastomataceae, Monimiaceae, Piperaceae, Rapateaceae, Rubiaceae, Rutaceae, Sapindaceae, Simaroubaceae, Solanaceae, Violaceae.

EXPLORATION PROGRAM

A thousand and a half or so herbarium numbers have been collected in the period 2006-2008 during botanical surveys, mostly in the following areas :

1. Coastal area of Fr. Guiana (Karouabo, Kanawa, savannas between Kourou and Sinnamary)
2. Tumuc-Humac range ("Borne 1") Fr. Guiana / Brazil : Sept.-Oct. 2006
3. Bakhuis Mts, BMS Bauxite mining concession, Suriname : Nov.- Dec. 2006
4. High Wanapi river area , Fr. Guiana : March 2007
5. Railroad Apoera – Bakhuis, Suriname : May 2007
6. Arawa Mts, Fr. Guiana : June-July 2007
7. Kotika Mts, Fr. Guiana : August-Sept. 2007,
8. Emerillons Mts. range, Fr. Guiana : Oct-Nov. 2007
9. Grand Croissant and Mt Chauve, Fr. Guiana (granite outcrops) : Nov. 2007
10. « Savane-Roche Virginie » (granite outcrop), Fr. Guiana : March 2008
11. Dékou-Dékou Mts, Fr. Guiana : May-June 2008

MAIN SCIENTIFIC PROGRAMS AND RESEARCH

Bakhuis Mountains (Suriname) flora & vegetation study in the frame of the Environment Social and Impact Assessment Study for a bauxite mining project.

Program Ecosystèmes Tropicaux 2005

"BRIDGE" project (Bridging Information on tree Diversity in French Guiana and a test of Ecological theories)

"XYLOTECH" project (Enhancing the value of sawmill waste and of underexploited forest products in French Guiana - estimation of molecular extraction potential for the industry)

"CAREFOR" project (Caractériser l'écosystème forestier pour mieux le gérer)

VISITING SCIENTISTS

From August 2006 to June 2008, about 350 persons visited the Herbarium. A hundred or so are scientists who carried out research on the flora of the Guianas; about one third of them came 2 or 3 times a year. Visitors were from the following institutions: P, MNHN (France), U (Netherlands), NY (U.S.A.), INPA (Manaus, Brazil), IRD (France), CIRAD (France), INRA (France), CEFE / CNRS Montpellier (France), CNRS (France), ENGREF (France), ONF (Office National des Forêts, France),

MISCELLANEOUS

- A new permanent position at CAY has been obtained from IRD in 2006, in expectation of J.-J. de Granville's retirement in 2008 : a scientist, in charge

of botanical research, appointed in 2008, will be posted to Cayenne before the end of the year.

Note: Since the 2008 meeting, this post has been filled by Piero Delprete.

- César Delnatte is carrying out doctoral research at CAY under J.-J. de Granville's responsibility, from 2006 to 2010, into the subject "1. Study on floristic diversity from the Aublet2 database; 2. Study of French Guiana submontane flora and vegetation from the Areaceae, Melastomataceae and Pteridophytes".
- The Herbar de Guyane became a GBIF (Global Biodiversity Information Facility) data provider. Sophie Gonzalez attended the GBIF / ABBIF meetings in São-Paulo (May 2007) and Paris (July 2007).
- The Herbar de Guyane was requested as a technical adviser for improving the national herbarium of Haiti (digitizing collection project) and building a national herbarium in Laos.
- A poster and a booklet on protected plant species in French Guiana, carried out and drawn by B. Bordenave was published by the DIREN (Direction Régionale de l'Environnement)
- In 2007 and 2008, 3 short documentaries were made in the herbarium for French TV broadcastings
- In October 2006, an impact assessment study of vegetation types and floristic inventory on the road section to the project of bridge on the Oyapock river was carried out by Sophie Gonzalez in the frame of the.
- In October 2007, J.-J. de Granville attended a symposium on development and conservation organized by the "Académie des Technologies" in Cayenne. He gave a lecture on protected areas and protected plant species in French Guiana.
- In January 2008, J.-J. de Granville and Sophie Gonzalez attended a symposium on conservation and enhancing the value of the flora in French Guiana, organized by the "Parc Naturel Régional de Guyane". They gave lectures on the "Herbier de Guyane" and a review and assessment of plant conservation in French Guiana.

BRG. - University of Guyana, Georgetown, Guyana: FLORA OF THE GUIANAS REPORT, SEPTEMBER 2006-JUNE 2008 (subsequently sent by Phillip da Silva)

INTRODUCTION

During the reporting period specific activities for the Flora of the Guianas programme has been limited. This report is a synopsis of the work in relation to herbarium activities that has been ongoing at the University of Guyana for the past two years. The herbarium continued to suffer from shortage of staff and this has severely limited its activities. In addition funding to conduct field collecting expeditions were also limited. Hence the herbarium relied on collaborative activities to add to its collections.

Staff members engaged in the day to day oversight of activities in the herbaria at the University of Guyana were Phillip Da Silva, Ravina Williams and Kaslyn Holder-Collins.

Ms. Holder Collins participated in a training programme in Herbarium Techniques in November 2007. This training programme was hosted by the University of the West Indies and done in collaboration with Royal Botanical gardens Kew.

COLLECTING TRIPS

A number of flora collecting trips were conducted by foreign scientists and researchers to various locations in the country. Most of these collectors either worked through collaborative arrangements with the Smithsonian Institution or through their own institutions and the University of Guyana.

The Centre for the Study of Biological Diversity (CSBD) continued to offer support to overseas collectors and scientists in terms of facilitating the permitting process at the Environmental Protection Agency and identification of specimen whenever the need arose.

STORAGE AND CARE OF SPECIMEN

Work continued in the sorting and arrangement for storage of specimen. Invaluable support has been forthcoming from the Smithsonian Institution in this regard. They must be commended for their continuous donation of materials for mounting and for the staff expertise, especially in the persons of Dr. Viki Funk and Dr. Carol Keloff. Through their support the work on plant

collections and often times faunal collections at the Centre for the Study of Biological Diversity (CSBD) has been ongoing.

At the herbarium at the CSBD mounting of plant specimen by students continued and formed the main activity of specimen sorting. Students have continued to show interest in the Internship programme where they are being trained in herbarium techniques. This initiative of the herbarium and the CSBD has allowed for a continuous programme for the mounting of specimen.

JENMAN HERBARIUM PROJECT

This project which was a major focus of activity was completed in 2007. It was supported by Conservation International and sought to provide an electronic inventory and database of the collections in the Jenman Herbarium. Now that the electronic databasing of specimen is complete the next phase of analysing the database will begin shortly.

RESEARCH

For the period 2006 – 2008 the Jenman herbarium and the CSBD herbarium facilitated staff and student research. The following projects were completed:

- Saul, G, Williams, R and Da Silva, P (2006): A database inventory and analysis of floral collections from Region 7 in the Jenman and CSBD herbaria.
- Thierens, C and Da Silva, P (2007): Guyana's Lichens: An initial database and analysis of collections in the Jenman and CSBD herbaria.
- Smartt, Forrest and Da Silva (2007): An investigation of the antimicrobial properties of two Guyanese Euphorbiaceae plant species. *Cassava mama* (*Euphorbia cotinifolia*) and White Iron Mary (*Chaetocarpus schomburgkianus*)
- Samaroo, Yuri and Da Silva (2007): An analysis of Antimicrobial and antifungal properties of two mangrove species

STATUS OF SPECIMENS IN COLLECTION

The majority of plant specimens housed in the Jenman Collection are in a fairly good condition in terms of preservation and herbarium labels. The inactive state of the herbarium coupled by the lack of an attached Scientific Officer to some extent has contributed to the lack of update in the following areas:

- information on herbarium labels,
- classification of plant species and
- identification of plant species.
- mounting of specimens especially those from the Dutch Collection.

The plant specimens housed in the CSBD herbarium are in very good condition in terms of preservation and herbarium labels. These are also stored in a temperature controlled environment.

CLOSING REMARKS

The Flora of the Guianas project is still a useful initiative for the three Guianas in respect of taxonomically studying and documenting the plant species of the region. It has led to a better understanding of the flora of the region and also of local scenarios. However, in respect of capacity building, both human and institutional, it still can focus a bit on these two aspects. These are important elements in the sustainability of the outputs and the significance of the work that has been achieved.

BBS. - National Herbarium of Suriname, Anton de Kom University of Suriname, Paramaribo, Suriname: Report of activities related to the FoG, 2006-2008

No report was available at the time of going to press.

B. - Botanischer Garten und Botanisches Museum Berlin-Dahlem, 2006-2008

General situation

During this period the activities for the Flora of the Guianas have been very limited, due to changes in the staff and competing new fields of activities. For details see the report for 2001-2002. Meanwhile our general herbarium continues to grow and is now estimated to contain about 3.5 million specimens. The web presentation of the collections is equally increasing and, e.g., pictures of some 70.000 specimens are available in the internet.

Since March 1st, 2008, Prof. Dr. Thomas Borsch has been appointed as new Director of both the Botanical Garden & Museum and the Institute of Systematic Botany and Plant Geography, and interest in the Neotropical flora is increasing.

Flora treatments (Cryptogams):

Lichens:

- Parmeliaceae: the preparation of backlog collections needed for the preparation of this volume has been resumed and completion of the manuscript is expected for next year.

-Thelethremataceae: the preparation of backlog collections essential for this volume has been resumed.

- Cladoniaceae: preparation of the manuscript has been resumed and it is expected to be ready before the end of this year.

Ferns:

Brigitte Zimmer is cooperating with George Cremers and Michel Boudrie to finish the outstanding fascicles of pteridophytes. She provided 680 digital images of CAY specimens of Adiantum and published 2007 in Willdenowia 37 the new species *Adiantum kramerii* from French Guiana.

Flora treatments (Phanerogams):

Compositae: Contribution by H. W. Lack (*Inuleae* s.l., *Tageteae* and *Lactuceae*), status: preliminary.

Menispermaceae: Contribution by Paul Hiepko, status: in progress.

Zygophyllaceae: Contribution by Beat E. Leuenberger, status: in progress. He still welcomes material, particularly of *Tribulus* and *Kallstroemia* from the Guianas because the recent Flora of the Venezuelan Guayana (2005) lists an introduced taxon (*Tribulus zeyheri* subsp. *macranthus*) while there is hitherto only a single confirmed record of *T. cistoides* from Guyana.

Cactaceae: Further material (incl. digital photo records with precise locality data) is welcome for study by Beat Leuenberger.

K. - Royal Botanic Gardens, Kew 2006-2008

Flora treatments

Some progress has been made since the 2006 meeting but much is unchanged. The status of the following families is as follows:

- Labiatae (R. M. Harley) – Author retired, current commitment to Flora unknown.
- Lentibulariaceae (P. Taylor) – Author will not continue; please remove from list and make available to other authors.
- Meliaceae (N. Biggs, T. D. Pennington); complete, ms being edited. The Sapotaceae (S. Edwards, T. D. Pennington) manuscript (c. 115 species, 10 genera) is underway with roughly half of Pouteria (c. 40 species) completed and with a tentative completion date of 2009
- Myrtaceae (Lucas, Nic Lughadha et al) – It is anticipated that *Myrcia* and related genera will be commenced in the twelve months subsequent to this report.
- Cyperaceae (D.A.Simpson) – contributing Mapania to the family account being compiled at US

Flora publication at Kew

Since the last FoG meeting:

- Fascicle 24 (Piperaceae); received July 2006; published June 2007.
- Fascicle 25 (Eremolepidaceae, Loranthaceae and Viscaceae); received March 2007; published October 2007.
- Fascicle 26 (Gesneriaceae); received July 2008; published September 2008
- Fascicle 27 (Cyrillaceae etc.); received December 2008; in press.

Discussion regarding the marketing of the FoG took place in early 2008; it was agreed that future fascicles would be sent for review in selected South American, North American and European journals. It is hoped that this will publicise the Flora and increase sales.

Efforts are to be increased to take and sell copies of the Flora at South American botanical meetings. A scheme of this nature resulted in the sale of some 12 volumes at the 2008 meeting. Copies will be on sale at the next two Brazilian Botanical Congresses.

NY. - The New York Botanical Garden 2006-2008

A number of changes have taken place at The New York Botanical since the last meeting of the Board in Berlin in August 2006.

1. Dr. Jim Miller has been appointed as the Dean and Vice President of Science. Miller is a specialist in Boraginaceae, has worked extensively in Madagascar, has done a great deal of research on economic botany, is an avid conservationist, and formerly directed William C. Brown Center for Plant Genetics Resources at the Missouri Botanical Garden.
2. Dr. Douglas Daly (specialist in Burseraceae) is the new Director of the Institute of Systematic botany.
3. The Garden has established a program in plant genomics headed by Dr. Amy Litt. The program consists of three full-time curators.
4. Two new curators have been hired as part of the Institute of Systematic Botany: Dr. Ben Torke, specialist in Swartzia (Fabaceae) and Dr. Paola Pedraza (specialist in Ericaceae).
5. Dr. James L. Luteyn (specialist in Ericaceae) retired in October 2007. He now lives on Beaver Island, Michigan.
6. Dr. Ken Cameron (specialist in Orchids) moved to the University of Wisconsin where he holds the position formerly held by Paul Berry. His replacement has not yet been announced.
7. As a result of the Garden's new seven-year planning process, it has committed to establishing a conservation office which will comprise a combination of core staff conservation officers, other Garden staff with conservation research interests, and research associates from partner institutions.

Flora of the Guianas Activity at NYBG

NYBG will appoint a replacement for me as representative to the Flora of the Guianas as soon as the newly hired curators are in place.

Doug Daly (Burseraceae for 2010) and Michael Nee (Solanaceae with no date stipulated) have indicated that they are still interested in preparing treatments

for the Flora of the Guianas. Noel Holmgren (Scrophulariaceae sensu lato) is now retired but continues with active research on the Intermountain Flora. He is willing to pass on his descriptions and nomenclatural decisions to another researcher if there is interest but if nobody volunteers to take up the family he wants to be kept on the list. If kept on the list, it is not likely that he will be able to provide a manuscript within the next three years. Wray Thomas (Simaroubaceae) is still interested in preparing the Picramniaceae, Simarubaceae, and the Surianaceae.

P. - Muséum National d'Histoire Naturelle 2006-2008

General situation at P

The situation at P is still critical in terms of scientific as well as technical staff, the present scientific activity focusing mainly on New Caledonia and Madagascar with an effort to new commitments in Africa. There is little hope that additional staff will be available for taxonomic research in the Guianas in the next future.

The important projects that will highly improve the collections are progressing:

Renovation of the Herbarium:

A big collection site started this spring, aiming to mounting and sorting the entire backlog (ca 1 M specimens), supported by a special funding over the next two years. This program will employ up to 30 people, and operates in an ample work space refurbished on purpose for the duration of the renovation of the building by itself.

The architects were hired January 2007, and the studies will be soon completed and the works should start in early 2009, and last for 4 years (compactors in all 3 herbarium galleries, refurbishment of technical and research areas, conservation –air-conditioning- equipments).

LAPI:

After having participated in the African Plants Initiative funded by the Mellon Foundation, P is now involved in the Latin America Plant Initiative.

Flora treatments

Ochnaceae (C. Sastre): ms submitted by the end of 2006 (*Ouratea* separated). First comments by Marion. No referring process. Illustrations submitted June 2008.

Apocynaceae (L. Allorge): status discussed with Marion at U May 2008.

Monimiaceae (M. Pignal & J. Jérémie): same status as in 2006, Marc plans to complete it by the end of 2008 - the treatment needs updating according to

the recent issue in *Fl. Neotropica* (Renner, 2005). Illustrations are ready for all species from the Guianas.

Leguminosae-Mimosoideae (R. Barneby, J. Grimes & O. Ponce): ms ready for publishing, thanks to editing support by Kew (G. Lewis and E. Lucas)
Cyclanthaceae (L. Barrabé & O. Ponce): no progress (treatment almost completed waiting for format and English corrections; one new species to be published)

Other publications

Ponce O. 2007. A new species of *Inga* Mill. (Fabaceae, Mimosoideae) from the Guianas. *Adansonia*, ser. 3, 29(2):249-254

Sastre C. 2007. Six nouvelles espèces d'*Ouratea* (Ochnaceae) des Guyanes. *Adansonia*, sér. 3, 29(1) :77-91.

U. - Report Nationaal Herbarium Nederland, Utrecht; 2006 – 2008

General

The project 'The databases of life', which started in 2005 was completed successfully in 2006. This project, funded through NWO-investment subsidies (known as NWO-Groot), is a collaboration of ZMA, Naturalis, CMS and NHN. At NHN-U the focus of this project are all collections from the Guianas, which by the end of 2006 (115,000 specimens) had been photographed and inserted in the NHN database.

Marion Jansen-Jacobs, editor of the Flora of the Guianas retired April 2006, but she will continue to work as editor in the year to come.

The year 2007 was the last year NHN-Utrecht was part of the NHN. Due to continuous budget cuts the University of Utrecht decided in 2003 to discontinue the Chairgroup Plant Systematics and to divest the Herbarium. Effective January 1, 2008, the Herbarium was officially closed for the public. Preparations to actually close the Herbarium will take until mid 2008, however. The editorial office will stay in Utrecht for the moment and be housed in the Botanic Gardens.

Taxonomic research for Flora of the Guianas

Annonaceae: Prof. P.J.M. Maas and co-workers continued the taxonomic revision of this family. Mr. U. Scharf (Leipzig), a regular guest in U, continued to work on the species of *Guatteria* of the Guianas.

Bromeliaceae: Mr. E.J. Gouda (Utrecht Botanical Gardens) continued his studies on *Pitcairnioideae*.

Bryophytes: Ms. J. Florschütz-de Waard finished the manuscript. Ms. M.A. Bruggeman-Nannenga and R. Zielman made contributions to it. The manuscript has been reviewed, corrected by the authors, and back at the editorial office now.

Gentianaceae: The treatment of this family was continued by Prof. P.J.M.

Maas, Ms. H. Maas-van de Kamer and Ms. M.J. Jansen-Jacobs, in close cooperation with Dr. L. Struwe (Rutgers University, New Brunswick, NJ, herbarium CRHB) and co-workers.

Marograviaceae: Dr. A.C. de Roon and Dr. S. Dressler (Forschungsinstitut Senckenberg, Frankfurt, Germany) continued working on the treatment of this family.

Piperaceae: The manuscript of Ms. A.R.A. Görtts-van Rijn was published in 2007, together with the Hernandiaceae by A.S.J. van Proosdij and Wood and Timber by A.M.W. Mennega and J. Koek-Noorman.

Rubiaceae: The manuscript on Wood and Timber was finished in 2008 by I. Poole, J. Koek-Noorman, L. Westra & P.G. Delprete (ca. 55 pages text + 67 pages illustrations).

Editorial activities mainly focused on:

fasc. 25 with the Eremolepidaceae, Loranthaceae, Viscaceae (published in 2007),
fasc. 26 with Gesneriaceae (in press 2008),
fasc. 27 with Cyrtillaceae, Theophrastaceae, Rhabdodendraceae, Proteaceae, Combretaceae, Dichapetalaceae, Limnocharitaceae and Alismataceae, including a chapter on Wood and Timber (to be published in 2009).
(For a complete overview see the Report of the executive editor, May 2008).

Other FoG related research at U.

Tinde van Andel continued her postdoc project 'Medicinal plants of Suriname: changes in plant use after migration to the Netherlands'. Her research aims to clarify the role medicinal plants play in the traditional health care of various ethnic groups in Paramaribo and to assess the principal factors influencing people's choice to use traditional medicine (in both Suriname and the Netherlands). How does medicinal plant use change after migration? In the framework of the Neutrality, Ecology and Tree diversity in the Guianas project, Olaf Banki conducted fieldwork in Guyana and Suriname between March and September 2006. In Guyana 12 1-ha plots were (re-)inventoried in mature forest on brown and white sand soils, and two plots in submontane savannah forest. This was carried out in the Mabura Hill Forest Reserve, the Pibiri Forest Reserve, in Iwokrama and in the vicinity of the Forest Training Centre at Manaka Essequeibo/Cuyuni region. In the Pibiri Forest Reserve the growth of 3 ha of trees was measured to establish the effect of drought in recent years. The fieldwork in Guyana was conducted with the Guyana Forestry Commission. In Suriname two brown sand plots were (re)inventoried. Extra plant collections were taken in Suriname on white and brown sands and on laterite soils to improve the connection of local tree names and scientific names. Fieldwork in Suriname was carried out with CELOS. Paddy Haripersaud continued to work on the databases for her PhD project. The work included georeferencing and properly checking names for the c. 115,000 specimens that were entered at the Utrecht Herbarium during the NWO-groot project "the Databases of Life. Data analysis started in 2007.

Selected publications 2006 – 2007

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Jansen-Jacobs, M.J. (Ed.) (2007). *Flora of the Guianas 24*. Royal Botanic Gardens, Kew. ISBN 978 1 84246 184 6.

Jansen-Jacobs, M.J. (Ed.) (2007). *Flora of the Guianas 25*. Royal Botanic Gardens, Kew. ISBN 978 1 84246 213 3.

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- Kraetzer, C., Enting, E., Brouwer, Y., Andel, T.R. van, Molenaar, P., Mulder, H. & A. Veenendaal. (2007). Kwalen en kruiden: het gebruik van geneeskrachtige kruiden en huismiddeltjes bij alledaagse kwalen. Gemeente Den Haag, Dienst OCW, Den Haag.
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US. - United States National Herbarium 2006-2008

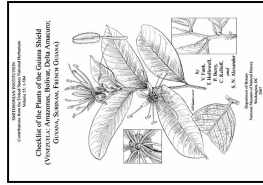
1. ACTIVITIES BY THE BIOLOGICAL DIVERSITY OF THE GUYANA SHIELD PROGRAM (BDG).

The Database: Bar-coding of the plant specimens in the US National Herbarium continues with 5814 (2310 colick + 3504 BDG) records added to the database in 2007. Currently, the total number of records is 161,108 (53556 BDG collections, 98377 historical specimens, 9175 misc. collections) all data based and bar coded by BDG.

Publications: 1. A Field Checklist of the Birds of Guyana, 2nd Edition. (Braun, M.J, D.W. Finch, M.B. Robbins and B.K. Schmidt. 2007) was published. It contains 814 bird species that have been documented as occurring in Guyana. It is aimed at a general audience and is set up for bird watchers to be able to check off the species that they see.



2. Checklist of the Plants of the Guiana Shield (Funk, V., T. Hollowell, P. Berry, C. Kelloff, and S.N. Alexander, 2007) was published after a delay of a year because of the departure of our database manager. It covers all vascular plants known to occur in the Guiana Shield region of northeastern South America. It is the product of the combined efforts of two research initiatives, the Smithsonian Institution's Biological Diversity of the Guiana Shield Program (BDG) and Missouri Botanical Garden's Flora of the Venezuelan Guayana. The President of the Missouri Botanical Garden, Dr. Peter H. Raven, wrote the foreword.



3. The Checklist of the Ferns, Fern Allies, and Flowering Plants of Kaieteur National Park, Guyana is nearly finished and will be published during the summer of 2008. This checklist covers all vascular plants known to occur in the Guyana's only national park, Kaieteur. It includes 147 families and 1409 taxa, about 16% of the total number of taxa recorded for the Guianas (Hollowell et al. 2007).

Website development: The BDG Program is working to make its data available to the scientific community. Several years ago the program lost its database manager, Tom Hollowell, and the money for his salary disappeared into the general museum coffers. At that point the efforts to make the data public stalled. In October 2007 BDG hired Eduardo Garcia Millagros as a part-time contractor to georeference specimens from the Guiana Shield region of South America found in the U.S. National Herbarium type collection. These collections are being mapped using ArcMap and then displayed on Google Earth as placemarks. The project, Georeferencing Plants of the Guiana Shield: US Types, displays in Google Earth and Google Maps the geographical location of the plant types housed in the US National Herbarium. The type specimens were originally collected on the Guiana Shield, sometimes by BDG staff. By March 2008 the site will include the Type collections of plants collected on the Guiana Shield (in Guyana, Suriname, or French Guiana) and housed at the US National Herbarium (ca. 1400 specimens). By the end of June the placemarks for the Venezuelan part of the Guiana Shield will be available (ca. 1900 specimens). This website is available now on the Department of Botany public website (<http://botany.si.edu/bdg/georeferencing.cfm>). The cost of a contractor to work on this project will have a negative impact on the ability of BDG to collect plants in 2008.

Plant Collecting: During 2007, despite a lower budget, BDG was able to once again have a 3 month resident collector for plants in Guyana. Dr. Karen M. Redden is a postdoctoral fellow for Dr. Pat Herendeen at George Washington University. Dr. Herendeen was interested in obtaining collections from the Guiana Shield area so we agreed that he would pay Dr. Redden's salary from his NSF grant and BDG would pay the field expenses. Karen has made about six expeditions in Venezuela and Guyana and this year was able to get into French Guiana before returning to Guyana for a final field trip. She has made about 935 collections this year, most with silica collected leaves for DNA work. We are using the BDG data base to determine potential collecting sites so we can test the "survey gap analysis" method. Dr. Redden and Dr. Ken Wurdack are planning another trip to the area just south of the CI concession in 2008.

Specimens Processed in 2007:

Specimens determined: 1,339
Specimens sent as gifts/loans for determination: 350
Duplicates sent out as exchange: 5,143

Returned to the host country: Guyana: 925; Surinam: 1426; French Guiana: 62;
New collections: 935 single numbers, excluding duplicate sheets (new collections)
Sheets bar coded and inserted into the US National Herbarium: 3,504 (newly mounted)
Sheets that have been inventoried and bar coded: 2,310 (historical collections from US)
Total plant specimens collected for 2007: approximately 935 (3,750 sheets).

Expeditions in 2007:

Plants: Guyana

Karen Redden (Post-doc, GWU), plant number series: (5077 – 6010)
Conservation International concession on the Essequibo River. Warashema Mt. Range, Daniel Watusi's mining camp, Mazaruni River. Apaikwa, Mearmu Mt., Meamu River, Guyana. With P. Benjamin; C. Perry; D. Singh; E. Alexander; H. James; N. John; H. Simon; E. Joseph. 19 January 2007 – March 2007: 873 collections and 3928 sheets.

Plants: French Guyana

Karen Redden (Post-doc, GWU), Piste de St. Elie, Bassin de Sinammary, French Guyana. With V. de Camp; R. Cozier; B. Bordenave; S. Draf; L. Pillman; M. Tarcy; M.F. Prevost; D. Barthelémy; C. Barthelémy; S. Gonzalez; O. Téllez; M.F. Prevost; C. Fontvieille; and E. Fontvieille. 15 March to 5 May 2007: 62 collections and 279 sheets.

2. FOG MANUSCRIPT TREATMENTS:

BORAGINACEAE*: (being prepared by C. Feuillet)
Manuscript is 75% completed. New taxa have been published; completion of manuscript is intended by the end of 2009.

CYPERACEAE: (being coordinated by M. T. Strong)
Genera & Species: 31/299. Mark now has a working draft in the format of the Flora. Treatments still not completed are *Eleocharis* (being prepared by E.H. Roalson), *Everardia*, and *Lagenocarpus* (being prepared by M. T. Strong) and *Hypolytrum* and *Mapania* (being prepared by D.A. Simpson). It is anticipated that a manuscript ready for review will be completed by the end of 2008.

GRAMMITIDACEAE: (being prepared by C. Kelloff)

Manuscript still under preparation, but anticipated to be ready by the end of Summer (2008)

PASSIFLORACEAE*: (being prepared by C. Feuillet)
Manuscript is about 60% completed, about 5 new species in *Passiflora* and one new species in *Dilkea* need to be published prior to the publication of the fascicle. Completion of manuscript is intended by the end of 2010.

SAPINDACEAE: (being prepared by P. Acevedo R.)
Treatment is in final stage. Most illustrations have been done. Descriptions for a total of 118 species in 21 genera have been done. Seven new species will be submitted for publication before the end of 2009 so their names will be validated before the Sapindaceae fascicle is published. A final manuscript will be ready for submission to the editors of FoG by the end of 2009.

No further updates were reported by the contributors at US
* information not reported during meeting.

3. PUBLICATIONS RELATED TO FOG MANUSCRIPTS:

1. Feuillet C. (2007) Folia taxonomica 1. —Validation of two taxa from northern South America. J. Bot. Res. Inst. Texas 1(1): 143-144. (10 Aug 2007)
Aristolochia kanukuensis Feuillet
2. Feuillet C. (2007) Folia taxonomica 2.—New species of *Passiflora* subgenus *Passiflora* (Passifloraceae) from the Guianas. J. Bot. Res. Inst. Texas 1(2): 819-825. (12 Dec 2007)
Passiflora arta Feuillet, *Passiflora compar* Feuillet
3. Feuillet C. (2007) Folia taxonomica 3.—*Passiflora davidii* (Passifloraceae), a new species in subgenus *Passiflora* and a key to the sections of supersection *Stipulata*. J. Bot. Res. Inst. Texas 1(2): 895-898. (12 Dec 2007)
Passiflora davidii Feuillet

2.6. Publishing Affairs

Eve Lucas reported from Kew that publication was running smoothly and that manuscripts enter the process promptly and pass through the type setting and proof stages quickly.

Marion Jansen-Jacobs reminded the board that she will retire from her position at U at the beginning of 2008 and that although she will remain active as editor of the Flora for some time, a new editor must be found. Marion suggested Tinde van Andel would be possible replacement who could learn from Marion at U. Pedro Acevedo suggested an editor with flora writing experience would be preferable and a debate followed that weighed the two options and proposed six months in which Pedro might seek an alternative candidate. Subsequent to the meeting (March 2009), no such alternative was available and Tinde is in position to begin her apprenticeship with Marion and to take up the position of editor pending funding availability from Leiden or other funding body. Piero Delprete is also providing some editorial assistance to Marion at this time.

2.7. Next Meeting

As the meeting scheduled to be held in Washington in 2008 went to Suriname, Pedro Acevedo kindly extended his invitation and agreed to hold the next meeting at US in 2010. At present September 2010 is most likely month.

2.8. Other Business

The Mimosaceae fascicle is now ready for submission and in the editorial process. Images are mostly with Eve and will be sent once required by the editor.

The issue of lapsed contracts was raised again and it was re-emphasised by Caroline that these contracts of commitment are strong incentives, particularly for the Guianan institutions. The absence of many board members and the uncertainty of the Utrecht team however, meant that debate on this issue was postponed to the next meeting.

It was agreed that the Newsletter would be distributed by pdf from now on; this will reduce paper use and costs in distribution; paper copies could be printed and assembled as pamphlets at participating institutions. Some doubt

was raised as to whether all board members have the necessary facilities but eventually all were in agreement and this change has been implemented here.

The possibility of European Union funding for the FoG and its activities was discussed. Activities that such a proposal would cover would include capacity building and training in the Guianas, support for collecting trips, promotion of awareness by local botanists, bursaries for fascicle authors, possible electronic publishing. Tinde van Andel will investigate the possibilities available from the EU. Eve Lucas volunteered to contribute to such a proposal wherever necessary.

Lack of Flora of the Guianas participants beside the board at the ATBC meeting lead the board to decide that a general meeting was not practical at this event.

3. WORKSHOP, 11 JUNE 2008

Chaired by Eve Lucas

3.1. Scott Mori: Electronic floras and monographs: the future is now!

The ability to present information about biodiversity now exists electronically. Species descriptions, specimens documenting species concepts, distribution maps, conservation status, images, literature, glossaries, and keys can now be exported directly from databases to the internet. In most aspects, electronic monographs and floras are superior to their hard-copy counterparts. The most significant difference is that electronic publication of this kind of information will ultimately result in higher quality research. Of special importance to those interested in conservation is the ability of presenting electronic distribution maps that can be overlain with different data, for example the state of forest destruction or the location of protected areas. Now biodiversity information can be made available, for example on 160 gigabyte iPods, to any place in the world. This technology has been in development for the last 20 years, but now it is here and available for any systematist that wants to use it and it will soon dominate the way that biodiversity information is communicated to others.

3.2. Odile Poncey & Pierre-Michel Forget: Biodiversity assessment and impact studies: how to ensure scientific independent expertise?

Within the last 15-year period, gold-mining activities have tremendously increased in French Guiana as well as in other countries. Ten years after it was initiated, the important project of an open-pit mine to be exploited by LamGold on the Kaw Mountain has remained extremely controversial, although the corporate displayed commitment to develop mining activities in agreement with French administrative and environmental requirements. Once all parts of the project were completed, including impact studies and public inquiries, the French government ordered a final inspection before giving its final decision; the French Ministry of Ecology asked the Museum National d'Histoire Naturelle to join this expertise and to produce a scientific report about biodiversity. As part of this expertise, we have been facing several crucial questions about the availability of scientific data accurate to provide impact studies, about methods and operable criteria to collect them in order to provide objective biodiversity assessment; we questioned the conditions of the real need for "compensatory measures", and of course those for preserving independent scientific expertise.

3.3. Pedro Acevedo : Sapindaceae in the Guianas.

Sapindaceae is a family of woody, flowering plants that include trees, treelets and vines. In the Neotropics, it is represented by ca. 800 species, with the vast majority occurring in the Amazon region. Although Sapindaceae is the most diverse family in the Guianas, it is far more common in dense, humid forests. A modern treatment of Sapindaceae for the Guiana region reveals that the family is represented there by 21 genera and 130 species, 20% of which are endemic to this region. As a result of this treatment 4 species are described as new to science.

3.4. Karen Redden & Patrick Herendeen: Morphological and molecular phylogeny of Elizabetha, Heterostemon, Paloue, and Paloveopsis (Leguminosae, Caesalpinioideae) from northeastern South America.

Most phylogenetic work within the subfamily Caesalpinioideae concentrates on higher level relationships among the tribes, subtribes, and genus groups. Within *Detarieae*, *Heterostemon* (7 spp.), *Elizabetha* (10 spp.), *Paloue* (4 spp.) and *Paloveopsis* (1 sp.) are members of the *Brownea* clade that are endemic to northeastern South America. As recognized by Cowan in 1957, conflicting patterns of character distributions among these genera have presented difficulties for generic delimitation and he recognized the possibility that these genera may need to be reorganized, rearranged or merged. Recent collections and field observations have enabled a closer morphological examination of the species. This study uses combined morphological and molecular data to explore generic limits and relationships among these taxa. The data set includes 175 morphological and anatomical characters from vegetative and reproductive structures for all species and ITS and trnL sequence data for most species. This phylogeny is the culmination of my dissertation and postdoctoral research and the basis for the reorganization of this group of species. Morphological characters that were used to delineate the current generic boundaries are re-evaluated and new characters are defined for generic and species identification. Patterns of morphological evolution, biogeography and hybridization issues will be examined based on the inferred phylogeny.

3.5. Jean-Jacques de Granville, B. G. Bordenave & Sophie Gonzalez – delivered by Scott Mori: Bakhuis Mountains (Suriname) flora & vegetation study in the frame of the Environment Social and Impact Assessment Study for a BMS bauxite mining project (BHP Billiton & Suralco).

Three field surveys were undertaken in September-October 2005, April 2006 and December 2006 by the BGB Consultancy team with IRD-Cayenne, appointed by SRK Consulting in order to provide relevant information to predict and manage mining impacts over a largely unstudied area, to characterize the diversity of forest habitats, to determine the species richness and sensitivity of the terrestrial vegetation and to place this information in the context of the region. The floristic and structural characterization of the habitats as well as species counts and quantification of biodiversity indices from plots and transect were assessed over 50 study sites. Along with a list of 761 species distributed among 336 genera and 116 families of vascular plants of all life forms (trees, shrubs, climbers, herbs, epiphytes, aquatic and parasitic plants), 53 remarkable species, determined through a set of criteria - rarity, endemism, restricted distribution, as well as relevant international protected, vulnerable or threatened plants lists - were provided along with region scale species distribution and conservation status.

3.6. Eve Lucas, Charlotte Murray-Smith, Steve Bachman & Neil Brummitt: Plant diversity hotspots in the Atlantic coastal forests of Brazil.

Plant diversity hotspots on a global scale are well established, but smaller, local hotspots within these must be identified for effective conservation of both the global and local spot. We used the distributions of endemic and endemic threatened species of *Myrcia* s.l. (Myrtaceae) to indicate areas of plant diversity and conservation importance within the Atlantic coastal forests (Mata Atlântica) of Brazil. This study is distinctive in considering collecting intensity, an inherent limitation of using natural history records for biodiversity studies. Three simple, inexpensive geographic information system (GIS) techniques were applied: predicted occurrences obtained from a predictive species-distribution model (Maxent), complementarity analysis (DIVA-GIS); and observed occurrences from herbarium collection localities. Two separate areas of endemism were evident: the Serra do Mar mountain range from Paraná to Rio de Janeiro and the coastal forests of northern Espírito Santo and southern Bahia. Twelve priority areas of approximately 35 km², of maximum species richness and threat were highlighted for priority conservation. Predicted and observed species occurrences and complementarity analysis results were found to be congruent.

3.7. Olaf Bánki & Hans ter Steege: Neutrality, Ecology and Tree-Diversity in the Guianas

The introduction of neutral models in community ecology has spurred discussions on the origin and maintenance of beta diversity (the change in species composition over distances) in tropical rainforests. The debate mostly focuses on the role of geographical distance (dispersal limitation) and environmental conditions in explaining diversity patterns. In the Guianan rainforests a relatively high endemism and habitat specificity of tree species occurs. The question is to what extent geographical distance (dispersal limitation) and environmental conditions affect similarity in composition within forests on different soil types in the Guianas. We designed a 1-ha plot study of trees ≥ 10 cm dbh in forests on white and brown sands to answer this question. Series of plots on brown and white sands were placed at close proximity over a distance of approximately 450 km in Guyana and Suriname. Species numbers were significantly lower in forests on white sands, and this resulted in a lower tree alpha diversity. Approximately 41 – 58 % of the variation in similarity between plots is explained, and habitat (soil type) explains a substantial part of this variation. This means there are clear differences in species composition between forests on brown and white sand, both locally as at larger geographical distances. Still, there is a decay in similarity at larger geographical distances between plots of forests on brown sands as well as between plots in forests on white sands. A small set of species dominate the forests on white sands over the Guianas. Our results strongly support the role of habitat in structuring tree communities in the Guianas.