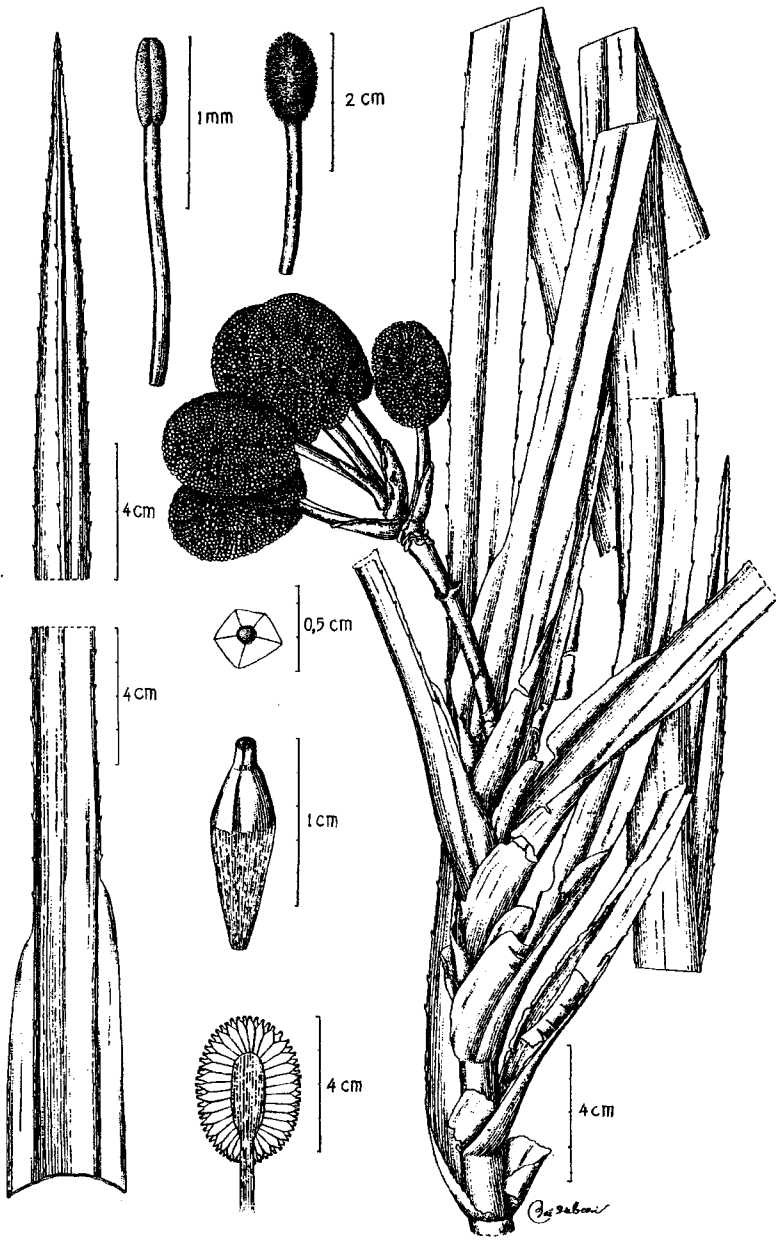




A JOURNAL ON TAXONOMIC BOTANY,  
PLANT SOCIOLOGY AND ECOLOGY

ISSN 0034 - 365 X



# REINWARDTIA

13 (2)

# REINWARDTIA

*A JOURNAL ON TAXONOMIC BOTANY  
PLANT SOCIOLOGY AND ECOLOGY*

Vol. 13(2): 95 — 220, November 11, 2010

## Chief Editor

KARTINI KRAMADIBRATA

## Editors

DEDY DARNAEDI

TUKIRIN PARTOMIHARDJO

JOENI SETIJO RAHAJOE

TEGUH TRIONO

MARLINA ARDIYANI

EIZI SUZUKI

JUN WEN

## Managing editors

ELIZABETH A. WIDJAJA

HIMMAH RUSTIAMI

## Secretary

ENDANG TRI UTAMI

## Lay out

DEDEN SUMIRAT HIDAYAT

## Illustrators

SUBARI

WAHYU SANTOSO

ANNE KUSUMAWATY

## Reviewers

R. ABDULHADI, SANDY ATKINS, JULIE F. BARCELONA, TODD J. BARKMAN, NICO CELLINESE, MARK COODE, GUDRUN KADEREIT, ROGIER DE KOCK, N. FUKUOKA, KUSWATA KARTAWINATA, ARY P. KEIM, P. J. A. KEßLER, A. LATIFF-MOHAMAD, M. A. RIFAI, RUGAYAH, H. SOEDJITO, T. SETYAWATI, D. G. STONE, WAYNE TAKEUCHI, BENITO C. TAN, J. F. VELDKAMP, P. VAN WELZEN, H. WIRIADINATA, RUI-LIANG ZHU.

Correspondence on editorial matters and subscriptions for Reinwardtia should be addressed to:  
HERBARIUM BOGORIENSE, BOTANY DIVISION,  
RESEARCH CENTER FOR BIOLOGY- LIPI,  
CIBINONG 16911, INDONESIA  
Email: reinwardtia@mail.lipi.go.id

## THE ECOLOGY AND DISTRIBUTION OF FREYCINETIA GAUD. (PANDANACEAE; FREYCINETOIDEAE) IN THE INDONESIAN NEW GUINEA

Received August 28, 2010; accepted September 15, 2010

### NURHAIDAH IRIANY SINAGA

Post Graduate School, Bogor Agricultural University, Bogor, Indonesia  
Forestry Department, Papua University, Jl. Gunung Salju Amban Manokwari, Papua Barat, Indonesia. Email:  
irianysinaga@yahoo.com.

### RITA MEGIA

Biology Department, Bogor Agricultural Institute, Jl. Raya Dramaga Bogor, Indonesia.

### ALEX HARTANA

Biology Department, Bogor Agricultural Institute, Jl. Raya Dramaga Bogor, Indonesia.

### ARY PRIHARDHYANTO KEIM

Herbarium Bogoriense, Research Center for Biology–LIPI. Jl. Raya Jakarta Bogor Km 46 Bogor 16911, Indonesia.  
Email: arypkeim@yahoo.com

### ABSTRACT

SINAGA, N. I., MEGIA, R., HARTANA, A., KEIM, A. P. Ecology and distribution of *Freycinetia* Gaud. (*Pandanaceae*; *Freycinetoidea*) in Indonesian New Guinea. *Reinwardtia* 13(2): 189–197. — The study mainly concerns with the species of *Freycinetia* that occurs in the Indonesian New Guinea, including the provinces of Papua and Papua Barat. The study indicates that almost all species of *Freycinetia* in the Indonesian New Guinea prefer high humidity and abundantly occur along rivers, except for the members of the group of species with imbricate leaves, which inhabit also secondary forests. Furthermore, the members of this group have never been found within the range of 1700 to 3000 m altitudes. This highest range of altitudes is specifically occupied by the members of the groups of species with semi imbricate and grass-like leaves. The coastal forests are inhabited by the groups of species with semi and non imbricate leaves. Indonesian New Guinea shares many species with Papua New Guinea, except for the members of the group of species with semi imbricate leaves, which are more common in Indonesian New Guinea than in Papua New Guinea. On the contrary, the members of the group of species with grass-like leaves are more common in Papua New Guinea and becoming rare toward the Indonesian site and becoming absent in the Vogelklop (Bird's head), except for *F. polyclada* which is commonly found in Sorong. Indonesian New Guinea possesses 34 species exclusively distributed in the area, while Papua New Guinea has 72 species. The two areas share 52 species. Only five species have extra New Guinean distributions, i.e. *F. excelsa*, *F. funicularis*, *F. marginata*, *F. percostata*, and *F. scandens*.

**Keywords:** ecology, distribution, *Freycinetia*, *Pandanaceae*, Indonesian New Guinea

### ABSTRAK

SINAGA, N. I., MEGIA, R., HARTANA, A., KEIM, A. P. Ekologi dan persebaran *Freycinetia* Gaud. (*Pandanaceae*; *Freycinetoidea*) di Nugini wilayah Indonesia. *Reinwardtia* 13(2): 189–197. — Studi mengenai ekologi dan persebaran *Freycinetia* di Nugini wilayah Indonesia telah dilakukan. Studi terutama dilakukan terhadap jenis-jenis *Freycinetia* yang ada di Nugini wilayah Indonesia yang meliputi propinsi Papua dan Papua Barat. Hasil penelitian menunjukkan bahwa *Freycinetia* lebih senang hidup di tempat yang lembab, dan ditemukan hidup melimpah di dekat sungai. Kecuali beberapa anggota jenis kelompok daun bersirap yang juga dapat hidup di hutan sekunder, akan tetapi untuk jenis dalam kelompok ini tidak pernah ditemukan hidup di pegunungan dalam ketinggian 1700 hingga 3000 m di atas permukaan laut. Tempat seperti ini dihuni oleh *Freycinetia* dari kelompok daun setengah bersirap dan kelompok seperti rumput. Kedua kelompok ini menduduki habitat yang sama akan tetapi kelompok seperti rumput tidak pernah ditemukan hidup di dekat pantai seperti kelompok *Freycinetia* dengan daun setengah bersirap dan tidak bersirap. Nugini wilayah Indonesia dan Papua Nugini (PNG) juga memiliki jenis yang sama akan tetapi khusus untuk kelompok daun setengah bersirap, lebih banyak jenisnya yang ditemukan hidup di Nugini wilayah Indonesia dibanding PNG. Kelompok *Freycinetia* berdaun seperti rumput ditemukan hidup melimpah di PNG dan semakin berkurang ke arah barat hingga tidak terdapat sama sekali di kepala burung, kecuali *F. polyclada* yang banyak ditemukan di daerah Sorong. Ditemukan sebanyak 34 jenis *Freycinetia* yang hanya hidup di Nugini wilayah Indonesia dan sebaliknya 72 jenis *Freycinetia* dari PNG tidak pernah ditemukan di Nugini wilayah Indonesia. Jenis yang ditemukan di kedua

HARRY WIRIADINATA & RISMITA SARI. A new species of <i>Rafflesia</i> ( <i>Rafflesiaceae</i> ) from North Sumatra .....	95
ARY P. KEIM. A new species of <i>Freycinetia</i> ( <i>Pandanaceae</i> ) from Papua New Guinea .....	101
ROBERT GRADSTEIN <i>et al.</i> Bryophytes of Mount Patuha, West Java, Indonesia .....	107
ABDULROKHMAN KARTONEGORO & J. F. VELDKAMP. Revision of <i>Dissochaeta</i> ( <i>Melastomataceae</i> ) in Java, Indonesia .....	125
NURSAHARA PASARIBU. Two new species of <i>Freycinetia</i> ( <i>Pandanaceae</i> ) from Sumatra, Indonesia .....	147
ARY P. KEIM. & M. RAHAYU. <i>Pandanaceae</i> of Sumbawa, West Nusa Tenggara, Indonesia .....	151
K. MAT-SALEH, RIDHA MAHYUNI, AGUS SUSATYA & J. F. VELDKAMP. <i>Rafflesia lawangensis</i> ( <i>Rafflesiaceae</i> ), a new species from Bukit Lawang, Gunung Leuser National Park, North Sumatra, Indonesia .....	159
J. F. VELDKAMP & R. M. K. SAUNDERS. <i>Goniothalamus tripetalus</i> (Lam.) Veldk. & R. M. K. Saunders ( <i>Annonaceae</i> ), <i>comb. nov.</i> .....	167
M. M. J. VAN BALGOOY. An updated survey of Malesian Seed Plants Families .....	171
NURHAIDAH IRIANY SINAGA. Two new species of <i>Freycinetia</i> ( <i>Pandanaceae</i> ) from Manokwari, West Papua .....	183
NURHAIDAH IRIANY SINAGA, RITA MEGIA, ALEX HARTANA & ARY PRIHARDHYANTO KEIM. The ecology and distribution of <i>Freycinetia</i> Gaud. ( <i>Pandanaceae</i> ; <i>Freycinetoideae</i> ) in the Indonesian New Guinea .....	189
EIZI SUZUKI. Tree flora on freshwater wet habitats in lowland of Borneo: Does wetness cool the sites....	199
NANDA UTAMI & HARRY WIRIADINATA. <i>Impatiens mamasensis</i> ( <i>Balsaminaceae</i> ), a new species from West Celebes, Indonesia .....	211
M. ARDIYANI, A. D. POULSEN, P. SUKSATHAN & F. BORCHSENIUS. <i>Marantaceae</i> in Sulawesi ..	213

Reinwardtia is a LIPI accredited Journal (258/AU 1/P2MBI/05/2010)

Herbarium Bogoriense  
Botany Division  
Research Centre for Biology – LIPI  
Cibinong, Indonesia