

ISBN : 979-8539-28-1



TRADITIONAL PLANT USAGE IN FOUR VILLAGES OF BALI AGA

TENGANAN, SEPANG, TIGAWASA AND SEMBIRAN,
BALI, INDONESIA



**Inggit Puji Astuti
Syamsul Hidayat
IBK Arinasa**

**Edited by :
Dedy Darnaedi
wyn Powell**



AKAAN DIGITAL

KALTENG

Km. 5 Palangka Raya

2-1

ST



**The John D. and Catherine T. MacArthur Foundation
Botanical Gardens of Indonesia
Indonesian Institute of Sciences
2000**

Front cover: Women preparing belimbing (*Averrhoa carambola* L), star fruit leaves for a vegetable dish for a ceremony

Cataloguing-in-publication entry:

Traditional Plant Usage in Four Villages of Bali Aga: Tenganan, Sepang, Tigawasa and Sembiran, Bali, Indonesia

ISBN : 979-8539-28-1

© 2000 by Botanical Gardens of Indonesia (Kebun Raya Indonesia) – LIPI
ALL RIGHTS RESERVED

Printed in Bogor, Indonesia

Kebun Raya Eka Karya Bali
Desa Candikuning
Baturiti
Tabanan 82191
Bali, Indonesia
Email: krielipi@singaraja.wasantara.net.id

Kebun Raya Bogor,
Botanical Gardens of Indonesia - LIPI
Box 309
Bogor 16003
Indonesia
Email: kriblipi@bogor.wasantara.net.id

Layout Design : Suhendar
Cover Design : Tatang Rohana

No. Induk	176/T/B/2006
Tgl. Terima	30/11/2006
Beli/Hadiah/Sumbangan	B
Nomor Buku	
Copy Ke	

502-1
AST
t

**Traditional Plant Usage in Four Villages of Bali Aga
Tenganan, Sepang, Tigawasa and Sembiran,
Bali, Indonesia**

30 NOV 2006

**Inggit Puji Astuti
Syamsul Hidayat
IBK Arinasa**

**Edited by :
Dedy Darnaedi
Bronwyn Powell**



The John D. and Catherine T. MacArthur Foundation
Botanical Gardens of Indonesia
Indonesian Institute of Sciences
2000

PERPUSTAKAAN
BALAI PENGKAJIAN TEKNOLOGI
PERTANIAN KALTENG
176/T/B/2006

Dedication

This booklet is dedicated to the people of the Bali Aga villages of Tenganan, Sepang, Tigawasa and Sembiran whose desire to record their rich plant knowledge has made this book possible.

Preface

This book is a result of project objectives **"Balinese Traditional Plant Knowledge: Documentation, Conservation And Promotion"**. The project is funded by The John D. and Catherine T. MacArthur Foundation and conducted by research staff of Bogor Botanic Gardens and Eka Karya Bali Botanic Gardens in 1998-1999.

The traditional plant knowledge of Bali Aga are presented in this book including ethnobotanical database from four Bali Aga villages i.e Tenganan, Sepang, Tigawasa, and Sembiran. Each of villages has particular species for their home industries. The priority species and some problematics for the conservation are presented in the Discussion and Conclusion.

Large data sets of useful plants from the villages are presented in a series of appendices of this book.

Contents

Preface.....	i
Contents	ii
List of Tables.....	iii
List of Appendices	iii
List of Photographs.....	iii
Introduction	1
Site Descriptions.....	2
Tenganan	2
Sepang	2
Tigawasa.....	3
Sembiran.....	3
Methods.....	5
Traditional Plants Uses.....	6
Tenganan	6
Sepang	13
Tigawasa.....	15
Sembiran.....	17
Discussion and Conclusion.....	20
Summary and Future Directions	24
References	25
Acknowledgements.....	26
Appendices	27

List of Tables

Table 1. Plant use categories and number of species in Tenganan	6
Table 2. Plant use categories and number of species in Sepang.....	13
Table 3. Plant use categories and number of species in Tigawasa.....	15
Table 4. Plant use categories and number of species in Sembiran	18
Table 5. List of ten priority species in Bali Aga villages for conservation	23

List of Appendices

Appendix 1. Species diversity of useful plants in Bali Aga villages	29
Appendix 2. Traditional plants usage in the Tenganan community	30
Appendix 3. Traditional plants usage in the Sepang community	49
Appendix 4. Traditional plants usage in the tigawasa community	67
Appendix 5. Traditional plants usage in the Sembiran community	75

List of Photographs

Photo 1. <i>Paku ata</i> (<i>Lygodium circinnatum</i>) growing in the community forest of Tenganan.	7
Photo 2. Fresh and dried <i>paku ata</i> stalks. Stalks must be dried before they can be woven.....	7
Photo 3. A craftsman weaving a basket from <i>paku ata</i>	7
Photo 4. <i>Paku ata</i> handicrafts for sale in one of the many houses open to the public in Tenganan.	8
Photo 5. <i>Aren</i> (<i>Arenga pinnata</i> , Sugar Palm)	8
Photo 6. A basket made from the leaf sheath of <i>aren</i> which is hung on the <i>aren</i> palm, below where the trunk is tapped to collect the <i>tuak</i>	8

- Photo 7. *Genggong*, a mouth harp, is one of the musical instruments produced in Tenganan. The stick is pulled in rapid succession to create a vibration in the longer, flat mouth piece which reverberates in the mouth cavity. The pole and mouth piece are made from *Arenga pinnata*..... 9
- Photo 8. *Perang pandan*, pandanas fighting is an important and unique ceremony of the Tenganan community. 9
- Photo 9. Some of the many plants used in ceremonies are shown in this offering (sesajen); *jaka*, (*Arenga pinnata*, *aren* palm), *kelapa* (*Cocos nucifera*, coconut), *paku ata* (*Lygodium circinnatum*, climbing fern), *pisang* (*Musa x paradisiaca*, banana) and *bambu* (*Bambusa* sp., bamboo). 10
- Photo 10. *Kesumanjai*, (*Cardiospermum halicacabum*, balloon vine) is used in many ceremonies including *Sangkepan desa*. 10
- Photo 11. The bark of roots of *tibah* (*Morinda citrifolia*, Indian mulberry) are dried and then used to make a red dye. 11
- Photo 12. Many plant materials are used in the traditional ikat dying process: *Minyak kemiri* (*Aleurites moluccana*, candlenut oil), *air abu*, water and ash, *pengikat benang* (*Sabal* sp), and the wood from of *kepundung* (*Baccaurea racemosa*) and *tibah* (*Morinda citrifolia*, Indian mulberry). 11
- Photo 13. Pak Mangku Widia, the customary leader of Tenganan, shows how the weft and warp fibres are carefully tied with traditional designs before the complicated dying process. 12
- Photo 14. A double ikat weaving loom in a Tenganan house. The various parts of the loom are made from *nangka*, (*Artocarpus heterophyllus*, jackfruit), *jaka* (*Arenga pinnata*, *aren* palm), *tiying tamlang*, (*Gigantochloa* sp., bamboo and *cagi* (*Tamarindus indica*, tamarind). 12
- Photo 15. The whole process to complete a double ikat cloth such as this can take two years or more 12
- Photo 16. *Ficus querciflora* 14
- Photo 17. *Gibbaeum cordata* 14
- Photo 18. *Sida rhombifolia* 14

Photo 19. <i>Arcangelisia flava</i>	14
Photo 20. A <i>prered</i> instrument held by its owner.....	14
Photo 21. A mature <i>majagahu</i> (<i>Dysoxylum caulostachyum</i>) tree. Besides being a valuable timber, <i>majagahu</i> wood is also used to make incense for ceremonies.....	15
Photo 22. <i>Kelor</i> (<i>Moringa oleifera</i> , 'horse-radish tree') leaves are used as a vegetable.....	16
Photo 23. Bamboo leaves (<i>Schizostachyum</i> sp.).....	17
Photo 24. The trunks of the bamboo are collected and cut in.....	17
Photo 25. A craftsman in Tigawasa weaves a plaited mat from bamboo.....	17
Photo 26. The flowers and leaves of <i>jepun merah</i> , (<i>Plumeria rubra</i> , frangipani tree).	18
Photo 27. <i>Dagdag-see</i> , (<i>Pisonia alba</i> , Moluccan cabbage)	19
Photo 28. <i>Daun besar</i> (<i>Morus alba</i> , white mulberry)	19