

**Senri Ethnological Studies 78**

**Irrigated Taro  
(*Colocasia esculenta*)  
in the Indo-Pacific**  
**Biological, Social and Historical  
Perspectives**

**Edited by**  
**Matthew Spriggs**  
**David Addison**  
**Peter J. Matthews**



National Museum  
of Ethnology

Senri Expo Park, Suita, Osaka, Japan  
Phone 06-6876-2151

Published by the National Museum of Ethnology  
Senri Expo Park, Suita, Osaka, 565-8511, Japan

©2012 National Museum of Ethnology, Japan  
All rights reserved. Printed in Japan by Nakanishi Printing Co., Ltd.

**Publication Data**

Senri Ethnological Studies 78

Irrigated Taro (*Colocasia esculenta*) in the Indo-Pacific

Edited by Matthew Spriggs, David Addison, and Peter J. Matthews

Includes bibliographical references and index.

ISSN 0387-6004

ISBN 978-4-901906-93-7 C3039

1. Archaeology 2. Anthropology 3. Agriculture 4. Ethnobotany 5. *Colocasia* 6. Irrigation

I. Spriggs, Matthew II. Addison, David III. Matthews, Peter Joseph

## CONTENTS

|  |     |
|--|-----|
| Preface.....   | i   |
| Acknowledgements.....  | v   |
| List of Figures and Tables.....  | xi  |
| <b>Part I</b>  |     |
| <b>HISTORICAL VIEWS</b>  |     |
| From Mendana to Riesenfeld: Early Accounts of and Speculation<br>on Taro Irrigation in the Asia-Pacific Area<br>Matthew Spriggs .....                        | 1   |
| Vernacular Names for Taro in the Indo-Pacific Region:<br>Implications for Centres of Diversification and Spread<br>Roger M. Blench .....                     | 21  |
| Yu Jing ( <i>The Book of Taro</i> )<br>Shengzheng Huang (Translated by Jee Yan Chu; introduced by P.J. Matthews) .....                                       | 45  |
| <b>Part II</b>   |     |
| <b>EASTERN PACIFIC</b>   |     |
| The Taro Wars of the Austral Islands, East Polynesia<br>Robert Boltt.....  | 53  |
| Wet Taro Cultivation on Atolls: A Techno-cultural Paradox?<br>Jean-Michel Chazine.....   | 83  |
| Taro Irrigation and Primary State Formation in Hawai'i<br>Timothy Earle .....  | 95  |
| Small Valley Irrigated Taro Agriculture in the Hawaiian Islands:<br>An Extension of the 'Wet and Dry' Hypothesis<br>Mark D. McCoy and Michael W. Graves..... | 115 |

|  |     |
|--|-----|
| Approaches to Dating Wetland Agricultural Features:<br>An Example from Wailau Valley, Moloka'i Island, Hawai'i<br>Windy K. McElroy.....  | 135 |
| Fluctuation in <i>Colocasia</i> Cultivation and Landesque Capital in Navosa,<br>Viti Levu, Fiji<br>Trevor King.....  | 155 |
| <b>Part III</b>  |     |
| <b>WESTERN PACIFIC</b>   |     |
| 'Certainly the Most Technically Complex Pondfield Irrigation Within Melanesia':<br>Wet Taro Field Systems of New Caledonia<br>Christophe Sand .....                                  | 167 |
| Produce to Exchange: The Taro Water-Gardens on Vanua Lava (Vanuatu),<br>a Social and Sustainable Place<br>Sophie Caillon.....  | 189 |
| Taro Culture in Western Santo, Vanuatu<br>Annie Walter and Fabienne Tzerikiantz.....   | 209 |
| Irrigated Taro, Malaria and the Expansion of Chiefdoms:<br><i>Ruta</i> in New Georgia, Solomon Islands<br>Tim Bayliss-Smith and Edvard Hviding.....                                  | 219 |
| The Decline of Taro and Taro Irrigation in Papua New Guinea<br>R. Michael Bourke.....  | 255 |
| <b>Part IV</b>   |     |
| <b>SOUTHEAST ASIA</b>  |     |
| Recovering, Analysing and Identifying <i>Colocasia esculenta</i> and <i>Dioscorea</i> spp.<br>from Archaeological Contexts in Timor-Leste<br>Nuno Vasco Oliveira .....               | 265 |
| Taro Before Rice Terraces: Implications of Radiocarbon Determinations,<br>Ethnohistoric Reconstructions, and Ethnography<br>in Dating the Ifugao Terraces<br>Stephen B. Acabado..... | 285 |

|  |     |
|--|-----|
| Ethnobotany and Ecology of Wild Taro ( <i>Colocasia esculenta</i> ) in the Philippines:<br>Implications for Domestication and Dispersal<br>P.J. Matthews, E.M.G. Agoo, D.N. Tandang and D.A. Madulid ..... | 307 |
|--|-----|

## CONCLUSION

|  |     |
|--|-----|
| Irrigated Taro in the Indo-Pacific: Multiple Perspectives<br>Matthew Spriggs and Peter J. Matthews ..... | 341 |
| Index .....  | 349 |
| List of Contributors.....  | 361 |