The 15th Congress of IPPA was co-organised with the SPAFA Regional Office in Bangkok, through the cooperation of SPAFA Senior Researcher Pisit Charoenwongsa and the Director of SPAFA Dr Ruang Chareonchai. Funding to cover the costs of a number of delegates from Asian countries was provided by the Chiang Ching-kuo Foundation (Taipei), the Wenner-Gren Foundation for Anthropological Research (New York), the Asian Cultural Council (New York) and the Japan Cultural Foundation (Bangkok). The Congress was held in the Chiangmai Plaza Hotel, Chiang Mai, and was attended by a total of approximately 200 delegates.

The Organising Committee for the Congress comprised Pisit Charoenwongsa (Chairman), Peter Bellwood (IPPA Secretary), Somsuda Leyavanija, R.P. Soejono (IPPA President) and Douglas Anderson.

The specific aims of the Congress were to present recent discoveries within the disciplines of prehistory, archaeology, biological anthropology, historical linguistics and comparative anthropology relevant to six major themes:

- Archaeology, Cultural Resource Management and the Public
- The Pleistocene and Early Holocene in the Indo-Pacific Region
- Indo-Pacific Prehistory: Regional Perspectives
- Indo-Pacific Prehistory: Thematic and Theoretical Perspectives
- Archaeology and Sea-Level Change During the Holocene
- Studies in Rock Art in Southeast Asia, Australia and Oceania

The delegates were also taken on two fieldtrips, one to attractions of a non-archaeological nature in the vicinity of Chiang Mai and the other to the important cave site at Obluang recently excavated by Marielle Santoni, who very kindly agreed to lead the tour.

THE SPEAKERS AND THEIR TITLES (titles and country affiliations of speakers are as given during the congress: some titles have subsequently been changed prior to publication)

THEME 1: ARCHAEOLOGY, CULTURAL RESOURCE MANAGEMENT AND THE PUBLIC (Convenor Pisit Charoenwongsa)

- Pisit Charoenwongsa (Thailand): Managing Thailand's archaeological resources
- David Blundell (Taiwan): Archaeology, cultural resource management and the Pacific: a look at the east coast of Taiwan
- D. Roe, J-C. Galipaud and R. Regenvanu (Vanuatu): The Vanuatu Cultural and Historic Site Survey: the implication of cultural sites significance for archaeology
- Yosihiko Sinoto (USA): Cultural resource management in French Polynesia

Denis Byrne (Australia): Problems with the conservation ethic

THEME 2: THE PLEISTOCENE AND EARLY HOLOCENE IN THE INDO-PACIFIC REGION

Session A: The Dating, Geographic Distribution and Affinities of the Early Asians (convenor Geoffrey Pope)

- Geoffrey Pope (USA): The earliest *Homo sapiens* and latest *Homo erectus* from the Far East
- Wu Xinzhi (China): The mosaic evolution of humankind in China
- Deborah A. Bakken (USA): Taphonomic parameters of Middle Pleistocene hominid sites in China
- James Ostlund (USA): Morphological evidence of regional continuity in China
- Ian Walters (Australia): Meganthropus and the hominid taxa of Java
- Donald E. Tyler (USA): The taxonomic status of the "Meganthropus" cranial material Sangiran 27 and 31
- Dominique Grimaud-Hervé (France): Evolution of the Asiatic fossil hominid brain
- H. Widianto (Indonesia), D. Grimaud-Hervé (France) and S. Sartono (Indonesia): The skull of Ngawi
- Richard Shutler Jr. (Canada), M.J. Head, D.J. Donohue, A.J. Jull, M.M. Barbetti. S Matsu'ura, J. de Vos and P. Storm: Wadjak AMS bone apatite C14 dates

Session B: Population History of East and Southeast Asia (convenor Johan Kamminga)

- J. Kamminga (Australia): The Mongoloid eyefold
- M. Pietrusewsky (USA): The people of Ban Chiang; an Early Bronze Age site in northeast Thailand
- Frédérique Valentin (France): The skeletons from the Petania burial mound, Uvea: a comparison with prehistoric Hawaiian populations

- K. Katayama (Japan): Prehistoric human dispersals into the South Pacific
- Session C: Pleistocene and Early Holocene Archaeology (convenors Douglas Anderson, V.N. Misra and R.P. Soejono)
- Subsession C1: Archaeology and the First Colonizations
- Huang Weiwen (China): The evidence of archaeology for the first human migrations into East Asia
- Tony Djubiantono (Indonesia), François Sémah (France) and Anne-Marie Sémah (New Caledonia): Early settlements in the Solo area and palaeogeographical evolution
- Truman Simanjuntak (Indonesia) and François Semah (France): New insights into the "Sangiran flake industry"
- Gert D. van den Bergh, Bondan Mubroto, Paul Y. Sondaar and John de Vos (Netherlands): Did *Homo erectus* reach the island of Flores?
- Sandra Bowdler (Australia): The human colonization of Sunda and Sahul: cultural and behavioural considerations
- Daniel Frimigacci (France) and Jack Golson (Australia): The tumuli of Ile des Pins, New Caledonia: a mystery resolved?
- Matthew Spriggs (Australia): Chronometric hygiene and colonization in Island Southeast Asia and the Pacific: new data and an evaluation
- Subsession C2: Regional Overviews
- Susan Keates (UK): The current state of Palaeolithic research in the Far East
- François Sémah (France), Tony Djubiantono (Indonesia), Anne-Marie Sémah (New Caledonia) and Dubel Driwantoro (Indonesia): Living in Sangiran during the Middle Pleistocene
- Ha Van Tan (Viet Nam): The Hoabinhian and before
- Masanari Nishimura (Japan): An implication from the regional variability and termination of the Hoabinhian industry: a perspective from revising the present data
- Gudrun Corvinus (Nepal): The prehistory of Nepal after 10 years of research
- Subsession C3: Site and Area Studies
- Trinh Nang Chung (Viet Nam): The Son Vi Culture: technology and typology
- Ranjana Ray (India): A study of stone tools from the Jamara site in the foothills of Malaygiri, Orissa
- H. Nimal Perera (Sri Lanka): Stone implements from the archaeological exploration at Samanalalewa, southern central highlands, Sri Lanka
- P. Rajendran (India): Holocene cultures and their technological innovations in Kerala, South India

- Claire Gaillard (France): Processing sequences in the Indian Lower Palaeolithic: examples from the Acheulian and the Soanian
- Hubert Forestier (New Caledonia): New evidence of a stone tool technology in New Caledonia
- V.N. Misra (India): Climatic and cultural history of a Quaternary sand dune from the Thar desert, India
- Session D: Palaeoenvironmental Studies (convenors Bernard Maloney and S.N. Rajaguru)
- Paul Y. Sondaar, Gert D. van den Bergh and John de Vos (Netherlands): Quaternary mammal faunal changes in Java: an environmental background for the evolution of *Homo erectus*.
- Yaowalak Chaimanee, Varavudh Suteethorn (Thailand) and Jean-Jacques Jaeger (France): Pleistocene mammals of Thailand and their use in the reconstruction of the palaeoenvironments of Southeast Asia
- Bernard Maloney (UK): Palaeoenvironments of North Sumatra: a 30,000 year old record from Pea Bullok
- Anne-Marie Sémah, Rachid Moudrikah (Indonesia), François Sémah and Tony Djubiantono: A 15,000 year palaeoenvironmental record in central Java
- Terry Harrison (USA): The palaeoecological context of archaeological sites in Sarawak, Borneo
- Vu The Long (Viet Nam), John de Vos (Netherlands) and Russell L. Ciochon (USA): A fossil mammal fauna of Vietnam (Lang Trang Caves) compared with fossil and recent mammal faunas of Southeast Asia: their geographical implications
- Manas Watanasak (Thailand): Pollen records from cave sediments in Thailand
- S.N. Rajaguru (India): Late Quaternary climatic changes in India: a geomorphological study
- Session E: The Biological Anthropology of Pre- and Early Agricultural Populations (convenor Asok Ghosh)
- Asok Ghosh (India): The demography of early agriculturalist populations in India
- P.G. Chatterjee (India): The impact of early agriculture on population dynamics a study in the Indian context
- Michele T. Douglas (USA): Paleopathology at Ban Chiang, northeast Thailand
- Bapukan Choudhury (India): From hunting/gathering to agricultural economy: an attempt to understand palaeo-demography
- Subrata Chakrabarti (India): Biocultural micro-transformation as revealed from changes in culture from Palaeolithic to Neolithic stages

THEME 3: INDO-PACIFIC PREHISTORY: REGIONAL PERSPECTIVES

- Session A: Early Farmers in Southern and Eastern Asia (convenors Chen Xingcan and Zarine Cooper)
- Chen Xingcan (China): Xiantouling dune site: its significance in understanding the prehistoric coastal area of South China
- Qiao Xiao-Qin (China): The Neolithic fishermen in coastal South China
- Li Guo (China): Neolithic sand bar sites round the Pearl River estuary area and Hainan: a comparative study
- Wu Yaoli (China): Prehistoric agriculture of rice in the Yellow River Valley
- Hoang Xuan Chinh (Viet Nam): The developmental stages of early agriculture in Viet Nam
- Charles Higham (New Zealand): Archaeology and linguistics in Southeast Asia: implications of the Austric hypothesis
- Anura Manatunga (Sri Lanka): Research potentiality in Sri Lanka for studies on the origin of agriculture: a feasibility study
- Session B: Prehistory of Thailand: Current Perspectives (convenor Charles Higham)
- Rasmi Shoocongdej (Thailand): Problems in Thai prehistory: working towards an anthropological perspective
- Metha Wichakana (Thailand): Prehistoric sacrifice in Thailand
- Vincent D. Pigott, Andrew D. Weiss (USA) and Surapol Natapintu (Thailand): Archaeology and production: the prehistoric copper industry in the Khao Wong Prachan Valley, central Thailand
- Andrew D. Weiss (USA): Socioeconomic organisation of copper production in the Khao Wong Prachan Valley, central Thailand
- Lisa A. Armstrong (USA): Interacting technologies: industrial ceramics in prehistoric copper production in the Khao Wong Prachan Valley, central Thailand
- Lisa Kealhofer (USA): Holocene palaeoenvironments in central Thailand: the phytolith evidence from the Lopburi region
- Anagnosti Agelarakis (USA): Demography and palaeopathology among prehistoric copper-producing peoples in the Khao Wong Prachan Valley, central Thailand
- Peter Grave, John Spies, Mike Barbetti and Mike Hotchkis (Australia): Dating the log coffins of northwest Thailand
- Nigel Chang (New Zealand): Personal ornaments in Thai prehistory some preliminary observations from Nong Nor, central Thailand
- Nancy Tayles (New Zealand): The health of prehistoric people in coastal central Thailand

- Session C: West New Britain Prehistory: New Data and Perspectives (convenor Chris Gosden)
- Chris Gosden and Jim Specht (Australia): Setting the Scene Chris Gosden: The coastal evidence on the Arawes
- C. Pavlides (Australia): The inland evidence from the Yambon Region
- Robin Torrence (Australia): Processes and events: differential rates of change in the Talasea region of West New Britain, Papua New Guinea
- Richard Fullagar (Australia): The use of obsidian: evidence for plants from tool functions
- Glenn Summerhayes (Australia): The movement of pottery and obsidian
- A. Smith (Australia): Shell technologies
- Session D: Archaeological Research in Polynesia and the Cook Islands: Overview, and Directions for Future Research (convenor Yosihiko Sinoto)
- Masashi Chikamori (Japan): Development of coral reefs and human settlement: archaeological research in the Northern Cook Atolls and Rarotonga
- Hiro Kurashina and Rebecca Stephenson (USA): archaeology, ethnohistory and *marae* reconstruction in the Southern Cook Islands
- Melinda Allen (USA): Prehistoric interaction in the southern Cook Islands
- David Addison (USA): Traditional agriculture of the Marquesas Islands
- Jeffrey Clark (USA): The Samoan ceramic sequence reconsidered
- Felicia Rounds Beardsley (USA): Stylistic and spatial affinities of Easter Island *ahu*
- Michael Graves and David Addison (USA): Models and methods for infering the prehistoric colonization of Hawai'i
- Terry L. Hunt (USA): East Polynesian relationships reconsidered
- Session E: Current Research in South and Southeast Asian Protohistoric Archaeology (convenor Ian Glover)
- Richard Engelhardt (UNESCO, Phnom Penh): Archaeology and the environment at Angkor: new evidence from remote sensing technology
- Per Sørensen (Denmark): A newly discovered Heger I kettledrum from Laos
- Chanh C. Phan (USA): The cosmology of the Heger type I bronze drums
- Nguyen Thi Kim Dung (Vietnam): The Trang Kenh jewellery workshop site: an experimental and microwear study

- E. Edwards McKinnon, Hasan Djafar and Soeroso M.P. (Indonesia): Tarumanegara?: A note on discoveries at Batujaya and Cibuaya, West Java
- Ian Glover (UK): Excavations at Buu Chau Hill, Tra Kieu, Quangnam-Danang Province, Vietnam 1993
- Amalia de la Torre (Philippines): Panhutongan archaeological excavations, Placer, Surigao del Norte, Philippines
- Maharlika Cuevas (Philippines): Fortune Island underwater archaeological excavation: the San Diego wrecksite
- Eusebio Dizon (Philippines): Anthropomorphic pottery from Ayub Cave, Mindanao
- Peter Koon (Malaysia): The development of archaeological research in Sabah, Malaysia, since 1950
- Session F: The Rise of Urbanism and States in South and Southeast Asia (convenors Himanshu Prabha Ray and Makkhan Lal)
- Anura Manatunga (Sri Lanka): The first urbanisation of Sri Lanka: an investigation into some possible urban settlements
- Himanshu Prabha Ray (India): The emergence of urban centres in Bengal and implications for the later prehistory of SE Asia
- Nik Hassan Shuhaimi bin Nik Abdul Rahman (Malaysia): The evolution of pre-modern urbanised centres in the Malay Peninsula c.500 BC AD 500
- Zhang Chi (China): The rise of urbanism in the Middle and Lower Yangtze Valley
- M.L.K. Murty (India): Rise of urbanism in the Krishna-Godavari Doab, Andhra Pradesh, southern India
- Makkhan Lal (India): The evolution of states and cities in South Asia: was there a prime mover?
- Session G: Current Research in Indonesian Prehistory (R.P. Soejono)
- I.M. Sutaba (Indonesia): Preliminary notes on ancestor statues in Bali
- Haris Sukendar (Indonesia): Megalithic studies in Indonesia
- Karina Arifin (Indonesia): Archaeological remains in the Kayan Menterang area, East Kalimantan
- D.D. Bintarti (Indonesia): Lambanapu: a burial site in East Sumba
- Santoso Sugondo (Indonesia): Arikamedu-type pottery of local manufacture from Lambanapu, East Sumba
- R.P. Soejono (Indonesia): Building the prehistory of Indonesia: commentary notes
- J.M. Chazine (France): New archaeological perspectives for Borneo – Kalimantan

- Session H: Prehistory of Northeast Thailand a Review of the Past 25 Years (convenors David Welch and Somsuda Leyavanija)
- Somsuda Leyavanija (Thailand): A rereview of Northeast Thailand prehistory
- Judith R. McNeill (USA): Muang Phet: Quaritch Wales' moated site reappraised
- William F. Henderson and Joyce White (USA): Cultural phases before Ban Chiang Early Period II: evidence from regional rim studies
- Joyce White (USA): Methodological challenges from Ban Chiang
- Claire White and Joyce White (USA): Current work on Ban Chiang roller typology
- William Vernon (USA): Chronological variation in Ban Chiang crucible technology: a preliminary assessment
- Charles Higham (New Zealand): Chronometric hygiene and the Bronze Age of Southeast Asia
- Eiji Nitta (Japan): Iron-smelting and salt-making industries in northeast Thailand
- Phasook Indrawooth (Thailand): The jar burial practice in the Mun-Chi Valleys
- Peter Grave (Australia): Monumental earthwork burials in the uplands of northwest Thailand and the archaeology of resistance

THEME 4: INDO- PACIFIC PREHISTORY: THEMATIC AND THEORETICAL PERSPECTIVES

- Session A: Perspectives on Socio-Economic Organisation in Later Southeast Asian Prehistory (convenors Elisabeth Bacus and Rasmi Shoocongdej)
- Rasmi Shoocongdej (Thailand): Rethinking the development of sedentary villages in western Thailand
- Yun-Kuen Lee (USA): Material representations of status in the Dian culture
- Elisabeth A. Bacus (USA): Political economy and interaction among late prehistoric chiefdoms in the Central Philippines: current research in the Dumaguete-Bacong area of southeastern Negros
- Masao Nishimura (Japan): Long distance trade and the development of complex societies in the prehistory of the central Philippines: the Cebu Central Settlement case
- Mary Gunn (USA): Aggression and alliance: the impact of resource distribution on exchange and competition among Prehispanic Philippine chiefdoms
- Session B: Development of Socio-Political Complexity in the Indo-Pacific Region (convenor David Welch)
- Sarah Nelson (USA): Hongshan: an early complex society in northeast China

- Richard Pearson (Canada): Development of social complexity in Okinawa: contending lineages, site occupation histories, and site area
- David J. Welch (USA): Archaeological evidence of Khmer state political and economic organization
- Jane Allen (USA): Coastal Kedah, Inland Angkor: relating landscapes and subsistence systems to sociopolitical complexity in the early Southeast Asian states
- Connie Cox Bodner (USA): On architecture and power: some possible Philippine-Oceanic links
- Rosalind Hunter-Anderson (USA): The adaptive context for the prehistoric use of rice in the Marianas
- Brian Hayden (Canada): The role of feasting in emergent social complexity
- Susan Bulmer (New Zealand): Settlement size and sociopolitical complexity in Taamaki Makurau (Auckland, New Zealand)
- Session C: Identifying Ethnic Identity and Interaction in the Archaeological Record (convenor Peter Bellwood)
- Lawrence R. Reid (USA): The current state of linguistic research on the relatedness of the language families of East and Southeast Asia
- W.G. Solheim II (USA): The Nusantao and north-south dispersals
- William Meacham (Hong Kong): Defining the Hundred Yueh
- Donn Bayard (New Zealand): Linguistics, archaeologists, and Austronesian origins: comparative and sociolinguistic aspects of the Meacham-Bellwood debate
- Hyung Il Pai (USA): The formation of Korean identity: colonialists, nationalists and archaeologists and the origins of Korean race and civilization
- Paul Taçon (Australia): Expressing ethnic identity with stone: the meaning of marks, monuments and masterpieces in the landscape
- Michiko Intoh (Japan): Multi-regional contacts of prehistoric Fais Islanders in Micronesia
- Session D: The Archaeological Analysis of Trade (convenor Harry Allen)
- Miriam Stark (USA): Specialization, exchange, and intensive cultivators: an ethnoarchaeological perspective
- Roger Green (New Zealand): Prehistoric transfers of portable items during the Lapita horizon in Remote Oceania: a review
- Terry L. Hunt (USA): Ceramic production and exchange in the Yasawa Islands of Fiji
- Magnus Fiskesjo (USA): Jomon and Yayoi occupation of a Pacific Japanese island (Takarajima, Ryukyu Islands): preliminary report from a new research project

- Session E: Botanical and Related Indicators of Subsistence and Environment (convenor Jill Thompson)
- Mukund Kajale (India): The domestication of rice (*Oryza sativa*) in parts of eastern India and its relevance to the theory of expansion of rice cultivation from China
- R.L. Hunter-Anderson USA), G.B. Thompson (New Zealand) and D.R. Moore (USA): Prehistoric rice in the Marianas
- Jon Hather (United Kingdom): Cooking without pots: the archaeobotany of big leaves in Polynesia
- Session F: New Models and Perspectives in Socio-Economic Prehistory (convenor Mary-Jane Mountain)
- Pamela Rumball Rogers (Hong Kong) and Richard A. Engelhardt (UNESCO, Phnom Penh): Maritime adaptive strategies in Post-Pleistocene Southeast Asia: an ethnoarchaeological model for the nature and distribution of archaeological sites
- Zarine Cooper (India): Coastal adaptations in India and in the Andaman Islands
- Christophe Sand (New Caledonia): Structural remains and demographic pressure in the late prehistory of New Caledonia
- Hiroto Takamiya (Japan): Subsistence adaptation processes in the prehistory of Okinawa

THEME 5: ARCHAEOLOGY AND SEA-LEVEL CHANGE DURING THE HOLOCENE

- Session A: Coastal Prehistory in Northern Australia (convenors Peter Hiscock and Sally Brockwell)
- Peter Hiscock (Australia): Mobility and technology in the Kakadu coastal wetlands
- Sally Brockwell (Australia): Mound sites on the Adelaide River coastal plains
- Sue O'Connor (Australia): Distribution of shell middens on the northwestern coastline of Australia
- Martinne Ludicke and Ian Walters (Australia): Human remains from Holocene deposits on the Kakadu wetlands
- Scott Mitchell (Australia): The effects of SE Asian contact on late Holocene marine exploitation in NW Arnhem Land
- Harry Allen (New Zealand): The time of the mangroves: hunting and gathering in mid-Holocene estuarine environments in North Australia and Southeast Asia
- Session B: Impacts of Sea Level Changes in SE Asia and Oceania (convenor Matthew Spriggs)
- Tsang Cheng-hwa (Taiwan): Coastal adaptations as expansion phenomena in the prehistory of the southeastern coast of China and Taiwan: implication for the problem of Austronesian expansion

- Bui Vinh (Viet Nam): The mid-Holocene transgression of the sea and cultural/environmental changes in the post-Hoabinh period of Vietnam
- Zarine Cooper (India): The impact of sea level changes on archaeological sites in the Andamans
- Sin Sinsakul (Thailand): Sea level change and the natural environment during the Holocene: examples from the coast of Thailand
- J. Amesbury, D. Moore and R. Hunter-Anderson (USA): Living on the edge: cultural adaptations to changing shoreline habitats in the Marianas, 3500-900 BP
- Jeff Clark (USA): Settlement systems and sea level history in Samoa

THEME 6: STUDIES IN ROCK ART IN SE ASIA, AUSTRALIA AND OCEANIA (convenors Graeme Ward and R.K. Varma)

- Phayao Khemnak and Somsuda Leyavanija (Thailand): Rock art in northeast Thailand
- Thongsa Sayavongkhamdy (Laos): Rock art in Luang Prabang
- Daud Tanudirjo (Indonesia): Rock painting, burial custom and migration in the Indo-Pacific region
- Paul Taçon (Australia) and Christopher Chippindale (UK): Australia's ancient warriors: new insight into some of Arnhem Land's oldest rock art
- Julie Drew (Australia): Australian Aboriginal rock images: depictions of women in regional contexts
- Graeme Ward (Australia): Rock painting protection in Australia
- Radha Kant Varma (India): Rock art of the Vindhyan region Ipoi Datan (Malaysia): Rock art in Sarawak
- Adi Taha (Malaysia): Recent discoveries of rock art in Peninsular Malaysia

In this volume (IPPA Bulletin 14) and the following issues (IPPA Bulletins 15 and 16), the Chiang Mai papers submitted for publication are printed in an order rather different from that given above. It has not been possible to await the arrival of all papers before commencing publication. Furthermore, some authors have changed their titles from those given above. Where possible, papers from individual sessions are published together, although in some cases (e.g. where only one paper from a session has become available at time of going to print) it has been necessary to do some regrouping.

The overall editing of this volume has been carried out by IPPA Secretary Peter Bellwood assisted by the session convenors listed on the front cover. Thanks are due to Sacha Jotisalikorn of the SPAFA office in Bangkok for commencing layout work and to Dr Ruang Chareonchai for making SPAFA facilities available. Unfortunately, owing to Sacha's departure from SPAFA late in 1995, all layout eventually had to be done by Bellwood in Canberra. Thanks are especially due to Norma Chin of the School Services Section, Research School of Pacific and Asian Studies. ANU, for essential assistance with template design and illustration layout. Thanks are also due to Pisit Charoenwongsa and Somsuda Leyavanija for the in-Thailand organisation which made the congress such a success, to the staff of the Chiang Mai Plaza Hotel, who made everyone welcome, and to the many people who volunteered assistance to the overworked Secretariat during the congress. All are now invited to our next congress, to be held in Malaysia in 1998.