

Biodiversity, Biogeography and Nature Conservation in Wallacea and New Guinea

Ladies and Gentlemen,

I would like to draw your attention to a new scientific book project:

"Biodiversity, biogeography and nature conservation in Wallacea and New Guinea"

The new book series focuses on the biodiversity, biogeography and conservation of one of the richest and scientifically most interesting areas of the earth - the islands of Wallacea and New Guinea.

The intention is for the books to appear in regular succession. This publication series offers a new discussion platform for biologists of various disciplines from around the world, with a focus on the Indo-Australian transitional zone.

The first volume is now available. It contains 17 scientific papers by 20 researchers from 12 countries on 526 A4 pages (including 92 colour plates). The foreword was written by William F. Laurance, the Australian science professor and laureate in tropical biology. A table of contents and a few example contents are presented below.

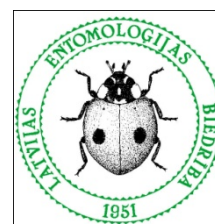
We hope this book series would stimulate your interest and you will share this information with potentially-interested colleagues and institutions.

The price for the 1st volume is EUR 85 (P&P costs are extra). To order Volume 1, please use the following e-mail: anthicus@gmail.com or the order form (also available electronically: <http://leb.daba.lv/book/order.doc>). By ordering Volume 1 you are already contributing to the production of the 2nd volume.

Thank you for your interest!

Dmitry Telnov, PhD.

Chairman of Coleoptera section
The Entomological Society of Latvia
Private: Dārza iela 10, DZIDRIŅAS
Stopiņu novads, LV-2130
Latvia / Lettland / Lettonie
anthicus@gmail.com





Biodiversity, biogeography
and
nature conservation
IN WALLACEA and NEW GUINEA

Volume 1

executive editor
Dmitry Telnov

The Entomological Society of Latvia
Rīga, 2011

Contents

Foreword: A World Apart	4
Editorial	5
Acknowledgements	6

SECTION ONE: CONSERVATION OF NATURAL RESOURCES

THOMAS, William: The Forest Stewards: using tradition to conserve New Guinea's Star Mountain wilderness	7
NYLANDER, Uif & HUDSON, Michael: Biodiversity in primary rainforest in Aseki and adjacent highlands in Papua New Guinea, with focus on the insect fauna, especially the Coleoptera (Buprestidae and Cerambycidae)	17

SECTION TWO: GENERAL BIOGEOGRAPHY

VALLEJO, Benjamin, Jr.: The Philippines in Wallacea	27
---	----

SECTION THREE: INVERTEBRATE ZOOLOGY AND BIOGEOGRAPHY

BARTOLOZZI, Luca, CIANFERONI, Fabio & MONTE, Cinzia: Checklist of the Lucanidae (Insecta: Coleoptera) from the Indo-Australian transition zone	43
BORDONI, Arnaldo: Xantholinini of the Australian region (Coleoptera: Staphylinidae), V. New species collected by Alexander Riedel in Arfak and Cyclops Mts., New Guinea	59
CASSOLA, Fabio: Studies of Tiger Beetles. CXCIV. The Tiger Beetles (Coleoptera: Cicindelidae) from Wallacea and the region of Indo-Australian transitional zone: the present knowledge	65
GREKE, Kristine: Species of <i>Ditropopsis</i> E.A.Smith, 1897 (Architaenioglossa: Cyclophoridae) from the Papuan region	69
GREKE, Kristine: First record of the genus <i>Ferrissia</i> Walker, 1903 (Gastropoda: Planorbidae) from the Papuan region	77
HÁVA, Jiří: Key to the species of Dermestidae (Coleoptera) recorded from the island of New Guinea ...	79
KALASHIAN, Mark Yu.: New species of <i>Endelus</i> Deyrolle, 1864 (Coleoptera: Buprestidae) from Sulawesi, Indonesia	83
MEDVEDEV, Lev N.: New species of Alticinae (Coleoptera: Chrysomelidae) from insular systems of SE Asia	89
TELNOV, Dmitry: Taxonomische Revision der Gattung <i>Macratrìa</i> Newman, 1838 (Coleoptera: Anthicidae: Macratrìinae) aus Wallacea, Neuguinea und den Salomonen	97
TELNOV, Dmitry: New <i>Gilletinus</i> Boucomont, 1932 (Coleoptera: Geotrupidae: Bolboceratinae) from Misool, with the key to known species	287
VITALI, Francesco: Notes on the genus <i>Acalolepta</i> Pascoe, 1858 (Coleoptera: Cerambycidae) from Indonesian Papua and the Moluccas	291
VOS, Rob de & SUHARTAWAN, Daawia: The <i>Spilosoma</i> group of species from New Guinea and adjacent islands (Lepidoptera: Erebidae: Arctiinae: Arctiini)	299
WEIGEL, Andreas & SKALE, André: Systematik, Taxonomie und Faunistik der Apomecynini der orientalischen und australischen Region (Coleoptera: Cerambycidae: Lamiinae). Revision der Gattung <i>Sybra</i> Pascoe, 1865 und Anmerkungen zu weiteren Gattungen, Teil 2	335
ZORN, Carsten: Taxonomic revision of the <i>Anomala cuprascens</i> species-group of Sulawesi and the Papuan Region. The species with a bidentate protibia (Coleoptera: Scarabaeidae: Rutelinae)	351
Index to scientific names	429

The Philippines in Wallacea

BENJAMIN VALLEJO, JR.

Institute of Environmental Science & Meteorology, College of Science, National Science Complex, University of the Philippines, Diliman, Quezon City 1101, The Philippines; bmvallejo@up.edu.ph

Abstract: The Philippine archipelago's position in Wallacea has been a matter of debate and is a biogeographic problem that has never been fully settled. In the current review this problem is examined in light of comparative phylogenetic biogeography, tectonic history and panbiogeography. The information about these supports Dickerson et al. (1928) assertions on the faunal transition character of Wallacea and how this defines the biotic regions of the Philippines within Wallacea and its links with Sulawesi. There is a need to go beyond the Pleistocene paradigm in Philippine biogeography if a fuller understanding of the scale and dimensions of biodiversity in the Philippines is to be achieved.

Key words: Philippines, Wallacea, comparative biogeography, panbiogeography, Sulawesi.

Introduction

The Philippines is an archipelago of approximately 7000 islands in the Western Pacific (Fig. 1). The position of the archipelago with respect to Wallacea (Dickerson et al. 1928) has been a subject for debate in biogeography. Wallacea is defined to be the region between Wallace's Line in the west and Weber's Line to the east (Fig. 2). The original Wallace's Line delineated the islands west of the line. Huxley's modification of the line included all the oceanic islands of the Philippines east of the line (Mayr 1976; Simpson 1977). Wallace (1880) considered the islands to be part of the Oriental region but was separated from the Asian mainland at a very early date (Simpson 1977). Dickerson et al. (1928) placed the Philippines as the northern apex of the Wallacean "triangle". While traditionally Wallace's Line delineated the Asian biotic region from the Australian and Weber's Line delineated the Australian from the Wallacean, Dickerson et al (1928) considered Wallacea as a faunal transition zone largely depauperate in Asian and Australian representatives (Wallace 1880; Mayr 1976) but characterized by a significant degree of novel and relict endemism.

In this paper the position of the Philippines with respect to Wallacea is examined under the present theories of phylogenetic biogeography and the tectonic setting and reconstruction of the archipelago. The significance of the Gondwanan affinities of Philippine taxa shared with Wallacea will be assessed using a panbiogeographic framework.

The physical geographic, tectonic and biogeographic setting of the Philippines

Physical geography

The Philippine archipelago can be divided into three groupings, Luzon, Visayas and Mindanao. Mindanao and Luzon are the two largest islands of Philippine archipelago. Luzon is the largest and most populous island of the Philippines with an area of 104688 km². It is orientated latitudinally from 18N to 12N and longitudinally from 119 to 123E. Mindanao is the second largest (97530 km²) and most easternmost island in the Philippines. The island is orientated more longitudinally (121E to 126E) unlike Luzon. Luzon has four major mountain systems, the Eastern Sierra Madre, Caraballo, Central Cordillera and Zambales ranges. Mindanao has the most complex physiography of the Philippine islands. There are 5 mountain range systems on the island mainly of volcanic origin and correspond to the crustal blocks identified. The highest Philippine mountain, Mount Apo is located along the eastern region of the island. Luzon is composed of 7 crustal blocks while Mindanao has 6 crustal blocks. Luzon and Mindanao are separated by the Visayas islands, the second major geographical groupings. The major islands are part of the Philippines "hotspot" of biodiversity (Heaney et al. 1998). Luzon and Mindanao formed their respective Greater islands during the Pleistocene. Greater Luzon included the islands of Polilio and Catanduanes while Greater Mindanao included the Visayan islands of Samar and Leyte as well as Dinagat and Basilan islands. The Sulu



SAMPLE PLATE 1



Figure 1. *Castiarina sedlaceki* Barker, 1988 from Mt. Kaindi (2300 m), the second known specimen (photo: U.Nylander).



Figure 2. Hitherto undescribed *Metataenia* species from Pawamanga village, Watut (photo: U.Nylander).



Figure 3. *Calodema longitarsis* Nylander, 2008 is only known by holotype specimen from Kerowagi (photo: U.Nylander).



Figure 4. *Calodema mariettae* Nylander, 1993, holotype specimen from Aseki (photo: U.Nylander).

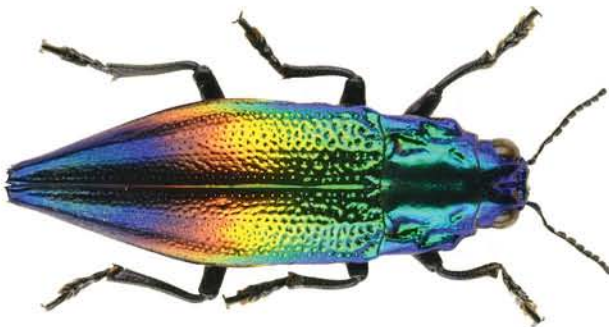


Figure 5. *Cyphogastara haidanae* Théry, 1923 from Gomemoa village, Garaina district, Morobe (photo: U.Nylander).



Figure 6. *Castiarina shelleybarkeri* Nylander, 2006 is only known by holotype specimen (photo: U.Nylander).

SAMPLE PLATE 2



Figures 1-6. *Ditropopsis fultoni* E.A.Smith, 1897, aberrant specimen from between Kokas and Goras, NE Onin peninsula (West New Guinea), with atrophied peripheral carina.

1: shell (lateral view with aperture); 2: shell (top view); 3: shell (bottom view); 4: operculum (internally); 5: operculum (externally); 6: operculum (laterally).