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CONTENT

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Hadi Dahruddin

DNA barcoding: foundations and applications for southeast asian freshwater fishes

TREUBIA, December 2016, Vol. 43, pp. 1–16.

Identifying and delineating species are the primary tasks of taxonomy. Owing to the decreasing interest of the nations for taxonomy and the inventory of living beings, funds have been drastically decreasing during the last two decades for taxonomic studies. As a consequence, the worldwide pool of taxonomists has dramatically decreased. DNA barcoding, as an automated tool for species delineation and identification, proved to rejuvenate the field of taxonomy and open new perspectives in ecology and conservation. In the present review, we will discuss how DNA barcoding established as a new paradigm in taxonomy and how DNA barcoding has been recently integrated in taxonomic studies. We will further details the potential applications for species identifications and discuss how DNA barcoding may positively impact the inventory and conservation of living beings, particularly in Biodiversity hotspots. We emphasize the benefit of DNA barcoding for the conservation of Southeast Asian freshwater fishes.

(Hadi Dahruddin, Renny Kurnia Hadiaty and Nicolas Hubert

Key words: biodiversity hotspots, DNA barcoding, integrative taxonomy, species delineation,species identification

UDC: 597:574.9(594)

Arief Aditya Hutama

Biogeography of Indonesian freshwater fishes: current progress

TREUBIA, December 2016, Vol. 43, pp. 17–30.

Southeast Asia is one of the most geologically complex tropical regions on Earth, in which the intricate interactions among plate tectonics, volcanism and Pleistocene climatic fluctuations led to complex patterns of species distribution. An increasing number of biogeographic studies of the Indonesian ichthyofauna have already partially uncovered the potential mechanisms at the origin of present day species distribution. These studies are currently scattered in the literature and the present review aims at presenting recent progress. Here, we propose a review of this literature with the aim to provide a broad overview of the current progress in the field of Indonesian freshwater fishes biogeography. First, we will briefly present the geology of the Indo-Australian Archipelago (IAA) and highlight the time frame of the geographical settlement of the Indonesian archipelago. Second, we will present the palaeoecological history of Sundaland during the Pleistocene. Finally, we will present the results of recent biogeographic studies across the three biogeographic provinces (Sundaland, Wallacea, Sahul) and discuss how these results fit with geological and palaeoecological scenarios in Indonesia.

(Arief Aditya Hutama, Renny Kurnia Hadiaty and Nicolas Hubert)

Key words: Biogeography, Indonesia, freshwater fishes, plate tectonics, Pleistocene climate

UDC: 599.41:519.23(594.31)

Sigit Wiantoro

Morphological and genetic study of the masked flying fox, *pteropus personatus*; with a new subspecies description from Gag Island

TREUBIA, December 2016, Vol. 43, pp. 31-46.

Study on the specimens of Masked Flying Fox, *Pteropus personatus* from Gag and Moluccas islands had been done by using the morphological and genetic analysis. Morphologically, four specimens from Gag Island differs from the other populations in Moluccas Islands by its smaller size of skull, dental and external measurements. All of these four specimens was identified as *P. personatus acityae* n. subsp. The phylogenetic reconstruction based on partial cytochrome *b* sequences also support the differences of *P. Personatus acityae* n. subsp. Thus, recently two subspecies of *P. personatus* known from its distribution areas.

(Sigit Wiantoro and Ibnu Maryanto)

Key words: flying fox, Gag Island, new subspecies, *Pteropus personatus*

UDC: 598.2:502.3(594.53)

Dewi M. Prawiradilaga

Birds of Halimun-Salak National Park, West Java, Indonesia: endemism, conservation and threatened status

TREUBIA, December 2016, Vol. 43, pp. 47–70.

Bird surveys and long-term bird monitoring in Gunung Halimun-Salak National Park were conducted between 1998 and 2009 to obtain comprehensive data on the bird species in the area. Compilation of bird data from this study and other studies have recorded a total of 279 species which is about 55.3% of the total Javan birds (507 species) or 17.4% of the total Indonesia birds (1605 species). As an important bird area, Gunung Halimun-Salak National Park is a home of 43 Indonesian and Javan endemic species. Among the endemics, 32 species are restricted range species. Gaps in the protection status of the bird species are discussed. The results of this study show that Gunung Halimun-Salak National Park has the highest richness of bird species in Java-Bali region and the conservation of its endemic and threatened species should be given the main priority.

(Dewi M. Prawiradilaga)

Key words: Birds, conservation status, endemism, gunung Halimun-Salak National Park, threatened status

UDC: 598.2(594.53)

Fransisca Noni Tirtaningtyas

Morphometric and molt of the crescent-chested babbler (*stachyris melanothorax*) in Cisarua forest, West Java

TREUBIA, December 2016, Vol. 43, pp. 71–78.

Crescent-chested Babbler is endemic to the island of Java and Bali, Indonesia and protected by the Indonesian Government Regulation No. 7/ 1999. Its population is suspected to be declining due to ongoing habitat destruction and fragmentation. Information on its eco-biology is very poorly known. There is a need to obtain those information in order to conserve this species and its habitat. Morphometric and molt stages were recorded from 23 individuals captured by mistnets between February and April 2016. There were variation in morphometric measurement in weight, head bill, wing length and tail length in Cisarua Forest habitat. This habitat have sufficient resource for Crescent-crested Babbler do the molt activity during the study.

(Fransisca Noni Tirtaningtyas, Yeni Aryati Mulyani, Dewi Malia Prawiradilaga, and Joseph Adiguna Hutabarat and Iis Sabahudin)

Key words: morphometric, molt, Stachyris melanothorax, threat, West Java

UDC: 595.132:599.322(594)

Kartika Dewi

General review of the genus *syphacia* (nematoda: oxyuridae) from murine rodents in Indonesia and neighboring areas

TREUBIA, December 2016, Vol. 43, pp. 79–104.

The pinworms of the genus *Syphacia* are of special interest because they have coevolutionary relationship with their host murines. In the areas from Southeast Asia to Australia, 21 species in four subgenera, of which two were endemic to Sulawesi, have been recorded. Their biogeographical distribution and dispersal process are discussed herein. Based on the morphological characteristics of the cephalic ends, the species of the subgenus *Syphacia* are divided into three lineages with square (S), round (R) and laterally-elongated (LE) cephalic shapes. The LE type is considered to be primitive, and the S and R types are derived from the LE type. The species composition of *Syphacia* seems to be mosaic among the islands, especially in Wallacea. A hypothesis on the formation of the host-parasite relationships between murines and subgenus *Syphacia* in the areas is presented. A key to *Syphacia* species recorded is also provided.

(Kartika Dewi, Hideo Hasegawa and Mitsuhiko Asakawa)

Key words: Indonesia, murine rodents, Southeast Asia to Australia, *Syphacia*