Faunistic notes about an entomological survey to Kepulauan Biak, Papua (Coleoptera: Cerambycidae)

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Abstract: Five species of cerambycids collected during an entomological survey done by the former author to Kepulauan Biak, Papua (Indonesia) are examined. *Acalolepta magnetica auripilis* (Matsushita, 1935) is new from the island of New Guinea, *Strongylurus aequatorius* (Gressitt, 1959) and *Parepepeotes togatus togatus* (Perroud, 1855) are new from Kepulauan Biak.

Ikhtisar: Lima spesies cerambycids dikumpulkan selama ekspedisi entomologi yang dilakukan oleh penulis pertam ke Kepulauan Biak, Papua (Indonesia) diselidiki. *Acalolepta magnetica auripilis* (Matsushita, 1935) merupakan spesies baru untuk New Guinea, *Strongylurus aequatorius* (Gressitt, 1959) dan *Parepepeotes togatus togatus* (Perroud, 1855) dua spesies baru untuk Kepulauan Biak.

Key-words: Cerambycinae, Lamiinae, New Guinea, faunistics.

Introduction

To naturalists New Guinea offers wide opportunities for research and possibilities for interesting discoveries. The island is a bridge between Asia on one side and Oceania on the other, where fauna and flora of different origins have met and mixed together, creating, in effect, a micro-continent with extraordinary biodiversity. The geography of New Guinea has contributed to the evolution of many endemic taxa. High mountain ranges, some of them covered by perpetual snow, bisect the length of the island. The climate is warm and humid with abundant rainfalls, the island being located few degrees at south of the Equator. The rivers flowing from central mountains have created a complex maze of valleys, often very deep, which

have formed an obstacle to the exploration of the inland for many years.
In New Guinea it is possible to switch after few miles from a tropical habitat of rainforests to an alpine one with biocenoses typical of high mountains.
Valleys are generally isolated by high mountain ranges or lowland forest, influencing the distribution of certain species and the evolution of endemic forms.
It is therefore not surprising that nearly every scientific exploration of the island discovers new species of animals and plants.
The small islands surrounding New Guinea often have unique geographic features, which have contributed to the differentiation of their fauna and flora. Two of them, Biak and Numfor (Kabupaten Biak-Numfor), were the destination of an entomologic survey by the former author.
The collected cerambycids were sent to the latter author, in whose collection they are currently preserved. Although the number of the collected specimens is relatively small, the results are significant and deserve publication.

Geographic characteristics of Kepulauan Biak

Kepulauan Biak (formerly Schouten or Geelvink Islands) is an archipelago located in the Cenderawasih Bay (or Geelvink Bay) at 50 km off the north-western coast of New Guinea, Papua, Indonesia. It consists of three large islands (Biak, Supiori and Numfor) and approximately fifty smaller coralline isles, all politically part of Papua Province. Supiori became regency (Kabupaten) on its own. Biak and Numfor are still united in the Kabupaten Biak-Numfor. Numfor, the smaller of the two islands, is low-lying with a maximum elevation of a few tens of meters, while Biak reaches nearly one thousand meters above sea level.
From a biogeographical point of view, Kepulauan Biak belongs to the ìNorthern New Guinea lowland rain and freshwater swamp forestsî (Boer & Duffels, 1996), a mountain region drained by numerous large rivers that extends from the eastern shore of Cenderawasih Bay to the Morobe Province of Papua New Guinea.
The archipelago is mostly covered with a rainforest of trees analogous to those found on the northern coastal regions of mainland New Guinea. Large areas of forest, especially on Biak, have been cut down for logging or to clear land for agriculture.

Scientific results

***Ceresium unicolor* (Fabricius, 1787)**
Fig. 4

Material. Biak I., Korem, 2.XII.1995, C. A. Casadio leg., 1 ♂.
Remarks. *Ceresium unicolor* is a polyphagous cerambycid, probably original from

New Guinea but widespread in all area bordering both Indian and Pacific Ocean: New Amsterdam I. (type locality), Madagascar, Comoros, Seychelles, Tahiti, Ceylon, India, Andaman, Nicobar, Myanmar, Thailand, Indochina, Taiwan, Ryukyu, Japan, Philippines, Borneo, Malaysia, Sumatra, Java, Sunda, Waigeo, Bonin, Caroline, Marianne, Marshall, New Guinea, Goodenough, Fergusson, Normanby, Misina, Rossel, Solomons, Vanuatu, New Caledonia, Norfolk, Australia, Fiji (Gahan, 1906; Plavilstshikov, 1932; Bigger & Schofield, 1983) and even Rapa Nui (Cerda, 1991).
The possibly ancient origin of this wide distribution has led to the description of some scarcely different forms (*paluense* Matsushita, 1932; *marshallianus* Gressitt, 1956; *pseudunicolor* Kusama & Hayashi, 1972), which have at different times been considered as species, subspecies or simple synonyms.
Apparently, *Ceresium unicolor* has not previously been recorded from Kepulauan Biak.

***Aeolesthes textor* (Pascoe, 1869)**
Figs 1, 6

Material. Biak I., Korem, 3.XII.1995, both in the same fissure of a broadleaf tree in daytime, C. A. Casadio leg., 2 ♂♂.
Remarks. *Aeolesthes textor* is a true Indonesian species widespread in the West Papua (Sorong) and the adjacent Moluccas (Halmahera, Ternate, Bacan, Obira). Though under a different erroneous name (*Aeolesthes externa*), this cerambycid has been already known for Biak (Gressitt, 1959).
In fact, due to an old incorrect synonymy (Gahan, 1890), this species has long been mixed with *Aeolesthes externa* (Pascoe, 1869), a sibling congener widespread throughout New Guinea, Moluccas, Aru, Kai, Queensland and Bougainville (Vitali, 2007; 2010).
Both collected males have mutilated antennae, a feature that often results from the fight for females typical of some Palaearctic genera such as *Cerambyx* Linnaeus, 1758.

***Strongylurus* cf. *aequatorius* (Gressitt, 1959)**
Figs 5, 9

Material. Numfor I., 13.XII.1995, C. A. Casadio leg., 1 ♂.
Remarks. By judging from the original description, the present specimen looks darker than the types, having the whole basal half of elytra entirely dark, but it agrees in antennal structure and body puncturing. It might be about a different subspecies; however this single specimen does not allow a firm opinion.
Gressitt (1959) listed this species only from Papua (Waigeo) and Papua New Guinea (Morobe prov.: Wareo, Mt. Lamington). Possibly, it is present throughout New Guinea.

The collected specimen represents the first record for Kepulauan Biak.

***Acalolepta magnetica auripilis* (Matsushita, 1935)**
Figs 2, 7

Material. Numfor I., 12.XII.1995, C. A. Casadio leg., 1 ♂.
Remarks. *Acalolepta magnetica auripilis* is a Micronesian cerambycid endemic from the Palau archipelago (Western Caroline) and ecologically related to dead woods of the Breadfruit Tree, *Artocarpus altilis* (Parkinson) Fosberg (Gressitt, 1956).
Originally, it was described as a true species (*Niphohammus auripilis*), but Breuning (1944) considered it as a simple synonym of *Acalolepta magnetica* (Pascoe, 1869), an Indonesian species widespread in the Moluccas (Watubela, Ternate, Buru, Seram, Timorlaut, Aru) (Gressitt, 1952; 1956; Bigger & Schofield, 1983).
Later, the peculiar characters of this taxon (smaller size and more punctured pronotum) made Gressitt (1956) rehabilitate it as a subspecies of *A. magnetica*.
In reality, the two subspecies show constant different characters and are found in widely separated areas, hence Breuning's point of view seems to be unfounded. Moreover, this kind of strongly disconnected geonemy suggests that these taxa should be more correctly considered again as two true species.
The male collected in Numfor has characters evidently attributable to the Micronesian taxon, becoming the first record for the territory of Papua and of New Guinea with its surrounding islands.
Such record also suggests a direct faunistic relationship (possibly due to storms) between Kepulauan Biak and the Western Caroline.

***Parepepeotes togatus togatus* (Perroud, 1855)**
Figs 3, 8

Material. Numfor I., 12.XII.1995, C. A. Casadio leg., 1 ♂.
Remarks. According to Breuning (1944; 1970), *Parepepeotes togatus* is widespread in New Guinea, Queensland and the Aru islands as the typical form, in New Britain as the subspecies *dilaceratus* Breuning, 1944, and in Yela (= Rossel I.) as the subspecies *rossellii* Breuning, 1970.
The male collected in Numfor belongs to the typical form, which has not previously been recorded from Kepulauan Biak.

Bibliography

Bigger M. & P. Schofield, 1983. Checklist of Cerambycidae, Curculionidae, Attelabidae, Scolytidae and Platypodidae of Melanesia. *Centre for Overseas Pest Research*, London, 26 pp.

Boer A. J. de & J.P. Duffels, 1996a. Biogeography of Indo-Pacific cicadas east of Wallace's Line. *In: A. Keast & S. Miller (ed.). The origin and evolution of Pacific Island biotas, New Guinea to Eastern Polynesia: patterns and processes*, SPB Academic Publishing, Amsterdam, pp. 297-330.

Boer A. J. de & J.P. Duffels, 1996b. Historical biogeography of the cicadas of Wallacea, New Guinea and the West Pacific: a geotectonic explanation. *Palaeogeography, palaeoclimatology, palaeoecology* **124**: 153-177.

Breuning S. Von, 1944. Études sur les Lamiares (Col. Ceramb.) Douzième Tribu: Agniini Thomson. *Novitates Entomologicae* **14** année, 3 suppl., fasc. 109-135: 297-512.

Breuning S. Von, 1970. Nouveaux Coléoptères Cerambycidae Lamiinae des collections du Muséum de Paris. *Bulletin du Muséum National d'histoire naturelle*, 2e Série, **42** (2): 363-377.

Cerda G. M., 1991. *Ceresium unicolor unicolor* F. new record collected on Easter Island (Coleoptera Cerambycidae). *Acta Entomologica Chilena* **16**: 271-272.

Gahan C. J., 1890. Notes on Longicorn Coleoptera of the group Cerambycinae with descriptions of new genera and species. *Annals and Magazine of Natural History* (6) VI (32): 247-261.

Gahan C. J., 1906. The Fauna of British India, including Ceylon and Birma. Vol. I: Coleoptera Cerambycidae. *Today & Tomorrow's Printer and Publishers*, New Delhi, 329 pp.

Gressitt J. L., 1952. Longicorn Beetles from New Guinea and the South Pacific (Coleoptera: Cerambycidae). Part III. *Annals of The Entomological Society of America* **45**: 44-58.

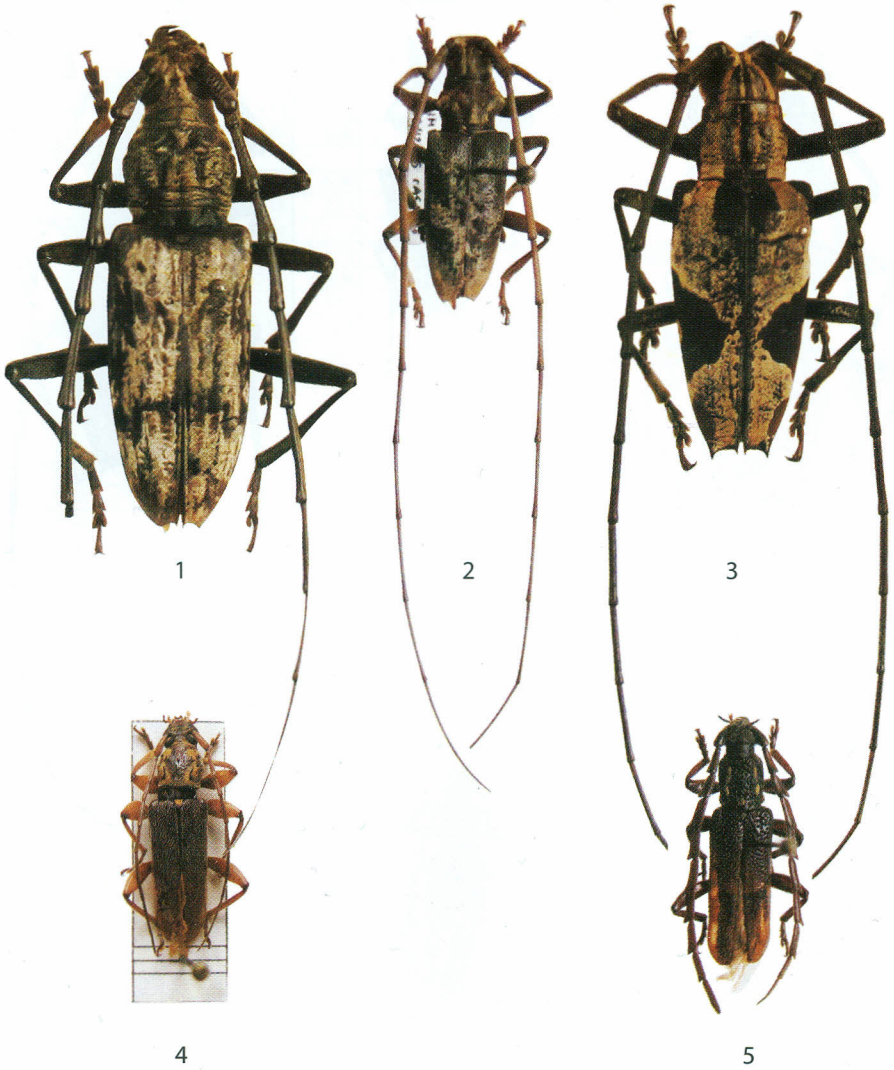
Gressitt J. L., 1956. Coleoptera: Cerambycidae. Insects of Micronesia 17 (2), *Bernice P. Bishop Museum*, Honolulu, 183 pp.

Gressitt J. L., 1959. Longicorn Beetles of New Guinea, I (Cerambycidae). *Pacific Insects* **1** (1): 59-171.

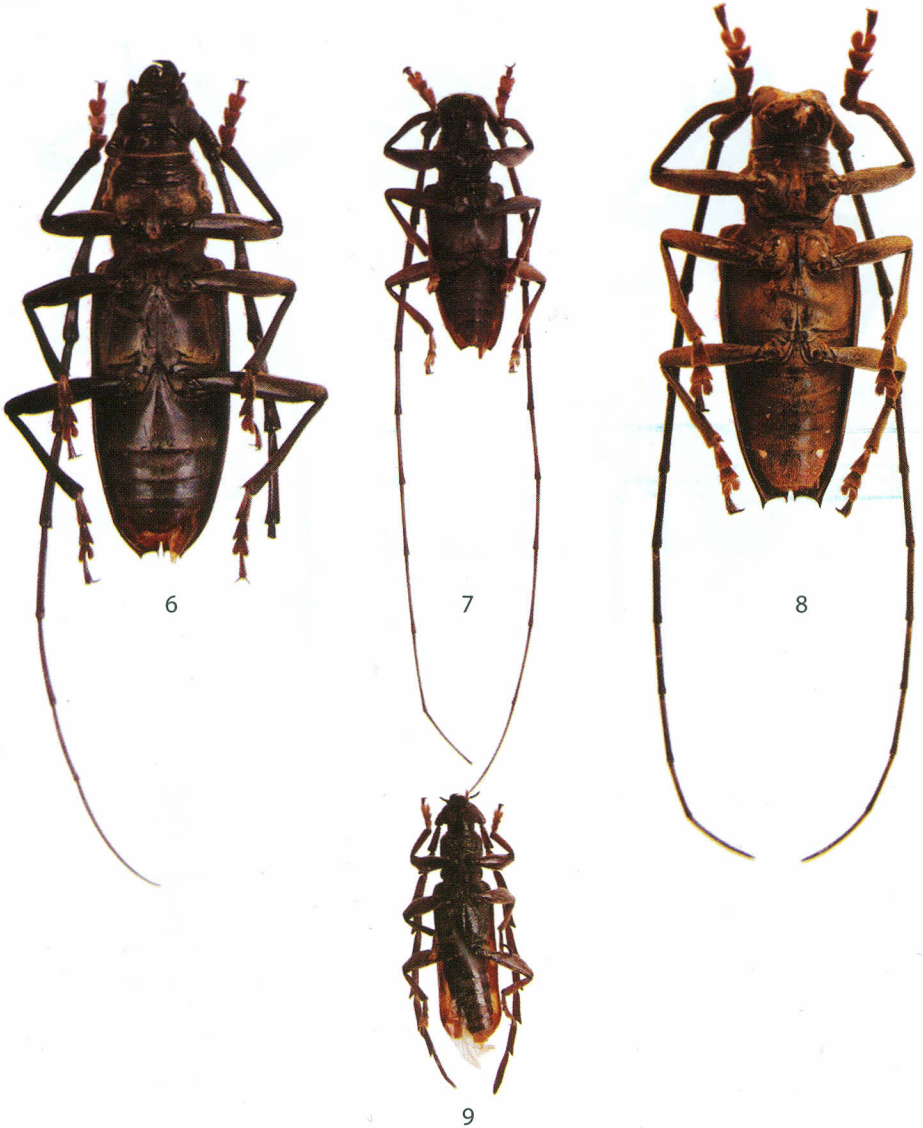
Plavilstshikov N. N., 1932. Bestimmungs-Tabellen der europäischen Coleopteren. 102 Heft. Cerambycidae II. Teil. Cerambycinae: Cerambycini II. E. Reitter Ed., Troppau, 145 pp.

Vitali F., 2007. About the taxonomic status of some species of the genus *Aeolesthes* Gahan, 1890 (Coleoptera Cerambycidae). *Entomapeiron* (N. S.) **1** (3): 65-80.

Vitali F., 2010. Taxonomic and Faunistic notes about some Asian cerambycids belonging to the national museum of natural history of Luxembourg (Coleoptera, Cerambycidae). *Lambillionea* **110** (2): 179-184.



Figs 1-5. Uppersides of: 1. *Aeolesthes textor* (Pascoe, 1869) male, Biak; 2. *Acalolepta magnetica auripilis* (Matsushita, 1935), male, Numfor; 3. *Parepeotes togatus togatus* (Perroud, 1855), male, Biak; 4. *Ceresium unicolor* (Fabricius, 1787), male, Biak; 5. *Strongylurus aequatorius* (Gressit, 1959), female, Numfor.



Figs 6-9. Ventral side of: 6. *Aeolesthes textor* (Pascoe, 1869); 7. *Acalolepta magnetica auripilis* (Matsushita, 1935); 8. *Parepeotes togatus togatus* (Perroud, 1855); 9. *Strongylurus aequatorius* (Gressit, 1959).