

# DESCRIPTION OF BEETLE (ORDER COLEOPTERA, SUB ORDER POLYPHAGA, FAM. ANOBIIDAE): NEW RECORD FOR POTENTIAL SEED PEST OF MERBAU [*Intsia bijuga* (Colebr.) O. Kuntze]



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## INTRODUCTION

Merbau seeds collected from the natural stands for planting purpose are often infested by un-described small beetles. If removing damaged seed is not done, frequently, serious damaged in storage could occur.

**THE OBJECTIVE OF THIS STUDY** is to describe the characters of the beetle and use those characters for identification.

## MATERIALS AND METHODS

The infested merbau seeds were collected from natural stands (Desa Swapodibo, Biak and Gunung Meja, Manokwari). The adult beetles were removed from the seeds and preserved with 70% alcohol. The main characters used in identification were those are of the head, antennae, thoracic sclerites, elytra, legs, abdomen, size, shape and color. All described characters then compare to the references for identification (Borror & DeLong 1970; Borror & White 1973; and Kalsoven 1980)

## RESULT

Merbau seeds collected from the natural forest of Biak and Manokwari had already been heavily infested by the same species of beetle (order Coleoptera) which belongs to suborder Polyphaga, famili Anobiidae, The beetle passed the larvae stage in the seed and destroyed the cotyledone of the seeds. Adult beetle will leave the seeds through exit holes (Fig.1 )

The beetle description as follows: **The body size** of the female ( $\pm 7.0$  mm) and of the male beetle ( $\pm 6.7$  mm). Almost the whole body covers with hairs. The beetle is elongated, somewhat cylindrical, brownish black. The head bends down, not visible from dorsal view. **The antennae:** 11 segments with three segmented clubs at the end, capitate type (Fig 3 A). **Pronotum** hood-like in form, with posterior margin sinuate, wider than head (Fig 2 A, B and E). The **sternum** is not completely divided by the hind coxae, and its posterior edge extends completely across the body (Fig 2 D). **Prosternum** is close to coxal cavities (Fig 2 C). **Elytra** covering tip of abdomen, only leaving a part of the last abdominal segment exposed (Fig 2 B), marked with patches of brownish-black pubescent (Fig 2 G). **Tarsus:** 3 segments (3-3-3), the last tarsal segment is smaller (Fig 3 B & C).

## CONCLUSIONS

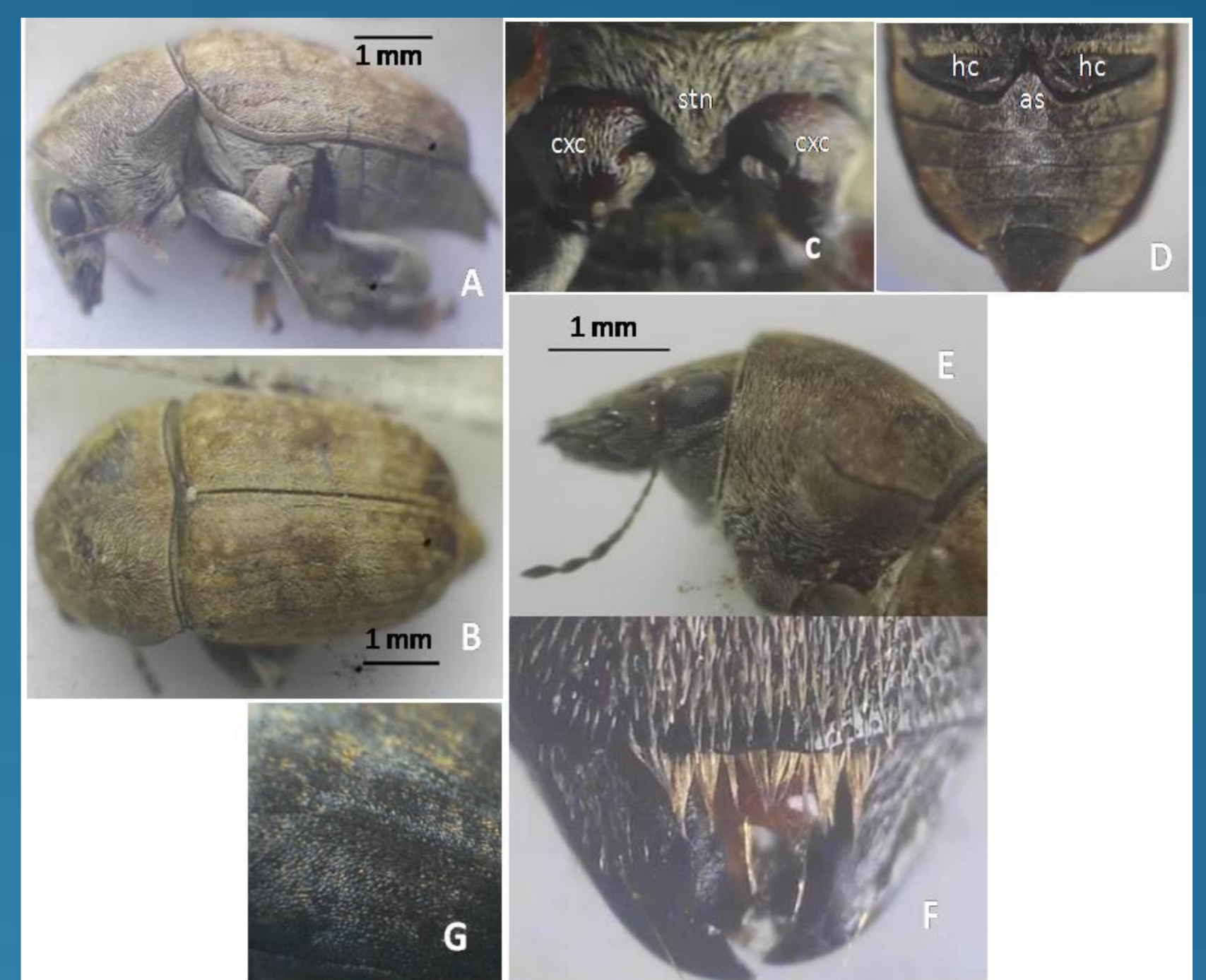
The beetle (Coleoptera) infested merbau seed belongs to suborder Polyphaga, family Anobiidae. This Anobiid beetle may have wide distribution and could be a potential seed pest of merbau in the future

## REFERENCES

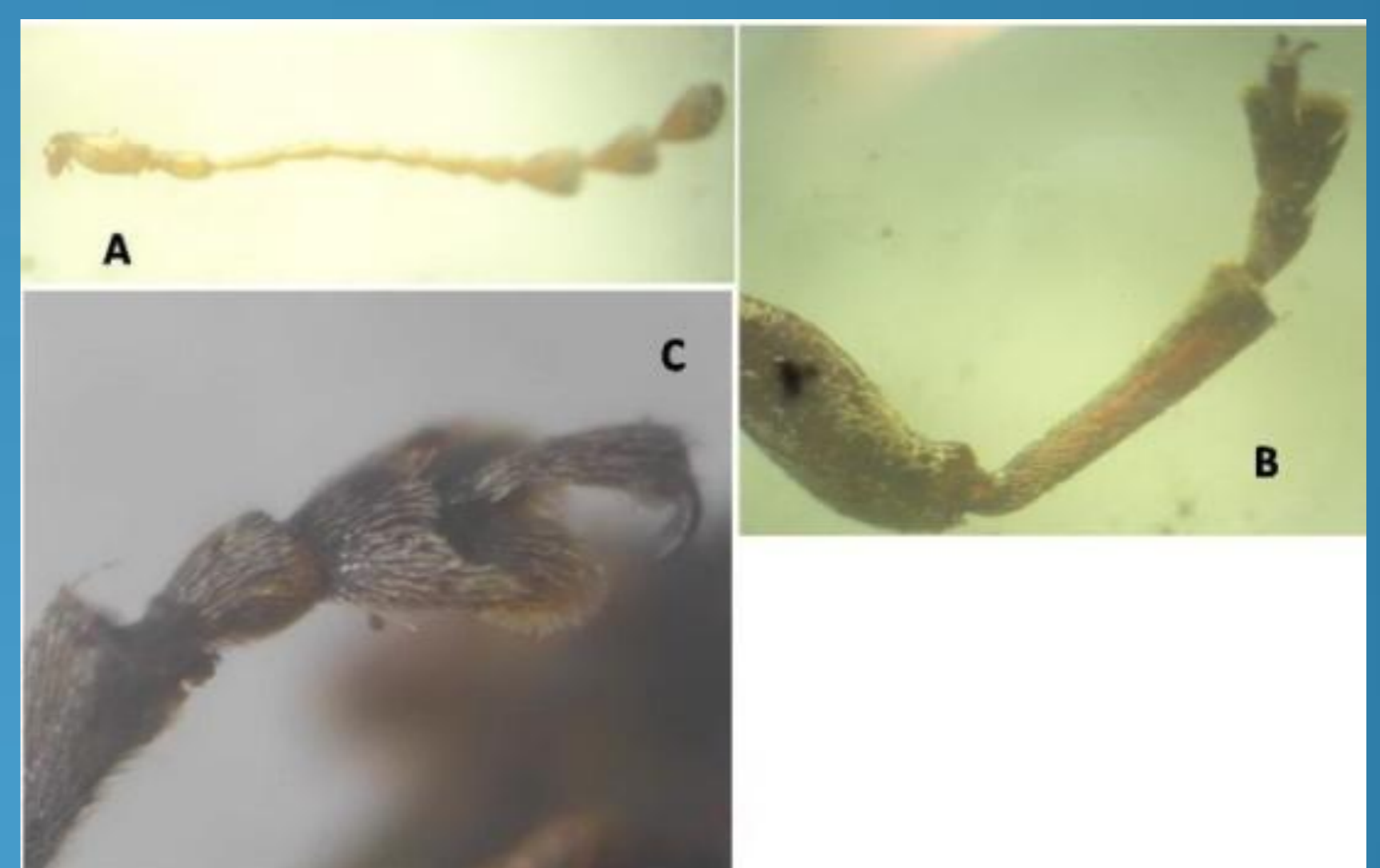
- Borror D J and White R E. (1973): A Field Guide to the Insects of America North of Mexico. Houghton Mifflin Company, Boston  
Borror, D J and DeLong, D M. (1970): An Introduction to the Study of Insects. 3<sup>rd</sup> Ed. Holt, Rinehart and Winston, New York.  
Kalsoven L G E. (1980). Pest of Crops in Indonesia. R A Van der Lean, Amsterdam.



Figure 1. Damage Seeds of Merbau caused by Anobiid Beetle



**Figure 2.** Adult of the female Anobiid beetle. (A) Lateral view; (B) Dorsal view; (C) Prosternum showing closed coxa cavities; cxc, coxa cavities; stn, sterna (D) Base of abdomen, ventral view, showing Polyphaga characteristic; hc, hind coxa; as, abdominal sterna; (E) the head and pronotum; (F) Mandible; (G) the pattern of pubescent elytra



**Figure 3.** (A) Antenna with three clubs at the end; (B) hind leg; (C) three segment of tarsus with the last segment having smaller size.