

## STAG BEETLE OF MALAYSIA ONLINE CHECKLIST

<http://www.frim.gov.my/CHM/Member.html>

### INTRODUCTION

Knowing the importance of insects' biodiversity in Malaysia, a step has been taken to recognize and conserve various insects groups from this megadiverse, rich, tropical country. One of the groups includes the stag beetle group (Malay names "kumbang rusa") of the family Lucanidae. Their English name is derived from the enlarged mandible resembling the antler of a stag (male deer) that the lucanids possessed. The family comprises of approximately 1200 species and 4 subfamilies worldwide. Of these, a total of 161 species are found in Malaysia.

### About the database

The main purpose of the checklist is to serve as references for future research in Malaysian stag beetle. The checklist comprised of the current classification of stag beetle following Krajcik (2003 & 2000) and Mizunuma & Nagai (1994). It includes subfamily, tribe, genus, subgenera, species, subspecies, describer, year, all known distribution of the species, type locality and date (if any), and type depository. Plates and numbers of the listed species illustrations are included and can be found in Mizunuma & Nagai (1994) "The Lucanid Beetles of the World" Encyclopedia. The species names are arranged alphabetically as follow subfamily>tribe>genus>species. It is important to note that the Lucanidae taxonomy is still incomplete and there is still a lot of disagreement regarding the species placement especially of the higher level. The difficulties of the taxonomic of Lucanidae can be quote as follow;

"In the family Lucanidae the extreme polymorphism of the males has been the cause of a great multiplication of names, but this family is not one of the very large groups of beetles and a considerable reduction in the number of genera will leave the largest genus far inferior to many genera of other families...A number of names treated as generic in the catalogues were intended by their authors only as subgeneric and by those who consider as useful subgenera of which the only distinctive features are not always present... The invariable confusion which arises from the use of names indistinguishable from those of genera are avoidable by adherence to the Linnaean method of using terms with plural endings of all subdivisions except the genus; or sections of the genus may be designated by letter or number, or by the name of a representative species"

Arrow, 1943

"The question of species in the LUCANIDAE...It follows that in this family the definition of a species is more extensive than in any other groups of insects, and that the descriptions must be differently arranged if they are to be of any permanent value. The old authors contended themselves with drawing up a description of a single specimens. This renders is extremely difficult, if not impossible, to identify many of their species with any certainty, as those only can fully realize who have attempted to work at historical entomology. The study of types is more important in the Lucanidae than in almost any group, for without this assistance many riddles would remain insoluble. As a single specimen gives us a very imperfect idea of a species, we must describe and illustrate an entire series in order to

elucidate it sufficiently. But we shall often find that our language is too poor to express our observations correctly."

Leuthner, 1885

"The classification of the families Geotrupidae and LUCANIDAE is more problematic. Because of the numerous and widely differing opinions about relationships within each of these groups, it was impossible to pick a single reference as the authority on either group."

"...the family LUCANIDAE is in a state of taxonomic chaos at the higher levels."

"The tribal classification within the subfamily Lucaninae was so haphazard that I decided to not recognize any of them in this work, even though there is undoubtedly merit in recognizing some of the groups as tribes (for example Platycerini, Chiasognathini, and Figulini)."

Smith, 2006

I will try to update the database regularly according to the recent progress on stag beetle taxonomic work, emphasizing on Malaysian stag beetles. No doubt that molecular works will play important roles in differentiating the species, especially cryptic species.

## **ABBREVIATIONS, SYMBOLS AND EXPLANATORY NOTES**

### **TYPE DATA**

TYPE LOCALITY includes the place where the primary type(s) was collected.

TYPE DEPOSITORY includes nature of type specimen(s) and institution(s) or private collection(s) in which type(s) is held.

### **ABBREVIATIONS OF DEPOSITORIES**

<b>AMNH</b>	American Museum of Natural History, New York
<b>BMNH</b>	British Museum of Natural History, London
<b>KPMY</b>	Kanagawa Prefectural Museum Yokohama, Japan (Collection Nagai)
<b>MCSN</b>	Museo Civico di Storia Naturale "Giacomo Doria" Genova, Italy
<b>MNHN</b>	Museum d'Histoire Naturelle, Paris
<b>MHNG</b>	Muséum d'Histoire Naturelle Geneva, Switzerland
<b>NHMW</b>	Naturhistorisches Museum Wien, Austria
<b>OXUM</b>	Hope Entomological Collections, University Museum, Oxford
<b>RMNH</b>	Rijksmuseum van Natuurlijke Historie Leiden, Netherlands
<b>UZI</b>	Uppsala University, Uppsala, Sweden
<b>ZMAS (ZIN)</b>	Zoological Institute Russian Academy of Sciences, St. Petersburg, Russia
<b>ZMUC</b>	University of Copenhagen Zoological Museum, Copenhagen, Denmark

## **TYPE SPECIMENS ABBREVIATIONS**

**HT** = holotype

**LT** = lectotype

**NT** = neotype

**AT** = allotype

**PT** = paratype

**PNT** = paraneotype

**ST** = syntype

**CT** = cotype

**T** = type

**?** Subjective or objective problems with a taxon status, validity of taxon, exact locality, types depositories etc.

## References

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