Serangga 22(2): 71-81
ISSN 1394-5130 © 2017, Centre for Insects Systematic,
Universiti Kebangsaan Malaysia

ILLUSTRATED IDENTIFICATION GUIDE OF MALAYSIAN REDUVIIDAE LATREILLE 1807 (HEMIPTERA: HETEROPTERA)

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ABSTRACT

An illustrated key for ten Reduviidae species belongs to four subfamilies were built using specimens collected in Malaysia.

Keywords: illustrated, identification, Reduviidae, Malaysia

ABSTRAK

Kekunci bergambar telah dibina untuk sepuluh spesies Reduviidae daripada empat subfamili dengan menggunakan spesimen dari Malaysia.

Kata kunci: ilustrasi, pengecaman, Reduviidae, Malaysia

INTRODUCTION

Reduviidae is one of arthropods with cosmopolitan and diversified behaviour and distributions (Ambrose 2006; Cassis & Gross 1995; David 2017; Froeschner & Kormilev 1989; Maldonado 1990). They possess notable and specialized morphological characters based on habitat adaptation and prey acquisition (Berenger & Pluot-Sigwalt 2009; Forthman & Weirauch 2012; MacMahan 1982, 1983; Weirauch et al. 2014).

Centrocnemidinae have strong spinous body and visible all labial segment whereas members of Tribelocephalinae does not have ocelli. Stenopodainae have pentagonal or hexagonal cubitus cell with prominent mandibular plate while Salyvatinae has 2-segmented tarsus (Weirauch 2014). Ambrose (2006) recorded 464 Oriental species with 28 Malaysian species from 7 subfamilies and 28 genera compare to Maldonado (1990) who established 514 Malaysian species (Ambrose 1980, 1987a, 1987b, 1988, 1991, 1999, 2000, 2003, 2004a, 2004b; David 2016).

Reduviidae are significance as disease vector such as Chagas disease and biological control agents in several cases such as in Salvayatinae that feed on termites (McMahan 1982, 1983). As a conclusion, thorough and up-to-date research are important due to global landmass changes, incomplete taxonomic status and biological significance of Reduviidae from Malaysia (David 2016; Weirauch 2014).

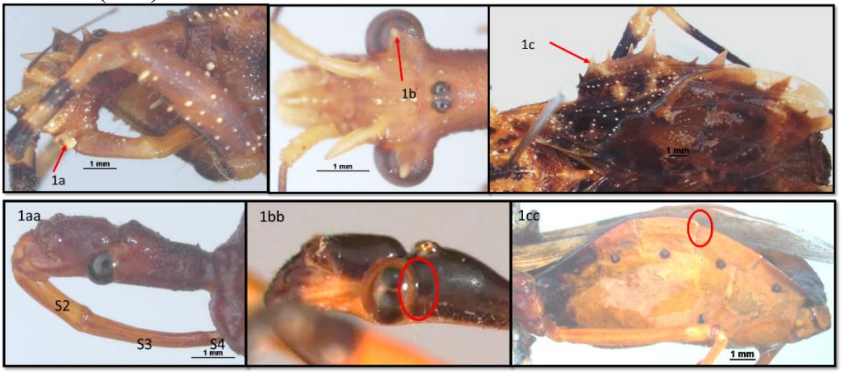
MATERIALS AND METHODS

Specimen were obtained in fieldwork conducted in Malaysia between in November 2014 until June 2016 by using sweep net, hand picking or malaise trap. Acquired specimens later preserved in 70% alcohol and sorted in laboratory (McGavin 1993). The

sorted specimens were later pinned, labelled and oven-dried for 30-40°C for 3 to 4 days (Mohamed Salleh 1990; David 2013). The specimens later identified and described by referring to pertinent literatures. Distinguishable characters extracted to build identification key. Specimen were later deposited in Centre for Insects Systematics (CIS) UKM. The images were captured using Axio Cam Vision Image Analyzer.

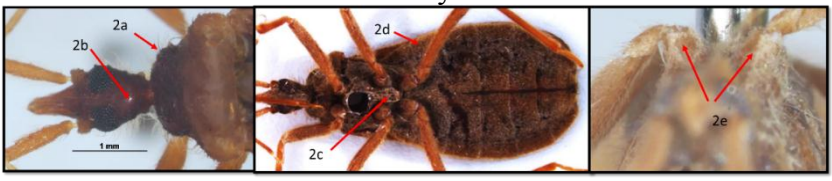
Illustrated Identification Key of Reduviidae from Malaysia

1. All four labial segments visible, 1st labial segment obvious (1a); horn-like protuberances lateral to eyes (1b); connexivum with projecting spine-like flanges (1c)…….***Neocentrocnemis signoreti* (Stal, 1863)**
   Only three labial segments visible, 1st segment absent (1aa); absences of horn-like protuberances lateral to eyes (1bb); connexivum without projecting spine-like flanges (1cc)…..**2**

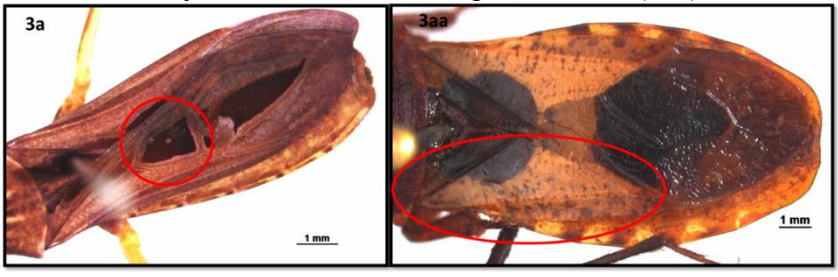


2(1) Body with overlapping hairs (2a); ocelli absent (2b); trichome present (2c); connexivum hairy (2d); fore coxa notched basoventrally (2e)…….***Opistoplatys sorex* (Horvath, 1879)**

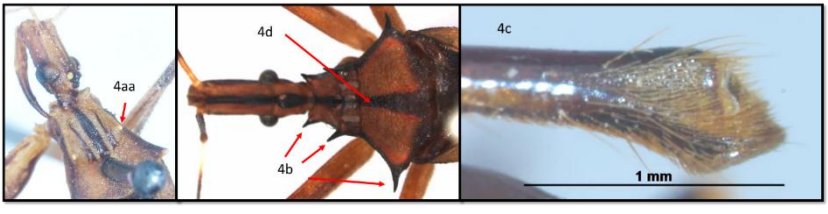
Body shiny, setose, pilose, punctate or carinated; ocelli present; trichome absent; connexivum not hairy; fore coxa without notch basoventrally……..…**3**



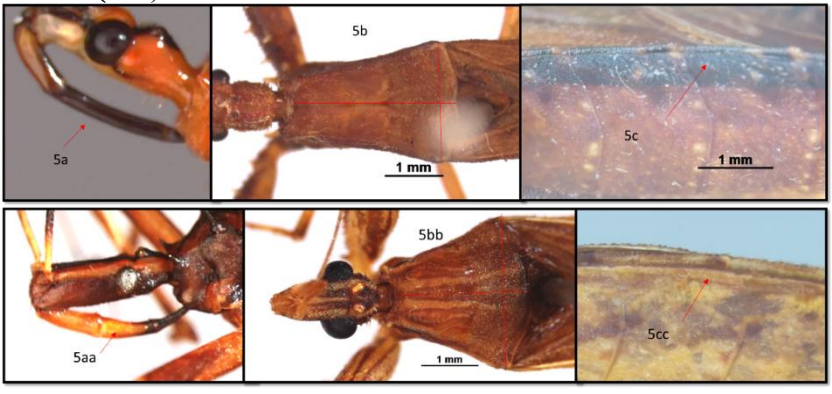
3(2) Hemelytron cubitus with quadrate cell (3a)……..……**4**
Hemelytron cubitus without quadrate cell (3aa)……..**7**



4(3) Body without denticles; pronotum with 3 pair of spines (4b); presence of fossula spongiosa (4c); with black longitudinal stripe from head till pronotum basal (4d)……...***Canthesancus gulo* (Stal, 1863)**
Body covered with denticles (4aa); pronotum without spine or tubercle setae; absence of fossula spongiosa; without black longitudinal stripe from head till pronotum basal……..**.....5**



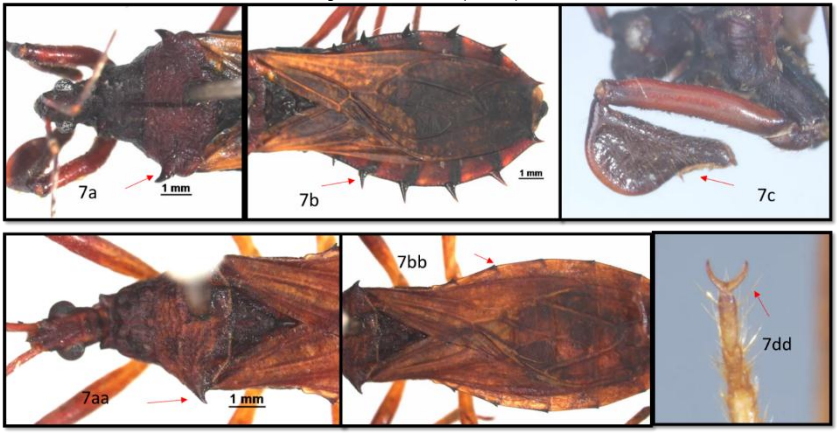
5(4) Third labial segment slender (5a); pronotum longer than width (5b); tergite and sternite fused (5c)……***Sastrapada singaporiensis*** **(Miller, 1940)**
Third labial segment stout (5aa); pronotum wider than length (5bb); tergite and sternite hinged laterally (5cc)……..…..**6**



6(7) Head without bi-lobed frontal projections; claw with basal tooth (6b); metasternum not subquadrate……***Oncocephalus annulipes*** **(Stal, 1855)**
Head with bi-lobed frontal projections (6aa); claw without basal tooth; metasternum subquadrate (6cc)……...***Oncocephalus lineosus*** **(Distant, 1904)**

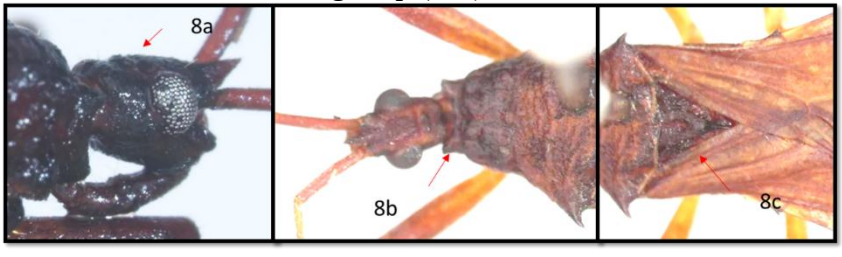
7(3) Humeral angle with spine concave upwards (7a); connexivum with specialized spine laterally (7b); foreleg chelate (7c); claw asymmetric……...***Alvilla australis*** **(Vuillefroy, 1864)**

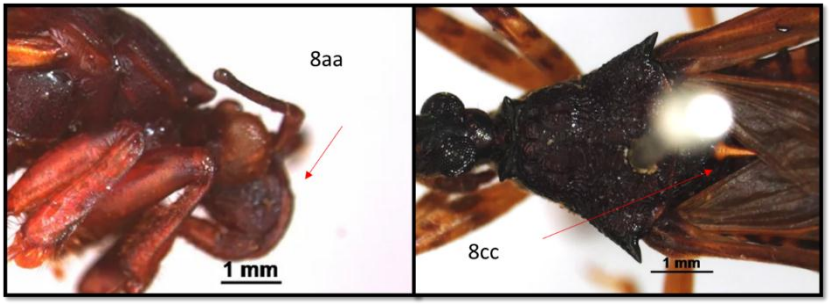
Humeral angle with spine concave down (7aa); connexivum with sharp, spine-like lateral (7bb); foreleg not chelate; claw symmetric (7dd)……..…..…**8**



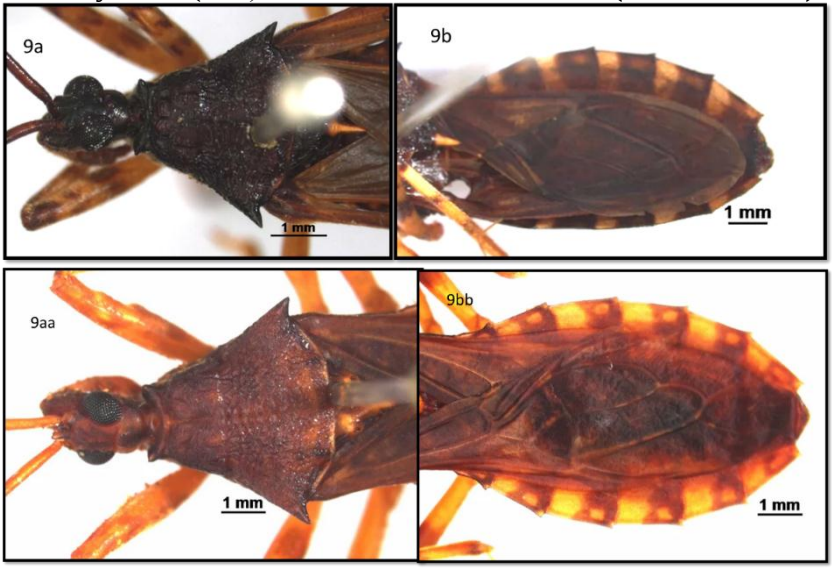
8(7) Head declivous (8a); median collar thickened (8b); scutellum single median tip with bilateral posterior tip (8c)……***Lisarda rhypara*** **(Stal, 1859)**

Head convex (8aa); median collar not thickened; scutellum with single tip (8cc)……**...9**





9(8) Scutellum black (9a); connexivum black and yellow (9b)……...***Lisarda pallidispina*** **(Stal, 1874)**
Scutellum dark brown (9aa); connexivum dark brown and yellow (9bb)……...***Lisarda inornata*** **(Walker, 1873)**



ACKNOWLEDGEMENT

We would like to thank Faculty of Science and Technology of Universiti Kebangsaan Malaysia for allowing us to conduct this research. This project is funded by Universiti Kebangsaan Malaysia with the grant GUP-2014-028.

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