

The Naiads of *Acisoma panorpoides panorpoides* Rambur and *Brachythemis contaminata* (Fabricius) [Libellulidae: Odonata]

RIAZ HUSSAIN AND MUHAMMAD RIAZ†

Pest Warning and Quality Control of Pesticides, Burewala and †Vehari, Pakistan

ABSTRACT

Taxonomy of the naiads of *Acisoma panorpoides panorpoides* Rambur and *Brachythemis contaminata* (Fabricius) collected from different localities of the Sindh, Pakistan have been given with illustrations.

Key Words: Naiads; Description; Libellulidae; Odonata; Taxonomy

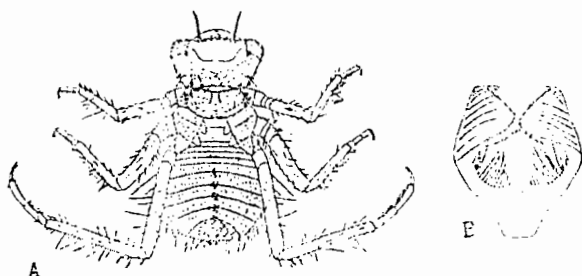
INTRODUCTION

The nymphs or naiads of *Acisoma panorpoides panorpoides* Rambur and *Brachythemis contaminata* (Fabricius) are aquatic, predacious and in turn are preyed upon by other predators such as fishes and birds. Numerous reports are available on the taxonomy of these insects from other countries (Needham, 1930; Fraser, 1933-36; Longfield, 1949; Needham & Westfall, 1955; Gardner, 1960; Musser, 1962; Belyshev, 1963; Begum *et al.*, 1982). This paper presents the taxonomy of these naiads collected from Sindh, Pakistan.

The samples collected from different localities of Sindh were brought to the Department of Agriculture Entomology, University of Agriculture, Faisalabad. They were identified and the taxonomic characteristics recorded with the help of keys and published description (Needham, 1930; Begum *et al.*, 1982).

I. *Acisoma panorpoides panorpoides* (Rambur)

Fig. 1. Naiad of *Acisoma panorpoides panorpoides* (A) and its labium (B)



The naiads are short, stout and covered with long hair.

Head. Quadrangular, slightly narrowed posteriorly, with hind angles blunt and hind margin between them slightly concave. Eyes small, raised, capping the fronto-lateral part of head, with their posterior margins concave. Antennae filiform, naked, with their third segment longer than fourth. Labium with its hinge reaching between pro-coxae; median lobe rather prominent, smooth, triangular, with its tip rounded and bordered with a row of weak spinules; movable hooks of lateral lobes slender, straight, with incurving tips, hardly as long as lateral setae; lateral lobes with their teeth obsolete, mostly armed with spinules of three sizes; lateral setae 7; mental setae 14.

Thorax. Prothorax almost equal to the hind margin of head, with its anterior lobe greatly depressed, middle lobe greatly raised and laterally covered with hair. Wing-pads parallel. Legs slender, last tarsal segment brownish apically; fore femora bearing dorsally a large brown spot in the middle.

Abdomen. Widest in middle, narrows very abruptly at apex of 9th segment, with hair tufts that simulate dorsal hooks on segments 5-9, ending bluntly, encircled with long hair; lateral spines absent but sides of segments fringed with long hair; caudal appendages short, thick, abruptly pointed at apices; epiproct not carinated dorsally and slightly shorter than paraprocts which have decurved tips; cerci outcurving and longer than half the length of paraprocts or almost equal to epiproct.

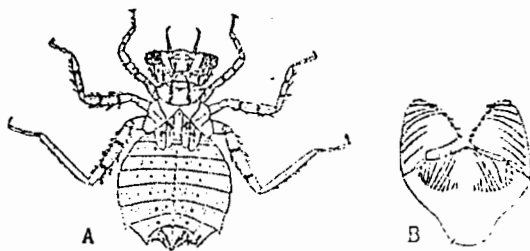
Remarks. The representatives of this species completely tally with the published description of Needham (1930) except that lateral setae of labium are 7 instead of 6. These specimens are distinguished from others by the absence of lateral spines and decurved appendages.

Material examined. Total five, collected from following localities:

Rohri (Sukkur) 2, 27-8-87; Tando Muhammad Khan (Hyderabad) 1, 2-9-87; Sonda (Thatta) 2, 3-9-87.

II. *Brachythemis contaminata* (Fabricius)

Fig. 2. Naiad of *Brachythemis contaminata* (A) and its labium (B)



The naiads are short and thickset. The body is smooth, patterned with blackish colour.

Head. Quadrangular, slightly narrowed behind the eyes, hind angles obtuse and hind margin between them concave. Eyes small, raised, rounded, with their posterior margins concave and more prominent laterally. Antennae filiform, transparent, with the last two segments of brownish colour. Labium with its hinge reaching between pro-coxae; median lobe smooth, triangular and armed with single spinules; movable hooks of lateral lobes slender, straight and slightly shorter than lateral setae; teeth on labial palpi 9, wider than high and mostly armed with spinules of two sizes; lateral setae 7; mental setae 12-14.

Thorax. Prothorax slightly wider than hind margin of head, with sub-dorsal broad black spots which are not in a straight line. Wing-pads parallel and blackish-brown. Legs short, stout and yellow; femora and tibiae encircled with a pair of blackish annuli, except the hind transparent tibiae.

Abdomen. Longer than wide, widest in its middle segments, with two rows of subdorsal blackish spots on segments 5-8 and two blackish spots on segments 4 and 9; dorsal hooks ridge-like and present on abdominal segments 4-9, that of 4th may or may not be erect; lateral spines sharp, equal in length, externally hair fringed and shorter than mid-dorsal length of their respective segments; caudal appendages, short, straight and provided with hair; epiproct slightly shorter than paraprocts and carinated dorsally; cerci naked and reaching half the length of paraprocts.

Remarks. The representatives of this species greatly resemble with the published description of Needham (1930) and Begum *et al.* (1982) except the following points. The lateral setae are 7 and mental setae are 12-14. Teeth on lateral lobes are armed mostly with spinules of two sizes instead of three sizes.

Material examined. Total 237, collected from the following localities: Sukkur 16, 28-8-87; Rohri (Sukkur) 96, 27-8-87; Shikarpur 8, 28-8-87; Tando Muhammad Khan (Hyderabad) 41, 2-9-87; Mirpur Khas 58, 31-8-87; Sonda (Thatta) 18, 3-9-87

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