



Description of some immature stages of *Nabis (Tropiconabis) capsiformis* (Hemiptera: Nabidae)

Descripción de algunos estadios inmaduros de *Nabis (Tropiconabis) capsiformis* (Hemiptera: Nabidae)

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Abstract. Instars III-V of *Nabis (Tropiconabis) capsiformis* Germar are described and illustrated, based on specimens from La Pampa, Argentina (new record).

Key words: Heteroptera, Nabidae, Nabinae, *Nabis (Tropiconabis) capsiformis*, nymphs.

Resumen. Se describen e ilustran los estadios III-V de *Nabis (Tropiconabis) capsiformis* German, con base en ejemplares de La Pampa, Argentina (nueva cita).

Palabras clave: Heteroptera, Nabidae, Nabinae, *Nabis (Tropiconabis) capsiformis*, ninfas.

Introduction

Nabidae, also known as “damsel bugs”, belong to the infraorder Cimicomorpha (Leston et al., 1954) and consist of 31 genera and about 386 species distributed in all the biogeographic regions of the world (Henry, 2009). *Nabis* belongs to the subfamily Nabinae and has 15 species (Volpi and Coscarón, 2010). Péricart (1987) gave a general contribution to the knowledge of the immature stages of Nabidae. Up to this moment, contributions on instars included 3 species of *Nabis*: *N. alternatus* Parshley (Taylor, 1949), *N. roseipennis* Reuter and *N. rufuluscus* Reuter (Mudinger, 1922); several species of *Nabicula*: *N. americolimbata* Carayon, *N. flavomarginata* Scholtz, *N. limbata* Dahlbom, *N. nigrovittata nearctica* Kerzhner, *N. propinqua* Reuter, *N. subcoleoprata* Kirby and *N. vanduzeei* Kirkaldy (Larivière, 1994); *Lasiomerus annulatus* Reuter (Larivière, 1993); and *Arachnocoris albomaculatus* Scott (Myers, 1925) (Nabinae); and *Alloeorhynchus trimacula* Stein (Cervantes-Peredo, 2004) (Prostenmatinae). Ojeda-Peña (1971) described the nymphs, eggs, and biology of *Nabis (Tropiconabis) capsiformis* German in Peru. Elvin and Sloderbeck (1984) made a key to the nymphs of 4 species of Nabidae from southeastern USA: *N. roseipennis* Reuter, *N. americanoferus*

Carayon, *N. (Tropiconabis) capsiformis* (Germar), and *Hoplistocelis deceptivus* (Harris).

Nabids are generalist predators, feeding on a wide variety of small arthropods (Harris, 1928; Irwin and Shepard, 1980; Jervis, 1990). Many species are numerically important in crops such as soybean, cotton, alfalfa and snuff. The Heteroptera predators of soybean, including *Nabis* spp., constitute 40 to 89% of the total insect predators (Irwin and Shepard, 1980). Frascarolo and Nasca (1997) cite *N. capsiformis* as the most common predator in soybeans in the province of Tucumán, Argentina. Additional information in relation to the biology was given by Jessep (1964), Hormchán et al. (1976), Samson and Blood (1979) and Fathipour and Jafari (2008). According to Kerzhner (1983), “pale damsel bugs” are long-winged bugs that fly well, and are the most widespread species in the Nabidae.

Our purpose is to describe the immature stages III-V of *N. (T.) capsiformis*. Instars I and II were not found.

Materials and methods

The material was collected using a sweep net on May 1, 2010 in *Medicago sativa* L. (Fabaceae) in Winifreda, La Pampa, Argentina (36°19'28.59" S, 64°19'50.84" W). Measurements are in millimeters. Images were taken with a stereoscopic microscope Kyowa 72X and digital camera Samsung L700. The material was deposited in the Museo de La Plata, Argentina.

Descriptions

Instar III (Fig. 1a): body elongate light brown (in some specimens is brown) and setose. Length 2.52–3.11 (mean= 2.93; n= 4). Head: length 0.55–0.60 (mean= 0.58), width 0.45–0.48 (mean= 0.46), light brown at the base of the antennae and clypeus, and eyes and post-ocular region; eye width 0.18–0.22 (mean= 0.20), vertex width 0.21–0.27 (mean= 0.24). Rostrum: lengths of segment I: 0.15–0.18 (mean= 0.16), II: 0.36–0.42 (mean= 0.38), III: 0.36– 0.40 (mean= 0.37), IV: 0.27–0.30 (mean= 0.28); ratio of segment lengths about 1: 2.37: 2.31: 1.68. Antenna: lengths of antennal segments I: 0.30–0.42 (mean= 0.39), II: 0.45–0.63 (mean= 0.57), III: 0.88–0.93 (mean= 0.91), IV: 0.76– 0.84 (mean= 0.81); ratio of segment about 1: 1.41: 2.11: 1.88. Pronotum brown with a red stripe that runs from the pronotum and anterior half of pteroteca and abdomen length 0.40–0.45 (mean= 0.43), width 0.49–0.51 (mean= 0.50). Wing pads length 0.46–0.49 (mean= 0.47) light brown. Abdomen: length 1.95–2.10 (mean= 2.04), width 0.66–0.70 (mean= 0.70). Legs light brown, fore femora: length 0.90–0.96 (mean= 0.94), width 0.16–0.18 (mean= 0.17); middle femora: length 0.81–0.85 (mean= 0.83), width 0.10–0.15 (mean= 0.12); hind femora: length 1.20–1.26 (mean= 1.22), width 0.09–0.12 (mean= 0.10).

Instar IV (Fig. 1b): body elongate light brown (in some specimens is brown) and setose. Length 3.44–3.70 (mean= 3.54; n= 3). Head: length 0.70–0.77 (mean= 0.72), width 0.52–0.61 (mean= 0.56), buccula + maxillary plate with a red stain, brown at the base of the antennae and clypeus, and eyes and post-ocular region; eye width 0.21–0.28 (mean= 0.24), vertex width 0.24–0.28 (mean= 0.27). Rostrum: lengths of segment I: 0.21–0.24 (mean= 0.22), II: 0.45–0.52 (mean= 0.48), III: 0.42–0.52 (mean= 0.47), IV: 0.30–0.33 (mean= 0.31); ratio of segment lengths about 1: 2.22: 2.18: 1.40. Antenna: lengths of antennal segments I: 0.49–0.56 (mean= 0.53), II: 0.88–0.94 (mean= 0.91), III: 1.26–1.29 (mean= 1.28), IV: 0.85–0.91 (mean= 0.87); ratio of segment about 1: 1.68: 2.37: 1.61. Pronotum dark brown with a red stripe that runs from the pronotum and anterior half of pteroteca and abdomen; length 0.45–0.52 (mean= 0.49), width 0.63–0.70 (mean= 0.66). Wing pads length 0.77–0.80 (mean= 0.78), brown. Ventral abdomen stripe in the connexival suture, length 2.10–2.38 (mean= 2.22), width 0.75–0.84 (mean= 0.79). Legs light brown, fore femora: length 1.26–1.33 (mean= 1.30), width 0.22–0.24 (mean=

0.23); middle femora: length 1.08–1.15 (mean= 1.12), width 0.14–0.17 (mean= 0.15); hind femora: length 1.70–1.80 (mean= 1.75), width 0.10–0.14 (mean= 0.12). *Instar V* (Fig. 1c): body elongate light brown (in some specimens brown) and setose. Length 4.99–5.51 (mean= 5.19; n= 7). Head: length 0.84–1.00 (mean= 0.89), width 0.65–0.71 (mean= 0.67), with 1+1 red in the post-ocular region (Fig. 1d), buccula + maxillary plate with a red stain (Fig. 1e), brown at the base of the antennae and clypeus, and eyes and post-ocular region; eye width 0.27–0.31 (mean= 0.29), width vertex 0.32–0.37 (mean= 0.33). Rostrum: lengths of segment I: 0.25–0.31 (mean= 0.28), II: 0.69–0.77 (mean= 0.71), III: 0.69–0.75 (mean= 0.71), IV: 0.37–0.41 (mean= 0.38); ratio of segment lengths about 1: 2.57: 2.53: 1.35. Antenna: lengths of antennal segments I: 0.80–0.86 (mean= 0.82), II: 1.25–1.30 (mean= 1.27), III: 1.59–1.68 (mean= 1.64), IV: 0.79–1.05 (mean= 0.94); ratio of segment about 1: 1.54: 2: 1.15. Pronotum darker with a red stripe that runs from the pronotum and anterior half of pteroteca and abdomen; length 0.71–0.80 (mean= 0.76), width 0.88–1.00 (mean= 0.96). Wing pads length 1.87–1.93 (mean= 1.90), brown. Ventral abdomen stripe in the connexival suture (Fig 1e); length 3.02–3.99 (mean= 3.57), width 0.96–1.55 (mean= 1.15). Legs light brown, fore femora: length 1.74–1.81 (mean= 1.77), width 0.31–0.35 (mean= 0.33); middle femora: length 1.57–2.18 (mean= 1.80), width 0.19–0.26 (mean= 0.21); hind femora: length 2.35–2.64 (mean= 2.44), width 0.13–0.19 (mean= 0.15).

Taxonomic summary

Distribution: **Argentina:** Buenos Aires (without locality); La Pampa (Winifreda), new record; Mendoza: Potrerillos (32°57'2.67" S, 69°12'20.26" W); Misiones (without locality); Salta: Río Bermejo, Salto. **Brazil:** Corumbá (19°0'35.36" S, 57°39'17.08" W), Piporá, Rio de Janeiro (22°54'12.74" S, 43°12'34.51" W), Santarem (2°26'21.97" S; 54°41'55.45" W). **British Guyana. Chile:** Arica (18°29'14.56" S, 70°19'19.77" W). **Mexico. Peru:** Lima (12°2'36" S, 77°1'42" W). **Uruguay:** Montevideo (34°49'59.69" S, 56°9'59.83" W).

Observations: According to Harris (1928), this is a cosmopolitan species occurring in the USA from North Carolina to Texas and southward into South America. In a later publication Harris (1939) gives more information about locality records (which are mentioned above) and states that Potrerillos is in Misiones, but the only Potrerillos found in Argentina is in Mendoza; whereas Arica is in Chile and not in Peru, as mentioned in his publication.

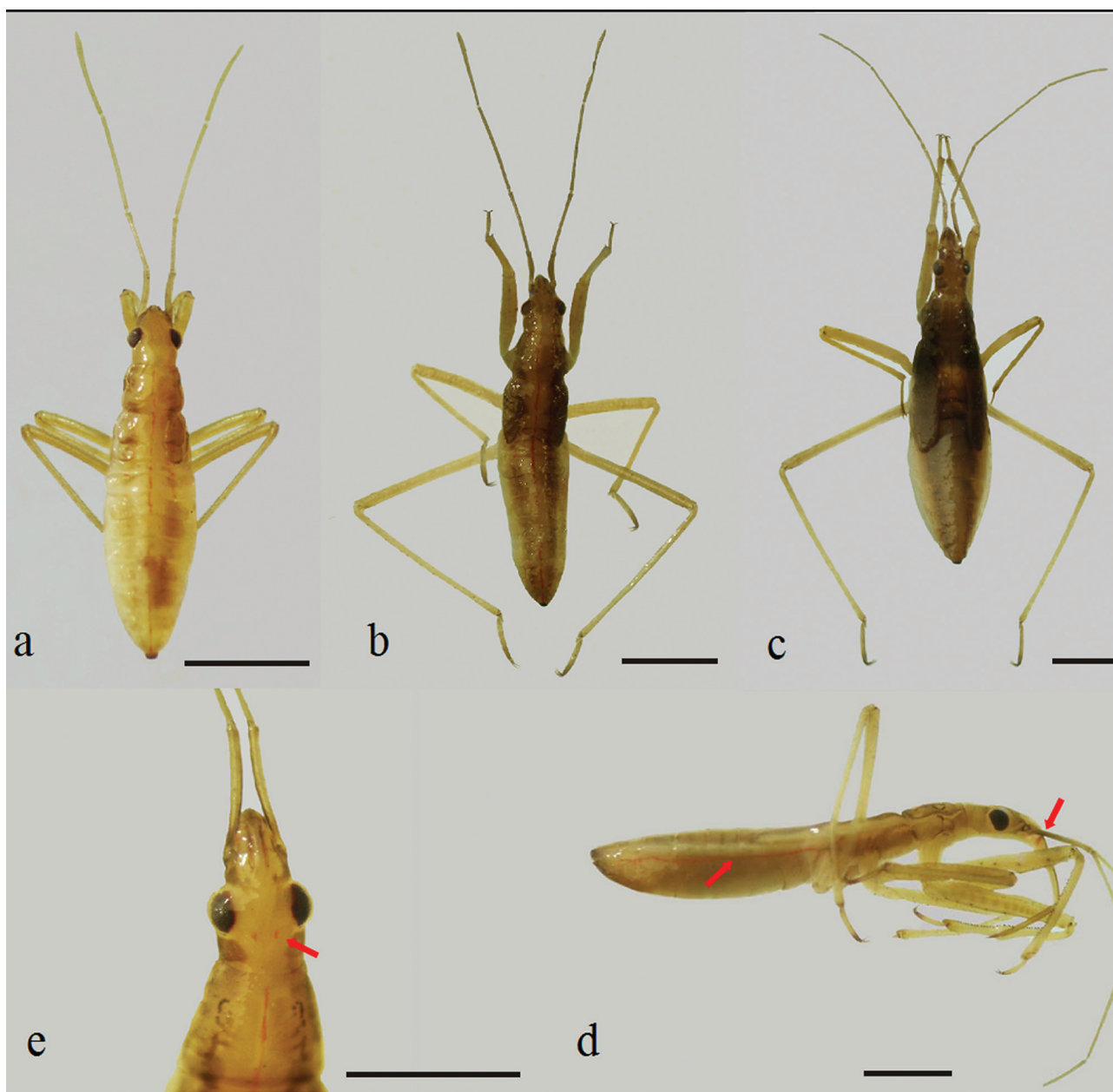


Figure 1. *Nabis capsiformis*. a), third instar dorsal view; b), fourth instar dorsal view; c), fifth instar dorsal view; d), head with 1+1 red in the post-ocular region, and e), abdomen ventrally with a stripe in the connexival suture. Scale line: 1 mm.

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