

SHORT COMMUNICATION

Contributions to the knowledge of *Banasa* Stål (Hemiptera, Heteroptera, Pentatomidae): *Banasa chaca* Thomas

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ABSTRACT. Contributions to the knowledge of *Banasa* Stål (Hemiptera, Heteroptera, Pentatomidae): *Banasa chaca* Thomas. The male of *Banasa chaca* Thomas is described with emphasis on external and internal genitalia and the female internal genitalia is described. *Banasa chaca* is newly recorded from Buenos Aires Province (Argentina).

KEYWORDS. *Ilex paraguariensis*; morphology of genitalia; Neotropical Region; Pentatominae; taxonomy.

RESUMO. Contribuições ao conhecimento de *Banasa* Stål (Hemiptera: Heteroptera: Pentatomidae: Pentatominae): *Banasa chaca* Thomas. O macho de *Banasa chaca* Thomas é descrito com ênfase na genitália externa e interna, também é descrita a genitália interna da fêmea. *Banasa chaca* é registrada pela primeira vez na província de Buenos Aires (Argentina).

PALAVRAS-CHAVE. *Ilex paraguariensis*; morfologia da genitália; Pentatominae; Região Neotropical; taxonomia.

Banasa Stål is widely distributed in the Americas, ranging from southern Canada to Argentina (Thomas & Yonke 1981, 1988, 1990). The genus is one of the most diverse among Pentatomidae, with 80 known species, and new taxa are still being described (Campos *et al.* 2010). Besides the description of new taxa, information about the known species is also necessary, for instance expanding biogeographic boundaries, finding immature stages or undescribed sexes.

Thomas & Yonke (1985) divided *Banasa* into 11 species groups mostly based in male characters. One of these groups is the *patagiata*, the second larger group in number of species (12), which occur in tropical and subtropical areas from Central through South America, except Amazonia (Thomas & Yonke 1985, 1990).

Banasa chaca Thomas was described for one female from Argentina, and included into the *patagiata* group due to the blunt and broad abdominal tubercle (Thomas & Yonke 1990). The species was posteriorly recorded in Brazil (Santa Catarina) by Chiaradia & Milanez (2007). Here we describe the male of *B. chaca* with emphasis on external and internal genitalia. The internal genitalia of the female is also described.

Adults of *B. chaca* (3 females, 3 males) were collected by F.M.B. in Araranguá and by L.A.C. (1 male) in Imbituba (Santa Catarina, Brazil, respectively -29.03910, -49.52619 and -28.2333, -48.6667); two males were sent to J.G. for identification, collected in Chapecó (Santa Catarina, Brazil, -27.1000, -52.6000), as well as 2 males and 3 females from Castelar (Buenos Aires, Argentina, -34.6667, -58.6667). The

specimens from Chapecó and Castelar were collected on *Ilex paraguariensis* St. Hill. (Aquifoliaceae). All the specimens studied are deposited in the collection of the Departamento de Zoologia, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil (UFRGS). Measurements (minimum and maximum) are given in millimeters. The terminology of Dupuis (1970) is adopted for the structure of the genitalia; dissection and illustration of genitalia follow Grazia *et al.* (2000).

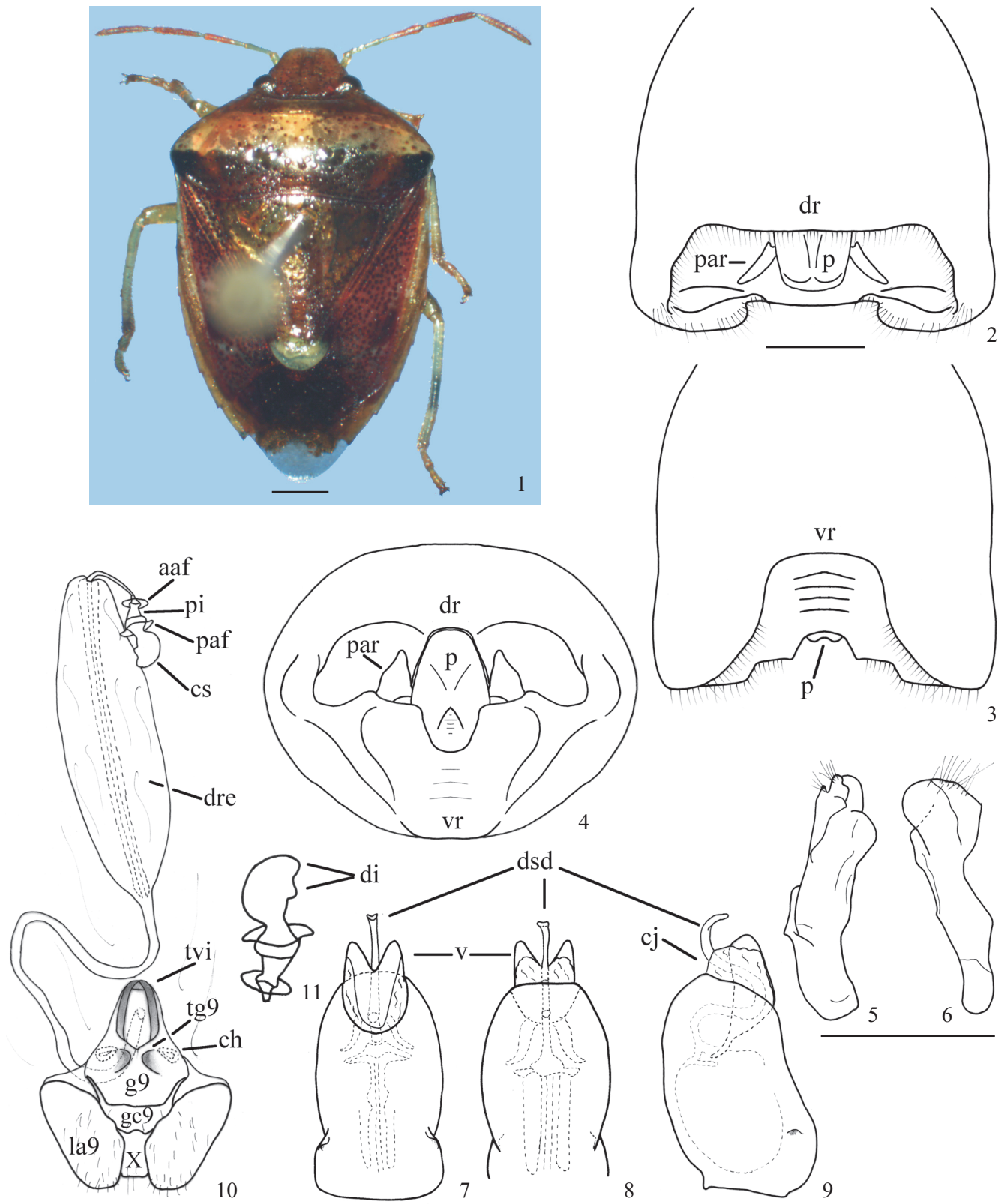
Banasa chaca Thomas, 1990

(Figs 1–10)

Distribution. ARGENTINA: Misiones, Buenos Aires (NEW RECORD); BRAZIL: Santa Catarina.

Male (Fig. 1). General color and morphology as described by Thomas & Yonke (1990) for the female holotype. Measurements (n = 5): head length (1.50–1.80); width (2.10–2.25); length of antennal segments: I (0.43–0.47); II (0.59–0.62); III (0.74–0.86); IV (0.98–1.09); V (1.17–1.21); pronotum length (1.80–2.10); width (4.80–5.40); scutellum length (3.00–3.60); width (3.15–3.60); body length (7.80–8.40); abdominal width (4.80–5.10).

Genitalia. Pygophore subquadrangular, posterolateral angles truncate. Dorsal rim subrectilinear edged by dense setae (Fig. 2). Ventral rim sinuous, deeply excavated mesally (Fig. 3). Surface of ventral wall shallowly depressed between posterolateral angles, projected dorsad partially covering parameres and proctiger posteriorly (Fig. 4). Lateral margins



Figs. 1–11. *Banasa chaca* Thomas, 1–9 male, 10–11 female. 1, dorsal view; 2–4, pygophore, respectively dorsal, ventral, and posterior; 5–6, left paramere, lateral and mesial; 7–9, phallus, respectively dorsal, ventral, and lateral; 10, receptaculum seminis and ausenwand, ventral; 11, capsula seminalis and ductus receptaculis. aaf: anterior annular flange; ch: chitinellipsen; cj: conjunctiva; cs: capsula seminalis; di: diverticula; dr: dorsal rim; dre: ductus receptaculi; dsd: ductus seminis distalis; g9: gonapophyses 9; gc9: gonocoxites 9; la9: laterotergites 9; p: proctiger; paf: posterior annular flange; par: paramere; pi: pars intermedialis; tg9: thickening of gonapophyses 9; tvi: thickening of vaginal intima; v: vesica; vr: ventral rim; X: tenth segment. Scales : 1 = 1 mm; 2–9 = 0.5 mm; figures 5, 6 and 11 in the same scale.

delimiting this depression with dense setae (Fig. 3). Parameres long and curved, apex subtriangular (Figs. 5, 6). Proctiger slightly bilobate at apex (Figs. 2, 3). Phallus simple, robust, longer than wide (Figs. 7–9). Phallosome bearing 1+1 basal processes. Conjunctiva covering ventro-laterally the base of vesica (Figs. 8, 9). Vesica short, dorsally bilobed (Figs. 7, 8); ductus seminis distalis curved, surpassing apex of vesica (Figs. 7–9).

Female. Measurements (n = 7): head length (1.50–1.90); width (2.10–2.4); length of antennal segments: I (0.40–0.50); II (0.40–0.60); III (0.80–1.10); IV (0.10–1.11); V (1.10–1.30); pronotum length (1.60–2.10); width (4.80–5.70); scutellum length (3.10–3.90); width (3.00–3.50); body length (8.40–9.80); abdominal width (4.60–5.60).

Internal genitalia (Figs. 10, 11). Gonapophyses 9 with 1+1 arched sclerotized areas close to elliptical ring sclerites (chitinellipsen, *sensu* Dupuis 1955). Thickening of the vaginal intima somewhat elliptical. Ductus receptaculi before the vesicular area subequal in length to this area. Pars intermedialis short, constricted at base; anterior and posterior annular flanges directed toward ductus receptaculi. Capsula seminalis constricted at base, anterior lobe subequal in length to pars intermedialis, posterior lobe bearing two diverticula laterally directed; margin of capsula opposite to diverticula convex.

Comments. The inclusion of *B. chaca* into the *patagiata* group is confirmed by characteristics of male pygophore, namely ventral rim with a deep, narrow, quadrate emargination (Figs. 3, 4, vr), and proctiger bilobate (Figs. 2, 4, p), as well as by the presence of two diverticula at capsula seminalis in the female internal genitalia (Fig. 11, di). *Ilex paraguariensis* Saint Hilaire (Aquifoliaceae) was first recorded as a host of *B. chaca* by Chiaradia & Milanez (2007).

Material examined: BRAZIL, Santa Catarina: Chapecó, 2 males, 2 females, 24/III/2004, Chiaradia, L. *leg.*; Hosp.: erva mate [–27.1000,

–52.6000]; Imbituba, 1 male, 1994, Campos, L. A. *leg.* [–28.2333, –48.6667]; Araranguá, 1 male, 2009/IV/24, Bianchi, F. M. *leg.* [–29.03910, –49.52619]; 1 male, 1 female, 2009/IV/30, Bianchi, F. M. *leg.* [–29.03910, –49.52619]; 1 male, 1 female, 2009/V/18, Bianchi, F. M. *leg.* [–29.03910, –49.52619]. ARGENTINA, Buenos Aires: Castelar, 2 males, 3 females, 30/III/1995, Saini, E. *leg.*; s/yerba mate [–34.6667, –58.6667].

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