

## SCIENTIFIC NOTE

Notes on *Dysdercus* from Brazil (Hemiptera: Pyrrhocoridae)CARL W. SCHAEFER<sup>1</sup><sup>1</sup>Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT 06269-3043, U.S.A.

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An. Soc. Entomol. Brasil 27(3): 485-488 (1998)Notas Sobre *Dysdercus* do Brasil (Hemiptera: Pyrrhocoridae)

RESUMO - Variações na coloração são apontadas para as seguintes espécies brasileiras de *Dysdercus*: *D. collaris* é citado pela primeira vez na Guiana Francesa; e *D. imitator* é citado pela primeira vez nos Estados do Rio de Janeiro e Pará, e *D. mimus* no Estado do Rio Grande do Sul.

PALAVRAS-CHAVE: Insecta, Heteroptera, coloração, distribuição geográfica.

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In March, 1997, I collected several specimens of *Dysdercus imitator* Blöte in Mato Grosso State. When I returned to the U.S.A., I discovered species of *Dysdercus* from Brazil, in material borrowed from the Museo de La Plata (MLP), La Plata, Argentina; and from the Carnegie Museum of Natural History (CMP), Pittsburgh, PA, U.S.A. Some of this material differs in several ways from published descriptions, and I record those differences here, as well as some new distributional records.

When genitalia were dissected, they were removed from water-softened specimens and then soaked for a time in KOH.

*Dysdercus albofasciatus* Berg.—This species is recorded from Argentina, Uruguay, Paraguay, and Brazil (Minas Gerais, R.G. do Sul, São Paulo, Santa Catarina, and Paraná States; the Paraná localities are Tucundiva, Curityba [sic], and Claretiano [Costa Lima *et al.* 1962, Van Doesburg 1968]). In material borrowed from the CMP, I have seven additional specimens, all collected in Curitiba, Paraná, on October 29, 1955. These specimens differ somewhat among themselves and

from the description of the species given by Van Doesburg (1968).

The anterior disc (=callus of Van Doesburg 1968) is sometimes entirely red, sometimes with a small irregularly shaped fuscous spot on either side of the midline and/or with a medial fuscous band; these three fuscous marking may be expanded into a single large spot occupying most of the anterior disc. The lateral margins of the pronotum are always red. The scutellum is entirely black. The patch on the corium is bright yellow (not "white to pale yellow"), as are also the corial patches of a series of *D. albofasciatus* (from several localities) in the MLP.

The Brazilian specimens are somewhat longer than Van Doesburg's, especially the females (Table 1).

I have also a series of 11 specimens borrowed from the MLP; most lack locality labels; one is labelled "cum typo comparat.," is identical with the Brazilian specimens, and indeed is also labelled "Mattogrosso." This series is in general brighter, and the dark colors slightly more pale, than are the Brazilian specimens. Two of the La Plata speci-

mens, both males, are unusually small: 10.01 and 9.75 mm.

*Dysdercus collaris* Blöte.—Although this northern South American species has not been recorded from Brazil, I take this opportunity to give a new country record. *D. collaris* occurs in Colombia and Venezuela (Van Doesburg 1968, Beccari & Gerini 1970, Costa Lima *et al.* 1962). I now have a specimen (CMP) labelled Cayenne [French Guiana] Mch. 1917. This *new country record* extends the range of this species to the east.

*Dysdercus imitator* Blöte has been recorded from Bolivia and Peru (Blöte 1931, Costa Lima *et al.* 1962), as well as Colombia, Ecuador, Venezuela (Van Doesburg 1968), and Brazil (Adis & Froeschner 1982). The Brazilian records are from Aripuaná, Reserva Humboldt (1 male), and Chapada dos Guimarães (1 female), both in Mato Grosso State (Adis & Froeschner 1982). I also have in my collection one male and four females, collected in or near Rio de Janeiro, and one male collected in Serra dos Carajas, Pará; these appear to be new state records.

On March 10, 1997, I collected *D. imitator* about 40 km north of Campo Novo de Parecis, Sapezal County, Mato Grosso State (Brazil). The bugs were swept from low and varied vegetation in a strip about 4 m wide lying between a dirt road and a soybean field.

As is well known (e.g., Van Doesburg 1968), the general colors of *Dysdercus* species are reds, yellows, and oranges, contrasting often with black or dark brown ground colors and/or dark spotting. Equally well known, is that the degree of darkness or paleness of these colors often varies intraspecifically. The specimens I collected exemplify this variation, and I describe it briefly here.

The color patterns of my specimens and the descriptions of both Blöte (1931; original description) and Van Doesburg (1968) are much the same, but the degree of darkening varies, both between some of my specimens and the descriptions, and within my short (14 specimens) series. In some specimens the dark color of the forewing's membrane con-

tinues partly or completely onto the normally yellowish corium, to the point of merging with and thus obscuring the two large fuscous spots subterminally on the corium. In these specimens the posterior disc of the pronotum is dark, whereas in paler specimens only the disc's posterior border is dark. In intermediate specimens, the posterior disc is yellow medially and laterally. In some specimens the posterior edge of the collar is black; in others it is pale; and the color is only loosely correlated with the amount of darkening elsewhere on the body. Of the specimens available (6 males, 8 females), the darkest were females, and among these the greater variation occurred.

The variation in body length within this single population was less than within the widely spread populations measured by Van Doesburg (1968) (Table 1).

The paramere and genital capsule of my Brazilian specimens are very similar to those illustrated by Van Doesburg (1968); however, Van Doesburg's Fig. 18 does not show the toothed lateral margins of the ventral rim so well as does Blöte's Fig. 6a. The shanks of my Brazilian specimens' parameres are somewhat more twisted than is shown in Van Doesburg's figures; and the "lamina" (=cup-like sclerite+median projection of Schaefer [1977]) is more straight across than in Van Doesburg's figures.

In describing *Dysdercus imitator*, Blöte (1931) described two varieties, *pseudoannulus* from Bolivia and Peru, and *pseudoruficollis* from Peru (and Venezuela [Van Doesburg 1968]). The former has and the latter lacks a black spot on the distal half of the corium. I have two specimens collected at the same time from Taguata Caxias, Rio de Janeiro; both are on the same pin. One (a male) has the black corial spots (and a black scutellum), and the other (a female) lacks the spots (and has a yellow scutellum). The male should therefore be var. *pseudoannulus* and the female var. *pseudoruficollis*. Because both were collected at the same time and in the same place, it is clear that these varieties have no taxonomic significance.

Table 1. Comparisons of body lengths (mm) of *Dysdercus*.

Source	Males	Females
<i>Dysdercus albofasciatus</i> Berg		
In Van Doesburg (1968)	10.0-11.5	11.0-13.0
From Carnegie Museum (Pittsburgh, PA, U.S.A.) (X=11.2, n=3) (X=13.6, n=4)	11.1-11.6	12.4-15.9
<i>Dysdercus imitator</i> Blöte		
In Blöte (1931)	9.0-10.7	10.0-11.7
In Van Doesburg (1968)	8.3-10.7	8.9-12.2
Collected by C.W.S. (X=9.9, n=6) (X=10.8, N=8)	9.5-10.3	9.1-11.4

*Dysdercus mimus* (Say).—Van Doesburg (1968) says of *Dysdercus mimus distanti* Blöte, the subspecies which occurs in Brazil, that it is “usually with a black scutellum but without any markings on the corium” (p. 34), both of which occur in the typical more northern *D. m. mimus*. Several specimens (CMP) have a very faint fuscous spot at the apex of the corium, and the scutellum is often yellow, with a black spot apically or proximally, or with irregular fuscous markings.

The CMP specimens are from Venezuela: Dist. Federal: Puerto La Cruz; and Brazil: Rio Grande do Sul: Santo Augusto. The latter specimens are a new state record for the country, and extend the range to the south of Brazil.

*Dysdercus ruficollis* (L.).—Van Doesburg (1968) writes that the pronotal collar of this species is “very variable in colour” (p. 135); and he is correct. In a series from Rio de Janeiro (CMP), all with the same accession number, the collar varies from yellow (same color as corium) through a combination of yellow and fuscous, to deep fuscous. The posterior lobe varies in the same way, and the degrees of darkness of each are positively correlated. The two broad corial spots also vary, from pale to dark and so large they merge with the dark membrane. There is no correlation between the darkness of the pronotal collar and posterior lobe, and that of the corial

spots. The membranes of these specimens are all dark. However, in one of two specimens from the MLP, labelled “Rio: Brazil,” and collected in 1901, the membrane is pale (these two specimens lack abdomens, and one lacks antennae; I am nevertheless confident of the determinations).

I have also (my collection) two specimens from “R. Janeiro,” collected in 1992. In one the membrane is pale, the corial spots are large and dark, and the collar is yellow. In the other, the membrane is dark, the corial spots are obscure, and the collar is yellow deeply infused with black.

Note: Males of this species are easily determined. Although it is not clear from Van Doesburg’s (1968) key, this is the only species with a white fourth-antennal annulus whose male has a single spur on the paramere. Females are less easily determined, because the key character of the second gonocoxa does not appear to hold true for all specimens. The second gonocoxa is described as having “a deep medio-dorsal indentation,” and this is figured in Fig. 207 of Van Doesburg (1968). But I have dissected five females, all in association with males (so the determination is accurate), and only one has the indentation, and it is very shallow (these specimens are all from Rio de Janeiro and bear the same accession number).

The lengths of specimens of this species

also vary considerably. Van Doesburg (1968) gives ranges of 7.5-12.0 mm for males and 9.0-14.0 mm for females. The CMP specimens vary less: males average 9.45 mm long (7.80-10.01 mm, n=11), and females average 9.7 mm long (9.10-11.44 mm, n=7). The two 1992 specimens in my collection are: male 8.84 mm long, female 10.9 mm long.

The third and fourth instars of *Dysdercus ruficollis* have been described by Coscarón (in press).

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