

Long-distance introduction: first New World record of *Stevenia deceptoria* (Loew) and a key to the genera of New World Rhinophoridae (Diptera)

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The Rhinophoridae are a small family with about 150 named species worldwide. Seventeen species of this family are known from the Neotropical Region: 14 species of *Bezzimyia* Townsend; the monotypic genera *Shannoniella* Townsend and *Trypetidomima* Townsend; and the Palaearctic immigrant *Melanophora roralis* (Linnaeus) (Pape & Arnaud 2001; Pape *in press*). Undescribed species of *Bezzimyia* and *Shannoniella* as well as species that cannot be assigned to any of the currently described genera are known (P. Cerretti, pers. comm., & TP, unpubl.), and the Neotropical rhinophorid fauna is still superficially known.

Most of the native Neotropical rhinophorids are restricted to tropical areas. Thus, most species of *Bezzimyia* inhabit humid forests, mainly between 500 and 2300 m altitude, and similar conditions seem to hold for *Shannoniella cuspidata* Townsend and *Trypetidomima lutea* Townsend in Brazil. On the other hand, *Melanophora roralis* has reached the temperate regions of southern South America, with records from Argentina and Chile (Blanchard & De Santis 1975; González 1998). Here, we report on the first occurrence of the genus *Stevenia* Robineau-Desvoidy in the Neotropical Region, from the province of Buenos Aires, Argentina, based on adult specimens of *S. deceptoria* (Loew) partly captured by the authors and partly examined in collections.

Several specimens were captured by PRM, LDP and JCM with a hand net on vegetation in Buenos Aires Province, Argentina. These authors initiated the identification using taxonomic keys (Pape 1998; Cerretti & Pape 2007). Additionally, three male specimens were dissected and their phallic morphology compared to figures provided by Cerretti & Pape (2007). In these cases, the structures of the male terminalia were extracted and cleared in 90% lactic acid at ambient temperature for ten days, and mounted on a concave slide for examination. The identity of these specimens was confirmed by TP.

Material examined during this study is deposited in the following collections: ANLIS (Administración Nacional de Laboratorios e Institutos de Salud “Dr. Carlos G. Malbrán”, Buenos Aires, Argentina), FAUBA (Facultad de Agronomía, Universidad de Buenos Aires, Buenos Aires, Argentina), and ZMUC (Natural History Museum of Denmark, Zoological Museum, Copenhagen, Denmark).

Stevenia deceptoria (Loew)

(Fig. 1)

Rhinophora deceptoria Loew, 1847: 266. Type locality: Italy, Sicily, Syracuse (= Siracusa) [“Sicilien, bei Syrakus”].

Neotropical distribution: Argentina, Buenos Aires (Fig. 1).

Palaearctic distribution: Andorra, Croatia, France (mainland, Corsica), Italy (mainland, Sardinia, Sicily), Malta, Morocco, Portugal, Spain (mainland, Balearic Is), Switzerland. Herewith recorded from Morocco for the first time.

Material studied. Argentina, Buenos Aires province: 1 ♂ Magdalena, Estancia San Isidro, 28.XII.1998, Basilio leg. (FAUBA); 1 ♂ Magdalena, Estancia El Carretero, 20.X.1999, Basilio leg. (FAUBA); 3 ♂ same data except 03.XI.1999; 1 ♂ same data except 05.I.2000; 2 ♂ same data except 23.III.2000; 2 ♂ Ciudad Universitaria, Buenos Aires, S34°32'47" W58°26'24", XII.2002, Mulieri leg. (ANLIS); 1 ♂, 1 ♀ Instituto Malbrán, Buenos Aires, S34°38'35" W58°23'28",

XII.2002, Mulieri leg. (ANLIS); 1 ♂, 1 ♀ Burzaco, S34°50'15" W58°23'53", IX.2001, Mulieri leg. (ANLIS); 2 ♂ same data except X.2001; 1 ♂, 1 ♀ same data except III.2002; 2 ♀ same data except III.2003; 1 ♂, 1 ♀ Reserva Ecológica Costanera Sur, Buenos Aires, S34°37' W58°21', III.2003, Mulieri leg. (ANLIS); 1 ♂, 1 ♀ Magdalena, X.2005, Torretta leg. (ANLIS); 1 ♂ Chascomús, Laguna La Tablilla, I.I.2007, Torretta leg. (ANLIS); 4 ♂, 1 ♀ Campana, Reserva Natural Estricta Otamendi, S34°14'03" W58°53'10", 26.XI.2009, on flowers of *Sapium haemospermum*, Patitucci & Mulieri leg. (ANLIS); 1 ♂, 1 ♀ Necochea, Quequén, S38°31'60" W58°42'00", I.2010, Patitucci leg. (ANLIS); 24 ♂, 4 ♀ Facultad de Agronomía, Buenos Aires, X.2009 and XI.2009 on flowers of *Coriandrum sativum*, D. Ganly & J.P. Torretta leg. (FAUBA). Numerous males and females in the collections of ZMUC, mostly from Italy, Malta and Spain, but also the following: Morocco, Rabat, Forêt de Mamora, 1 ♂, 2 ♀ 25–26.IV.1989, Zool. Mus. Copenh. Exp. [new country record].

Stevenia deceptor appears to be relatively common in gardens, even in densely populated urban areas (such as Buenos Aires City), as well as in both rural and relatively undisturbed areas (such as Otamendi Reserve).

Several species of terrestrial isopods have become widespread by human activities. In the New World, nearly 40 Palaearctic or synanthropically cosmopolitan woodlice species have been recorded (Leistikow & Wägele 1999; Schmalzfuss 2003). The presence in Argentina of several potential woodlice hosts of Palaearctic origin (*Halophiloscia couchii* (Kinahan), Halophilosciidae; *Porcellio scaber* Latreille, *P. lamellatus* Budde-Lund and *Porcellionides pruinosus* (Brandt), Porcellionidae; Leistikow & Wägele 1999) has probably been instrumental for the establishment of *Stevenia deceptor*. The introduction itself may be hypothesised to have taken place with infected woodlice, although no host records are so far known for *Stevenia deceptor* (Herting 1961).

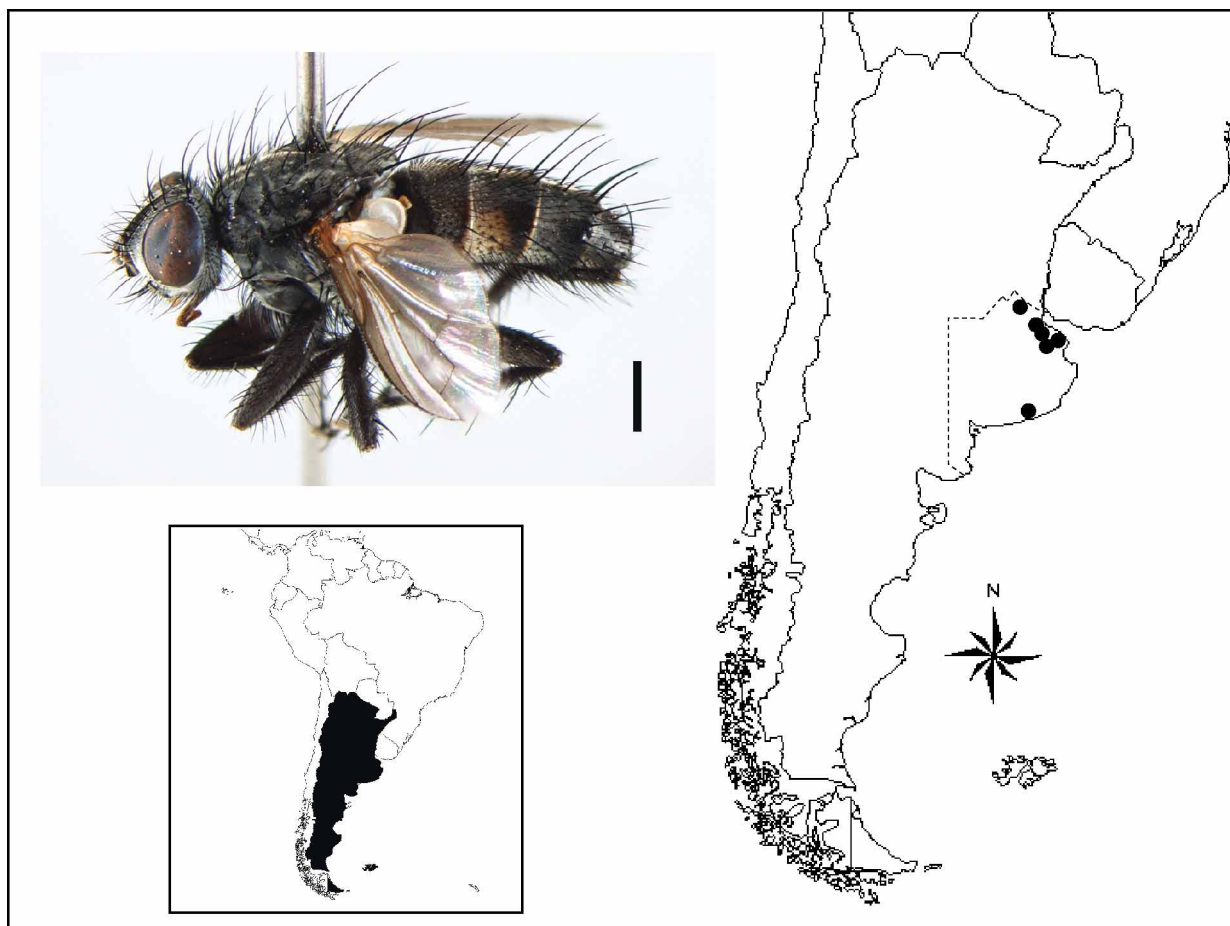


FIGURE 1. Distribution of *Stevenia deceptor* (Loew) in the Neotropical Region and habitus of male. Scale bar = 1.0mm.

Key to genera of New World Rhinophoridae

- 1 Wing vein M complete and reaching costa at wing margin (cell r_{4+5} open)2
- Wing vein M not reaching wing margin; either straight, incomplete and ending freely in wing membrane; or with

- distal part curving forwards and fused to vein R_{4+5} thereby closing cell r_{4+5} 3
- 2 Head, body and legs largely black, male vibrissal angle drawn out, male antenna with flagellomere 1 about as long as eye height, female flagellomere 1 at most as long as 0.5x eye height. Veins R_1 and R_{4+5} with row of several long setulae; lower calypter without long, blackish setulae along margin *Shannoniella* Townsend [One species: *S. cuspidata* Townsend; Brazil (Rio de Janeiro)]
- Head, body and legs extensively yellow, male vibrissal angle not drawn out, male and female antenna with flagellomere 1 at most as long as 0.5x eye height. Veins R_1 and R_{4+5} bare or with 1–2 short setulae, lower calypter with long, blackish setulae along margin..... *Trypetidomima* Townsend [One species: *T. luteola* Townsend; Brazil (São Paulo)]
- 3 Wing vein M straight and ending freely in wing membrane; both sexes without or with minute proclinate orbital bristles..... *Bezzimyia* Townsend [16 species, USA to Brazil]
- Wing vein M with distal part curving forwards and fused to vein R_{4+5} . At least females with strong proclinate orbital bristles..... 4
- 4 Wing vein M gently curving forwards, joining vein R_{4+5} close to wing margin and leaving a petiole shorter than crossvein r-m..... *Phyto* Robineau-Desvoidy [One species: *P. discrepans* (Pandellé); Canada (Newfoundland), introduced]
- Wing vein M rather abruptly curving forwards, joining vein R_{4+5} well before wing margin and leaving a petiole at least as long as crossvein r-m..... 5
- 5 Head profile strongly receding, parafacial setae not particularly well developed. Both sexes with 4–6 proclinate orbital bristles. Female with white wing tip..... *Melanophora* Meigen [One species: *M. roralis* (Linnaeus); Argentina, Brazil, Chile, USA, West Indies, introduced]
- Head profile not particularly receding, parafacial with row of bristly setae along lower eye margin. Male without, female with two proclinate orbital bristles. Female without white wing tip..... *Stevenia* Robineau-Desvoidy [One species: *S. deceptoria* (Loew); Argentina (Buenos Aires), introduced]

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