

ORIGINAL ARTICLE

Distribution of *Cornops* grasshoppers (Leptysminae: Acrididae: Orthoptera) in Latin America and the Caribbean Islands

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Abstract

Distribution of *Cornops aquaticum*, *C. brevipenne*, *C. frenatum* and *C. paraguayense* is given for Latin America and the Caribbean Islands, along with native host plants and other plants that are repeatedly attacked. A database has been produced following new examinations of museum specimens. Occurrences are depicted in maps arranged to collecting localities and biogeographic provinces.

Resumo

A distribuição de *Cornops aquaticum*, *C. brevipenne*, *C. frenatum* e *C. paraguayens* é apresentada para a América Latina e Ilhas do Caribe, juntamente com as plantas hospedeiras nativas e outras plantas repetidamente atacadas. Um banco de dados baseado em novas investigações de indivíduos depositados em museus foi produzido. As ocorrências são representadas em mapas conforme as localidades de coleta e províncias biogeográficas.

Keywords: biological control, Latin America, macrophytes, Neotropics, Pontederiaceae, South America, water hyacinth

Introduction

The Neotropical grasshopper genus *Cornops* Scudder, 1875 (revised by Roberts & Carbonell, 1979) inhabits lowlands from southern Mexico to Central Argentina and Uruguay. It currently comprises one terrestrial species that reproduces on terrestrial host plants (*Cornops frenatum*) and two (or three) semi-aquatic species that reproduce on aquatic macrophytes (*Cornops aquaticum* and *Cornops paraguayense*; possibly *Cornops brevipenne*, also found in swamps and marshes).

Cornops aquaticum, host-specific to *Eichhornia* spp. and *Pontederia* spp. (cf. Adis & Junk, 2003; Lhano et al., 2005), is planned to be released in South Africa as a biological control agent of the water hyacinth *E. crassipes* (cf. Oberholzer & Hill, 2001). Co-evolution of the grasshopper and its host plant (cf. Adis et al., 2004; Brede & Beebee, 2005) is

presently under study in a project called HIWCA (host–insect co-evolution on water hyacinth) involving 10 countries (Argentina, Brazil, Colombia, France, Germany, Nicaragua, South Africa, Trinidad, UK and Uruguay), under the auspices of the Tropical Ecology Working Group of the Max-Planck-Institute for Limnology at Plön, Germany (www.mpil-ploen.mpg.de).

The objective of this contribution is to provide distribution maps for all *Cornops* species to facilitate further ecological studies.

Materials and methods

Distribution is based on adult collection specimens examined by M. Lhano (AMNH, ANSP, FCMU, INPA, JA, NHMH, SUREHMA, UFMT, UMMZ), C. Amedegnato (NHM, MNHN), A. L. Nunes

(MPEG, INPA) and J. Adis (ZFMK). Specimens listed from the National Museum at Rio de Janeiro (UFRJ) were formerly identified by C. S. Carbonell, Montevideo, Uruguay. Round brackets indicate data that are not on the museum labels and were complemented by the authors of this contribution. The following abbreviations are used in the text: ?, locality uncertain or unknown, mostly omitted from maps; AMNH, American Museum of Natural History, New York, USA; ANSP, Academy of Natural Sciences of Philadelphia, Pennsylvania, USA; FCMU, Facultad de Ciencias, Montevideo, Uruguay; INPA, Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil; NHM, The Natural History Museum, London, UK; JA, Voucher Collection of Joachim Adis, Max-Planck-Institute for Limnology, Plön, Germany; MNHN, Muséum national d'Histoire naturelle, Paris, France; MPEG, Museu Paraense Emílio Goeldi, Belém-PA, Brazil; NMNH, National Museum of Natural History, Smithsonian Institution, Washington, DC, USA; UFMT, Entomological Collection, Departamento de Biologia, C.C.B.S., Universidade Federal de Mato Grosso, Cuiabá, MT, Brazil; UFRJ, Museu Nacional, Rio de Janeiro, RJ, Brazil; UMMZ, Museum of Zoology, University of Michigan, Ann Arbor, MI, USA; ZFMK, Forschungsmuseum Koenig, Bonn, Germany.

In general, semiaquatic Neotropical acridids are poorly collected and therefore two types of map (Figures 2–5) are given for *Cornops* distribution in Latin America and the Caribbean Islands: Left map: local occurrences according to collection data. Sample localities and their positions were cross-checked with Google Earth [Internet], Global Gazetteer [Internet] and Satellite Views [Internet]; right map: area occurrences according to biogeographic provinces (according to Morrone, 2006). For each examined specimen the biogeographic province is given in square brackets for the respective distribution locality in the text. A map on the vegetation structures in Latin America and the Caribbean Islands (according to Hueck & Seibert, 1972; Cabrera & Willink, 1973) is given as additional information (Figure 1).

Results

Cornops Scudder, 1875

Synonymy. *Paracornops* Giglio-Tos, 1894.

Distribution

Southern Mexico to Central Argentina and Uruguay.

List of Cornops species

Cornops aquaticum (Bruner, 1906)

Cornops brevipenne Roberts & Carbonell, 1979

Cornops frenatum (Marschall, 1836)

C. f. frenatum (Marschall, 1836)

C. f. cannae Roberts & Carbonell, 1979

Cornops paraguayense (Bruner, 1906a)

Cornops aquaticum (Bruner, 1906) (Figure 2)

Synonymy. *Cornops pelagicum* Bruner, 1919; *Cornops scuderi* Bruner, 1906; *Paracornops politum* Bruner, 1906.

Distribution. Argentina, Belize, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad, Uruguay, Venezuela; up to 2184m a.s.l. (Colombia: Antioquia: Medellín).

Native host plants. *Eichhornia crassipes*, *E. azurea*, *Pontederia cordata*, *P. lanceolata* (all Pontederiaceae) (Zolessi, 1956; Guido & Perkins, 1975; Adis & Victoria, 2001; Ferreira & Vasconcelos-Neto, 2001; Lhano et al., 2005).



Figure 1. Vegetation structures in Latin America and the Caribbean Islands (according to Hueck & Seibert, 1972; Cabrera & Willink, 1973).

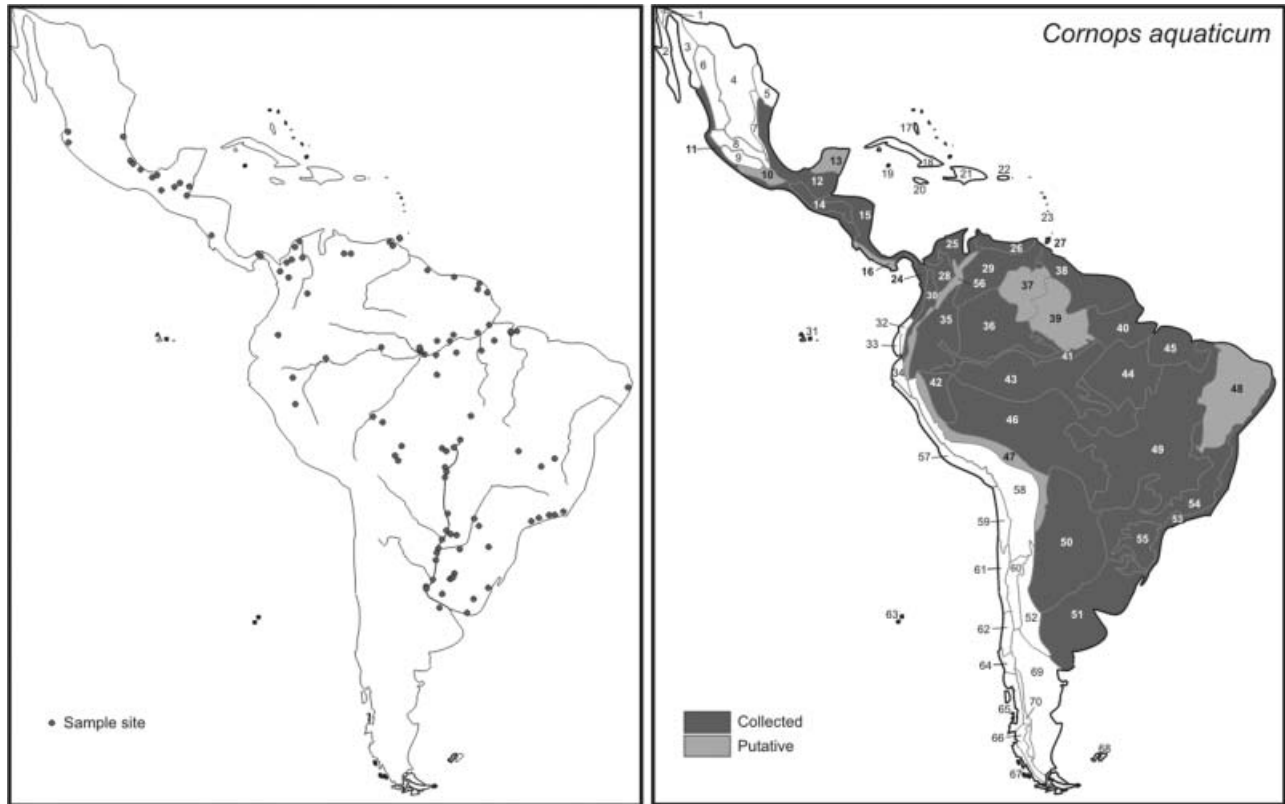


Figure 2. Distribution of *Cornops aquaticum* in Latin America and the Caribbean Islands. Left: Local occurrences according to collection data. Right: Area occurrences according to biogeographic provinces (according to Morrone, 2006): 1, California; 2, Baja California; 3, Sonora; 4, Mexican Plateau; 5, Tamaulipas; 6, Sierra Madre Occidental; 7, Sierra Madre Oriental; 8, Transmexican Volcanic Belt; 9, Balsas Basin; 10, Sierra Madre del Sur; 11, Mexican Pacific Coast; 12, Mexican Gulf; 13, Yucatan Peninsula; 14, Chiapas; 15, Eastern Central America; 16, Western Panamanian Isthmus; 17, Bahama; 18, Cuba; 19, Cayman Islands; 20, Jamaica; 21, Hispaniola; 22, Puerto Rico; 23, Lesser Antilles; 24, Choco; 25, Maracaibo; 26, Venezuelan Coast; 27, Trinidad and Tobago; 28, Magdalena; 29, Venezuelan Llanos; 30, Cauca; 31, Galapagos Islands; 32, Western Ecuador; 33, Arid Ecuador; 34, Tumbes-Piura; 35, Napo; 36, Imeri; 37, Guyana; 38, Humid Guyana; 39, Roraima; 40, Amapá; 41, Várzea; 42, Ucayali; 43, Madeira; 44, Tapajós-Xingu; 45, Pará; 46, Pantanal; 47, Yungas; 48, Caatinga; 49, Cerrado; 50, Chaco; 51, Pampa; 52, Monte; 53, Brazilian Atlantic Forest; 54, Paraná Forest; 55, *Araucaria angustifolia* Forest; 56, North Andean Paramo; 57, Coastal Peruvian Desert; 58, Puna; 59, Atacama; 60, Prepuna; 61, Coquimbo; 62, Santiago; 63, Juan Fernandez Islands; 64, Maule; 65, Valdivian Forest; 66, Magallanic Forest; 67, Magallanic Paramo; 68, Malvinas Islands; 69, Central Patagonia; 70, Subandean Patagonia.

Other plants repeatedly attacked. *Jaborosa integrifolia* (Solanaceae), *Ludwigia* spp. (Onagraceae), *Oxyarium cubense* (Cyperaceae), *Paspalum repens* (Poaceae/Gramineae), *Pistia* spp. (Araceae), *Pontederia* spp. (Pontederiaceae), *Salvinia* spp. (Salviniaceae), *Thalia multiflora* (Marantaceae), lettuce (*Lactuca sativa*; Asteraceae), rice (*Oryza* spp.; Poaceae/Gramineae), sugarcane (*Saccharum officinarum*; Poaceae/Gramineae), *Pontederia cordata* (Pontederiaceae) and possibly some Commelinaceae (*Commelina virginica*, *Tradescantia virginiana*, *Tripogandra elongata*) (cf. Guido & Perkins, 1975; Ferreira & Vasconcelos-Neto, 2001; Vieira & Santos, 2003; Lhano et al., 2005; J. Adis, S. Capello, C. Franceschini, A. L. Nunes, all unpublished).

Examined specimens

Argentina: Buenos Aires, Campaña (34°09'S, 58°36'W) [51], 3 February 1970 (B. D. Perkins),

1♀—NMNH. Corrientes, Bella Vista (28°31'S, 59°00'W) [50], 7–8 January 1972 (M. Descamps), 1♂, 1♀—ANSP; 2♂♂, 1♀—MNHN. Corrientes, Corrientes, Rio Paraná: Isla Barranqueira (27°29'S, 58°53'W) [50] 14 February 2005 (C. Franceschini), on big *E. azurea* leaves, 1♂, 1♀—JA. Corrientes, Corrientes, Laguna Pampin-Rio Paraná (27°30'S, 58°45'W) [50], on *E. azurea* (A. Poi de Neiff et al.), 1♂, 1♀—JA. Corrientes, Corrientes, Madrejón El Puente (Norte)-Rio Paraná (27°26'33"S, 58°51'20"W) [50], 28 January 2004 (A. Poi de Neiff et al.), on *E. crassipes*, 1♂, 1♀—JA. Corrientes, lower Rio Paraguay (27°15'S, 58°35'W) [50], 12 February 2005 (C. Franceschini, S. Capello), on *E. azurea*, 1♂, 1♀—JA. Entre Ríos, La Paz (30°45'S, 59°36'W) [50], 14 January 1940, 1♂, 1♀—ANSP. Entre Ríos, Pronunciamento (32°20'S, 58°26'W) [51], November 1963 (Walz), 1♂—ANSP. Formosa, Clorinda (25°17'S, 57°43'W)

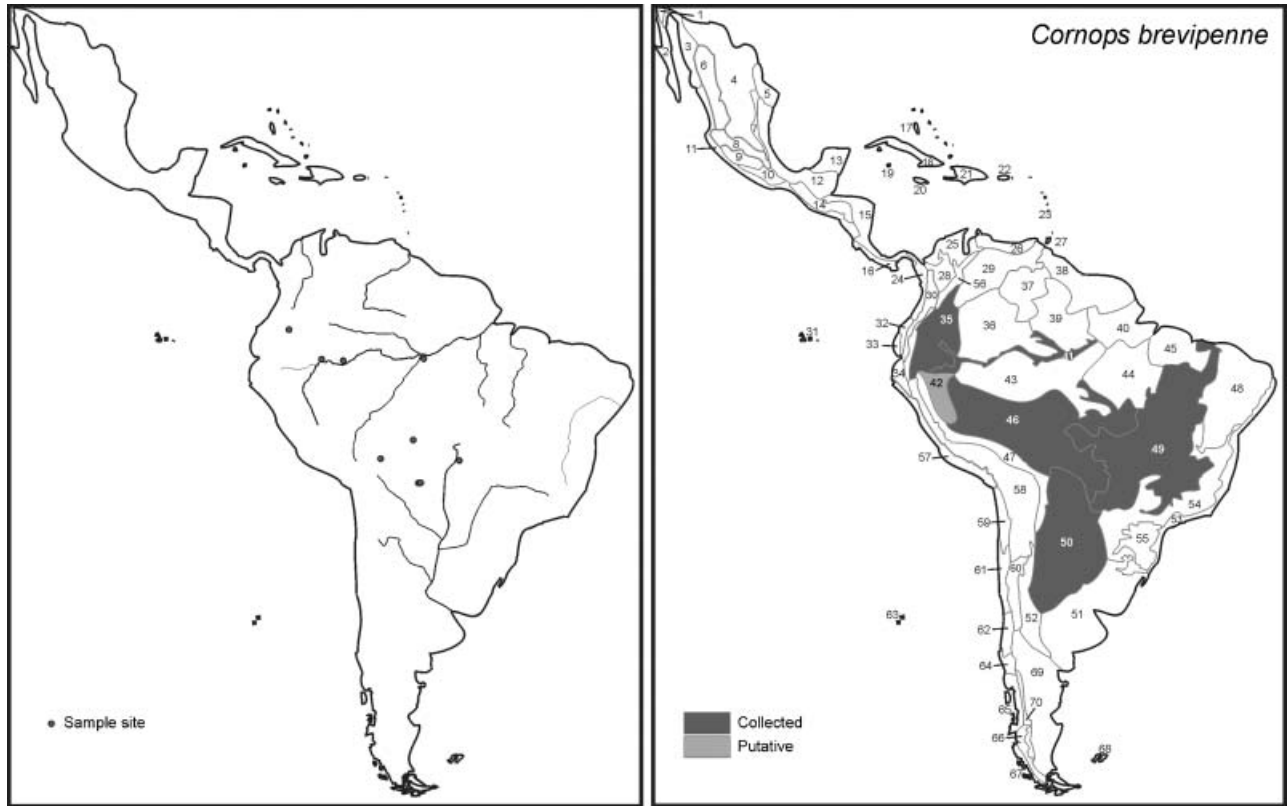


Figure 3. Distribution of *Cornops brevipenne* in Latin America and the Caribbean Islands. Left: Local occurrences according to collection data. Right: Area occurrences according to biogeographic provinces (according to Morrone, 2006; see Figure 2 for details of 1–70).

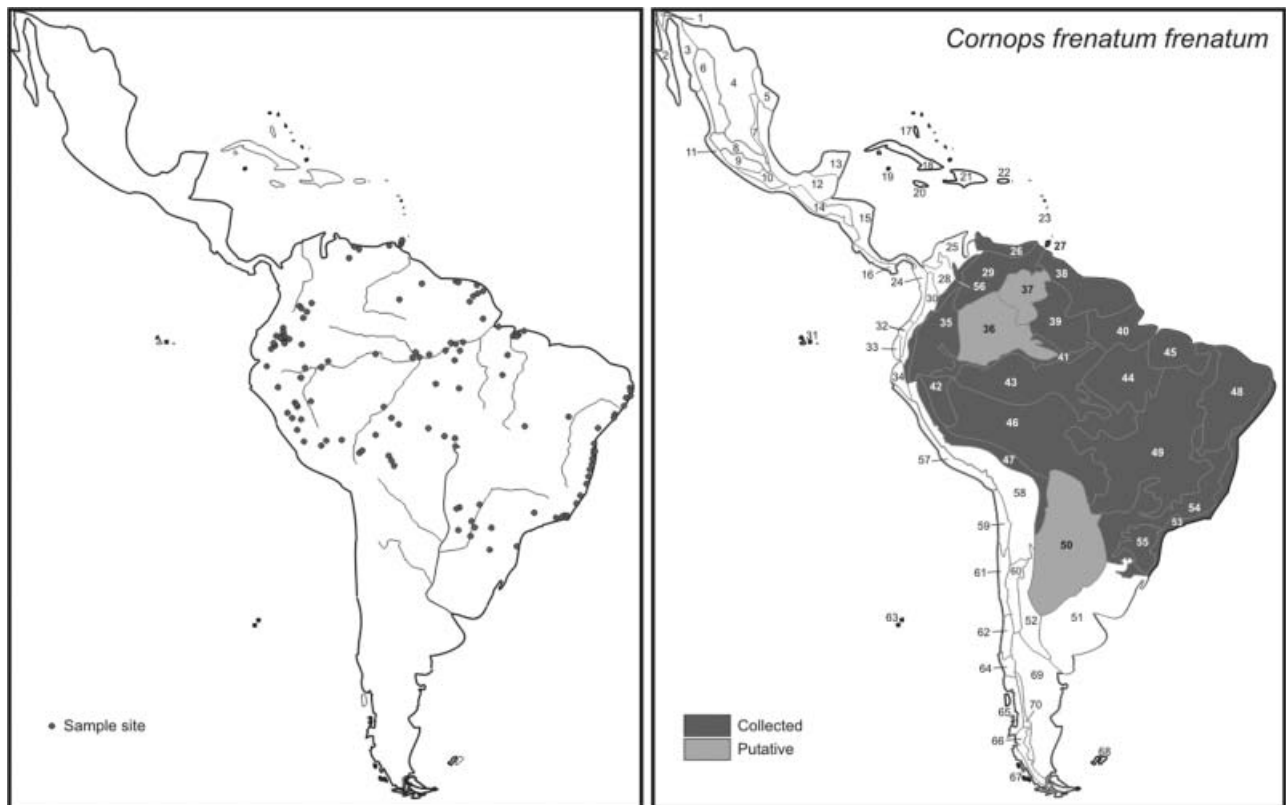


Figure 4. Distribution of *Cornops frenatum frenatum* in Latin America and the Caribbean Islands. Left: Local occurrences according to collection data. Right: Area occurrences according to biogeographic provinces (according to Morrone, 2006; see Figure 2 for details of 1–70). 34, Tumbes-Piura—occurrence of *C. f. frenatum* solely on eastern slopes of the Andes (C. Amedeganto, unpublished).

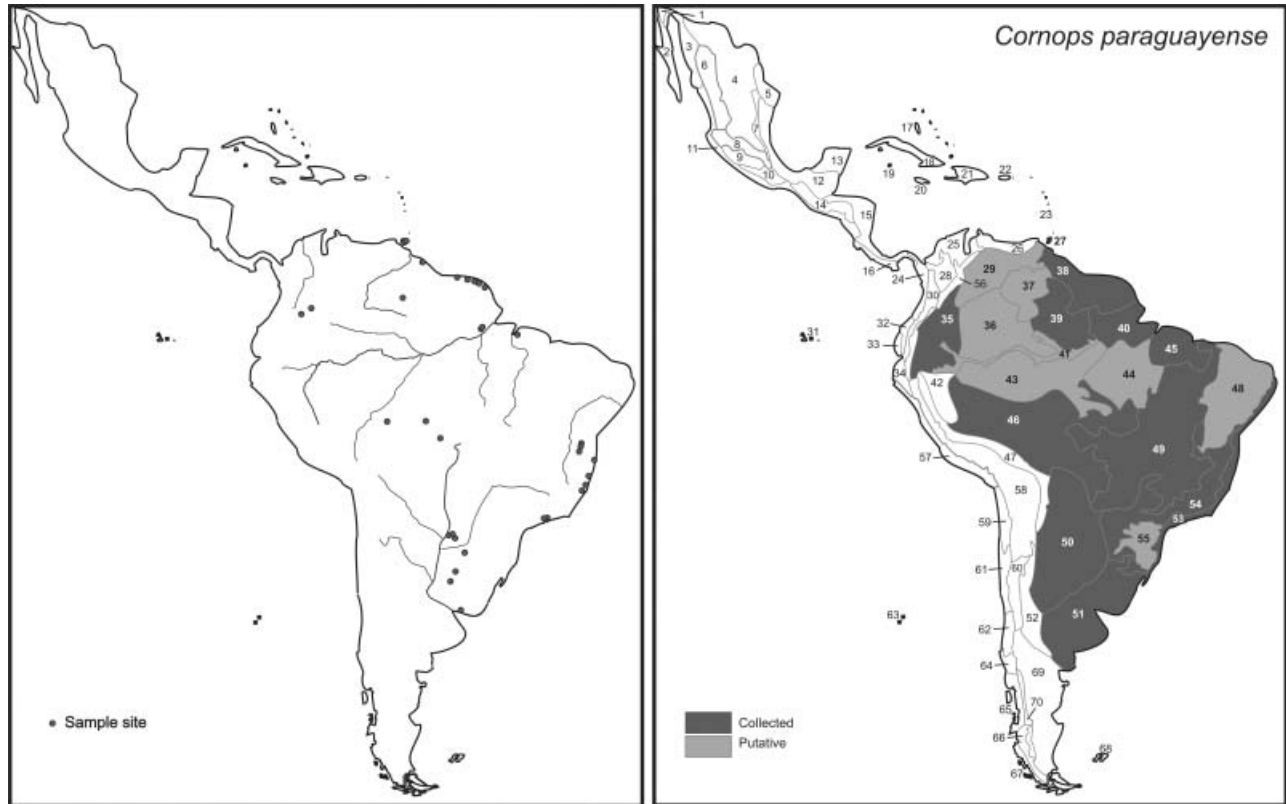


Figure 5. Distribution of *Cornops paraguayense* in Latin America and the Caribbean Islands. Left: Local occurrences according to collection data. Right: Area occurrences according to biogeographic provinces (according to Morrone, 2006; see Figure 2 for details of 1–70).

[50], 12 January 1972 (M. Descamps), 1♂, 2♀♀—MNHN. Formosa, Formosa (26°10'S, 58°10'W) [50], 23 July (P. Jorgensen), 1♂—ANSP. Misiones, Posadas (27°23'S, 55°54'W) [50], November 1941 (Daguerre), 1♂, 1♀—NMNH; Santa Fé, Capital (=Santa Fé) (31°37'S, 60°41'W) [50], March 1941 (Daguerre), 1♂—NMNH. Santa Fé, Santa Fé, Laguna El Puesto (31°43'64"S, 60°39'04"W) [51], 30 January 2004 (S. Capello, E. Drago, J. Adis), on *E. crassipes*, 1♂, 1♀—JA. Santa Fé, Santa Fé, Rio Catarata (31°42'33"S, 60°45'22"W) [50], 26 January 2004 (E. Drago, M. Marchese, J. Adis), on *E. crassipes*, 1♂, 1♀—JA. Santa Fé, Santa Fé, Rio Correntoso (31°41'32"S, 60°43'73"W) [50], 26 January 2004 (E. Drago, M. Marchese, J. Adis), on *E. crassipes*, 1♂, 1♀—JA. **Belize:** Stann Creek (16°50'N, 88°70'W) [12], 27 June 1968, on *Eichhornia crassipes* (F. D. Bennett), 1♀—ANSP. **Bolivia:** Beni, Vale-Itenez (=Valle Itenez) (13°25'S, 57°55'W; wrong coordinates given in Roberts & Carbonell, 1979) (11°55'S, 65°01'W=mouth Rio Itenez/Rio Marmore) [46], 3 March 1976, on Rio Itenez (Ronderos, Roberts), 1♀—ANSP. Santa Cruz, between Buena Vista and Portachuelo, 400 m, marshes (17°23'S, 63°32'W) [46], 18 and 20 February 1976 (Ronderos, Roberts), 3♂♂, 3♀♀—ANSP. Santa Cruz, Nuflo de Chaves, Ascención, 500 m (15°41'S, 63°05'W) [46],

November 1963 (Walz), 1♀—ANSP. Santa Cruz, Prov. del Sara, 450 m (16°50'S, 63°55'W) [46], (J. Steinbach), 1♂—ANSP. **Brazil:** Amapá, Macapá, Pacoval (0°03'N, 51°02'W) [40], 7 October 1978 (M. F. Torres), 1♀—MPEG. Amapá, Macapá, Pacoval (0°03'N, 51°02'W) [40], 20 October 1978 (M. F. Torres), 1♀—MPEG. Amapá, Ucupy Island on Rio Arucaú (3°28'N, 51°30'W) [38], June 1918 (S. M. Klages), 1♀ (holotype of *C. pelagicum*)—ANSP. Amazonas, BR 174, km 45 (2°42'S, 60°04'W) [41], 2 April 1982 (A. T. S. Jatahy), 1♀; (E. F. Ribeiro), 1♀—both INPA. Amazonas, Benjamin Constant (4°22'S, 70°1'W) [36], October 1977 (I. C. Lima), 1♂—UFRJ. Amazonas, East [?], no date (Gordon D. Brown), 1♀—AMNH. Amazonas, Itacoatiara (3°03'S, 58°25'W) [41], 18–21 October 1977 (M. Descamps), 1♀—MNHN. Amazonas, Manaus, Campus-INPA (2°59'S, 60°00'W) [41], 18 May 1976 (Paraluppi), 1♀—INPA. Amazonas, Manaus, Ilha de Marchantaria (3°14'S, 59°57'W) [41], 18 August 1987 (M. F. Vieira), 1♂—INPA. Amazonas, Manaus, Ilha de Marchantaria (3°14'S, 59°57'W) [41], 7–8 February 1991 (M. F. Vieira), 5♂♂, 1♀—INPA. Amazonas, Nova Olinda (3°30'S, 57°56'W) [41], no date (S. M. Klages), 1♂, 1♀—ANSP. Amazonas, Tefé (3°23'S, 64°42'W) [41], 25 December 1919, 1♀—ANSP. Bahia, Morro do Pará (=Morpará)

(11°33'S, 43°16'W) [49], 6 December 1908 (J. D. Haseman), 1♂—ANSP. Goiás, Pedra de Amolar (16°45'S, 49°14'W) [49], no date or collector, 1♂—ANSP. Mato Grosso (=MT), Cáceres (16°4'S, 57°40'W) [49], 21 July 1979 (Pearson), 1♀—UFRJ. Mato Grosso (=MS), Corumbá (19°10'S, 57°38'W) [46], February to March (H. H. Smith), 8♂♂, 3♀♀—ANSP. Mato Grosso (=MS), Corumbá (19°10'S, 57°38'W) [46], March (no collector), 2♀♀, 6♂♂—ANSP. Mato Grosso (=MT), Cuyabá (=Cuiabá) (15°36'S, 56°05'W) [49], February (no collector), 1♂—NMNH. Mato Grosso (=MT), Fazenda Ipiranga, km 10 at Rod. Transpantaneira, Baía do Piuvál (56°37'W, 16°24'W) [49], 19 October 1998 (Sonia de Aguiar Ferreira), on *E. azurea*, 4♂♂, 4♀♀—UFMT. Mato Grosso (=MS), Porto Esperança (19°35'S, 57°27'W) [46], 31 January 1941 (J. R. Bailey), 1♂—UMMZ. Mato Grosso (=MT), Posto Jacaré, Rio Xingu (12°00'S, 53°22'W) [46], November 1961 (M. Alvarenga, Werner), 1♀—UMMZ. Mato Grosso (=MT), Rio Paraguay, Descalvados, floating plants (16°46'S, 57°40'W) [49], 4 June 1931 (J. A. G. Rehn), 1♂—ANSP. Minas Gerais, Pirapora (17°21'S, 44°56'W) [49], 17–23 November 1976 (M. Descamps), 1♂, 1♀—ANSP; 21♂, 22♀♀—MNHN. Minas Gerais, Pirapora (17°21'S, 44°56'W) [49], October 1977 (O. Roppa, M. A. Monné), 6♂♂—UFRJ. Pará, Altamira, Rio Xingu, Ilha Grande-Imbaubau (3°12'S, 52°12'W) [40], 8 December 1983 (A. L. Nunes), 1♀—MPEG. Pará, Belém (1°25'S, 48°31'W) [45], March 1968 (F. D. Bennett, H. Zwoelfer), 1♂, 1♀—NMNH. Pará, Belém, Ilha do Combu: Furo da Paciência (1°25'S, 48°25'W) [45], 19 March 2005 (A. L. Nunes, C. E. Braga), 1♂, 1♀—MPEG. Pará, Belém, Ilha de Tatuoca (1°12'S, 48°30'W) [45], 25 March 1978 (P. Tadeu) 1♀—MPEG. Pará, Belém, Parque Ambiental (1°27'S, 48°30'W) [45], 19–22 April 2004 (A. L. Nunes et al.), 2♂♂—MPEG; 9–13 August 2004 (A. L. Nunes et al.), 2♀♀—MPEG. Pará, Igarapé-Assu (3°44'S, 55°31'W) [44], 25 June 1919 (H.S. Parish), 1♂—UMMZ. Pará, Jacareacanga (6°16'S, 57°44'W) [43], November 1969 (F. R. Barbosa), 4♂♂, 1♀—UMMZ. Pará, Melgaço, Caxiuanã (1°48'S, 50°42'W) [40], 20 January 2006 (A. L. Nunes, C. E. Braga), 2♀♀—MPEG. Pará, Monte Dourado-Rio Jari: Área do Matadouro, *Eichhornia azurea* (0°52'S, 52°31'W) [40], 26 February 2005 (A. L. Nunes, C. E. Braga), 1♂, 1♀—MPEG. Pará, Óbidos (1°54'S, 55°31'W) [40], 20 August 1919 (H. S. Parish), 1♂—ANSP. Pará, Óbidos (1°54'S, 55°31'W) [40], April 1978 (M. V. Cerdeira), 1♂, 1♀—UFRJ. Paraná, Guoyra (=Guaira) (24°06'S, 54°16'W) [54], 3 July 1929 (A. A. Oglobin), 2♀♀—NHM. Paraná, Rio São Francisco nr Toledo (24°44'S, 53°44'W) [55], February to May 1981 (M. L. M. B.

de Medeiros; unpublished MSc thesis, UFP Curitiba, Brazil, 1984), det. C. S. Carbonell, 2♂♂, 2♀♀—FCMU; Pernambuco, São Lourenço da Mata (8°00'S, 35°04'W) [53], 5–7 July 1990 (C. Amedegnato, S. Poulain), 4♀♀—MNHN. Rio de Janeiro, Barra da Tijuca, km 14 Estrada Rio-Santos (23°00'S, 43°20'W) [53], 10 June 1977 (C. A. Campos Seabra, B. Silva), 22♂♂, 16♀♀—UFRJ. Rio de Janeiro, Miguel Couto, Nova Iguassu (22°44'S, 43°27'W) [53], July 1961 (M. Alvarenga), 1♂—UMMZ. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 1 April 1949, 1♀; 27 February 1949, 1♀; 31 March 1951, 1♀; 28 November 1952, 1♀; 1 January 1953, 1♀ (all C. M. de Biezanko)—all NHM. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 9 February 1954 (C. M. de Biezanko), 1♀—AMNH. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 30 November 1956 (C. M. de Biezanko), 1♀—NHM. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 23 February 1960 (C. M. de Biezanko), 1♀—AMNH. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 30 January 1960, 1♀; 26 March 1960, 1♂, 1♀; 11 April 1961, 1♂; 7 October 1961, 1♀; March 1968, 1♂ (all C. M. de Biezanko)—all NHM. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 1 April 1974 (C. M. de Biezanko), 2♀♀—AMNH. Rio Grande do Sul, Pelotas (31°44'S, 52°19'W) [51], 14 April 1961 (Mantoni, Biezanko), 1♀—NMNH. Rondônia, Costa Marques, Rio Guapore (12°28'S, 64°15'W) [46], 11 October 1964 (J. K. Bouseman, T. Lussenhop), 1♂—AMNH. Santa Catarina, Nova Teutonia, 6 km SW Seara (27°11'S, 52°23'W) [55], 21 June 1964 (F. Plaumann), 1♂—UMMZ. São Paulo, Barueri (23°31'S, 46°52'W) [53], March 1967 (K. Lenko), 8♀♀—UFRJ. São Paulo, Rio Ipiranga, at light (23°22'S, 45°09'W) [53], April 1910 (H. Luederwaldt), 1♀—ANSP. São Paulo, São Paulo (23°34'S, 46°37'W) [53], no date (A. Hempel), 1♂, 1♀—UMMZ. **Colombia:** Antioquia, Medellín (2184 m) (6°17'N, 75°32'W) [30], 1953 (F. L. Galeano), 1♀—NMNH. Meta, 16 km SW of Puerto Lopez, Hacienda Mozambique (4°00'N, 72°49'W) [29], February and March 1971 (D. C. Rentz), 1♂—ANSP. Atlántico, Barranquilla (10°58'N, 74°47'W) [25], 2 August 1923 (F. W. Walker), 1♀—UMMZ. Atlántico, nr Barranquilla, mouth of Magdalena River: Salamanca's Island (11°04'10"N, 74°47'20"W) and Ciénaga Grande de Santa Marta (10°51'30"N, 74°34'35"W) [25], 6–13 August 2005 (G. Rueda-Delgado), on *E. crassipes*, 6♂♂, 7♀♀—JA. Bolívar, Bonga (10°02'N, 75°12'W) [25], 10 May 1926 (F. W. Walker), 1♂—UMMZ. Cesar, La Mata (8°36'N, 73°37'W) [25], 9 January 1971 (M. Descamps), 1♂—MNHN. Chocó, Boca Murindo (7°02'N, 76°45'W) [24], 2 February 1918 (M. A. Carriker Jr), 1♂, 2♀♀—ANSP.

Córdoba, Ayapel Cano Seco (8°18'N, 75°08'W) [28], 26 January 1968 (M. Descamps), 4♂♂, 3♀♀—MNHN. Córdoba, El Varal, Pueblo Nuevo (Monteria) (8°30'N, 75°29'W) [25], 17 January 1968 (M. Descamps), 1♂, 3♀♀—MNHN. Córdoba, Hacienda El Torno de Matamores Monteria/Tierra Alta (8°10'N, 76°03'W) [25], 6 January 1968 (M. Descamps), 6♂♂, 5♀♀—MNHN. Córdoba, San Carlos, Monteria (8°47'N, 75°41'W) [25], 18 January 1968 (M. Descamps), 2♂♂, 1♀—ANSP; 20♂♂, 13♀♀—MNHN. **Ecuador:** Sucumbios, Limoncocha (0°24'S, 76°37'W) [35], 27 May 1963 (L. E. Peña G), 1♂—UMMZ. **French Guiana:** Pied Saut Parare (=at foot of Parare fall, on Arataye River, affluent of Approuage River), Clairières (=clearings) (4°03'N, 52°42'W) [38], September 1977 (M. Descamps), 1♂—ANSP. Polder Marianne (4°44'N, 52°20'W) [38], 19 February 1969 (Balachowski-Gruner), 1♂, 1♀—MNHN. **Guatemala:** Izabal, Puerto Barrios (15°43'N, 88°35'W) [12], 11 March 1905 (Bruner), 1♂ (holotype of *C. scudderi*)—ANSP. Petén, Subín R., Subín (16°38'N, 90°11'W) [12], 4 April 1935 (Hubbs, Vanderschalie), 1♂, 1♀—UMMZ. Petén, Tikal (17°13'N, 89°37'W) [12], March to April 1956 (Cantrall, Hubbell), 6♂♂, 4♀♀—UMMZ. **Guayana:** Demerara-Mahaica, Georgetown (6°48'N, 58°09'W) [38], July 1921 (Aug. Busck), 1♂—NMNH. **Honduras:** Honduras, no locality [15], December 1934 (Galv.), 1♀—NMNH. **Mexico:** Chiapas, Lagunas de Montebello, 1500 m (16°06'N, 91°39'W) [14], 23–24 October 1986 (C. Amedegnato, S. Poulain), 1♀—MNHN. Jalisco, 2 mi N de Resolana (19°35'N, 104°26'W) [11], 8 April 1949 (J. A. Peters), 2♂♂, 6♀♀—UMMZ. Nayarit, 5 mi N de Acaponeta on Huajicori Mine Road, 300 ft (22°34'N, 105°21'W) [11], 20 November 1958 (T. J. Cohn), 10♂♂, 3♀♀—UMMZ. Tabasco, 6 mi N de Teapa (17°39'N, 92°56'W) [12], 15 July 1958 (Wellman, Duellman, Tulecke), 2♀♀—UMMZ. Tabasco, 34 mi NE of Teapa (17°48'N, 92°31'W) [12], (Cohn, S. P. Hubbell), 1♀—UMMZ. Veracruz, Alvarado (18°46'N, 95°46'W) [12], 19 November 1973 (M. Descamps), 2♂♂, 3♀♀—MNHN. Veracruz, Playa Linda (18°15'N, 94°39'W) [12], 17 November 1973 (M. Descamps), 2♂♂, 1♀—ANSP, 41♂♂, 20♀♀—MNHN. Veracruz, Tampico (22°12'N, 97°50'W) [12], December 1906, 1♂—UMMZ. Veracruz, 6 km SW of Veracruz (19°06'N, 96°10'W) [12], 12 March 1941 (I. J. Cantrall), 2♂♂, 1♀—UMMZ. Veracruz, 8 km SW of Veracruz (19°06'N, 96°10'W) [12], 12 March 1941 (I. J. Cantrall), 1♂, 1♀—UMMZ. Veracruz, 6 km SW of Veracruz (19°06'N, 96°10'W) [12], 16 September 1959 (Cantrall, Cohn), 1♂—UMMZ. **Nicaragua:** Rivas, El Abuelo, Orosi-Rivas (11°9'N, 85°20'W) [15], 14 April 1959 (O. Anastacio), 1♂, 1♀—NMNH. **Panama:** Canal Zone, Barro Colorado, at light (9°18'N, 79°52'W) [15], 31 August 1967 (O. J. Sexton), 1♂, 2♀♀—UMMZ. Canal Zone, Barro Colorado Island (9°18'N, 79°52'W) [15], 15 March 1956 (Rettenmeyer), 1♀—ANSP. Canal Zone, Barro Colorado Island, at light at station (9°18'N, 79°52'W) [15], 7 July 1967 (E. Ortleb), 1♀—UMMZ. Canal Zone, Barro Colorado Island, at light at laboratory (9°18'N, 79°52'W) [15], 31 August 1967 (O. J. Sexton), 1♂—UMMZ. Canal Zone, Barro Colorado Island (9°18'N, 79°52'W) [15], 7 June 1977 (Silberglied/Aiello), 1♀—UMMZ. Panama City (8°59'N, 79°31'W) [15], 1912 (no collector), 1♂—ANSP. **Paraguay:** Central, Asunción (25°17'S, 57°38'W) [50], 24–25 December 1981 (A. Harman), 1♀. Concepcion, Concepción, on river below (23°23'S, 57°25'W) [50], December, 1♀—ANSP. Guaira, Mbocayati (25°42'S, 56°24'W) [50], 17 January 1972 (M. Descamps), 2♂♂, 1♀—MNHN. Guaira, Villarica (25°45'S, 56°30'W) [50], 16 January 1972 (M. Descamps), 2♂♂, 1♀—ANSP; 8♂♂, 7♀♀—MNHN. Paraguari, Sapucay (25°40'S, 56°57'W) [50], 7 March 1965 (Carbonell, Mesa, Monné), 1♂, 2♀♀—FCMU. Paraguari, Sapucay (25°40'S, 56°57'W) [50], 14–15 January 1972 (M. Descamps), 11♂, 4♀♀—MNHN. Presidente Hayes, Rio Pilcomayo at Puerto Falcon, ca. 12 km WSW Chaco-i (25°16'S, 57°40'W) [50], 29–30 August 1979 (J. N. Taylor et al.), 1♀—UMMZ. **Peru:** Loreto, Pacaya Samiria Nat. Res. 150 m, Rio Samiria, Bio. Sta. Pitchecia (5°13'S, 74°38'W) [42], August 1985 (G. S. Glenn), 1♂—ANSP. Ucayali, Requena (8°21'S, 74°33'W) [42], 14 June 1993 (C. Delgado), 1♂—MNHN. **Suriname:** Paramaribo, Paramaribo (5°49'N, 55°10'W) [38], no date (K. Mayo), 1♀—ANSP. **Trinidad:** Kernahan, Nariva Swamp (10°24'N, 61°03'W) [27], 25–26 November 2004 (P. Polar), on *E. crassipes*, 1♂, 1♀—JA. San Juan (10°38'N, 61°26'W) [27], May 1968, on *E. crassipes* (F. D. Bennett), 3♂♂, 1♀—ANSP. San Juan y Cunupia (10°38'N, 61°26'W and 10°33'N, 61°21'W) [27], May 1970, on *E. crassipes* (E. J. Rankin), 4♂♂, 1♀—ANSP. **Uruguay:** Artigas, Arroyo Tres Cruces Grande (30°17'S, 57°00'W) [51], 16 February 1955 (C. S. Carbonell), 1♂, 1♀—UFRJ. Artigas, Timbauba (30°27'S, 56°48'W) [51], 13–18 February 1955 (C. S. Carbonell), 4♂♂, 6♀♀—NHM. Artigas, Yucutuja (30°36'S, 57°19'W) [51], 30 January 1952 (C. S. Carbonell), 1♀—NMNH. Artigas and Treinta y Tres (30°37'S, 56°59'W and 33°03'S, 54°15'W) [51], collected in January to March from 1952 to 1970 (L. C. de Zolessi or C. S. Carbonell), 24♂♂, 28♀♀—FCMU. Maldonado, Piriapolis, Laguna del Sauce (34°50'S, 55°09'W) [51] (M. G. Lhano), 14 January 2004, on *E. azurea*,

1♂, 1♀—JA. **Venezuela:** Cojedes, Hato Mata Clara (9°00'00"N, 68°30'00"W) [29], 12 July 1981 (Otte et al.), 1♀—ANSP. Delta Amacuro, Caño d'Vagre (9°41'N, 62°20'W) [26], 28 January 1911 (S. Brown), 1♂—ANSP. Guarico, Calabozo area (8°56'N, 67°25'W) [29], 14 July 1981 (Otte et al.), 1♂—ANSP. Sucre, Cariaquito (10°37'N, 63°18'W) [29], January 1911 (S. Brown), 1♀—ANSP.

Cornops brevipenne Roberts & Carbonell, 1979 (Figure 3)

Synonymy. None.

Distribution. Bolivia, Brazil, Ecuador and Peru; up to 400 m a.s.l. (Bolivia: Santa Cruz: Buena Vista–Portachuelo).

Native host plants. Unknown.

Other plants repeatedly attacked. Unknown.

Examined specimens

Bolivia: Beni, Río Itenez at mouth of Río Baures (12°30'S, 64°16'W) [46], 10 October 1964 (S. K. Bauseman), 1♂—ANSP. Beni, Rurrenabaque, 227 m (14°27'S, 67°33'W) [46], 10–23 October 1956 (L. E. Peña), 2♀♀—UMMZ. Santa Cruz, between Buena Vista and Portachuelo, 400 m (17°23'S, 63°32'W) [50], 18–20 February 1976, marshes (Ronderos, Roberts), 4♂♂, 6♀♀ (including the holotype)—ANSP. Santa Cruz, Montero, Asahi Hotel (17°19'S, 63°15'W) [50], 19 February 1976 (Ronderos, Roberts), 1♀—ANSP. **Brazil:** Amazonas, Manaus, Ilha de Marchantaria (3°14'S, 59°57'W) [41], 18 May 2006 and 14 July 2006 (C. E. Braga), 2♂♂—INPA. **Ecuador:** Sucumbios, Shushufindi (0°10'S, 76°39'W) [35], 13 March 1982 (G. Couturier, G. Onoré), 1♂, 1♀—MNHN. **Peru:** Loreto, Iquitos, Quisto Cocha (3°49'S, 73°16'W) [41], 8 July 1980 (M. J. W. Cock), 1♂, 1♀—NHM.

Cornops frenatum (Marschall, 1835)

Distribution. Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Venezuela.

Cornops frenatum frenatum (Marschall, 1835) (Figure 4)

Synonymy. *Cornops bivittatum* Scuder, 1875; *Cornops insularis* Bruner, 1908; *Cornops longicorne* (Bruner, 1911); *Gryllus frenatus* Marschall, 1835; *Gryllus lineatus* Thunberg, 1824.

Distribution. Bolivia, Brazil, Colombia, Ecuador, French Guyana, Guyana, Paraguay, Peru, Suriname, Trinidad and Venezuela; up to 1600 m a.s.l. (Venezuela: Aragua).

Native host plants. *Heliconia* spp. (Musaceae) (A. Pfrommer, unpublished MSc thesis, University of Hamburg, Germany, 1990) and possibly *Eichhornia* spp. (Pontederiaceae) (cf. Benett, 1970).

Other plants repeatedly attacked. *Panicum pilosum* (Gramineae) (J. Adis & M. I. Marques, unpublished).

Examined specimens

Bolivia: Beni, Rurrenabaque (14°27'S, 67°33'W) [46], October 1956 (L. E. Peña), 31♂, 42♀♀—UMMZ. Beni, Valleitenez (=Valle Itenez), Río Itenez (13°25'S, 57°55'W; wrong coordinates given in Roberts & Carbonell, 1979) (11°55'S, 65°01'W=mouth Río Itenez/Río Marmore) [46], 3 March 1976 (Ronderos, Roberts), 10♂♂, 8♀♀—ANSP. La Paz, Altamarani, on Beni River (14°20'S, 67°34'W) [46], 5–11 November 1956 (L. E. Peña), 1♂, 1♀—UMMZ. Santa Cruz, Buenavista, 400 m (17°27'S, 63°39'W) [46], (J. Steinbach), 1♂—ANSP. Santa Cruz, Ibanez, Río Espejo, 400 m (17°58'S, 63°20'W) [46], February 1962 (Walz), 1♂—ANSP. Santa Cruz, Prov. del Sara, 350 m (16°50'S, 63°55'W) [46], (J. Steinbach), 3♂♂, 4♀♀—ANSP. **Brazil:** Acre, Cruzeiro do Sul (7°40'S, 72°37'W) [46], February 1963 (M. Alvarenga), 1♂, 2♀♀—UMMZ. Alagoas, Maceió Al 215 plateau (9°37'S, 35°42'W) [53], 3 June and 1 July 1990 (C. Amedegnato, S. Poulain), 5♂♂, 2♀♀—MNHN. Alagoas, NE de Maceió BR 104 (9°35'S, 35°44'W) [53], 30 June 1990 (C. Amedegnato, S. Poulain), 2♂♂, 4♀♀—MNHN. Alagoas, Satuba, 20 km W Maceió (9°33'S, 35°49'W) [53], 21 February 1981 (Roppa, Roberts, Carbonell), 1♀—ANSP. Amapá, Serra do Navio (0°58'N, 52°2'W) [40], October 1957 (K. Lenko), 1♀—UFRJ. Amazonas, Benjamin Constant (4°22'S, 70°1'W) [36], August 1977 (B. Silva), 2♀♀—UFRJ. Amazonas, Itacoatiara, Rio Urubú, 30 km W (3°08'S, 58°16'W) [41], 13 January 1981 (R. Davison), 1♂—MPEG. Amazonas, Manacapuru (3°17'S, 60°36'W) [41], 9–11 November 1977 (M. Descamps), 4♂♂, 5♀♀—MNHN. Amazonas, Manaus, Campus-INPA (2°59'S, 60°00'W) [41], 15 June 2006 (C. E. Braga), on *Heliconia* sp., 1♂, 1♀—INPA. Amazonas, Reserv. Biol. do Cuieiras, 50 km N Manaus (2°40'S, 60°04'W) [41], 1979 (M. Descamps), 2♂♂—MNHN. Amazonas, Tarumã (3°02'S, 60°06'W) (Manaus) [41], 16 October 1977 (M. Descamps), 1♂—MNHN. Amazonas,

Tarumã (3°02'S, 60°06'W) (Manaus) [41], 25 October 1977 (M. Descamps), 4♀—MNHN. Amazonas, Tarumã (3°02'S, 60°06'W) (Manaus) [41], 9–11 November 1977 (M. Descamps), 3♂♂—MNHN. Amazonas, Tefê (3°23'S, 64°42'W) [41], September 1991 (O. Roppa, P. Magno), 1♀—UFRJ. Bahia, Alcobaça, 20 km W (17°30'S, 39°24'W) [53], 27 November 1974 (Roberts, Carbonell), 5♂♂, 6♀♀—ANSP. Bahia, between Alcobaça and rt 101, marsh (17°27'S, 39°13'W) [53], 26 November 1974 (Roberts, Carbonell), 1♂—ANSP. Bahia, Barrolandia (Belmonte) (15°53'S, 39°16'W) [53], 17–22 December 1976 (M. Descamps), 10♂♂, 12♀♀—MNHN. Bahia, Barrolandia (15°53'S, 39°16'W) [53], 15 October 1987 (J. Becker), 1♀—UFRJ. Bahia, Belmonte (15°51'S, 38°54'W) [53], 15 October 1987 (J. Becker), 1♀—UFRJ. Bahia, Conceição de Almeida (12°48'S, 39°12'W) [53], August 1979 (J. Becker), 4♂♂, 1♀—UFRJ. Bahia, Itabuna, research center, cacao forest (14°47'S, 39°16'W) [53], 22–24 November 1974 (Roberts, Carbonell), 1♀—ANSP. Bahia, Itamarajú (17°02'S, 39°31'W) [53], 14–17 January 1977 (M. Descamps), 1♂—ANSP, 4♂♂—MNHN. Bahia, Itamarajú (17°02'S, 39°31'W) [53], August 1977 (J. Becker, O. Roppa), 1♀—UFRJ. Bahia, between Itamarajú and Prado (17°15'S, 39°21'W) [53], 18–19 January 1977 (M. Descamps), 5♂♂, 5♀♀—MNHN. Bahia, Itapeba (11°59'S, 43°16'W) [48], August 1977 (O. Roppa, J. Becker), 1♀—UFRJ. Bahia, Mascote (15°33'S, 16°60'W) [53], May 1977 (C. A. Campos Seabra, M. A. Monné, O. Roppa, B. Silva), 2♂♂, 2♀♀—UFRJ. Bahia, Porto Seguro (16°26'S, 39°04'W) [53], 13 January 1977 (M. Descamps), 1♂, 2♀♀—MNHN. Bahia, São Felipe, BR 242 (12°50'S, 39°05'W) [48], 16 June 1990 (C. Amedegnato, S. Poulain), 1♀—MNHN. Espírito Santo, Mun. Conceição da Barra, Córrego do Ita (18°34'S, 39°45'W) [53], June 1977 (B. Silva), 1♀—UFRJ. Espírito Santo, Itapemirim Falls, 1–6 km E rt 101 (21°02'S, 40°57'W) [53], 5 December 1974 (Roberts, Carbonell), 1♀—ANSP. Espírito Santo, Linhares (19°23'S, 40°02'W) [53], 21–24 January 1977 (M. Descamps), 1♀—ANSP; 11♂♂, 10♀♀—MNHN. Espírito Santo, Linhares (19°23'S, 40°02'W) [53], August 1977 (O. Roppa, J. Becker, B. Silva), 3♀♀—UFRJ. Espírito Santo, Linhares (19°23'S, 40°02'W) [53], October 1978 (M. Descamps), 4♂♂, 3♀♀—MNHN. Espírito Santo, Linhares 3 km S, cacao forest (19°23'S, 40°02'W) [53], 1 December 1974 (Roberts, Carbonell), 9♂♂, 8♀♀—ANSP. Goiás, Minaçu (13°31'S, 48°13'W) [49], 3 December 1987 (O. Roppa, M. A. Monné), 2♂♂, 1♀—UFRJ. Mato Grosso (=MT), Andradina (22°15'S, 53°20'W) [49], July 1971 (F. M. Oliveira), 2♂♂—UMMZ. Mato Grosso, Barra do Bugres (14°4'S, 57°10'W) [46], October 1984 (O.

Roppa, B. Silva), 1♂, 2♀♀—UFRJ. Mato Grosso (=MT), Chapada (dos Guimarães) (15°26'S, 55°47'W) [49], December (H. H. Smith), 1♂—ANSP. Mato Grosso (=MT), Chapada dos Guimarães (15°26'S, 55°47'W) [49], September 1978 (O. Roppa, M. A. Monné, J. Becker), 3♂♂, 7♀♀—UFRJ. Mato Grosso (=MT), Chapada dos Guimarães: Centro de Treinamento AMI (15°26'S, 55°47'W) [49], 23 March 2004 and 25 April 2005 (L. de O. Neves), on *Panicum pilosum*, 2♂♂, 2♀♀—UFMT. Mato Grosso (=MT), Diamantino, Alto Rio Arinos (14°14'S, 56°01'W) [46], March 1979 (O. Roppa, B. Silva), 2♂♂, 4♀♀—UFRJ. Mato Grosso (=MT), Juina (11°22'S, 58°44'W) [46], May 1985 (O. Roppa, B. Silva), 1♂, 1♀—UFRJ. Pará, Alenquer (1°55'S, 54°46'W) [41], April 1978 (B. Silva), 1♂—UFRJ. Pará, Belém (1°25'S, 48°31'W) [45], 8 August 1919 (H. S. Parish), 1♀—ANSP. Pará, Belém (1°25'S, 48°31'W) [45], April 1978 (B. Silva), 1♀—UFRJ. Pará, Belém (1°25'S, 48°31'W) [45], 8 September 1979 (C. Pereira), 1♀—MPEG. Pará, Belém, Mocambo (1°27'S, 48°30'W) [45], 30 September 1977 (J. Becker), 1♂—UFRJ; 29 December 1977 (M. F. Torres), 1♀—MPEG; 7 March 1978 (M. F. Torres), 1♀—MPEG; 31 March 1978 (P. Tadeu), 1♂, 1♀—MPEG; 9 May 1978 (M. Carvalho), 2♀♀—MPEG; 6 February 1979 (M. F. Torres), 2♂♂, 1♀—MPEG. Pará, Belém, Mosqueiro (1°09'S, 48°28'W) [45], 17 December 1983 (J. Tadaievsky), 1♀—MPEG. Pará, Belém, Utinga (1°27'S, 48°30'W) [45], 24 January 1980 (M. F. Torres), 1♀—MPEG. Pará, Belterra (2°37'S, 54°57'W) [40], April 1978 (B. Silva), 1♀—UFRJ. Pará, Benevides (1°21'S, 48°14'W) [45], 19–25 March 1983 (J. Dias), 1♀—MPEG; 15–19 March 1993 (J. Dias), 1♀—MPEG; 19–22 March 1993 (F. F. Ramos), 1♂, 1♀—MPEG; Pará, Benevides, Fazenda Morelândia (1°13'S, 48°17'W) [45], 16 June 1988 (W. França), 1♀—MPEG; 7 July 1988 (J. Dias), 1♀—MPEG; 25 January 1991 (W. França), 1♀—MPEG; Pará, Benevides, PA 408, km 6 (1°21'S, 48°14'W) [45], 21 June 1980 (no collector), 2♀♀—MPEG; 26 May 1981 (E. Cruz), 1♂—MPEG; 8 May 1982 (D. Freitas), 1♀—MPEG; 24 July 1982 (M. F. Torres), 1♀—MPEG; 29 July 1982 (M. F. Torres), 1♀—MPEG. Pará, Benevides, Sítio Taunus (1°21'S, 48°14'W) [45], 13 November 2005 (A. L. Nunes, C. E. Braga, W. A. Santos), 2♂♂—MPEG. Pará, Chaves (Lower Amazon) (0°09'N, 49°59'W) [40], 27 February 1896 (E. E. Austen), 2♀♀—NHM. Pará, Igarapé Assu (3°44'S, 55°31'W) [44], 25 January 1919 (H. S. Parish), 1♂—ANSP. Pará, Ilha de Mosqueiro (1°06'S, 48°23'W) [45], 28 November 1977 (J. Becker), 1♂, 2♀♀—UFRJ. Pará, Jacareacanga (6°16'S, 57°44'W) [43], December 1968 (F. R. Barbosa), 1♂, 1♀—UMMZ. Pará, Monte Alegre (2°01'S,

54°04'W) [40], April 1978 (B. Silva), 1♂—UFRJ. Pará, Novo Progresso, Área 01-Aeroporto (7°08'S, 55°24'W) [44], 24 November 2005 (A. L. Nunes), 1♂, 3♀♀—MPEG. Pará, Novo Progresso, Área 02-Fazenda (7°08'S, 55°17'W) [44], 22 November 2005, 1♂; 26 November 2005, 1♂, 1♀; 27 November 2005, 3♂♂ (all A. L. Nunes)—all MPEG. Pará, Óbidos (1°54'S, 55°31'W) [40], April 1978 (B. Silva), 5♂♂, 5♀♀—UFRJ. Pará, Oriximiná, Rio Trombetas (1°46'S, 55°52'W) [40], 3 September 1919 (H. S. Parish), 1♂, 1♀—ANSP. Pará, Parauapebas, Carajás, 2 Alfa Serraria (5°58'S, 50°19'W) [44], 15 April 1987 (M. F. Torres), 1♂—MPEG. Pará, Parauapebas, Serra Norte, Fofoca (5°58'S, 50°21'W) [44], 8 May 1984 (M. F. Torres), 1♂—MPEG; 22 June 1985 (N. Bittencourt), 1♂—MPEG. Pará, Parauapebas, Serra Norte, Serraria (5°58'S, 50°19'W) [44], 30 January 1985 (M. F. Torres), 1♂—MPEG. Pará, Parintins (2°37'S, 56°43'W) [43], 30 September 1919 (no collector), 1♂—ANSP. Pará, Santa Bárbara, Fazenda Morelândia (1°13'S, 48°17'W) [45], 10 December 2005 (A. L. Nunes, C. E. Braga, W. A. Santos), 1♂, 5♀♀—MPEG. Pará, Santarém (2°25'S, 54°42'W) [40], July 1919 (S. M. Klages), 2♂♂, 3♀♀—ANSP. Pará, São João de Pirabas (0°46'S, 47°10'W) [45], 27 July 1978 (M. F. Torres), 1♂—MPEG. Pará, Tucuruí, Rio Tocantins: 12 km S. margem esquerda (Jacundá) (3°45'S, 49°40'W) [45], 5 May 1984 (C. N. Arcanjo), 1♂—MPEG. Pará [?], no date (A. Miles Moss), 1♂—NHM. Paraíba, BR101, 2 km to S border (7°28'S, 34°58'W) [53], 8 March 1981 (Roppa, Carbonell, Roberts), 1♂—ANSP. Paraíba, IBDF Park, João Pessoa (7°07'S, 34°52'W) [53], 6 March 1981 (Roppa, Carbonell, Roberts), 1♀—ANSP. Paraná, Estancia Santa Clara (24°38'S, 52°00'W) [55], 11–13 April 1985 (D. Otte), 1♂, 3♀♀—ANSP. Paraná, Guoyra (=Guaira) (24°06'S, 54°16'W) [54], 3 July 1929 (A. A. Oglobin), 6♀♀—NHM. Paraná, Porto Majoli [?], October 1910 (Schrottky), 1♂—ANSP. Paraná, Rondon (24°38'S, 54°07'W) [54], March 1965 (F. Plaumann), 15♂♂, 18♀♀—UMMZ. Pernambuco, Bonito, 800 m (8°28'S, 35°43'W) [53], 27 February 1981 (Roppa, Carbonell, Roberts), 1♀—ANSP. Pernambuco, Recife: Dois Irmãos (8°05'S, 34°54'W) [53], 10–16 July 1990 (C. Amedegnato, S. Poulain), 2♂♂, 3♀♀—MNHN. Pernambuco, São Lourenço da Mata (8°00'S, 35°04'W) [53], 5–7 July 1990 (C. Amedegnato, S. Poulain), 2♂♂—MNHN. Rio de Janeiro, Angra dos Reis (23°00'S, 44°17'W) [53], 30 May 1977 (C. A. Campos Seabra, M. A. Monné), 1♂, 1♀—UFRJ. Rio de Janeiro, Rio de Janeiro, Floresta da Tijuca (22°54'S, 43°14'W) [53], October 1977 (B. Silva), 1♀—UFRJ. Rio de Janeiro, Grumarim (21°36'S, 41°47'W) [53], 4

October 1976 (M. Descamps), 1♂—ANSP. Rio de Janeiro, Rio de Janeiro, Guanabara, Represa Rio Grande (22°54'S, 43°24'W) [53], February 1966 (F. M. Oliveira), 3♂♂, 3♀♀—UMMZ. Rio de Janeiro, Rio de Janeiro, Guanabara (22°54'S, 43°12'W) [53], January 1968 (Moacir Alvarenga), 1♂, 1♀—UMMZ. Rondônia, Ariquemes (9°55'S, 63°04'W) [46], August 1978 (B. Silva), 7♂♂, 3♀♀—UFRJ. Rondônia, Ouro Preto do Oeste (10°40'S, 62°17'W) [46], October 1986 (O. Roppa, P. Magno, J. Becker), 2♂♂, 2♀♀—UFRJ. Rondônia, Porto Velho (8°46'S, 63°53'W) [43], April 1978 (E. S. Lima), 13♂♂, 7♀♀—UFRJ. Roraima, Ilha de Maracá (3°24'N, 61°39'W) [39], June 1981 (M. Descamps), 2♂♂, 5♀♀—INPA; 2♂♂, 3♀♀—MNHN. Santa Catarina, Corupá, Hansa Humboldt (26°26'S, 49°13'W) [53], October 1960 (A. Maller), 1♂, 1♀—UMMZ. Santa Catarina (Nova) Teutonia (27°11'S, 52°23'W) [55], 19 July 1959 (F. Plaumann), 1♂—UMMZ. Santa Catarina (Nova) Teutonia (27°11'S, 52°23'W) [55], 25 November 1959 (F. Plaumann), 1♂—UMMZ. Sergipe, Areia Branca, 35 km W Aracaju (10°54'S, 37°22'W) [53], 19 February 1981 (Roppa, Carbonell, Roberts), 1♀—ANSP. Sergipe, Estância (11°16'S, 37°26'W) [53], 22 June 1990 (C. Amedegnato, S. Poulain), 2♂♂, 2♀♀—MNHN. **Colombia:** Meta, Caño Cabra (2°25'N, 73°04'W) [35], 7–10 December 1970 (M. Descamps), 1♂, 1♀—ANSP; 16♂♂, 10♀♀—MNHN. Meta, La Macarena (2°04'N, 73°57'W) [35], 3–5 December 1970 (M. Descamps), 10♂♂, 8♀♀—MNHN. Meta, Los Micos (3°17'N, 73°53'W) [29], 26–27 November 1970 (M. Descamps), 1♂—ANSP; 4♂♂, 8♀♀—MNHN. Meta, 18 km SW Puerto Lopez, Laguna Mozambique, low woodland swamp (3°57'N, 73°03'W) [29], 19 January 1970 (N. D. Jago), 1♀—ANSP. Meta, Vista Hermosa (3°01'N, 73°42'W) [35], 28–30 November 1970 (M. Descamps), 2♂♂—MNHN. Putumayo, river bank Mocoa, 500 m (1°03'N, 76°33'W) [35], 5 November 1968 (M. Descamps), 1♀—MNHN. Putumayo, river bank Mocoa Villagarzon/Puerto Limon (1°02'N, 76°31'W) [35], 14 November 1968 (M. Descamps), 1♀—MNHN. Putumayo, Puerto Asis (0°30'N, 76°29'W) [35], 17 January 1994, Duffner, 1♂, 3♀♀—ZFMK. Putumayo, environment of Puerto Asis, 200 m (0°30'N, 76°29'W) [35], 13 November 1968 (M. Descamps), 2♂♂, 1♀—MNHN. Putumayo, Villagarzon, 500 m (1°02'N, 76°37'W) [35], 10 November 1968 (M. Descamps), 3♀♀—MNHN. **Ecuador:** Morona Santiago, Santiago (3°23'S, 78°32'W) [34], 3 January 1994, Duffner, 2♂♂, 2♀♀—ZFMK. Napo, road Limoncocha-Rio Napo, 200 m a.s.l. (0°23'S, 76°38'W) [35], September 1989, terra firme forest, on *Heliconia* sp. (A. Pfrommer), 1♀—ZFMK. Napo, Orellana between

Rios Rumiayacu and Tiptutini, via Cupidos (0°48'S, 75°51'W) [35], 4–16 March 1995 (S. Poulain), 1♀—MNHN. Napo, Puerto Napo/Ahuano, Purma (1°02'S, 77°38'W) [35], 17–18 August 1991 (C. Amedegnato, S. Poulain), 2♂♂, 1♀—MNHN. Napo, Puerto Napo, li Seite (left side) (1°03'S, 77°46'W) [35], 27 January 1994, Duffner, 4♂♂, 6♀♀—ZFMK. Napo, Puerto Napo, re Seite (right side) (1°03'S, 77°46'W) [35], 27 January 1994, Duffner, 1♂, 6♀♀—ZFMK. Napo, junction Rios Tiptutini/Tivacuno plateau (0°41'S, 76°21'W) [35], 5–15 February 1995 (S. Poulain), 1♂, 2♀♀—MNHN. Napo, Tena, Misahualli, Jatun Sacha (1°04'S, 77°36'W) [35], 29 March 1990 (S. Poulain), 9♂♂, 15♀♀—MNHN. Napo, Via Hollin: Loreto, 530 m (0°58'S, 77°44'W) [56], 18–20 September 1997 (C. Amedegnato, S. Poulain), 1♂, 1♀—MNHN. Pastaza, Puyo/Macas: S. Bolivar, 1000 m (1°37'S, 78°01'W) [56], 10 November 1997 (C. Amedegnato, S. Poulain), 1♀—MNHN. Sucumbios, Anangu (0°30'S, 76°23'W) [35], 20–26 March 1995 (S. Poulain), 6♂♂, 9♀♀—MNHN. Sucumbios, Dureno on Río Aguarico (0°02'N, 76°42'W) [35], March 1977 (L. E. Peña), 1♀—ANSP. Sucumbios, Limoncocha (0°24'S, 76°37'W) [35], June to July 1983 (K. Riede), 1♂, 6♀♀—MNHN. Sucumbios, Limoncocha (0°24'S, 76°37'W) [35], 5 August 1989 (K. Riede), 1♀—MNHN. Sucumbios, Lumbaqui (0°03'N, 77°19'W) [35], 3 September 1993 and 9 February 1994, Duffner, 2♀♀—ZFMK. Sucumbios, Río Aguarico, San Pablo (0°15'S, 76°25'W) [35], July to August 1984 (K. Riede), 2♂♂, 1♀—MNHN. Sucumbios, Río Cuyabeno (0°15'S, 75°52'W) [35], July 1983 (K. Riede), 1♂, 1♀—MNHN. Sucumbios, San Pablo, re Seite (right side) (0°15'S, 76°25'W) [35], 10–11 November 1993, Duffner, 2♀♀—ZFMK. Zamora Chinchipe, Yanzatza: Los Encuentros, 950 m (3°45'S, 78°38'W) [34], 16 February 1990 (S. Poulain), 1♂—MNHN. **French Guiana:** Cayenne (4°56'N, 52°19'W) [38], March 1917 (S. M. Klages), 13♂♂, 5♀♀—ANSP. Crique Anguille (4°49'N, 52°31'W) [38], 3 February 1976 (M. Descamps), 1♂—ANSP; 1♂, 4♀♀—MNHN. Matoury (4°50'N, 52°19'W) [38], 21 February 1976 (M. Descamps), 2♂♂—MNHN. Matoury (4°50'N, 52°19'W) [38], 2 March 1976 (M. Descamps), 3♂♂, 2♀♀—MNHN. Pied Saut Parare, Clairieres (4°03'N, 52°42'W) [38], August 1977 (M. Descamps), 1♂—MNHN. Pied Saut Parare, Clairieres (4°03'N, 52°42'W) [38], September 1977 (M. Descamps), 1♂—ANSP; 3♂♂, 2♀♀—MNHN. 9 km Pied Saut Parare (4°03'N, 52°42'W) [38], 1 May 1988 (L. Desutter), 1♂, 1♀—MNHN. Regina (4°18'N, 52°08'W) [38], 19 April 1976 (M. Descamps), 4♂♂—MNHN. Saul (3°36'N, 53°12'W) [38], 9–10 July 1993 (P. Roubaud), 5♂♂, 6♀♀—MNHN. Savane Matiti

(5°04'N, 52°36'W) [38], 7 July 1977 (M. Descamps), 1♀—ANSP; 6♂♂, 4♀♀—MNHN. **Guyana:** Potaro-Siparuni, Kaieteur, Hight forest (5°12'N, 59°24'W) [38], 6 September 1937 (Richards, Smart), 1♀—NHM. **Paraguay:** Alto Paraná, Bayer Ranch, nr Pto Pte Stroessner (25°31'S, 54°37'W) [54], 12 June 1975 (Elzinga, Granovsky, Blocker), 1♂—UMMZ. Amambay, Cerro Corá (22°36'S, 55°59'W) [49], 18 January 1972 (Ronderos, Carbonell), 1♂—FCMU. Amambay, Pedro Juan Caballero, Río Ypane nr Pedro Juan Caballero (22°31'S, 55°45'W) [49], November 1956 (C. J. D. Brown), 2♀♀—UMMZ. Caaguazú, near Ihú (24°59'S, 55°59'W) [54], 13 March 1965 (Carbonell, Mesa, Monné), 1♀—FCMU. **Peru:** Ayacucho, Ayacucho/San Francisco: Ayna (12°40'S, 73°55'W) [47], 20–22 November 2001 (C. Amedegnato, S. Poulain), 1♂—MNHN. Cusco, Atalaya, 700 m (12°58'S, 71°39'W) [46], 18 May 1976 (M. Descamps), 1♂—ANSP; 7♂♂, 5♀♀—MNHN. Huánuco, 10 km E of Huánuco (9°55'S, 76°08'W) [47], 7 December 1937 (F. Woytkowski), 1♂—ANSP. Huánuco, Leonpampa, 110 km E of Huánuco (9°49'S, 75°14'W) [47], 7 December 1937 (F. Woytkowski), 1♂—ANSP. Huánuco, Tingo Maria, Aerro Puertos (=Aeropuerto) (9°17'S, 75°59'W) [47], 22 October 1941 (J. C. Pallister), 1♂, 2♀♀—AMNH. Huánuco, Tingo Maria, Chinchavio (9°17'S, 75°59'W) [47], August 1980 (M. Descamps), 1♂—MNHN. Huánuco, Tingo Maria, Cueva Castillo Grande (9°17'S, 75°59'W) [47], August 1979 (M. Descamps), 11♂, 5♀♀—MNHN. Huánuco, Tingo Maria, Cueva de las Pavas (9°17'S, 75°59'W) [47], August 1978 (M. Descamps), 1♂—MNHN. Huánuco, Tingo Maria, Las Lechuzas (9°17'S, 75°59'W) [47], 22 October 2001 (C. Amedegnato, S. Poulain), 2♀♀—MNHN. Huánuco, km 37 road of Tournavista (8°55'S, 74°42'W) [42], September 1978 (M. Descamps), 1♂—MNHN. Huánuco, km 40 road of Tournavista (8°55'S, 74°42'W) [42], September 1979 (M. Descamps), 1♂, 1♀—MNHN. Junin, Satipo (11°15'S, 74°41'W) [42], August 1947 (P. Paprzucki), 1♀—ANSP. Junin, Satipo, 650 m (11°15'S, 74°41'W) [42], September 1978 (M. Descamps), 8♂♂, 8♀♀—MNHN. Junin, nr Satipo (11°15'S, 74°41'W) [42], 10 April 1920, 1♀—UMMZ. Loreto, Iquitos: Quisto Cocha (3°49'S, 73°16'W) [41], 20 May 1995 (S. Poulain), 1♂—MNHN. Loreto, Iquitos: Santo Thomas (3°44'S, 71°16'W) [41], 18 May 1978 (M. Descamps), 2♂♂, 1♀—MNHN. Loreto, Iquitos/Nauta, Allpahuayo (3°57'S, 73°25'W) [41], 29 October to 4 November 1990 (S. Poulain), 4♂♂, 3♀♀—MNHN. Loreto, Río Yubineto (0°58'S, 74°16'W) [35], February 1978 (S. Poulain), 1♂—MNHN. Loreto,

Rio Yubinetto (0°58'S, 74°16'W) [35], 1 July to 1 August 1978 (M. Descamps), 1♂, 2♀♀—MNHN. Madre de Dios, Pakitza (12°15'S, 71°45'W) [47], 20 May to 20 June 1976 (M. Descamps), 1♀—ANSP; 28♂♂, 19♀♀—MNHN. Madre de Dios, Puerto Maldonado (12°36'S, 69°11'W) [46], 20 December 2001 (C. Amedegnato, S. Poulain), 1♂, 4♀♀—MNHN. (Ucayali), Loreto, Río Aguaytia (8°03'S, 74°40'W) [42], June 1947 (Weyrauch), 2♀♀—ANSP. Ucayali, Pucallpa, Río Ucayali (8°23'S, 74°31'W) [42], 3 February 1948 (J. M. Schunke), 1♂—NHMN. Ucayali (=Loreto), Río Ucayali: Genaro Herrera (4°58'S, 73°46'W) [41], January–February 1984 (S. Poulain), 1♂—MNHN. Ucayali, Middle Río Ucayali (9°50'S, 74°00'W) [47], 20 September 1923 (F. Guoif) 1♂—AMNH. Northern Andes of Peru between Yurimaguas and Chachapoyas (6°00'S, 77°00'W) [47], no date (Scudder), 1♀ (holotype of *C. bivittatum*)—ANSP. **Suriname:** Marowijne, Langamankondre (5°43'N, 54°10'W) [38], 22–25 October 1963 (B. Malkin), 1♀—AMNH. Paramaribo, Paramaribo, Coesevgeny (5°49'N, 55°10'W) [38] February 1968 (F. D. Bennett, H. Zwoelfer), 1♂—NMNH. Paramaribo, Paramaribo (5°49'N, 55°10'W) [38], no date (M. Mayo), 1♂—ANSP. **Trinidad:** Arima Valley, B.W.I. (10°37'N, 61°16'W) [27], 23 February 1952, 1♀—AMNH. Brasso (10°24'N, 61°19'W) [27], 21 August 1930 (G. Belmontes), 2♂♂, 2♀♀—ANSP. Fyzabad (10°10'N, 61°32'W) [27], 21 August 1929 (N. A. Wood), 2♂♂, 5♀♀—ANSP. Moruga (10°4'N, 61°16'W) [27], February 1986 (G. B. Popov), 2♀♀, one nymph—NHM. Moruga area (10°4'N, 61°16'W) [27], February to March 1985 (G. B. Popov), 6♂♂, 3♀♀—NHM. Moruga area (10°4'N, 61°16'W) [27], 17 March 1986 (G. B. Popov), 1♀—NHM. Moruga area (10°4'N, 61°16'W) [27], March 1986 (G. B. Popov), 2♂♂, 4♀♀—NHM. Sangre Grande (10°34'N, 61°07'W) [27], 3 April 1930, 1♂—ANSP. South-East Trinidad, mixed vegetation at edge of forest (10°0'N, 61°00'W) [27], 9 December 1970 (I. A. D. Robertson), 1♂, 1♀—NHM. **Venezuela:** Aragua, 1600 m (9°59'N, 67°05'W) [26], October 1943, 1♀—ANSP. Aragua, near Ocumare, 200 m, under cacao (10°27'N, 67°46'W) [26], 3–6 February 1973 (H. R. Roberts), 2♂♂—ANSP. Carabobo, Trincheras (10°18'N, 68°05'W) [26], 28 July 1981 (M. Descamps), 3♀♀—MNHN. Cojedes, Hato Mata Clara (9°00'00"N, 68°30'00"W) [29], 12 July 1981 (Otte et al.), 3♂♂, 2♀♀—ANSP. Monagas, Caripito (10°7'N, 63°06'W) [26], 15 April 1942, 1♀—AMNH.

Cornops frenatum cannae Roberts & Carbonell, 1979

Synonymy. None.

Distribution. Only found at Tucumán, Argentina (Turk, 1984); up to 750 m a.s.l. (Argentina: Tucumán: 110 km SW Tucumán).

Native host plants. *Canna edulis*, *Canna coccinea* and other *Canna* spp. (Turk, 1984).

Other plants repeatedly attacked. *Heliconia* spp. (Turk, 1984).

Examined specimens

Argentina: Tucumán, 10 km SE of Tucumán, route 9, km 1281, on *Canna* (26°53'S, 65°07'W) [50], 9–24 March 1979 (H. R. Roberts), 5♂♂, 11♀♀ (including the holotype)—ANSP. Tucumán, Tucumán, 110 km SW of city, rt 38, on *Canna* (750 m) (27°41'S, 65°46'W) [50], 12 March 1979 (H. R. Roberts), 1♂, 2♀♀—ANSP. Tucumán, 25 km W de Monteros, 700 m, edge of wet forest, *Canna* in vicinity (27°10'S, 65°40'W) [50], 26 March 1979 (H. R. Roberts), 1♀—ANSP.

Cornops paraguayense (Bruner, 1906) (Figure 5)
Synonymy. *Cornops ignotum* Rehn, 1918; *Paracornops paraguayense* Bruner, 1906.

Distribution. Argentina, Bolivia, Brazil, Colombia, French Guiana, Guyana, Paraguay, Suriname, Trinidad and Uruguay; up to 700 m a.s.l. (Brazil: Minas Gerais: rt 116-Salinas).

Native host plants. *Typha* sp. (Turk & Aquino, 1996).

Other plants repeatedly attacked. *Eichhornia crassipes* (Roberts & Carbonell, 1979).

Examined specimens

Argentina: Corrientes, 30 km N de Paso de los Libres (29°26'S, 57°04'W) [50], 20 March 1965 (Carbonell, Mesa, Monné), 5♂♂, 7♀♀—FCMU. Misiones, Posadas (27°23'S, 55°54'W) [54] March 1940 (Daguerre), 1♂, 2♀♀—NMNH. **Bolivia:** Beni, Valleitenez (=Valle Itenez, wrong coordinates given in Roberts & Carbonell, 1979) (11°55'S, 65°01'W=mouth Río Itenez/Río Marmore) [46], 3 March 1976 on Río Itenez (Ronderos, Roberts), 1♀—ANSP. **Brazil:** Bahia, between Alcobaça and rt 101 (17°27'S, 39°13'W) [53], 26 November 1974, marsh (Roberts, Carbonell), 2♂♂, 1♀—ANSP. Espírito Santo, Cariacica (20°16'S, 40°25'W) [53], December 1977 (B. Silva), 4♂♂, 4♀♀—UFRJ. Espírito Santo, Itapemirín Falls, 1–6 km E of rt 101, forest edge and marsh (21°02'S, 40°57'W)

[53], 5 December 1974 (Roberts, Carbonell), 2♂♂—ANSP. Espirito Santo, Itapemirin Falls, near coast (21°02'S, 40°57'W) [53], 5 December 1974 (Roberts, Carbonell), 3♂♂—ANSP. Espirito Santo, Linhares (19°23'S, 40°02'W) [53], September 1972 (Moacir Alvarenga), 1♀—UMMZ. Mato Grosso (=MT), 30 km N of Uirapurú, Chapada dos Parecis (14°43'S, 58°30'W) [49], 1–15 December 2002 (A. Foucart), 3♂♂, 4♀♀—MNHN. Minas Gerais, Pedra Azul (16°1'S, 41°16'W) [54], November 1972 (Moacir Alvarenga), 1♀—UMMZ. Minas Gerais, Pedra Azul (16°1'S, 41°16'W) [54], October 1977 (O. Roppa), 3♀♀—UFRJ. Minas Gerais, between rt 116 and Salinas, 700 m (16°10'S, 41°15'W), 700 m [54], 18 November 1974 (Roberts, Carbonell), 2♂♂, 2♀♀—ANSP. Minas Gerais, BR 116, km 771 (16°42'S, 41°29'W) [54], October 1977 (O. Roppa), 1♀—UFRJ. Pará, Belém (1°25'S, 48°31'W) [45], October 1980 (B. Silva), 4♂♂, 2♀♀—UFRJ. Pará, Monte Dourado-Rio Jari, Área 95, Plantação de Eucalipto (0°41'S, 52°48'W) [40], 23 February 2005 (A. L. Nunes, C. E. Braga), 2♀♀—MPEG. Pará, Monte Dourado-Rio Jari, Castanhal, Mata Primária (0°41'S, 52°49'W) [40], 22 February 2005 (A. L. Nunes, C. E. Braga), 1♀—MPEG. Rondônia, Vilhena (12°42'S, 60°06'W) [46], November 1973 (M. Alvarenga), 1♀—UMMZ. Roraima, Ilha de Maracá (3°24'N, 61°39'W) [39], June 1981 (M. Descamps), 2♂♂, 4♀♀—INPA; 2♂♂, 3♀♀—MNHN. São Paulo, São Paulo (23°34'S, 46°37'W) [53], no date (A. Hempel), 1♂, 1♀—AMNH. São Paulo, São Paulo (23°34'S, 46°37'W) [53], 14 September 1900, 1♂—AMNH. São Paulo, São Paulo (23°34'S, 46°37'W) [53], 14 September 1900, type series of *C. ignotum* (Rehn), 2♂♂, 1♀—ANSP. **Colombia:** Guaviare, San Jose de Guaviare (2°34'N, 72°38'W) [35], 14–16 December 1970 (M. Descamps), 1♂—MNHN. Meta, La Macarena (2°04'N, 73°57'W) [35], 3–5 December 1970 (M. Descamps), 1♂—MNHN. **French Guiana:** Cayenne (4°56'N, 52°19'W) [38], April 1917 (S. M. Klages), 5♂♂, 2♀♀, reported by Bruner, 1918 as *C. longipenne* (De Geer)—ANSP. Crique Anguille, Cayenne (4°49'N, 52°31'W) [38], 3 March 1976 (M. Descamps), 3♂♂, 1♀—MNHN. Regina (4°18'N, 52°08'W) [38], 18–19 April 1976 (M. Descamps), 1♂—ANSP; 20♂♂, 19♀♀—MNHN. Savane Matiti (5°04'N, 52°36'W) [38], 7 July 1977 (M. Descamps), 1♂, 1♀—ANSP; 1♂, 5♀♀—MNHN. Sinnamary (5°22'N, 52°57'W) [38], 6–7 July 1977 (M. Descamps), 3♀♀—MNHN. St. Laurent du Maroni (5°30'N, 54°01'W) [38], 16 October 1969 (Balachowski-Gruner), 4♂♂—MNHN. **Guyana:** North-West District (7°44'N, 60°01'W) [38], March 1934 (F. A. Squire), 1♂—NHM. **Paraguay:** Central, Asunción (25°17'S,

57°38'W) [50] 13 October 1980 (D. C. Lowrie), 1♀—NMNH. Cordillera, San Bernardino (25°16'S, 57°19'W) [50], November (L. Bruner), 1♀ (holotype of *P. paraguayense*)—ANSP. Paraguari, Sapucay (25°40'S, 56°57'W) [50], 14–15 January 1972 (M. Descamps), 2♂♂, 1♀—ANSP; 3♂♂, 2♀♀—MNHN. **Suriname:** Paramaribo (5°49'N, 55°10'W) [38], February 1968, on *Eichhornia crassipes* (F. D. Bennett, H. Zwoelfer), 1♀—ANSP. **Trinidad:** Brasso (10°24'N, 61°19'W) [27], 16 January 1930 (G. Belmontes), 1♀—ANSP. Moruga area (10°04'N, 61°16'W) [27], February to March 1985 (G. B. Popov), 2♂♂—NHM. Moruga area (10°04'N, 61°16'W) [27], March 1986 (G. B. Popov), 10♂♂, 5♀♀—NHM. Piarco Savannah, marshy patch (10°34'N, 61°19'W) [27], 8 July 1942 (D. Kevan), 1♀—NHM. Sangre Grande (10°35'N, 61°08'W) [27], B.W.I., 3 April 1930 (G. Belmontes), 1♂, 1♀—ANSP. Wallen Pielo (=Waller field) (10°37'N, 61°13'W) [27], 11 March 1986 (G. B. Popov), 1♂—NHM. **Uruguay:** Artigas, San Gregorio (30°33'S, 57°52'W) [51], 30 April 1963 (Carbonell, Mesa), 1♂—FCMU. San José, Chamizo (34°10'S, 56°40'W) [51], 6 February 1965 (L. Lage), 1♀—FCMU.

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