PROC. ENTOMOL. SOC. WASH.
110(4), 2008, pp. 988–1011

THREE NEW SPECIES, NOTES AND NEW RECORDS OF POORLY KNOWN SPECIES, AND AN UPDATED CHECKLIST FOR THE NORTH AMERICAN NABIDAE (HEMIPTERA: HETEROPTERA)

IZYASLAV M. KERZHNER AND THOMAS J. HENRY

(IMK) Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia; (TJH) Systematic Entomology Laboratory, Agricultural Research Service, United States Department of Agriculture, P.O. Box 37012, National Museum of Natural History, Smithsonian Institution, MRC-168, Washington, D. C. 20013-7012, U.S.A. (e-mail: thomas.henry@ars.usda.gov)

Abstract.—Three new species of North American Nabidae are described: ***Hoplistoscelis confusa*, n. sp., *Nabis latior* n. sp.,** and ***Pagasa lattini* n. sp.** A diagnosis, description, a dorsal and lateral color photograph, a pen and ink dorsal habitus illustration, drawings of male and/or female genitalia, and comments on their relationship with other species are given for each. *Nabis mexicanus* Remane is recorded from the United States for the first time and new U.S. state or Canadian province records are given for several species. Clarification of misidentifications since the 1988 North American nabid catalog are reported. A revised checklist of the North American Nabidae is provided, giving current generic and subgeneric combinations for 41 species.

Key Words: Heteroptera, Nabidae, North America, checklist, new species, *Hoplistocelis confusa*, *Nabis latior*, *Pagasa lattini*

The Nabidae, often called damsel bugs, are a small group of important predatory bugs frequently used in biological control programs (Yeargan 1998). Harris (1928) monographed the North American fauna. Henry and Lattin (1988) provided the most recent catalog, including 35 species in 10 genera, and Lattin (1989) and Braman (2000) provided thorough reviews of nabid bionomics and economic importance. Larivière (1992b) gave the first North American report for *Himacerus apterus* (Fabricius) and Larivière (1994), for *Nabis limbatus* Dahlbom. Kerzhner (1993) added two new species, gave species status to one subspecies, removed records for two species that were based on misidentifications, and added one extralimital species, and Kerzhner (1996) cataloged the Palearctic fauna and made a number of generic and subgeneric changes. More recently, Henry and Brambila (2003) reported the Neotropical *Alloeorhynchus trimacula* (Stein) from Florida, adding an additional genus and species, raising the North American list to 39 species and 11 genera.

Because of the discovery of several new taxa and the fragmented status of the literature since the Henry and Lattin (1988) catalog, we describe three new species and provide a revised checklist of the North American Nabidae. For each of the new species, we provide a diagnosis, description, a dorsal and lateral color photograph, a pen and ink habitus,

figures of the male and/or female genitalia, and comments on their relationship with other species of the respective genera. In addition, we provide the first U.S. record for *Nabis mexicanus* Remane and notes on misidentifications and new distribution records for species reported since the 1988 North American nabid catalog. We follow the subfamily and tribal classifications used by Henry and Lattin (1988) and updated by Kerzhner (1996). All taxa are presented alphabetically.

The following abbreviations are used for specimen depositories (curators in parentheses) cited in this paper: AMNH (American Museum of Natural History, New York, USA; R. T. Schuh); BMNH (The Natural History Museum, London, U.K.; W. R. Dolling and M. Webb); CAS (California Academy of Sciences, San Francisco, USA; W. J. Pulawski), MEL (Museo Entomologico, León, Nicaragua; J.-M. Maes); PU (Purdue University, West Lafayette, Indiana; A. Provonsha); SMNH (Swedish Museum of Natural History [Naturhistoriska riksmuseet], Stockholm, Sweden; B. Viklund); UMMZ (University of Michigan, Museum of Zoology; M. O'Brien); UNAM (Instituto de Biologia, Universidad National Autonoma de Mexico, D.F., Mexico; H. Brailovsky); USNM (National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA; TJH); ZISP (Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia; IMK); ZMUH (Zoological Museum, University of Helsinki, Helsinki, Finland; L. Huldén).

Subfamily Nabinae

Genus *Himacerus* Wolff, 1811

Subgenus *Himacerus* Wolff, 1811

Himacerus apterus (Fabricius 1798)

Reduviolus apterus Fabricius 1798: 546 (orig. descrip.).

Himacerus apterus: Kerzhner 1964: 690 (comb.).

Discussion.—Lariviére (1992b) reported this widespread Palearctic species new to North America based on specimens from Nova Scotia.

Subgenus *Anaptus* Kerzhner, 1968

Himacerus major (Costa, 1842)

Nabis major Costa 1842: 137 (orig. descrip.).

Himacerus major: Kerzhner 1996: 93 (comb.).

Discussion.—Wheeler (1976) and Henry and Lattin (1988) reported this species from British Columbia, California, New York, Oregon, Pennsylvania, and Washington. Paiero et al. (2003) gave the first record for Ontario and Wheeler and Hoebeke (2004) the first for Nova Scotia.

Genus *Hoplistoscelis* Reuter, 1890

***Hoplistoscelis confusa* Kerzhner and Henry, new species**

(Figs. 1–3, 6, 10–13, 21, 26, 27)

Hoplistoscelis pallescens (not Reuter 1872): Kerzhner 1993: 40, figs. 10–12, 16 (clarification).

Hoplistoscelis sp. n.: Kerzhner 2007: 232 (note).

Diagnosis.—This species (Fig. 1) does not differ from *H. pallescens* and *H. sordida* in external characters, but clearly is distinguished by the structure of the male (Figs. 2, 3, 11–13) and female genitalia (Figs. 6, 21) described below.

Description.—Overall coloration (Figs. 26, 27) yellowish brown, accented with darker brown. Holotype male measurements: Head length 1.04 mm, width 0.88 mm, width of vertex 0.36 mm. Length of antennal segments: I 1.08 mm, II 1.52 mm, III 1.30 mm, IV missing. Rostrum: Length of segments I 0.34 mm,

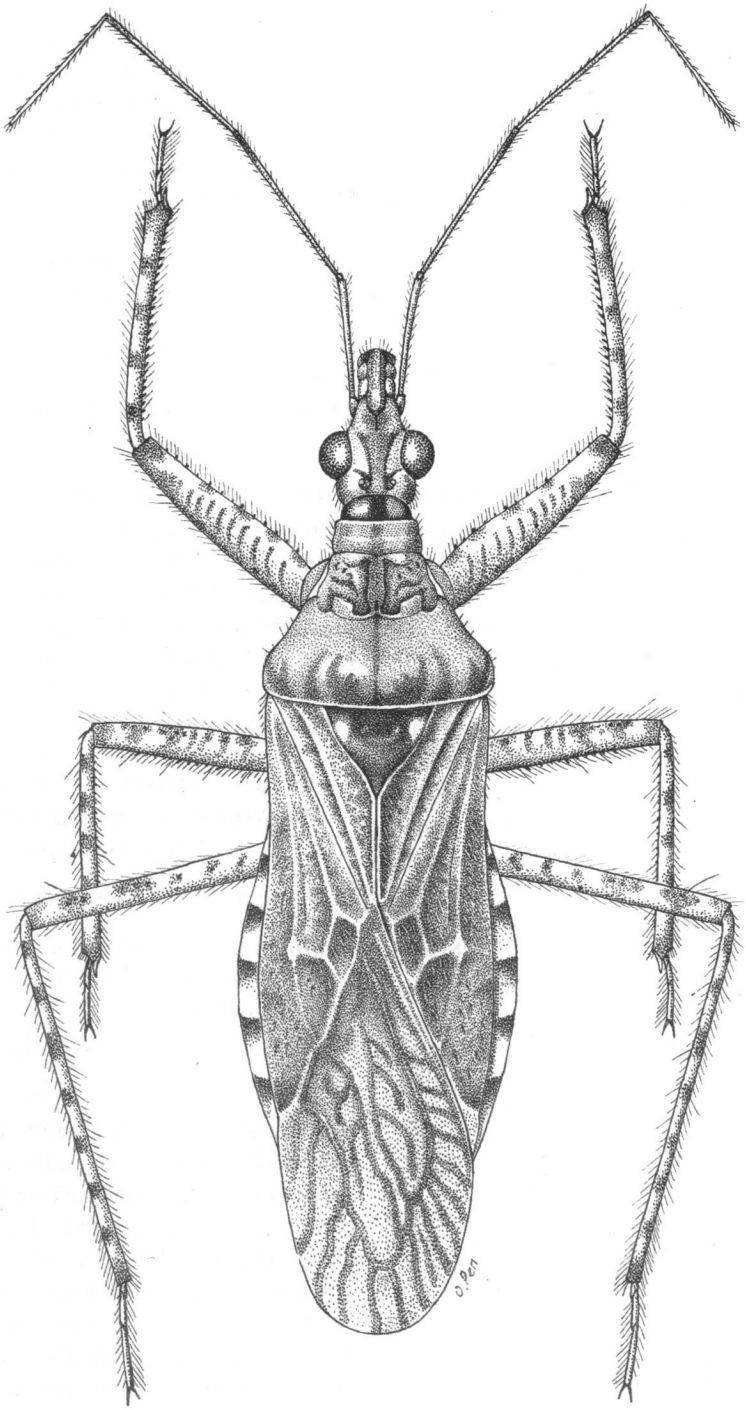
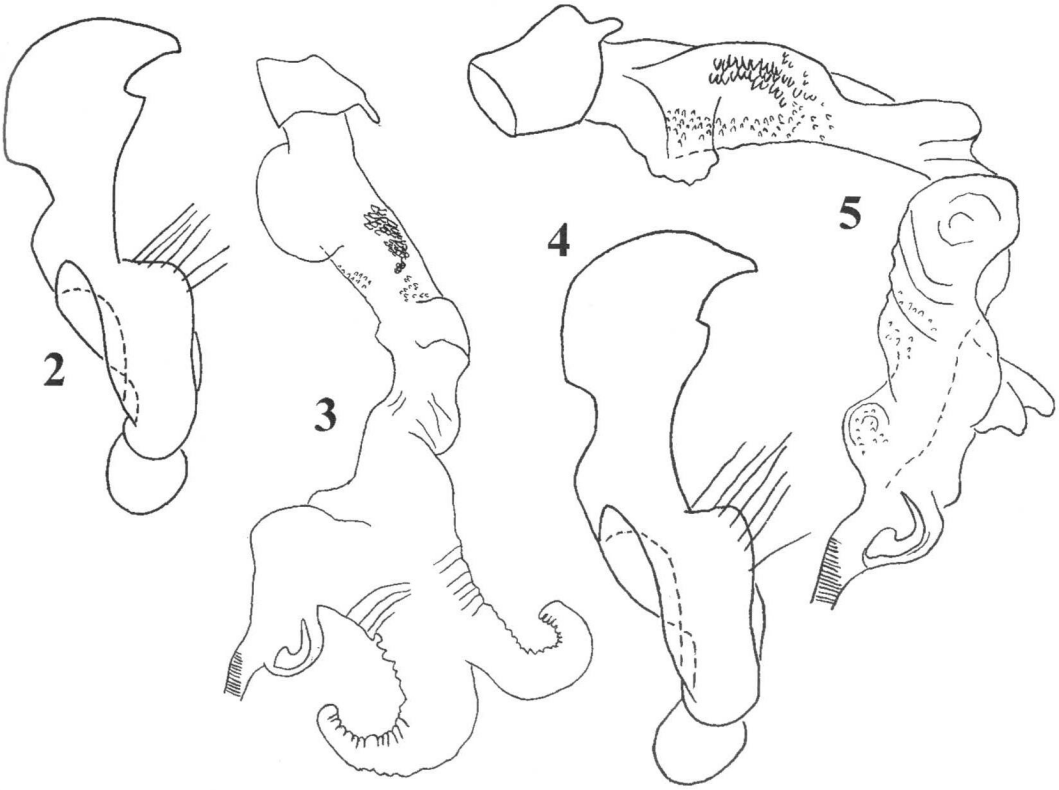


Fig. 1. *Hoplistoscelis confusa.*



Figs. 2–5. *Hoplistoscelis* spp., male genitalia. 2, 3, *H. confusa*, Texas. 2, paramere, lateral aspect. 3, aedeagus. 4, 5, *H. pallescens*, Maryland. 4, paramere, lateral aspect. 5, aedeagus.

II 0.44 mm, III 0.50 mm, IV embedded in glue. Pronotum length 1.48 mm, width 1.60 mm. Length of femora: Fore 2.20 mm, middle 2.04 mm, hind 2.88 mm. Length of tibiae: Fore 1.84 mm, middle 1.92, hind mm. Body length mm 6.78 mm, width 1.80 mm

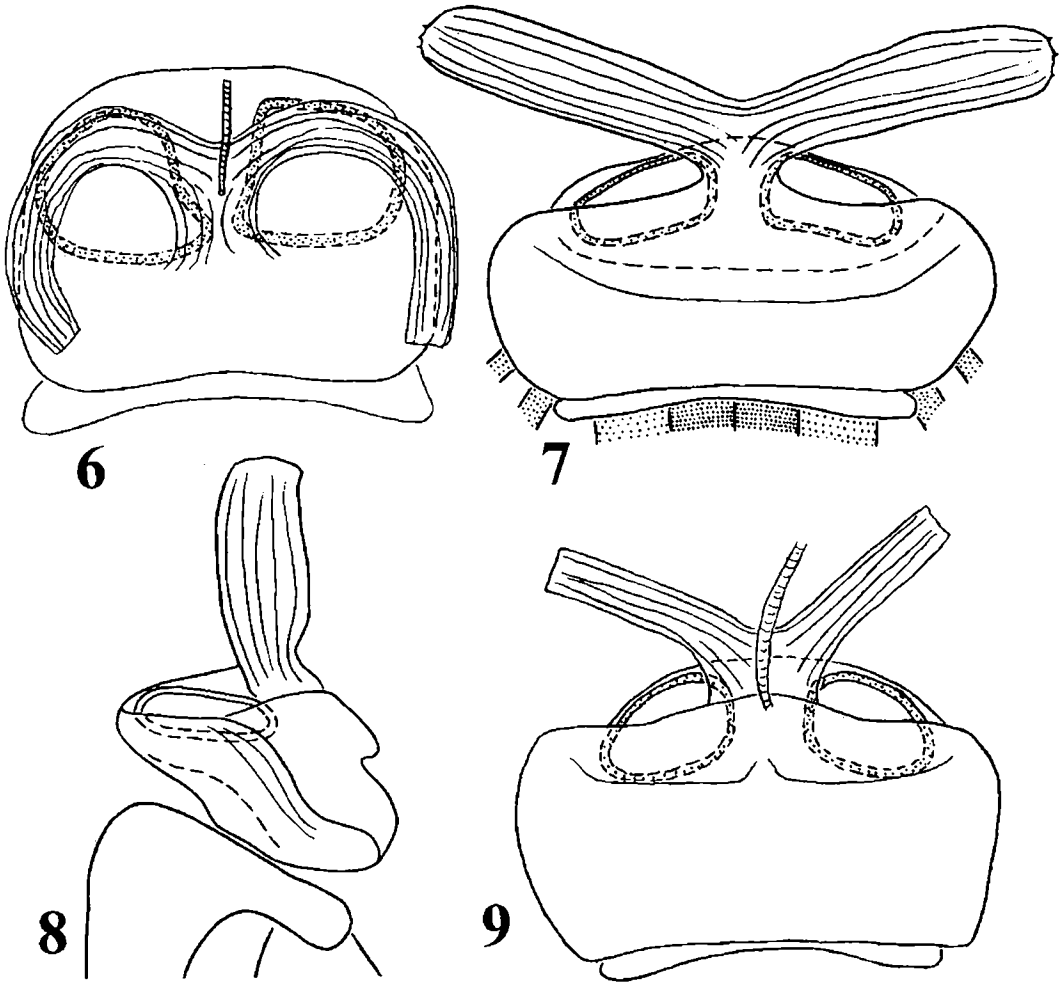
Male genitalia: Paramere (Figs. 2, 10–12) with triangular incision on outer margin (rounded incision in *H. pallescens* and *H. sordida*). Endosoma of the aedeagus (Figs. 3, 13) with two very long lateral diverticula.

Female genitalia: Bursa copulatrix (Figs. 6, 21) moderately transverse, rounded, sometimes with constriction near the middle; oviducts very large and curved backward; parietal glands slightly transverse, with rounded margins, except the concave or at least straight inner margins.

Etymology.—The specific epithet "confusa" is given to denote the confused status of this species with *H. pallescens* and *H. sordida*.

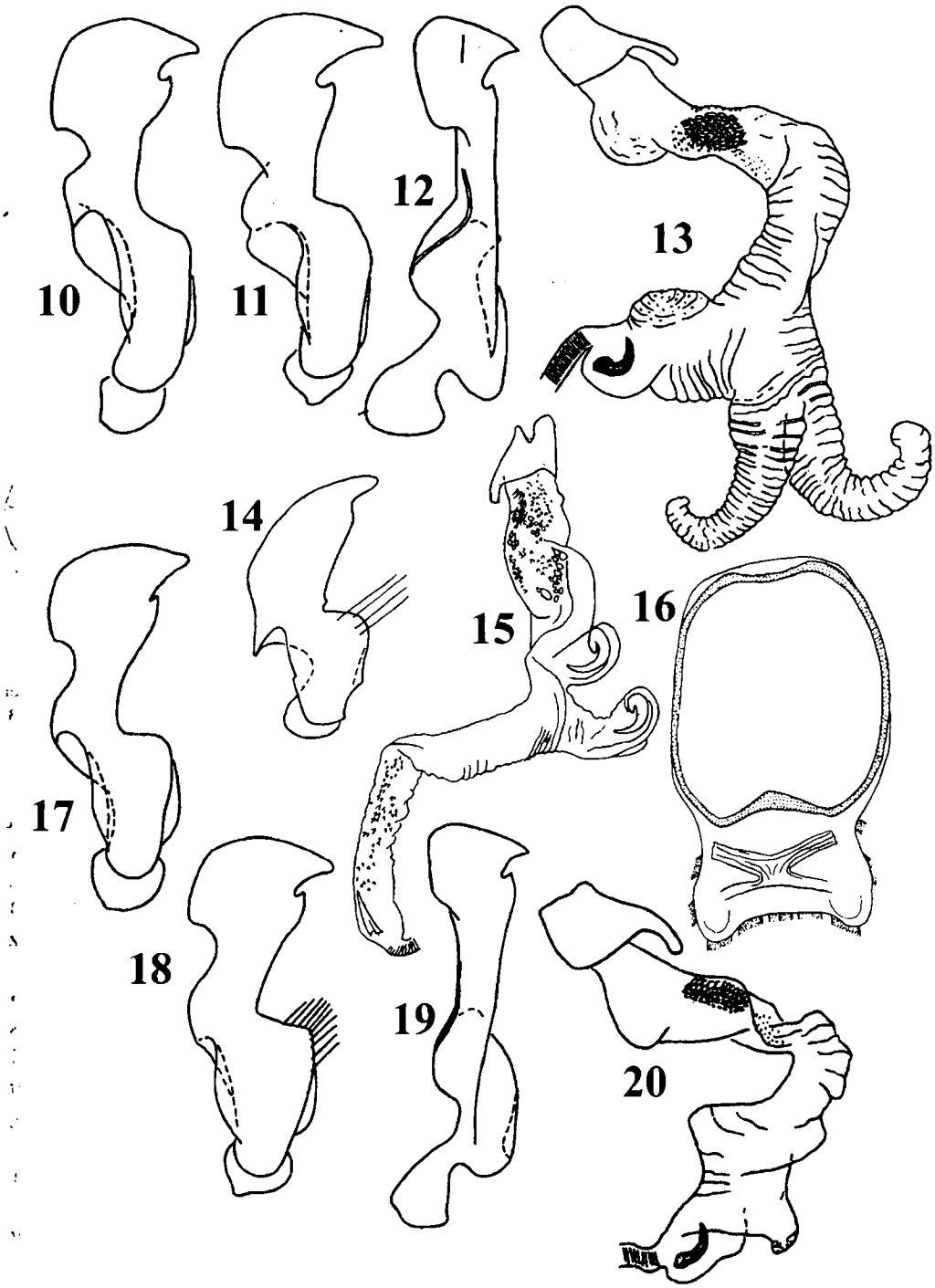
Distribution.—Colombia, Costa Rica, Dominican Republic, El Salvador, Grenada, Grenadines, Guatemala, Haiti, Honduras, Jamaica, Mexico (Chiapas, Guerrero, Michoacan, Morelos, Oaxaca, San Luis Potosi, Sinaloa, Tabasco, Veracruz), Panama, Puerto Rico, St. Vincent, and the United States (Arizona, Arkansas, Florida, Texas), and Venezuela.

Type material.—HOLOTYPE: ♂, Texas [Brazos Co.], College Station, 24 June 1931, H. J. Reinhard (USNM). PARATYPES (all specimens in USNM collection, except as noted): COLOMBIA: 3♂♂, 9 ♀♀ (4 brachypterous), Palmira Valle, 1,006 m, Feb.–July 1971

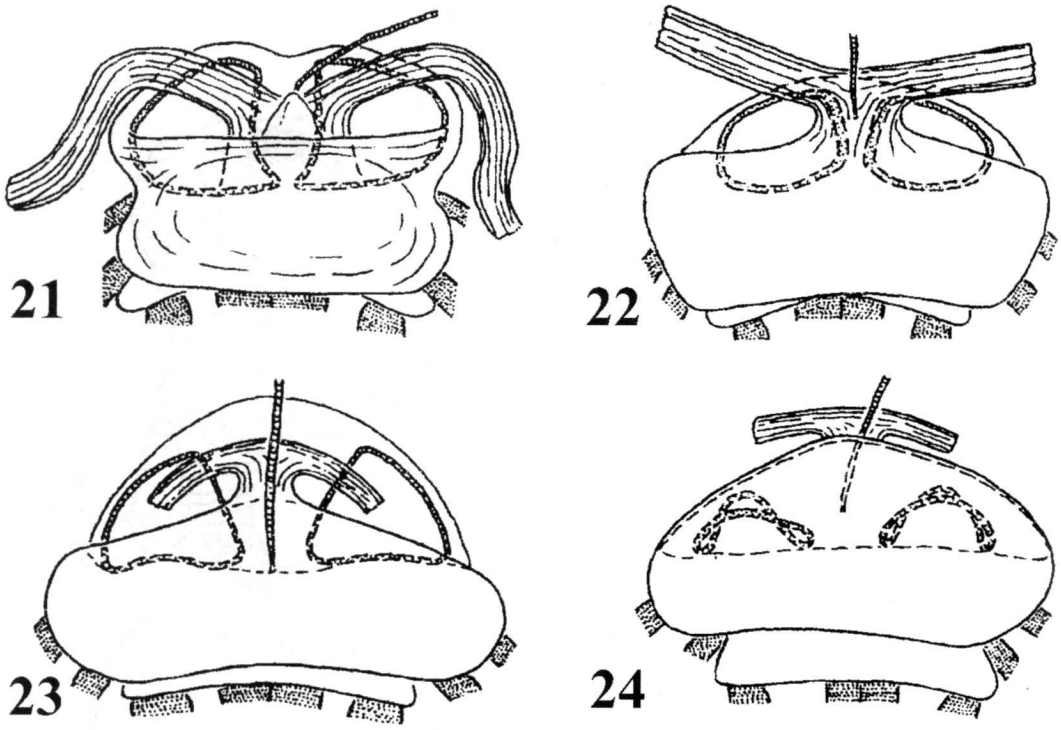


Figs. 6–9. *Hoplistoscelis* spp., female genitalia (bursa copulatrix dorsal (6, 7, 9) and lateral aspect (8). 6, *H. confusa*, Mexico, Michoacan. 7–9, *H. pallescens* (7, 9, Texas; 8, New Jersey).

[exact dates 17,19, & 24 Feb.; 24 Mar.; 5, 17; & 19 May; 19 & 29 July 1971], G. P. Waldbauer coll. COSTA RICA: 1♂, Dominical, 10 June 1951, O. L. Cartwright; 1 (brachypterous) ♂, 3 (brachypterous) ♀♀, San Jose, Apr. 1928, J. F. Tristan. DOMINICAN REPUBLIC: 1 (brachypterous) ♀, 6 Km W of Ciudad Trujiillo, 16–20 Dec. 1955, J. Maldonado; 1 (brachypterous) ♂, S. Fr[a]nc[i]sco Mts., S[an]t[o]. Domingo, 15 Sept. 05, A. Busck; 1 ♀, S. Dom., P. R. Uhler; 1 ♀, Constanza, 5 May 1959 (CAS). EL SALVADOR: 1 ♀, Cerro Verde, 6,800 ft, 29 June 1923, D. Q. Cavagnaro & M. E. Irwin (CAS). GRENADA: 1 (brachypterous) ♂, Balthazar, (Windward Side) Grenada, H. H. Smith, P. R. Uhler colln. GUATEMALA: 1 ♀, Coban., 10 Sept. 1946, H. M. Harris; 1♂, Petén Poptún, 17 Apr. 1956, Hubbell-Cantrall; 1 (brachypterous) ♀, Tiquasate, 19 Aug. 1946, H. M. Harris; 1 (brachypterous) ♂, Escuintla, 20 Aug. 1975, N. L. H. Krauss. HAITI: 1 (brachypterous) ♂, Fond-Des-Negress, 12 June 1920; 1 (brachypterous) ♂, Plaisanc, 1-6 Aug. 1961, J. Maldonado



Figs. 10–20. *Hoplistoscelis* spp., male genitalia (after Kerzhner 1993). 10–13, *H. confusa*. 10, paramere, Texas, lateral aspect. 11, paramere, Honduras, lateral aspect. 12, paramere, Honduras, ventral aspect. 13, aedeagus, Texas. 14–16, *H. hubbeli*, genitalia. 14, paramere. 15, aedeagus. 16, bursa copulatrix, dorsal aspect. 17–20, *H. sordida*. 17, paramere, Guatemala, lateral. 18, paramere, Honduras, lateral aspect. 19, paramere, Honduras, ventral aspect. 20, aedeagus, Guatemala.



Figs. 21–24. *Hoplistoscelis* spp., female genitalia, bursal copulatrix, dorsal aspect (after Kerzhner 1993). 21, *H. confusa*, Mexico, Oaxaca. 22, *H. pallescens*, New Jersey, lectotype. 23, 24, *H. sordida*. 23, Mexico, Veracruz, lectotype. 24, Mexico, Chiapas.

C.; 2♂♂, P[or]t[o]. au Pr[ince]., Feb.–June, P. R. Uhler colln.; 1 ♀, P[or]t[o]. [au] Prince, July 1961, J. Maldonado C.; Dondon, 1–6 Aug. 1961, J. Maldonado C.; 1 ♀, Morne Cabrits, 26 Nov. 1929, J. G. Myers (BMNH); 1 (brachypterous) specimen (without abdomen), Limbé, 29 July 1931, J. G. Myers (BMNH). HONDURAS: 1 ♀, San Pedro Sula, Aug. 1975, N. L. H. Kraus; 1♂, D. C., 14 km N Tegucigalpa, 27 July 1977, C. W. & L. B. O'Brien & Marshall (CAS); 4 ♀♀, Ola, 6 mi SE and 11 mi NE Catacamas, 13 and 15 June 1974, C. W. & L. B. O'Brien & Marshall (CAS); 1 (brachypterous) ♂, 3 ♀♀ (2 brachypterous), Danli – Chichicaste, Paraiso, 6 July 1948, W. D. Clarke (CAS); 1♂, Tegucigalpa, 26 Aug. 1948, W. D. Clarke (CAS); 1♂, San Francisco, Yoro, 26 July 1948, W. D. Clarke (CAS); 1♂, 1 ♀, Columbia, Aug. 1932, J. J. White (BMNH). JAMAICA: 1 (brachypterous) ♀, Kingston, Apr. 1906, Van Duzee, E. P. Van Duzee colln. (CAS). MEXICO: Chiapas: 1 (brachypterous) ♀, Gutierrez, Aug. 1959, N. L. H. Kraus; 1 ♀, Municipio de Jiquipilas, 38 km ESE of Terra Libertad, on Road to Villa Flores, 1,219 m, 23 June 1981, D. E. and P. M. Breedlove (CAS); 2♂♂, 4 ♀♀, San Cristobal de las Casas, 2,174 m, grassy area, 23 May 1972, D. E. Breedlove (CAS), 17 km SE San Cristobal de las Casas, 2,195 m, within *Tillandsia* sp., 6 and 9 m from ground level on *Quercus* sp., 15 Jan. 1973, Ken E. Lucas (CAS). Colima: 1 ♀, Sept. 1965, N. L. H. Kraus; 2♂♂, pine zone, SE slope Mt. Collima, Dec. 1948, Ross (CAS). Estado de México: 1♂, Tejupilco, Temescaltepec, ca. 4,000 ft, 1932, H. E. Hinton and R.

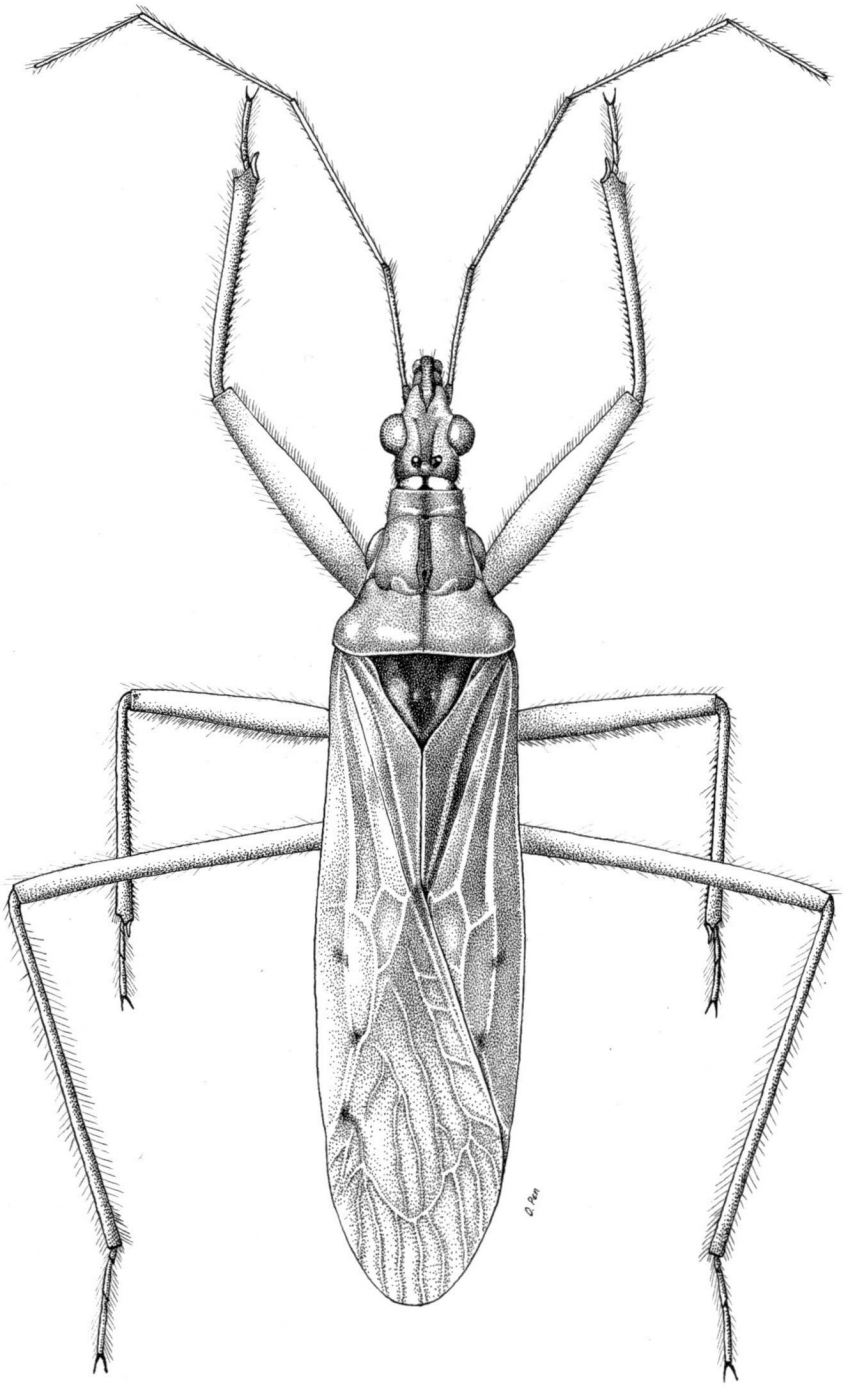
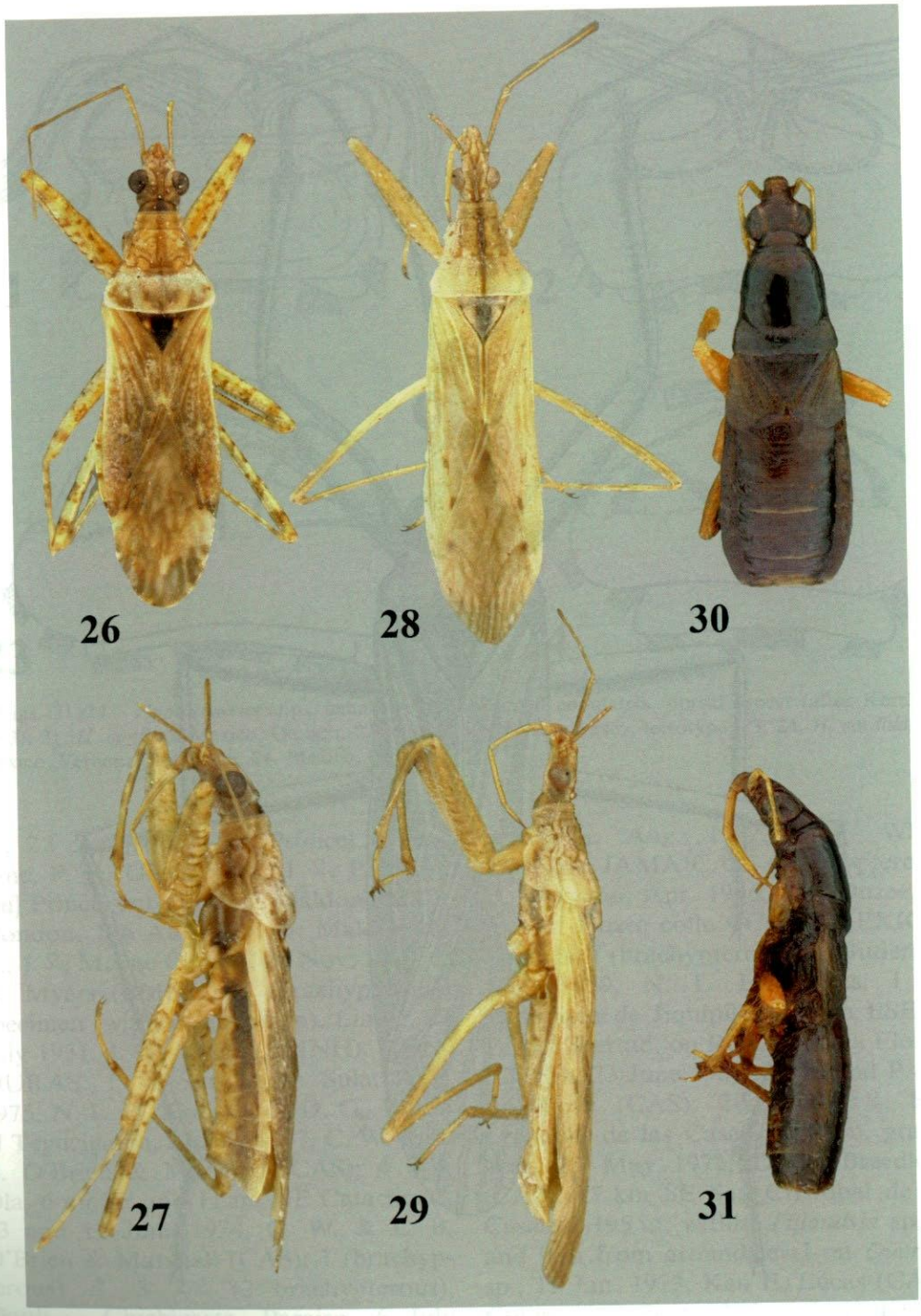


Fig. 25. *Nabis latior*.



Figs. 26–31. Species of Nabidae. 26, 27, *Hoplistoscelis confusa*, holotype ♂. 28, dorsal aspect. 29, lateral aspect. 28, 29, *Nabis latior*, paratype ♀. 28, dorsal aspect. 29, lateral aspect. 30, 31, *Pagasa lattini*, holotype ♂. 32, dorsal aspect. 33, lateral aspect.

L. Usinger (BMNH); 4 ♀♀, km 10 carr. Tejupuco – Temascaltepec, 20 Oct. 1983, E. Barrera, H. Brailovsky (UNAM); 1 ♀, 15 km E Paso de Contes, 2,850 m, 7 Nov. 1977, A. N. Garcia A. (UNAM); 2 ♀♀, Acamochitlan – El Zapote, 21 Nov. 1984, H. Brailovsky (UNAM). Guerrero: 1 (brachypterous) ♂, 1 (brachypterous) ♀, intercepted at Laredo, Texas, from Guerrero, 4 Mar. 1946, on orchid plants; 2 ♀♀, Acapulco, 11 Sept. 1979, George J. Mallick (CAS). Jalisco: 1♂, Chamela (Est[acion]. Biologica), 175 m, 16 Oct. 1988, Buickerod & E. S. Ross (CAS). Michoacán: 1 ♀, Paricutin, 28 Nov. 1944, W. F. Foshag; 1 ♀, km 24 carr. Coalcoman – Dos Aguas, 10 Feb. 1983, H. Brailovsky (UNAM). Morelos: 1♂, Cuernavaca, June 1959, N. L. H. Kraus; 1♂, [Morelos], Cuernavaca, 15 Nov. 1946, E. C. Van Dyke (CAS). Nayarit: 1♂, 17 mi NW Tepic, 23 Nov. 1948, H. B. Leech (CAS); 1 ♀, Rio de las Canyas, 8 mi NW Acaponeta, 25 Nov. 1948, E. S. Ross (CAS); 1 ♀, San Blas, km 4 carr. 15, 29 July 1984, M. Garcia (UNAM). Nuevo León: 1 ♀, Bustamante, Ojo de Agua, 13 Nov. 1985, S. Tutinio (UNAM); 1 ♀, Cañón de Bustamante, 22 Nov. 1985, F. Arias & L. Cervantes (UNAM); 1 ♀, km 30 carr. Linares – San Roberto, 18 Nov. 1985, F. Arias & L. Cervantes (UNAM). Oaxaca: 1♂, 4 ♀♀, Almobya, 1923, H. G. Barber colln.; 1 (brachypterous) ♀, Pochutla, 14 Oct. 1985, E. Barrera (UNAM); 1 ♀, Tuxtepec, 13 Sept. 1979, E. Barrera (UNAM); 1 ♀, Crawford (CAS); 1 ♀, 29 mi W Tehuantepec, 700 ft (CAS). San Luis Potosi: 1 (brachypterous) ♂, 1 (brachypterous) ♀, 1 km E Xolo, between Ciudad Valles & Tamazunchale, ca. 500 m, 18 Apr. 1978, T. Henry, J. Schaffner, and R. Schuh; 1 ♀, Laguiatachill – Tomasuchale, 20 May 1978, E. Marino (UNAM); 1 ♀, Hicos C[iu]d[ad]. Valles, 5 Apr. 1978, J. Figueroa (UNAM); 1 ♀, Tanvid, 29 Aug. 1975, H. Brailovsky (UNAM). Sinaloa: 1 ♀, E Mazatlan, 15 Aug. 1954, Ryckman, Chr[i]st[ia]ns[o]n & Spencer. Tabasco: 1 ♀, Frontera, June 1897, Townsend. Tamaulipas: 1 ♀, km 65 Cd. Victoria – San Luis Potosi, 20 May 1978, E. Marino (UNAM). Veracruz: 1 (brachypterous) ♂, 1 (brachyperous) ♀, Rt. 140, 40 km NW Veracruz, nr Actopan, 15 Sept. 1989, E. Barrera, T.J. Henry, and I. M. Kerzhner; 1 ♀, intercepted at Brownsville, Texas, from Mexico, 7 Mar. 1937; 1 ♀, intercepted at Laredo, Texas, from Mexico, 9 Apr. 1960. NICARAGUA: 1 ♀, Jinotega, Bonetillo, 13 May 1981, Diaz Rodriguez (MEL); 1 ♀, Jinotega, L. Apunas, July 1989, F. Reinboldt (MEL); 5♂♂, 2 ♀♀, 5 km E Jinotega, July 1989, F. Reinboldt (MEL); 1 (brachyperous) ♀, 3 km N Jinotega, July 1989, F. Reinboldt (MEL); 1♂, 20 km N Matagalpa, July 1989, F. Reinboldt (MEL); 1 ♀, León, El Pochote, June 1987, J. P. Desmedt (MEL). PANAMA: 2♂♂, Paraiso, Canal Zone, 18 Jan. and 24 Apr. 1911, A. Busck. PUERTO RICO: 1 (brachypterous) ♀, Ponce, 1933–34, R. G. Oakley. SAINT VINCENT AND THE GRENADINES: 1♂, Grenadines, Becquia I., H. H. Smith (BMNH). UNITED STATES: Arizona: 1 (brachypterous) ♀, [Santa Cruz Co.], Nogales, 14 May 1914, F. J. Dyer. Arkansas: 1 (brachypterous) ♂, [Pulaski Co.], Little Rock, 20 Aug. 1926, H. M. Harris. Florida: 1 (brachypterous) ♂, [Alachua Co.], Gainesville, 14 July 1918, C. J. Drake. Texas: 1 (brachypterous) ♂, [Dallas Co.], Dallas, 3 Jul. 1906, J. D. Mitchell; 1 (brachypterous) ♂, [Cameron Co.], Brownsville, 29 June 1938, R. H. Beamer; 1♂, Brownsville, 4 Jan. 1932, E. D. Ball; 1♂, Brownsville, 8 Feb. 1936, P. A. Glick. VENEZUELA: 1♂, El Valle, D. F., 24 Oct. 39, C. H. Ballou; 1 ♀, Oil F[ield?]., NE of L. Maracaibo, Aug. 1971, J. Maldonado; 1♂, 3 ♀♀, Guanare, Estado Portuguesa, 10–13 Sept. 1957, B. Malkin (CAS); 1♂, Araqua, Colonia Tovar, 20 June 1997, Bordon

(UNAM); 1 ♀, Antoategui, Valle Guanapo C. Tucusito, 13 Feb. 1989, Bordon (UNAM); 1 ♀, El Limon, Maracay, 5 June 1977, J. M. Ayala L. (UNAM). "WEST INDIES": 1 ♀, "West Indies, E. F. Becher" (BMNH).

Hoplistoscelis heidemanni (Reuter, 1908)

Reduviolus heidemanni Reuter 1908: 100 (orig. descrip.).
Hoplisoscelis heidemanni: Henry and Lattin 1988: 511 (comb.).

Discussion.—Henry and Lattin (1988) reported *H. heidemanni* from California and Idaho. Maw et al. (2000) added British Columbia to the distribution.

Hoplistoscelis hubbeli (Hussey, 1953) (Figs. 14–16)

Nabis (*Hoplistoscelis*) *hubbeli* Hussey 1953: 5 (orig. descrip.).

Comments.—This rare species was described and known previously only from Tennessee. In addition to the holotype ♂ and allotype ♀ (Allardt, Fentress Co., Tennessee, UMMZ), we have examined specimens from Missouri (1 ♀, "Missouri, St. Louis, L. Schoelch, Geo W. Kirkaldy's coll.," USNM) and Virginia (1 ♂, "Falls Church, Va, March, Collection N. Banks,"AMNH; 1 ♀, "Vienna, Va, 6.6.56" USNM) that represent new state records. We illustrate the male and female genitalia (Figs. 14–16) for the first time.

Hoplistoscelis pallescens (Reuter, 1872) (Figs. 4, 5, 7–9, 22)

Nabis pallescens Reuter 1872: 85 (orig. descrip.).
Hoplistoscelis pallescens: Kerzhner 1993: 40 (comb.).

Discussion.—*Hoplistoscelis pallescens* was described from New Jersey, Pennsylvania, and Wisconsin (Reuter 1872). Kerzhner (1993) designated a female lectotype from New Jersey, but misidentified material from the southern United States as *H. pallescens*, which is described above as *H. confusa* n. sp. The true *H. pallescens*, widely distributed in the United States, does not differ from *H. sordida* (Reuter 1872) externally or in the shape of the paramere (Fig. 4), but can be distinguished by the structure of the aedeagus and bursa copulatrix. The endosoma of the aedeagus (Fig. 5) has two very short lateral diverticula (diverticula absent in *H. sordida*). In females of *H. pallescens* (Figs. 7–9, 22), the size of the oviducts is intermediate between that of *H. sordida* and *H. confusa*, but are most different from *P. confusa* in not curving backward. The main part of the bursa copulatrix is transverse and trapeziform, narrower caudally (rather triangular in *H. sordida*), and the parietal glands are more or less transverse and rounded (triangular in *H. sordida*).

The distributions of *H. pallescens* and *H. sordida* do not overlap. *Hoplistoscelis pallescens* is known from Ontario to Texas, and *H. sordida* from central Mexico (Estado de México) to Argentina. Neither species was found in the extensive material examined from northern Mexico (e.g., UNAM). Canadian reports of *H. sordida* by Larivière (1992a) and Paiero et al. (2003) are here referred to *H. pallescens*.

Genus *Lasiomerus* Reuter, 1890
Lasiomerus andabata Kerzhner, 1993

Lasiomerus andabata Kerzhner 1993: 37 (orig. descrip.).

Discussion.—This species was originally described from Guatemala, Mexico, and Florida in the United States (Kerzhner 1993). More recently, Wheeler (2002) gave additional Florida county records for this poorly known species, noting that it was collected from the crowns of bushy beardgrass or bushy bluestem, *Andropogon glomeratus* (Wal-

ter) Britton, Sterns, & Poggenburg (Poaceae).

Genus *Metatropiphorus* Reuter, 1872
Metatropiphorus belfragii Reuter, 1872

Metatropiphorus belfragii Reuter 1872: 94 (orig. descrip.).

Discussion.—Henry and Lattin (1988) reported this species from Connecticut, District of Columbia, Florida, Iowa, Illinois, Maryland, Massachusetts, Mississippi, Missouri, North Carolina, New Jersey, New York, Texas, and Virginia. Paiero et al. (2003) gave the first Canadian record from Ontario.

Genus *Nabis* Latreille, 1802
Subgenus *Dolichonabis* Reuter, 1908

Nabis americolimbatus (Carayon, 1961)

Dolichonabis americolimbatus Carayon 1961: 193 (orig. descrip.).
Nabis americolimbatus: Kerzhner 1996: 96 (comb.).

Discussion.—Henry and Lattin (1988) reported this Holarctic species from Alberta, Maine, Minnesota, Newfoundland, New York, Ontario, and Quebec. Larivière (1994) and Maw et al. (2000) added Alaska, British Columbia, Labrador, Manitoba, New Brunswick, Northern Territories, Nova Scotia, Prince Edward Island, Saskatchewan, and the Yukon.

Nabis limbatus (Dahlbom, 1851)

Nabis limbatus Dahlbom 1851: 227 (orig. descrip.).

Discussion.—Henry and Lattin (1988) considered all North American reports of the Palearctic *N. limbatus* misidentifications of *N. americolimbatus*. More recently, however, Larivière (1994) identified specimens from St. John's, Newfoundland, representing the first authentic New World record for this species.

Nabis nigrovittata nearctica (Kerzhner, 1981)

Nabicula (*Dolichonabis*) *nigrovittata nearctica* Kerzhner 1981: 234 (orig. descrip.).
Nabis nigrovittata nearctica: Kerzhner 1996: 97 (comb.).

Discussion.—Henry and Lattin (1988) reported this subspecies from Alaska, Colorado, Idaho, Manitoba, New York, Ontario, and Quebec. Larivière (1994) added Alberta, British Columbia, New Brunswick, Newfoundland, Northwest Territories, Prince Edward Island, Saskatchewan, and the Yukon.

Subgenus *Limnonabis* Kerzhner, 1968
Nabis propinquus Reuter, 1872

Nabis propinquus Reuter 1872: 87 (orig. descrip.).
Nabicula (*Limnonabis*) *propinquus*: Kerzhner 1981: 205 (comb.).

Discussion.—Henry and Lattin (1988) reported this species from Alberta, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, New Jersey, New York, Ohio, Ontario, Quebec, South Dakota, and Wisconsin. Maw et al. (2000) added British Columbia, Saskatchewan, Manitoba, New Brunswick, Prince Edward Island, and Nova Scotia.

Subgenus *Nabicula* Kirby, 1837
Nabis flavomarginatus Scholtz, 1847

Nabis flavomarginatus Scholtz 1847: 114 (orig. descrip.).
Nabicula (*Nabicula*) *flavomarginata*: Kerzhner 1981: 263 (comb.).

Discussion.—This Holarctic species is known in North America from Alaska in the United States, and Alberta, New Brunswick, Newfoundland, Nova Scotia, and Quebec in Canada (Henry and Lattin 1988). Maw et al. (2000) added British Columbia, Labrador, Northwest

Territories, and Prince Edward Island. We have examined specimens from Maine that represent the first continental U.S. records for this species.

Specimens examined.—Maine: 1♂, 1 ♀, Androskoggin Co., Rt. 202, Green, 1 July 1989, T. J. Henry and A. G. Wheeler, Jr. (USNM); 2 ♀♀, Aroostook Co. Presque Isle, Univ. Maine Reg. campus, 5 July 1989, T. J. Henry and A. G. Wheeler, Jr., sweeping grasses (USNM); 2♂♂, Aroostock, I-95 N, Island Falls exit, 4 July 1989, T. J. Henry and A. G. Wheeler, Jr., sweeping (USNM); 1 ♀, Hancock Co., 29 June 1967, N. L. H. Krauss (USNM); 4♂♂, 12 ♀♀, Kennebec Co., Waterville, Colby College, 2 July 1989, T. J. Henry and A. G. Wheeler, Jr., sweeping grasses (USNM); 1♂, Piscataquis Co., Millinocket Rd., nr. Baxter State Park., 4 July 1989, T. J. Henry and A. G. Wheeler, Jr. (USNM).

Nabis subcoleoptratus (Kirby, 1837)

Nabicula subcoleoptrata Kirby 1837: 282 (orig. descrip.).
Nabis subcoleoptratus: Kerzhner 1996: 99 (comb.).

Discussion.—Henry and Lattin (1988) reported this species from Alberta, British Columbia, Nova Scotia, Ontario, and, Quebec in Canada, and 20 U.S. states. Maw et al. (2000) added New Brunswick, Prince Edward Island, and Saskatchewan.

Nabis vanduzeei (Kirkaldy, 1901)

Reduviolus vanduzeei Kirkaldy 1901: 223 (orig. descrip.).
Nabis vanduzeei: Harris 1926: 287 (comb.).

Discussion.—Henry and Lattin (1988) reported this species from Alberta, British Columbia, Colorado, Idaho, Montana, Oregon, South Dakota, Washington, and Wyoming. Maw et al. (2000) added Saskatchewan.

Subgenus *Nabis* Latreille, 1802

Nabis edax Blatchley, 1929

(Figs. 34–36)

Nabis edax Blatchley 1929: 75; 1930: 66 (orig. descrip.); Asquith and Lattin 1991: 16 (identification, relationships).

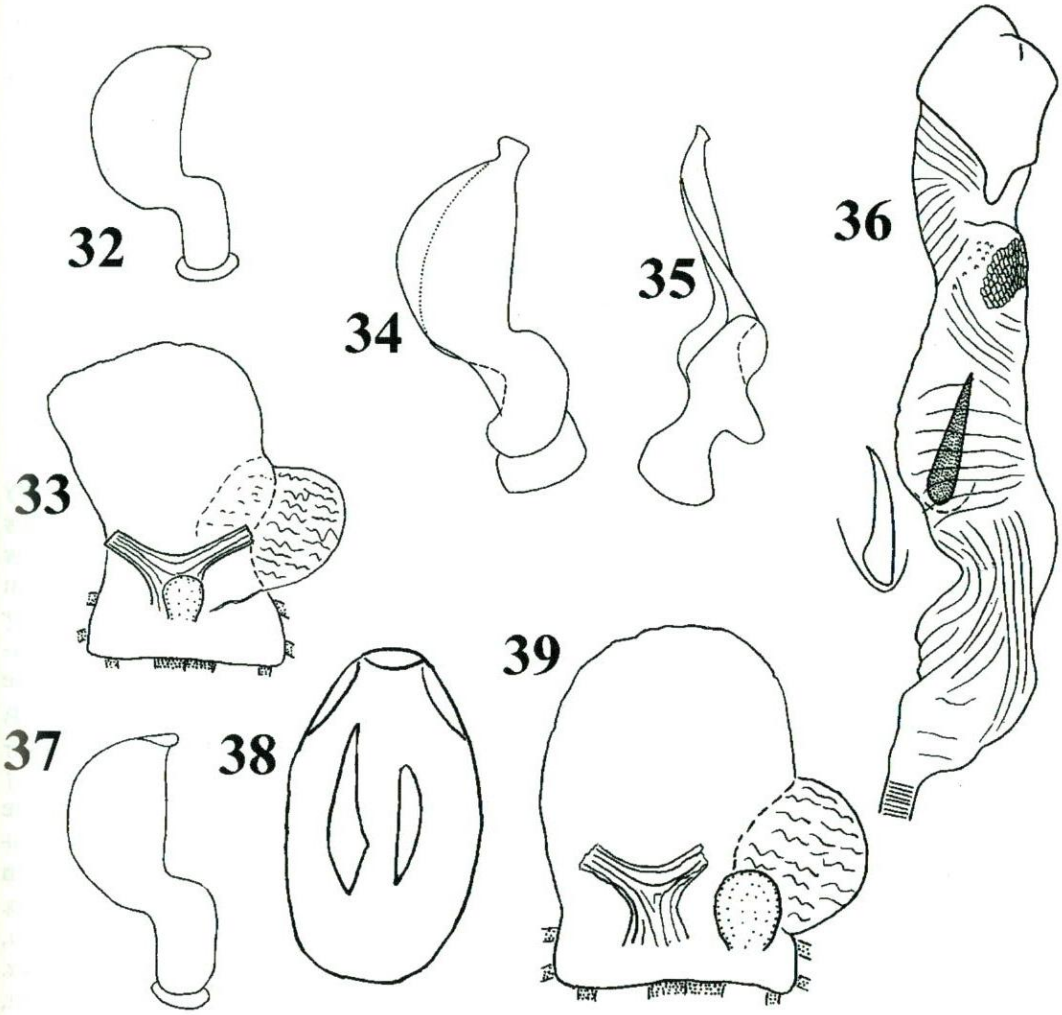
Discussion.—The single male Blatchley used to describe this species is labeled "Los Angeles Cal. W.S.B. 12-6-27," "Purdue Blatchley collection," "Type," "Lectotype Nabis edax Blatchley Des.: W.S. Blatchley 1930 (PU)." As noted by Henry and Lattin (1988) and Asquith and Lattin (1991), that specimen should be considered the holotype. Asquith and Lattin (1991) illustrated the male and female genitalia and indicated that it did not belong in the subgenus *Nabis* or any other subgenus of *Nabis*, but refrained from describing a monotypic subgenus and relegated its position to *incertae sedis*. For comparative purposes, we re-illustrate the male and female genitalia (Figs. 34–36), and retain *N. edax* in the subgenus *Nabis*.

Nabis mexicanus Remane, 1964

Nabis mexicanus Remane 1964: 290 (orig. descrip.).

Discussion.—This species was known previously only from Mexico (Remane 1964). Based on specimens in the USNM collection, we give the first records for Guatemala and the United States (Arizona, Colorado, and New Mexico).

Specimens examined.—Guatemala: 3 ♀♀, Yepocapa, May 1948, H. T. Dalmer (USNM); 5♂♂, 5 ♀♀, Antigua, 6 Aug. to 3 Sept. 1946, H. M. Harris (USNM); 1 ♀, San Marcos, 11.5 km NW San Marcos, 15°01′N, 91°48′W, 3,000 mts, 24–25 May 1973, Erwin and Hevel (USNM). United States: Arizona: 1♂, Douglas, 4 July 1933, W. W. Jones (USNM); 1 ♀, Douglas, San Bernardino Ranch, 3,750 ft., P. H. Snow (USNM); 3 ♀♀, Huachuca Mts., July 8 & 14, and 3



Figs. 32–39. *Nabis* spp. genitalia. 32, 33, *N. capsiformis*. 32, paramere, lateral. 33, bursa copulatrix. 34–36, *Nabis edax*. 34, paramere, lateral. 35, paramere, ventral. 36, aedeagus. 37–39, *N. latior* 37, paramere, lateral. 38, aedeagus. 39, bursa copulatrix, dorsal.

Aug. [19]05, H. G. Barber colln. (USNM); 1 ♀, McNary, 6 Aug. 1933, E. D. Ball (USNM). Colorado: 1 ♂, "745 or 795 [handwritten number unclear] (USNM). New Mexico: 1 ♂, Las Vegas, H[ot] S[prings], 2–8, Barber and Schwarz (USNM); 1 ♂, "2,311 [Mesilla, N.M., A. B. Morse], C. F. Baker colln. (USNM).

Nabis roseipennis Reuter, 1872

Nabis roseipennis Reuter 1872: 92 (orig. descrip.).

Discussion.—Henry and Lattin (1988) reported this species from Alberta, British Columbia, Ontario, and Quebec in Canada, and 29 U.S. states. Maw et al. (2000) added Manitoba, New Brunswick, and Saskatchewan.

Nabis rufusculus Reuter, 1872

Nabis rufusculus Reuter 1872: 92 (orig. descrip.).

Discussion.—Henry and Lattin (1988) listed this species from Alberta, British

Columbia, Ontario, and Quebec in Canada, and 26 U.S. states. Maw et al. (2000) added Manitoba, Nova Scotia, Prince Edward Island, and Saskatchewan.

Subgenus *Reduviolus* Kirby, 1837
Nabis americoferus Carayon, 1961

Nabis americoferus Carayon 1961: 604 (orig. descrip.).

Discussion.—Henry and Lattin (1988) reported this species from Alberta, British Columbia, Ontario, and Quebec in Canada, and 33 U.S. states. Maw et al. (2000) added Manitoba, New Brunswick, Newfoundland, Nova Scotia, and Saskatchewan.

Nabis kalmii Reuter, 1872

Nabis kalmii Reuter 1872: 91 (orig. descrip.).

Discussion.—Henry and Lattin (1988) reported *N. kalmii* from Iowa, Minnesota, Newfoundland, New York, Nova Scotia, Ohio, Pennsylvania, South Dakota, and Wisconsin. Based on specimens in the USNM collection, the following represent new U.S. state and Canadian province records: Alberta, Kansas, Maine, Manitoba, Massachusetts, Montana, New Hampshire, New Jersey, and North Dakota.

Specimens examined.—Canada: Alberta: 1♂, Slave L[ake], 14 Aug. 1924, O. Bryant. Manitoba: 2♂♂, 1 ♀, The Pas, 11 Aug. 1937, R. H. Daggy. United States: Kansas: 1♂, Douglas Co., 900 ft. G. W. Kirkaldy colln. New Jersey: 1♂, Ramapa, 31 May [19]01; 1 ♀, Pemberton, 20 May [19]14, H. B. Scammel; 1 ♀, Whites bog, 16 July [19]14, Quaintance. Maine: 1♂, Pretty Marsh, 4 Oct. [19]32, A. E. Brower; 1 ♀, Washington Co., Rt. 189, SW of West Lubec, 6 Jul. 1989, T. J. Henry and A. G. Wheeler, Jr. Massachusetts: 1 ♀, Cambridge, vic. Fresh Pond, 20 May 1975, A. Harkins; 1♂, Monterey, 6 July [19]44, E. A. Chapin. Montana: 1♂, Drummond, 11 Aug. [19]31, R. H. Beamer. New Hampshire: 1♂, Crawford "N[o]tch," 21 Aug. 1934, P. Oman; 1♂, Bretton Woods, 31 Aug. [19]34, M. E. Griffith. North Dakota: 1♂, University, 1 June [18]96, R. P. Currie; 1 ♀, Tower City, 3 Oct. [19]05, R. I. Reeves.

Subgenus *Tropiconabis* Kerzhner, 1968
***Nabis latior* Kerzhner and Henry, new species**

(Figs. 37–39)

Diagnosis.—This new species is closely related to *N. capsiformis* Germar. The hemelytra extend beyond the apex of the abdomen less than they usually extend in *N. capsiformis*, frequently making *N. latior* look proportionally wider than *N. capsiformis*. Not all specimens, however, can be readily identified by the external character, making examination of the genitalia necessary for reliable identification.

Description.—Overall coloration pale yellowish brown. Holotype male measurements: Head length 1.00 mm, width 0.74 mm, width of vertex 0.32 mm. Length of antennal segment: I 0.84 mm, II 1.30 mm, III 1.18 mm, IV 0.72 mm. Rostrum: Length of segments I 0.26 mm, II 0.82 mm, III 0.80 mm, IV 0.46 mm. Pronotum length 1.36 mm, width 1.50 mm. Length of femora: Fore 2.20 mm, middle 2.12 mm, hind 3.16 mm. Length of tibiae: Fore 0.92 mm, middle 0.94 mm, hind 1.70 mm. Body length 7.36 mm, width 1.64 mm.

Male genitalia: The paramere (Fig. 37) is distinctly larger than in *N. capsiformis* (Fig. 32). The vesica (Fig. 38) as in *N. capsiformis*, with two large, outwardly directed spicules. Bursa copulatrix (Fig. 39) almost symmetrical (larger on the left in *N. capsiformis*, Fig. 33), with dorsal sacculus situated to the right from the common oviduct (located before common oviduct in *N. capsiformis*).

Etymology.—The specific epithet "latior," meaning straight sided, is used to denote the slender, parallel sides of the hemelytra.

Distribution.—The Bahamas and the United States (Alabama, Florida, Louisiana, Mississippi, and Texas).

Type material.—HOLOTYPE: 1♂, Louisiana [Vermillion Co.], Gueydan, E. Kalmbach, 25–26 June 1925, at light (USNM). PARATYPES (all in USNM collection except as noted): BAHAMAS: 1 ♀, South Bimini Isl[and]., 20 June 1950, Cazier & Rindge (AMNH); 1 ♀, same island, May 1951, Cazier & Gertsch, "Nabis capsiformis Germ. H. G. Barber" (AMNH); 3♂♂, Abaco Cays, Elbow Cay, Hope Town, 4 May 1953, E. B. Hayden (AMNH). UNITED STATES: Alabama: 1♂, Escambia Co., 4 Sept. 1937, W. F. Turner. Florida: 3 ♀♀, Highlands Co., Archbold Biological Station, 20–27 Apr. 1981, T. J. Henry, taken at black light; 1 ♀, Alachua Co., High Springs, 14 Aug. 1968, G. F. Hevel; 1 ♀, "Florida, W. M. Ashmead"; 1 ♀, Florida, Sawfly Hights, Pensacola, 8 Dec. 1944 (AMNH); 1 ♀, Florida, Everglades, 11 Apr. 1912 (AMNH); 1 ♀, Florida, Bisc[ayne]. Bay, collection of Mrs. A. T. Slosson (AMNH). Louisiana: 7 ♀♀, [Vermillion Co.], Gueydan, E. Kalmbach, June–Aug 1925 (21, 23, & 28 July; 3 Aug.), at light; 1♂, 1 ♀, same data but 3 and 5 Aug. (ZISP); 1 ♀, [Baton Rouge Co.] Baton Rouge, 2 Aug. 1950, J. C. Elkins; 2 ♀♀, Baton Rouge, June 1905, A. W. Morrill; 1 ♀ [St. Mary Co.], Berwick, 2 May 1904, E. S. G. Titus; 1♂, Baton Rouge, at light, 2 Aug. 1950, J. C. Elkins (AMNH); 1 ♀, New Orleans, 29 June 1916 (AMNH); 3 ♀♀, Harahan, 23 and 25 Aug., 20 Sept., F. G. Werner (AMNH). Mississippi: 1 ♀, [Jackson Co.], Pasagoula, 8 Aug. 1921, C. J. Drake. Texas: 2 ♀♀, Brazoria Co., 9–10 Aug. 1928, R. H. Beamer; 1 ♀, East Cameron Co., 15 June 1946, G. B. Vogt; 1♂, 3 ♀♀, [Cameron Co.], Brownsville, 22 Apr. 1911, R. A. Vickery; 1 ♀, [Cameron Co.], Brownsville, 3 June 1903; 1 ♀, Texas [Victoria Co.], Victoria, Sept.; 1 ♀, Texas, San Antonio, collection N. Banks (AMNH); 2♂♂, 3 ♀♀, Texas, at light, 9 Aug. 1962, Elkins (AMNH); 1♂, 1 ♀, Texas, Brownsville, 11–16 June 1933, Darlington (AMNH).

Discussion.—The Bahama specimens are relatively small and slender. Previous records of *N. capsiformis* from the Bahamas actually pertain to *N. latior*.

The subgenus *Tropiconabis* Kerzhner comprises five species, of which *Nabis capsiformis* Germar is the most widely distributed. It is a long-winged species with great ability for aerial dispersal (Kerzhner 1983). It is known from almost all tropical and subtropical regions of the world, including numerous small and remote islands: Clipperton Island (material in CAS), Easter Island, etc. *Nabis kinbergii* Reuter was recorded from Australia (including Tasmania), New Guinea, New Zealand, several groups of Pacific Islands, Taiwan, and Japan (Ryukyu and Bonin Islands, and Shikoku). An interesting new record is from Java (2 ♀♀, Dieng Plateau, 7,000 ft., Dec. 1908, Terry coll., CAS). *Nabis kinbergii* and *N. capsiformis* co-occur in the Malay Archipelago, Taiwan, Guam, and western part of New Guinea. *Nabis maoricus* Walker is a subbrachypterous species endemic to New Zealand; it co-occurs there with *N. kinbergii*. *Nabis latior*, n. sp., is distributed in the southeastern United States; it co-occurs there with *N. capsiformis*. Finally, *N. consimilis* Reuter is found in Colombia, Ecuador, Peru, and northern Chile. Only this species was reported hitherto from the Galápagos Islands, but the Templeton Crocker Expedition 1932 (material in CAS) collected both *N. capsiformis* and *N. consimilis* from these islands (47♂♂, 34 ♀♀ of *N. capsiformis* from Baltra, EspaZola, Rabida, San Cristobal, San Salvador, Santa Maria, and Seymour

islands; 22♂♂, 19 ♀♀ of *N. consimilis* from Genovesa, Isabela, Rabida, San Cristobal, Santa Cruz, Santa Maria, and Seymour islands). However, from other years (1905, 1964, 1971–1972) only *N. consimilis* (14♂♂, 19 ♀♀ from Santa Cruz and Santa Maria) is represented in the CAS material. Apparently, a mass invasion of *N. capsiformis* occurred in 1932, but the species did not become established.

It is most probable that *N. capsiformis* has an African origin and all other species of the subgenus are descendants of small populations of *N. capsiformis*, which reached remote isolated territories and developed into separate species before the territory (or its margin) was invaded by mass populations of *N. capsiformis* or *N. kinbergii* (in New Zealand). Except for *N. kinbergii*, which is almost as long-winged as *N. capsiformis*, all species have on the average shorter wings, with individuals of *N. maoricus* becoming submacropterous.

Subfamily Prostemmatinae

Genus *Alloeorhynchus* Fieber, 1860

Alloeorhynchus trimacula (Stein, 1860)

Prostemma trimacula Stein 1857: 76 (orig. descrip.).

Alloeorhynchus trimacula: Stål 1873: 19 (comb.).

Discussion.—Previously known only from Brazil, Guatemala, Mexico, and Panama (Harris 1928). Henry and Brambila (2003) gave the first report of this Neotropical species in the United States from Florida and Texas.

Genus *Pagasa* Stål, 1862

Discussion.—Kerzhner (1993) indicated that five species in the subgenus *Lampropagasa* Reuter, 1909, differing primarily in the shape of the parameres, were confused by previous authors who used the name *Pagasa fusca* (Stein). Three of these species were identified by Kerzhner (1993) as *P. fusca*, *P. nigripes* Harris (elevated from variety status), and *P. confusa* n. sp. The two species represented by single specimens have remained unidentified. One of these proved to be *P. insperata* Hussey and the other is a new species described below as *P. lattini* n. sp.

Subgenus *Lampropagasa* Reuter, 1909

Pagasa confusa Kerzhner, 1993

(Fig. 41)

Pagasa confusa Kerzhner 1993: 43 (orig. descrip.).

Discussion.—This species was described from Costa Rica, Guatemala, Mexico, Panama, Puerto Rico, and the United States (Alabama, Arizona, California, Connecticut, District of Columbia, Florida, New Jersey, North Carolina, and Texas). Henry and Brambila (2003) gave additional Florida records.

***Pagasa lattini* Kerzhner and Henry, n. sp.**

(Figs. 30, 31, 40, 44))

Pagasa sp. (specimens from Arizona and Colorado): Kerzhner 1993: 42, fig. 28.

Diagnosis.—The male of the new species can be identified by the shape of the paramere (see Figs. 41–45). The female is similar to *P. nigripes* in the structure of the bursa copulatrix, but can be distinguished by the absence of black markings on the femora.

Description.—Holotype male: Coloration: Body brown (female) to black (male); antennae, rostrum, and legs bright yellow; base of rostral segment I brownish; femora accented with an orange hue. Structure: Body, except scutellum and most of ventral side of metathorax, strongly shiny. Dorsal surface with short setae. Body length of male 4.8 mm, body length of female

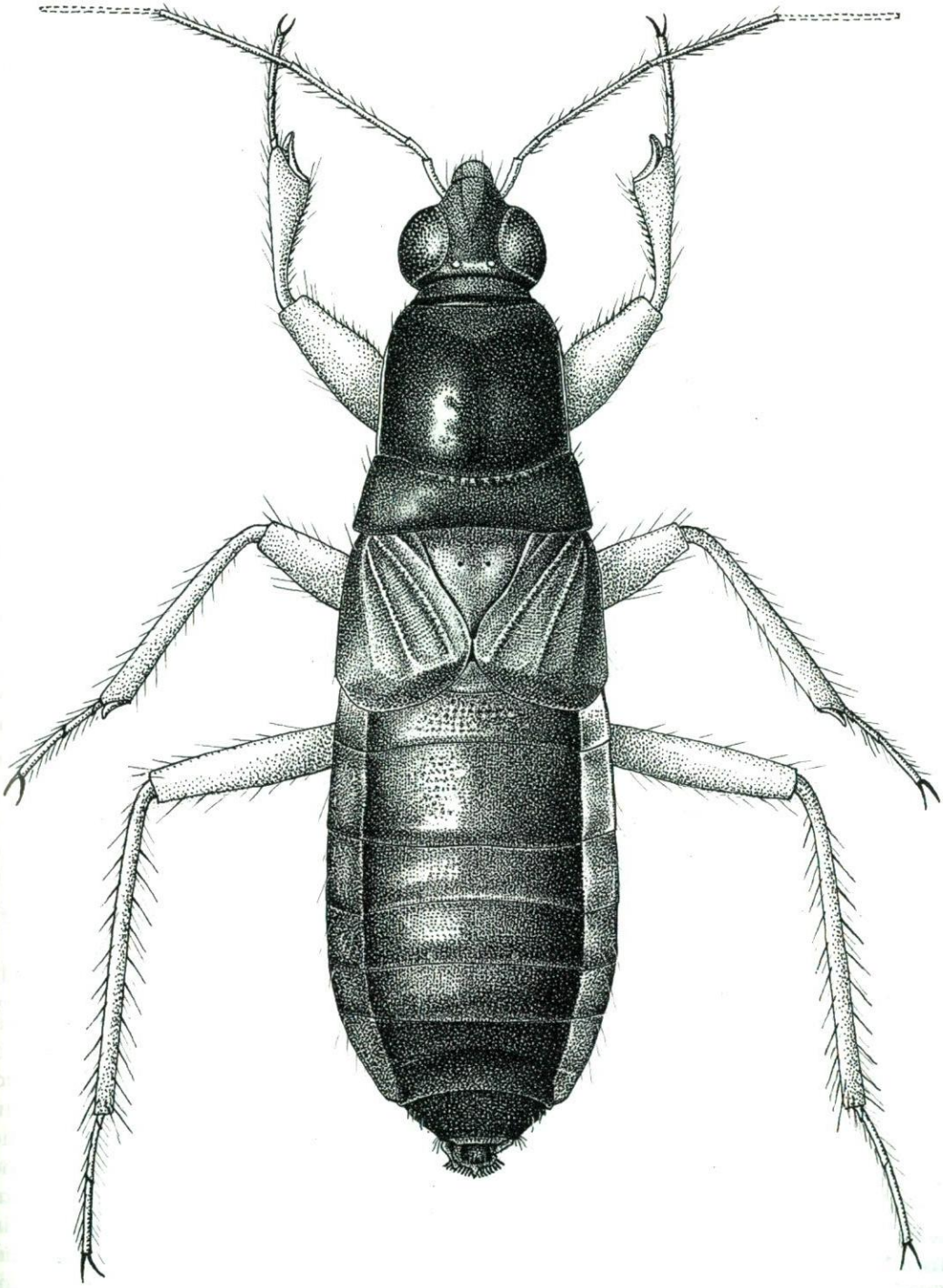
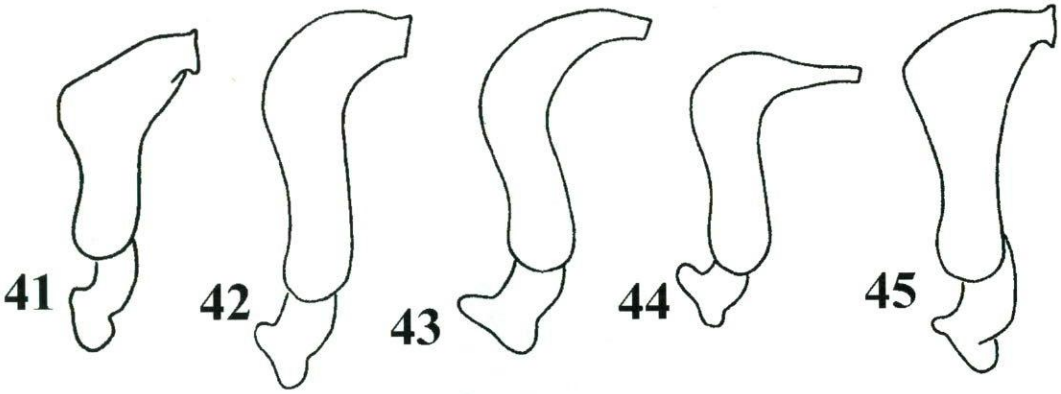


Fig. 40. *Pagasa lattini.*



Figs. 41–45. *Pagasa* spp, parameres (after Kerzhner 1993): 41, *P. confusa*, holotype. 42, *P. fusca*. 43, *P. insperata*. 44, *P. lattini*, holotype. 45, *P. nigripes*.

4.6 mm, width 1.5 mm. Head length 0.65 mm, width of male 0.77 mm, width of female 0.69 mm, width of vertex 0.27 mm. Length of antennal segments: I 0.27 mm, supplementary segment 0.16 mm, II 0.65–0.69 mm, III 0.61–0.71 mm, IV 0.57 mm. Rostrum extending to anterior third of fore coxae; segment I extending to middle of eyes; length of segments I 0.16 mm, II 0.50 mm, III 0.52 mm, IV 0.11 mm. Pronotum length 1.19 mm, width of male 1.19 mm, width of female 1.36 mm. Hemelytra extending to anterior half of tergite II, with very narrow rudiment of membrane in brachypterous form and extending to apex of abdomen in macropterous form, moderately shining throughout, covered with pale setae; veins *PCu* and *Cu* distinct, with shallow punctures on both sides. Fore femur strongly thickened toward middle, with about 25 black teeth forming two rows on apical two thirds of femur. Fore tibia straight; apical thickening (from widest point to apex of tibia) occupying about two sevenths of length, with convergent sides. Lengths of femora: fore 1.07 mm, middle 1.07 mm, and hind femora 1.36–1.59 mm. Lengths of tibiae: fore 0.90 mm, middle 1.07 mm, and hind tibiae 1.43–1.57 mm.

Paramere (Fig. 44) crescent-shaped, with relatively narrow and slightly wavy apex. Bursa copulatrix similar to that of *P. nigripes* (elongate triangular and strongly folded), but smaller.

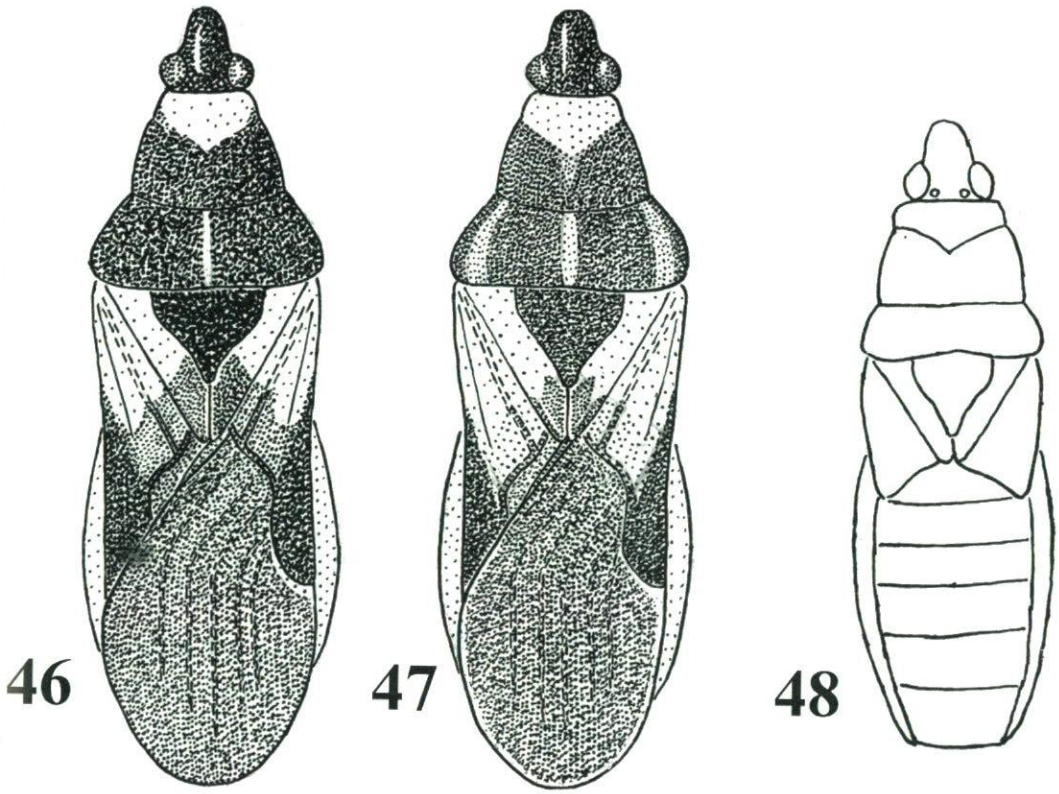
Type material.—Holotype: brachypterous ♂, USA, Arizona, Huach[uca] Mts., 14 July 1934, E. D. Ball, H. M. Harris collection, 1974 (USNM). Paratype: macropterous ♀, USA, Colorado, Fort Collins, 25 June 1900, H. M. Harris collection, 1974 (USNM). [Note: Both type specimens were identified by H. M. Harris as "*Pagasa ?fusca*."]

Pagasa insperata Hussey, 1953
(Fig. 43)

Pagasa insperata Hussey 1953: 3 (orig. descrip.).

Pagasa sp. (males from Long Island, New York, and New Jersey): Kerzhner 1993: 42, figs. 26–27.

Discussion.—Hussey (1953) described *P. insperata* from one male taken in Oceana Co., Michigan. Based on the peculiar structure of the fore tibia, he established the new subgenus *Parapagasa*, which has since been placed in synonymy with *Lampropagasa* by Kerzhner (1993). Examination of the holotype has shown that one of the fore legs was injured in the nymphal stage; the tibia is missing, except for a stump at the extreme base. Apparently this circum-



Figs. 46–48. *Phorticus collaris*: 46, 47, macropterous female, variability of body coloration. 48, brachypterous male, body contour.

stance affected the metamorphosis of the opposite fore leg, which retained the larval fossa spongiosa. All other specimens examined have a normal fore tibia, not differing from that of *P. fusca* and related species.

Pagasa insperata resembles *P. fusca* and *P. confusa* from which it can be clearly distinguished by the shape of the parameres (Fig. 43). The female genitalia are most similar to those of *P. fusca*, but show slight differences discussed by Kerzhner (1993). All examined specimens of *P. insperata* are brachypterous, with hemelytra extending to the posterior margin of tergite II or only very slightly beyond the anterior margin of tergite III. In *P. fusca* and *P. confusa*, the development of hemelytra varies. In some specimens they are as short as in *P. insperata* but, in some others, they are macropterous, and in *P. fusca*, they are intermediate, but long-winged forms are also are common.

Distribution.—*Pagasa insperata* is known only from Michigan.

Genus *Phorticus* Stål, 1860

Phorticus collaris Stål, 1873.

(Figs. 46–48)

Phorticus collaris Stål 1873: 109 (orig. descrip.).

Discussion.—This infrequently collected species was described from Texas (Stål 1873) and later reported from Mexico (Champion 1899). Blinn (1996) reported additional Texas localities and the first eastern U.S. records from North Carolina and Tennessee. Henry and Brambila (2003) gave the first Florida

record based on a female taken at light in Leon County.

Type material examined.—Lectotype (here designated for nomenclatural stability): Macropterous ♀, "Texas," "Belfrage," "collaris Stål," (SMNH). Paralectotypes: 1 macropterous and 1 brachypterous ♂, 5 brachypterous ♀♀, same data as for holotype (SMNH); 1 macropterous ♀, same data as for holotype (ZMUH).

Updated Checklist of Nabidae of America North of Mexico

In the past, *Nabis* has been broken into a large number of genera, sometimes as many as 20 (Kerzhner 1996). Here, we conservatively recognize only five genera: *Himacerus*, *Hoplistoscelis*, *Lasiomerus*, *Nabis*, and *Stenonabis* Reuter, following Kerzhner's (1996) treatment of the Palearctic fauna. Of these, *Stenonabis* does not occur in the New World and *Himacerus* is considered an introduction. Following this classification, we regard *Omanonabis* Asquith and Lattin a subgenus of *Nabis*.

Subfamily NABINAE Costa, 1853
Tribe CARTHASINI Blatchley, 1926

Genus *Carthasis* Champion, 1900

Carthasis decoratus (Uhler 1901)

Tribe NABINI Costa, 1853
Genus *Himacerus* Wolff, 1811

Subgenus *Anaptus* Kerzhner, 1968

Himacerus major (Costa 1842)

Subgenus *Himacerus* Wolff, 1811

Himacerus apterus (Fabricius 1798)

Genus *Hoplistoscelis* Reuter, 1890

Hoplistoscelis confusa Kerzhner and Henry, new species
Hoplistoscelis heidemanni (Reuter 1908)
Hoplistoscelis hubbeli (Hussey 1953)
Hoplistoscelis pallescens (Reuter 1872)
Hoplistoscelis sericans (Reuter 1872)

Genus *Lasiomerus* Reuter, 1890

Lasiomerus andabata Kerzhner, 1993
Lasiomerus annulatus (Reuter 1872)
Lasiomerus constrictus (Champion 1900)

Genus *Metatropiphorus* Reuter, 1872

Metatropiphorus belfragii Reuter, 1872

Genus *Nabis* Latreille, 1802
Subgenus *Dolichonabis* Reuter, 1908

Nabis americolimbatus (Carayon 1961).
Nabis nigrovittatus J. Sahlberg, 1878 (in North America – ssp. *nearctica* Kerzhner 1981).
Nabis limbatus Dahlbom, 1851.

Subgenus *Limnonabis* Kerzhner, 1968

Nabis propinquus Reuter, 1872.

Subgenus *Nabicula* Kirby, 1837

Nabis flavomarginatus Scholtz, 1847.
Nabis subcoleoptratus (Kirby 1837).
Nabis vanduzeei (Kirkaldy 1901).

Subgenus *Nabis* Latreille, 1802

Nabis edax Blatchley, 1929.
Nabis mexicanus Remane, 1964, new U.S. record.
Nabis roseipennis Reuter, 1872.
Nabis rufusculus Reuter, 1872.

Subgenus *Omanonabis* Asquith and Lattin, 1991, new status

Nabis lovetti Harris, 1925.

Subgenus *Reduviolus* Kirby, 1837

Nabis alternatus Parshley, 1922.
Nabis americanus Remane, 1964.
Nabis americoferus Carayon, 1961.
Nabis inscriptus (Kirby 1837).
Nabis kalmii Reuter, 1872.

Subgenus *Tropiconabis* Kerzhner, 1968

Nabis capsiformis Germar, 1838.

Nabis latior Kerzhner and Henry, new species.

Subfamily PROSTEMMATINAE Reuter, 1890

Tribe PHORTICINI Kerzhner, 1971

Genus *Phorticus* Stål, 1860

Phorticus collaris Stål, 1873.

Tribe PROSTEMMATINI Reuter, 1890

Genus *Alloeorhynchus* Fieber, 1860

Subgenus *Alloeorhynchus* Fieber, 1860

Alloeorhynchus nigrolobus Barber, 1922.
Alloeorhynchus trimacula (Stein 1860).

Genus *Pagasa* Stål, 1862

Subgenus *Lampropagasa* Reuter, 1909

Pagasa confusa Kerzhner, 1993.
Pagasa fasciventris Harris, 1940.
Pagasa fusca (Stein, 1857).
Pagasa insperata Hussey, 1953.
Pagasa lattini Kerzhner and Henry, new species.
Pagasa nigripes Harris, 1926.

Subgenus *Pagasa* Stål, 1862

Pagasa pallipes Stål, 1873.

Acknowledgments

We are indebted to all of the institutions and their curators for lending specimens used in preparing this study. We thank Michele A. Touchet (Systematic Entomology Laboratory [SEL], ARS, USDA, c/o National Museum of Natural History, Washington, D.C.) for the color plate and "O. Pen" (Zoological Institute, Russian Academy of Sciences, St. Petersburg) for the adult pen and ink illustrations. Michael G. Pogue (SEL), Alfred G. Wheeler, Jr. (Clemson University, Clemson, SC), and Norman E. Woodley (SEL) kindly reviewed the manuscript.

Literature Cited

Asquith, A. and J. D. Lattin. 1991. *Omanonabis*: a new genus of Nabidae (Heteroptera) from western North America, with a review of *Nabis edax* Blatchley. Pan-Pacific Entomologist 67: 7–19.

Barber, H. G. 1922. Two new species of Reduviidae from the United States (Hem.). Proceeding of the Entomological Society of Washington 24: 103–104.

Blatchley, W. S. 1926. Heteroptera or true bugs of eastern North America, with especial reference to the faunas of Indiana and Florida. Nature Publishing Co., Indianapolis. 1116 pp.

———. 1929. Two new Heteroptera from southern California (Cydnidae, Nabidae). Entomological News 40: 74–76.

———. 1930. Blatchleyana. Nature Publishing Company, Indianapolis. 77 pp.

Blinn, R. L. 1996. *Phorticus collaris* Stål: a nabid new to the eastern North America (Heteroptera: Nabidae). Journal of the New York Entomological Society 103: 216–218 (1995).

Braman, S. K. 2000. Damsel bugs (Nabidae), Chapter 27, pp. 639–656. *In* Schaefer, C. W. and A. R. Panizzi, eds. Heteroptera of Economic Importance. CRC Press, Boca Raton, Florida. 828 pp.

Carayon, J. 1961. Valeur systématique des voies ectodermiques de l'appareil génital femelle chez les HémiptΠres Nabidae. Bulletin du Muséum National d'Histoire Naturelle 33: 183–196.

Champion, G. C. 1897–1901. Insecta: Rhynchota (Hemiptera-Heteroptera). Volume II. Biologia Centrali-Americana, London. xvi + 416 pp, 22 plates. (1897: 1–32; 1898: 33–192; 1899: 193–304; 1900: 305–344; 1901: i–xvi + 345–416].

Costa, A. 1842. Ragguaglio delle specie iu interessanti di Emitteri Eterotteri raccolti in Sicilia, e descrizione di alcuni nuove specie dei contorni di Palermo. Esercitazioni accademiche degli aspiranti naturalisti diretti dal Dotter O.-G. Costa 2(2) (1840): 129–147.

———. 1853. Cimicum regni Neapolitani centuria tertia et quarta (fragmentum). 1–77. Napoli. [Also published in Atti del Reale Istituto d'Incorragiamento alle Scienze Naturali di Napoli 8 (1855): 225–299].

Dahlbom, A. G. 1851. Anteckningar ofver Insecker, som blifvit observerade pa Gottland och I en del af Clamare San, under Sommaren 1850. Öfversigt af Kongliga Svenska Ventenskaps-Akademiens Förhandlingar 1850: 155–229.

Fabricius, J. C. 1798. Supplementum entomologiae systematicae. Proft et Storch, Hafniae, 572 pp. [Classis XII. Rhyngota. Pages 511–546].

Fieber, F. X. 1860. Die europäischen Hemiptera. Halbflüler (Rhynchota Heteroptera), i–vi, pp. 1–112.

Germar, E. F. 1838. Hemiptera Heteroptera promontorii bonae spei, nundum descripta, quae collegit C. F. Drége. Revue entomologique publiée part Silbermann 5: 121–192.

Harris, H. M. 1925. A new species of Nabidae (Costa) from the western United States (Hemiptera). Entomological News 36: 205–206.

———. 1926. Notes on some American Nabidae (Hemiptera). Entomological News 37: 287.

———. 1928. A monographic study of the hemipterous family Nabidae as it occurs in North America. Entomologica Americana 9(new series): 1–98.

———. 1940. A new *Pagasa* from the United States (Hemiptera, Nabidae). Entomological News 51: 35–37.

Henry, T. J. and J. Brambila. 2003. First report of the Neotropical damsel bug *Alloeorhynchus trimcula* (Stein) in the United States, with new records for two other nabid species in Florida (Heteroptera: Nabidae: Prostemmatinae). Proceedings of the Entomological Society of Washington 105: 801–808.

Henry, T. J. and J. D. Lattin. 1988. Family Nabidae Costa, 1853. The damsel bugs, pp. 508–520. *In* Henry, T. J. and R. C. Froeschner, eds. Catalog of the Heteroptera, or true bugs, of Canada and the continental United States. E. J. Brill, Leiden and New York. 958 pp.

Hussey, R. F. 1953. Some new and little-known American Hemiptera. Occasional Papers of the Museum of Zoology, University of Michigan 550: 1–12.

Kerzhner, I. M. 1964. Family Nabidae, pp. 913–1003. *In* Bei-Bienko, G. Ya. ed. Keys to the Insects of the European USSR. I [English translation, 1967, Israel Program for Scientific Translations, Jerusalem].

———. 1968. New and little known Palearctic bugs of the family Nabidae (Heteroptera). Entomologichesko Obozrenie 47: 848–863. [English translation in Entomological Review 47: 517–525].

———. 1971. Classification and phylogeny of bugs of the family Nabidae (Heteroptera). *In* Zoological Institute, Academy of Sciences of the USSR. Scientific conference on results of work in 1970. Abstracts (O.A. Skarlato, ed.): 23–4. Nauka, Leningrad [In Russian].

———. 1981. Heteroptera of the family Nabidae. *In* The Fauna of the U.S.S.R. Academy of Sciences USSR, Zoological Institute. New Series, No. 124 13(2): 1–324. [In Russian].

———. 1983. Airborne *Nabis capsiformis* (Heteroptera: Nabidae) from the Atlantic, Indian, and Pacific Oceans. International Journal of Entomology (Honolulu) 25: 273–275.

———. 1993. New and little-known Nabidae from North America (Heteroptera). Zoosystematica Rossica 1(1992): 37–45.

———. 1996. Family Nabidae, pp. 84–107. *In* Aukema, B. and C. Rieger, eds. Catalogue of the Heteroptera of the Palaearctic Region. Vol. II. Netherlands Entomolological Society, Amsterdam. 361 pp.

———. 2007. Nabidae of the West Indies (Heteroptera). Zoosystematica Rossica 16: 225–234.

Kirby, W. 1837. Order Hemiptera Latr, pp. 275–285. *In* Richardson's Fauna Boreali-Americana or the Zoology of the Northern Parts of British America. J. Fletcher, Norwich, 4: i–xxxix + 1–325.

Kirkaldy, G. W. 1901. Anmerkungen über bemerkenswerte Nabinen (Rhynchota). Weiner Entomologsiche Zeitung 20: 219–225.

Larivière, M.-C. 1992a. *Hoplistoscelis sordidus* (Heteroptera: Nabidae) in Canada. Great Lakes Entomologist 25: 47–50.

———. 1992b. *Himacerus apterus* (Fabricius), a Eurasian Nabidae (Hemiptera) new to North America: Diagnosis, geographical distribution, and binomics. Canadian Entomologist 124: 725–728.

———. 1994. Biodiversity of *Nabicula* Kirby species (Hemiptera: Nabidae) in Canada: Faunistic review, bioecology, biogeography. Canadian Entomologist 126: 327–378.

Latreille, P. A. 1802. Histoire naturelle, génériques des Insectes, disposés dans un ordre Naturel. Bordeaux. xii + 201 pp.

Lattin, J. D. 1989. Bionomics of the Nabidae. Annual Review of Entomology 34: 383–400.

Maw, H. E. L., R. G. Foottit, K. G. A. Hamilton, and G. G. E. Scudder. 2000. Checklist of the Hemiptera of Canada and Alaska. NRC Research Press, Ottawa, Ontario. 220 pp.

Paiero, S. M., S. A. Marshall, and K. G. A. Hamilton. 2003. New records of Hemiptera from Canada and Ontario. Journal of the Entomological Society of Ontario 134: 115–129.

Parshley, H. M. 1922. Report on a collection of Hemiptera-Heteroptera from South Dakota. South Dakota State College Technical Bulletin 2: 1–22.

Remane, R. 1964. Weitere Beiträge zur Kenntnis der Gattung Nabis Latr. (Hemiptera Heteroptera, Nabidae). Zoologische Beiträge 10: 253–314.

Reuter, O. M. 1872. Nabidae novae et minus cognitae. Bidrag till Nabidernas kännedom af. Öfversigt Kongliga Svenska Ventenskaps-Akademiens Förhandlingar 29(6): 79–96.

———. 1890. Ad Coognitionem Nabidarum. Revue d'Entomologie 9: 289–309 (1889).

———. 1908. Bermerkungen über Nabiden nebst Beschreibung neuer Arten. Mémoires de la Société Entomologique de Belgique 15: 87–130.

Reuter, O. M. and B. Poppius. 1909. Mongraphia Nabidarum orbis terrestris. I.–Acta Societatis Scientiarum Fennicae 37(2): 1–62.

Sahlberg, J. 1878. Bidrag till Nordvestra Sibiriens insektfauna. Hemiptera Heteroptera insamlade under expeditionerna till obi och jenesej 1876 och 1877. Öfversigts af Kongliga Svenska Vetenskaps-Akademiens Handlingar 16(4): 1–39.

Scholtz, H. 1847. *Prodromus* zu einer Rhynchoten-Fauna von Schlesien. Uebersicht der Arbeiten und Veränderungen de Schlesischen Gesellschaft für Vaterländische Kultur, Breaslau (1846), 104–164.

Stål, C. 1860–1862. Bidrag till Rio Janeiro-traktens Hemipter-fauna. Kongliga Svenska Vetenskaps-Akademiens Handlingar 2(7): 1–84 (1860); 3(6): 1–75 (1862).

———. 1873. Enumeratio Hemipterorum: Bidrag till en företeckning öfver alla hittills kända Hemiptera, jemte systematiska meddelanden. Part 3 (1873) 11(2): 1–163.

Stein, J. P. E. F. 1860. Die Gattung *Prostemma* Laporte. Berliner Entomologische Zeitschrift 1: 81–96.

Uhler, P. R. 1901. Some new genera and species of North American Hemiptera. Proceeding of the Entomological Society of Washington 4: 507–515.

Wheeler, A. G., Jr. 1976. *Anaptus major* established in eastern North America (Hemiptera: Nabidae). Proceedings of the Entomological Society of Washington 78: 382.

———. 2002. Additional Florida records of the seldom-collected *Lasiomerus andabata* (Hemiptera: Nabidae). Florida Entomologist 84: 723.

Wheeler, A. G., Jr. and E. R. Hoebeke. 2004. New records of Palearctic Hemiptera (Sternorrhyncha, Cicadomorpha, Heteroptera) in the Canadian Maritime Provinces. Proceedings of the Entomological Society of Washington 106: 298–304.

Wolff, J. F. Icones cimicum descriptionibus illustratae. J. J. Palm, Erlangan, 1(1800): i–vii,1–40; 2 (1801): 43–84; 3 (1802): 85–126; 4 (1804): 127–166; 5 (1811): 167–208.

Yeargan, K. V. 1998. Predatory Heteroptera in North American agroecosystems: An overview, pp. 7–19. *In* Coll, M. and J. Ruberson, eds. Predatory Heteroptera in Agroecosystems: Their Ecology and Use in Biological Control. Thomas Say Publications, Entomological Society of America, Lanham, Maryland.