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The Aradidae (Insecta, Hemiptera, Heteroptera) of Argentina

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Abstract

In Argentina, 14 genera and 41 species are recorded, belonging to 5 subfamilies: Aneurinae, Aradinae, Calisiinae, Isodermiinae and Mezirinae. *Aneurosoma dissimile* (Bergroth); *Aneururus bosqui* Kormilev; *Aphleboderrhis comata* Champion; *Aphleboderrhis pilosa* Stål; *Aradus angustellus* (Blanchard); *Aradus brasiliensis* Usinger; *Aradus mexicanus* Usinger; *Aradus penningtoni* Drake; *Calisius confusus* Kormilev; *Dysodius lunatus* (Fabricius); *Iralunelus bergi* (Kormilev); *Iralunelus monrosi* (Kormilev); *Iralunelus subdipterus* (Burmeister); *Isodermus gayi* (Spinola); *Kormilevia dureti* (Kormilev); *Lobocara oblonga* Bergroth; *Mezira americana* (Spinola); *Mezira argentinensis* (Kormilev); *Mezira birabeni* (Kormilev 1953); *Mezira bonaerensis* Kormilev; *Mezira bruchi* (Kormilev); *Mezira formosa* (Kormilev); *Mezira granuliger* (Stål); *Mezira neonigripennis* Kormilev; *Mezira neonigripennis misionensis* Kormilev; *Mezira nigripennis* Usinger; *Mezira paragruliger* Kormilev; *Mezira proseni* Kormilev; *Mezira regularis* (Champion); *Mezira reuteri* (Bergroth); *Mezira saltensis* Kormilev; *Mezira spissigrada* Kormilev; *Mezira tartagalensis* Kormilev; *Mezira vianai* Kormilev; *Neuroctenus centralis* (Berg); *Neuroctenus punctulatus* (Burmeister); *Neuroctenus subandinus* Kormilev; *Neuroctenus terginus* (Stål); *Notapictinus martinezi* (Kormilev); *Notapictinus sanmigueli* (Kormilev); and *Placogenys clarkei* Kormilev.

Key words: Aradidae, keys, Argentina, taxonomy, distribution

Introduction

The family Aradidae comprises insects of phytophagous and mycetophagous habits, commonly known as “bark bugs” or “flat bugs”. They are found on and under the bark and decaying trees or in leaf litter. They also live associated with termites, in bird and rodent nests and occasionally, in the galleries of woodboring beetles (Schuh and Slater, 1995). They are flat and elliptical, oval or rectangular in shape and they are dark coloured (black or brown). Often have a granular or rough dorsal surface which provides an excellent vehicle to transport fungi spores (Hubbard, 1892).

Usinger and Matsuda (1959) provided a systematic account of the family and Kormilev and Froeschner (1987) a catalog of the world species.

Despite their wide distribution and abundance, this is a little-known group from the biological, ecological and systematic point of view. The family includes 233 genera and 1931 species separated into eight subfamilies, distributed worldwide (Henry, 2009). They are distributed over all the biogeographical regions of the world. In the Neotropical region there are 80 genera and 509 species (Coscarón and Contreras, 2012), for Argentina 4 genera and 5 species (Pennington, 1921) were reported, Coscarón (submitted) this number increased to 14 genera and 41 species; records from Ecuador comprise 9 genera and 15 species (Froeschner, 1981); from Panama 30 genera and 60 species (Froeschner, 1999) and from Chile 6 genera and 6 species (Prado, 2008).

Regarding the biology of this family, there is very little information. Aradids are generally found in a quiescent state, either feeding, apparently resting, or in hibernation (Usinger and Matsuda, 1959). The only economically significant species belongs to the genus *Aradus* Blanchard with an Holarctic distribution. The pine bark bug *A. cinnamomeus* Panzer pushes its stylets into phloem, cambium, and xylem tissues of living saplings, disturbing their growth and causing serious damage (Heliovara, 2000).

Bearing in mind the previous considerations and the systematic changes that took place in recent years, the aim of this work is to collect all the scattered information in order to identify the Aradidae subfamilies, genera and species that exist in Argentina. So far in this country there are 41 species which are classified in 5 subfamilies.

Material and Methods

The keys are based on external morphological characters and digital images of the major characteristics of diagnostic value of the specimens from the collections of the Museo Argentino de Ciencias Naturales, Buenos Aires (MACN), Museo de Ciencias Naturales de la Plata, Buenos Aires (MLP, <http://www.fcnym.unlp.edu.ar/abamuse.html>) and from the Fundación Miguel Lillo, San Miguel de Tucumán (FML), Argentina. The photos were compared with material of the Naturhistoriska Riksmuseet of Stockholm (<http://www.nrm.se/2.1286b10fdbe80efba80001.html>) and the Natural History Museum, United States National Museum, Washington (<http://www.mnh.si.edu>) Digital photos were taken with a digital camera Sony Cybershot DSC-P200. The value of the scale line is 1 millimeter.

Results

Key to subfamilies of Argentinian Aradidae

1. Mandibular plates produced anteriorly to exceed apex of clypeus, forming a cleft or emarginate anterior margin of head (Fig 5D); first dorsal abdominal scent-gland orifice (or scar thereof) large, usually strongly displaced posteriorly, second orifice rarely well developed, third always obsolete or undifferentiated 2
- 1'. Mandibular plates not produced anteriorly to exceed apex of clypeus, head not appearing cleft or emarginate anteriorly (Fig 3B); 3 dorsal abdominal scent-gland orifices (or scar thereof), equal in size, not displaced posteriorly 3
2. Labium arising from open area of bucculae ("open atrium") (Fig 2B); anterior dorsal abdominal scent-gland orifice, or scar, not or only slightly displaced posteriorly **Aneurinae Douglas and Scott** (Figs 2A–D, 3A–B)
- 2'. Labium arising from nearly closed area of bucculae ("closed atrium") (Fig 8A) opening of first dorsal abdominal scent-gland orifice (or scar) displaced posteriorly to middle or posterior margin of segment 4 4
3. Labium arising at or near apex of clypeus; base of labium free and exposed (Fig 4D). Forewings with line of weakness at level of apex of scutellum and often broken off at this level **Isoderminae Stål** (Figs 4C–D)
- 3'. Labium arising well behind apex of clypeus; base of labium bordered by well-developed bucculae, wings lacking a line of weakness at level of apex of scutellum 5
4. Metathoracic scent-gland orifices with a well-developed, usually channel-like, evaporatory area extending to lateral margin of thoracic metapleuron; body usually not incrustate above **Mezirinae Oshanin** (Figs 5A–D, 6A–D, 7A–D, 8A–D, 9A–D, 10A–B)
- 4'. Metathoracic scent-gland orifices absent; evaporatory area indistinct. Body sometimes with incrustations above 5
5. Scutellum greatly enlarged, covering all but narrow margins of abdominal disk inside of connexival sutures. Hemielytra completely hidden and membranous, except for thickened costal margins which are exposed at edges of basal half of scutellum. Edge of connexivum double **Calisiinae Stål**
- 5'. Scutellum much smaller, usually triangular, never covering only a small part of abdominal disk. Hemielytra variously developed but completely exposed, usually with costal margins dilated at base **Aradinae Amyot and Serville** (Figs 3C–D, 4A–B)

Subfamily Aneurinae Douglas and Scott, 1865

Figs 2A–D, 3A–B

Aneuridae Douglas and Scott, 1865 British Hemiptera, pp. 26, 267.

Aneurinae Usinger and Matsuda, 1959. *Classif. Aradidae*, p. 95.

Key to genera of Aneurinae

1. Scutellum wider, subtriangular or semicircular; corium never produced more than 2/3 of scutellum; clavus rudimentary 2
- 1'. Scutellum narrow, triangular; corium reaching to tip of scutellum, clavus developed. ... **Aneurosoma Champion** (Fig 2A–B)
2. Tergum VII without paratergites. Lateral margins of pronotum more or less sinuate **Aneurus Curtis** (Fig 2C)
- 2'. Tergum VII with paratergites. Lateral margins of pronotum unisinuate. **Iralunelus Štys** (Figs 2D, 3A–B)

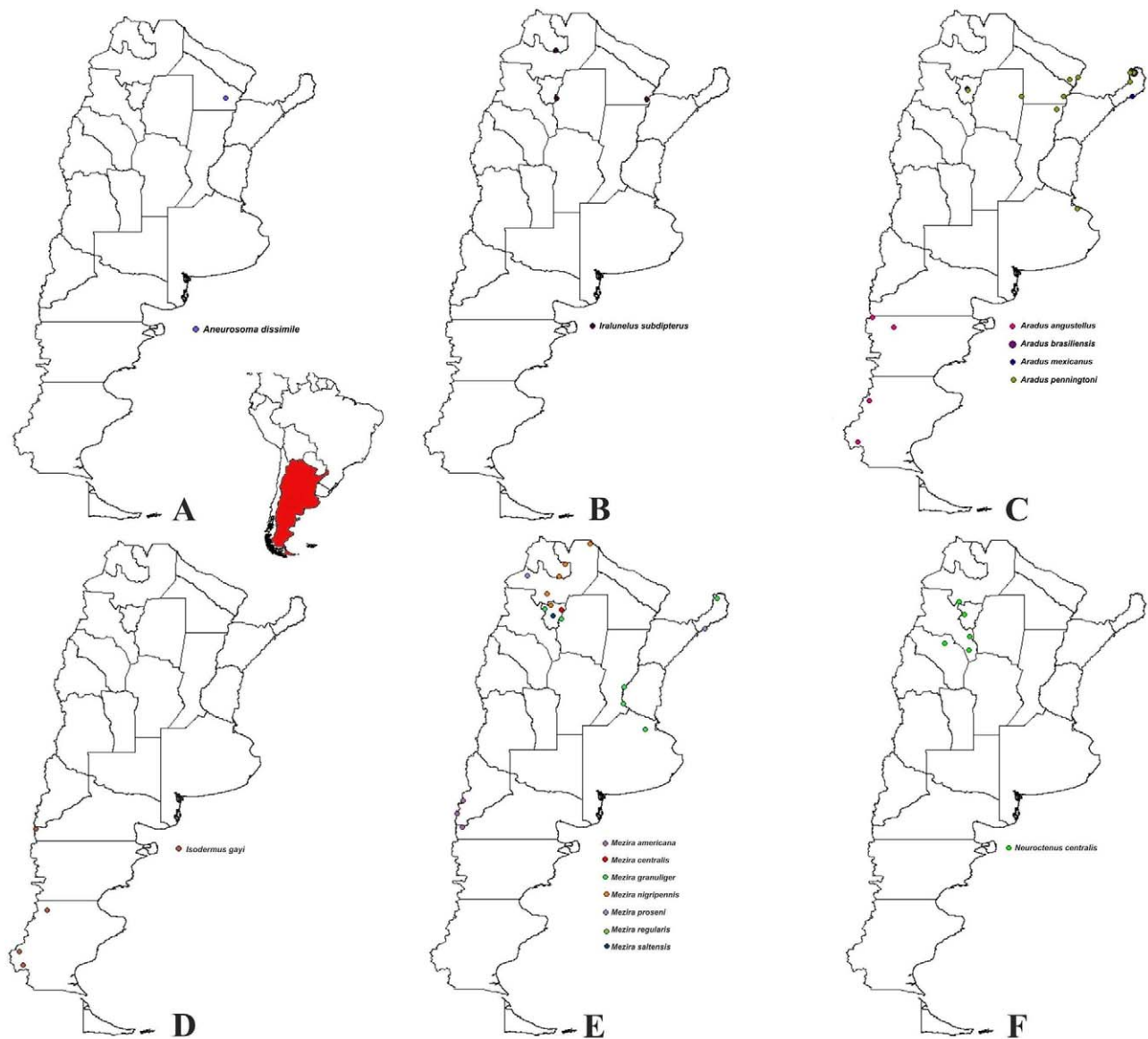


FIGURE 1. Distribution map of Argentinian species of Aradidae. A; *Aneurosoma*. B; *Iralunelus*. C; *Aradus*. D; *Isodermus*. E; *Mezira*. F; *Neuroctenus*.

Genus *Aneurosoma* Champion, 1898

Fig. 1 A, 2A–B

Aneurosoma Champion, 1898. Biol. Centr. Amer., Rhynch, 2: 116. Type-species: *Aneurus dissimilis* Bergroth, monobasic.

Aneuromorpha Bergroth, 1914. Ann. Mus. Nat. Hung., 12: 106.

Aneurosoma: Kormilev and Froeschner, 1987. Entomogr., 5: 23.

Diagnosis: Scutellum equilaterally triangular, as long as the pronotum; abdomen in the females very broadly truncate-emarginate at the apex; the first genital segment is strongly transverse.

Species of *Aneurosoma* Champion

Pronotum almost without lateral notch; scutellum with slightly convex lateral edges and apex narrowly rounded; pygophore very small and shorter than lobes of segment VIII *Aneurosoma dissimile* Bergroth (Fig 2A–B).

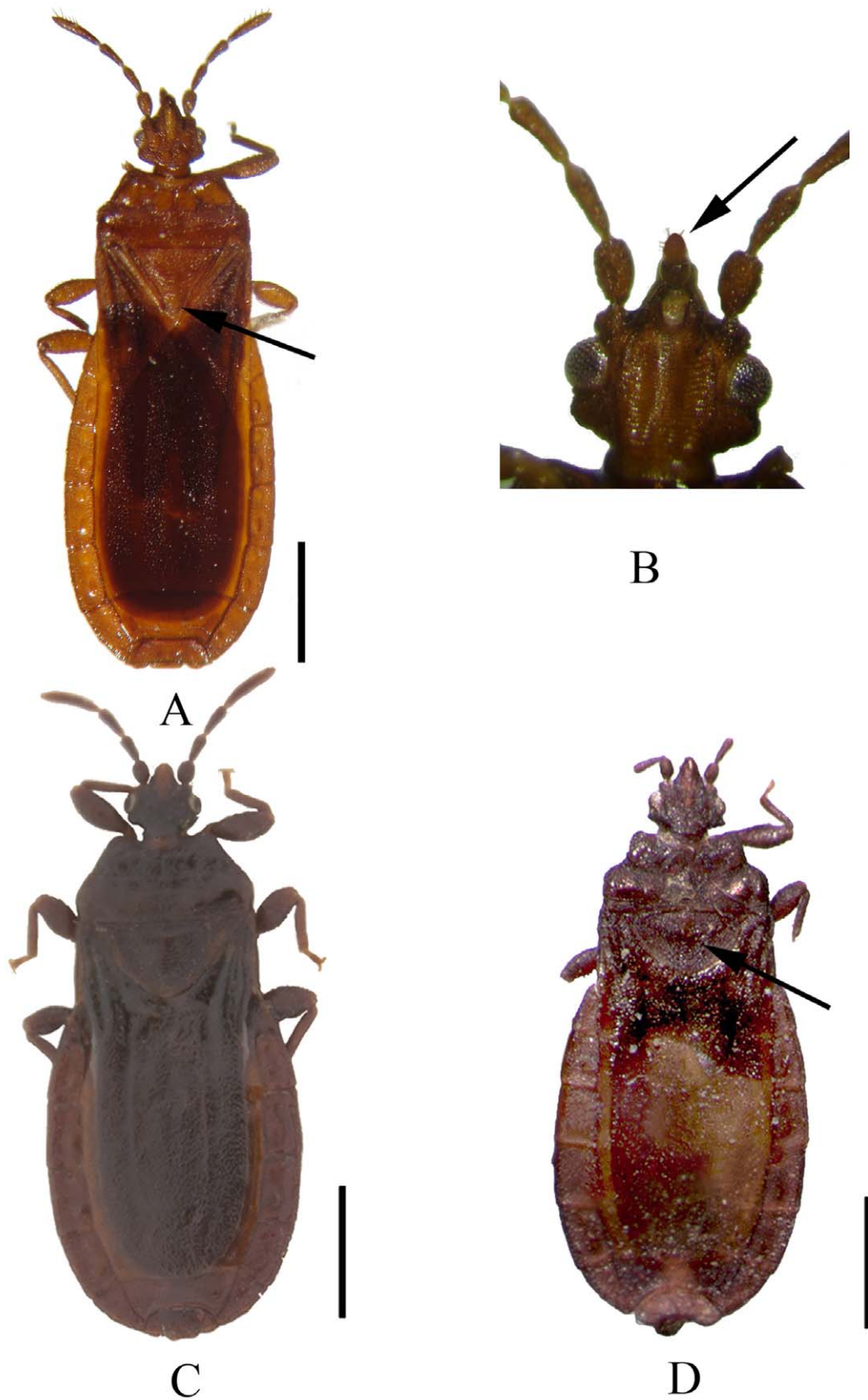


FIGURE 2. Subfamily Aneurinae. Dorsal view, scutellum triangular *Aneurosoma dissimile*: A; “Open atrium” *Aneurosoma dissimile*: B; Dorsal view *Aneurus bosqui*: C; Dorsal view and scutellum semicircular *Iralunelus bergi*: D.

***Aneurosoma dissimile* (Bergroth 1889)**

- Aneurus dissimilis* Bergroth, 1889. Wien. Ent. Zeit. 8: 52.
Aneurosoma dissimilis: Champion, 1898. Biol. Centr. Amer., Rhynch., 2: 116.
Aneuromorpha dissimilis: Bergroth, 1914. Ann. Mus. Nat. Hung., 12: 106.
Aneuromorpha dissimilis: Kormilev, 1952a. Dus., 3(1): 56.
Aneuromorpha dissimilis: Kormilev, 1953a. Acta Zool. Lilloana, 13: 253.
Aneurus dissimilis: Usinger and Matsuda, 1959. Classif. Aradidae, p.100.
Aneurus (Aneurosoma) dissimilis: Kormilev, 1967. Opusc. Zool., 100: 4.
Aneurus dissimilis: Picchi, 1977. Quaest. Entomol., 13: 270.
Aneurosoma dissimile: Kormilev and Froeschner, 1987. Entomogr., 5: 23.

Material examined: BUENOS AIRES, 1918, 4 specimens (MLP). CHACO: La Escondida, 27° 06'16,32''S, 59° 26'45,46'', 28-VIII-36, Denier, col., 5 specimens (MLP).

Distribution in Argentina: Buenos Aires; Chaco: La Escondida, Vilela; Misiones: Concepción; Santa María.

Distribution in others countries: Brazil: Cassapava Selou; Amazonas: N. Rio Cauaburi, Serra Nebulina, 1500 m. Colombia: Sierra Nevada de Santa Marta; Cerro San Lorenzo, Pico Kennedy. Paraguay: Villa Rica.

Genus *Aneurus* Curtis, 1825

Fig 2C

Aneurus Curtis, 1825. British Entomology, 7: 86. Type species: *Acanthia laevis* Fabricius, monobasic.

Diagnosis: body elongate, oval with the surface naked, granular, rugose, usually polished; eyes exserted or inserted so that the outer margins follow the curve of head; scutellum subtriangular or semicircular; under surface very flat; connexival margin usually with a distinct fold.

Species of *Aneurus* Curtis

Scutellum subtriangular with moderately convex sides and angularly rounded tip; corium short, reaching to 1/3 of tergum VII; clavus practically absent *Aneurus bosqui* Kormilev (Fig. 2C).

***Aneurus bosqui* Kormilev 1967**

In: <http://collections.nmnh.si.edu/search/ento>

- Aneurus bosqui* Kormilev, 1967. Opusc. Zool., 100: 4.
Aneurus bosqui: Kormilev, 1980. Acta zool. Lilloana, 36(1): 54.
Aneurus bosqui: Kormilev and Froeschner, 1987. Entomogr., 5: 25.

Distribution in Argentina: Misiones; Chaco.

Distribution in others countries: Brazil: Rio Grande do Sul. Paraguay: Villarica.

Genus *Iralunelus* Štys, 1974

Figs 1B, 2D, 3A–B

- Aneurus (Iralunelus) Štys*, 1974. Acta entomol. Bohem., 71: 91. Type-species: *Aneurus gallicus* Štys, original designation.
Iralunelus Kormilev and Froeschner, 1987. Entomogr., 5: 31.

Diagnosis: Tergum VII with triangular paratergites. Cuticle largely coarse and matt; lateral margins of pronotum uni-sinuate; scutellum semicircular, apex arcuate; clavus reduced, corium short and indistinctly delimited; dorsal laterotergite 7 with an anterior impression only; contergite developed on abdominal segment 3 only; intertergal strip laterally matt and verrucose, mesally glabrous; the hind margin of ventrite 7 and 8 simple in the female.

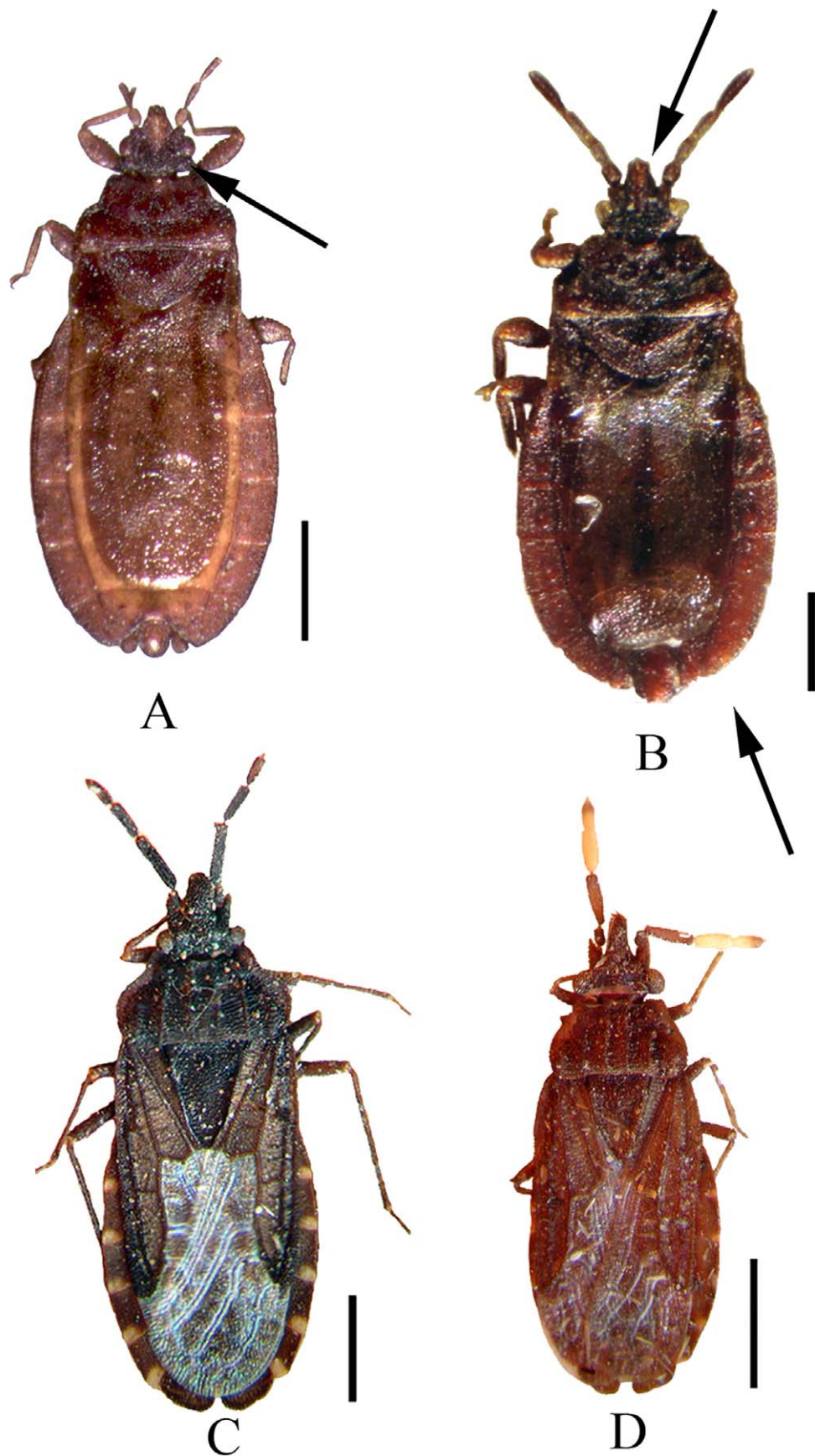


FIGURE 3. Subfamilies Aneurinae and Aradinae. Dorsal view and postocular tubercles *Iralunelus monrosi*: A; Dorsal view, mandibular plates and triangular paratergite *Iralunelus subdipterus*: B; Dorsal view *Aradus angustellus*: C; Dorsal view *Aradus brasiliensis*: D.

Key to the species of genus *Iralunelus* Burmeister of Argentina

1. Spiracles of 2° segment ventral and not visible from above..... *Iralunelus bergi* Kormilev (Fig 2D)
 1'. Spiracles of 2° segment lateral and visible from above..... 2
 2. Postocular tubercles moderately developed; male pygophore large, acorn shaped; paratergites 8° reach up to 2/3 of pygophore; crenulation of the sides edges of the abdomen slightly blurry..... *Iralunelus subdipterus* Burmeister (Fig 3B)
 2'. Postocular tubercles robust, male pygophore smaller; paratergites 8° reach up to 7/8 of pygophore; crenulation of the sides edges of the abdomen clear..... *Iralunelus monrosi* Kormilev (Fig 3A)

***Iralunelus bergi* (Kormilev 1980)**

Aneurus (Iralunelus) bergi Kormilev, 1980. Acta Zool. Lilloana, 36(1): 55.

Iralunelus bergi: Kormilev and Froeschner, 1987. Entomogr., 5: 32.

Distribution in Argentina: Corrientes: Paso de la Patria.

***Iralunelus monrosi* (Kormilev 1980)**

Aneurus (Iralunelus) monrosi Kormilev, 1980. Acta Zool. Lilloana, 36(1): 54.

Iralunelus bergi: Kormilev and Froeschner, 1987. Entomogr., 5: 33.

Distribution in Argentina: Salta: Cabeza de Buey.

***Iralunelus subdipterus* (Burmeister 1835)**

Aneurus subdipterus Burmeister, 1835. Hand. Ent. 2(1): 252.

Aneurus subdipterus: Stål, 1873. Enum. Hem., 3: 146.

Aneurus subdipterus: Bergroth, 1886. Verh zool.-bot. Ges. Wien, 36: 59.

Aneurus subdipterus: Lethierry and Severin, 1896. Cat. Gén. Hem. 3: 47.

Aneurus subdipterus: Kormilev, 1953a. Acta zool. Lilloana; 13: 251.

Aneurus subdipterus: Viana and Williner, 1972. Acta Scient., ser. Entomol., 5: 27.

Aneurus (Iralunelus) subdipterus: Kormilev and Heiss. 1979. Entomol. Arb. Mus. Frey, 28: 96.

Aneurus (Iralunelus) subdipterus: Kormilev, 1980. Acta Zool. Lilloana, 36(1): 54.

Iralunelus subdipterus: Kormilev and Froeschner, 1987. Entomogr., 5: 33.

Iralunelus subdipterus: Contreras, Nader and Coscarón, 2011. Mun. Ent. Zool., 6(2): 766.

Material examined: CHACO: Vilela, 20-IX-36, 1 specimen (MLP). JUJUY, La Mendieta, 24° 18'50''S, 64° 58'01,00''W, 27-XII-39, 1 specimen (MLP). SANTIAGO DEL ESTERO: Lago Mayo, 27° 31' 28''S, 64° 52' 10''W, III-57, Golbach, col., 2 specimens (FML). TUCUMAN: 1-X-68, Weyrauch, col., 7 specimens (FML); San Miguel de Tucumán, 7-XII-44, Golbach, col., Museo Argentino de Ciencias Naturales, 1 specimen (FML).

Distribution in Argentina: Buenos Aires: Tigre; Chaco: La Escondida, Vilela; Córdoba: Calamuchita; Formosa: Puerto Tirol; Jujuy: La Mendieta; Misiones: Puerto 17 de Octubre, Concepción, Santa María; Salta: El Piquete; Santiago del Estero: El Sauce, Lago Mayo; Córdoba: V.G. Belgrano; Calamuchita; Tucumán.

Distribution in others countries: Brazil. Colombia

Subfamily Aradinae Amyot and Serville, 1843

Figs 3C–D; 4A–B.

Aradides Amyot and Serville, 1843. His. Nat., Hém., pages 41 and 307

Aradinae Champion, 1898. Biol. Centr. Amer. Rhynch., 2: 65

Genus *Aradus* Fabricius, 1803

Figs 1C, 3C–D, 4A–B

Aradus Fabricius, 1803. Systema Rhyngotorum, p. 116. Type species: *Cimex betulae* Linnaeus, designated by Latreille, 1810 In Considerations Generales sur l'ordre naturel des animaux composant les classes des Crustaces, des Arachnides et des Insectes avec un tableau methodique de leurs genres disposes en families, p. 433.

Piestosoma Laporte, 1833. Magazine Zoology (Guérin), 2:51, 53. Type-species: *Aradus depressus* Fabricius, monobasic. Synonymized by Fieber, 1861. Die europaischen Hemiptera Halbflügler, p. 110.

Diagnosis: Head usually longer than wide, the eyes exserted and located posteriorly with only a short distance before constricted neck region; rostrum usually reaching on to proesternum or longer; pronotum narrow anteriorly, variously dilated, spined, or even lamellate laterally, with four more or less distinct longitudinal carinae; scutellum usually triangular or pentagonal; abdomen finely granular under wings; legs relatively long and slender and without spines.

Key to species of genus *Aradus* Fabricius of Argentina

1. All antennal segments uniformly brown *Aradus angustellus* Blanchard (Fig 3C)
- 1'. Not all antennal segments uniformly brown 2
2. Only the antennal segment III light colored *Aradus penningtoni* Drake (Fig 4B)
- 2'. More of one antennal segment light colored. 3
3. The antennal segment III and basal half of IV yellowish. *Aradus brasiliensis* Usinger (Fig 3B)
- 3'. Antennal segment I, $\frac{3}{4}$ basal of segment II and $\frac{1}{4}$ basal of segment III dark; the remainder yellowish *Aradus mexicanus* Usinger (Fig 4A)

***Aradus angustellus* (Blanchard 1852)**

Brachyrhynchus angustellus Blanchard, 1852. In Gay, Hist. De Chile (Zool.), 7: 205.

Aradus angustellus: Signoret, 1863. Ann. Soc. Ent. Fr., 4(3): 576.

Aradus compressicornis: Stål, 1873. Kongl. Svenska Vet.-Akad. Handl, 3: 136.

Brachyrhynchus angustellus: Stål, 1873. Kongl. Svenska Vet.-Akad. Handl, 3: 147.

Aradus angustellus: Berg, 1879. An. Soc. Cient. Argentina, 7: 44.

Aradus angustellus: Pennington, 1921. Lista de los Hem. Het. De La Rep. Arg., 17.

Aradus angustellus: Parshley, 1921. Trans. Am. Ent. Soc., 47: 150.

Aradus angustellus: Porter, 1930. Rev. Chil. Hist. Nat., 34: 150.

Aradus angustellus: Usinger, 1940. Rev. Ent., 11(3): 642.

Aradus angustellus: Drake, 1942. Rev. Ent. Rio de Jan., 13: 151.

Aradus angustellus: Wygodzinsky, 1943. Rev. Ent., 14(3): 502.

Aradus angustellus: Kormilev, 1951. Com. Inst. Nac. Inv. Cien. Nat. Bs. As., Zool 2(6): 84.

Aradus angustellus: Kormilev, 1976. Rev. Bras. Biol., 36: 736.

Aradus angustellus: Kormilev and Froeschner, 1987. Entomogr., 5: 36.

Aradus angustellus: Heiss, 1993. Mitt. der Münch. Ent. Ges., 83: 121.

Aradus angustellus: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 765.

Material examined: CHUBUT: Piedra Parada, 43° 39' 22''S, 69° 17' 08''W, 28-III-45, Castellanos col., Museo Argentino de Ciencias Naturales, 3 specimens (FML). RIO NEGRO: Lago Mascarol, 41° 10' 59''S, 71° 24' 20''W, 6-III-41, Velaro, col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); El Bolsón, 41° 57' 51''S, 71° 30' 58''W, 12-II-49, Monrós col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); El Tronador, 41° 06' 14''S, 71° 21' 46''W, II-46, Velaro, col., Museo Argentino de Ciencias Naturales, 1 specimen (FML). SANTA CRUZ: Lago Argentino, 50° 20' 03''S, 72° 16' 16''W, 22-I-53, Willink, col., Museo Argentino de Ciencias Naturales, 1 specimen (FML), Lago Posadas, 47° 30'42''S, 71° 46'37''W, Dibon, col., 2 specimens (MLP).

Distribution in Argentina: Buenos Aires; Córdoba; Chaco; Chubut: Piedra Parada; Río Negro: Bariloche, Lago Mascardi, El Tronador; El Bolsón. Santa Cruz: Lago Posadas, Lago Argentino, Patagonia Austral.

Distribution in others countries: Chile: Cordilleras de Ovalle. Peru: Cuzco: Urubamba, 2863 m.

***Aradus brasiliensis* Usinger 1940**

- Aradus brasiliensis* Usinger, 1940. Rev. Ent., 11(3): 630.
Aradus brasiliensis: Drake, 1942. Rev. Ent., 13: 151.
Aradus brasiliensis: Wygodzinsky, 1943. Rev. Ent., 14(3): 562.
Aradus brasiliensis: Wygodzinsky, 1944. Rev. Ent., 15(3): 329.
Aradus brasiliensis: Kormilev, 1951. Com. Inst. Nac. Inv. Cien. Nat. Bs. As., Zool 2 (6):88.
Aradus brasiliensis: Kormilev and Froeschner, 1987. Entomogr., 5: 39.
Aradus brasiliensis: Heiss, 1994. Jour. of the New York Entomol. Soc., 102 (1): 103.

Material examined: MISIONES: Iguazú, 25° 40' 13'' S, 54° 26' 21'' W, 24-II-45, Mayorand-Willink-Golbach cols., Museo Argentino de Ciencias Naturales, 2 specimens (FML); 13-III-45, Hayward-Willink-Golbach cols., 5 specimens (FML); 10.XI-73, Willink-Tomsic cols., 1 specimen (FML).

Distribution in Argentina: Misiones: Iguazú.

Distribution in others countries: Brazil: Santa Catarina: Nova Teutonia. Paraguay: San Bernardino.

***Aradus mexicanus* Usinger 1936**

- Aradus mexicanus* Usinger, 1936. Ann. Ent. Soc. Am. 29: 503.
Aradus mexicanus: Wygodzinsky, 1943. Rev. Ent., 14(3): 502.
Aradus mexicanus: Wygodzinsky, 1944. Rev. Ent., 15(3): 329.
Aradus mexicanus: Kormilev, 1951. Com. Inst. Nac. Inv. Cien. Nat. Bs. As., Zool 2(6): 89.
Aradus mexicanus: Kormilev, 1962. Ark. Zool., ser. 2, 15(14): 256.
Aradus mexicanus: Kormilev and Froeschner, 1987. Entomogr., 5: 49.
Aradus mexicanus: Heiss, 1994. Jour. of the New York Entomol. Soc., 102(1): 103.
Aradus mexicanus: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 765.

Material examined: MISIONES: Puerto Londero, 27° 22' 41.57'' S, 54° 26' 13.04'' W, IX-47, 1 specimen (MACN); San Javier, 27° 52' 18.92'' S, 55° 08' 20.07'' W, IX-47, 1 specimen (MACN); TUCUMÁN: Horco Molle, 26° 56' 06'' S, 65° 17' 44.50'' W, 22-XI-64, Haedo-Rossi cols., 3 specimens (FML).

Distribution in Argentina: Misiones: Puerto Londero; Tucumán: Horco Molle.

Distribution in others countries: Brazil: Espirito Santo. Mexico: Temascaltepec.

***Aradus penningtoni* Drake 1942**

In: <http://collections.nmnh.si.edu/search/ento/>

- Aradus penningtoni* Drake, 1942. Rev. Ent., 13: 151.
Aradus penningtoni: Wygodzinsky, 1943. Rev. Ent., 14(3): 502.
Aradus penningtoni: Wygodzinsky, 1944. Rev. Ent., 15(3): 329.
Aradus penningtoni: Pirán, 1948. Acta Zool. Lilloana, 5: 6.
Aradus penningtoni: Kormilev, 1951. Com. Inst. Nac. Inv. Cien. Nat. Bs. As., Zool 2(6): 86.
Aradus penningtoni: Kormilev, 1968. Pap. Avul. Zool., 22(6): 47.
Aradus penningtoni: Viana and Williner, 1978. Acta Scient., ser. Entomol., 11: 75.
Aradus penningtoni: Kormilev and Froeschner, 1987. Entomogr., 5: 51.
Aradus penningtoni: Heiss, 1994. Jour. of the New York Entomol. Soc., 102(1): 103.
Aradus penningtoni: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 765.

Material examined: BUENOS AIRES: La Plata, 34° 55'02'' S, 57° 56' 59'' W, 30-X-44, Museo Argentino de Ciencias Naturales, 1 specimen (MLP). CHACO: Resistencia, 27° 27'05'' S, 58° 59'10'' W, 21-XII-39, Benitez col, 4 specimens (MLP); Campos del Cielo, 27° 20'52'' S, 61° 41'52'' W, 1954, Museo Argentino de Ciencias Naturales, 2 specimens (MLP), XII-48, Benítez-Golbach cols., Museo Argentino de Ciencias Naturales, 24 specimens (FML). CORRIENTES: 15-III-39, Denier col., Museo Argentino de Ciencias Naturales, 1 specimen (MLP). FORMOSA: 08-I-39, Denier col.; Misión Laishi, 26° 13' 48'' S, 58° 38' 06'' W, 18-XII-48, Golbach col., Museo Argentino de Ciencias Naturales, 2 specimens (FML); Mojón de Fierro, 26° 02' 58'' S, 58° 03'00,47'' W,

12-XII-48, Golbach col., Museo Argentino de Ciencias Naturales, 1 specimen (FML). MISIONES: Iguazú, 26° 55' 13''S, 54° 27' 03''W, 24-II-45, Hayward-Willink-Golbach cols., Museo Argentino de Ciencias Naturales, 10 specimens (FML); 13-III-45, Hayward-Willink-Golbach cols., 7 specimens, (FML); XII-45, Hayward-Willink-Golbach cols., 1 specimen; 10-XI-73, Willink-Tomsic cols., 4 specimens (FML); 1957, Biraben col., Museo Argentino de Ciencias Naturales, 1 specimen (MLP); Pte Bemberg, 23° 57' 02''S, 54° 37' 10''W, 23-III-45, Hayward-Willink-Golbach cols., Museo Argentino de Ciencias Naturales, 3 specimens (FML); Pindapoy, 27° 35' 41''S, 55° 49' 21''W, 27-VI-37, Drake col., Museo Argentino de Ciencias Naturales, 1 specimen (MLP). SANTA FÉ: Drake col, Museo Argentino de Ciencias Naturales, 5 specimens (MLP); Villa Guillermina, 28° 14' 36,59''S, 59° 27' 10,30''W, 18-II-46, Hayward-Willink cols., Museo Argentino de Ciencias Naturales, 95 specimens (FML). SANTIAGO DEL ESTERO: 1935, Fernandez col., Museo Argentino de Ciencias Naturales, 3 specimens (MLP). TUCUMÁN: 19-XI-46, Golbach col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); I-56, Golbach col., 2 specimens (FML); Horco Molle, 26° 56' 44''S, 65° 17' 28''W, 22-XI-64, Rossi col., 3 specimens (FML).

Distribution in Argentina: Buenos Aires: Capital, Devoto, La Plata; Chaco: Charata, Colonia Benítez, Fontana, Puerto La Plata, Reconquista, Resistencia; Campos de Cielo. Córdoba: Córdoba; Corrientes: San Cosme; Formosa: Clorinda, Isla de Oro, Misión Laishi, Zona Laguna La Oca; Jujuy: Ledesma; La Rioja: Department Belgrano, Iliar; Misiones: Iguazú, Puerto Bemberg, Pindapoy; Santa Fé: Villa Guillermina. Santiago del Estero: Campos del Cielo, Río Salado; Río Negro: Río Colorado; Tucumán: Horco Molle.

Distribution in others countries: Brazil: Chapada; Mato Grosso: Salobra, Corumbá; Serra do Urucum. Paraguay: Horqueta.

Subfamily Calisiinae Stål, 1873

Calisaria Stål, 1873. Kongl. Svenska Vet.-Akad. Handl., 11(2): 138.

Calisiinae Usinger and Matsuda, 1959. Classif. Aradidae, p. 92.

Genus *Calisius* Stål, 1860

Calisius Stål, 1860. Kongl. Svenska Vet.-Akad. Handl., 2(7): 67. Type-species: *Calisius papillipes* Stål monobasic.

Aradosyrtris Costa, 1864. Annuario del Museo Zoologico della Università di Napoli, 2: 132. Type-species: *Aradosyrtris Ghiliani* Costa, monobasic. Synonymized by Bergroth, 1894. Entomol. Tidsk., 15: 98.

Diagnosis: body oblong-oval but not very broad, with abdomen round; head about as long as wide, or in a few species, much shorter; pronotum usually with a distinct anterior collar and a faint to distinct transverse impression across middle, the disk with four longitudinal rows of tubercles, lateral margins with prominent tubercles, posterior margin sinuate; scutellum with four tubercles more or less distinct at base and overlapping slightly the base of pronotum; abdomen very diverse in form but almost always with a lower row of tubercles on connexival edges, three to each segment.

Species of *Calisius* Ericson, 1842

Anterior process of the head more robust, rounded; slender antennae with the segments increasing in length from the first to the four. Posterior lobe of pronotum swollen with four longitudinal rows of tubercles. Scutellum length and width completely covering the dorsum; pygophore of the male big, dorsocaudal or caudal in position, clearly visible from above *Calisius confusus* Kormilev

Calisius confusus Kormilev 1953

Calisius confusus Kormilev, 1953a. Acta Zool. Lilloana, 13: 216.

Calisius confusus: Kormilev and Froeschner, 1987. Entomogr., 5: 59.

Distribution in Argentina: Tucumán.

Distribution in others countries: Brazil: Santa Catarina: Nova Teutonia.

Subfamily Isoderminae Stål, 1873

Figs 4C–D

Isodermina Stål, 1873. Kongl. Svenska Vet.-Akad. Handl., 11(2): 135.

Isoderminae Wygodzinsky, 1946. Rev. Entomol., 17(1–2): 266.

Genus *Isodermus* Erichson, 1842

Figs 1D, 4C–D

Isodermus Erichson, 1842. Ark. für Natur., 8: 281. Type-species: *Isodermus planus* Erichson, monobasic.

Anchomichon Spinola, 1852. Hist. Chile, Zool., 7: 214. Type-species: *Anchomichon Gayi* Spinola, monobasic. Synonymized by Stål, 1873. Kongl. Svenska Vet.-Akad. Handl., 11(2): 147.

Ecpiestocoris Blanchard, 1852. Hist. Chile, Zool., 7: 223. Type-species: *Ecpiestocoris castaneus* Blanchard, a junior synonym of *Anchomichon "Gayi"* Spinola, monobasic. Synonymized by Wygodzinsky, 1946. Rev. Entomol., 17: 268.

Diagnosis: macropterous, with wings sometimes broken off; head about as long as wide across eyes, with a constricted neck region; the juga well developed on either side, extending beyond middle of clypeus; rostrum with the first and second segment very short, third longer and thicker, fourth longest; ventral surface of head without bucculae or rostral groove; corium scarcely distinguished from membrane, separated by an ill-defined transverse, sinuate pale line of weakness at level of apex of scutellum; abdomen polished.

Species of *Isodermus* Erichson

Antennae slender, second segment not strongly thickened anteriorly, third segment antennal as long as fourth. Abdomen dilated and much wider than thorax. Tibia strongly thickened apically. Seven ventral segment on either side of bilobed plates elongate, subtriangular in female ***Isodermus gayi* (Spinola)** (Fig. 4C–D).

Isodermus gayi (Spinola 1852)

Anchomichon gayi Spinola, 1852. Hist. Chile, Zool., 7: 216.

Ecpiestocoris castaneus Blanchard, 1852. Hist. Chile, Zool., 7: 223.

Mezira patagonica Stål, 1859. Svenska Freg. Eugenies Resa, 3: 260.

Anchomichon gayi: Signoret, 1963. Ann. Soc. Entomol. Fr. 4(3): 577.

Brachyrhynchus gayi: Walker, 1873. Cat. Hem. Het. of the British Museum, VII: 9.

Isodermus gayi: Stål, 1873. Svenska Vet.-Akad. Handl., 11(2): 147.

Isodermus gayi: Berg, 1879. An. Soc. Cient. Arg.; 7: 46.

Isodermus gayi: Signoret, 1885. Ann. Soc. Entomol. Fr. 6(5): 65.

Isodermus gayi: Berg, 1896. Ann Mus. Nac. Buenos Aires, V: 131.

Isodermus gayi: Pennington, 1921., p. 17.

Isodermus gayi: Wygodzinsky, 1946. Rev. Entomol., 17(1–2): 266.

Isodermus gayi: Pirán, 1948. Acta Zool. Lilloana, 5: 16.

Isodermus gayi: Kormilev, 1951. Com. Del Ins. Nac. De Inv. De las Cienc. Nat., 2(6): 93.

Isodermus gayi: Blöte, 1965. Zool. Verh., 75: 3.

Isodermus gayi: Kormilev, 1975. Occ. Pap. Cal. Acad. of Sci., 122: 3.

Isodermus gayi: Kormilev and Froeschner, 1987. Entomogr., 5: 94.

Isodermus gayi: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 766.

Material examined: RÍO NEGRO: El Tronador, 40° 16' 14''S, 71° 48' 46''W, II-46, Velaro col., Museo Argentino de Ciencias Naturales, 1 specimen (FML). SANTA CRUZ: Lago Argentino, 50° 20' 03''S, 72° 16' 16''W, 25-II-53, Willink col., Museo Argentino de Ciencias Naturales, 48 specimens (FML); Río Las Vueltas, 49° 23' 43''S, 72° 45' 06''W, I-44, Lenko col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); Ventisquero, Moreno, Parque Nacional los Glaciares, 46° 26' 00''S, 67° 31' 41''W, 29-I-77, Stange col., 28 specimens (FML). TIERRA DEL FUEGO: Parque Nacional de Tierra del Fuego, 54° 39' 57''S, 68° 30' 10''W, 22-I-77, Stange col., 20 specimens (FML); 1975, Stål col., P. Wygodzinsky det., Museo Argentino de Ciencias Naturales, 1 specimen (MLP).

Distribution in Argentina: Neuquén: San Martín de los Andes; Río Negro: El Tronador; Santa Cruz: Lago Argentino, Río Las Vueltas; Ventisquero, Moreno, Parque Nacional los Glaciares; Tierra del Fuego: Puerto Arenas, Ushuaia. Patagonia.

Distribution in others countries: Chile: los Muermos. Puntarenas

Subfamily Mezirinae Oshanin, 1908

Figs 5A–D, 6A–D, 7A–D, 8A–D, 9A–D, 10A–B

Brachyrhynquides Amyot and Serville, 1843. His. Nat., Hém., pages 41 and 303.

Mezirina Oshanin, 1908. Ann. Mus. Zool. Acad. Imp. des Sci., 1(2): 478.

Dysodiidae Reuter, 1912. Öfv. Kongl. Svenka Vet.-Soc. För., 54: 33.

Mezirinae Van Duzee, 1916. New York Entomol. Soc., p. 16.

Chelonocorinae Miller, 1938. Ann. Mag. Nat. Hist., serie 11, 1: 499.

Key to genera of Mezirinae of Argentina

1. Granular surface without pubescence; pronotum with lateral margins sinuate; anterior angles briefly, roundly lamellate but never produced as strong lobes; hind margin very slightly concave; scutellum slightly longer than pronotum *Neuroctenus* Fieber (Figs 9A–D, 10A–B)
- 1'. Surface with coarse granules; pronotum with lateral margins more or less dilated forming a narrow anterior lobe; hind margin nearly straight; scutellum much shorter than pronotum..... 2
2. Body beset with long erect hairs, straight or curved. Membrane without veins *Aphleboderhis* Stål (Fig 5A)
- 2'. Body without or with few hairs conspicuous. Membrane with veins 3
3. Pronotum laterally expanded lobes broad (Fig 4B), sickle-shaped, sides of pronotum with prominent tooth-like granules in one or two rows; abdomen broadly rounded, connexiva with prominent rounded lateral lobes and granulate margins edges lobe. Hemelytra complete reaching to hind margin of 6th tergite *Dysodius* Lepeletier and Serville (Fig 5B)
- 3'. Pronotum slightly or not expanded laterally, sides of pronotum without prominent tooth-like granules in one or two rows; abdomen not rounded and without lateral lobes. Hemelytra complete reaching over of 7 th tergite 4
4. Antennae long, anteniferous tubercles relatively short and usually spine-like not exceed level of outer margins of eyes. Rostral groove distinct, narrow and paralell-sided and terminating at constricted neck region *Mezira* Amyot and Serville (Figs 5D, 6A–E, 7A–D, 8A–D)
- 4'. Antennae short (Fig 4C), anteniferous tubercles not short and broadened into plate-like lobes which are rounded and exceed level of outer marging of eyes. Rostral groove distinctly delimited for carinae at the bottom, which are slightly sinuate 5
5. The genae exceedingly wide, broadened anteriorly. Scutellum about as long as pronotum on median line *Lobocara* Bergroth (Fig 5C)
- 5'. The genae not exceedingly wide. Scutellum much shorter than pronotum on median line with a prominent longitudinal carina 6
6. Upper surface of head with clypeus narrowly elevated, with a pair of longitudinal rows of tubercles placed to each other behind clypeus. *Placogenys* Usinger and Matsuda
- 6'. Upper surface of head without clypeus narrowly elevated, with a pair of longitudinal rows of tubercles placed to each other behind clypeus. 7
7. Scutellum shorter than pronotum, the sides sinuate and carinate. Tarsi with short but distinct arolia between the claws. Wings present *Notapictinus* Usinger and Matsuda (Fig 10B)
- 7'. Scutellum formed as a triangular area produced backward at middle but completely exposed and narrowed laterally to just behind humeral angles where a small rounded lobe is produced on either side beyond level of humeral angles. Tarsi with claws bearing distinct arolia and a median much longer seta enlarged and curved at tip. Wings absent *Kormilevia* Usinger and Matsuda

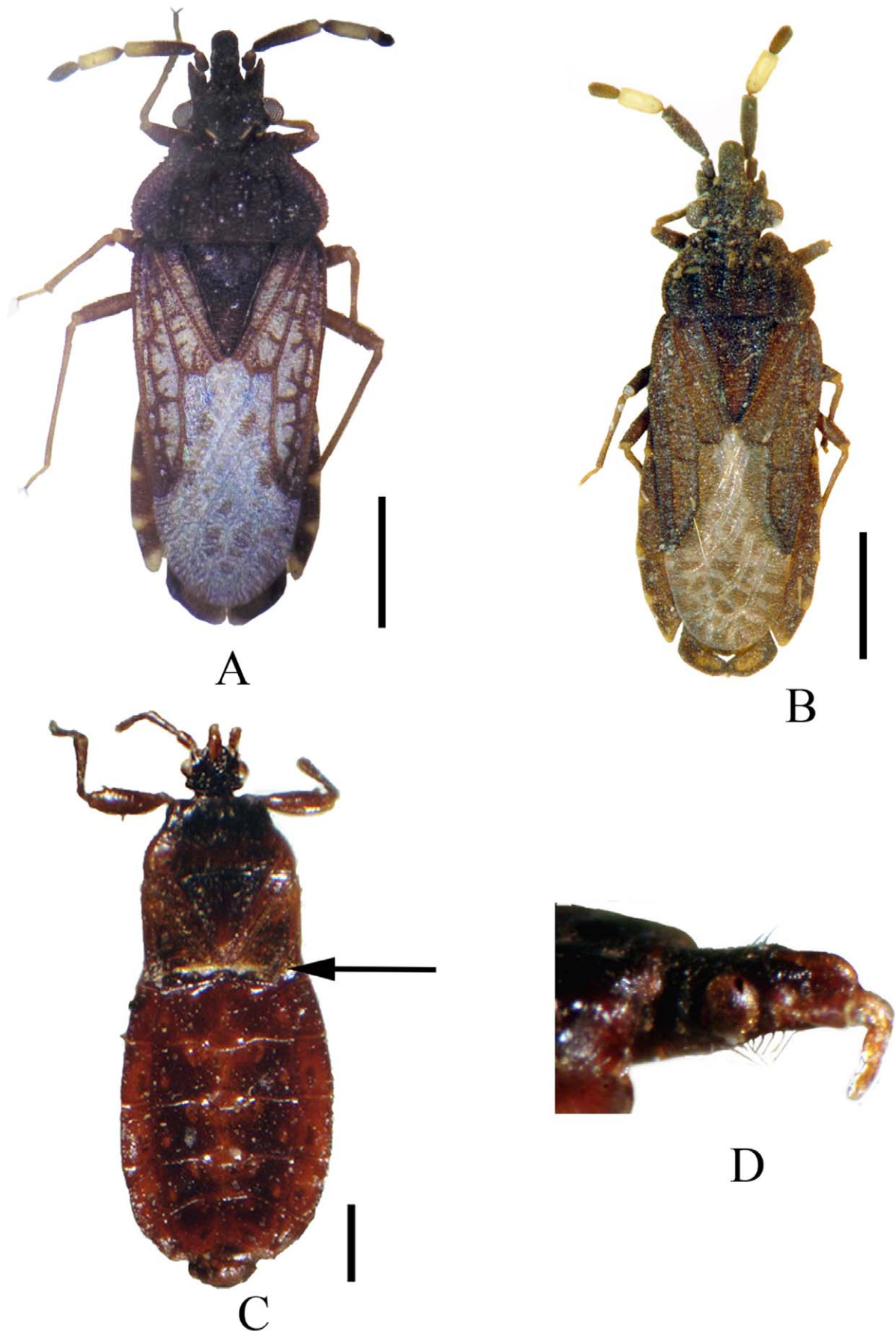


FIGURE 4. Subfamily Aradinae and Isoderminae. Dorsal view *Aradus mexicanus*: A; Dorsal view *Aradus penningtoni*: B; Dorsal view and forewings with line of weakness *Isodermus gayi*: C; Base of labium free and exposed *Isodermus gayi*: D.

Genus *Aphleboderrhis* Stål, 1860

Fig 5A

Aphleboderrhis Stål, 1860. Kongl. Svenska Vet.-Akad. Handl., 2(7): 67. Type-species: *Aphleboderrhis pilosa* Stål, monobasic.

Diagnosis: Body oval and slightly to conspicuously attenuated anteriorly; beset with long erect hairs; rostrum arising distinctly behind apex of head from a slit-like opening, the rostral groove very prominent; anterior margin of pronotum forming a distinct collar; scutellum much shorter than pronotum; second tergal segment distinctly separated from third by an arched suture on either side.

Key to the species of *Aphleboderrhis* Stål of Argentina

1. Anterior lobe of pronotum almost equal as posterior lobe, without tubercles above, anterior angles broadly rounded, lateral notch of pronotum deep. *Aphleboderrhis comata* Champion
- 1'. Anterior lobe of pronotum trapezoidal, distinctly narrower than the posterior, anteriorly in the middle with two elevated tubercles, angled anterior angles, lateral notch of pronotum slightly marked. *Aphleboderrhis pilosa* Stål (Fig 5A)

***Aphleboderrhis comata* Champion 1898**

Aphleboderrhis comata Champion, 1898. Biol. Centr. Amer., Rhynch, 2: 79.

Aphleboderrhis comata: Drake and Harris, 1944. Ann. Carnegie Mus., 30: 41.

Aphleboderrhis comata: Kormilev, 1953a. Acta Zool. Lilloana, 13: 219.

Aphleboderrhis comata: Kormilev, 1975. Occ. Pap. Cal. Acad. Sci., 122: 7.

Aphleboderrhis comata: Kormilev and Froeschner, 1987. Entomogr., 5: 98.

Aphleboderrhis comata: Heiss and Moragues, 2009. Linzer Biol. Beitr., 41(2): 1665.

Distribution in Argentina: Misiones

Distribution in others countries: Brazil: Chapada; Pará: Santarém. French Guyana: Amazon Nature Lodge; PK 5 piste Coralie; Régina, RN2 PK 125 + 3, PK 37 Montagne de Kaw; RN2 PK 22; Montagne des Chevaux; RN2PK 65, Tibourou. Peru: Tingo Maria: Monzon Valley. Panama: Chiriqui: Bugaba: Volcan.

***Aphleboderrhis pilosa* Stål 1860**

In: http://www2.nrm.se/en/het_nrm/p/aphleboderrhis_pilosa.html

Aphleboderrhis pilosa Stål, 1860. Svenska Vet.-Akad. Handl., 2(7): 67.

Aphleboderrhis pilosa: Stål, 1873. Svenska Vet.-Akad. Handl., 11(2): 142.

Aphleboderrhis pilosa: Champion, 1898. Biol. Centr. Amer., Rhynch. 2: 78.

Aphleboderrhis pilosa: Drake and Harris, 1944. Ann. Carn. Mus., 30: 41.

Aphleboderrhis pilosa: Kormilev, 1952b. Pan Pac. Ent., 23(2): 122.

Aphleboderrhis pilosa: Kormilev, 1953a. Acta Zool. Lilloana, 13: 219.

Aphleboderrhis pilosa: Blöte, 1965. Zool. Verh., 75: 29.

Aphleboderrhis pilosa: Kormilev and Froeschner, 1987. Entomogr., 5: 98.

Aphleboderrhis pilosa: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 766.

Material examined: JUJUY, 30-I-46, Biraben, col., 5 specimens (MLP). TUCUMÁN: 1933, 18 specimens (MLP); Tafí del Valle, 26° 50' 43.98" S-65° 42' 01.05" W, 28-XI-51, Golbach, col., Museo Argentino de Ciencias Naturales, 2 specimens, (FML).

Distribution in Argentina: Jujuy; Misiones: Santa María; Tucumán: Siambón, Tafí del Valle.

Distribution in others countries: Brazil: Rio de Janeiro. Paraguay: Independencia. Peru: Marcapata.

Genus *Dysodius* Lepeletier and Servile, 1828

Fig 5B

Dysodius Lepeletier and Servile, 1828. En. Meth., 10: 654. Type-species: *Acanthia lunata* Fabricius, original designation.
Depodius Stål, 1862. Stett. Entomol. Zeit., 23: 437.

Diagnosis: Body form oval, sides of body more or less lobulate anteriorly and on abdomen, surface with coarse granules and with minute to short but distinct adpressed hairs; genae extending beyond clypeus; antenniferous tubercles moderately to strongly produced, not reaching level of apex of clypeus; eyes relatively small; antennae slightly longer than width across eyes; sides of pronotum with prominent tooth-like granules in one or two rows; scutellum distinctly shorter than pronotum on median line; second tergal segment distinctly separated from third by prominent sutures, the remaining tergites separated by glabrous carinae and the third tergite divided by a very fine granular and low line at middle.

Species of *Dysodius* Lepeletier and Servile

Lateral margins of pronotum and abdomen roughly crenulate. Antennae slender, distal 2/3 of first segment with large tubercles, segments II to IV with weaker granulation and short pubescens, connexivum with prominent rounded lateral lobes and granulate margins *Dysodius lunatus* (Fabricius) (Fig 5B).

***Dysodius lunatus* (Fabricius 1775)**

Acanthia lunata Fabricius, 1775. Syst. Ent., p. 694.

La Punaise araignée Stoll, 1780. Punaises, 53.

Acanthia lunata: Fabricius, 1794. Ent. Syst., 4(1–4): 72.

Aradus lunatus: Fabricius, 1803. Syst. Rhyng: 117.

Aradus lunatus: Wolff, 1811. Icon. Cimin., 5: 168.

Dysodius lunatus: Burmeister, 1835. Hand. Ent., 2: 255.

Aradus (Dysodius) lunatus: Guérin, 1838. Icon. Reg. Anim., Ins., 3: 349.

Dysodius lunatus: Blanchard, 1840. Hist. Nat., Ins., 3: 11.

Dysodius lunatus: Amyot and Servile, 1843. His. Nat., Hém.: 304.

Dysodius lunatus: Herrich-Schaeffer, 1848. Wanz. Ins., 8: 119.

Dysodius lunatus: Stål, 1862. Stett. Ent. Zeit., 23: 437.

Dysodius lunatus: Stål, 1868. Kongl. Svenska Vet.-Akad. Handl, 7(11): 95.

Dysodius lunatus: Stål 1873. Kongl. Svenska Vet.-Akad. Handl, 11(2): 143.

Dysodius lunatus: Walker, 1873. Cat. Hem. Het. Brit. Mus., 7: 8.

Dysodius lunatus: Uhler, 1884. Stand. Nat. Hist., 2: 284.

Dysodius lunatus: Bergroth, 1886. Verh Wien. Zool., bot. Ges., 36: 55.

Dysodius lunatus: Berg, 1892. An. Soc. Cien. Arg., 34: 203.

Dysodius lunatus: Champion, 1898. Biol. Centr. Amer, Rhynch., 2: 86.

Mezira lunata: Pennington, 1921. Lista Hem. Het. Rep. Arg., p. 17.

Dysodius lunatus: Drake and Harris, 1944. Ann. Carn. Mus. 30: 41.

Dysodius lunatus: Kormilev, 1953a. Acta zool. Lilloana, 13: 222.

Dysodius lunatus: Kormilev, 1962. Ark. Zool., 15(14): 259. Brazil: Amazonas.

Dysodius lunatus: Kormilev, 1965. Opusc. Zool., 84: 6. Brazil: Amazonas: Mission Canaburi, Canal Maturach. Bolivia: Chaparé.

Dysodius lunatus vandoesburgi Blöte, 1965. Zool. Verh., 75: 31. Synonymized by Heiss, 1990: 280.

Dysodius lunatus ssp vandoesburgi: Kormilev, 1968. Pap. Avul. Zool., 22(6): 55.

Dysodius lunatus: Kormilev, 1975. Occ. Pap. of the Cal. Acad. of Sci., 122: 9.

Dysodius lunatus: Kormilev and Froeschner, 1987. Entomogr., 5: 137.

Dysodius lunatus: Heiss, 1990. Anales Instit. Biol. Univ. Nac. Auton. Mexico, ser. Zool., 61(2): 282.

Dysodius lunatus: Maes, 1991. Rev. Nica. Ent., 15: 49.

Material examined: CHACO: 1994, 1 specimen (MLP).

Distribution in Argentina: Chaco.

Distribution in others countries: Brazil: Santa Catarina: Amazonas Mission Canaburi, Canal Maturach, Manaus; Pará: Santarem; Mato Grosso; São Paulo de Olivença. British Guyana. Bolivia: Santa Cruz: Ichilo: Buenavista; Chaparé, Yungas de Coroico; Cochabamba. Colombia: Sierra Nevada de Santa Marta; Chiriguana dist. Costa Rica: Cache, Punta Arenas; Limon: San José: Río Barbilla. Ecuador: Sucula Masca, Limoncocha; Pichincha: Pto. Quito; Napo. French Guiana: Charvein. Guatemala: Tikal, Cubilguitz, Cahabon, Panzos, Chacoj, San Juan, Tamahu in Vera Paz, El Reposo. Honduras: Rio Grande: San Pedro Sula. Mexico: Veracruz, Yucatán, Quintana Roo, Oaxaca, Campeche. Nicaragua: León; Managua; Chontales. Panama: Chiriqui: Bugabá: Volcán, Coiba; Colon: la Guaira; Panama Prov.: Chepo, Portobelo; Barro Colorado Islands. Peru: Cuzco: Marcapata; Madre de Dios: Puerto Maldonado; Panguana Station; Rio Pachitea, Altamarani, Chutihuara Beni; Iquitos; Tarapoto. Surinam: Bokopondo: Tonka; Coppename River; Kabalebo. Trinidad y Tobago: Arima Venezuela: Haut Savare; Caracas.

Genus *Kormilevia* Usinger and Matsuda, 1959

Kormilevia Usinger and Matsuda, 1959. Classification of the Aradidae, pp. 201. Type-species: *Kormilevia setifera* Usinger and Matsuda, original designation.

Diagnosis: Apterous; body form elongate oval; anterior process of head prominent, with raised clypeus and with genae extending forward, antenniferous tubercles moderately developed with the outer margins rounded; anterior margin of pronotum with a distinct collar; scutellum formed as a triangular area produced backward at middle but completely exposed and narrowed laterally; abdominal disk with second segment distinctly separated from third by a transverse suture and with a row of coarse punctures along its middle; third, fourth, fifth and sixth tergites progressively shorter, connexival plates distinctly separated, narrowed anteriorly, widened posteriorly.

Species of *Kormilevia* Usinger and Matsuda

Antenniferous tubercles shorter than an eye. Dorsum rather flat, the first tergite deeply separated from the second. Connexivum is distinctly separated from the dorsum, less distinctly from the venter
 *Kormilevia dureti* (Kormilev)

Kormilevia dureti (Kormilev 1953)

Acaricoris dureti Kormilev, 1953b. Dus., 4(2): 125

Kormilevia dureti: Usinger and Matsuda, 1959. Classif. Aradidae, p. 331.

Kormilevia dureti: Kormilev and Froeschner, 1987. Entomogr., 5: 144.

Distribution in Argentina: Misiones: Iguazú.

Genus *Lobocara* Bergroth, 1892

Fig 5C

Lobocara Bergroth, 1892. Revue d'Entomologie, 11 : 259. Type-species: *Lobocara ovata* Bergroth, designated by Usinger and Matsuda, 1959. Classification of the Aradidae, p. 358.

Diagnosis: Body oval and slightly attenuated anteriorly, the surface granular and beset with curious flat pale scales with occasional very short hairs as well; head about as long as wide, the clypeus prominent, the genae exceedingly wide; posterior lobe of pronotum wider than anterior with prominent humeri, hind lobe granular; scutellum about as long as pronotum on median line; connexival plates distinct, with glabrous spots on inner half and with slightly depressed areas on outer portions.

Species of *Lobocara* Bergroth

The clypeus prominent; antennae short, the first segment not reaching level of apex of anterior process; second segment shortest; third longer; fourth slightly enlarged; pronotum slightly shorter than head and with anterolateral margins rounded and converging to collar *Lobocara oblonga* Bergroth (Fig. 5C).

Lobocara oblonga Bergroth 1892

In: http://www2.nrm.se/en/het_nrm/o/lobocara_oblonga.html

Lobocara oblonga Bergroth, 1892. Rev. d'Ent., 11: 259.

Lobocara oblonga: Champion, 1898. Biol. Centr. Amer., Rhynch., 2: 91.

Lobocara oblonga: Kormilev, 1953a. Acta zool. Lilloana, 13: 223.

Lobocara oblonga: Kormilev, 1962. Ark. Zool., 2(15): 257.

Lobocara oblonga: Kormilev, 1965. Opusc. Zool., 84: 5.

Lobocara oblonga: Blöte, 1965. Zool. Verh., 75: 29.

Lobocara oblonga: Kormilev and Froeschner, 1987. Entomogr., 5: 145.

Lobocara oblonga: Heiss and Moragues, 2009. Linzer Biol. Beitr., 41(2): 1668.

Distribution in Argentina: Misiones.

Distribution in Others Countries: Brazil: Amazonas: Taracua, Tapurucuará on Rio Negro. Bolivia: Coroico. French Guyana, Rémire.

Genus *Mezira* Amyot and Serville, 1843

Figs 1E, 5D, 6A–E, 7A–D, 8A–D

Mezira Amyot and Serville, 1843. His. Nat., Hém., pp. 12, 305. Type-species: *Mezira granulata* Amyot and Serville, preoccupied, next available name is *Brachyrhynchus abdominalis* Stål, monobasic.

Arictus Stål, 1865. Hem. Africana, 3: 31.

Dusius Bergroth, 1894. Entomol. Tidsk., 15: 104.

Diagnosis: Body elongate oval, surface granular and typically without conspicuous hairs; clypeus prominent, with genae well developed, at either side and exceeding apex of clypeus to form a slight cleft or notch in front, the genae usually rounded at sides of apex; antenniferous tubercles relatively short but spine-like, rostrum arising well behind apex of head, rostral groove distinct, narrow and parallel-sided and terminating at constricted neck region; pronotum slightly shorter than head, lateral margins sinuate; hemelytra complete, membrane with distinct irregular veins; spiracles typically all ventral except those of eighth segment lobes and all well set apart from lateral margins

Key to species of *Mezira* Amyot and Serville of Argentina

1. Lateral edges of pronotum without lateral notch; small and elongated species 16
- 1'. Lateral edges of pronotum notched one or two times 2
2. Lateral edges of pronotum two times; between the notched with a fan-shaped process. *Mezira birabeni* Kormilev
- 2'. Lateral edges of pronotum notched once 3
3. Frontal process equal to or longer than the first antennal segment 4
- 3'. Frontal process shorter than the first antennal segment 6
4. Postocular spines of equal length or shorter than eyes; large species piceous *Mezira americana* Spinola (Fig 5D)
- 4'. Postocular spines distinctly larger than eyes; medium sized species reddish brown or testaceous 5
5. Pygophore with a carena elevated backward; reddish brown *Mezira argentinensis* Kormilev (Fig 6A)
- 5'. Pygophore heart-shaped with a median carena slightly raised backward, testaceous. . . *Mezira saltensis* Kormilev (Fig 8B–C)
6. Postocular spines surpassing the eyes 7
- 6'. Postocular spines not exceeding the eyes 9
7. Finely granulated surface of the body; apical process broad; terminal genital segment of the male large; terminal genital segment of the female truncate at the apex, the lobes of the first genital segment short *Mezira regularis* Champion (Fig 7D, 8A)

- 7'. Densely granulated surface of the body 8
8. The third antennal segment about twice the length of the second; postocular spines curved; conexivum bicolor, black-yellow *Mezira granuliger* Stål (Fig 6C)
- 8'. The third antennal segment 1½ times longer than the second; pronotum with strong granulation on the four carinae and the posterior lobe; conexivum unicolor; *Mezira tartagalensis* Kormilev (Fig 8D)
9. Narrower antenniferous spines directed forward or slightly divergent; small species 10
- 9'. Antenniferous spines wider, divergent; largest species. 12
10. Pronotum with a slightly marked transverse depression, anterior lobe carine less pronounced; granulation with fine and very short hairs, often covered with thick wax *Mezira nigripennis* Usinger (Fig 7A)
- 10'. Pronotum with a deep transverse depression, anterior lobe carine elevated; granulation with curved hairs 11
11. Slender antenniferous spines, slightly divergent; postocular spine very thin and short; granulation with conspicuous curved hairs; pygophore heart-shaped; piceous. *Mezira proseni* Kormilev (Fig 7C)
- 11'. Antenniferous spines wider and longer, granulation absent, posterior edge crenulated; postocular spines thin; granulation with thin and short curved hairs; pygophore not heart-shaped; testaceous, darker chorion *Mezira bruchi* Kormilev
12. Antenniferous spines with the interior edge directed obliquely forward; postocular spines very short; conexivum bicolor. *Mezira paragranelia* Kormilev (Fig 7B)
- 12'. Antenniferous spines very wide, with the anterior edge transversal; conexivum unicolor. 13
13. Scutellum more wider than long; antennal segment II shorter than IV *Mezira neonigripennis* Kormilev (Fig 6D–E, 7A)
- a. Frontal process reaches to ½ of the antennal segment I; antenniferous tubercles wide, their anterior border almost transverse; *Mezira neonigripennis neonigripennis* Kormilev
- b. Frontal process reaches to ¾ of the antennal segment I; antenniferous tubercles also narrower, their interior border more oblique. *Mezira neonigripennis misionensis* Kormilev
- 13'. Scutellum more longer than wide; antennal segment II equal than IV 14
14. Process of the head narrower, postocular tubercles prominent; the third antennal segment is subequal in length than the first *Mezira bonaerensis* Kormilev
- 14'. Process of the head dilated; postocular tubercles not prominent; the third antennal segment is longer than the first 15
15. Pronotum with distinct lateral notch; scutellum shorter than wide; the second antennal segment is equal to fourth. *Mezira spissigrada* Kormilev
- 15'. Pronotum without lateral notch; scutellum the same length as width; the second antennal segment is shorter than fourth . . . 16
16. Body elongate-oval; abdomen convex edges. Pronotum transverse depression almost absent; anterior lobe carinae very depressed and indistinct *Mezira reuteri* (Bergroth)
- 16'. Elongated body; the abdomen with parallel edges; pronotum transverse depression defined; anterior lobe carina protuded . . 17
17. Apical angle of corium and posterior angle of abdominal segment VII rounded, valves in the female as long as the tergite IX *Mezira vianai* Kormilev
- 17'. Apical angle of corium and posterior angle of abdominal segment VII acute, valves in the female salient longer than the tergite IX. *Mezira formosa* Kormilev (Fig 6B)

Mezira americana (Spinola 1852)

- Brachyrhinchus americanus* Spinola, 1852. in Gay, Hist. Chile, Zool., 7: 202
- Brachyrhynchus chilensis* Stål, 1854. Ofv. Vet.-Akad. Forh., 11: 237.
- Mezira Americana*: Signoret, 1863. Ann. Soc. Entomol., France, serie 4, 3: 576.
- Brachyrhinchus americanus*: Stål, 1873. Kongl. Svenska Akad. Handl., 11(2): 145.
- Mezira americana*: Reed, 1901. Rev. Chil. Hist. Nat., 5:24.
- Mezira americana*: Porter, 1930. Rev. Chil. Hist.Nat., 34: 149.
- Mezira americana*: Kormilev, 1953a. Acta zool. Lilloana, XIII: 227.
- Mezira Americana*: Blöte, 1965. Zool. Verh., 75: 34.
- Mezira Americana*: Kormilev, 1975. Occ. Pap. Cal. Acad. Sci., 122: 23.
- Mezira americana*: Kormilev and Froeschner, 1987. Entomogr., 5: 148.
- Mezira americana*: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 766.

Material examined: LA RIOJA: W, II-42, Monros col., Museo Argentino de Ciencias Naturales, 2 specimens (FML). NEUQUÉN: 1902, Bruch, col., Museo Argentino de Ciencias Naturales, 3 specimens (MLP); Lago Quillén, 39° 25' 05'' S, 71° 19' 17'' W, Monros col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); Hua-Húm, 40° 06' 56'' S, 71° 39' 39'' W, 22-I-49, 27 specimens (FML), 16-II-46; Museo Argentino de Ciencias Naturales, 2 specimens (FML); 6-XII-46, Hayward col.; 27-I-49, Monros, col., 1 specimen (FML); II-51, Shayovskoy col., 4 specimens (FML). RÍO NEGRO: Nahuel Huapi, Isla Victoria, 40° 07' 22'' S, 71° 21' 36'' W, Museo Argentino de Ciencias Naturales, 5 specimens (MLP).

Distribution in Argentina: Córdoba: El Sauce; La Rioja; Neuquén: Correntoso, Hua-Húm, Lago Nonthuel, Lago Queñi, San Martín de los Andes; Lago Quillén. Río Negro: Isla Victoria, Llao-Llao, Nahuel Huapi, San Carlos de Bariloche.

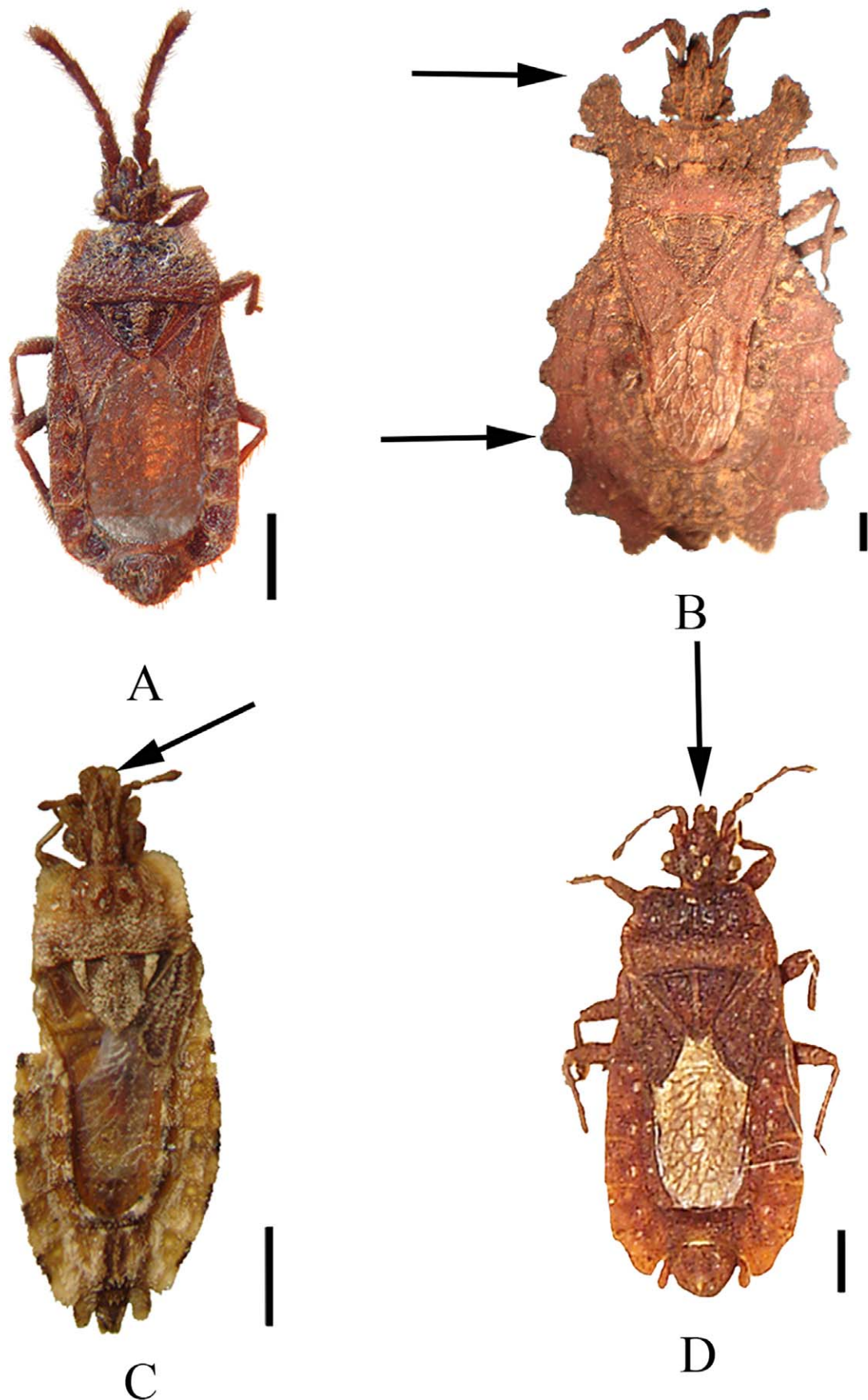


FIGURE 5. Subfamily Mezirinae: Dorsal view *Aphleboderrhis pilosa*: A; Dorsal view, pronotum laterally expanded lobes broad and abdomen broadly rounded *Dysodius lunatus*: B; Dorsal view and genae wide *Lobocara oblonga*: C; Dorsal view and mandibular plates produced anteriorly *Mezira americana*: D.

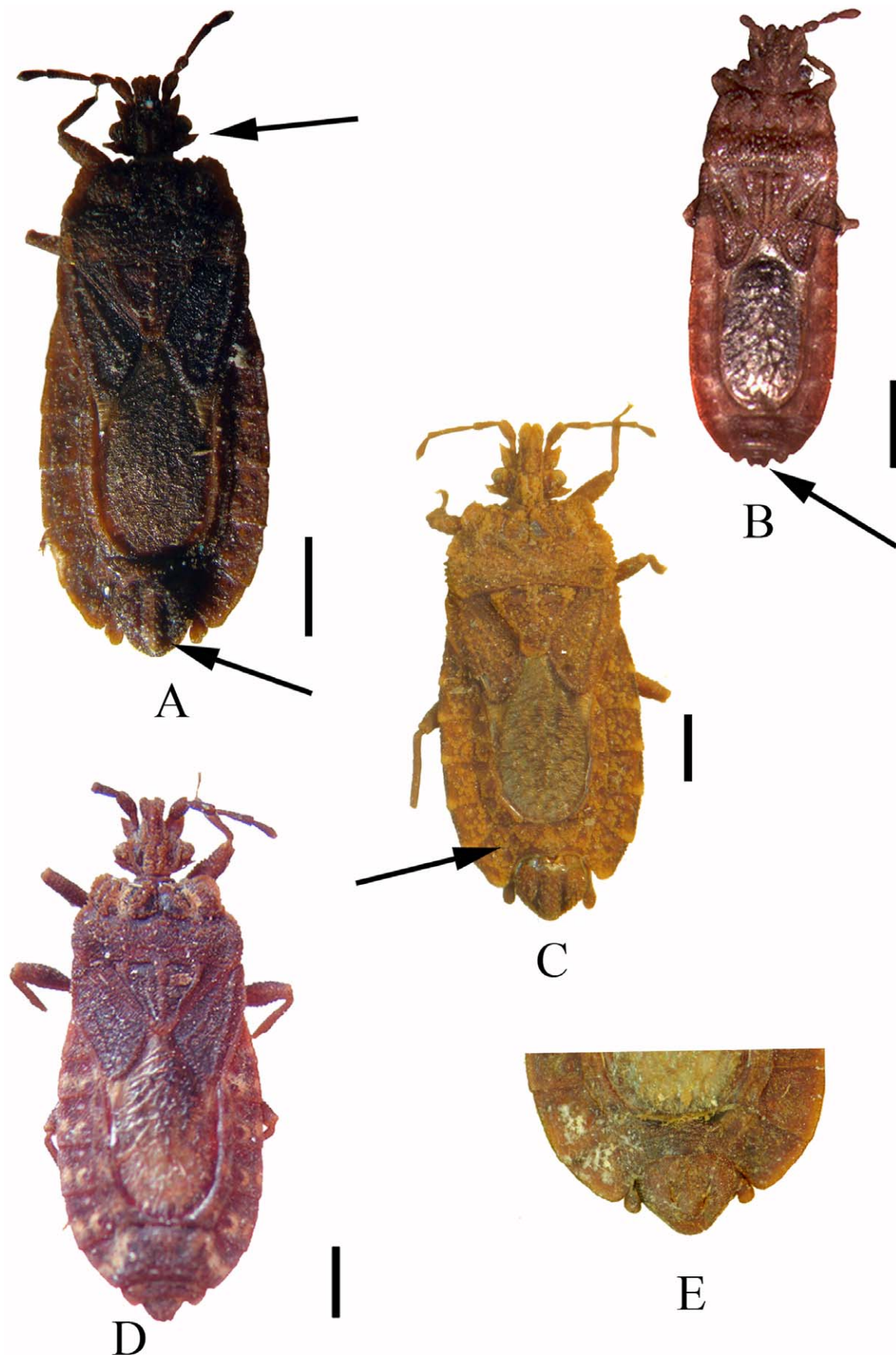


FIGURE 6. Subfamily Mezirinae: Dorsal view, postocular spines and pygophore *Mezira argentinensis*: A; Dorsal view and female valves salient *Mezira formosa*: B; Dorsal view and strong granulation *Mezira granuliger*: C; Dorsal view *Mezira neonigripennis neonigripennis*: D; Male pygophore *Mezira neonigripennis neonigripennis*: E.

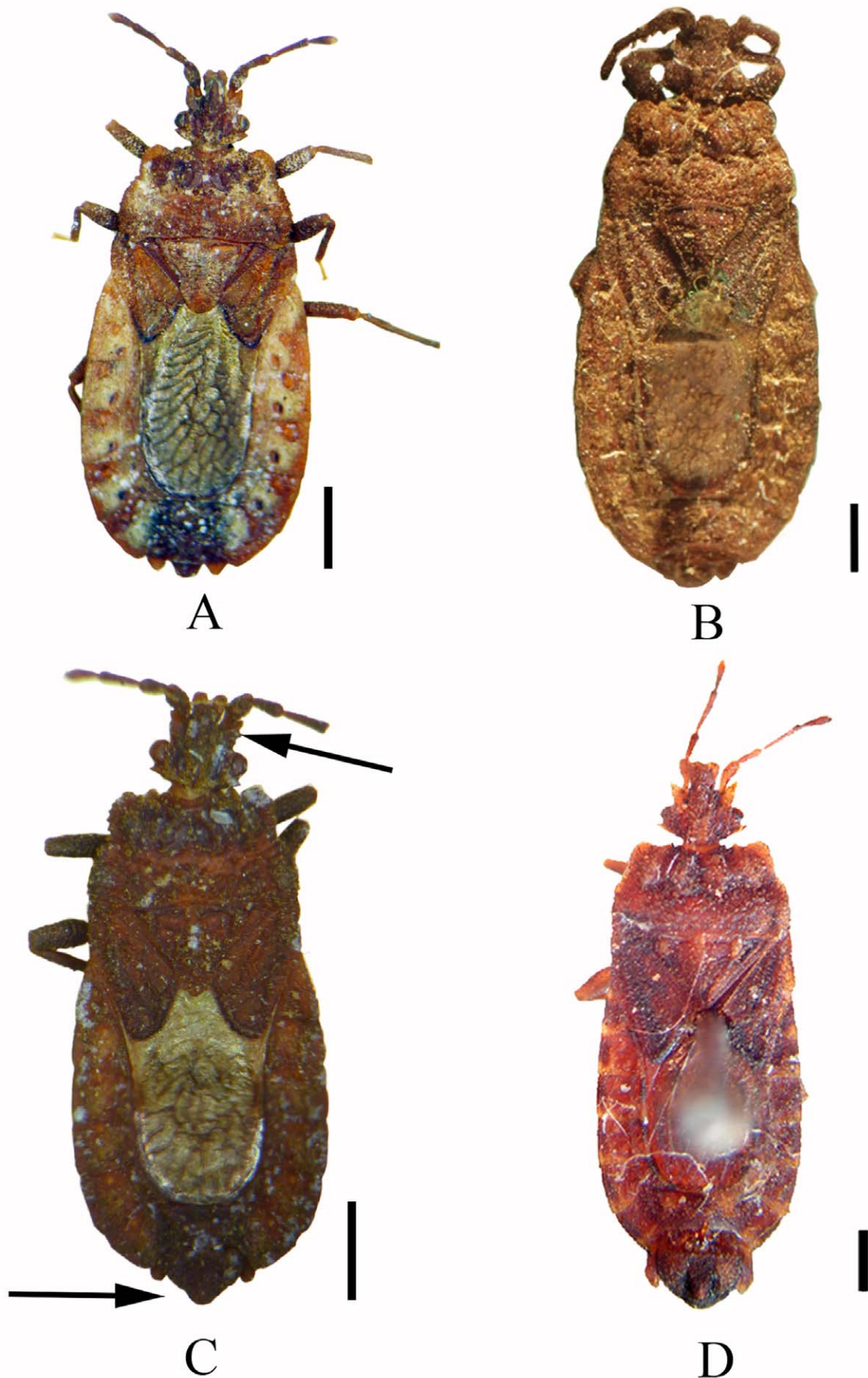


FIGURE 7. Subfamily Mezirinae: Dorsal view *Mezira nigripennis*: A; Dorsal view *Mezira paragraneligera*: B; Dorsal view, postocular spine and pygophore *Mezira proseni*: C; Dorsal view *Mezira regularis*: D.

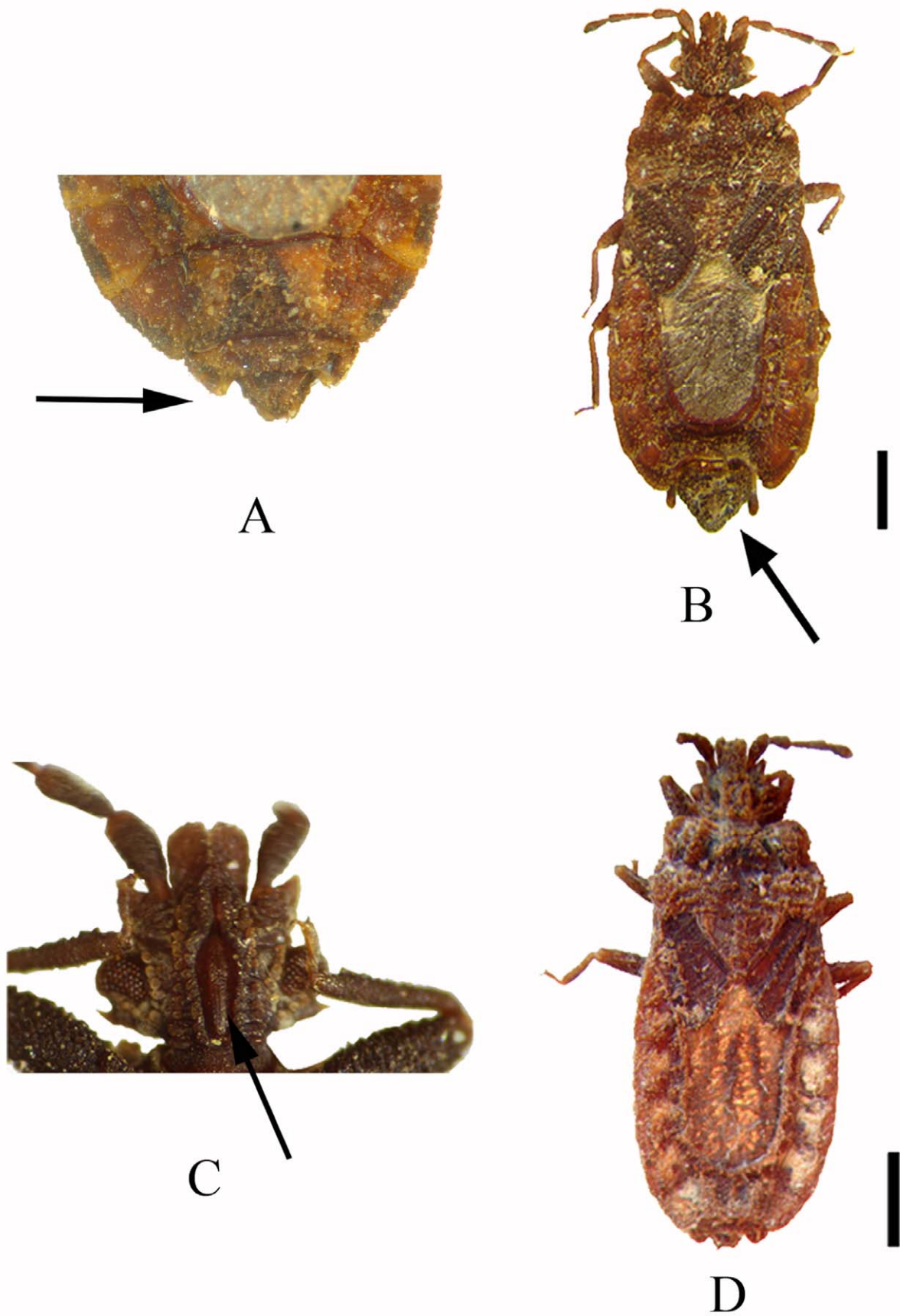


FIGURE 8. Subfamily Mezirinae: Female genitalia *Mezira regularis*: A; Dorsal view and male pygopore *Mezira saltensis*: B; "Close atrium" *Mezira saltensis*: C; Dorsal view *Mezira tartagalensis*: D.

Distribution in others countries: Chile: Los Muermos Forest; Osorno; Puhue, Purranque; 12 Km. NE Pucon, 380 m.; El Abanico, Bio Bio, Lago Llanquihue, Sierra de Nahuelbuta; Cayutué.

***Mezira argentinensis* (Kormilev 1953)**

In: <http://collections.nmnh.si.edu/search/ento>

Mezira argentinensis Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.

Mezira argentinensis: Kormilev, 1975. Occ. Pap. of the Calif. Acad. Sci., 122: 23.

Mezira argentinensis: Kormilev and Froeschner, 1987. Entomogr., 5: 148.

Distribution in Argentina: Córdoba: Caimán; Corrientes: Aguapey; Entre Rios: Gualeguaychú. Misiones: Puerto 17 de Octubre; Santa Fe: Fives Lille. Tucumán: Cerro San Javier.

Distribution in others countries: Brazil: Santa Catarina: Nova Teutonia. Paraguay: Caaguazu. Peru: Tingo María; Monson Valley.

***Mezira birabeni* (Kormilev 1953)**

In: <http://collections.nmnh.si.edu/search/ento>

Mezira birabeni Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.

Mezira birabeni: Kormilev, 1962. Ark. Zool., Ser. 2, 15(14): 260.

Mezira birabeni: Viana and Williner, 1978. Acta Scient., ser. Entomol., 11: 75.

Mezira birabeni: Kormilev and Froeschner, 1987. Entomogr., 5: 149.

Distribution in Argentina: Córdoba: Caminiaga.

***Mezira bonaerensis* Kormilev 1960**

In: <http://collections.nmnh.si.edu/search/ento/>

Mezira bonaerensis Kormilev, 1960a. An. de la Soc. Cient. Arg., 169(5–6): 89.

Mezira bonaerensis: Kormilev, 1962. Ark. Zool., Ser. 2, 15(14): 265.

Mezira bonaerensis: Kormilev and Froeschner, 1987. Entomogr., 5: 149.

Distribution in Argentina: Buenos Aires: Punta Lara; Córdoba: El Sauce.

***Mezira bruchi* (Kormilev 1953)**

Mezira bruchi Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.

Mezira bruchi: Kormilev, 1962. Ark. Zool., Ser. 2, 15(14): 265.

Mezira bruchi: Viana and Williner, 1972. Acta Scient., ser. Entomol., 5: 27.

Mezira bruchi: Kormilev and Froeschner, 1987. Entomogr., 5: 149.

Mezira bruchi: Bachmann, 1999. Rev. Mus. Arg. Cs Nat., 1(2): 193.

Distribution in Argentina: Cordoba: El Sauce.

***Mezira formosa* (Kormilev 1953)**

In: <http://www.fcnym.unlp.edu.ar/abamuse.html/>

Mezira formosa Kormilev, 1953a. Acta Zool. Lilloana, 13: 226.

Mezira formosa: Kormilev, 1962. Ark. Zool., Ser. 2, 15(14): 260.

Mezira formosa: Kormilev, 1975. Occ. Pap. Cal. Acad. Sci., 122: 19.

Mezira formosa: Kormilev and Froeschner, 1987. Entomogr., 5: 151.

Mezira formosa: Coscarón, 2000. Ser. Téc. y Did., Mus. La Plata, 40: 44.

Distribution in Argentina: Formosa: Sombrero Negro, Clorinda. Corrientes: Paso Amores.

Distribution in others countries: Brazil: Reserva Ducke, 25 Km. N. Manaus.

***Mezira granuliger* (Stål 1860)**

In: http://www2.nrm.se/en/het_nrm/g/mezira_granuliger.html

Brachyrhynchus granuliger Stål, 1860. Kongl. Svenska Vet.-Akad. Handl., 2(7): 66.

Mezira granuliger: Stål, 1862. Stett. Entomol. Zeitg., 23: 438.

Brachyrhynchus granuliger: Stål, 1873. Kongl. Svenska Vet.-Akad. Handl., 11(2): 145.

Mezira granuligera: Walker, 1873. Cat. Hem. Col. Brit. Mus., 7: 24.

Brachyrhynchus granuliger: Berg, 1879. An. Soc. Cient. Argentina, 7: 45.

Mezira granuliger: Pennington, 1921, p. 17.

Mezira granuliger: Drake and Harris, 1944. Ann. Carn. Mus., 30: 42.

Mezira granuligera: Kormilev, 1953a. Acta zool. Lilloana, 13: 231.

Mezira granuliger: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 272.

Mezira granuliger: Kormilev and Froeschner, 1987. Entomogr., 5: 148.

Mezira granuliger: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 766.

Material examined: BUENOS AIRES: Luján, 34° 33'43''S, 59° 05'29''W, Museo Argentino de Ciencias Naturales, 2 specimens (MLP). ENTRE RÍOS: Paraná, 31° 44'28,22''S-60° 30'41,57''W, 7-III-49, Monros col., Museo Argentino de Ciencias Naturales 1 specimen (FML). MISIONES: Iguazú, 25° 40'13'' S, 54° 26' 21''W, 1944, Biraben col., Museo Argentino de Ciencias Naturales, 2 specimens (MLP). SANTA FÉ: Rosario, 32° 57' 02'' S, 60° 39'59'' W, 1954, Museo Argentino de Ciencias Naturales, 4 specimens (MLP). TUCUMÁN: 1949, Golbach col., Museo Argentino de Ciencias Naturales, 3 specimens (FML); Horco Molle, 26° 56' 06''S, 65° 17' 44''W, 1-IX-73, Stange col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); Tacanas, 27° 07' 59''S, 64° 49'00''W, II-47, Golbach col., 1 specimen (FML); Amaicha del Valle, 26° 35'10''S, 65° 55' 05''W, XII-47, Golbach col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); Burreyacu, 26° 29'57''S, 64° 44'30''W, I-II-42, Golbach col., 1 specimen (FML).

Distribution in Argentina: Buenos Aires: Escobar, Las Conchas, Luján, Punta Chica, San Isidro, Tigre: Isla de Coble; Paraná de las Palmas; Entre Ríos: Paraná. Misiones: Iguazú; Salta: San Lorenzo; Santa Fé Rosario; Tucumán: Amaicha del Valle, Buruyacu, Tacanas, Tafí del Valle, Horco Molle.

Distribution in others countries: Brazil: Rio de Janeiro; Espirito Santo, Paraiba do Sul; Rio Grande do Sul, Gramado. Paraguay: Caaguazú.

***Mezira neonigripennis neonigripennis* Kormilev 1953**

In: <http://collections.nmnh.si.edu/search/ento>

Mezira neonigripennis Kormilev, 1953a. Acta Zool. Lilloana, 13: 224

Mezira neonigripennis: Kormilev, 1975. Occ. Pap. Calif. Acad. Sci., 122: 24.

Mezira neonigripennis: Kormilev, and Froeschner, 1987. Entomogr., 5: 154.

Distribution in Argentina: Salta: Las Cañas, Parque Nacional El Rey.

Distribution in others countries: Brazil: Taracua. Peru: Tingo María: Monzón Valley. Venezuela: Guanare, Estado Portuguesa.

***Mezira neonigripennis misionensis* Kormilev 1953**

Mezira neonigripennis Kormilev, 1953a. Acta Zool. Lilloana, 13: 240.

Mezira neonigripennis misionensis: Kormilev, 1962. Ark. Zool., Ser. 2, 15(14): 264.

Mezira neonigripennis: Kormilev and Froeschner, 1987. Entomogr., 5: 155.

Mezira neonigripennis misionensis: Bachmann, 1999. Rev. Mus. Arg. Cs Nat., 1(2): 193.

Distribution in Argentina: Misiones: Puerto Londero, San Javier.

***Mezira neonigripennis neonigripennis* Kormilev 1953**

Mezira neonigripennis Kormilev, 1953a. Acta Zool. Lilloana, 13: 238.

Mezira neonigripennis misionensis: Kormilev, 1962. Ark. Zool., Ser. 2, 15(14): 264.

Mezira neonigripennis: Kormilev and Froeschner 1987. Entomogr., 5: 154.

Distribution in Argentina: Salta: Anta: Parque Nacional El Rey, Las Cañas.

Distribution in others countries: Bolivia.

***Mezira nigripennis* Usinger 1936**

Mezira nigripennis Usinger, 1936. Ann. Entomol. Soc. of Amer., 29: 511.

Mezira nigripennis: Kormilev, 1953a. Acta zool. Lilloana, 13: 234.

Mezira nigripennis: Kormilev and Froeschner, 1987. Entomogr., 5: 155.

Mezira nigripennis: Contreras, Nader and Coscarón, 2011. Mun. Ent. Zool., 6(2): 767.

Material examined: JUJUY: La Mendieta, 24° 18'50''S, 64° 58'01''W, 27-XII-39, 3 specimens (MLP). SALTA: Alemania, 25° 36'01''S, 65° 37'57''W, 9-II-48, Willink-Monros col., Museo Argentino de Ciencias Naturales, 2 specimens (FML); Urundel, 23° 33'27.86''S, 64° 23'49.84''W, 14-XII-47, 1 specimen (MACN). TUCUMÁN: Horco Molle, 26° 56' 06''S, 65° 17' 44''W, 1-IX-73, Stange col., 3 specimens (FML); San Pedro de Colalao, 26° 13' 59''S, 65° 29' 00''W, II-53, Teran col., 1 specimen (FML).

Distribution in Argentina: Chaco: Pte. Perón; Jujuy: La Mendieta; Misiones; Salta: Alemania, Las Cañas, Pocitos, Santa María, Urundel. Tucumán: Horco Molle; San Pedro de Colalao.

Distribution in others countries: Brazil: Río Grande do Sul; Santa Catarina; Nova Teutonia. Paraguay: Horqueta.

***Mezira paraganuliger* Kormilev 1953**

In: <http://www.fcnym.unlp.edu.ar/abamuse.html>

Mezira paraganuligera Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.

Mezira paraganuliger: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 273.

Mezira paraganuliger: Kormilev and Froeschner, 1987. Entomogr., 5: 156.

Mezira paraganuligera: Bachmann, 1999. Rev. Mus. Arg. Cs Nat., 1(2): 193.

Mezira paraganuligera: Coscarón, 2000. Ser. Téc. y Did., Mus. La Plata, 40: 44.

Distribution in Argentina: Misiones: San Javier, Puerto Linderos, Iguazú, San Antonio, Cerro Azul; Chaco: Chilcas; Tucumán; Salta: Orán; Jujuy.

Distribution in others countries: Brazil: Rio de Janeiro; Santa Catarina: Nova Teutonia; Espirito Santo; Est. Rio: Pico da Tijuca.

***Mezira proseni* Kormilev 1953**

Mezira proseni Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.

Mezira proseni: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 262.

Mezira proseni: Kormilev, 1975. Occ. Pap. Calif. Acad. Sci., 122: 25.

Mezira proseni: Kormilev and Froeschner, 1987. Entomogr., 5: 157.

Mezira proseni: Bachmann, 1999. Rev. Mus. Arg. Cs Nat., 1(2): 193.

Material examined: SALTA: Pocitos, 24° 19'23.39''S, 67° 01'20.10'' W, Prosen col., 2 specimens (MACN).

Distribution in Argentina: Salta, Pocitos.

Distribution in others countries: Peru: Yurac, 67 mi. (108 Km.), Tingo Maria.

***Mezira regularis* (Champion 1898)**

Brachyrhynchus regularis Champion, 1898. Biol. Centr. Amer., Rhynch., 2: 93.

Mezira regularis: Usinger and Matsuda, 1959. Classif. Aradidae, p. 381.

Mezira regularis: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 267.

Mezira regularis: Kormilev, 1975. Occ. Pap. Cal. Acad.Sci., 122: 21.

Mezira regularis: Kormilev and Froeschner, 1987. Entomogr., 5: 157.

Mezira regularis: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 767.

Material examined: TUCUMAN: Horco Molle, 26° 56' 06''S, 65° 17'44''W, 1-IX-73, Stange, col. 16 specimens (FML).

Distribution in Argentina: Tucumán: Horco Molle.

Distribution in others countries: Guatemala, El Tumbador 2500 ft. Costa Rica: Turrialba. Brazil: Espirito Santo. Mexico: Vera Cruz, El Fortin.

***Mezira reuteri* (Bergroth 1886)**

Brachyrhynchus reuteri Bergroth, 1886. Verh. Zool.-bot. Ges. Wien, 36: 56.

Mezira reuteri: Kormilev, 1953a. Acta Zool. Lilloana, 13: 241.

Mezira reuteri: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 262.

Mezira reuteri: Kormilev and Heiss, 1979. Entomol. Arb. Mus. Frey, 28: 112.

Distribution in Argentina: Buenos Aires: Burzaco, San Miguel, Ituzaingó, Punta Lara; Misiones; Santa Fé: Garay

Distribution in others countries: Brazil.

***Mezira saltensis* Kormilev 1953**

In: <http://www.fcnym.unlp.edu.ar/abamuse.html/>

Mezira saltensis Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.

Mezira saltensis: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 263.

Mezira saltensis: Kormilev and Froeschner, 1987. Entomogr., 5: 157.

Mezira saltensis: Bachmann, 1999. Rev. Mus. Arg. Cs Nat., 1(2): 193.

Mezira saltensis: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 767.

Material examined: TUCUMAN: Horco Molle, 26° 56' 06''S, 65° 17'44''W, III-65, Haedo-Rossi, cols., 3 specimens (FML).

Distribution in Argentina: Salta: Anta. Tucumán: Horco Molle.

Distribution in others countries: Brazil: Corumbá, Umcú.

***Mezira spissigrada* Kormilev 1960**

In: <http://collections.nmnh.si.edu/search/ento>

Mezira spissigrada Kormilev, 1960a. An. de la Soc. Cient. Arg., 169(5-6): 88.

Mezira spissigrada: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 263.

Mezira spissigrada: Kormilev and Froeschner, 1987. Entomogr., 5: 158.

Distribution in Argentina: Misiones: Iguazú.

***Mezira tartagalensis* Kormilev 1953**In: <http://collections.nmnh.si.edu/search/ento>*Mezira tartagalensis* Kormilev, 1953a. Acta Zool. Lilloana, 13: 224.*Mezira tartagalensis*: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 263.*Mezira tartagalensis*: Kormilev and Froeschner, 1987. Entomogr., 5: 159.

Distribution in Argentina: Salta: Tartagal.

Mezira vianai* Kormilev 1953Mezira vianai* Kormilev, 1953a. Acta Zool. Lilloana, 13: 226.*Mezira vianai*: Kormilev, 1962. Ark. Zool., Serie 2, 15(14): 262.*Mezira vianai*: Viana and Williner, 1972. Acta Scient., ser. Entomol., 5: 27.*Mezira vianai*: Viana and Williner, 1978. Acta Scient., ser. Entomol., 11: 75.*Mezira vianai*: Kormilev and Froeschner, 1987. Entomogr., 5: 160.*Mezira vianai*: Bachmann, 1999. Rev. Mus. Arg. Cs Nat., 1(2): 193.

Distribution in Argentina: Córdoba: Punilla, Tanti, El Sauce.

Genus *Neuroctenus* Fieber, 1860

Figs 1F, 9A–D, 10A

Neuroctenus Fieber, 1860. Die europ. Hem., p. 34. Type-species: *Neuroctenus brasiliensis* Mayr, a junior synonym of *Brachyrhynchus punctulatus* Burmeister, designated by Van Duzee, 1916. New York Entomol. Soc., p. 17.

Diagnosis: Body oval, very flattened; surface granular but without pubescence; head slightly wider across eyes, anterior process relatively broad with genae prominent on either side of clypeus, postocular tubercles prominent but short reaching or surpassing level of outer margins of eyes; pronotum a little more than twice as wide as long, lateral margins sinuate; scutellum triangular with the apex rounded, the sides carinate, ventral surface very flattened with coxae widely separated; legs with trochanters distinct, sometimes with the granules even large enough to appear as minutes spines.

Key to species of *Neuroctenus* Fieber of Argentina

1. Male pygophore not depressed on the disc; distinctly narrower than the width of the head (at the eyes); frontal process shorter than the first antennal segment 2
- 1'. Male pygophore more or less depressed on the disc; the same width as the head; frontal process longer. 3
2. Anterior angles of pronotum rounded, slightly protruding; pygophore heart-shaped; large species *Neuroctenus terginus* Stål
- 2'. Anterior angle of pronotum acute and distinctly angled and prominent; pygophore semicircular; lobes of VIII segment in the female rounded and almost reach to the apex IX tergite; small species *Neuroctenus punctulatus* Burmeister (Fig 9C–D)
3. Anterior angles of pronotum rounded, not protruding; male pygophore deeply depressed longitudinally on the apex; lobes of segment VIII of the female triangular, apically rounded, a little wider than long, almost reaching the apex of the IX tergite *Neuroctenus centralis* Berg (Fig 9A–B)
- 3'. Anterior angle of pronotum angled and protruding; pygophore a little depressed on the disc; lobes of the VIII segment in the female twice or even three times wider than long. *Neuroctenus subandinus* Kormilev (Fig. 10A)

***Neuroctenus centralis* (Berg 1879)**In: <http://www.fcnym.unlp.edu.ar/abamuse.html>*Brachyrhynchus centralis* Berg, 1879. An. Soc. Cient. Argent., 7: 44*Brachyrhynchus granuliger* var. Bergroth, 1886. Verh. Zool.-bot. ges. Wien, 36: 59.

- Neuroctenus centralis*: Bergroth, 1887b. Wien. Ent. Zeit., 6: 284.
Neuroctenus centralis: Berg, 1892. An. Soc. Cient. Arg., 34: 204.
Neuroctenus centralis: Pennington, 1921, p. 17.
Neuroctenus centralis: Kormilev, 1953a. Acta Zool. Lilloana, 13: 247.
Neuroctenus centralis: Kormilev, 1975. Occ. Pap. Cal. Acad. Sci., 112: 11.
Neuroctenus centralis: Kormilev and Froeschner, 1987. Entomogr., 5: 166.
Neuroctenus centralis: Contreras, Neder and Coscarón, 2011. Mun. Ent. Zool., 6(2): 767.

Material examined: CATAMARCA: 1899, Ventura col., Museo Argentino de Ciencias Naturales, 5 specimens (MLP); El Suncho, 29° 11' 52''S, 65° 22' 05''W, 18-II-57, Golbach col., 19 specimens (FML); El Alto, 28° 17' 58''S-65° 22' 00''W, 24-XII-58, 2 specimens (FML). CORDOBA: 01-IV-20, Bruch col., Museo Argentino de Ciencias Naturales, 3 specimens (MLP). CORRIENTES: 1940, Birabén col., Museo Argentino de Ciencias Naturales, 3 specimens (MLP). JUJUY: Cerro Peroties, 27-I-48, Monros col., Museo Argentino de Ciencias Naturales, 1 specimen (FML); 30-I-46, Birabén col., 2 specimens (MLP). LA RIOJA: Anillaco, 28° 47'00''S, 66°54'50.51''S, 27-II-39, Biraben-Scott cols., Museo Argentino de Ciencias Naturales, 8 specimens (MLP). MISIONES: XI-51, Willink, col., 1 specimen, (FML); Loreto, 27° 18'56''S, 55°32'01''W, Museo Argentino de Ciencias Naturales, 5 specimens (MLP). SALTA: Cafayate, 26° 04'14''S, 65° 58'43''W, VII-54, Hayward col., 15 specimens (FML). SANTA FÉ: Rosario, 27-XII-39, Biraben-Bezzi cols., (MLP). TUCUMÁN: I-56, Golbach col., 3 specimens (FML); Tafí del Valle, 26° 50' 43''S, 65° 42' 01''W, I-50, Golbach col., 4 specimens (FML); 23-X-47, Golbach col., 4 specimens, II-47, Golbach col., 4 specimens; I-50, Monros col., 4 specimens (FML); III-59, Wygodzinsky col., 3 specimens (FML); 28-XI-51, Golbach col., 1 specimen (FML); Burreyacú, 26° 29'57''S, 64° 44'30''W, 8-II-61, Golbach col., 5 specimens (FML); San Javier, 26° 46'59''S, 65° 23'01''W, XI-50, Golbach col., 1 specimen (FML); Siambón, 26° 41'57''S, 65° 27'01''W, 26-XII-49, Monros col., 7 specimens (FML); Río La Caldera, 26° 49'55'' S, 65° 12'00'' W, 12-II-29, 6 specimens (FML); 1933, Museo Argentino de Ciencias Naturales, 5 specimens (MLP).

Distribution in Argentina: BUENOS AIRES; CATAMARCA: El Suncho, El Alto; CHACO; CORDOBA: Alta Gracia, Calamuchita, El Sauce, Punilla, Tanti, V.G. Belgrano; Corrientes: Manantiales; JUJUY: Zapla; LA RIOJA: Anillaco; MISIONES: Loreto; SALTA: Cafayate, Rosario de la Frontera; SANTA FÉ: Rosario, Colonia Mascías, Garay, Guadalupe; TUCUMÁN: San José, Siambón, Tafí del Valle, Burreyacú, San Javier, Río la Caldera.

Neuroctenus punctulatus (Burmeister 1835)

- Brachyrhynchus punctulatus* Burmeister, 1835. Handb. Entomol., 2: 254.
Brachyrhynchus bimaculatus Stål, 1860. Kongl. Svenska Vet.-Akad. Handl., 2(7): 66.
Neuroctenus brasiliensis Mayr, 1866. Verh. Zool. bot. Gesell. Wien, 16: 365.
Neuroctenus brasiliensis: Mayr, 1868. Reise Freg. Novara; Hemipt., 2: 167.
Neuroctenus bimaculatus: Stål, 1873. Kongl. Svenska Vet.-Akad. Handl., 11(2): 146.
Neuroctenus brasiliensis: Stål, 1873. Loc. Cit.
Brachyrhynchus punctulatus: Stål, 1873. Loc. Cit.
Neuroctenus rubiginosus Bergroth, 1887a. Oef. Finsk. Vet. Soc. Forh., 29: 184.
Neuroctenus punctulatus: Bergroth, 1887a Oef. Finsk. Vet.-Soc. Forh., 29:185.
Neuroctenus frugalis Bergroth, 1889 Wiener Entomol. Zeitg., 8: 52
Neuroctenus punctulatus: Bergroth, 1894. Ent. Tidskr., 15: 114.
Neuroctenus punctulatus: Champion, 1898. Biol. Centr. Amer., 2: 110.
Neuroctenus punctulatus: Kormilev, 1953a. Acta Zool. Lilloana, 13: 246.
Neuroctenus punctulatus: Blöte, 1965. Zool. Verh., 75: 21.
Neuroctenus punctulatus: Kormilev, 1975. Occ. Pap. Cal. Acad. Sci., 122: 13.
Neuroctenus punctulatus: Kormilev and Heiss, 1979. Entomol. Arb. Mus. Frey, 28: 105.
Neuroctenus punctulatus: Kormilev and Froeschner, 1987. Entomogr., 5: 173.

Material examined: CORRIENTES, 1947, Biraben-Bezzi, cols., (MLP), MISIONES: Iguazú, 25° 40'13,93'' S, 54° 26' 21,79''W, 13-III-45, Hayward-Willink-Golbach cols., Museo Argentino de Ciencias Naturales, 4 specimens (FML); 10-XI-73, Willink-Tomsic cols., 3 specimens (FML).

Distribution in Argentina: CORRIENTES: Aguapié; MISIONES: San Javier, Puerto Londeros, Iguazú, Cerro Azul.

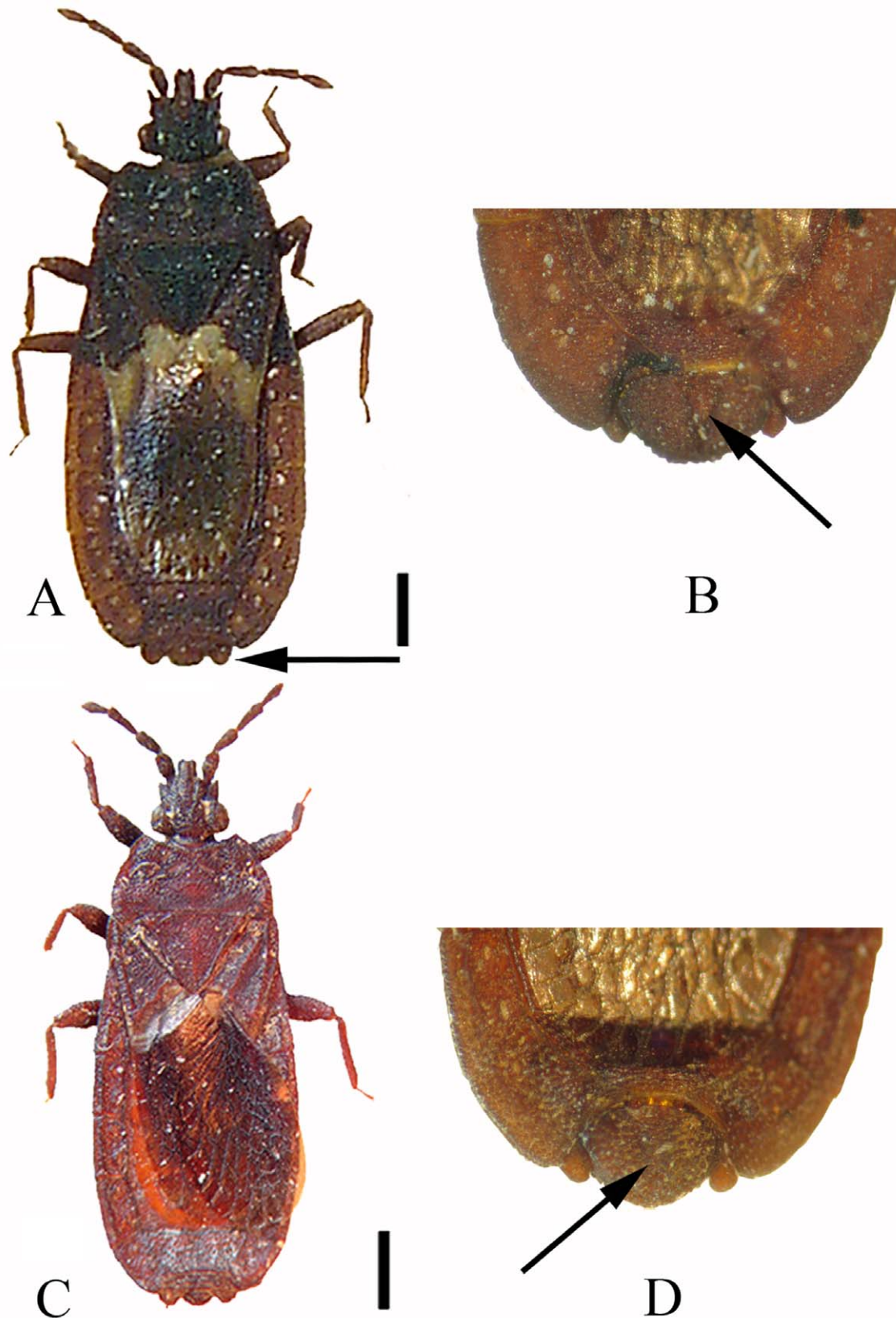


FIGURE 9. Subfamily Mezirinae: Dorsal view and female genitalia *Neuroctenus centralis*: A; Male pygophore deeply depressed longitudinally on the apex *Neuroctenus centralis*: B; Dorsal view *Neuroctenus punctulatus*: C; Male pygophore *Neuroctenus punctulatus*: D.

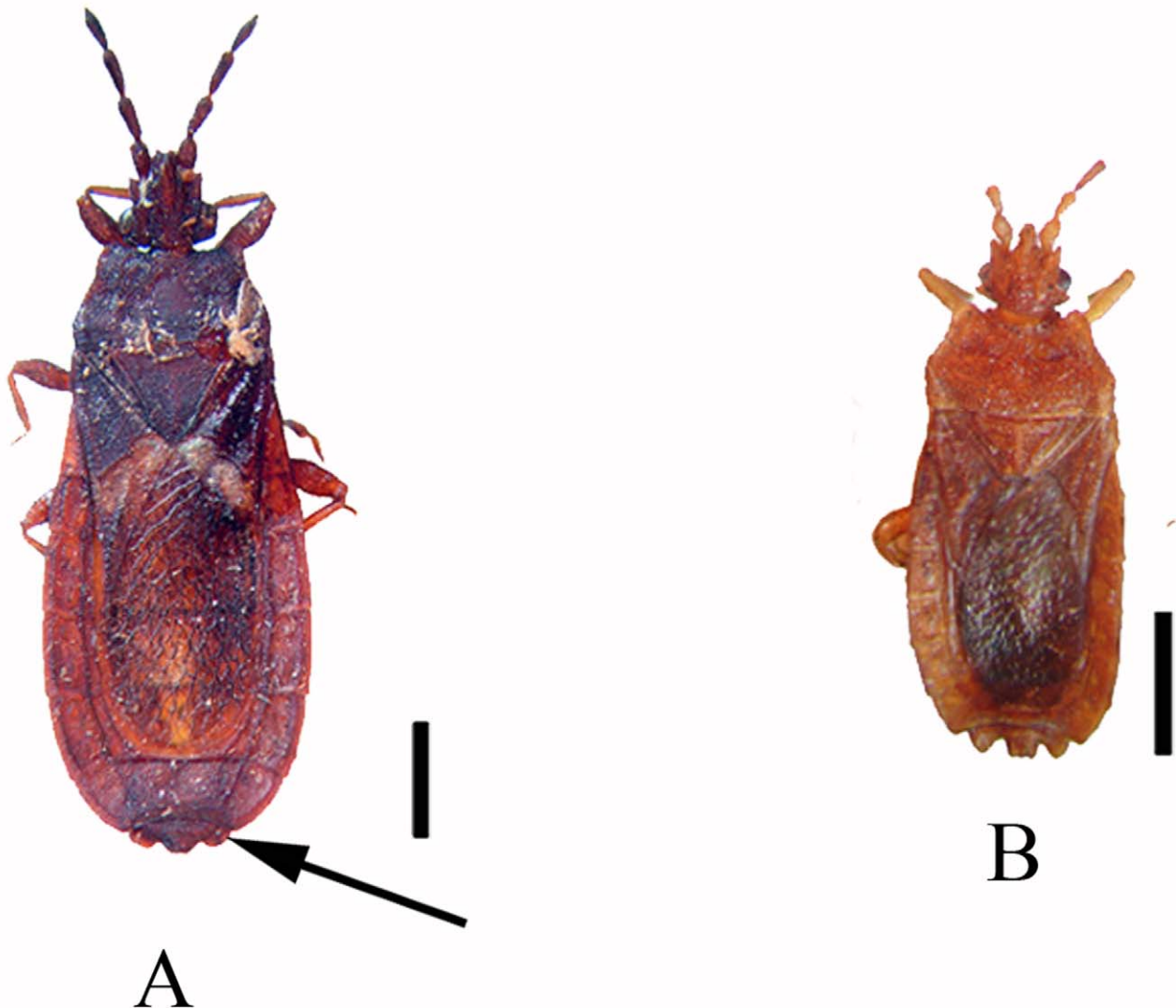


FIGURE 10. Subfamily Mezirinae: Dorsal view and female genitalia *Neuroctenus subandinus*: A; Dorsal view *Notapictinus sanmigueli*: B.

Distribution in others countries: Brazil: Rio Grande do Sul; Santa Catarina: Nova Teutona. Paraguay: Caaguazú. Colombia: 5 mi. (8Km.) E. Villavicencio, Meta: 410m. Guatemala: El Tumbador. Nicaragua: Chontales. Panama: Chiriqui.

***Neuroctenus subandinus* Kormilev 1953**

In: <http://www.fcnym.unlp.edu.ar/abamuse.html>

Neuroctenus subandinus Kormilev, 1953a. Acta Zool. Lilloana, 13: 244.

Neuroctenus subandinus: Viana and Williner, 1978. Acta Scient., ser. Entomol., 11: 75.

Neuroctenus subandinus: Kormilev and Froeschner, 1987. Entomogr., 5: 175.

Neuroctenus subandinus: Bachmann, 1999. Rev. Mus. Arg. Cs. Nat., 1(2): 193.

Distribution in Argentina: CATAMARCA; JUJUY: Cuarteles, Valle Grande, Ceno Pezales; MENDOZA: Tunuyán; SALTA: Urundel, Abra de Minas, Tartagal, El Naranjo, Rosario de la Frontera; TUCUMÁN: San Pedro de Colalao, Burreyacú, Lacavera.

Distribution in others countries: Bolivia: Villa Monti, Mapiquí. Mexico: Atoyac in Vera Cruz. Guatemala: Vera Paz Senahu, Cubilguitz, El Tumbador.

***Neuroctenus terginus* (Stål 1860)**

In: http://www2.nrm.se/en/het_nrm/t/neuroctenus_terginus.html

Brachyrhynchus terginus Stål, 1860. Bidr. Till. Rio Jan. trakt. Hem.-fauna, 1: 66.

Neuroctenus terginus: Stål, 1873. Kongl. Svenska Vet.-Akad. Handl., 11(2): 146.

Neuroctenus terginus: Bergroth, 1887a. Ef. Finsk. Vet. Soc. Forh., 29: 186.

Neuroctenus terginus: Champion, 1898. Biol. Centr. Amer., Rhynch., 2: 109.

Neuroctenus terginus: Kormilev, 1953a. Acta Zool. Lilloana, 13: 244.

Neuroctenus terginus: Kormilev and Froeschner, 1987. Entomogr., 5: 175.

Distribution in Argentina: MISIONES: San Antonio.

Distribution in Others Countries: Brazil: Rio de Janeiro; Rio Grande do Sul: Cerro Azul. Venezuela: Bogota. Guatemala, Volcán de Agua. Mexico: Chiapas, Cerro Huepetec, W. of San Cristobal de las Casas.

Genus *Notapictinus* Usinger and Matsuda, 1959

Fig 5H

Notapictinus Usinger and Matsuda, 1959. Classif. Aradidae, p. 203. Type-species: *Pictinus dominicus* Usinger, original designation.

Diagnosis: Body form elongate oval, surface granular without conspicuous hairs except for short ones on the appendages; head slightly wider than long with a convex clypeus and genae prominent, antenniferous tubercles about as long as eyes or slightly shorter; antennae about as long as head and pronotum together; pronotum a little longer than head on median line and twice as wide as long, narrowed on anterior lobe, posterior lobe with sides subparallel; scutellum shorter than pronotum, the sides sinuate and carinate; hemelytra reaching well onto seventh tergite; connexival plates distinct, longer than wide, slightly sinuate on lateral margins posteriorly in some species; under surface granular on thoracic sterna and depressed on meso and metasterna.

Key to species of *Notapictinus* Usinger and Matsuda of Argentina

1. Conical frontal process, reaches up to 2/3 of the first antennal segment; conexivum unicolored *Notapictinus sanmigueli* Kormilev (Fig. 10B)
- 1'. Conical frontal process, reaches up to 1/2 of the first antennal segment; conexivum bicolored *Notapictinus martinezi* Kormilev

***Notapictinus martinezi* (Kormilev 1953)**

In: <http://collections.nmnh.si.edu/search/ento>

Pictinus martinezi Kormilev, 1953a. Acta Zool. Lilloana, 13: 220.

Notapictinus martinezi: Kormilev, 1960. Jour. N.Y. Entomol. Soc., 68: 40.

Notapictinus martinezi: Kormilev and Froeschner, 1987. Entomogr., 5: 179.

Distribution in Argentina: SALTA: Pocitos.

***Notapictinus sanmigueli* (Kormilev 1959)**

Pictinus sanmigueli Kormilev, 1959. Rev. Soc. Urug. Entomol., 3: 24.

Notapictinus sanmigueli: Kormilev, 1960. Jour. N. Y. Entomol. Soc., 68: 40.

Notapictinus sanmigueli: Kormilev and Froeschner, 1987. Entomogr., 5: 180.

Material examined: TUCUMAN: 5-I-68, Weyrauch col., 1 specimen (FML)

Distribution in Argentina: SAN LUIS: Carolina.

Genus *Placogenys* Usinger and Matsuda, 1959

Placogenys Usinger and Matsuda, 1959. *Classif. Aradidae*, p. 203. Type-species: *Pictinus cockerelli* Usinger and Matsuda, monobasic.

Diphyllonotus Kormilev, 1959b. *Proc. Entomol. Soc. Wash.*, 61(2): 61. Type species: *Diphyllonotus explanatus* Kormilev, original designation. Synonymized by Kormilev, 1966. *Proc. of the U. S. Nat. Mus.*, 119(3548): 16.

Diagnosis: Body form elongate, surface granular and beset with only minute hairs on raised portions; the anterior process formed a prominent clypeus and distinctly lobate subflattened genae that extend forward well beyond apex of clypeus and are contiguous on their apical portions with the tips only briefly notched; antenniferous tubercles plate-like, subtriangular produced on either side of bases of antennae and angulate at apices; pronotum with the lateral margins lamellate and with the anterior margin formed as a distinct collar with a ring-like appearance; scutellum much shorter than pronotum on median line with a prominent longitudinal carina; connexival plates distinct except that the suture between second and third segments is vague.

Species of *Placogenys* Usinger and Matsuda

Genae much longer than clypeus, reaching apical fourth of antennal segment I; antennal segment I shorter than IV, and much shorter than III; abdomen longer than width across segment IV. Tergum VII with a transverse carina along the hind border, and a transverse sulcus in front of it ***Placogenys clarkei* Kormilev**

***Placogenys clarkei* (Kormilev 1966)**

In: <http://collections.nmnh.si.edu/search/ento>

Placogenis clarkei Kormilev, 1966. *Proc. of the U. S. Nat. Mus.*, 119(3548): 17.

Placogenis clarkei: Kormilev and Froeschner, 1987. *Entomogr.*, 5: 187.

Distribution in Argentina: TUCUMÁN: Ciudad Universitaria.

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