The genus *Pnirontis*, the *subinermis* group of species (Hemiptera:Reduviidae:Stenopodainae)[1]

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ABSTRACT

The species of *Pnirontis* without spines on the under surface of the first antennal segment belong in the *subinermis* group. A key to these species is given. It includes the species described after Barber's monograph on the Stenopodainae of the New World, the species discussed by Barber, and *P. lissa* and *P. heminigra*, n. spp. These two new species are described and illustrated and notes about the types of four old species are given.

INTRODUCTION

Pnirontis (fig. 10) can be identified by the presence of ramose or forked spines ventrolaterally behind eyes and by having the basal antennal segment produced in a spine or apical process beyond the insertion of the second antennal segment. It shares these characters with *Rutuba*. *Pnirontis* is separated from *Rutuba* in Barber's (1929–1930)[4] by the absence or presence of a minute process on the antenniferous tubercle and having the connexival angles not produced. However, *P. beieri* and *P. scutellaris* have the posterior angles of connexival segments produced, and semifoliaceous (fig. 6) and *P. beieri* and *P. subinermis* (fig. 24) have a relatively strong spine on the antenniferous tubercle. Wygodzinsky (1948)[5] points out that the only consistent character to separate these genera is that median and posterior tarsal joints are subequal in *Rutuba* (fig. 26), whereas the first joint is short in *Pnirontis* (fig. 18). In specimens of *Rutuba* before me, all males have a quadrangular last tergum with a shallow and broad apical notch, but this sclerite is trapezoidal and with a deep angular notch in *Pnirontis*. Consequently, the habitus of the males of these genera are different. Wygodzinsky also suggested the possibility that *Rutuba* may not be a valid genus.

This paper describes and illustrates two new species. Notes about old species are given and some details of their morphology are illustrated.

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[4] Barber, H. G., 1929–30. Essay on the subfamily Stenopodinae of the New World. Entomol. Am. X (n. s.) (3): 149–238.

[5] Wygodzinsky, P., 1948. On some "Reduviidae: belonging to the Naturhistorisches Museum in Vienna (Hemiptera). Rev. Brasil. Biol. 8 (2): 209–24.

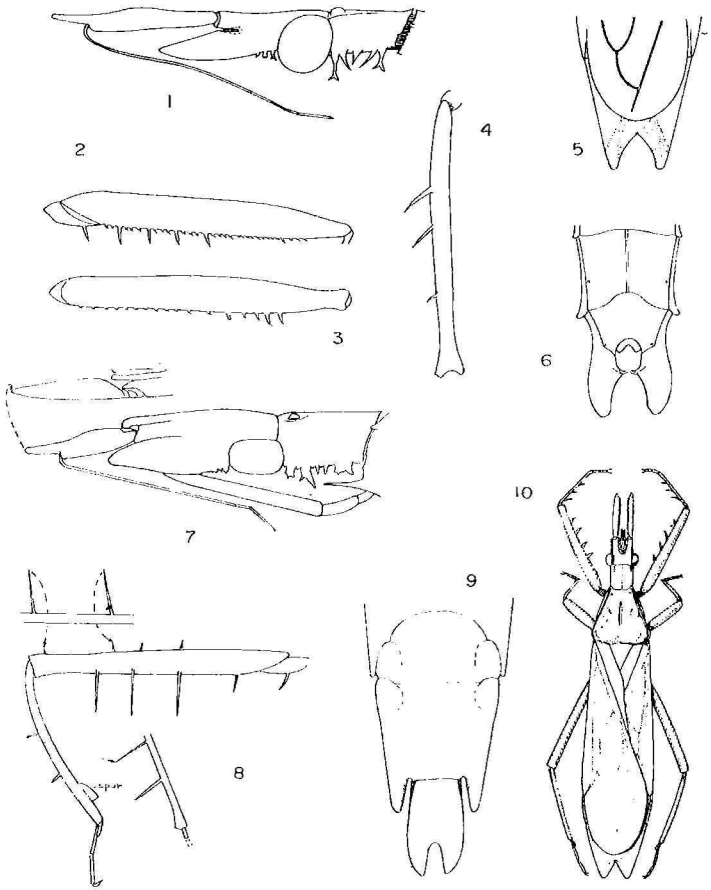

PLATE 1.—*Pnirontis heminigra* n. sp., male, 1. head, lateral; 2. profemur, ventral armature, lateral; 3. profemur, inner armature, dorsal; 4. protibia; 5. apex of abdomen. *Pnirontis beieri* Wygodzinsky, male; 6. apex of abdomen, ventral. *Pnirontis acuminata* Barber, female; 7. head, lateral and detail of antennal segment I and jugae, dorsal; 8. proleg, details of spines and spur; 9. last abdominal terga, dorsal. *Pnirontis* sp., 10. habitus.

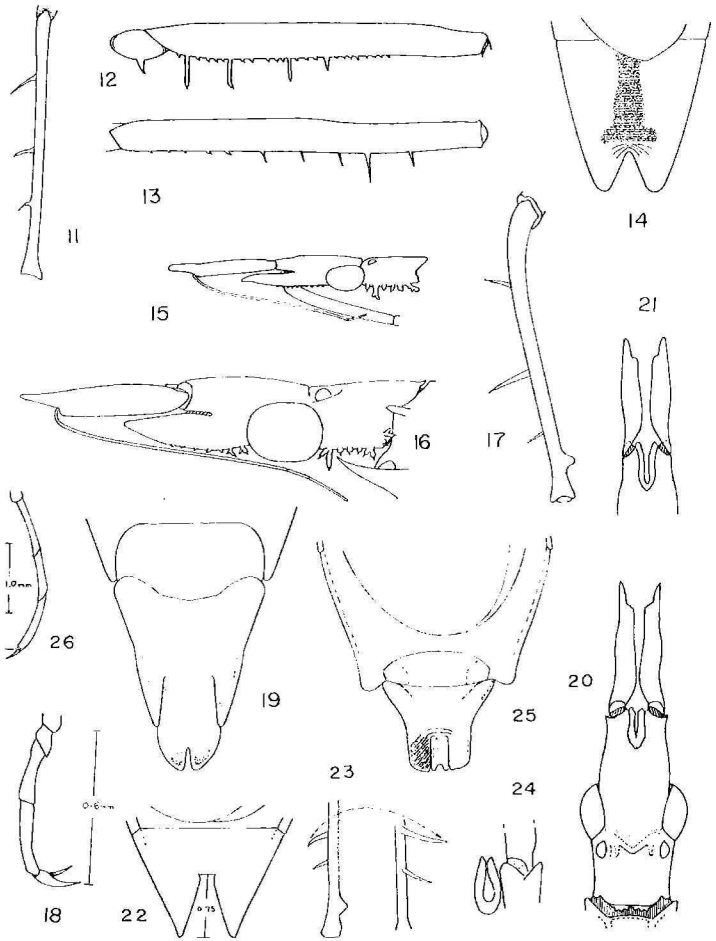

PLATE II.—*Pnirontis lissa* n. sp., male; 11. protibia; 12. trochanter and profemur, ventral armature, lateral; 13. profemur, inner armature, dorsal; 14. last abdominal tergum, dorsal; 15. head, lateral. *Pnirontis languida* Barber, female holotype; 16. head, lateral; 17. protibia; 18. hind tarsus; 19. last abdominal terga, dorsal; 20. head dorsal; 21. detail of antennal segments I and apex of head, male, dorsal. *Pnirontis bellatrix* Hussey, male holotype, 22. last tergum, dorsal; 23. protibia. *Pnirontis subinermis* Barber, female paratype; 24. jugae and antenniferous tubercle, dorsal; 25. last abdominal terga. *Rutuba* sp., 26. hind tarsus.

The key to the species is a modification of part of Barber's key. Measurements given below are in millimeters. The types are deposited in the National Museum of Natural History (NMHN) in Washington and in the MZUM.

RESULTS

The species in *Pnirontis* can be divided into three groups: the first, with the first antennal segment unarmed below; the second, with first antennal segment armed below and the protibia with only an inner series of spines; and the third, with first antennal segment armed below and the protibia with two series of spines. The first group is considered in this paper. I call it the *subinermis* group because this trivial name describes its diagnostic character.

Key to the *Pnirontis* species of the *subinermis* group

1. First antennal segment unarmed below (*subinermis* group) 2
   First antennal segment armed below ..... Groups II and III
2. Protibia with one series or row of spines (fig. 4, 8) 3
   Protibia with an inner and a ventral series of spines 11
3. Apical angle of connexival segments clearly produced, semifoliaceous, connexival margin undulate (fig. 6) 4
   Apical angle of connexival segments not produced or very slight, the margin straight; in some females the penultimate angles may be produced (fig. 25) 5
4. Length 22.5; jugae very long; protibia with 2 short setiferous spines; clavus and corium extensively ornamented with dark brown ... *P. beieri* Wygodzinsky
   Length 18.0; jugae short; protibia with 4 setiferous spines; lighter species ..... *P. scutellaris* Stål
5. Profemur with at least some spines in both series longer than diameter of segment 6
   Profemur with inner row of spines with some spines sometimes equal to, but usually all shorter than diameter of segment; spines of ventral series shorter than diameter of segment 7
6. Head shorter than pronotum; connexival margin immaculate; spur of tibia triangular (fig. 23); male, incisure of last tergum deep (fig. 22); length 12.0 ..... *P. bellatrix* Hussey[6]
   Head longer than pronotum; connexival margin with apical angles infuscate; spur of protibia elongate (fig. 8); male unknown; length 18.0 ..... *P. acuminata* Barber

[6] Hussey, R. F., 1954. Concerning some Neotropical Stenopodinae (Reduviidae, Hemiptera). Ann. Entomol. Soc. Am., 47 (2): 287–300.

7. Head slightly longer or equal to pronotum 8
   Head shorter than pronotum 9
8. Length 14.8; longitudinal median brownish stripe outstanding between yellow coria, membrane brownish; appendices yellowish . *P. inobtrusa* Barber
   Length 12.5; hemelytra mostly light brown, broader brownish longitudinal stripe slightly contrasting with grayish or light brown coria; appendices light brown ..... *P. lissa* n. sp.
9. Length 10.0; from apex of scutellum to apex of head blackish, hemelytra stramineous, thus in contrasting halves; connexical angles black; protibia without spur (fig. 4) ... *P. heminigra* n. sp.
   Length 12–14; uniformly light colored species, not in contrasting anterior and posterior halves; with or without spur; connexival angles spotted or not 10
10. Antenniferous tubercle with strong outward spine (fig. 24); protibia with short spines, only the basal spine slightly longer than diameter of segment, without spur; forefemur with an irregular row of shorter spines between outer and inner series; connexival angles spotted ..... *P. subinermis* Barber
    Antenniferous tubercle with short spine; protibia with all spines 3× or 4× as long as diameter of segment, with spur; profemur without spines between outer and inner series; connexivum immaculate ..... *P. languida* Stål
11. Pronotum almost as wide as long; discal cell with extensive brown area; connexival segments marked with brown; ventrally with rows of subcircular brown spots each side of median line; gena almost reaching midlength of antennal segment I; jugae short; tylus visible as a long spine between bases of antenna (female) ... *P. brimleyi* Blatchley[7]
    Pronotum much longer than wide; discal cell, connexival segments, ventrally unspotted; gena slightly surpassing base of antennal segment I and apex of jugae 12
12. Length 19.0; jugae hiding tylus and looking as two long fine spines between bases of antennae; hemelytra short, reaching into fifth tergum ..... *P. demerarae* Brindley[8]
    Length 14.0; jugae short, tylus visible as a long spine between bases of antennae; hemelytra reaching into sixth tergum *P. brevispina* Barber

[7] Blatchley, W. S., 1926. Heteroptera of Eastern North America, Nature Publ. Co., Indianapolis, Indiana.

[8] Brindley, H. H., 1931. The Reduviidae of Kartabo, Bartica District, British Guiana. Zoologica, VII (5): 129–54.

***Pnirontis lissa* Maldonado, n. sp.**

Male—mostly stramineous. A V-shaped brown fine line above on anterior lobe of head; longitudinal sulcus on anterior lobe of pronotum dark gray, moderately narrow brown area on each side of sulcus; median longitudinal sulcus of posterior lobe of pronotum widening caudad, brown; lateral carina of pronotum bright yellow. Scutellum dark gray. Hemelytra: most of clavus, inner two and discal cell of corium, margin and inner cell of membrane light brown; outer cell of membrane and subcostal area whitish. A broad gradually widening brownish longitudinal stripe on last tergum extending into margins of incisure. Pronotum laterally longitudinally striped with brownish and yellow as follows: brown below lateral carina, above anterior spine, and along inferior margin; mesopleura brownish, yellow above and below, the brownish stripe an extension of that on inferior margin of pronotum; metapleura with same pattern as mesopleura, the brown stripe an extension of that on mesopleuron. Abdominal sterna yellowish, first with a brown stripe that is an extension of the brown area of metapleuron. Connexivum immaculate.

Head: length 2.25, internal length of antennal tubercle 0.4, width across eyes 0.86, interocular space 0.45, length of eye 0.5, eye width from above 0.2, preocular margin 0.7; postocular margin with 7 ramose spines, length 0.55. Gena unarmed below, only in front of eye with a few globose setigerous spines, extending into ¼ length of antennal segment I. Antenna: I segment unarmed below, length 1.35, apical spine about ¼ length of segment (0.4:1.35); II segment reaching to midlength of eye, hairy; III, 0.2; IV, 0.7; last two segments bare. Ocelli much closer to eyes than to each other. Jugae extending slightly beyond inner apical angle of antenniferous tubercle.

Pronotum: mostly smooth, with small groups of fine granules irregularly arranged on the diffuse pattern of lines of anterior lobe; width at anterior spines 0.7, length 1.95, width at humeral angles 1.56; sulcus of anterior lobe deep on apical ⅔, depression of posterior lobe widening to apex. Scutellum width 0.5, length 0.65. Prolegs—coxa truncate conical, length 0.4; trochanter: length 0.4, a strong spine at ventral midlength; femur length 3.04, armature: ventral series consisting of 4 spines on basal half, second from base the longest, last the shortest, all shorter than thickness of segment; between each pair, 3 to 4 spinules; after the apical long spine about 12 spinules, some of these globose; inner series—6 spines gradually shortening toward base, second from apex the longest, all shorter than diameter of segment. Protibia as in figure 11; length 2.34, no subapical spur, with the usual triangular apical expansion. Mesosternum transversely impressed behind anterior margin, anterolateral proc-

esses 0.36 apart. Abdominal sterna keeled to apex of penultimate sternum. Connexival margin straight, angles not produced. Hemelytra reaching slightly beyond apex of penultimate tergum; last tergum with deep apical incisure (fig. 14). Length 12.5 mm.

Holotype—male, VENEZUELA, Cojedes, 12 km NE of Tinaquillo, 30.V.1972, L. J. Joly collector, in NMNH. Quite close to *P. subinermis*, the difference in size and coloration are the most striking differences; the arms of the incisure of the last tergum of *lissa* are 0.5 mm apart, whereas in *inobtrusa* these are 0.75 apart. Both incisures being of about the same depth, the angle of that of *inobtrusa* is much less acute than in *lissa*. Only the proportion of length to width of thorax is the same in both species; all other proportions are different, such as between length of antennal segment I to head length, head length to thorax length, spine of antennal segment I to whole segment, length of discal cell to width (2:0.7 *inobtrusa*, 1.6:0.6 in *lissa*).

Pnirontis heminigra Maldonado, n. sp.
(Figs. 1 to 5)

Male—head, antennal segment I blackish; pronotum, prosternum, mesosternum, mesopleura, and scutellum brownish black; II–IV antennal segments, beak, lower half of metapleura, basal half of pro- and mesocoxa, metacoxa, outer coriaceous cell of corium brown. Most of legs and metasternum stramineous; apex of tibia and tarsi blackish brown. Hemelytra: polished stramineous, clavus and corium to apex of discal cell lightly variegated brown, thence more densely marbled with brownish; veins to apex of hexagonal cell yellow, thence to apex concolorous with blade. Abdominal sterna stramineous to apex of sixth; two longitudinal brownish stripes between median keel and line of spiracles, both stripes almost the same width; apical angles of connexival segments 3–6th black, each area successively larger towards apex; borders of incisure of last tergum black (fig. 5); apex of last abdominal tergum ventrally black.

Head: length 1.4, width across eyes 0.72, postocular margin 0.35, anteocular margin 0.35, length of eye 0.4, width of eye 0.16, height of eye 0.35. Juga extended as 2 porrect processes reaching 0.1 beyond apex of antenniferous tubercle. Gena long, sharp, reaching basal ¼ of antennal segment I, unarmed below but for two small ramose spines close to eye; head ventrolaterally behind eye with 4 ramose spines. Antennal segments: I, 11.5; II, 1.5; III, 0.15; IV, 0.5; I unarmed below, apical projection 0.2, slightly less than ¼ length of segment; II–IV very slender and very finely short pilose. Pronotum: lateral carina incomplete, width at anterior angles 0.55, length of anterior lobe 0.95, length of hind lobe 0.75, width at humeral angles 1.35; median longitudinal sulcus of anterior lobe shallow on basal ⅓, thence deep to base of posterior lobe; median sulcus

on posterior lobe 2× as wide apically than basally, apical half obliquely corrugate; each lateral depression of posterior lobe obliquely corrugate; anteroventral spine of pronotum sharp, reaching about midlength of postocular margin; meso- and metapleura pitted and vertically sulcate. Mesosternum transversely impressed behind anterior margin, which is slightly convex in front of anterior mesosternal processes; processes 0.25 apart and angled mesad at about 45°. Proleg: coxa truncate-globose, unarmed; trochanter with one strong spine ventrally before apex; femur: inner series of about 10 spines each successively longer toward apex, reaching apical ⅔ of segment, the longest slightly less than ½ thickness of segment; ventral series—4 spines on basal half, with 4 or 5 very short spinules between each pair, first the longest, about ½ as long as thickness of segment, apical half of segment with 16 spinules that are shorter than those between the long basal spines; tibia only with inner armature, consisting of 3 spines distributed in the middle ⅓ of the segment, the first 2 spines 2× as long as thickness of segment (0.2:0.1), third spine slightly longer than thickness of segment. Scutellum width 0.5, length 0.74, with small basal discal depression. Hemielytra reaching apical ⅔ of last tergum; last tergum with deep V-shaped apical incisure. Length 10.0 mm.

Holotype—male, PARAGUAY, CaaGuazú District, Estancia Primera, 11 Jan. 1932, R. F. Hussey collector, in MZUM. The short spines of the profemur, the small size, and the contrasting dark anterior half and light posterior half of the body identify this species.

Pnirontis acuminata Barber, 1929
(Fig. 7 to 9)

Female holotype—Head length from apex of jugae to base of collum 2.8, width across eyes 2.2, interocular space 0.6, antennal segment I 1.45, somewhat fusiform, length of apical spine 0.5, internal face not pilose; jugae extending as 2 porrect spines, their apices reaching 0.1 into base of antennal segment I; gena reaching 0.3 into base of antennal segment I, with small globular setigerous spines basally on ventral margin. Anteocular space (as measured by Barber from lateral apex of antenniferous tubercle to anterior margin of eye) 1.05, postocular margin 0.8, with 5 spines, 3 of these ramose. Profemur: both series with spines at least 2× as long as thickness of segment; protibia with one series of spines 4× as long as thickness of segment, with an elongate apical spur (fig. 8). Forewings reaching apex of fourth tergum. Coloration: stramineous, a longitudinal brownish stripe along lower margin of sides of pronotum. Brazil. Type in Carnegie Museum.

***Pnirontis subinermis* Barber, 1929**
(Figs. 24 to 25)

Female paratype—Head: length 1.9, width across eyes 0.9, interocular space 0.45, antennal segment I parallel sided, length 1.3, apical spine 0.3, inner margin short pilose, subantennal spine thick, well developed (fig. 24). Jugae two-pronged, length 0.3, reaching base of antennae. Gena reaching 0.5 into first antennal segment, lower margin with 1–3 small globular setigerous spines. Anteocular margin 0.6; postocular margin 0.5, with 4 spines, the first behind eye, large, ramose. Profemur with 3 rows of spines, the middle one with short spines irregularly arranged; spines on all 3 rows shorter than diameter of segment; protibia with one row of spines, only the basal spine slightly longer than diameter of segment, second one equal, third shorter, no spur. Connexivum with last 4 angles slightly produced, apices of angles black, margins straight. Overall color darkening towards apex of abdomen. Brazil. Length 12.5 mm. In Carnegie Museum.

***Pnirontis demerarae* Brindley, 1931**

I have not seen the type or specimens of this species. Several years ago, while trying to determine the position of this species in Barber's key, the late English hemipterologist, Dr. W. E. China, gave me the following details: first antennal segment not armed beneath and shorter than head; apex of gena reaching far beyond the apex of antenniferous tubercle; gena from base of antenniferous tubercle to its apex about 2× as long as antenniferous tubercle. Type in the British Museum (Natural History).

***Pnirontis inobtrusa* Barber, 1929**

Male—Head: length 2.3, width across eyes 0.96, interocular space 0.5; first antennal segment 1.6, slightly fusiform, apical spine 0.5, internal face short haired. Jugae surpassing base of antennal segment I. Gena surpassing base of antennal segment I by 0.6, lower margin with a few globular setigerous spines close to eye. Anteocular margin 0.75, postocular margin 0.7, ventrolaterally behind eye with 6 or 7 spines giving the impression of a long row of about 10 or 11 setigerous spines. Pronotum length 2.3, width 1.75. Profemur with spines in both series shorter than diameter of segment; protibia with short spines and without spur. Connexival margin straight, immaculate. Length 15.00 mm. Bolivia. Type in Carnegie Museum.

RESUMEN

Se discuten las especies de *Pnirontis* pertenecientes al grupo *subinermis* que se caracterizan por tener el primer artejo antenal sin espinas en la faz inferior. Se provee una clave para las especies descritas a la fecha de la monografía de Barber sobre los estenopodainos americanos. Otras especies sa descritas luego; también dos nuevas, *P. lisa* y *P. heminigra*, que se ilustran.