ZOOLOGIA 31 (5): 463–474, October, 2014
http://dx.doi.org/10.1590/S1984-46702014000500006

New species of the harvestmen *Hutamaia* (Laniatores: Gonyleptidae: Ampycinae) and generic diagnosis

Ana Lúcia Tourinho[1] & Amanda Cruz Mendes[2]

[1] *Museum of Comparative Zoology and Department of Organismic and Evolutionary Biology, Harvard University. 26 Oxford Street, Cambridge, MA 02138, USA. E-mail: amtourinho@gmail.com*
[2] *Departamento de Zoologia, Instituto de Biologia, Universidade do Estado do Rio de Janeiro. Rua São Francisco Xavier 524, Maracanã, 20550-900 Rio de Janeiro, RJ, Brazil. E-mail: amanda.mendes@gmail.com*

ABSTRACT. We add three new species to the formerly monotypic Amazonian *Hutamaia*, *Hutamaia maceta* **sp. nov.**, *Hutamaia plei* **sp. nov.** and *Hutamaia trompsonica* **sp. nov.** and compare them with the type species, *Hutamaia caramaschii* Soares & Soares, 1977. *Hutamaia* was known only from two localities: Humaitá, Amazonas, Brazil (type locality of the type species), and Madre de Dios, Peru. Herein we record species from the following additional localities, all in Brazil: Coari, Codajás, Juruá, Jutaí, Manacapuru, Tefé (state of Amazonas) and Gurupá (state of Pará), indicating that the genus has a widespread distribution in the Brazilian and Peruvian Amazon. *Hutamaia* is newly diagnosed by having yellowish granules on dorsal scutum, armature of coxa IV of males, metatarsi with yellow rings, ventral plate of penis trapezoid with V-shaped cleft, bearing two pairs of longitudinal rows of setae, and glans without dorsal or ventral processes. The genus is likely closely related to *Licornus* Roewer, 1932, from which it differs by the shape of the ventral plate of the penis and lack of dorsal process of glans.

KEY WORDS. Amazonas-Solimões River; floodplains; Neotropics; Opiliones; taxonomy.

Ampycinae Kury, 2003 was erected under Gonyleptidae by Kury (2003), and originally included three species in two genera (*Ampycus* Simon, 1879 and *Hexabunus* Roewer, 1913). Later, the author acknowledged that, although his initial intention had been to widen the definition of the subfamily to include nine more genera in it, he decided not do to do it, which resulted in some inconsistencies in his 2003 publication (see Kury & Alonso-Zarazaga 2011: 52). Kury & Alonso-Zarazaga (2011) officially transferred those nine genera (*Ampycella* Roewer, 1929, *Glysterus* Roewer, 1931, *Hernandariodes* Pickard-Cambridge, 1905, *Hutamaia* Soares & Soares, 1977, *Neopachyloides* Roewer, 1913, *Nesopachylus* Chamberlin, 1925, *Parahernandria* Goodnight & Goodnight, 1947, *Sibollus*, Roewer, 1929, and *Thaumatopachylus* Roewer, 1929) to Ampycinae. More recently, two genera have been included in Ampycinae, *Pirunipygus* Roewer, 1936 (Pinto-da-Rocha *et al*. 2012) and *Licornus* Roewer, 1932 (Villarreal & Kury 2012). Currently, Ampycinae comprises 25 species grouped into 13 genera. Most of the genera were originally placed in Pachylinae, some in Hernandariinae or Gonyleptinae, and Cranainae. As it is usually the case with Neotropical harvestmen, almost half of the genera of Ampycinae were monotypic – six out of 13, until this paper. Ampycinae was recovered as a clade, which is closely related to Cranainae, in the most recently published molecular phylogeny of Gonyleptidae (Pinto-da-Rocha *et al*. 2013).

"ProVárzea" was a large project on the diversity and potential biogeographic regions of the Amazon flooded forests – várzea – (Brazil), conducted by the staff of the Instituto Nacional de Pesquisas da Amazônia (INPA) and funded by the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA). This project resulted in numerous harvestmen samples, including new species of some genera previously considered monotypic, or with only one species recorded for the Brazilian Amazon (Tourinho & Pérez 2006). In this paper we describe three new species of *Hutamaia*, formerly monotypic, collected from the flooded forests (várzea) of the Amazon River. We discuss the affinities of *Hutamaia* with *Licornus* and their biogeographic distribution patterns. Additionally, we provide a map and key for the genus, and new diagnoses for *Hutamaia* and *H. caramaschii*, including information on the new species.

MATERIAL AND METHODS

Photographs were taken at different focus distances with a Sony Cybershot DSC-V1 attached to an Olympus dissecting microscope. Later, photographs were aligned – command Macro > Align and Balance Used Frames (Thorough) – and stacked – command Macro > Pyramoid Maximum Contrast – to obtain an image with greater depth of field, using the software CombineZ, version Combine ZP (Hadley 2014). We made schematic illustrations from photographs or using a camera lucida, with the help of the software CorelDRAW X5 and a Wacom Bamboo Connect tablet.

All measurements are given in millimeters. Abbreviations used in the descriptions: (CL) carapace length, (CW) carapace maximal width, (AL) abdominal scutum length, (AW) abdominal scutum maximal width, (Pe) pedipalpus, (Tr) trochanter, (Fe) femur, (Pa) patella, (Ti) tibia, (Mt) metatarsus, (Ta) tarsus, (Cl) claw.

Repositories of specimens are as follows: Instituto Nacional de Pesquisas da Amazonia, Amazonas, Brazil (INPA) and Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil (MNRJ). We made the map using the software ArcGIS Desktop 10.

TAXONOMY

Ampycinae Kury, 2003

Ampycinae Kury, 2003: 106. Villarreal & Kury, 2012: 72. Type genus: *Ampycus* Simon, 1879.

Hutamaia Soares & Soares, 1977

Hutamaia Soares & Soares, 1977: 217; Kury & Alonso-Zarazaga, 2011: 53; Villarreal & Kury, 2012: 71.

Placement. *Hutamaia* originally in Pachylinae. Transferred to the Ampycinae by Kury & Alonso-Zarazaga, 2011.

Type species. *Hutamaia caramaschii* Soares & Soares, 1977, by original designation.

New diagnosis. Mesotergum divided into four areas, area I divided into left and right halves by longitudinal groove. Yellowish granules scattered on carapace and at least one row on each mesotergal area and free tergite. Mesotergum with paired armature in areas – inconspicuous in areas I and II, and inconspicuous or acuminate tubercles in area III. Lateral areas with at least one conspicuous row of flattened yellowish white tubercles each. Coxa IV of males with spiniform curved prolateral distal apophysis, posteriorly projected; much reduced in females. Metatarsi with yellow rings. Ventral plate of penis trapezoid, with V-shaped cleft. Without dorsal or ventral processes. Two pairs of longitudinal rows of setae on ventral plate, one more dorsal and other more ventral, dorsal row with at least five pairs of macrosetae. Tarsal counts: 4-6(2-3)/8(3)/6-7/6-7.

Distribution. Brazil, *Amazonas*: Coari, Codajás, Humaitá, Juruá, Jutaí, Manacapuru, Tefé. *Pará*: Gurupá. Peru: *Madre de Dios*.

Species included. *Hutamaia caramaschii* Soares & Soares, 1977 (type species), *Hutamaia maceta* **sp. nov.**, *Hutamaia plei* **sp. nov.**, *Hutamaia trompsonica* **sp. nov.**

Remarks. Kury (2003) proposed the subfamily Ampycinae, composed of three species transferred from Pachylinae. He included *Hutamaia* in the Gonyleptidae as *incertae sedis* and also as member of the Ampycinae in the general list of species by region, and in the list of nomenclatorial changes. However, he did not include the genus in the specific section treating the Ampycinae genera and species. The problem as later pointed out by Kury & Alonso-Zarazaga (2011), who formally transferred *Hutamaia* to Ampycinae.

Key to the species of *Hutamaia*

1. Areas of mesotergum divided (Figs 25, 29). Free tergites I and II armed with a median apophysis each (Figs 25, 27-30) ..... *Hutamaia trompsonica* **sp. nov.**

1'. Only area I completely divided by a longitudinal groove (Figs 5, 13, 17). Areas II and III entire (Figs 13, 17) or partially divided in half longitudinally (Figs 1, 5). Area IV entire. Free tergites I-II unarmed (Fig. 1) 2

2. Areas II and III of mesotergum partially divided in half by incomplete longitudinal groove (Figs 1, 5). Tibia IV of males elongate, more than four times the length of patella IV (Figs 9, 10) ..... *H. maceta* **sp. nov.**

2'. Areas II and III entire (Figs 13, 17). Tibia IV less than four times the length of patella IV (Figs 21, 22) 3

3. Stigmatic area unarmed (Fig. 14). Trochanter II with small retrolateral distal tubercle (Figs 13, 17). Trochanter IV with small retrolateral distal tubercle and a large spiniform ventro-retrolateral distal apophysis (Figs 13, 18). Ventro-basal spiniform apophysis on femur IV (Figs 14, 15, 18). Metatarsus IV with ventral row of spines larger than dorsal and lateral tubercles of the podomere .... *Hutamaia plei* **sp. nov.**

3'. Stigmatic area with two posterolateral blunt projections. Trochanter II with large curved retrolateral distal apophysis. Trochanter IV with retrolateral distal curved spiniform apophysis. Femur IV without ventro-basal apophysis. Metatarsus IV with rows of sub equally sized tubercles *Hutamaia caramaschii* Soares & Soares, 1977

Hutamaia caramaschii Soares & Soares, 1977

Fig. 37

Hutamaia caramaschii Soares & Soares, 1977: 217 (MNRJ-HS 614, male holotype, examined).

Type locality. Brazil, *Amazonas*: Humaitá (Igarapé Banheiro, left margin of Madeira River).

New diagnosis. Only area I of mesotergum divided by a longitudinal groove, areas II-IV entire. Area III with a paramedian pair of small tubercles. Free tergites I and II unarmed, free tergite III with apophysis stout on well-developed males (alpha males), reduced on beta males and females. Stigmatic area with 2 posterolateral blunt projections. Trochanter II with large curved retrolateral distal apophysis. Legs of males not elongate, tibia IV twice the length of patella IV, with rows of subequal granules. Ventral plate of penis pyriform, with two longitudinal rows of setae, one pair more dorsal and the other more ventral in the ventral plate. Dorsal row composed by five pairs of aligned macrosetae: three more distal and two more basal; and one smaller mesodorsal setae between those two groups. Ventral row composed by three pairs of distal setae. Glans complex quite long – much longer than ventral plate, stylus entirely above ventral plate (vp) border and bent over the ventral surface of the vp.

Figures 1-4. *Hutamaia maceta* **sp. nov.**, male holotype INPA 453: (1) dorsal view; (2) ventral view; (3) lateral view; (4) posterior view. Scale bars: 2.0 mm.

Material examined. Brazil, *Amazonas*: Humaitá (Igarapé Banheiro), 1 male holotype, 04.IV.1975, Caramaschi, U. *leg.*, MNRJ-HS 614. Same locality, 1 male paratype, 24.II.1976, Caramaschi, U. *leg.*, MNRJ-HS 633. Same locality, 2 males, 1 female, 10-11.III.1976, Caramaschi, U. *leg.*, MNRJ 4469.

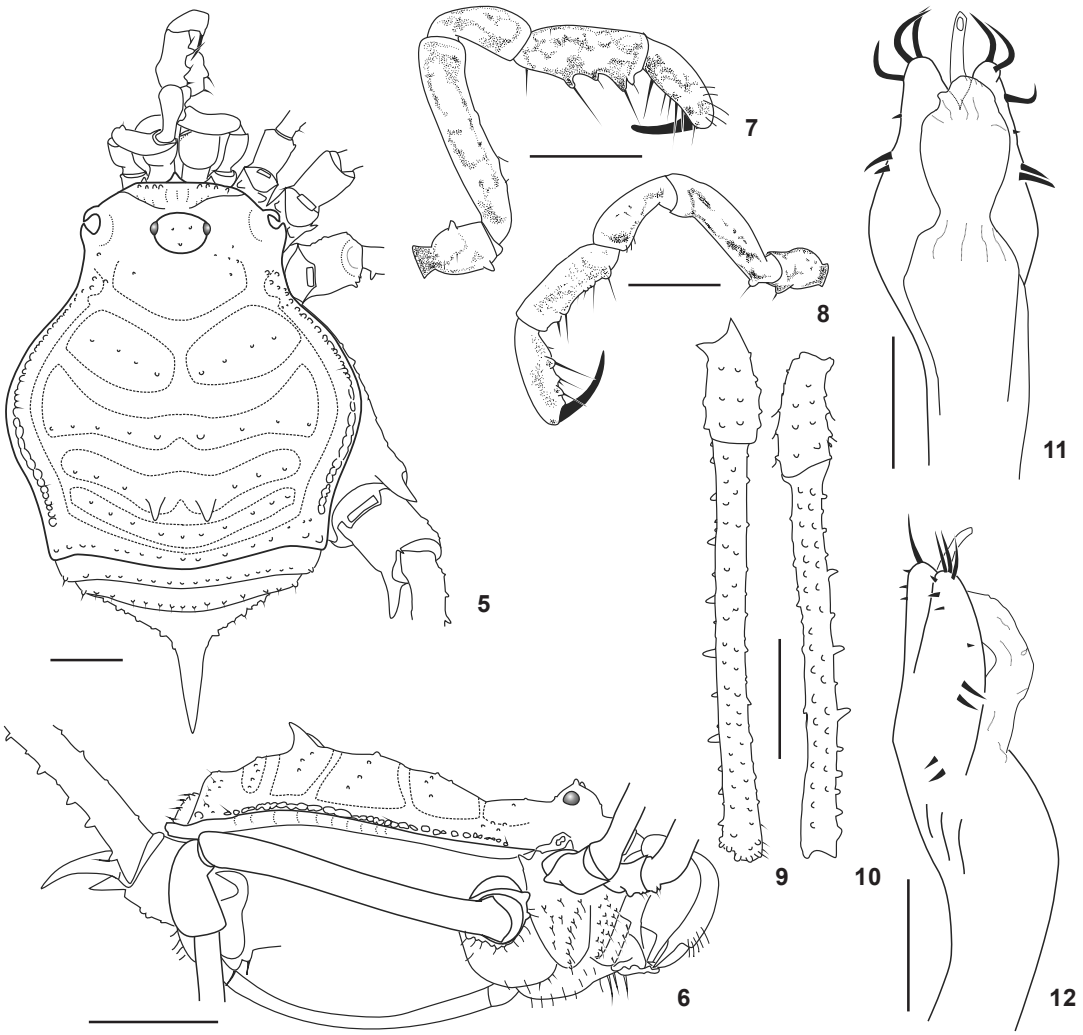
Records. Peru, *Madre de Dios*: Puerto Maldonado (Lodge "Cuzco Amazónico", 15 Km E Puerto Maldonado, 200 m) (Kury 2003: 105).

Hutamaia maceta **sp. nov.**

Figs 1-12, 37

Type locality. Brazil, *Amazonas*: Juruá (Médio Juruá, Margem direita RDS Uacari, -5.43917, -67.2734).

Diagnosis. Only area I of mesotergum totally divided by a longitudinal groove, areas II-III with incomplete longitudinal groove, area IV entire. Area III with a paramedian pair of acuminate tubercles. Free tergites I and II unarmed, free tergite III with apophysis stout on well-developed males (alpha males), reduced on beta males and females. Stigmatic area unarmed. Legs of males elongate, tibia IV of males 4X the length of patella IV, with rows of granules, and a ventral row of subequal spines on the median third. Ventral plate of penis pyriform attenuated, with two pairs of lateral longitudinal rows of setae, one pair more dorsal and the other more ventral in the ventral plate. Dorsal row composed by five pairs of aligned macrosetae: three most distal strongly curved, two most basal slightly curved; and one small mesodorsal setae between those two groups. Ventral row composed by three pairs of distal small setae and two pairs of basal macrosetae slightly curved. Glans complex long – but only slightly longer than vp, stylus entirely above ventral plate border, curved in lateral view and pointing dorsally, not bent over vp.



Figures 5-12. *Hutamaia maceta* **sp. nov.**, male holotype INPA 453: (5-6) habitus, dorsal and lateral views, respectively; (7-8) pedipalps: (7) right, ectal view; (8) left, mesal view; (9-10) tibiae IV: (9) right, dorsal view; (10) left, retrolateral view; (11-12) penis dorsal and lateral views, respectively. Scale bars: 5, 6, 9, 10 = 2.0 mm; 7, 8 = 1.0 mm; 11, 12 = 0.2 mm.

Description of male (holotype). **Measurements**: CL: 2.8; CW: 3.5; AL: 4.5; AW: 6.2. Legs. Pp: Tr: 0.8; Fe 1.9; Pa 0.8; Ti 1.0; Ta: 0.9; Cl: 0.8; Leg I: Tr: 0.7; Fe: 4.1; Pa: 1.2; Tb: 2.6; Mt: 4.6; Ta: 2.5. Leg II: Tr: 0.9; Fe: 8.7; Pa: 1.6; Ti: 6.4; Mt: 8.5; Ta: 5.1. Leg III: Tr: 0.9; Fe: 8.6; Pa: 1.6; Ti: 6.5; Mt: 8.5; Ta: 2.2. Leg IV: Tr: 1.5 Fe: 9.8 Pa: 2.2 Ti: 11.2 Mt: 9.9 Ta: 2.1. **Dorsum** (Figs 1, 3-6): outline of dorsal scutum in dorsal view pyriform. Mesotergum divided into 4 areas. Ocularium low, armed with a dorsal pair of small median tubercles and several small dispersed. Carapace with small granules in anterior margin and behind the ocularium, smaller anteriorly and larger lateral to areas II and III. Lateral margin of dorsal scutum with a row of yellowish white tubercles extending from carapace to area IV. Scutal area I with a posterior row of 8 yellowish white granules; area II with 1 row of yellowish white granules; area III with 2 large spines (spiniform tubercles) and some yellowish white granules in lateral; area IV with a row of about 10 yellowish white granules. Free tergites I and II each with a transverse row of granules; free tergite III with a large spiniform posterior medial projection with apex bending. Dorsal anal operculum with a pair of granules. **Venter** (Figs 2, 4): stigmatic area unarmed. Free sternites each with a transverse row of granules. Ventral anal operculum with a posterior row of granules. **Chelicerae** (Figs 1-3): chelicera neither swollen nor elongate, with well-marked bulla with a little ectoproximal tubercle. **Pedipalps** (Figs 1, 5, 7-8): coxa with a ventral setiferous tubercle. Trochanter with 1 dorsal and 1 ventral setiferous tubercles. Femur with 1 ventroproximal setiferous tubercle and a

row of 4 minute ventroectal tubercles. Patella smooth and unarmed, with only minute scattered setiferous granules. Tibia: ectal (IiIi/IIi) and mesal (IiIi). Tarsus: ectal (IiIi); mesal (IiIi). **Legs** (Figs 1, 2, 5, 6, 9, 10): legs elongate, II and IV twice the length of body. Coxa I with 2 dorsal tubercles; II with 1 anterior and 2 posterior dorsal tubercle, 1 retrolateral distal spiniform tubercle; coxa IV, in dorsal view, surpassing dorsal scutum, with numerous granules and 1 large spiniform curved prolateral distal apophysis, posteriorly directed. Trochanters I-III with retrolateral setiferous tubercles, larger on III; trochanter IV with some small tubercles on both sides and 1 large retrolateral distal apophysis, ventral scattered tubercles. Femora I-III with several longitudinal rows of granules, each one with a larger retrolateral basal granule; femur IV straight in dorsal view, with rows of tubercles, more concentrated in distal portion, two ventral rows with larger tubercles. Patella IV with scattered tubercles. Tibia IV straight in lateral view, incrassate sub distally, with rows of granules, and a ventral row of subequal spines on the median third. Tarsal segmentation. 6(3)/8(3)/7/7. **Penis** (Figs 11, 12): ventral plate pyriform attenuated: long, with lateral margins subparallel, convex at base, tapering at distal part. Distal border with small V-shaped cleft. Two pairs of lateral longitudinal rows of setae, one pair more dorsal and the other more ventral in the ventral plate. Dorsal row composed by five pairs of aligned macrosetae: three most distal strongly curved, two most basal slightly curved; and one small mesodorsal setae between those two groups. Ventral row composed by three pairs of distal small setae and two pairs of basal macrosetae slightly curved. Glans complex long – but only slightly longer than vp, stylus entirely above ventral plate border, sinuous and pointing dorsally in lateral view, not bent over vp. **Color** (in ethanol) (Figs 1-4): Dorsal scutum dark brown, with reticulated carapace and lateral groove, with yellow spots on lateral and dorsal areas. Chelicerae brown, pedipalps and trochanters I-III yellow; rest of the legs dark with few light spots but tarsi yellow. All metatarsi with yellow rings.

Female. **Measurements** (female paratype, INPA 453): CL 2.5; CW 3.3, AL 4.5, AW 6.2. Pp. Tr: 0.6; Fe: 1.6; Pa: 0.9; Ti: 1.1; Ta: 0.8; Cl: 0.7. Leg I. Tr: 0.7; Fe: 2.9; Pa: 1.1; Ti: 1.9; Mt: 3.7; Ta: 2.0. Leg II. Tr: 0.9; Fm: 5.9; Pa: 1.3; Ti: 4.1; Mt: 5.2; Ta: 4.0. Leg III. Tr: 0.9; Fe: 4.5; Pa: 1.4; Ti: 2.6; Mt: 4.5; Ta: 2.0. Leg IV. Tr: 0.9 Fe: 5.9; Pa: 1.6; Ti: 3.8; Mt: 6.3; Ta: 1.9. **Description**: in general aspect, similar to the male, but dorsal tubercles of area III smaller. Free tergite III with very small apophysis. Distal tubercles of coxa IV and retrolateral spiniform apophysis of trochanter IV smaller than in males. Ventral and conspicuous tubercles on tibia IV.

Type material. Brazil, *Amazonas*: Juruá (Médio Juruá, Margem direita RDS Uacari, -5.43917, -67.2734), 1 male holotype + 1 male paratype, VIII.2005, Rohe, F. *leg*., INPA 453; Other paratypes: (Paraná Teiú, -2.679, -65.64), 2 males + 1 female, 26.IX.2003, nocturnal search, Venticinque, E. *leg*., MNRJ 4280. Tefé (Lago do Jacaré, -3.26, -64.628), 1 male, 21.IX.2003, nocturnal search, Venticinque, E. *leg*., INPA 160; (Guariba Solimões, -3.664, -64.17), 1 female, 22.IX.2003, nocturnal search, Venticinque, E. *leg*., INPA 166; 2 females, 19.IX.2003, nocturnal search, Rego, F. *leg*., INPA 186. Codajás (Lago Cuxuará, -3.972, -61.96), 1 male, 26.IX.2003, nocturnal search, Venticinque, E. *leg*., INPA 211.

Distribution (Fig. 37). Brazil, *Amazonas*: Juruá, Tefé, Codajás.

Etymology. The word "maceta" is used by the local people of the Amazon basin to refer to extremely big things. Noun in apposition.

Hutamaia plei **sp. nov.**

Figs 13-24, 37

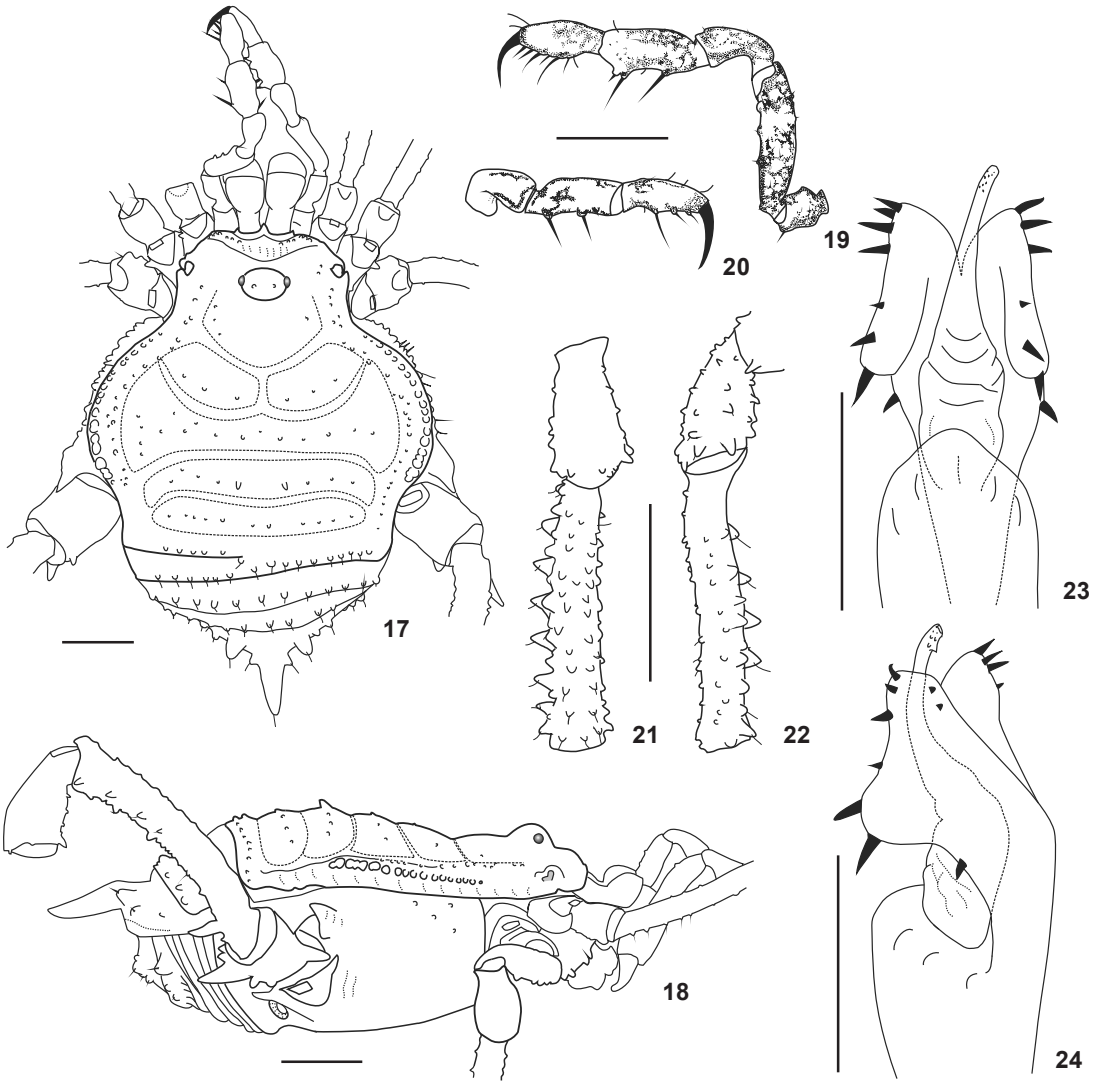
Type locality. Brazil, *Amazonas*: Jutaí (Restinga do Cevalho).

Diagnosis. Only area I of mesotergum divided by a longitudinal groove, areas II-IV entire. Area III with paramedian pair of small tubercles. Free tergites I and II unarmed, free tergite III with median spiniform apophysis, with a pair of small tubercles on basis, and one pair of blunt paralateral apophysis on the free tergite. Stigmatic area unarmed. Trochanter IV with small retrolateral distal tubercle and one large spiniform ventroretrolateral distal apophysis. Femur IV with ventrobasal spiniform apophysis. Legs not elongate, tibia IV of males twice the size of patella IV, with rows of granules, ventral rows of acuminate tubercles. Ventral plate of penis, with basal portion narrow, widening towards the apex, and abruptly forming lateral lobes on medial portion. Insertion of ventral plate very basal in the truncus of the penis. Two pairs of lateral longitudinal rows of setae, one more dorsal and the other ventral in the ventral plate. Dorsal row composed by five aligned macrosetae: three pairs most distal straight, two pairs most basal straight and on the lateral lobes; and one small mesodorsal setae between those two groups. Ventral row composed by a distal group of two very small setae and a basal group of one macrosetae. Complex glans only slightly longer than vp. Distal half of stylus surpass distal border of ventral plate. Stylus slightly curved, pointing ventrally. Apex of stylus with small scales.

Description of male (holotype). **Measurements**: CL 1.9; CW 2.6, AL 3.0, AW. Pp: Tr: 0.5; Fe: 1.2; Pa: 0.7; Ti: 0.8; Ta: 0.8; Cl: 0.5. Leg I. Tr: 0.7; Fe: 2.0; Pa: 0.8; Ti: 1.3; Mt: 2.2; Ta: 1.4. Leg II. Tr: 0.6; Fe: 3.4; Pa: 0.8; Ti: 2.7; Mt: 2.9; Ta: 3.0. Leg III. Tr: 0.8; Fe: 2.9; Pa: 0.8; Ti: 1.8; Mt: 2.8; Ta: 1.4. Leg IV. Tr: 1.0; Fe: 3.4; Pa: 1.4; Ti: 2.9; Mt: 4.1; Ta: 1.6. **Dorsum** (Figs 13, 15, 16, 17, 18): outline of dorsal scutum in dorsal view pyriform. Mesotergum divided into 4 very well-marked areas, areas II-IV. Ocularium low, armed with a dorsal pair of small median tubercles. Carapace with small granules in anterior margin and behind the ocularium. Lateral margin of dorsal scutum with two rows of small yellowish white tubercles: the innermost composed by minute granules, extending from lateral of ocularium to of the area IV, the outermost extending from lateral of area I to area II, starting small and incrementing in size. Scutal area I with a posterior row of 6 yellowish white gran-

Figures 13-16. *Hutamaia plei* **sp. nov.**, male holotype INPA 014: (13) dorsal view; (14) ventral view; (15) lateral view; (16) posterior view. Scale bars: 1.0 mm.

ules, the median pair slightly larger than others; II-IV with 1 row of small yellowish white granules each, II and IV with median pair slightly larger than others and area III with median pair of acuminate tubercles; posterior margin with a row of small granules. The holotype has a teratologic extra left half of the posterior margin, before the entire posterior margin. Free tergites I and II unarmed, each with a row of small granules; III with median spiniform apophysis, ventrally directed, with a pair of small tubercles on basis, and one pair of blunt paralateral apophysis on the free tergite. Dorsal anal operculum with a pair of rounded tubercles, and smaller tubercles scattered. **Venter** (Figs 14, 18): stigmatic area unarmed. Free sternites each with a transverse row of granules. Anal operculum ventral with one posterior row of rounded tubercles, larger laterally. **Chelicerae** (Figs 13, 14, 17, 18): neither swollen nor elongate, with well-marked bulla with a little ectoproximal tubercle. **Pedipalps** (Figs 13, 14, 17, 19, 20): coxa with a ventral setiferous tubercle. Trochanter with 1 ventral setiferous tubercle. Femur with 1 ventroproximal setiferous tubercle and a row of 3 minute ventroectal tubercles. Patella smooth and unarmed, with few scattered minute setiferous granules. Tibia: ectal (IIi) and mesal (II). Tarsus: ectal (IiIi); mesal (IiIi/IIi). **Legs** (Figs 13-15, 17, 18, 21, 22): coxa I with 2 dorsal tubercles; II with 1 dorsal anterior conspicuous tubercle and lower posterior tubercles, 1 retrolateral distal tubercle; coxa IV, in dorsal view, surpassing dorsal scutum, with numerous yellowish granules and 1 large spiniform curved prolateral distal apophysis, posteriorly directed. Trochanters I-III with scattered granules; trochanter IV with small retrolateral distal tubercle and one large spiniform ventro-retrolateral distal apophysis. Femora I-III with several longitudinal rows of granules, II and III with a larger retrolateral basal granule; femur IV curved in dorsal view, with several rows of tubercles, two ventral with larger ones and with a ventrobasal spiniform apophysis. Patella IV with



Figures 17-24. *Hutamaia plei* **sp. nov.**, male holotype INPA 014: (17-18) habitus, dorsal and lateral views, respectively; (19-20) pedipalps: (19) left, ectal view; (20) left, mesal view; (21-22) tibiae IV; (21) left, dorsal view; (22) right, prolateral view; (23-24) penis dorsal and lateral views, respectively. Scale bars: 17-22 = 1.0 mm, 23-24: 0.2 mm.

scattered tubercles, the ventral larger and spiniform. Tibia IV straight in lateral view, with rows of acuminate tubercles, the ones of the ventro-retrolateral row much larger. Metatarsus and basitarsus I slightly incrassate. Metatarsus IV with rows of tubercles, ventral row with larger spiniform tubercles, larger on basal portion of podomere, decreasing in size towards apex. Tarsal segmentation. 4(2)/8(3)/6/6. **Penis** (Figs 23, 24): Ventral plate of penis, with basal portion narrow, widening towards the apex, and abruptly forming lateral lobes on medial portion. Insertion of ventral plate very basal in the truncus of the penis. Distal border with small V-shaped cleft. Two pairs of lateral longitudinal rows of setae, one more dorsal and the other ventral in the ventral plate. Dorsal row composed by five aligned macrosetae (on the right half, the left half with six possibly due to teratologic multiplication on the distal group of macrosetae): three most distal straight (on the right half, the left half with four), two pairs most basal straight and on the lateral lobes; and one small mesodorsal setae between those two groups. Ventral row composed by a distal group of two very small setae and a basal group of one macrosetae. Complex glans only slightly longer than vp. Distal half of stylus surpass distal border of ventral plate. Stylus slightly curved, pointing ventrally. Apex of stylus with small scales. **Color** (in ethanol) (Figs 13-16): dorsal scutum orangey brown, with re-

ticulated carapace and lateral groove, with yellow spots in lateral and dorsal areas, and region around mesotergal granules seeming depigmented. Chelicerae dark yellow, pedipalps and trochanters I-III pale yellow; rest of the legs dark yellow but tarsi pale yellow. Leg IV orangey brown. All metatarsi with yellow rings.

Female unknown.

Type material. Brazil, *Amazonas*: Jutaí (Restinga do Cevalho, -2.731, -66.916, 528 m), 1 male holotype, 16.IX.2003, nocturnal search, Venticinque, E. *leg*., INPA 14.

Distribution (Fig. 37). Known only from the type locality.

Etymology. Latinization of the English word "play", which is used by the Brazilian opilionologist Adriano B. Kury, our friend and former tutor, in reference to anything he perceives to be extremely good. The name is to honor him for erecting Ampycinae. Noun in apposition.

Hutamaia trompsonica sp. nov.

Figs 25-37

Type locality. Brazil, *Pará*: Gurupá (Furinho).

Diagnosis. Areas I-IV divided, areas II-IV narrow, elevated ridges. Area III with row of tubercles subequally sized. Free tergites I-III with a median large apophysis, I acuminate, II blunt, conic, dorsally directed, III blunt and conic ventrally directed. Stigmatic area unarmed. Legs of males not elongate, tibia IV less than 3X the length of patella IV, with rows of tubercles, a ventral row of blunt tubercles on basal half, largest at the middle of row. Ventral plate of penis attenuated pyriform with two pairs of lateral longitudinal rows of setae, one pair more dorsal and the other more ventral in the ventral plate. Dorsal row composed by five pairs of aligned macrosetae: three pairs most distal strongly curved, two pairs most distal slightly curved; and one small mesodorsal setae between those two groups. Ventral row composed by four pairs of distal setae: the three most distal smaller and the most basal larger. Glans long, curved. Stylus does not surpass distal border of ventral plate, curved, pointing dorsalwards.

Description of male (holotype). **Measurements**: CL 2.0; CW 2.6, AL 3.2, AW 5.2. Pp. Tr: 0.5; Fe: 1.0; Pa: 0.7; Ti 0.8; Ta: 0.8; Cl: 0.5. Leg I. Tr: 0.6; Fe: 2.2; Pa: 0.8; Ti: 1.4; Mt: 2.6; Ta: 1.4. Leg II. Tr: 0.7; Fe: 4.0; Pa: 1.0; Ti: 2.9; Mt: 3.6; Ta: 3.0. Leg III. Tr: 0.7; Fe: 3.3; Pa: 0.9; Ti: 1.9; Mt: 2.7; Ta: 1.5. Leg IV. Tr: 0.6; Fe: 4.0; Pa: 1.3; Ti: 3.6; Mt: 5.0; Ta: 1.6. **Dorsum** (Figs 25, 27, 28, 29-30): outline of dorsal scutum in dorsal view pyriform. Mesotergum divided into 4 not very well-marked areas, area II-IV as elevated ridges in posterior margin. Ocularium low, armed with a dorsal pair of small median tubercles and several small dispersed. Carapace with several small granules on anterior margin, lateral and behind the ocularium. Lateral margin of dorsal scutum with two rows of small yellowish white tubercles, the innermost extending from carapace to lateral of area III, outermost from carapace to posterior margin, tubercles larger lateral to areas II and III. Scutal area I with a posterior transversal row of 9 yellowish white granules and several additional dispersed; II-IV with 1 row of small yellowish white granules on elevated ridges; posterior margin with a row of small granules. Free tergite I with a row of small granules, the median larger and acuminate, II with a row of granules, bearing a median blunt and conic apophysis, dorsally directed, III with a row of small granules, with a median blunt and conic apophysis ventrally directed. Dorsal anal operculum with a pair of small rounded tubercles. **Venter** (Figs 26, 28, 30): stigmatic area unarmed. Free sternites each with a transverse row of granules. Ventral anal operculum with posterior row of tubercles, larger laterally. **Chelicerae** (Figs 25, 26, 29): neither swollen nor elongate, with well-marked bulla with a little ectoproximal tubercle. **Pedipalps** (Figs 31, 32): Coxa with a ventral setiferous tubercle. Trochanter with 1 ventral setiferous tubercle. Femur with 1 ventroproximal setiferous tubercle and a row of 2 very small ventroectal tubercles. Patella smooth and unarmed. Tibia: ectal (IIi/II) and mesal (IiIi/IiiIi). Tarsus: ectal (IiIi); mesal (IiIi). **Legs** (Figs 25-27, 29, 30, 33, 34): legs of male not elongate. Coxa I with 2 dorsal tubercles; II with 1 anterior dorsal and two fused posterior tubercles, 1 small retrolateral distal tubercle; coxa IV, in dorsal view, surpassing dorsal scutum, with numerous yellowish granules and 1 large spiniform curved prolateral distal apophysis, posteriorly directed. Trochanters I-III with scattered granules; IV with some small tubercles in both sides and 1 prolateral distal apophysis. Femur I-III with several longitudinal rows of granules; femur IV curved in dorsal view, with several rows of tubercles, the two ventral rows with larger ones. Patella IV with scattered tubercles, ventrodistal ones acuminate. Tibia IV curved in lateral view, less than 3X the length of patella IV, incrassate sub basally, with rows of tubercles, the ventral composed of blunt tubercles on basal half, largest at the middle of row. Tarsal segmentation. 6(3)/8(3)/7/7. **Penis** (Figs 35, 36): ventral plate pyriform attenuated: long, with lateral margins subparallel, convex at base, tapering at distal part. Distal border with small V-shaped cleft. Two pairs of lateral longitudinal rows of setae, one pair more dorsal and the other more ventral in the ventral plate. Dorsal row composed by five aligned macrosetae (on the left half, the right half with six possibly due to teratologic multiplication on the distal group of macrosetae): three most distal strongly curved (on the left half, the right half with four), two pairs most distal slightly curved; and one small mesodorsal setae between those two groups. Ventral row composed by four pairs of distal setae: the three most distal smaller and the most basal larger. Glans long, curved. Stylus does not surpass distal border of ventral plate, curved, pointing dorsalwards. **Color** (in ethanol) (Figs 25-28): dorsal scutum dark brown, with reticulated carapace and lateral groove. Chelicerae reticulated of brown, pedipalps and trochanters I-III yellow; rest of the legs dark but tarsi yellow. All metatarsi with yellow rings.

Female. **Measurements** (female paratype, INPA 261): CL 1.7; CW 2.4, AL 3.0, AW 4.8. Pp. Tr: 0.5; Fe: 0.9; Pa: 0.6; Ti: 0.7; Ta: 0.6; Cl: 0.5. Leg I. Tr: 0.5; Fe: 1.9; Pa: 0.8; Ti: 1.3; Mt: 1.8; Ta:

Figures 25-28. *Hutamaia trompsonica* **sp. nov.**, male holotype INPA 118: (25) Dorsal view; (26) ventral view; (27) lateral view; (28) posterior view. Scale bars: 1.0 mm.

1.2. Leg II. Tr: 0.7; Fm: 3.6; Pa: 0.9; Ti: 2.5; Mt: 3.4; Ta: 2.7. Leg III. Tr: 0.8; Fe: 3.1; Pa: 1.0; Ti: 1.6; Mt: 2.7; Ta: 1.5. Leg IV. Tr: 0.9 Fe: 3.6; Pa: 1.0; Ti: 2.5; Mt: 3.9; Ta: 1.5. **Description**: in general aspect, similar to the male, but free tergite Iwith a row of granules equally sized, lacking a median larger and acuminate. Free tergites II and III with median larger and acuminate armature, but relatively smaller than in males.

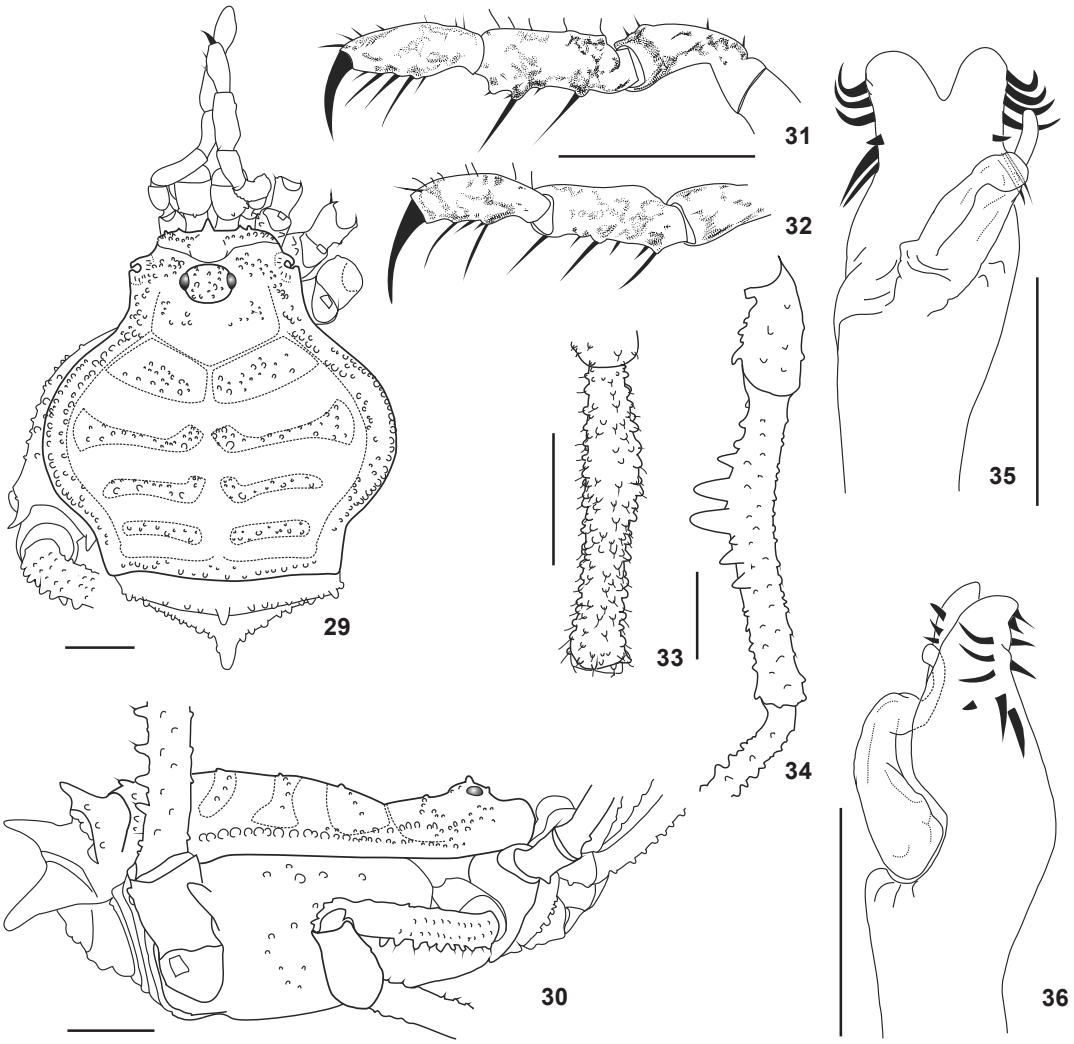
Type material. Brazil, *Pará*: Gurupá (Furinho, -1.204, -51.818), 1 male holotype, 18.IX.2003, Rheims, C. *leg.*, INPA 118. Paratypes: same locality of holotype, 1 male, 25.IX.2003, Rego, F. *leg.*, INPA 137. *Amazonas*: Manacapuru (Lago do Piranha, -3.403, -60.96354), 1 female, without collection date, Tourinho, A.L. *leg*, INPA 261. Codajás (Lago Cuxuará, -3.972, -61.996), 1 male, 26.IX.2003, Rego, F. *leg.*, INPA 200. Coari (Tocari-Solimões II, -3.894, -62.855), 1 male, 25.IX.2003, Venticinque, E. *leg.*, MNRJ 4281. All from nocturnal collecting.

Distribution (Fig. 37). Brazil, *Amazonas*: Coari (Tocari-Solimões), Codajás (Lago Cuxuará), Manacapuru (Lago do Piranha); *Pará*: Gurupá (Furinho).

Etymology. "trompsonica" is a word made up by Adriano Kury to express all kinds of ordinary things. Following his usage as an adjective in Portuguese, latinization as follows: f. trompsonica, m. trompsonicus, n. trompsonicum.

DISCUSSION

Ampycinae comprises 13 genera and 28 species, including the three new species herein described. Its monophyly is supported by two morphological characters, the presence of a deep cleft on the distal margin of the ventral plate of the penis and a free tergite III armed with spine (Kury 2003). The monophyly of Ampycinae was also recovered by molecular analysis



Figures 29-36. *Hutamaia trompsonica* **sp. nov.**, male paratype MNRJ 4281: (29) habitus dorsal view; (33) left tibia IV, dorsal view; holotype INPA 118:(30) habitus lateral view; (31-32) pedipalps: (31) left, ectal view; (32) right, mesal view; (34) right tibia IV, retrolateral view; (35-36) penis dorsal and lateral views, respectively. Scale bars: 29-36 = 1.0 mm, 35-36 = 0.2 mm.

(Pinto-da-Rocha *et al*. 2013). Species of this subfamily are distributed in the Brazilian Amazon, Ecuador and Peru (*Ampycus*, *Hexabunus*, *Hutamaia*, *Sibollus*, and *Thaumatopachylus*), Pacific forest of Ecuador (*Ampycella*), Central America (*Glysterus*, *Hernandarioides*, *Nesopachylus*, and *Parahernandria*) and Ecuadorian/Peruvian montane forest of the Andes *(Neopachyloides* and *Pirunipygus*).

Soares & Soares (1977) described *Hutamaia* for *Hutamaia caramaschii* Soares & Soares, 1977, which was only known from the type locality, Humaitá. Kury (2003) added a record from Madre de Dios, Peru. In this paper, we expand the distribution of the genus to the following localities in the Northern portion of Brazil: Coari, Codajás, Juruá, Jutaí, Manacapuru, Tefé (state of Amazonas) and Gurupá (state of Pará). This expanded distribution indicates that *Hutamaia* is widespread in the Brazilian and Peruvian Amazon.

The species included in Ampycinae, however, have never been subjected to taxonomic revisions. The diagnoses of most species and genera are inadequate according to current standards, being composed of characters that are mostly useless at the generic and suprageneric levels, as it is the case with *Hutamaia*. The Amazonian *Hutamaia* and the Andean *Licornus* species are morphologically very similar; there is not a combination of non-genital characters that may be used to support them as separate genera. On the other hand, the ventral plate of the penis of *Licornus tama* Villarreal & Kury, 2012 is much narrower than the ventral plate of *Hutamaia* species; in *L. tama* the penis also has a dorsal process that is not present in

Figure 37. Distribution of the species of *Hutamaia*: (◆) *Hutamaia caramaschii*, (▲) *H. plei* **sp. nov.**, (■) *H. trompsonica* **sp. nov.**, (●) *H. maceta* **sp. nov.**

Hutamaia. These two characters could be used as main diagnostic characters to separate both groups; however, we do not know if they are present in the other two species included in *Licornus*. The male genitalia of the type species *Licornus perfectus* Roewer, 1932 is unknown and we have not examined males of *Licornus atroluteus* Roewer, 1959.

The two species of *Licornus*, *L. perfectus* and *L. tama*, are likely closely related and should remain in the same genus, whereas *L. atroluteus* seems not to share many characters with them. We suggest that *L. tama* and *L. perfectus* are much more similar to *Hutamaia* species than they are to the third species of *Licornus*. As suggested before by Villarreal & Kury (2012), *Hutamaia* and *Licornus* (excluding *L. atroluteus*) seem to be closely related to *Glysterus* and *Nesopachylus*, but a taxonomic revision is needed to better define the genera and test this hypothesis.

The four species of *Hutamaia* are similar, and the most constant somatic difference among them is size: *H. maceta* is about twice as long as the other species of the genus. Phenotypic similarity among species of the same genus, or even of the same family, is also common in other groups inhabiting the Amazon basin, e.g. species of the order Ricinulei (Tourinho & Azevedo 2007, Tourinho *et al*. 2010, Salvatierra *et al*. 2013) and other harvestmen (A.L. Tourinho, unpubl. data). However, species of *Hutamaia* can be separated by the following characters: armature and aspect of mesotergal areas, armature of free tergites, armature of tibiae IV of males and their size relative to the patella IV, armature of femur IV of males, armature and shape of ventral plate of penis (*H. plei* has lateral lobes of ventral plate pronounced and ventral plate inserted very basal on the truncus in relation to the remaining species of the genus).

ACKNOWLEDGMENTS

The research was conducted by ALT while at the Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA), and by ACM while at the Museu Nacional, Rio de Janeiro (MNRJ). This study was partly supported by PróVárzea – IBAMA. The program Science Without Borders granted a Special Visiting Professor Grant (CAPES #003/2012) and an International Postdoctoral Grant (CNPq #200972/2013-8 to ALT); Fundação Lemman provided a Lemman Additional International Fellowship, and an Ernst Mayr Travel Grant from the Harvard University funded ALT's visit to the Senckenberg Museum in Germany. ACM was supported by of the program PROTAX (CNPq #562149/2010-4) with Postdoctoral grants from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), and by the program of "SiB-Br – Coleções Biológicas" (CNPQ #504327/2012-7).

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Submitted: 19.III.2014; Accepted: 16.VIII.2014.
Editorial responsibility: Antonio D. Brescovit