

## TAXONOMY AND NOMENCLATURE

## Two new species of Tydeidae (Acari: Prostigmata), records of species of this family and Triophtydeidae from Brazil

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**ABSTRACT.** Two new species of Tydeidae are described, *Brachytydeus lorenzatus* **sp. nov.** and *Quasitydeus feresi* **sp. nov.** *Brachytydeus lorenzatus* **sp. nov.** differs from *B. aegyptiaca* (Rasmy & El Bagoury, 1979) by having a reticulated area on the region of *f1* and *f2*, dorsal setae smooth, solenidion  $\omega$  shorter than or equal to the width of tarsus I, most setae on dorsal shield shorter than the length between their bases and setae *d* forked distally. The new species is distinguished from *B. scutatus* Silva, Rocha & Ferla, 2013 by having a slightly reticulate area on the aspidosoma, near setae *bo*, all dorsal setae slender and club-shaped. *Quasitydeus feresi* **sp. nov.** differs from the only other species of the genus, *Q. ricensis* (Baker, 1970), by having all dorsal setae simple and serrated, similar in shape. Eleven tydeoid species are reported also from several plants native to the state of Rio Grande do Sul, Brazil. This is the second species of *Brachytydeus* Thor, 1931 described from and the second species described for *Quasitydeus* Kazmierski, 1996.

**KEY WORDS.** *Brachytydeus*, *Quasitydeus*, Rio Grande do Sul, taxonomy, Tydeoidea.

Species of Tydeidae and Triophtydeidae are widely distributed in the world, with the exception of Antarctica. These soft-bodied mites have idiosoma striated and sometimes reticulated or complex, with two prodorsal trichobothria (KAZMIERSKI 1998). Species of this group present movable cheliceral digit relatively short and needle-like, fixed digit of chelicera reduced and cheliceral bases fused (KAZMIERSKI 1998, GERSON et al. 2003). They can be associated with plants and inhabit several environments, such as moss, litter, straw, soil or humus, fungi, bird nests, stored food products and arboreal (on plants) (WALTER et al. 2009). Until now, three species of Tydeidae are known from Brazil: *Brachytydeus scutatus* Silva, Rocha & Ferla, 2013, *Tydeus riopardensis* Silva, Cunha & Ferla, 2014 and *Tydeus manoi* Silva, Rocha & Ferla, 2014 (SILVA et al. 2013, 2014). Twenty-six species of *Brachytydeus* Thor, 1931 sensu ANDRÉ (2005) have been recorded from the American continent, three of which occur in Brazil (SILVA et al. 2013). *Quasitydeus* Kazmierski, 1996 has included only the type-species, *Quasitydeus ricensis* (Baker, 1970), from Costa Rica. Here we describe and illustrate *Brachytydeus lorenzatus* **sp. nov.** and *Quasitydeus feresi* **sp. nov.** and provide new records of Tydeidae and Triophtydeidae for the State of Rio Grande do Sul, Brazil.

### MATERIAL AND METHODS

The study was carried out in Arroio do Meio (29°24'48"S, 51°55'06"W), Colinas (29°24'05"S, 51°53'19"W), Lajeado (29°25'47"S, 51°56'32"W), Muçum (29°07'97"S, 51°50'29"W), Taquari (29°49'04"S, 51°51'34"W), municipalities of the state of Rio Grande do Sul, Brazil.

All mites were collected from leaves of *Annona neosalicifolia* H. Rainer (Annonaceae); *Eupatorium* sp. (Asteraceae); *Acalypha multicaulis* Müll. Arg. (Euphorbiaceae); *Byttneria australis* St.-Hil., *Luehea divaricata* Mart., *Pavonia sepium* A. St.-Hil. (Malvaceae); *Trichilia elegans* A. Juss., *Trichilia clausenii* C. DC. (Meliaceae); *Morus nigra* L. (Moraceae); *Myrciaria plinioides* D. Legrand (Myrtaceae); *Piper aduncum* L., *Piper amalago* L. (Piperaceae); *Allophylus edulis* (A. St.-Hil., Cambess. & A. Juss.), *Cupania vernalis* Camb. (Sapindaceae); *Chrysophyllum gonocarpum* (Mart. & Eichler) Engl. (Sapotaceae); *Cestrum strigillatum* Ruiz & Pav. (Solanaceae).

Four collecting sites were evaluated: three in the municipality of Tramandaí: sand dunes (Site 1: 29°58'56"S 50°07'46"W), containing the natural features of most sandy beaches, with continuous input of sands carried by prevailing winds; mangrove or swamp area (Site 2 – 30°03'02"S 50°13'28"W) and Northern

Coast forest (Site 3: 30°04'50"S, 50°12'29"W), with representative regional ecosystem. In Osório, the area evaluated was Morro da Borrúsia (Site 4: 29°52'58"S, 50°17'37"W), within the Atlantic Forest Domain, representing the rainforest ecosystem (ROCHA et al. 2015).

Mites were collected from plants by hand with a fine-tipped paintbrush and were mounted with Hoyer's medium on microscopic slides (JEPSON et al. 1975). They were dried on a slide warming plate, ringed with nail polish and their morphological details were studied under a phase contrast microscope. Drawings were made using a camera lucida and the lines were digitized using Corel Draw X5®. For the descriptions, dorsal setal notations follow KAŻMIERSKI (1989) and those of the venter, gnathosoma, leg setae and lyrifissures follow ANDRÉ (1981a, b). Species were identified using the keys of KAŻMIERSKI (1996, 1998) and SILVA et al. (2013). Measurements are given in micrometers (µm) and measurements of the holotypes or illustrated specimens are shown in bold followed by the mean and range in parentheses. The legs were measured from the base of the trochanter to the end of the apotele.

Voucher specimens of each species were deposited in the mite reference collection of the Museu de Ciências Naturais of Centro Universitário UNIVATES (ZAUMCN), Lajeado, Rio Grande do Sul.

## TAXONOMY

Eleven tydeoids were on several native plants. They belong to six genera of Tydeidae within the Tydeinae (eight species), Pretydeinae (two species) and one species of the Triophtydeidae. The most abundant genus was *Brachytydeus* (four species), followed by *Tydeus* (three species) and *Pretydeus* (two species).

### Tydeidae Kramer, 1877

#### Tydeinae Kramer sensu André, 1980

##### *Afrotydeus* Baker, 1970

##### *Afrotydeus smileyi* Kaźmierski, 1998

*Afrotydeus smileyi* Kaźmierski, 1998: 355.

Locality of the examined species (number the specimens are in parentheses): Brazil, Rio Grande do Sul state: Site 3: *Psidium cattleianum* Sabine (Myrtaceae) XI-2011 (5), II-2012 (5), *Inga marginata* Willd. (Fabaceae) II-2012 (4), *Handroanthus pulcherrimus* (Sandwith) S.O. Grose (Bignoniaceae) II-2012 (3), *Murtughas indica* (L.) Kuntze (Lythraceae) II-2012 (1); Site 4: *Nectandra megapotamica* (Spreng.) Mez (Lauraceae) XI-2011 (2), *Myrsine hermogenesii* (Jung-Mendaçolli & Bernacci) Freitas & Kinoshita (Primulaceae) II-2012 (1), *Casearia sylvestris* Sw. (Salicaceae) II-2012 (3), *Verbenoxylum reitzii* (Moldenke) Tronc. (Verbenaceae) V-2012 (1).

Distribution. This species was described from undetermined tree in Costa Rica. It is the first record from Brazil.

### *Brachytydeus* Thor, 1931

*Brachytydeus* Thor, 1931: 102.

*Raphitydeus* Thor, 1933: 54 sensu André, 2005.

*Lorryia* Oudemans, 1925: 32 sensu Kaźmierski, 1989, 1996.

### *Brachytydeus benensis* (Baker, 1968)

*Lorryia benensis* Baker, 1968: 998.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 3: *Eupatorium* sp. (Asteraceae) VIII-2011 (4), *Solanum concinnum* Sendtn (Solanaceae) XI-2011 (2).

Distribution. This species was described from *Tithonia speciosa* Goldfinger, Democratic Republic of Congo. This is the first record from Brazil.

### *Brachytydeus formosa* (Cooreman, 1958)

*Brachytydeus formosa* André, 2005: 975-1001; Thor, 1931: 102. Silva et al., 2014: 500.

*Lorryia formosa* Cooreman, 1958: 7; Kaźmierski, 1998.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 2: *Schinus terebinthifolius* RADDI (Anacardiaceae) II-2012 (1), *Cestrum bracteatum* Link & Otto (Solanaceae) II-2012 (5), *Conyza bonariensis* (L.) Cronquist (Asteraceae) II-2012 (1), *Myrsine parvifolia* DC. (Myrsinaceae) V-2012 (1), *Varronia curassavica* Jacq. (Boraginaceae) V-2012 (19); Site 3: *P. cattleianum* II-2012 (1), *H. pulcherrimus* II-2012 (1); Site 4: *C. bracteatum* VIII-2011 (1), *C. sylvestris* II-2012 (2), *Sebastiania brasiliensis* Spreng. (Euphorbiaceae) II-2012 (6).

Distribution. This species is distributed worldwide (GARCIA MARI et al. 1985, 1986, FARAJI & KAMALI 1993, KAŻMIERSKI 2008, SADEGHI et al. 2012, SOUSA et al. 2015); it had been previously recorded from the state of Rio Grande do Sul, Brazil (EICHELBERGER et al. 2011, JOHANN et al. 2009, KLOCK et al. 2011, SILVA et al. 2014).

### *Brachytydeus pinnigera* (Kuznetsov, 1973)

*Lorryia pinnigera* Kuznetsov, 1973: 771.

Locality of the examined species: Brazil, Rio Grande do Sul state, Site 4: *Inga vera* Willd. (Fabaceae) V-2012 (8).

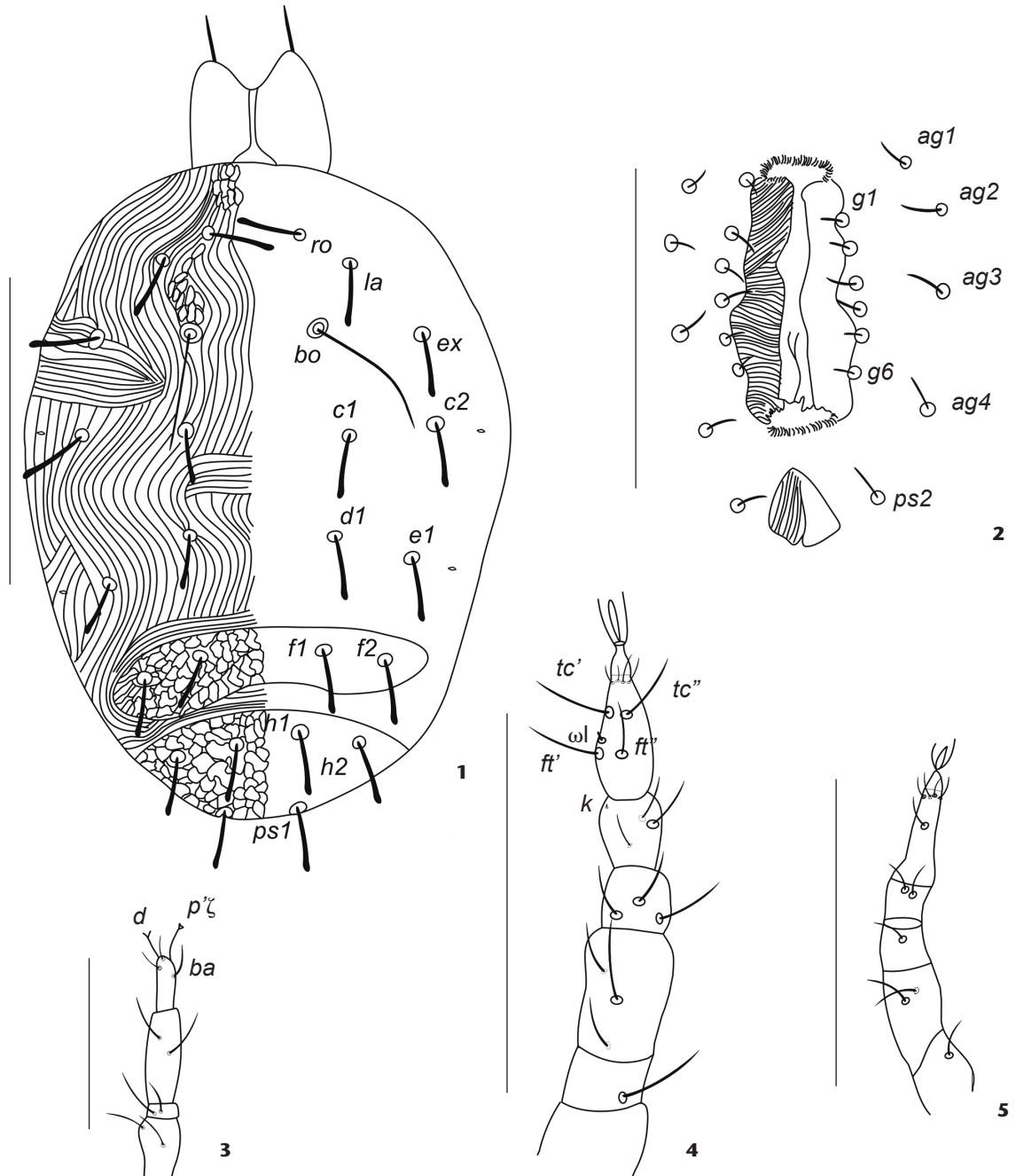
Distribution. This species was described from *Fraxinus* sp. in Crimea. This is the first record from Brazil.

### *Brachytydeus lorenzatus* Silva & N.J. Ferla, **sp. nov.**

Figs. 1-5

[urn:lsid:zoobank.org:act:C59837DF-A356-41E4-B51D-B7F8FED49460](http://urn:lsid:zoobank.org:act:C59837DF-A356-41E4-B51D-B7F8FED49460)

Diagnosis. The new species resembles *Brachytydeus aegyptiaca* (Rasmy & El Bagoury, 1979) and *Brachytydeus scutatus* Silva, Rocha & Ferla, 2013 due to the reticulate area of the aspidosoma and opisthosoma, six pairs of setae on the anogenital area, lack of empodial hooks and setae *ps1* situated on dorsally. *Brachytydeus lorenzatus* **sp. nov.** differs from *B. aegyptiaca* by having a reticulated area on *f1* and *f2*, dorsal setae smooth, solenidion  $\omega$ I shorter than or equal to the width of tarsus I, most setae on dorsal shield



Figures 1-5. *Brachytydeus lorenzatus* sp. nov., female holotype: (1) dorsal view; (2) anogenital area; (3) palp; (4) leg I; (5) leg III. Scale bars: 1, 4, 5 = 10  $\mu$ m, 2, 3 = 50  $\mu$ m.

shorter than the length between their bases and setae d forked distally. *Brachytydeus lorenzatus* sp. nov. is also distinguished from *B. scutatus* by having slightly reticulate area on the aspidosoma, near setae bo, whereas on *B. scutatus* have reticulate area near setae ro, la and bo. The dorsal setae of *B. lorenzatus* sp. nov.

are slender, club-shaped and *B. scutatus* have all setae on dorsal side not broadly lanceolate with longitudinal groove and length of h1 and h2 not reaching bases of the next setae.

Description. Adult female (n = 10). Dimensions of holotype are as follows: length of idiosoma 200 195 (117-237) and width

150 166 (147-187). Dorsum (Fig. 1) Prodorsum recurved, two pairs of lyrifissures, 13 pairs of dorsal setae smooth blunt-tipped, except for trichobothrium (*bo* – bothridial setae), which is filiform and smooth. The striae density varies between setae *ro* (6-9). Setal measurements as follows: *ro* 17 17 (15-17), *la* 17 15 (12-20), *bo* 42 41 (35-50), *ex* 15 15 (15-17), *c1* 15 16 (12-20), *c2* 17 16 (15-17), *d1* 15 17 (15-20), *e1* 15 17 (15-20), *f1* 17 18 (17-20), *f2* 20 20, *h1* 20 19 (17-22), *h2* 20 19 (15-25) and *ps1* 20 18 (15-20). Setae *f1*, *f2*, *h1*, *h2* and *ps1* on reticulated area. **Venter** (Fig. 2) Anogenital area with six pairs of genital setae, four pairs of aggenitals and one pair of pseudoanal setae. Genital striation pattern extended. Coxal organ oval. Epimeral formula: 3-1-4-2. **Gnathosoma** (Fig. 3) Setal pattern of palp (tarsus-genu): 5-2-2, tarsus with seta *p'z* T-shaped distally, *d* distally bifurcate and *ba* equal length of *d* setae. Movable digit half-length of palptarsus, length of palp 65. **Legs** (Figs. 4, 5) Length of legs I-IV as follows: leg I 140 144 (115-165), leg II 100 109 (100-120), leg III 125 119 (100-127) and leg IV 125 126 (112-140). All legs with two claws and a hairy empodium, empodial claws absent. Solenidion *vi* short, slender, shorter than half the width of the tarsus, seta *k* on tibia I very short and not distally bifurcate. Tarsus I with *ft'* equal length of *ft''*. Leg formulae as follows (tarsus -trochanter): Leg I: 8(1v)-3(1k)-3-3-1; Leg II: 6(1v)-2-2-3-0; Leg III: 5-2-1-2-1; Leg IV: 5-2-1-1-0.

Male: Unknown.

Type material. Holotype female, Brazil, Rio Grande do Sul, Colinas (29°23'36"S, 51°52'39"W), 12 February 2014, on *M. nigra*. Two paratypes females, same data as holotype on *P. amalago*. Six paratypes females, Brazil, Rio Grande do Sul, Arroio do Meio (29°24'48.9"S, 51°55'06.3"W), 31 March 2014, on *A. multicaulis*.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 3: *P. cattleianum* II-2012 (1); Site 4: *Thelypteris hispidula* (Decne) C.F. Reed (Thelypteridaceae) XI-2011 (3), *Quillaja brasiliensis* (A.St.-Hil. & Tul.) Mart. (Quillajaceae) XI-2011 (19).

**Etiology.** The new species was named in honor of Dorvalino Lorenzato, an eminent agronomist and acarologist who lived at the end of 20<sup>th</sup> century.

**Remarks.** The decision to classify this new species in *Brachytydeus* was made based on the fact that it has 10 pairs of setae (*ps* included) on the opisthosoma, palpal femurogenu with two setae, having one seta on trochanter I, tibia III and IV each with two setae, femur III with two setae and setae *ft''ζ* present on tarsus I (KAZMIERSKI 1998).

### *Quasitydeus* Kaźmierski, 1996

*Quasitydeus* Kaźmierski, 1996: 201.

#### *Quasitydeus feresi* Silva & N.J. Ferla, **sp. nov.**

Figs. 6-10

[url:lsid:zoobank.org:act:1B750DC1-A330-4F6B-ACA1-5B41B1B21B2E](http://url:lsid:zoobank.org:act:1B750DC1-A330-4F6B-ACA1-5B41B1B21B2E)

**Diagnosis.** *Quasitydeus feresi* **sp. nov.** differs from the only other species of the genus, *Q. ricensis* (Baker, 1970), by having all dorsal setae simple and serrated, similar in shape, whereas in *Q. ricensis* most dorsal setae are blunt distally and setae *f2*, *h1* are club-like.

**Description.** Adult female (n = 2). Dimensions of holotype are as follows: length of idiosoma 205 207 (205-210) and width 138 119 (100-138). **Dorsum** (Fig. 6): Prodorsum recurved, two pairs of lyrifissures, completely striated, 12 pairs of dorsal setae serrated, including trichobothrium (*bo* – bothridial setae), which is filiform and slightly serrated. Twelve striae between setae *ro*. Setal measurements as follows: *ro* 13 13, *la* 15 17 (15-19), *bo* 38 39 (38-40), *ex* 18 17 (16-18), *c1* 18 18, *c2* 18 16 (15-18), *d1* 20 20, *e1* 20 20, *f1* 20 20, *f2* 20 21 (20-22), *h1* 23 23 (23-24), *h2* 18 19 (18-20). Setae *ps1* 20 19 (19-20) situated ventrally. **Venter** (Fig. 7) Anogenital area with six pairs of genital setae, four pairs of aggenitals and one pair of pseudoanal setae (*ps2* 13 13). Genital striation pattern extended. Coxal organ not visualized. Epimeral formula: 3-1-4-2. **Gnathosoma** (Fig. 8) Setal pattern of palp (tarsus -genu): 6-2-2, tarsus with seta *p'z* straight and gradually narrows towards tip, ended by narrow wedge-like cross-piece, *d* distally simple and *ba* shorter than *d* setae. Cheliceral stiletto 13 12 (10-13), length of palp 55 53 (50-55). **Legs** (Fig. 9-10) Length of legs I-IV as follows: leg I 123 126 (123-130), leg II 105 106 (105-108), leg III 113 115 (113-118) and leg IV 125 124 (123-125). All legs with two claws and a hairy empodium, empodial claws absent. Solenidion *vi* short 8 8, shorter than half the width of the tarsus, seta *k* on tibia I very short and distally bifurcate. Tarsus I with *ft'* as long as *ft''*. Leg formulae as follows (tarsus -trochanter): Leg I: 8(1v)-3(1k)-3-3-1; Leg II: 6-2-2-3-0; Leg III: 5-2-1-1-0; Leg IV: 5-2-1-1-0.

Male: Unknown.

Type material. Site 3: Holotype female, Brazil, Rio Grande do Sul, Tramandaí (30°04'50"S, 50°12'29"W), 15 August 2011, on *Eupatorium* sp. One paratype female, same data as holotype.

**Etiology.** The new species was named in honor to Reinaldo José Fazzio Feres, an eminent Acarologist of Brazil.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 3: *Eupatorium* sp. VIII-2011(2).

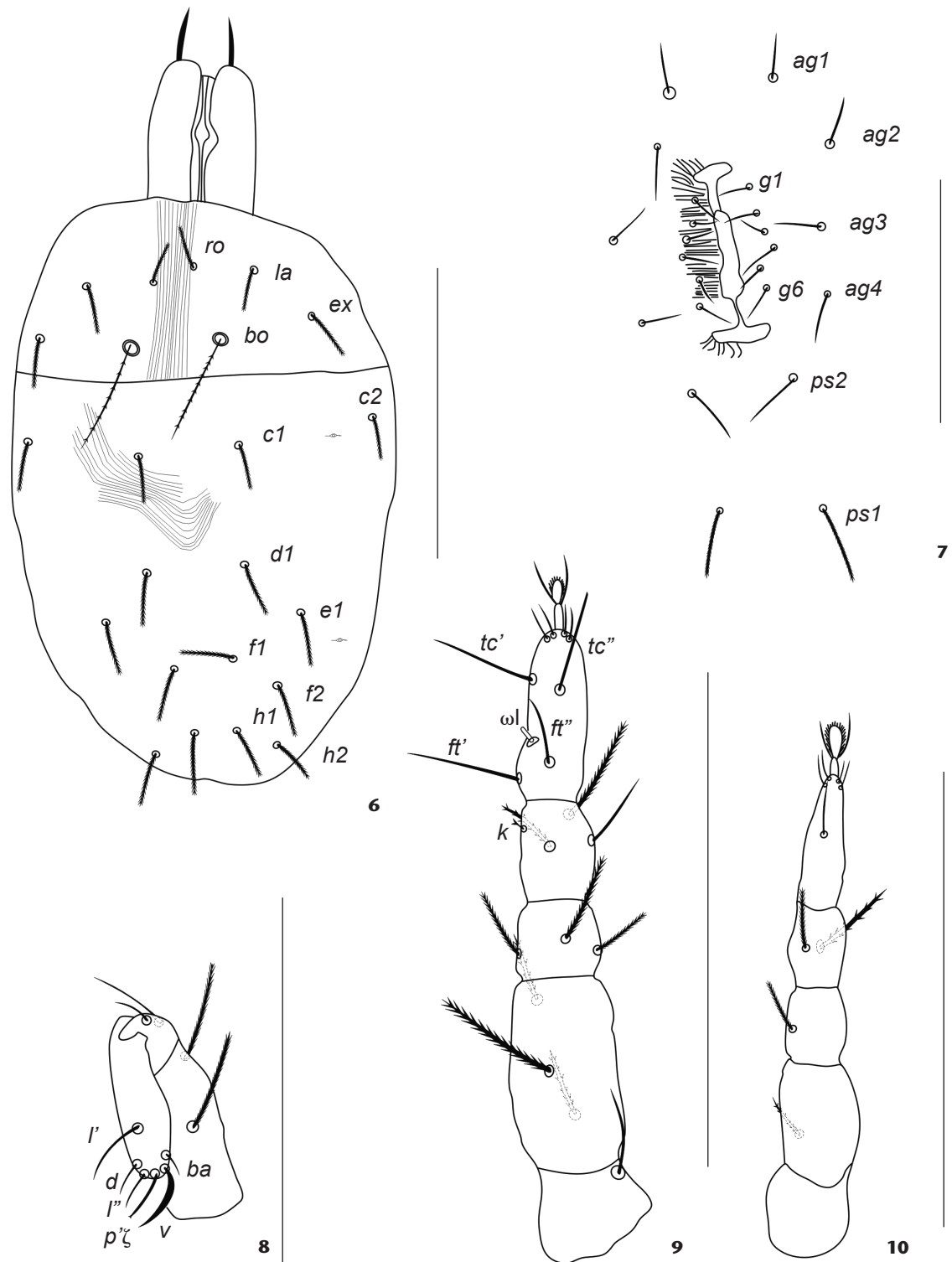
**Remarks.** Based on ANDRÉ (1981a, b), the chaetotaxy of the legs and genital parts are the most important characters in the identification of genera and species. The classification of the new species in *Quasitydeus* is consistent with the following characters it displays: absence of setae on trochanter III, femur II with three setae and femur III with one seta (KAZMIERSKI 1998).

### *Tydeus* (Koch, 1835) sensu (Kaźmierski, 1989)

#### *Tydeus californicus* (Banks, 1904)

*Tydeus californicus* Kaźmierski, 1998: 344; Silva et al., 2014: 502. *Tydeus californicus* Baker & Wharton, 1952: 192; Fleschner & Arakawa, 1953: 1092; Baker, 1970: 174. *Tetranychoides californicus* Banks, 1904: 54.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 1: *Acicarpa tribuloides* A. Juss. (Calyceraceae) VIII-2011 (4), unspecified plant species VIII-2011 (1), *Chenopodium ambrosioides* L. (Dysphaniaceae) II-2012 (1), V-2012 (2); Site 2: Fabaceae VIII-2011 (1), *Adesmia latifolia* (Spreng.) Vogel (Leguminosae) XI-2011 (2), *Psidium guajava* L. (Myrtaceae) XI-2011 (3), II-2012



Figures 6-10. *Quasitydeus feresi* sp. nov., female holotype: (6) dorsal view; (7) anogenital area; (8) palp; (9) leg I; (10) leg III. Scale bars: 6, 9, 10 = 10  $\mu$ m, 7, 8 = 50  $\mu$ m.

(24), V-2012 (47), *Syzygium cumini* (L.) Skeels. (Myrtaceae) II-2012 (1), *Rumohra adiantiformis* (G. Forst.) Ching (Elaphoglossaceae) II-2012 (1), *Xanthium strumarium* L. (Asteraceae) II-2012 (6), *C. bonariensis* II-2012 (9), *Solidago chilensis* Meyen (Compositae) V-2012 (2), *V. curassavica* V-2012 (2), *Desmodium* sp. (Fabaceae) V-2012 (2); Site 3: *P. cattleianum* XI-2011 (1), *Ficus cestrifolia* Schott (Moraceae) XI-2011 (1), *I. vera* XI-2011 (5), *I. marginata* II-2012 (5), *H. pulcherrimus* II-2012 (55), *Cecropia pachystachya* Trécul (Urticaceae) II-2012 (9), *S. concinnum* II-2012 (3), *M. indica* II-2012 (6); Site 4: *C. bracteatum* VIII-2011 (1), *Matayba eleagnoides* Radlk. (Sapindaceae) VIII-2011 (1), unidentified plant species XI-2011 (2), *Dendropanax cuneatus* (DC.) Decne. & Planch. (Araliaceae) XI-2011 (24), *T. hispidula* XI-2011 (1), *Boehmeria caudata* Sw. (Urticaceae) XI-2011 (15), *Q. brasiliensis* XI-2011 (3), *Trema micrantha* (L.) Blume (Ulmaceae) XI-2011 (10), *S. terebinthifolius* XI-2011 (27), II-2012 (37), *N. megapotamica* XI-2011 (1), *M. hermogenesii* II-2012 (1), V-2012 (1), *V. reitzii* II-2012 (5), V-2012 (2), *S. brasiliensis* II-2012 (2), *C. sylvestris* II-2012 (4), *Syzygium cumini* (L.) Skeels. (Myrtaceae) II-2012 (1), *Cabralea canjerana* (Vell.) Mart. (Meliaceae) V-2012 (1).

Distribution. This species is worldwide distributed (BAKER & WHARTON 1952, FLESCHNER & ARAKAWA 1953, COLLYER 1964, BAKER 1970, RASMY et al. 1972, DANESHVAR 1978, NACHEV & SIMOVA 1978, ABALI 1984, MOMEN 1987, CASTAGNOLI 1989, DELLEI & SZENDREY 1989, 1991a,b, MOLNÁR 1990, 1997, 2003, KULCZYCKI 1992, FARAJI & KAMALI 1993, BOZAI 1997, KAŻMIERSKI 1998, RIPKA & KAŻMIERSKI 1998, COBANOGU & KAŻMIERSKI 1999, RIPKA 2000, SZENDREY & VOIGT 2000, KAMALI et al. 2001, RIPKA et al. 2002, 2005, 2013, NIEMCZYK 2007, KASAP & COBANOGU 2007, KAŻMIERSKI 2008, SABBATINI PEVERIERI et al. 2009, KULIKOVA 2011, SADEGHI et al. 2012); it was previously recorded on rubber trees in the state of São Paulo (HERNANDES & FERES 2006) and in vineyards from the state of Rio Grande do Sul (SILVA et al. 2014).

### *Tydeus caryae* Khanjani & Ueckermann, 2003

*Tydeus caryae* Khanjani & Ueckermann, 2003: 4.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 4: *C. bracteatum* VIII-2011 (3), *N. megapotamica* XI-2011 (1), *D. cuneatus* XI-2011 (1), *T. hispidula* XI-2011 (1), *B. caudata* XI-2011 (1), *Q. brasiliensis* XI-2011 (6).

Distribution. This species was reported from Iran (SADEGHI et al. 2012). This is its first record from Brazil.

### *Tydeus costensis* Baker, 1970

#### *Tydeus (Tydeus) costensis* Baker, 1970

*Tydeus costensis* Kaźmierski, 1998: 342; Hernandez & Feres, 2006: 13.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 3: *P. guajava* V-2012 (1).

Distribution. This species was described from leaves of *Datura* sp. in Costa Rica and Nicaragua; HERNANDES & FERES (2006) recorded this species from *Hevea* sp. and ZACARIAS & MORAES (2002), on *Hevea brasiliensis* MUELL. ARG. (Euphorbiaceae).

### Pretydeinae André, 1980

#### *Pretydeus* André, 1980

#### *Pretydeus henriandrei* Kaźmierski, 1996

*Pretydeus henriandrei* Kaźmierski, 1996: 173; Silva et al., 2014: 507.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 4: *S. brasiliensis* II-2012 (2), *Daphnopsis fasciculata* (Meisn.) Nevling (Thymelaeaceae) II-2012 (1).

Distribution. This species was described from an undetermined tree in Costa Rica. It had been previously recorded from Brazil by SILVA et al. (2014).

#### *Pretydeus panitae* (Baker, 1968)

*Lorryia panitae* Baker, 1968: 990.

*Pretydeus panitae* Kaźmierski, 1996: 183.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 4: *M. eleagnoides* VIII-2011 (1), *S. terebinthifolius* II-2012 (2), *C. sylvestris* II-2012 (1), *D. fasciculata* II-2012 (1).

Distribution. This species was described from citrus leaves in Thailand; ARANDA & FLECHTMANN (1969) recorded this species from Brazil.

### Triophydeidae André, 1979

#### Triophydeinae André, 1979

#### *Triophydeus* Thor, 1932

#### *Triophydeus lebruni* (André, 1980)

*Triophydeus lebruni* André, 1985: 192; SILVA et al., 2014: 497.

*Metatriophydeus lebruni* André, 1980: 119.

Locality of the examined species: Brazil, Rio Grande do Sul state: Site 3: *H. pulcherrimus* XI-2011 (1), *S. concinnum* II-2012 (3); Site 4: *M. hermogenesii* V-2012 (2).

Distribution. ANDRÉ (1980) described this species from vineyards, Cabernet Sauvignon variety from California, USA. SILVA et al. (2014) had already recorded this species from the state of Rio Grande do Sul, Brazil.

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