

A NEW SPECIES OF *ALLOGALUMNA*
(ACARI, ORIBATIDA, GALUMNIDAE) FROM IRAN,
INCLUDING A KEY TO ALL SPECIES OF THE GENUS

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A new oribatid mite species of the family Galumnidae, *Allogalumna (Allogalumna) iranica* sp. n., is described from Iranian soil. It is characterized by the rounded rostrum; long, slightly thick and barbulate interlamellar setae; medium long, thin and smooth rostral and lamellar setae; long sensilli, with densely barbed, slightly dilated lanceolate head; dorsosejugal furrow medially undeveloped; presence of median pore in females and males; large, nearly oval porose areas *Aa*; and large, elongated, medially narrowed postanal porose area and tridactylous legs. An identification key for the known species of *Allogalumna* is presented.

Key words: Acari, Galumnidae, *Allogalumna*, new species, Iran, key.

INTRODUCTION

Oribatid mites (Acari: Oribatida) of the family Galumnidae is one of the largest groups of mites with a world-wide distribution, and it comprises 34 genera with about 470 species (SUBÍAS 2014). There is little information on this family in Iran and a few species have been recorded (MAHUNKA & AKRAMI 2001, AKRAMI 2007, AKRAMI *et al.* 2011, BAYARTOGTOKH & AKRAMI 2014). In the course of a study on oribatid mites of pastures in Fars province, southern Iran, one new species belonging to this family was found. Here, I describe one new species of the genus *Allogalumna* and present an identification key to all known species of the genus. Prior to this study there was only one record of this genus from Iran (BAYARTOGTOKH & AKRAMI 2014).

The genus *Allogalumna* was established by GRANDJEAN (1936) with *Galumna alamellae* Jacot, 1935 as the type species. Currently, this genus has two subgenera: *Allogalumna*, with anal lyrifissures close to anal plates and *Globogalumna*, with anal lyrifissures removed from anal plates (ERMILOV & ANICHKIN 2014). The diagnostic characters of the genus were summarized by ERMILOV *et al.* (2013).

MATERIAL AND METHODS

Soil samples were taken from various pastures at Shiraz township, Fars province. Mites were extracted from samples in Berlese-Tullgren funnels set over jars with 75% etha-

nol. Mites were removed, cleared in lactophenol and mounted in Hoyer's medium on glass microscopic slides. The slides were placed in an oven at 45°C for two weeks. One specimen was mounted in lactic acid on a temporary cavity slide for measurement and illustration. Mites were studied using a light microscope (Zeiss Standard 20). Figures were made using a drawing tube attached to the microscope. Body length was measured from the tip of the rostrum to the posterior edge of the notogaster, and body width refers to the maximum width of the notogaster in dorsal aspect. The length variation of some body setae is given in parenthesis. All body measurements are presented in micrometers (μm). The holotype and paratypes are deposited in the Acarological Collection of the Department of Plant Protection, Faculty of Agriculture, Shiraz University, Iran. General terminology used in this paper follows that of NORTON and BEHAN-PELLETIER (2009).

DESCRIPTION OF THE NEW SPECIES
***Allogalumna (Allogalumna) iranica* sp. n.**
(Figs 1–14)

Diagnosis – *Allogalumna (Allogalumna) iranica* sp. n. is characterized by the combination of the following character states: Body size 453–489 × 350–380; rostrum rounded; rostral and lamellar setae medium long, thin and smooth; interlamellar setae long and thick, finely barbed; sensilli long, with densely barbed, slightly dilated lanceolate head; dorsosejugal furrow medially not developed; four pairs of round porose areas, *Aa* larger, slightly oval; postanal porose area elongated, narrowed medially; dorsal median pore present in females and males.

Material examined – Holotype (female): Ghalat, Fars Province, southern Iran, soil of pasture under *Centaurea* sp. and *Hordeum* sp. (Gramineae), 29° 48'N; 52° 19'E, 2070 m a.s.l., 16.x.2012, F. Ebrahimi leg.; four paratypes (two females, two males): same data as holotype.

Description – *Integument*. Body color yellowish-brown. Cerotegument with small granules. Cuticle of body in dorsolateral parts of notogaster with radiate impressions. Pteromorphs with fine striations.

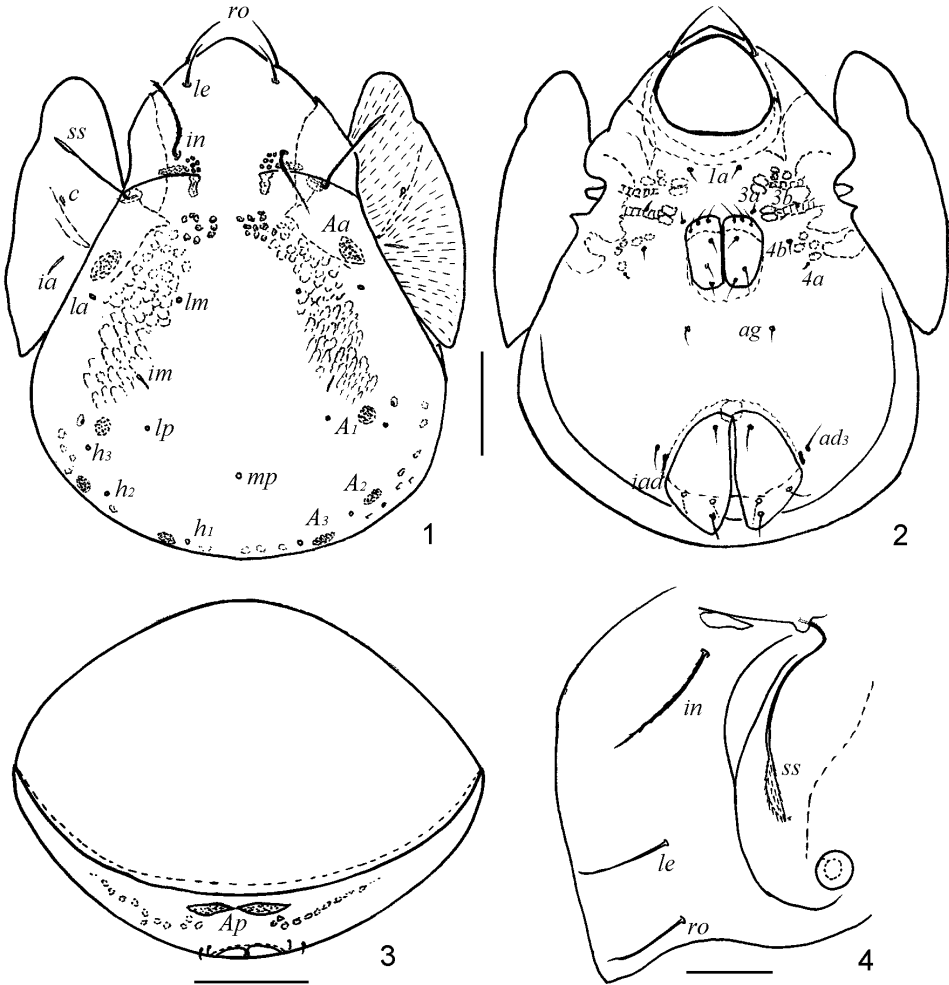
Measurements. Holotype: body length 500, width of notogaster 395, length of notogaster 368; paratypes (n = 4): body length 453, 489 (females); 453, 474 (males); width of notogaster 350–380, length of notogaster 368–380. Males and females similar in size.

Prodorsum (Figs 1, 4, 5–7). Rostrum rounded. Sublamellar line distinct. Rostral setae (*ro*, 49–56) thin, setiform, smooth, inserted ventro-laterally and well visible in dorsofrontal view. Lamellar setae (*le*, 46–53) thin, smooth. Interlamellar setae (*in*, 72–81) long, thickened, finely barbed bilaterally, not reaching the tip of rostrum. Exobothridial setae not observed. Sensilli (*ss*, 103–125) with long and narrow stalk and densely barbed, slightly dilated lanceolate head. A pair of elongate oval adalar porose areas *Ad* located posterior to interlamellar setae.

Notogaster (Figs 1, 10, 11). Notogaster widely rounded posteriorly. Dorsosejugal furrow not developed medially (between dorsophragmata). Pteromorphs with fine striations. Notogastral setae vestigial, their alveoli discernable. Four pairs of porose areas present: *Aa*

(26×20) large, nearly oval, A_1 (18×17), A_2 (18×13) and A_3 (17×13) nearly rounded. Median pore present in both sexes, situated in middle line between porose areas A_2 . Opisthotal gland openings (*gla*) situated anterolaterad of A_1 . Lyrifissures *im* inserted anteromedially to A_1 , rather far from it, in front of setae *lp*.

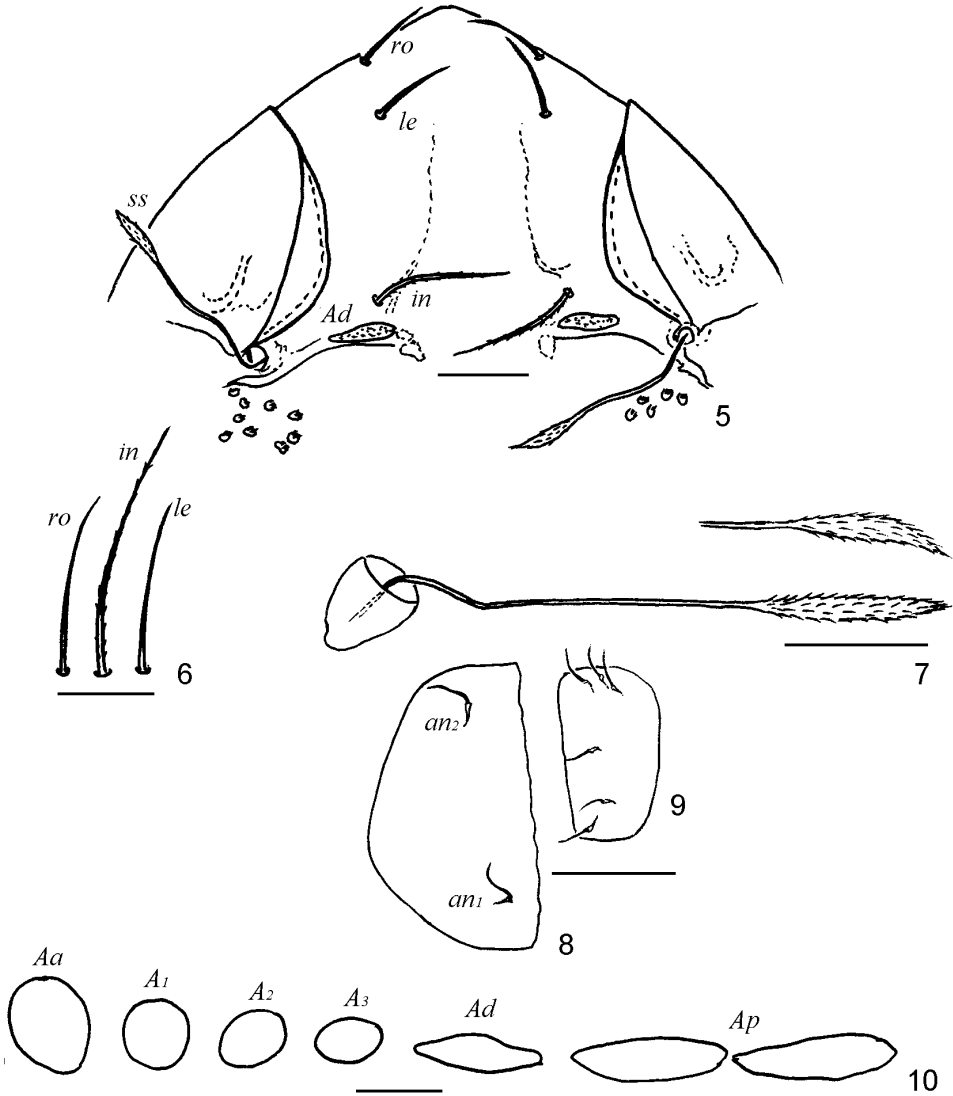
Gnathosoma (Figs 13, 14). Subcapitulum bearing three pairs of hypostomal setae, all thin and densely barbed. Palp typical for family, all setae except on tarsus finely barbed, formula of setation: 0–2–1–3–9 (+1 ω), solenidion ω and eupathidium *acm* on tarsus fused and three other eupathidia not fused and located far to each other. Chelicera with sclerotized teeth, cheliceral setae setiform, barbed, *cha* longer than *chb*.



Figs 1–4. *Allogalumna (Allogalumna) iranica* sp. n.: 1 = dorsal view; 2 = ventral view, gnathosoma and legs not shown; 3 = posterior view; 4 = lateral view of prodorsum. Scale bars: 1–3 = 100 μm , 4 = 50 μm .

Epimeral region (Fig. 2). Apodemes *apo.1*, *apo.2*, *apo.sj* and *apo.3* well developed. Only five pairs of short epimeral setae observed, setal formula: 1–0–2–2.

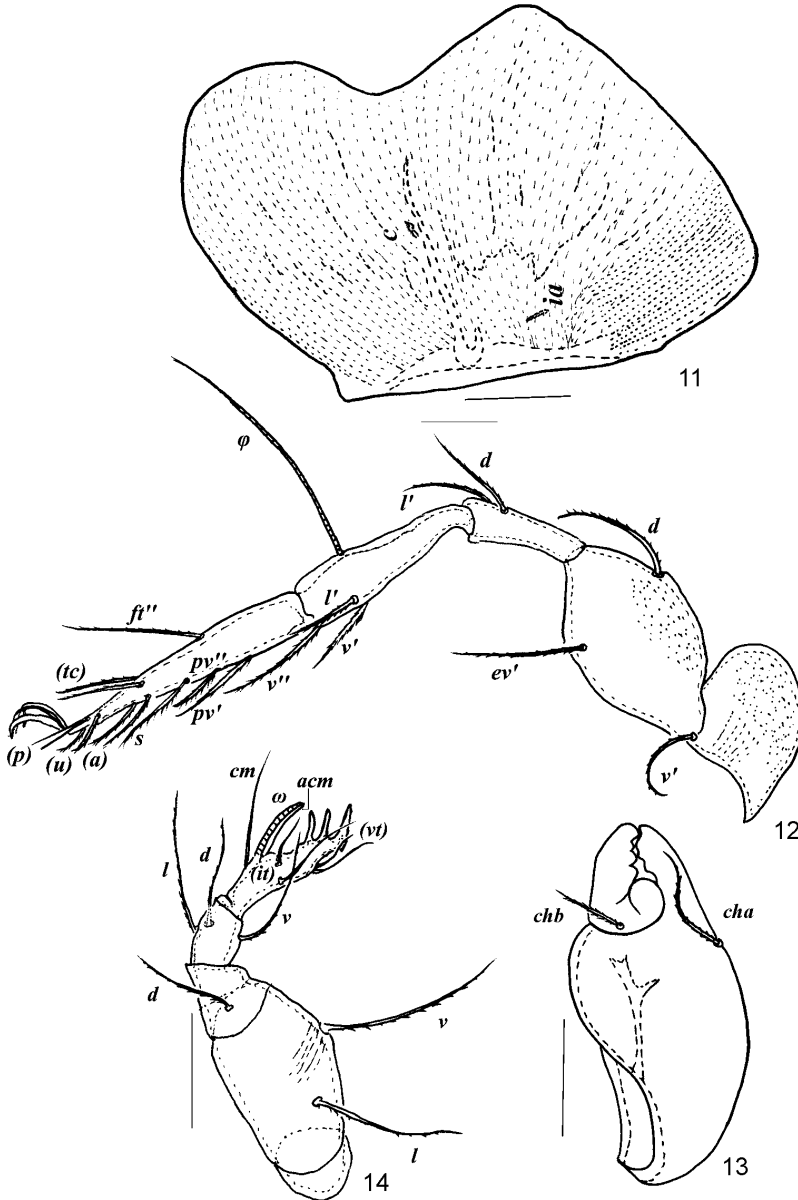
Anogenital region (Figs 2, 3, 8, 9). Anal and genital apertures situated far from each other, anal aperture (112 × 118) much larger than genital aperture (66 × 80). Six pairs of genital setae (13–19), three arranged on anterior edge, one inserted in middle part and two others



Figs 5–10. *Allogalumna (Allogalumna) iranica* sp. n.: 5 = dorso-anterior view of prodorsum; 6 = rostral (*ro*), interlamellar (*in*) and lamellar (*le*) setae; 7 = sensillus; 8 = anal plate, right; 9 = genital plate, left; 10 = notogastral (*Aa*, *A*₁–*A*₃), adalar (*Ad*) and postanal (*Ap*) porose areas.

Scale bars: 5, 8, 9 = 50 µm, 6, 7, 10 = 25 µm.

on posterior half of genital plates. One pair of aggenital setae (13) situated posterior to genital aperture. Two pairs of anal (20–22) and three pairs of adanal setae (22–26). Adanal lyrifissures *iad* situated in paranal position, slightly posterior to setae *ad*₃. All anogenital setae short and smooth. A large, elongated postanal porose area *Ap* present, narrowed medially.



Figs 11–14. *Allogalumna (Allogalumna) iranica* sp. n.: 11 = pteromorph; 12 = leg IV (right, antiaxial view); 13 = chelicera; 14 = palp. Scale bars: 11–13 = 50 μ m, 14 = 25 μ m.

Table 1. Leg setation and solenidia of adult *Allogalumna (Allogalumna) iranica* sp. n.

Leg*	Trochanter	Femur	Genu	Tibia	Tarsus
I	v'	$d, (l), bv''$	$(l), v', \sigma$	$(l), (v), \phi_1, \phi_2$	$(ft), (tc), (it), (p), (u), (a), s, (pv), (pl), l'', \varepsilon, \omega_1, \omega_2$
II	v'	$d, (l), bv''$	$(l), v', \sigma$	$(l), (v), \phi$	$(ft), (tc), (it), (p), (u), (a), s, (pv), \omega_1, \omega_2$
III	v'	d, ev'	l', σ	$l', (v), \phi$	$(ft), (tc), (it), (p), (u), (a), s, (pv)$
IV	v'	d, ev'	d, l'	$l', (v), \phi$	$ft'', (tc), (p), (u), (a), s, (pv)$

* In leg formulae, Roman letters refer to normal setae, Greek letters to famulus and solenidia. Single prime (') marks setae on anterior and double prime (") setae on posterior side of the given leg segment and parentheses refer to a pair of setae.

Legs (Fig. 12). All legs tridactylous with stronger median and slender lateral claws. Structure and setation of legs typical for family. All setae on podomeres barbed, especially some ventral setae of tarsi heavily barbed with long cilia. Formula of setation, including famulus: I (1-4-3-4-20), II (1-4-3-4-15), III (1-2-1-3-15), IV (1-2-2-3-12), formula of solenidia I (1-2-2), II (1-1-2), III (1-1-0), IV (0-1-0). Homology of setae and solenidia indicated in Table 1.

Etymology – The specific name “*iranica*” refers to the type locality of this species, Iran.

Remarks – *Allogalumna (Allogalumna) iranica* sp. n. is unique among the known species of *Allogalumna* by the combination of the following features, namely the undeveloped medial portion of the dorsosejugal furrow; four pairs of round or nearly oval porose areas; slightly dilated lanceolate head of sensilli with long stalk; the rounded rostrum; the long, thickened interlamellar setae, position of lyrifissures *im* anteromedial of A_1 , presence of notogastral median pore (in females and males) and a large, elongated postanal porose area.

The European species, *A. (A.) integer* described by BERLESE (1904) as *Oribata alata integer* and redescribed by MAHUNKA (1992) resembles the new species in the structure of porose areas, dilated sensilli, long interlamellar setae and undeveloped medial portion of the dorsosejugal furrow. However, the former species is distinguished from the present new species by the shorter stalk and swollen head of sensilli; longer and barbulate lamellar setae; insertion of lyrifissures *im* laterad of porose areas A_1 ; insertion of notogastral median pore posteromedial of porose areas A_2 ; smaller adalar and notogastral porose areas, and different position of notogastral setae *c* on pteromorphs.

The Mediterranean species, *A. (A.) parva* described by BERLESE (1916) as *Oribata parvus* and redescribed by MAHUNKA (1992) is similar to *Allogalumna (A.) iranica* sp. n. in the structure of porose areas and prodorsal setae, but it is different from the new species in the shorter sensilli, with clavate head;

absence of dorsosejugal furrow; insertion of lyrifissures *im* laterad of porose areas A_{1V} and smaller body size (420×320).

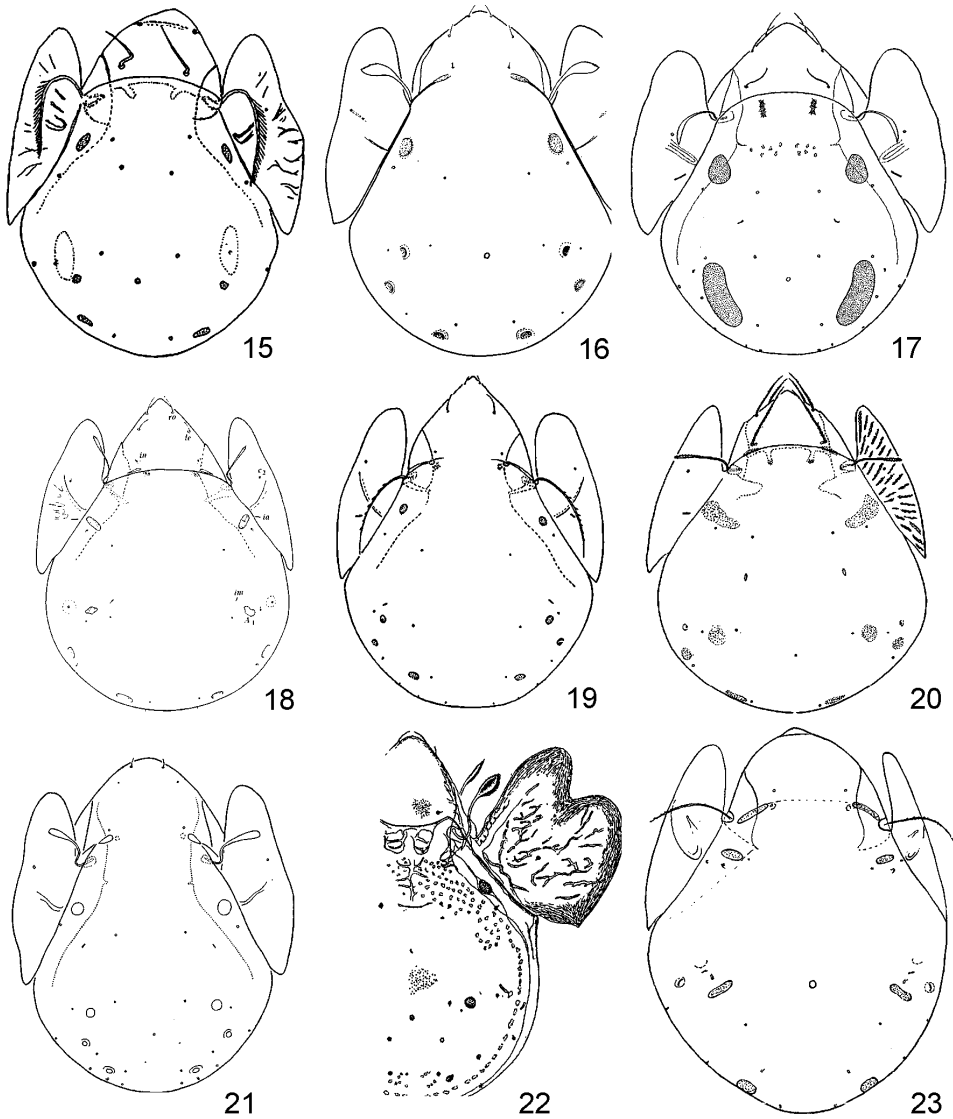
The Turkish species, *A. (A.) turkeyensis* described by GROBLER *et al.* (2004) resembles the new species in slightly dilated sensilli. However, the former species is distinguishable from the new species by the shorter sensilli with rounded tip; thicker interlamellar setae; longer lamellar setae; larger porose areas A_{1V} , A_2 and A_3 ; insertion of lyrifissures *im* laterad of porose areas A_{1V} and smaller body size ($369\text{--}421 \times 220\text{--}242$).

DISCUSSION

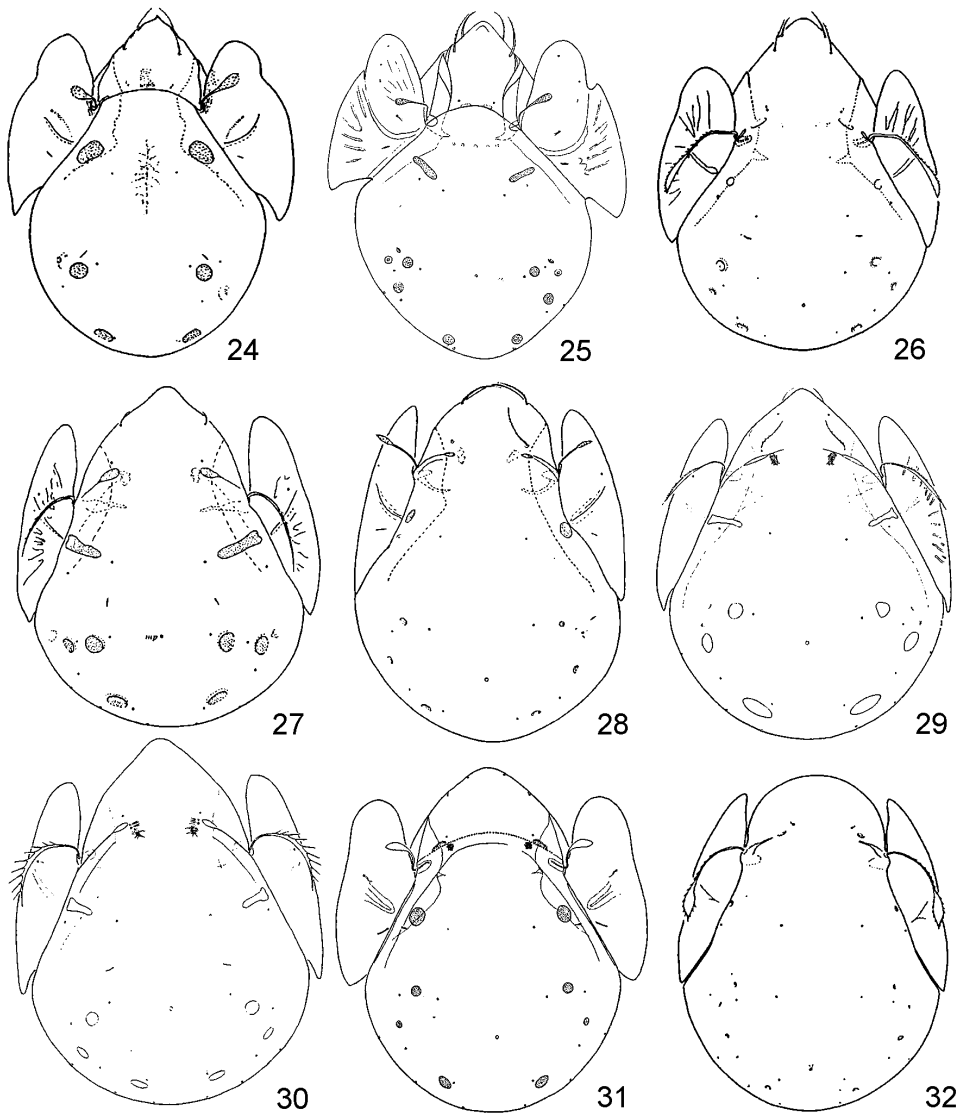
Currently, the genus *Allogalumna* comprises more than 40 species having a cosmopolitan distribution collectively (AOKI & HU 1993, ERMILOV & ANICHKIN 2012, 2014, BAYARTOGTOKH & AKRAMI 2014, ERMILOV & KALÚZ 2014, ERMILOV *et al.* 2014, SUBÍAS 2014). There are some features such as presence or absence of dorsosejugal furrow; number and shape of porose areas especially *Aa*; shape of sensilli; presence or absence and size of rostral, lamellar and interlamellar setae; presence or absence of notogastral median pore (in females and males); position of lyrifissures *im* and number of claws (one or three) that differentiate the species in this genus. In conclusion, the following key (including 41 species until now) can be used to identify adults of all known species of *Allogalumna*. The measurements and distribution of all species is given in parentheses.

A KEY TO THE KNOWN SPECIES OF *ALLOGALUMNA* GRANDJEAN, 1936 (Figs 15–56)

- 1 Adanal lyrifissures (*iad*) removed from anal plates [subgenus *Globogalumna*] 2
- Adanal lyrifissures (*iad*) located very close to anal plates [subgenus *Allogalumna*] 3
- 2 Notogaster with only two pairs of porose areas; prodorsum without a transverse line anteriorly to interlamellar setae; notogastral cerotegument with ornamentation ($250 \times 159\text{--}164$)
A. (G.) biporosa Ermilov et Anichkin, 2012 (Vietnam)
- Four pairs of porose areas; prodorsum with a transverse line anteriorly to interlamellar setae; notogaster smooth, without ornamentation ($236\text{--}244 \times 168\text{--}176$) *A. (G.) globulifera* (Balogh et Mahunka, 1978) (Brazil)



Figs 15–23. *Allogalumna* species: 15 = *Allogalumna* (*A.*) *alpha* (after PÉREZ-ÍÑIGO & BAGGIO 1994); 16 = *A.* (*A.*) *borhidii* (after BALOGH & MAHUNKA 1979); 17 = *A.* (*A.*) *confluens* (after BALOGH 1960a); 18 = *A.* (*A.*) *antillensis* (after MAHUNKA 1998); 19 = *A.* (*A.*) *costata* (after MAHUNKA 1996); 20 = *A.* (*A.*) *dentirostrata* (after BAYARTOGTOKH & AKRAMI 2014); 21 = *A.* (*A.*) *dilatata* (after BALOGH & BALOGH 1983); 22 = *A.* (*A.*) *exigua* (after POPP 1960); 23 = *A.* (*A.*) *filiger* (after HAMMER 1962).

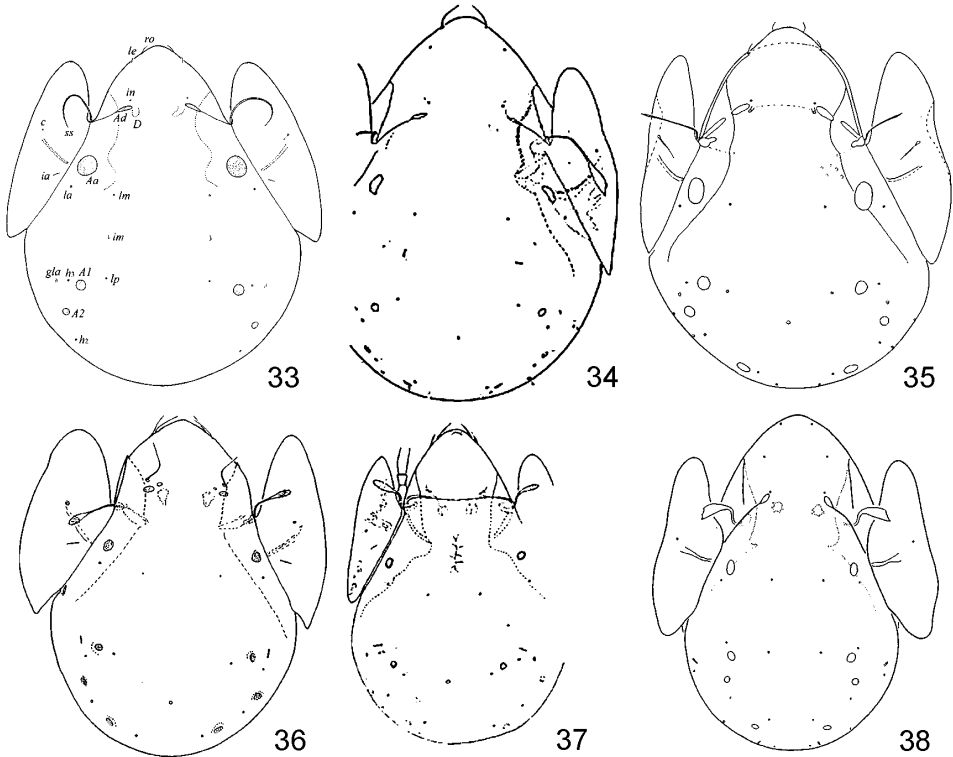


Figs 24–32. *Allogalumna* species: 24 *A. (A.) gedaii* (after MAHUNKA 1995); 25 = *A. (A.) hydrophila* (after HAMMER 1962); 26 = *A. (A.) incompleta* (after MAHUNKA 1988); 27 = *A. (A.) insolita* (after MAHUNKA 1996); 28 = *A. (A.) integer* (after MAHUNKA 1992b); 29 = *A. (A.) leleupi* (after BALOGH 1962); 30 = *A. (A.) madagascarensis* (after BALOGH 1960b); 31 = *A. (A.) margaritifera* (after BALOGH 1960a); 32 = *A. (A.) microporosa* (after MAHUNKA 1978b).

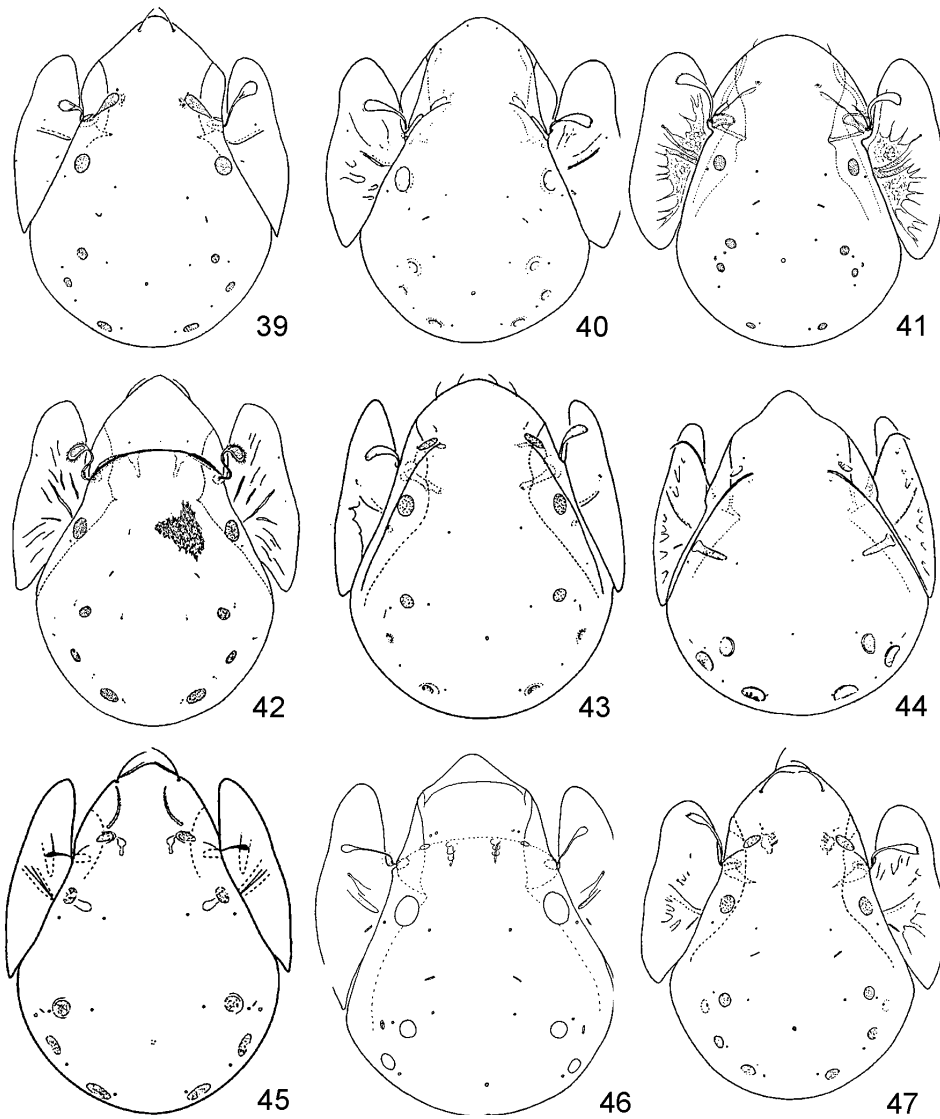
- 3 Legs monodactyle; median pore located in centrodorsal part of notogaster (180–188 × 114–123)
A. (A.) monodactyla Ermilov et Anichkin, 2014 (Vietnam)
- Legs tridactyle; median pore located in posterior part of notogaster 4
- 4 Dorsosejugal furrow well developed, complete 5
- Dorsosejugal furrow medially undeveloped or absent 13
- 5 Notogaster with only two pairs of large porose areas (A_1 – A_3 fused) (264–290 × 207–223)
A. (A.) confluens Balogh, 1960 (Congo)
- Three or four pairs of notogastral porose areas present 6
- 6 Three pairs of porose areas (usually A_3 reduced) 7
- Four pairs of porose areas 9
- 7 Sensilli setiform, unilaterally ciliate; interlamellar setae well developed, long; lamellar setae represented by alveoli (276 × 196)
A. (A.) alpha Pérez-Íñigo et Baggio, 1994 (Brazil)
- Sensilli with conspicuously dilated head; interlamellar setae minute; lamellar setae present 8
- 8 Sensilli with pointed head; rostrum rounded; porose areas small; lyrifissures *im* located laterad of A_1 (345 × 219)
A. (A.) exigua Popp, 1960 (Egypt)
- Sensilli with rounded head; rostrum pointed; porose areas large; lyrifissures *im* located anteriorad of A_1 (449–505 × 312–346)
A. (A.) gedaii Mahunka, 1995 (Thailand)
- 9 Porose areas *Aa* very large, triangular or elongate, transversely oriented 10
- Porose areas *Aa* round or slightly oval 12
- 10 Porose areas *Aa* triangular, with conspicuously widened lateral and narrowed medial parts; sensilli with slightly dilated head; interlamellar setae long (600–615 × 496–530)
A. (A.) dentirostrata Bayartogtokh et Akrami, 2014 (Iran)
- Porose areas *Aa* elongate, 2–3 times longer than broad; interlamellar setae represented by alveoli 11

- 11 Porose areas *Aa* nearly 3 times longer than broad, narrowed medially; A_1 rounded; sensilli with well dilated head; lyrifissures *im* located anterolateral to A_1 (450) *A. (A.) hydrophila* Hammer, 1962 (Chile)
- Porose areas *Aa* nearly 2 times longer than broad; A_1 irregular; sensilli narrow lanceolate; lyrifissures *im* located anteromedial to A_1 (683–781 × 526–622) *A. (A.) antillensis* (Mahunka, 1998) (St. Lucia, Antilles)
- 12 Interlamellar setae minute; lamellar setae developed; dorsosejugal furrow concave medially; porose areas small; lyrifissures *im* located anterolateral to A_1 ; notogaster without longitudinal lines (297–336 × 190–224) *A. (A.) pellucida* Wallwork, 1965 (Chad)
- Interlamellar and lamellar setae represented by their alveoli; dorsosejugal furrow convex; porose areas large; lyrifissures *im* located anteromedial to A_1 ; notogaster with short longitudinal lines (345–377 × 235–262) *A. (A.) scripta* (Balogh et Mahunka, 1966) (Congo)
- 13 Notogaster with five pairs of porose areas, *Aa* divided into two parts *A. (A.) bipartita* (Aoki et Hu, 1993) (China)
- Notogaster with three or four pairs of porose areas, *Aa* not divided 14
- 14 Notogaster with three pairs of porose areas 15
- Notogaster with four pairs of porose areas 16
- 15 Sensilli setiform, barbed; notogastral porose areas elongate; lyrifissures *im* located anterolateral to A_1 , very close to it (840) *A. (A.) filiger* Hammer, 1962 (Chile and Panama)
- Sensilli clavate, smooth; notogastral porose areas round; lyrifissures *im* located anteromedial to A_1 , rather far from it (360) *A. (A.) upoluensis* Hammer, 1973 (Samoa)
- 16 Sensilli setiform, or lanceolate with slightly dilated head 17
- Sensilli clavate, or lanceolate with well developed head 27
- 17 *Aa* round or nearly oval 18
- *Aa* triangular, with widened lateral and narrowed medial parts 24
- 18 Interlamellar setae minute or represented by alveoli 19
- Interlamellar setae well developed 22
- 19 Median pore present 20
- Median pore absent 21

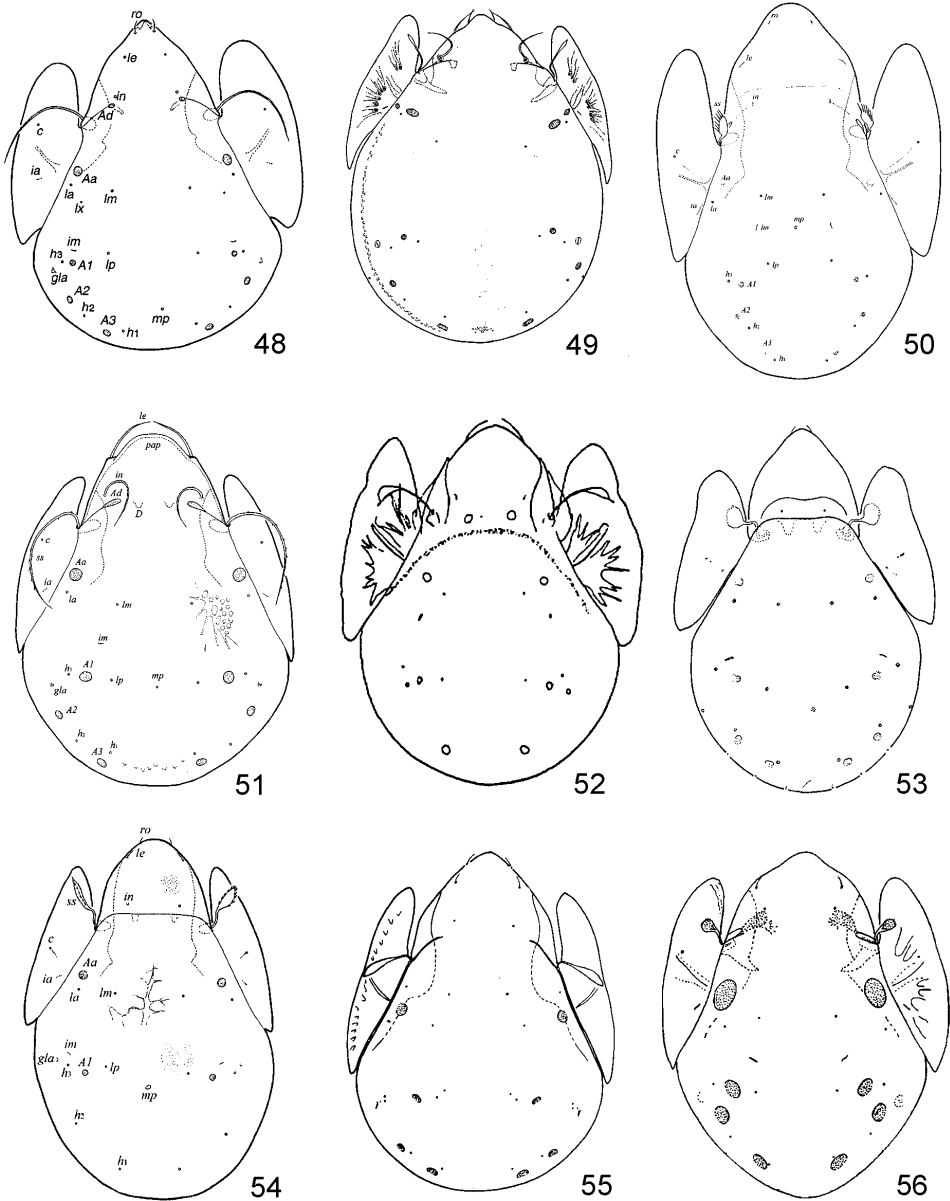
- 20 Sensilli with weakly developed head, smooth; *Aa* oval and very large; anal plates without longitudinal striae; lamellar setae developed (400–410)
A. (A.) novazealandica Hammer, 1968 (New Zealand)
- Sensilli setiform, slightly barbed; *Aa* round with normal size; anal plates striate; lamellar setae represented by alveoli (564–581 × 415)
A. (A.) asetosa Ermilov et Kalúz, 2014 (India)
- 21 *Aa* small, slightly larger than others; genital and anal plates with some fine longitudinal striae (542–598 × 403–445)
A. (A.) costata Mahunka, 1996 (Madagascar)
- *Aa* large, distinctly larger than others; genital plates with one long, longitudinal stria; anal plates smooth (448–464 × 332–365)
A. (A.) ampla Ermilov, Stary, Sandmann, Marian et Maraun, 2013 (Ecuador)



Figs 33–38. *Allogalumna* species: 33 = *A. (A.) ampla* (after ERMILOV *et al.* 2013); 34 = *A. (A.) multesima* (after GRANDJEAN 1957); 35 = *A. (A.) novazealandica* (after HAMMER 1968); 36 = *A. (A.) parva* (after MAHUNKA 1992b); 37 = *A. (A.) pellucida* (after WALLWORK 1965); 38 = *A. (A.) plowmanae* (after BALOGH & BALOGH 1983).



Figs 39–47. *Allogalumna* species: 39 = *A. (A.) pocsi* (after MAHUNKA 1996); 40 = *A. (A.) quadrimaculata* (after MAHUNKA 1988); 41 = *A. (A.) rotundiceps* (after AOKI 1996); 42 = *A. (A.) scripta* (after BALOGH & MAHUNKA 1966); 43 = *A. (A.) sinornata* (after MAHUNKA 1992a); 44 = *A. (A.) triangulata* (after MAHUNKA 1978a); 45 = *A. (A.) turkeyensis* (after GROBLER *et al.* 2004); 46 = *A. (A.) upoluensis* (after HAMMER 1973); 47 *A. (A.) vojmitsi* (after MAHUNKA 1993).



Figs 48–56. *Allogalumna* species: 48 = *A. (A.) asetosa* (after ERMILOV & KALÚZ 2014); 49 = *A. (A.) bipartita* (after AOKI & HU 1993); 50 = *A. (A.) monodactyla* (after ERMILOV & ANICHKIN 2014a); 51 = *A. (A.) paramachadoi* (after ERMILOV & ANICHKIN 2014b); 52 = *A. (A.) curva ventralis* (after WILLMANN 1931); 53 = *A. (G.) glubulifera* (after BALOGH & MAHUNKA 1978); 54 = *A. (G.) biporosa* (after ERMILOV & ANICHKIN 2012); 55 = *A. (A.) cubana* (after BALOGH & MAHUNKA 1979); 56 = *A. (A.) superporosa* (after MAHUNKA 1996).

- 22 Anterior part of prodorsum with large apophysis; sensilli setiform, ciliate; rostral setae densely ciliate (332–348 × 249–265)
A. (A.) paramachadoi Ermilov et Anichkin, 2012 (Vietnam)
- Anterior part of prodorsum without apophysis; sensilli with dilated head; rostral setae smooth 23
- 23 Sensilli with dilated head; lamellar setae ciliate; lyrifissures *im* located laterad of A_1 (440–540)
A. (A.) integer (Berlese, 1904) (Southern central Europe)
- Sensilli with slightly dilated head; lamellar setae smooth; lyrifissures *im* located anteromediad of A_1 in middle part of notogaster (453–489 × 350–380)
A. (A.) iranica sp. n. (Iran)
- 24 Interlamellar setae well developed (398–404 × 312–350)
A. (A.) leleupi Balogh, 1962 (Tanzania)
- Interlamellar setae represented by alveoli 25
- 25 Sensilli with 9–10 long cilia; rostral setae represented by alveoli (301–354 × 261–274)
A. (A.) madagascarensis (Balogh, 1960) (Madagascar)
- Sensilli with short cilia; rostral setae short 26
- 26 Sensilli with 2–3 cilia; lamellar setae developed, short; genital plates with one longitudinal stria (394–428 × 312–340)
A. (A.) insolita Mahunka, 1996 (Madagascar)
- Sensilli densely ciliate; lamellar setae represented by alveoli; genital plates with several longitudinal striae (446–458 × 313–322)
A. (A.) triangulata Mahunka, 1978 (Mauritius)
- 27 Interlamellar setae long 28
- Interlamellar setae minute or represented by alveoli 29
- 28 Interlamellar setae clearly thicker than lamellar and rostral setae, ciliate; porose areas $A_1 - A_3$ little larger than *Aa* (369–421 × 220–242)
A. (A.) turkeyensis Grobler, Bayram et Çobanoğlu, 2004 (Turkey)
- Interlamellar setae not thicker than lamellar and rostral setae, smooth; porose areas $A_1 - A_3$ little smaller than *Aa* (420 × 320)
A. (A.) parva (Berlese, 1916) (Mediterranean)
- 29 Interlamellar setae minute, sometimes hardly visible 30
- Interlamellar setae represented by alveoli 37

- 30 Lamellar setae minute, sometimes hardly visible or represented by alveoli 31
- Lamellar setae well developed, short or long 33
- 31 Rostral setae minute, hardly recognizable; sensillar head barbed; porose areas very small; lyrifissures *im* located posterolaterad of A_1 (206×173 – 185) *A. (A.) microporosa* Mahunka, 1978 (Northern Neotropical)
- Rostral setae long; sensillar head smooth; porose areas of medium size 32
- 32 Ventral side in epimeral region strongly chitinized; lyrifissures *im* located anteriorad of A_1 (360×255)
A. (A.) curva ventralis Willmann, 1931 (tropical and Holarctic)
- Ventral side not chitinized; lyrifissures *im* located anteromedialad of A_1 (215 – 245) *A. (A.) multesima* Grandjean, 1957 (Northern Neotropical)
- 33 Rostral setae long 34
- Rostral setae short, well visible 35
- 34 Rostral setae barbed; sensilli very long, nearly 3 times longer than lamellar setae, directed backwards, distally pointed; dorsosejugal furrow absent; anterior margin of genital plates with 3 pairs of setae close to each other (277 – 307×198 – 218) *A. (A.) incompleta* Mahunka, 1988 (Borneo)
- Rostral setae smooth; sensilli nearly 1.5 times longer than lamellar setae, its head with 3–5 strong spines; dorsosejugal furrow medially undeveloped; anterior margin of genital plates with only one pair of setae, the others set behind it longitudinally (288 – 316×218 – 235)
A. (A.) vojnitsi Mahunka, 1993 (Tanzania)
- 35 Sensilli broadened distally, blunt at tip, with fine barbs on apical margin (212 – 219×155 – 160) *A. (A.) rotundiceps* Aoki, 1996 (Japan)
- Sensilli asymmetrically fusiform, pointed distally, with some small barbs on outer margin 36
- 36 Median pore located between porose areas A_1 ; all notogastral porose areas framed by an anelliform ring (243 – 264×193 – 202)
A. (A.) borhidii Balogh et Mahunka, 1979 (Neotropical)
- Median pore located between A_2 ; only porose areas A_2 and A_3 with ring (281 – 306×226 – 242) *A. (A.) sinornata* Mahunka, 1992 (Senegal)

- 37 Lamellar setae minute, sometimes hardly visible or represented by alveoli 38
- Lamellar setae well developed, short 41
- 38 Rostral setae represented by alveoli 39
- Rostral setae minute, sometimes hardly visible 40
- 39 Sensilli hatchet like, with a small hyaline band on its distal end; all porose areas surrounded by a ring, A_2 of medium size; dorsosejugal furrow medially undeveloped (389–405 × 275–300)
A. (A.) quadrimaculata (Mahunka, 1988) (Borneo)
- Sensilli fusiform, pointed distally; porose areas without ring, A_2 very small; dorsosejugal furrow absent, indicated by minute granules (273 × 200)
A. (A.) margaritifera Balogh, 1960 (Congo)
- 40 Sensillar head dilated, smooth; median pore present; lyrifissures *im* located far anterior to A_1 (290 × 212)
A. (A.) dilatata Balogh et Balogh, 1983 (Australia)
- Sensillar head denticulate; median pore absent; lyrifissures *im* located posterolaterad of A_1 (261 × 171)
A. (A.) plowmanae Balogh et Balogh, 1983 (Australia)
- 41 Median pore present; dorsosejugal furrow absent (252–296 × 197–214)
A. (A.) poci Mahunka, 1996 (Madagascar)
- Median pore absent; dorsosejugal furrow medially undeveloped 42
- 42 Porose areas very large, A_1 and A_2 located near to each other; sensilli short with rounded head; notogaster strongly narrowed posteriorly; anterior margin of genital plates with only one pair of setae, the others set behind it longitudinally (372–390 × 174–280)
A. (A.) superporosa Mahunka, 1996 (Madagascar)
- Porose areas of normal size, A_1 and A_2 located far from each other; sensilli long with pointed head; notogaster rounded posteriorly; anterior margin of genital plates with 2–3 pairs of setae close to each other (328–336 × 243–251)
A. (A.) cubana Balogh et Mahunka, 1979 (Cuba)

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