

SEVEN NEW LARVAL SPECIES OF MITES (ACARI, PROSTIGMATA:
ERYTHRAEIDAE AND TROMBIDIIDAE) FROM POLAND

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new species

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(ACARI, PROSTIGMATA: ERYTHRAEIDAE I TROMBIDIIDAE) Z POLSKI

Abstract. The following species are described as new, all from Poland: *Hauptmannia humberti* n. sp., *Balaustium kacperi* n. sp., *B. rajmundi* n. sp., *B. nikae* n. sp., *B. wratislaviensis* n. sp., *Allothrombium lechi* n. sp. and *Trombidium rowmundi* n. sp. *Balaustioides tuxeni* SOUTHCOTT is synonymized with *Hauptmannia wratislaviensis* HAITLINGER and *Leptus gabrysi* SOUTHCOTT is synonymized with *L. mariae* HAITLINGER.

INTRODUCTION

morpho

In the genus *Hauptmannia* OUDEMANS has been described 15 species hitherto; among them 11 species were known from Europe. Beyond Europe were found the following species: *H. miyatakei* KAW. in Japan, *H. trifarius* SHIBA in Malaysia, *H. aitapensis* SOUTH. in Australia, Vietnam and Madagascar and *H. mortenseni* SOUTH. in Thailand (KAWASHIMA 1958, SOUTHCOTT 1961, 1994, SHIBA 1976, HAITLINGER 1986b, 1987b). From Europe were described 10 species: *H. longicollis* (OUD.) *H. brevicollis* (OUD.), *H. gracilentia* WILLM., *H. parvum* SCHW. et BADER, *H. willmanni* SCHW., *H. wratislaviensis* HAITL., *H. kazimierae* HAITL., *H. silesiacus* HAITL., *H. rudaensis* HAITL. and *H. pseudolongicollis* HAITL. (OUDEMANS 1912, WILLMANN 1937, SCHWEIZER and BADER 1963, HAITLINGER 1986a, 1987a). In this paper is given description of the new species *H. humberti* from Poland, also is synonymized genus *Balaustioides* SOUTHCOTT with genus *Hauptmannia* OUD., and *Balaustioides tuxeni* SOUTH. with *Hauptmannia wratislaviensis*. Also are given new localities for *Leptus mariae* HAITLINGER and is synonymized *L. gabrysi* SOUTH. with *L. mariae*.

The genus *Balaustium* VON HEYDEN is widespread with most species known from Europe, Africa, Asia and North America. These species, except *B. florale* GRANDJEAN from Europe, were based on adults. Moreover, larvae are known for three species: *B. cristatum* MEYER et RYKE from South Africa, *B. putmani* SMILEY and *B. kendalli* WELBOURN, both from North America (GRANDJEAN 1947, MEYER and RYKE 1959, SMILEY 1968, PUTMAN 1970, WELBOURN and

JENNINGS 1991). From Poland are known two species: *B. murorum* (HERMANN) and *B. unidentatum* (TRÄGÅRDH) (GABRYŚ and HAITLINGER 1986, GABRYŚ 1988). Moreover two larvae of *Balaustium* sp. were found by GABRYŚ and MAKOL (1994). Species of *Balaustium* were found on various substrates. The adults are often extremely aggressive predators of small insects. In recent years authenticated cases of attacks on man. Man is attacked probably in situations which bring numbers of *Balaustium* into incidental contact with potential human victims (NEWELL 1963). Such cases mentioned also RACK (1973). Little is known of the habits of the larvae. According to NEWELL they attack insects but GRANDJEAN (1947) found larvae of *Balaustium florale* feeding on the pollen of flowers: *Dellis derehuis*, *Ranunculus acris* and *Acer campestre*. The author found a dozen or so larvae on *Talpa europaea* L. obtained by a dog. Unfortunately these larvae disappeared. Undoubtedly, larvae of *Balaustium* often attack various hosts. I have a specimen obtained from bat *Pipistrellus pipistrellus* (SCHREB.) from Germany. In this paper are described further four new species of which *B. wratislaviensis* has been obtained from *Parus major* L.; the remaining ones were obtained from plants.

Larvae of *Allothrombium* BERLESE are ectoparasites of aphids or rarely of other insects (ZHANG and XIN 1992, HAITLINGER 1994). To date 11 larval species were known. From Poland have been mentioned hitherto 3 species based on adults (GABRYŚ and MAKOL 1994). In this paper the next larval species *A. lechi* n. sp. is described from Poland.

Larval species of *Trombidium* FABRICIUS are known from Europe and North America. At present, 12 larval species of *Trombidium* have been described (SOUTHCOTT 1986). GABRYŚ (1988) and GABRYŚ and MAKOL (1994) were mentioned from Poland 11 species but not any species based on larvae. Larvae of this genus are associated with various insects: Lepidoptera, Hemiptera, Heteroptera, Coleoptera and Hymenoptera. In this paper is described *T. (Teresothrombium) rowmundi* n. sp. from Poland. It has been obtained from young specimens of spider.

The terminology of structures and setal notation is adopted from SOUTHCOTT (1961, 1986, 1988). The new species are deposited in the Museum of Natural History, Wrocław University (MNHWU). All measurements are given in micrometers (μm).

Results

Erythraeidae ROBINEAU-DESVOIDY, 1928

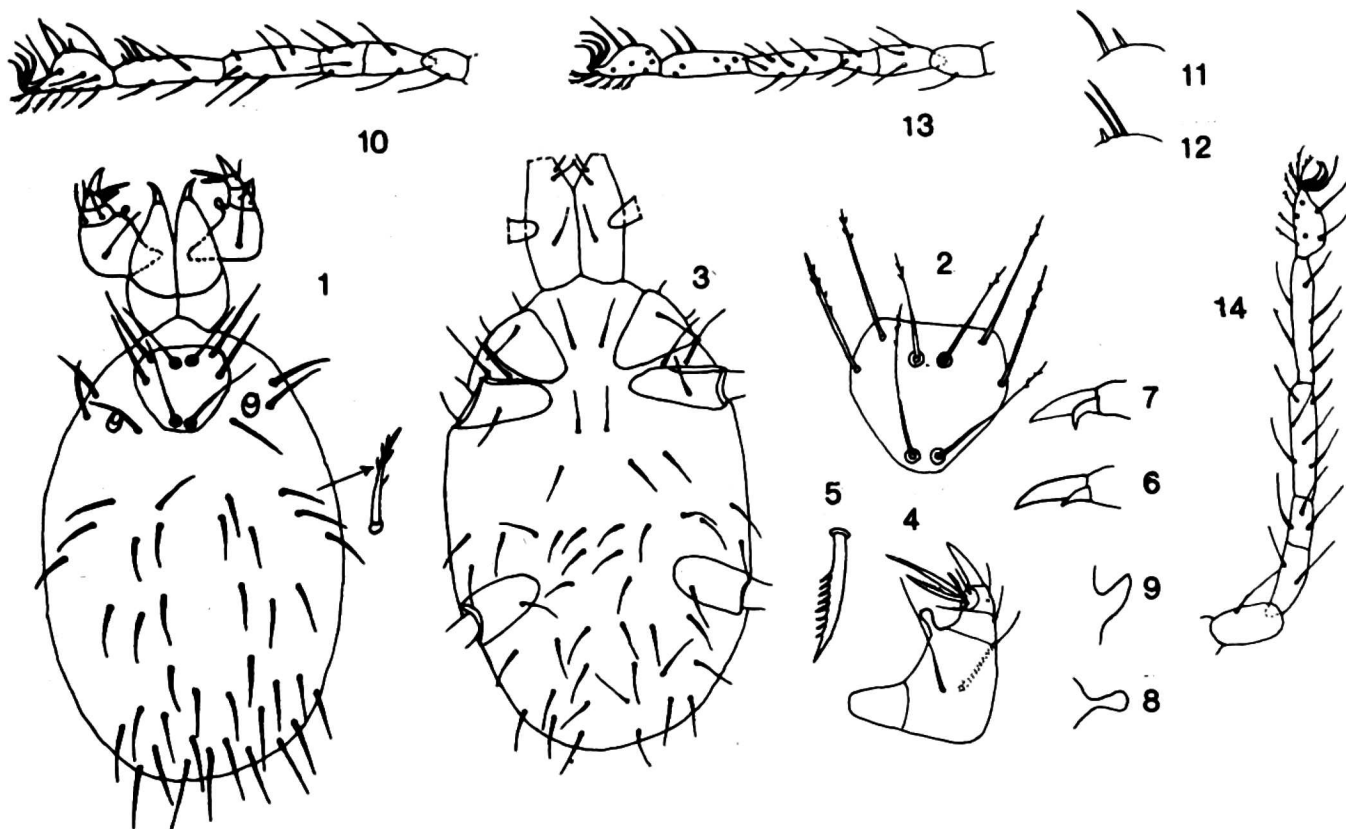
Hauptmannia OUDEMANS, 1910

Balaustioides SOUTHCOTT, 1989 — syn. nov.

Hauptmannia humberti n. sp.

Diagnosis. Palptarsus with comblike seta, palpfemur has projection with enlarged and rounded tip; PSE over 88, short terminala, below 46 and gnathosoma, below 142.

Larva, holotype. Idiosoma ovoid, length 424, width 272; overall length from tip of chelicerae to posterior pole of idiosoma 560. Dorsal scutum with rather straight anterior margin, lateral and postlateral borders as in Fig. 2. All scutalae with a few weakly visible setules; a some setules have scutalae PL. Anterior scutalae somewhat longer than posterior sensillae, both filiform with a few distal setules (Fig. 2).



Figs 1–14. *Hauptmannia* spp. 1–6, 8, 10–14 – *H. humberti* n. sp. 1 – idiosoma, dorsal view; 2 – scutum; 3 – idiosoma, ventral view; 4 – palp; 5 – comblike seta; 6 – palptibial claw and accessory palptibial claw; 8 – palpfermoral protuberance; 10 – leg I, tarsus-trochanter; 11 – solenoidala and famulus of tarsus I; 12 – solenoidalae and vestigiala on tibia I; 13 – leg II, tarsus-trochanter; 14 – leg III, tarsus-trochanter. 7, 9. *H. longicollis* (OUD.) 7 – palptibial claw and accessory palptibial claw; 9 – palpfermoral protuberance

Dorsal setae pointed, with setules arranged irregularly; posterior idiosomatae are longer (Tab. 1); total 44 (Fig. 1).

Ventral side: with one pair of smooth sternal I and one pair of somewhat shorter sternal II setae. Somewhat below are three setae and above coxae III are 14 setae; two setae placed between coxae III. All mentioned setae are smooth. Behind coxae III placed 19 weakly barbed setae. Coxalae I–II smooth, coxalae III slightly barbed; the shortest are coxalae II. Gnathosoma (GL) relatively long (measured between tip of chelicerae to posterior margin of capitulum). Palpcoxala and both hypostomatae thin and smooth; palpcoxala about twice longer than both hypostomatae (Fig. 3). Palps: femur with two setae, dorsal weakly barbed and ventral smooth setae almost equal. Genu with two dorsal and single ventral seta, tibia with three setae (Fig. 4), including a short, strong seta near claw (Fig. 6). Tibial claw simple, hooked. Palptar-

TABLE 1

Metric data for *Hauptmannia humberti* n. sp. (Hh); *H. longicollis* (OUD.) (Hl); *H. pseudolongicollis* HAITL. (Hp); *Balaustioides tuxeni* SOUTH. (Bt) and *H. wratislaviensis* HAITL. (Hw)

Character	Hh H	Hh P	Hl	Hp	Bt	Hw
L	74	70	70-88	72-80	75	64-72
W	76	72	66-76	60-70	60	46-56
AW	50	44	42-54	40-48	35	32-36
PW	70	60	58-74	52-60	51	40-50
AL	72	68	68-84	40-50	26	22-28
PL	66	66	56-64	44-52	30	24-28
ASE	66	60	44-54	34-40	35	28-36
PSE	90	92	68-78	54-60	67	54-64
SBa	12	10	12-18	10-14	10	8-12
SBp	12	12	12-14	12-14	10	10-16
ISD	44	44	56-64	50-56	51	48-54
AP	24	18	22-28	16-24	25	22-30
DS	36-70	48-70	40-80	34-60	28-53	20-54
St I	50	48	72-88	34-44	-	-
ScFed	60	62	46-60	40-50	38	30-40
ScFev	64	60	64-72	52-60	31	30-40
GL	140	134	162-180	146-168	?77	94-104
Ta I	62	64	66-78	60-66	55	42-48
Ti I	86	78	88-106	72-84	61	52-62
Ge I	84	70	80-92	70-76	65	56-62
Tf I	38	34	38-46	32-44	-	-
Bf I	60	58	52-60	48-52	-	-
Tr I	48	48	40-46	40-44	-	-
Cx I	72	66	58-62	54-60	-	-
Ta II	50	56	54-70	52-56	44	32-40
Ti II	76	72	82-100	70-80	57	48-54
Ge II	80	62	70-80	64-70	57	36-52
Bf II	34	30	34-42	30-36	-	-
Tf II	54	44	40-50	40-48	-	-
Tr II	48	48	42-46	42-44	-	-
Cx II	70	70	72-88	64-70	-	-
Ta III	50	54	54-68	52-60	44	34-40
Ti III	104	92	102-126	88-100	71	52-68
Ge III	86	74	80-96	80-86	65	52-64
Bf III	44	36	44-60	40-44	-	-
Tf III	64	50	48-64	46-52	-	-
Tr III	44	50	48-52	46-54	-	-
Cx III	68	74	74-80	64-70	-	-
Coxala I	48	40	56-70	46-52	-	-
Coxala II	26	30	40	30-46	-	-
Coxala III	40	42	44-46	34-42	-	-
Terminala	44	40	60-64	48-56	-	-

H - holotype, P - paratype, Bt - according to SOUTHCOTT (1989)

sus with 6 setae; terminala about 40 long, comblike seta shorter (Figs 4–5). Palpfemur bears a projection, it has enlarged and rounded tip (Figs 4, 8).

Legs. Tarsus I with 24 setae, excluding specialized setae So, Fa; of them 5 setae are barbed. Famala is placed behind solenidion (Figs 10–11). Tibia with smooth setae; among them are 2 solenidia and one vestigiala placed before solenidia (Figs 10, 12). Genu with specialized setae So and Vs placed on the same level. Tarsus II among other bears 6 barbed setae and 1 So. Tibia with 2 solenidia, genu with single solenidion (Fig. 13). Tarsus III among other bears 7 barbed setae, with no specialized setae. Tibia and genu with single So each (Fig. 14).

Measurements are given in Table 1.

Material examined: 2 l.

Locus typicus; Poland, Tatra Mts, Tomanowa Valley, ~1450 m asl., from plants in dwarf mountain pine, 10 July 1991 (MNHUWU). Paratype with the same data as holotype; in authors collection.

Remarks. The larva of *H. humberti* is very close to two species bearing comblike seta on palpal tarsus: *H. longicollis* (OUD.) known from Holland, Poland and Sweden and *H. pseudolongicollis* HAITL. known from Poland and Italy (Roma, December 1992, 1 larva from plants at the Tiber, coll. R. HAITLINGER). From both species it differs in shape of projection on palpfemur (Figs 8–9); longer PSE (90–92 to 68–78 in *H. longicollis* and 54–60 in *H. pseudolongicollis*), shorter GL (130–140 to 162–180 and 146–168, respectively, shorter terminala (40–44 to 62–64 and 48–60); from *H. longicollis* also differ by shorter St I (48–50 to 72–88); from *H. pseudolongicollis* also by longer AL (68–72 to 40–50), PL (66 to 44–52) and ASE (60–66 to 34–40) (HAITLINGER 1987a).

WELBOURN and YOUNG (1987) in key to the genera of North American Erythraeidae to *Hauptmannia* included species having palpal tibial claw entire, palpal tarsus with at least 1 comblike seta, palpal femur with nonsetiferous spine or hook and to *Abrolophus* (larvae) included species having palpal tibial claw distally bifurcate, palpal femur without hooklike projection. WELBOURN and YOUNG defined larval *Abrolophus* although they do not appear to have described it formally. It needs to accept their division basing on palpal tibial claw. But the other features are doubtful. For example *H. kazimierae* HAITL. has not comblike seta on palpal tarsus, however, this species has spine on palpal femur (Fig. 15). To the genus *Hauptmannia* needs to include *Balaustioides tuxeni* SOUTH. For this species SOUTHCOTT (1989) erected new genus *Balaustioides*, included it to the subfamily Balaustiinae and gave new definition for this subfamily! *B. tuxeni* is a synonym of *H. wratislaviensis* HAITL., 1986. All measurements of *B. tuxeni* and details such as arrangement of body setae, structure of palps and its setae are identical as in *H. wratislaviensis* known from Poland (Tab. 2).

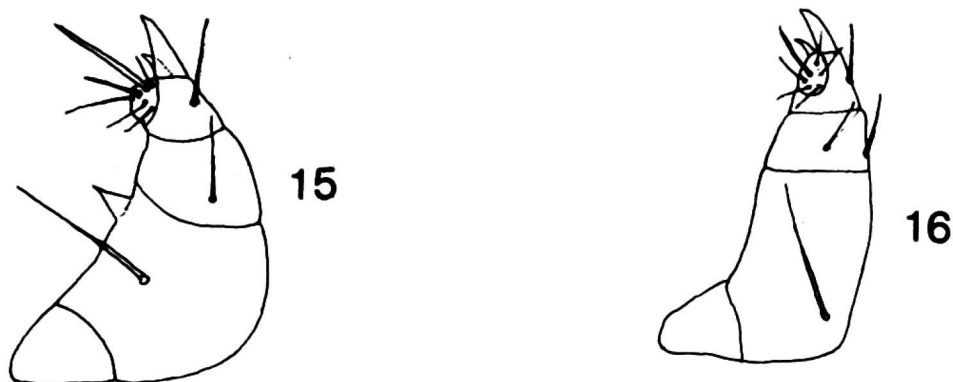
TABLE 2

Metric data for *Balaustium kacperi* n. sp. (Bk); *B. rajmundi* n. sp. (Br); *B. nikae* n. sp. (Bn) and *B. wratislaviensis* n. sp. (Bw)

Character	Bk H	Br H	Bn H	Bw H	Bw P
1	2	3	4	5	6
Length of idiosoma	504	552	528	560	544
Width of idiosoma	380	392	320	468	360
AW	50	54	28	40	32
PW	62	70	68	60	64
SBa	16	12	12	14	12
SBp	16	16	12	12	12
ISD	80	64	52	62	62
AP	42	40	40	40	38
AL	40	30	22	26	28
PL	44	38	52	40	36
ASE	52	48	36	42	42
PSE	86	80	54	60	—
DS	40—44	28—44	24—34	26—42	28—36
St I	52	40	48	40	40
Coxala I	48	42	40	36	40
Coxala II	54	44	48	34	42
Coxala III	52	42	38	38	—
GL	~136	~116	~104	~120	~108
PaScFed	60	48	32	42	40
PaScFev	54	44	40	48	40
PaScGed	50	30	26	—	40
PaScGev	42	30	28	—	30
Ta I L	86	72	64	66	70
Ta I H	38	30	28	26	30
Ti I	120	82	64	78	86
Ge I	100	78	66	80	84
Tf I	56	44	34	46	48
Bf I	62	40	40	34	46
Tr I	48	42	36	42	38
Cx I	~72	62	50	56	52
Ta II L	76	64	54	56	60
Ta II H	36	26	22	22	26
Ti II	84	74	54	66	72
Ge II	84	66	50	64	68
Tf II	50	40	28	36	40
Bf II	48	32	26	32	40
Tr II	44	36	32	36	32
Cx II	~72	64	~52	60	56
Ta III L	72	64	56	60	62
Ta III H	36	26	20	26	26
Ti III	102	84	68	82	90

	1	2	3	4	5	6
Ge III		100	72	56	72	74
Tf III		64	46	36	42	48
Bf III		60	42	36	36	40
Tr III		44	36	32	40	36
Cx III		82	64	56	66	70
PL/AL		1.10	1.27	2.36	1.54	1.29
ISD/AP		1.90	1.60	1.30	1.55	1.63
TiII/PW		1.35	1.06	0.79	1.10	1.13

H – holotype, P – paratype



Figs 15–16. *Hauptmannia* spp. 15 – *H. kazimierae* HAITL. – palp. 16 – *H. wratislaviensis* HAITL. – palp

Leptus LATREILLE, 1796

Leptus mariae HAITLINGER, 1987

L. gabrysi SOUTHCOTT, 1992; syn. nov.

This species is known from Poland, Slovenia and Holland (HAITLINGER 1991, SOUTHCOTT 1992). In Poland it was found on some localities; also its hosts are slightly known. To date were mentioned as hosts *Phyllobius urticae* (Curculionidae), *Lochmaea caprae* (L.) (Chrysomelidae) from Poland, *Lagriia hirta* L. (Lagriidae) from Slovenia and *Dryobius roboris* (L.) (Aphidoidea) from Holland. (GABRYŚ 1991, HAITLINGER 1992, SOUTHCOTT 1992). Recently the author has been obtained two larvae near Ustrzyki Górne (Bieszczady Mts, voi. Krosno) on 1100 m asl from undertermined Orthoptera. Above mentioned hosts suggest that this species has large group of hosts.

New localities: Ustrzyki Górne, 8 August 1991, Dęblin (voi. Radom), 5 August 1983, from meadows.

Larvae of this species, first of all, were obtained in May and June, rarely in July but can to occur also in August.

SOUTHCOTT (1992) described *L. gabrysi*, very similar to *L. mariae*. All metric data mentioned by SOUTHCOTT contains in range of metric data for *L. mariae*. Only one feature differ this species from *L. mariae*: VsTiI is distinctly distally to

distal SoTiI; in *L. mariae* VsTiI is almost at same level as distal SoTiI. Unfortunately this distance is differentiate and in one specimen VsTiI was found beyond SoTiI. Therefore the author recognize *L. gabrysi* as synonym of *L. mariae*.

Balaustium VON HEYDEN, 1826

Balaustium kacperi n. sp

Diagnosis. Number of dorsal setae ~68, ISD 80, AL 40, PSE 86, Ta I 86, Ti I 120, PL/AL 1.10, ISD/AP 1.90, Ti II/PW 1.35.

Larva. Idiosoma oval; borders of scutum invisible. Crista metopica distinctly visible, short (not extend to bases of ASE). AL = PL < PL but PL is only somewhat longer than other scutalae; all these setae bear some setules at the top (Fig. 19). Setae at posterior margin of idiosoma are longer than the remaining ones.

Ventral side of idiosoma bears about 56 setae below coxae III and 17 setae above them. All ventral setae slightly barbed. Sternalae I, II and all coxalae are nude (Fig. 18).

Gnathosoma malformed, details are badly visible, bears nude hypostomalae. Palptrochanter and palpfemur each with one seta with slightly setules; palpgenu with two smooth setae. Palptibia bears 3 setae; of them one seta probably with setules (badly visible). Palptarsus with 6 setae (Fig. 20).

Leg. I. Tarsus with about 22 setae; among them 7 barbed; moreover is present 1 So. The setal formula: Ti – 1 So, 1 Vs, 12 N; Ge – 1 So, 1 Vs, 7 N; Tf – 5 N; Bf – 4 N; Tr – 1 N, 2 B (Fig. 21).

Leg. II. The setal formula: Ta – 1 So, 1 Co, 13 N, 6 B; Ti – 2 So, 12 N; Ge – 1 So, 1 Vs, 7 N; Tf – 3 N, 2 B; Bf – 4 ; Tr – 3 B (Fig. 22).

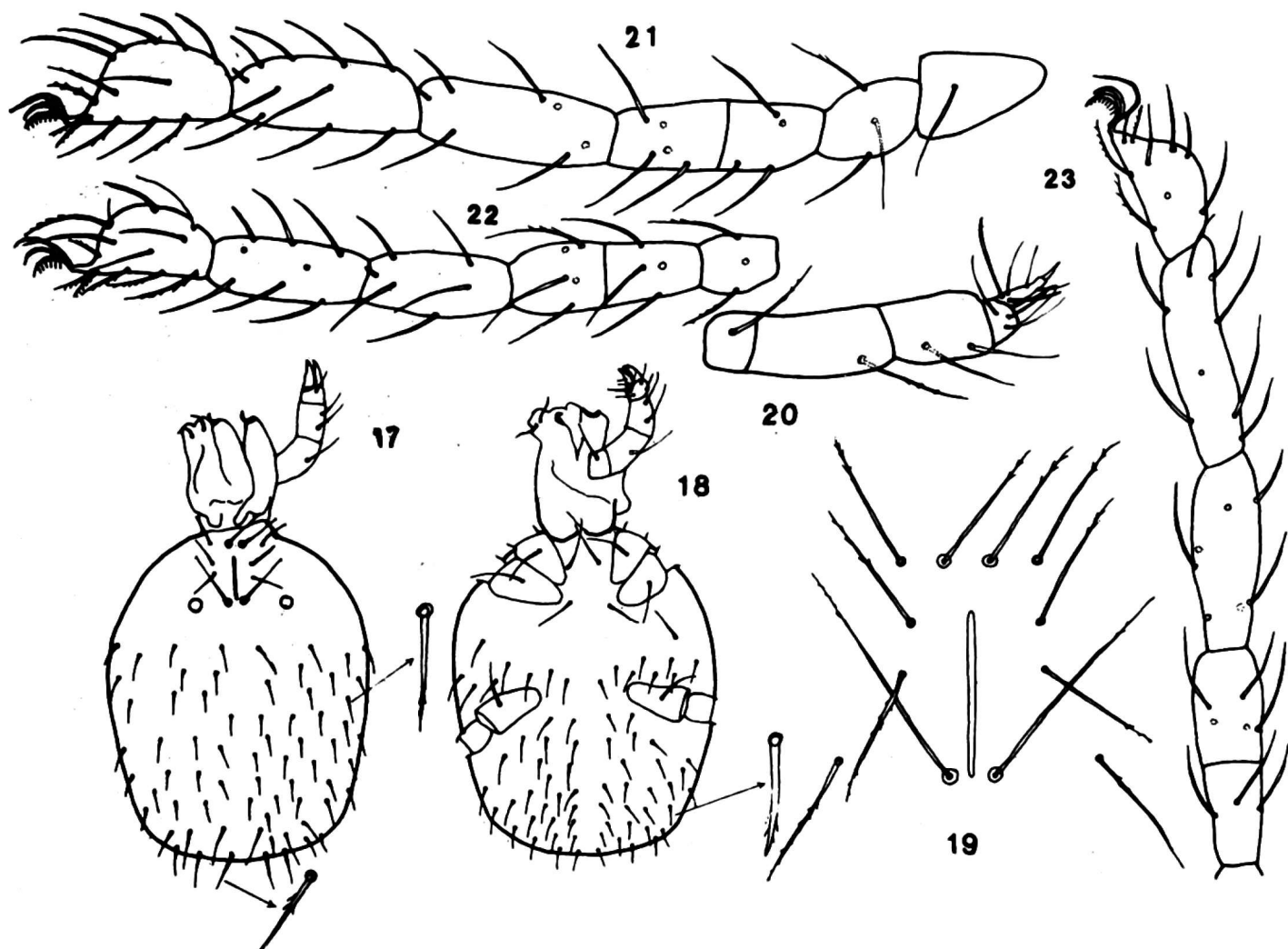
Leg. III. The setal formula: Ta – 10 N, 11 B; Tr – 1 So, 11 N; Ge – 1 So, 8 N; Tf – 1 N, 4 B; Bf – 2 B; Tr – 2 B (Fig. 23).

Metric data of holotype in Table 2.

Material examined: 1 l.

Locus typicus: Poland, Studzienna n. Wambierzyce (voi. Wałbrzych); ~500 m asl, 19 June 1985, meadow, from plants; coll. R. HAITLINGER; MNHWU.

Remarks. The first description of *Balaustium* larvae was given by GRANDJEAN (1947); he was described it as *B. florale*. Unfortunately in this description has not any measurements. *B. kacperi* n. sp. differs from all *Balaustium* (including *B. kendalli* WELBOURN and *B. cristatus* MEYER et RYKE) by very long ISD (80 to 56–66 in all others), AL (40 to 22–34 in others), PSE (86 to 54–80), Ta I (86 to 62–72), Ti I (120 to 64–86), Ge I (100 to 62–84), also by crista metopica not extending to bases of ASE. *B. cristatus* from South Africa differs from all larvae by lack crista metopica.



Figs 17–23. *Balaustium kacperi* n. sp. 17 – idiosoma, dorsal view; 18 – idiosoma, ventral view; 19 – setae in scutal area; 20 – palp; 21 – leg I, tarsus-coxa; 22 – leg II, tarsus-trochanter; 23 – leg III, tarsus-basifemur

Balaustium rajmundi n. sp.

Diagnosis. Number of dorsal setae about 64, ISD 64, PSE 80, AL 30, Ta I 72, Ti I 82, PL/AL 1.27, ISD/AP 1.60, Tiii/PW 1.06.

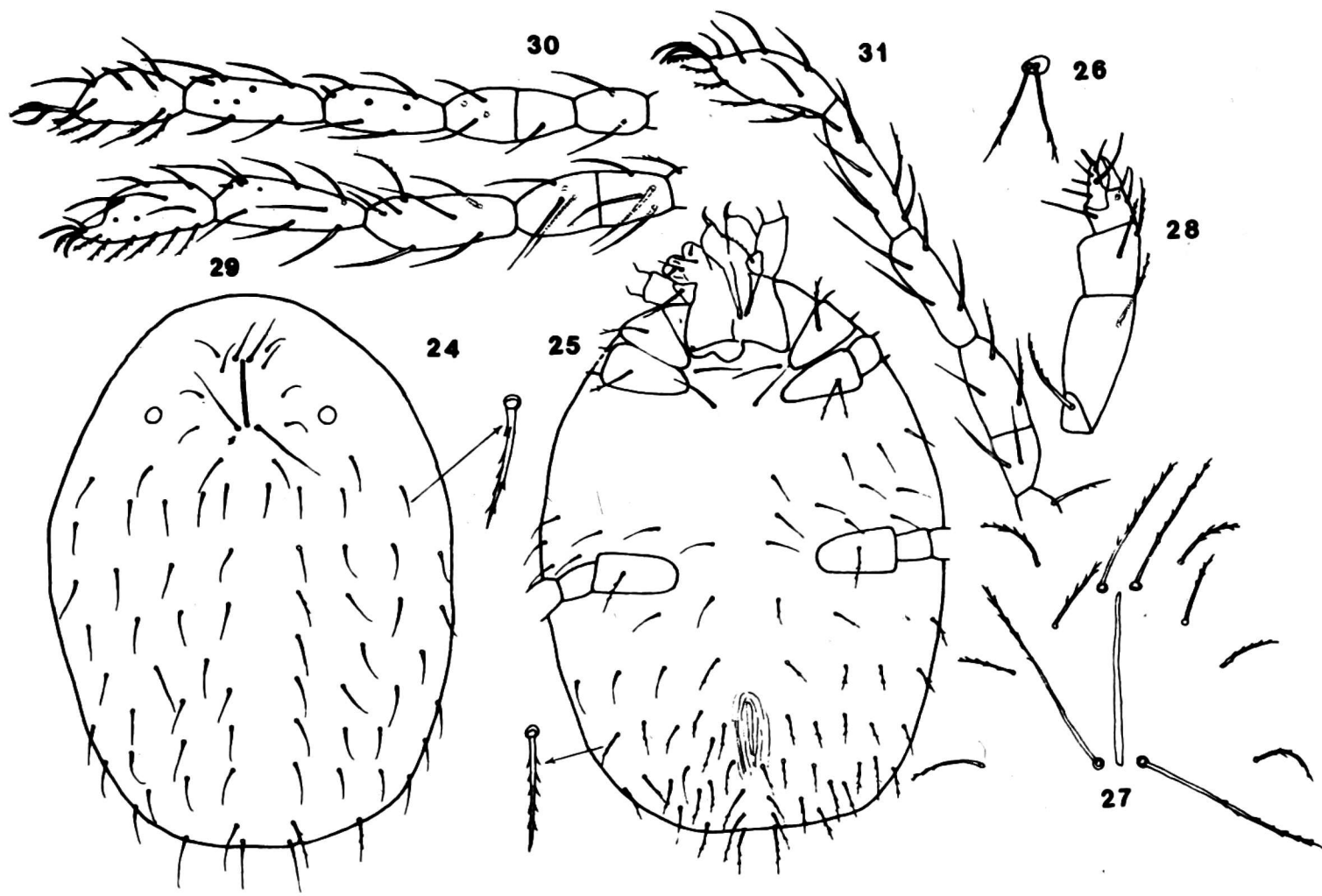
Larva. Idiosoma oval with about 64 dorsal setae with distinctly setules (Fig. 24). Margins of scutum invisible. Crista metopica between bases of ASE and PSE. $AL < ML < PL$ but differences in length between these setae are small; they are distinctly branched. Sensillae have setulae near the top (Fig. 27). Setae near posterior margin of idiosoma longer than the remaining ones.

Ventral side of idiosoma bears about 51 setae beyond coxae III and 18 setae above them. All these setae are branched. Sternalae I–II nude. Coxalae I–III branched (Fig. 25). Coxala II with anomaly: there are two setae (Fig. 26).

Gnathosoma deformed; setae on palptrochanter, palpfemur and palpgenu barbed. Setae on palptibia (3) and palptarsus (6) smooth (Fig. 28).

Leg I. The setal formula: Ta – 1 So, 12 N, 7 B; Ti – 2 So, 1 Vs, 12 ?N; Ge – 1 So, 7 N, 1 B; Tf – 4 N, 1 B; Bf – 4 ?N; Tr – 1 N, 2 B. Some pedal setae bear very badly visible setules – therefore there are question mark about some numerals (Fig. 29).

Leg II. Ta – 1 So, 1 Co, 11 N, 8 B; Ti – 1 So, 1 Vs, 9 N, 3 B; Ge 1 Vs, 4 N, 4 B; Tf – 1 N, 3 B; Bf – 4 B; Tr – 3 B (Fig. 30).



Figs 24–31. *Balaustium rajmundi* n. sp. 24 – idiosoma, dorsal view; 25 – idiosoma, ventral view; 26 – coxalae II, anomaly; 27 – setae in scutal area; 28 – palp; 29 – leg I, tarsus-basifemur; 30 – leg II, tarsus-trochanter; 31 – leg III, tarsus-trochanter

Leg III. Ta – 10 N, 7 B; Ti – 1 So, 8 N, 2 ?B; Ge – 6 N, 2 B; Tf – 1 N, 4 B; Bf – 1 N, 1 B; Tr – 2 B (Fig. 31).

Metric data of holotype in Table 2.

Material examined: 1 l.

Locus typicus: Poland, Pieniny Mts, Krościenko (voi. Nowy Sącz); ~460 m asl, 11 May 1985; meadow, from plants; col. R. HAITLINGER; MNHWU.

Remarks. The new species can be distinguished from *B. florale*, *B. wra-tislaviensis* n. sp., *B. nikaie* n. sp. and *B. kendalli* (excluding *B. kacperi* n. sp.) by longer AW (54 to 28–42) and PSE (80 to 54–73); moreover from *B. nikaie* n. sp. it differs in barbed setae on palpgenu and palpfemur; number of dorsal setae (~64 to ~53) and ventral setae (beyond coxae III) (~51 to ~37), longer AL and shorter PL, longer ASE, Ti I–III (Tab. 2). From *B. wra-tislaviensis* n. sp. by lack Vs on Ge I, Bf (4 N to 3 B, 1 N) and smooth sternalae I, II and SBa, SBp; from *B. florale* also by smooth sternalae I, II and SBa, SBp.

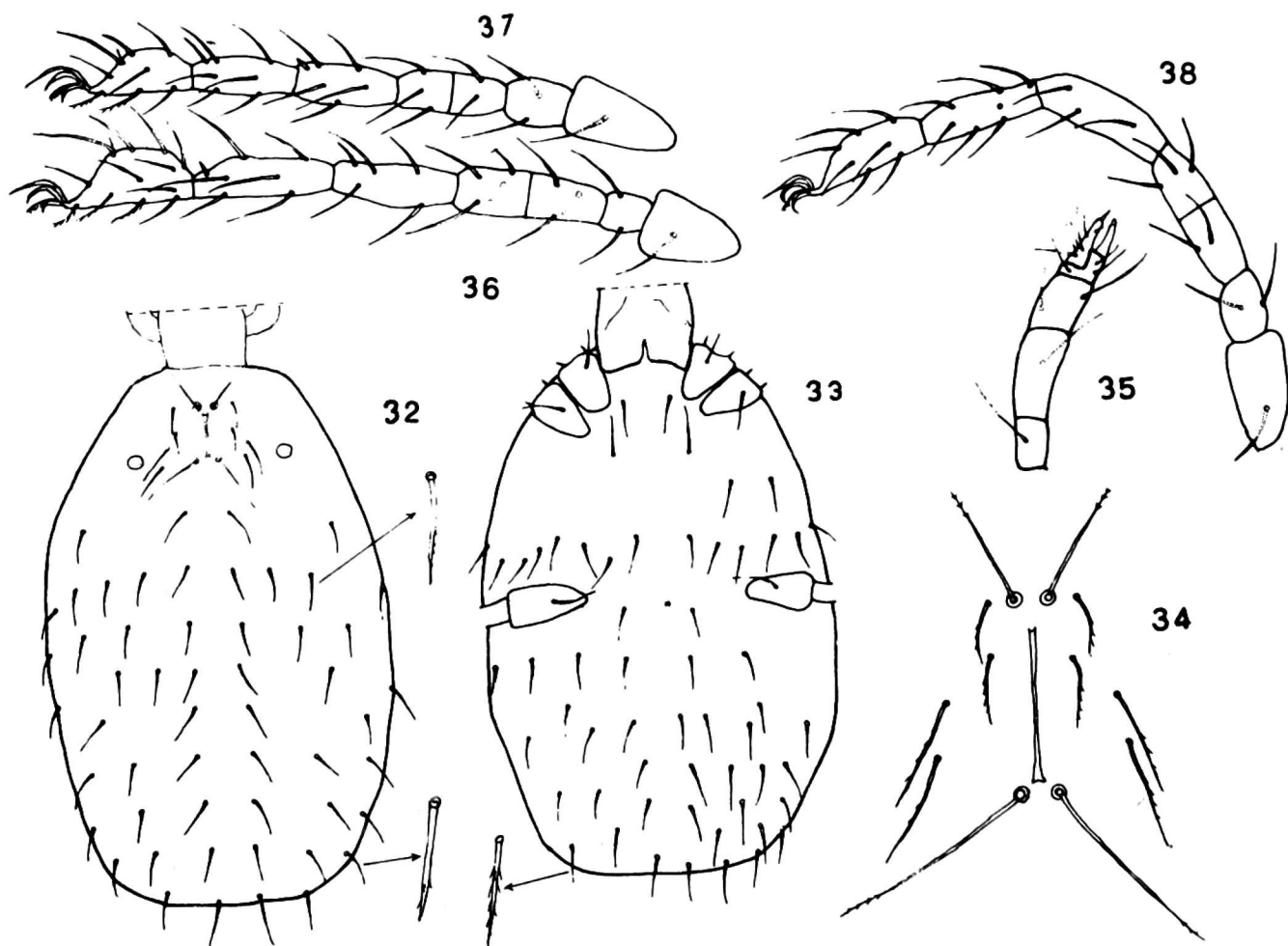
Balaustium nikae n. sp.

Diagnosis. Number of dorsal setae about 53, ISD 52, AL 22, PSE 54, Ta I 64, Ti I 64, PL/AL 2.36, ISD/AP 1.30, TiII/PW 0.79.

Larva. Idiosoma with about 53 dorsal setae having on distal part some small setules. Setae at posterior margin of idiosoma are longer than the remaining ones (Fig. 32). Margins of scutum invisible. Crista metopica not extending to bases of ASE. $ML < AL < PL$; PL is over twice longer than AL and ML. All these setae bears small setules. ASE distinctly shorter than PSE, both with small setulae at the top (Fig. 34).

Ventral side of idiosoma with about 37 setae beyond coxae III and 16 above them. Setae at posterior margin of idiosoma longer than others and have more setules. The remaining ones with 2–3 setules or nude. Sternalae I–II smooth, also coxalae I–II smooth (Fig. 33).

Gnathosoma badly visible; seta on palptrochanter barbed; the rest part nude (Fig. 35). Palptarsus with 6 setae; among them only one seta relatively long and thick.



Figs 32–38. *Balaustium nikae* n. sp. 32 – idiosoma, dorsal view; 33 – idiosoma, ventral view; 34 – setae in scutal area; 35 – palp; 36 – leg I, tarsus-coxa; 37 – leg II, tarsus-coxa; 38 – leg III, tarsus-coxa

Leg I. The setal formula: Ta – 1 So, 1 Co, 14 ?N, 4 B; Ti – 1 So, 1 Vs, 10 N; Ge – 1 So, 9 N; Tf – 5 N; Bf – 4 N; Tr – 3 N (Fig. 36).

Leg II. Ta – 1 So, 1 Co, 10 ?N, 4 ?B; Ti – 1 So, 12 N; Ge – 1 Vs, 7 N; Tf – 5 N; Bf – 4 N; Tr – 3 N (Fig. 37).

Leg III. Ta – 8 N, 6 B; Ti – 1 So, 12 ?N; Ge – 7 N; Tf – 5 N; Bf – 2 N; Tr – 3 N (Fig. 38).

Metric data of holotype in Table 2.

Material examined: 1 l.

Locus typicus: Poland, Rogalinek (voi. Poznań), 5 July 1983; dry meadow, from plants; coll. R. HAITLINGER; MNHWU.

Remarks. The new species differs from *B. wratislaviensis* and *B. florale* by smaller number of dorsal setae (~ 53 to at least 70) and number of ventral setae beyond coxae III (~ 37 to at least 50), shorter Ti I (64 to 78–86), Ti II (54 to 66–72), Ti III (68 to 82–90), longer PL (52 to 36–40) and PL/AL ratio (2.36 to 1.28–1.54) and nude setae on palpgenu, palpfemur and nude sternalae and coxalae.

Balaustium wratislaviensis n. sp.

Diagnosis. Number of dorsal setae about 72, ISD 62, AL 26, PSE 60, TaI 66, TiI 78, PL/AL 1.5, ISD/AP 1.55, TiII/PW 1.65.

Larva. Idiosoma with about 72 dorsal setae having distinctly setules. Setae at posterior margin of idiosoma are longer than dorsal setae (Fig. 39). Margins of scutum invisible. Crista metopica not extending to bases of ASE. AL < ML < PL; these setae with distinctly setules (Fig. 41).

Ventral side of idiosoma with about 56 setae beyond coxae III and 24 above them. Sternalae I–II barbed also coxalae I–III barbed (Fig. 40).

Gnathosoma badly visible; all setae on palpgenu, palpfemur and palptrochanter barbed. Palptarsus with 6 setae and among them only one seta relatively long and thick (Fig. 42).

Leg I. The setal formula: Ta – 1 So, 10 N, 9 B; Ti – 1 So, 1 Vs, 11 N; Ge – 1 So, 1 Vs, 7 N; Tf – 3 N, 2 B; Bf – 1 N, 3 B; Tr – 3 B (Fig. 43).

Leg II. Ta – 1 So, 10 N, 9 B; Ti – 1 So, 10 N; Ge – 1 Vs, 7 N; Tf – 3 N, 2 B; Bf – 1 N, 3 B; Tr – 3 B (Fig. 44).

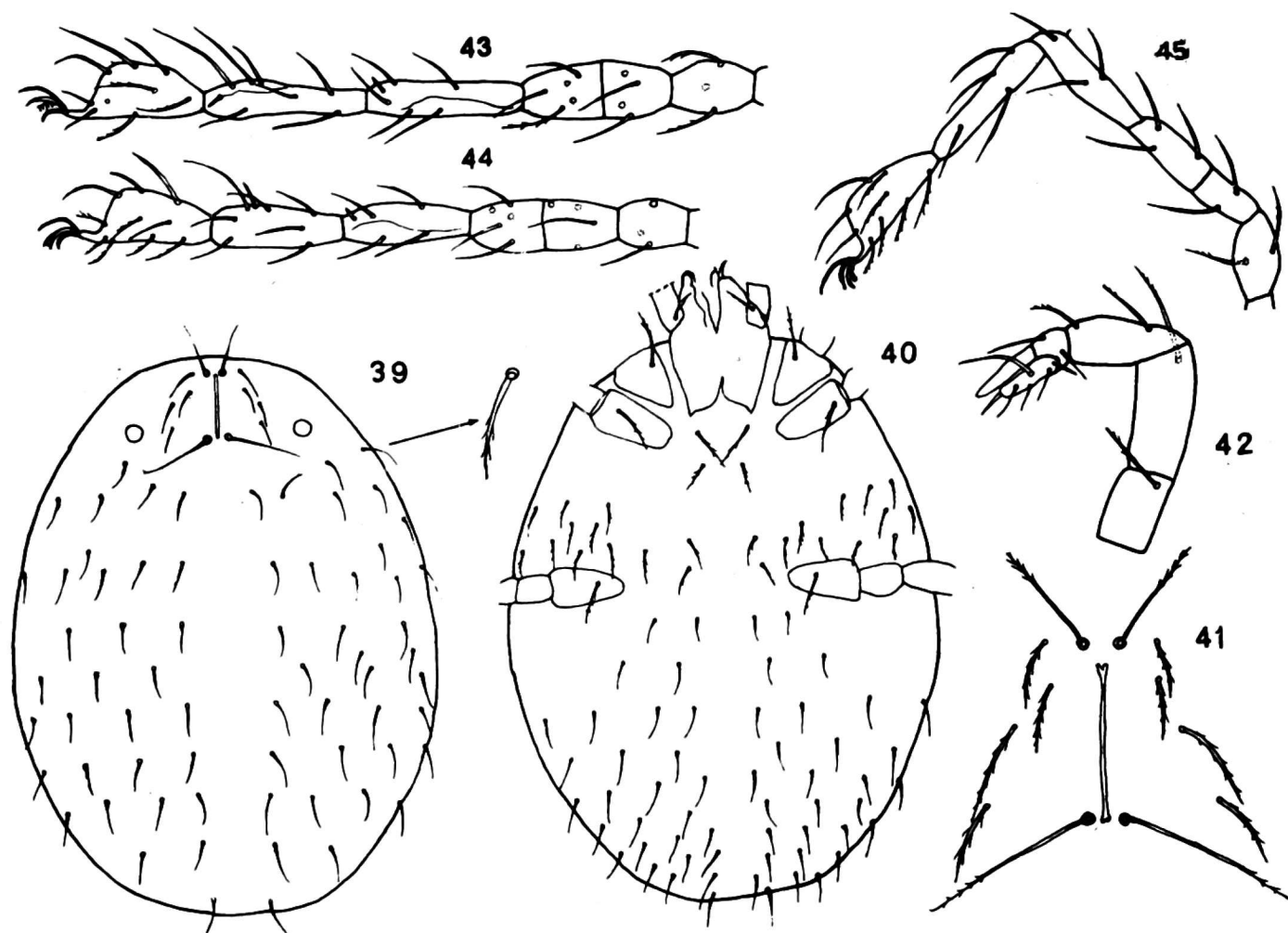
Leg III. Ta – 10 N, 9 B; Ti – 1 So, 10 N, 1 B; Ge – 7 N; Tf – 1 N, 4 B; Bf – 1 N?, 1 B?; Tr – 2 B (Fig. 45).

Metric data of holotype in Table 2.

Material examined: 1 l.

Locus typicus. Holotype; Poland, Wrocław, 7 May 1981, from *Parus major* L.; leg. R. HAITLINGER; MNHWU. Paratype: Germany, Osterode/Harz, 23 March 1991, from *Pipistrellus pipistrellus* (SCHREB.) leg. W. RACKOW; in author's collection.

Remarks. The new species is especially similar to *B. florale* GRAND. and differs from it by lack prodorsal plate (in *B. florale* longitudinal plate with only



Figs 39–45. *Balaustium wratislaviensis* n. sp. 39 – idiosoma, dorsal view; 40 – idiosoma, ventral view; 41 – setae in scutal area; 42 – palp; 43 – leg I, tarsus-trochanter; 44 – leg II, tarsus-trochanter; 45 – leg III, tarsus-trochanter

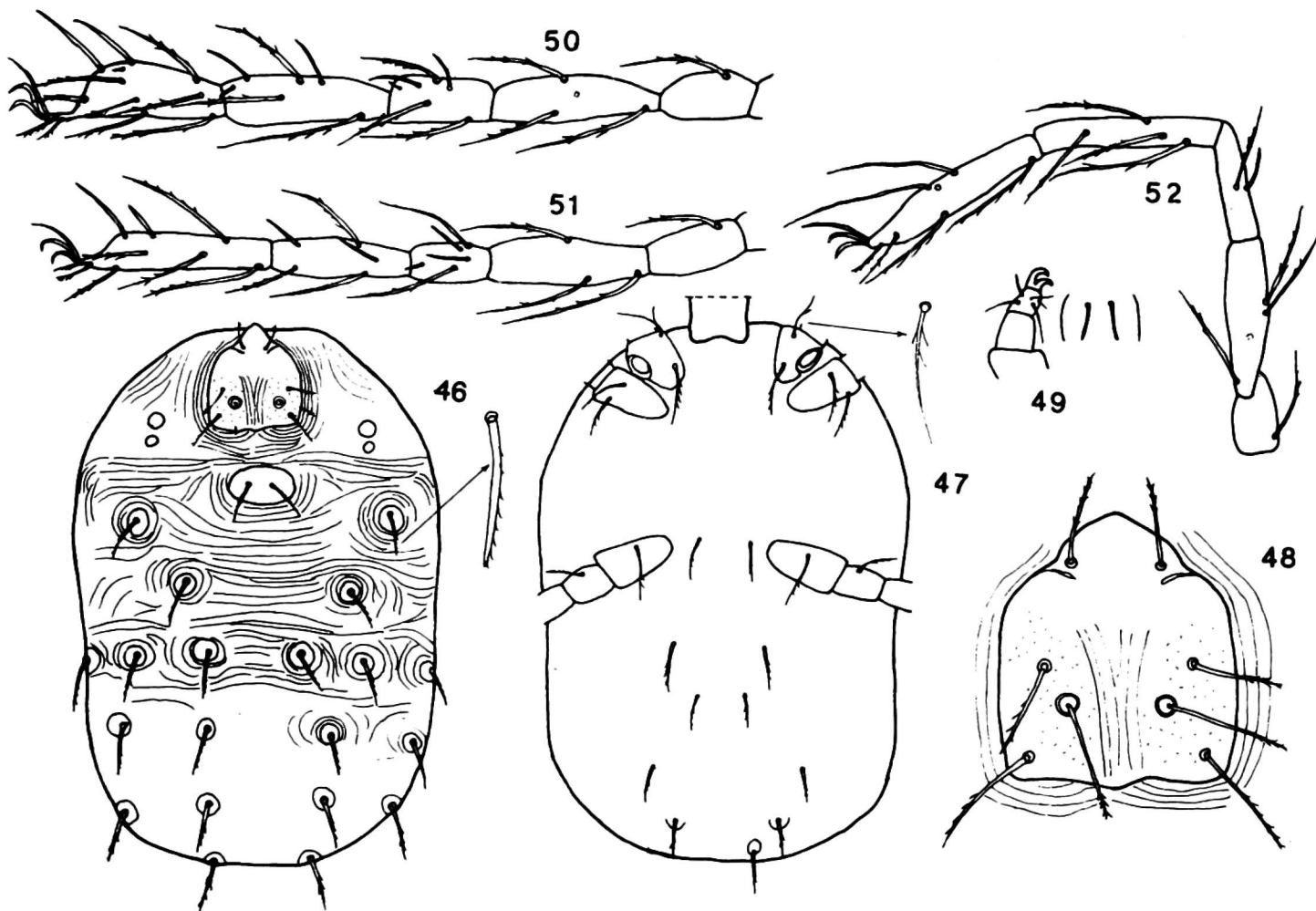
four sensillae), lack barbed seta on palptarsus and palptibia (*B. florale* with one barbed seta on these segments). Further comparison with *B. florale* is impossible because GRANDJEAN (1947) gave any measurements to this species. It is interesting that both specimens were obtained from flying animals.

Trombidiidae LEACH, 1815

Allothrombium BERLESE, 1903

Allothrombium lechi n. sp.

Diagnosis. Tarsus III with normal claws, dorsal surface ornamented by transverse lines, dorsum with 20 setae, AP 46?, PW 92, AW 82, TaI/TiI 1.12. **Larva.** Idiosoma distinctly longer than wide. Dorsum bears scutum with sharpen tip. Scutum partial punctated with lines between sensillae. $AL = AM < PL$; all these setae barbed. Sensillae relatively short, barbed (Fig. 48). Scutellum about twice wider than long with two barbed setae. Each dorsal seta with platelets. All dorsal setae are barbed. These setae arranged in: $2 + 2 + 6 + 4 + 4 + 2 = 20$. Two pairs of eyes placed of posterior angle of scutum; the anterior pair larger than posterior pair. Anterior 2/3 of dorsum covered by transverse lines (Fig. 40).



Figs 46–52. *Allothrombium lechi* n. sp. 46 – idiosoma, dorsal view; 47 – idiosoma, ventral view; 48 – scutum; 49 – palp; 50 – leg I, tarsus-trochanter; 51 – leg II, tarsus-trochanter; 52 – leg III, tarsus-trochanter

Ventral surface of idiosoma bears two barbed sternalae between coxae III; setae behind coxae III are barbed; three posterior setae with incomplete platelets. $fV = 2 + 2 + 2 + 3 = 9$. $NDV = 29$. Coxae I–II each bear two barbed setae; anterior seta on coxa I with about 3 setules; coxa III with weekly barbed seta (Fig. 47).

Gnathosoma badly visible, hypostomalae rather narrow; palptarsus with probably 5 setae; among them one long and barbed seta (Fig. 49).

Leg I. The setal formula: Ta – 1 So, 1 N, 15 B; Ti – 2 So, 1 Vs, 5 B; Ge – 2 So, 1 Vs, 4 B; Fe – 5 B; Tr – 1 B (Fig. 50).

Leg II. Ta – 1 So, 13 ?B; Ti – 2 So, 5 B; Ge – 2 So, 1 Vs, 3 B; Fe – 4 B, Tr – 1 B (Fig. 51).

Leg III. Ta – 10 B; Ti – 5 B; Ge – 2 So, 3 B; Fe – 4 B; Tr – 1 B (Fig. 52). $Ip = 364 + 340 + 400 = 1104$ (lengs length were measured from the basal end of the trochanter (Tr) to the base of the pretarsal claw).

Metric data of holotype in Table 2.

Material examined: 1 l.

Locus typicus: Poland, Radwanice n. Wrocław (voi. Wrocław), 30 June 1986, from undetermined Diptera; leg. L. BOROWIEC; MNHWU.

Remarks. The new species differs from other larval species of *Allothrom-*

bium (having tarsus III with normal claws) in distinctly ornamented dorsal surface, by transverse lines; moreover from *B. reinholdi* HAITLINGER it differs by dorsum bears 20 setae (16 in *B. reinholdi*); from *A. monospessulanum* ROB. et AESCHL. by one pair of setae of scutellum; from *A. fuliginosum* (HERMANN) by longer AP (46 to 26–36), shorter AW (82 to 90–101), PW (92 to 93–113), PSW (80 to 86–101), OW (34 to 42–48) and upper coxala I bears only 3–4 setules (in *A. fuliginosum* whole seta barbed) from *A. chanaanense* FEIDER by only 9 setae on ventral surface of idiosoma; from *A. recki* FEIDER et AGEKIAN by longer AW (82 to 58–68), shorter AP (46 to 61–87); from *A. lerouxi* MOSS by 4 barbed setae on genu I, and from *A. pulvinum* EWING by longer AP (46 to 30–35) and distinctly barbed upper coxala I.

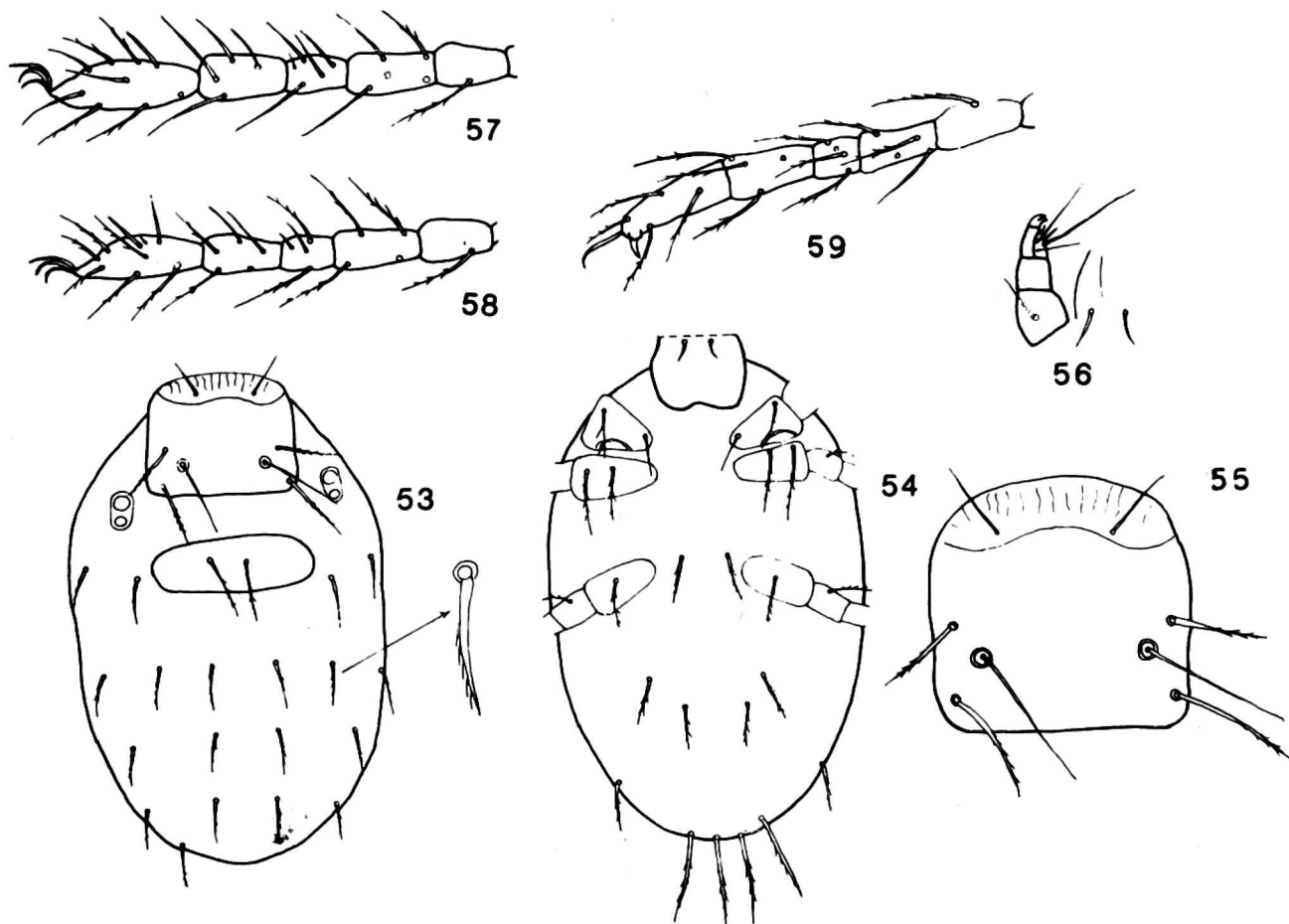
Trombidium FABRICIUS, 1775

Subg. *Teresothrombium* FEIDER, 1950

Trombidium (*Teresothrombium*) *rowmundi* n. sp.

Diagnosis. Hypostomalae narrow, not branched, palpal tibial claw slightly separating in distal part, AL 46, AM 32, number of ventral setae 6, TiI/GeI 1.38, TiII/GeII 1.67.

Larva. Idiosoma distinctly longer than wide. Dorsum with 19 barbed setae arranged 4–6–4–4–1 (Fig. 53). Scutum rounded with AL and PL barbed;



Figs 53–59. *Trombidium* (*Teresothrombium*) *rowmundi* n. sp. 53 – idiosoma, dorsal view; 54 – idiosoma, ventral view; 55 – scutum; 56 – palp; 57 – leg I, tarsus-trochanter; 58 – leg II, tarsus-trochanter; 59 – leg III, tarsus-trochanter

AM probably nude (badly visible). AM < AL < PL. Sensillae nude (Fig. 55). Scutellum with two barbed setae.

Ventral side of idiosoma with 10 barbed setae; four setae on posterior margin of idiosoma distinctly longer than the other ones. Lower seta on coxa I nude, the remaining coxalae barbed. Pygosomal setae 68–72 long (Fig. 54).

Gnathosoma badly visible; hypostomalae narrow and probably nude (Fig. 56). Palptarsus with ?5 setae; palpfemorala nude. Palpal tibial claw bifid slightly separating in distal part.

TABLE 3
Metric data for *Allothrombium lechi* n. sp. (Al) and *Trombidium rowmundi* n. sp. (Tr)

Character	Al H	Tr H	Tr P		Al H	Tr H	Tr P
Length of idiosoma	808	424	480	Coxala Ia (lower)	58	26	28
Width of idiosoma	544	276	312	Coxala Ib (upper)	60	50	52
AW	82	102	98	Coxala IIa	54	54	42
PW	92	102	100	Coxala IIb	—	60	52
AMB	60	52	48	Coxala III	70	50	—
LN	~ 34	—	—	Ta I L	92	66	60
MA	40	48	48	Ta I H	—	22	20
SA	24	18	16	Ti I	82	36	36
SP	30	24	24	Ge I	54	26	26
ASB	~ 88	—	—	Fe I	84	36	36
PSB	48	36	32	Tr I	52	40	36
AP	46	32	32	Cx I	72	56	52
AL	56	46	40	Ta II L	90	62	56
PL	72	60	60	Ta II H	—	20	22
AM	50	32	28	Ti II	74	40	36
SB	52	80	74	Ge II	44	24	22
SE	64	70	~ 60	Fe II	80	42	38
L	~ 136	~ 118	—	Tr II	52	36	32
W	~ 120	118	~ 114	Cx II	80	50	50
PSW	80	110	—	Ta III L	104	60	52
OW	34	38	—	Ta III H	—	16	16
PSL	42	~ 40	—	Ti III	96	42	40
OL	~ 70	50	—	Ge III	50	28	24
PaScFe	—	14	—	Fe III	86	46	44
GL	94	~ 80	80	Tr III	64	44	40
DS	64–74	36–74	40–62	Cx III	80	56	54
TaI/TiII	1.12	—	—	TiI/GeI	—	1.38	1.38
				TaII/GeII	—	2.58	2.55

H — holotype, P — paratype

Leg I. The setal formula: Ta – 1 So, 10 B, 5 N; Ti – 2 So, 1 Vs, 1 N, 4 B; Ge – 2 So, 1 Vs, 4 B; Fe – 2 So, 1 Vs, 4 B; Tr – 1 B (Fig. 57).

Leg II. Ta – 1 So, 1 Fa, 1 N 11 B; Ti – 2 So, 5 B; Ge – 1 So, 1 Vs, 3 B; Fe – 4 B; Tr – 1 B (Fig. 58).

Leg III. Ta – 12 B; Ti – 5 B; Ge – 1 So, 3 B; Fe – 4 B; Tr – 1 B (Fig. 59).

Metric data of holotype in Table 3.

Material examined: 2 ♀.

Locus typicus: Holotype from Poland, Podemszczyzna (voi. Przemyśl), 9 August 1985, from undetermined young spider (probably Araneidae), det. Dr. WOŹNY) MNHWU; paratype – Garłówko n. Elk (voi. Suwałki), 19 August 1984, from undetermined spider; in author's collection; both specimens leg. R. HAITLINGER.

Remarks. The new species belongs to species group having narrow hypostomata. From *T. breei* SOUTHCOFF it differs by shape of scutum and palpal tibial claw, slightly separated in distal part; from *T. rhopalicus* VERCAMMEN-GRANDJEAN et POPP by not branched hypostomata, shorter AM (32 to 54), longer AL (46 to 30); from *T. hungaricum* KOBULEJ by 19 dorsal setae and 10 ventral setae (?16 in *T. hungaricum*; and differently arranged ventral setae; 6–2–2); from *T. carpaticum* FEIDER and *T. teres* ANDRE it differs by more number of ventral setae (6 to 2, 2) and from both by ?5 setae on palptarsus (6 and 4, respectively).

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Received December 23, 1995, accepted August 12, 1996