

## Preliminary revision of the genus *Bolbostetha* Fairmaire, 1896 (Coleoptera: Tenebrionidae: Alleculinae).

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**Taxonomy, new species, new combinations, description, key, Coleoptera, Tenebrionidae, Alleculinae, *Allecula*, *Bolbostetha*, Oriental region**

**Abstract.** Type material of 22 species of Alleculinae was studied (males of 10 species, females of 12 species and 2 species of both sexes). I had no possibility to see the type material of *Bolbostetha atricolor* Pic, 1944, *B. malaisei* Borchmann, 1942, *B. martapurana* Pic, 1936, *B. pendleburyi* Pic, 1936 and *B. sauteri oshimana* (Nakane, 1968). The following new species of the genus *Bolbostetha* Fairmaire, 1896 are described: *Bolbostetha borchmanni* sp. n., *B. cameronensis* sp. n., *B. fairmairei* sp. n. from Malaysia, *B. jakli* sp. n., *B. klausii* sp. n. from Indonesia, *B. oliveri* sp. n., *B. pahangensis* sp. n., *B. pici* sp. n. and *B. tazi* sp. n. from Malaysia. All new species are described, illustrated and keyed. Species *Bolbostetha angustiformis* Pic, 1944 and *B. subensellata* Pic, 1936 are newly transferred to the genus *Allecula* Fabricius, 1801 as *Allecula angustiformis* (Pic, 1944) comb. n. and *Allecula subensellata* (Pic, 1936) comb. n. *Allecula maxima* Pic, 1910 was mistakenly listed as *Bolbostetha* by Borchmann (1925) and this information was taken over by Novák & Pettersson (2008). The species *Alleculodes baumi* Mařan, 1940, *Alleculodes uniseriatus* Mařan, 1940 and *Alleculodes sauteri oshimana* Nakane, 1968 are newly and formally transferred to the genus *Bolbostetha* Fairmaire, 1896 as *Bolbostetha baumi* (Mařan, 1940) comb. n., *Bolbostetha uniseriatus* (Mařan, 1940) comb. n. and *Bolbostetha sauteri oshimana* (Nakane, 1968) comb. n. from synonym genus *Alleculodes* Borchmann, 1925. Species of the genus *Bolbostetha* Fairmaire, 1896 are divided into three groups - *quadricollis* group (with shiny elytra), - *opaca* group (with elytra matt) and - *varus* group (with ultimate abdominal sternite of male with excision). Description of males of the species *Bolbostetha genualis* (Borchmann, 1925) and *Bolbostetha glos* (Borchmann, 1925) and redescriptions of the species *Allecula angustiformis* (Pic, 1944) comb. n., *A. subensellata* (Pic, 1936) comb. n., *Bolbostetha baluana* Pic, 1936, *B. longicornis* Pic, 1915, *B. major* Pic, 1936, *B. malangana* Pic, 1936, *B. quadricollis* Fairmaire, 1896 and *B. soleata* Fairmaire, 1896 are added. New catalogue with new distributional data (*B. analis* new to Indonesia, *B. glos* and *B. varus* new to Malaysia) of the species of the genus *Bolbostetha* Fairmaire, 1896 is added.

### INTRODUCTION

In 1896, Fairmaire has described a new genus *Bolbostetha*. This genus is closely related to the genus *Allecula*, it differs mainly by having antennomere 3 distinctly shorter than antennomere 4, by anterior tarsomeres 1-4 or 2-4 strongly broadened and lobed, by anterior tibia of males often with teeth, angles, excisions and depressions. Borchmann (1910) in Coleopterorum Catalogus listed only 2 species of this genus. Till the present time 24 species of this tenebrionid genus have been described (Borchmann 1925, 1932, 1942, Fairmaire 1896, Mařan 1940, Nakane 1968 and Pic 1915, 1936a, b, 1944), unfortunately some of them as *Alleculodes* Borchmann, 1925 (Borchmann 1925, 1932 and Mařan 1940). Borchmann (1942) synonymized the genus *Alleculodes* Borchmann, 1925 with *Bolbostetha* Fairmaire,

1896. The species *Alleculodes baumi* Mařan, 1940, *Alleculodes uniseriatus* Mařan, 1940 and *Alleculodes sauteri oshimana* Nakane, 1968 are newly and formally transferred to the genus *Bolbostetha* Fairmaire, 1896 as *Bolbostetha baumi* (Mařan, 1940) comb. n., *Bolbostetha uniseriatus* (Mařan, 1940) comb. nov. and *Bolbostetha sauteri oshimana* (Nakane, 1968) comb. n.

All the new species - *Bolbostetha borchmanni* sp. n., *Bolbostetha cameronensis* sp. n., *Bolbostetha fairmairei* sp. n. from Malaysia, *Bolbostetha jakli* sp. n. from Indonesia, *Bolbostetha klausii* sp. n. from Indonesia - west Sumatra, *Bolbostetha oliveri* sp. n., *Bolbostetha pahangensis* sp. n., *Bolbostetha pici* sp. n. and *Bolbostetha tazi* sp. n. from Malaysia are described, keyed and illustrated.

The species *Bolbostetha angustiformis* Pic, 1944 and *B. subensellata* Pic, 1936 are newly transferred to the genus *Allecula* Fabricius, 1801 as *Allecula angustiformis* (Pic, 1944) comb. n. and *Allecula subensellata* (Pic, 1936) comb. n. *Allecula maxima* Pic, 1910 was mistakenly listed as *Bolbostetha* by Borchmann (1925) and this information was taken over by Novák & Pettersson (2008).

Description of males of the species *Bolbostetha genualis* (Borchmann, 1925) and *Bolbostetha glos* (Borchmann, 1925) and redescriptions of the species *Allecula angustiformis* (Pic, 1944) comb. n., *A. subensellata* (Pic, 1936) comb. n., *Bolbostetha baluana* Pic, 1936, *B. longicornis* Pic, 1915, *B. major* Pic, 1936, *B. malangana* Pic, 1936, *B. quadricollis* Fairmaire, 1896, *B. soleata* Fairmaire, 1896 are added (Pic's and Fairmaire's original descriptions are short and strict).

Borchmann (1925) has notified first of all that we have shiny and matt species (he likely considered the elytra) in this genus and that males of some *Bolbostetha* species have ultimate abdominal sternite with excision. Thus we can recognize *quadricollis* group species (with shiny elytra) - *Bolbostetha quadricollis* Fairmaire, 1896 and further *B. atricolor* Pic, 1944, *B. cameronensis* sp. n., *B. discrepans* (Borchmann, 1925), *B. genualis* (Borchmann, 1925), *B. glos* (Borchmann, 1925), *B. klausii* sp. n., *B. latipes* (Borchmann, 1925), *B. longicornis* Pic, 1915, *B. malaisei* Borchmann, 1942, *B. malangana* Pic, 1936, *B. martapurana* Pic, 1936, *B. neptis* (Borchmann, 1925), *B. pahangensis* sp. n., *B. pici* sp. n., *B. proavia* (Borchmann, 1925), *B. sauteri sauteri* (Borchmann, 1925), *B. sauteri oshimana* (Nakane, 1968), *B. socia* (Borchmann, 1932), *B. soleata* Fairmaire, 1896 and *B. uniseriatus* (Mařan, 1940). The second *opaca* group species (with matt elytra) here are - *Bolbostetha opaca* (Borchmann, 1925), *B. baluana* Pic, 1936, *B. baumi* (Mařan, 1940), *B. major* Pic, 1936, *B. oliveri* sp. n., *B. pendleburyi* Pic, 1936 and *B. tazi* sp. n. The third *varus* group species (ultimate abdominal sternite of males with excision) here are - *Bolbostetha varus* (Borchmann, 1925), *B. analis* (Borchmann, 1932), *B. fairmairei* sp. n. and *B. jakli* sp. n. Catalogue of the species of the genus *Bolbostetha* Fairmaire, 1896 with new distributional data of the species *B. analis* (new to Indonesia), *B. glos* and *B. varus* (both new to Malaysia) is added and majority of the species are illustrated and keyed.

## MATERIAL AND METHODS

The material was taken from the collection of David Hauck (Brno, Czech Republic) and mainly from author's collection. Type material of males of *Bolbostetha analis* (Borchmann,

1932), *B. discrepans* (Borchmann, 1925), *B. opaca* (Borchmann, 1925), *B. sauteri sauteri* (Borchmann, 1925) and *B. varus* (Borchmann, 1925) was loaned from Zoologisches Institut und Museums der Universität Hamburg, Germany; type material of males of *B. malangana* Pic, 1936, *B. quadricollis* Fairmaire, 1896, *B. soleata* Fairmaire, 1896 was loaned from Muséum National d'Histoire naturelle, Paris and type material of males of *B. baumi* (Mařan, 1940) and *B. uniseriatus* (Mařan, 1940) was loaned from National Museum, Prague, Czech Republic. Type material of females of *B. discrepans* (Borchmann, 1925), *B. genualis* (Borchmann, 1925), *B. glos* (Borchmann, 1925), *B. latipes* (Borchmann, 1925), *B. neptis* (Borchmann, 1925), *B. proavia* (Borchmann, 1925), *B. sauteri sauteri* (Borchmann, 1925) and *B. socia* (Borchmann, 1932) was loaned from Zoologisches Institut und Museums der Universität Hamburg, Germany; type material of females of *B. baluana* Pic, 1936, *B. longicornis* Pic, 1915, *B. major* Pic, 1936 was loaned from Muséum National d'Histoire naturelle, Paris and type material of female of *B. baumi* (Mařan, 1940) was loaned from the National Museum, Prague, Czech Republic.

Types of *Allecula angustiformis* (Pic, 1944) comb. n. (female), *Allecula maxima* Pic, 1910 (female) and *Allecula subensellata* (Pic, 1936) comb. n. (female) all from Muséum National d'Histoire naturelle, Paris, were loaned and studied.

I have no possibility to study types of *B. atricolor* Pic, 1944, *B. malaisei* Borchmann, 1942, *B. martapurana* Pic, 1936, *B. pendleburyi* Pic, 1936 and *B. sauteri oshimana* (Nakane, 1968). Separate labels of types are divided in the text by a double slash (//), different rows of labels by a slash (/).

Specimens of the presently described species are provided with one red label printed: „*Bolbostetha borchmanni* sp. n. [or *Bolbostetha cameronensis* sp. n. or *Bolbostetha fairmairei* sp. n. or *Bolbostetha jakli* sp. n. or *Bolbostetha klausii* sp. n. or *Bolbostetha oliveri* sp. n. or *Bolbostetha pahangensis* sp. n. or *Bolbostetha pici* sp. n. or *Bolbostetha tazi* sp. n. respectively] HOLOTYPE [or PARATYPE respectively] V. Novák det. 2007“. Holotypes are deposited in author's collection, paratypes are deposited in author's collection and in collection of David Hauck (Brno, Czech Republic).

The following abbreviations are used in the paper:

DHBC collection of David Hauck, Brno, Czech Republic;

MNHN collection of Muséum National d'Histoire naturelle, Paris, France;

NMPC collection of National Museum, Prague, Czech Republic;

VNPC collection of Vladimír Novák, Prague, Czech Republic;

ZMUH collection of Zoologisches Institut und Museums der Universität Hamburg, Germany.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with soft imaging system Analysis. Measurements of body parts and corresponding abbreviations used in the text are as follows:

AL antennae length

BL maximum body length

EL maximum elytral length

EW	maximum elytral width
EL/W	ratio maximum length of elytron/maximum width of elytron
HL	maximum length of head (visible part)
HW	maximum width of head
OI	ocular index dorsaly (Campbell & Marshall 1964) is calculated by measuring the minimum distance between the eyes and dividing this value by the maximum dorsal width across the eyes. The quotient resulting from this dividing is then converted into an index by multiplying to 100 ?.
PI	pronotal index (Campbell 1965) expressed the ratio of the length of the pronotum along the midline to the width at the basal angles. This ratio is multiplied by 100 for convenience in handling.
PL	maximum pronotal length
PW	maximum pronotal width
RLA	ratios of relative lengths of antennomeres 1-11 from base to apex (3=1.00)
RL/WA	ratios of length/maximum width of antennomeres 1-11 from base to apex
RLP	ratios of relative lengths of palpomeres 2-4 from base to apex (3=1.00)
RL/WP	ratios of length/maximum width of palpomeres 2-4 from base to apex
RLT	ratios of relative length of tarsomeres 1-5 respectively 1-4 from base to apex (1=1.00)
RL/WT	ratios of length/maximum width of anterior tarsomeres 1-5 from base to apex

Size of punctures of pronotum and elytron (in mm):

Very small-sized: up to 0.035 mm  
 Small-sized: from 0.038 to 0.053 mm  
 Middle-sized: from 0.053 to 0.064 mm  
 Large-sized: more than 0.068 mm

Size of interspaces between punctures of pronotum (in mm):

Very small-sized: up to 0.019 mm  
 Small-sized: from 0.019 to 0.026 mm  
 Middle-sized: from 0.026 to 0.034 mm  
 Large-sized: more than 0.034 mm

## RESULTS

### Key to the species

Note. Key without species *Bolbostetha atricolor* Pic, 1944, *B. malaisei* Borchmann, 1942, *B. martapurana* Pic, 1936, *B. pendleburyi* Pic, 1936 and *B. sauteri oshimana* (Nakane, 1968).

1 (2)	Elytra matt .....	3
2 (1)	Elytra shiny .....	15
3 (4)	Antennae bicolorous .....	5
4 (3)	Antennae unicolorous .....	9
5 (6)	Punctures of pronotum (Fig. 104) 5 times larger than interspaces between punctures. Malaysia .....	27 <i>B. tazi</i> sp. n.

6 (5)	Punctures of pronotum smaller than interspaces between punctures .....	7
7 (8)	Posterior angles of pronotum distinctly rounded, abdomen with sparse and short setation. Habitus (Fig.11). Borneo .....	3 <i>B. baluana</i> Pic, 1936
8 (7)	Posterior angles of pronotum not distinctly rounded, abdomen with dense and longer setation. Singapore. .....	4 <i>B. baumi</i> (Mařan, 1940)
9 (10)	Punctures of pronotum larger than intervals between punctures. Malaysia .....	20 <i>B. oliveri</i> sp. n.
10 (9)	Punctures of pronotum smaller or with same diameter than intervals of punctures .....	11
11 (12)	Intervals between punctures of pronotum (Fig. 61) near twice larger than diameter of punctures. Habitus (Fig. 60) Malaysia .....	15 <i>B. major</i> Pic, 1936
12 (11)	Intervals between punctures of pronotum only slightly larger or with same diameter as punctures of pronotum .....	13
13 (14)	Pronotum broader, punctuation of pronotum (Fig. 30) denser, scutellum with dense and long setation. Malaysia. ....	8 <i>B. fairmairei</i> sp. n.
14 (13)	Pronotum narrower, punctuation of pronotum sparse (Fig. 75), setation of scutellum as dense and as long as setation of elytron. Hong Kong .....	21 <i>B. opaca</i> (Borchmann, 1925)
15 (16)	Antennae bicolorous .....	17
16 (15)	Antennae unicolorous .....	39
17 (18)	Basal half of femora yellow, apical half brown. Malaysia .....	9 <i>B. genualis</i> (Borchmann, 1925)
18 (17)	Femora more or less unicolorous .....	19
19 (20)	Punctures of pronotum very small (Fig. 22). Malaysia .....	6 <i>B. cameronensis</i> sp. n.
20 (19)	Punctures of pronotum larger .....	21
21 (22)	Punctures of pronotum large (Fig. 98). Singapore .....	31 <i>B. soleata</i> Fairmaire, 1896
22 (21)	Punctures of pronotum smaller .....	23
23 (24)	Punctures of pronotum small .....	25
24 (23)	Punctures of pronotum middle .....	35
25 (26)	Punctures of elytral stries large (Fig. 46). Indonesia .....	11 <i>B. jakli</i> sp. n.
26 (25)	Punctures of elytral stries smaller .....	27
27 (28)	Intervals between punctures of pronotum very narrow, three times smaller than diameter of punctures .....	29
28 (27)	Intervals between punctures of pronotum larger .....	31
29 (30)	Punctuation of elytral stries shallow and fine, elytral interspaces more flat (Fig. 63). Indonesia. ....	17 <i>B. malangana</i> Pic, 1936
30 (29)	Punctuation of elytral stries deep and coarse (Fig. 59), elytral intervals rounded. Habitus (Fig. 58). Malaysia .....	14 <i>B. longicornis</i> Pic, 1915
31 (32)	Punctures of pronotum 1.5 times larger than intervals between punctures (Fig. 4), pronotum narrower, side borders not clearly conspicuous from dorsal view. Indonesia, Singapore ..	1 <i>B. analis</i> (Borchmann, 1932)
32 (31)	Punctures of pronotum twice as larger as intervals between punctures, pronotum broader, sides border clearly conspicuous from dorsal view .....	33
33 (34)	Space between eyes narrower than length of antennomere 1, posterior tibia with distinct depression at inner side of posterior half. Malaysia .....	5 <i>B. borchmanni</i> sp. n.
34 (33)	Space between eyes of same length as antennomere 1, posterior tibia without clearly conspicuous depression at inner side of posterior half. Indonesia .....	7 <i>B. discrepans</i> (Borchmann, 1925)
35 (36)	Punctures of elytral stries middle-sized (Fig. 57). Habitus (Fig. 56) Singapore .....	13 <i>B. latipes</i> (Borchmann, 1925)
36 (35)	Punctures of elytral stries small .....	37
37 (38)	Base of pronotum against scutellum slightly rounded, middle tarsomeres 3, 4 broad and lobed. Singapore. ....	26 <i>B. quadricollis</i> Fairmaire, 1896
38 (37)	Base of pronotum against scutellum distinctly excised, middle tarsomeres 2-4 broad and lobed. Indonesia, Malaysia. ....	33 <i>B. varus</i> (Borchmann, 1925)
39 (40)	Punctures of pronotum very small .....	41
40 (39)	Punctures of pronotum larger .....	43
41 (42)	Pronotum broader, relatively shiny, with distinct oblique impressions from both sides of base between scutellum and posterior angles, body broadest near elytral half. Habitus (Fig. 67) Burma. ....	19 <i>B. neptis</i> (Borchmann, 1925)
42 (41)	Pronotum narrower, relatively matt, without distinct oblique impressions at base between scutellum and posterior angles, body broadest near elytral base. Malaysia. ....	22 <i>B. pahangensis</i> sp. n.

43 (44) Punctures of pronotum large .....	45
44 (43) Punctures of pronotum smaller .....	47
45 (46) Small species without longitudinal impression at middle of pronotum. Indonesia, Malaysia. ....	
..... 10 <i>B. glos</i> (Borchmann, 1925)	
46 (45) Large species with distinct longitudinal impression at middle of pronotum. Habitus (Fig. 87). Hong Kong. ....	
..... 25 <i>B. proavia</i> (Borchmann, 1925)	
47 (48) Punctures of elytral striae middle (Fig. 83). Malaysia .....	
..... 24 <i>B. pici</i> sp. n.	
48 (47) Punctures of elytral striae smaller .....	50
50 (51) Intervals between punctures of pronotum very narrow, four times smaller than diameter of punctures .....	
..... 52	
51 (50) Intervals between punctures of pronotum broader, twice smaller than diameter of punctures .....	54
52 (53) Smaller species, antennae dark brown. Indonesia .....	12 <i>B. klausii</i> sp. n.
53 (52) Larger species, antennae pale brown. Japan, Taiwan .....	29 <i>B. sauteri sauteri</i> (Borchmann, 1925)
54 (55) Pronotum broader with longer setation, scutellum with dense and longer setation. Habitus (Fig. 95). Hong Kong. ....	30 <i>B. socia</i> (Borchmann, 1932)
55 (56) Pronotum narrower without longer setation, scutellum without longer setation. Malaysia. ....	
..... 32 <i>B. uniseriatus</i> (Mafan, 1940)	

#### Key to the species - males

Note. Key without males of the following species: *Bolbostetha atricolor* Pic, 1944, *B. baluana* Pic, 1936, *B. latipes* (Borchmann, 1925), *B. longicornis* Pic, 1915, *B. major* Pic, 1936, *B. malaisei* Borchmann, 1942, *B. martapurana* Pic, 1936, *B. neptis* (Borchmann, 1925), *B. pendleburyi* Pic, 1936, *B. proavia* (Borchmann, 1925), *B. sauteri oshimana* (Nakane, 1968) and *B. socia* (Borchmann, 1932).

1 (2) Elytra matt .....	3
2 (1) Elytra shiny .....	11
3 (4) Ultimate abdominal sternite (Fig. 32) anteriorly straight, with fine and distinct excision at sides. Habitus (Fig. 29); anterior tibia (Fig. 31); aedeagus (Figs 33-34). Malaysia .....	8 <i>B. fairmairei</i> sp. n.
4 (3) Ultimate abdominal sternite anteriorly rounded, without excision .....	5
5 (6) Pronotum broad, slightly narrower than elytra .....	7
6 (5) Pronotum narrow, distinctly narrower than elytra .....	9
7 (8) Sides of pronotum at posterior half parallel, pronotum and scutellum with longer and dense setation..... Habitus (Fig. 13); anterior tibia (Fig. 14). Singapore .....	4 <i>B. baumi</i> (Mafan, 1940)
8 (7) Sides of pronotum regularly narrowing at posterior half, pronotum and scutellum with shorter and sparse setation. Habitus (Fig. 103); anterior tibia (Fig. 105); aedeagus (Figs 106-107). Malaysia .....	
..... 27 <i>B. tazi</i> sp. n.	
9 (10) All tibiae with distinct tooth. Habitus (Fig. 74); anterior tibia (Fig. 76). Hong Kong .....	
..... 21 <i>B. opaca</i> (Borchmann, 1925)	
10 (9) Only anterior tibia with tooth. Habitus (Fig. 69); anterior tibia (Fig. 71); aedeagus (Figs 72-73). Malaysia .....	
..... 20 <i>B. oliveri</i> sp. n.	
11 (12) Ultimate abdominal sternite with excision .....	13
12 (11) Ultimate abdominal sternite without excision .....	19
13 (14) Anterior border of ultimate abdominal sternite (Fig. 114) very narrow, excised at middle, sides at anterior half broadly excised, narrowing to apex. Habitus (Fig. 111); anterior tibia (Fig. 113); aedeagus (Figs 115-116). Indonesia, Malaysia .....	33 <i>B. varus</i> (Borchmann, 1925)
14 (13) Anterior border of ultimate abdominal sternite broadly rounded, excised at middle, excised sides of anterior half straight, parallel .....	15
15 (16) Smaller, abdomen and antennae lighter than elytra. Habitus (Fig. 1); anterior tibia (Fig. 2); ultimate abdominal sternite (Fig. 3); aedeagus (Figs 5-6). Indonesia, Singapore .....	1 <i>B. analis</i> (Borchmann, 1932)



- 17 (18) Larger, abdomen and antennae darker than elytra. Habitus (Fig. 45); anterior tibia (Fig. 47); ultimate abdominal sternite (Fig. 48); aedeagus (Figs 49-50). Indonesia ..... 11 *B. jakli* sp. n.
- 19 (20) All femora distinctly bicolorous, anterior part darker. Habitus (Fig. 35); anterior tibia (Fig. 37); aedeagus (Figs 38, 39). Malaysia ..... 9 *B. genualis* (Borchmann, 1925)
- 20 (19) All femora almost unicolorous ..... 21
- 21 (22) Anterior half of ultimate abdominal sternite without impression ..... 23
- 22 (21) Anterior half of ultimate abdominal sternite with impression at middle ..... 33
- 23 (24) Anterior tibia (Fig. 53) without distinct angle or tooth. Habitus (Fig. 51); aedeagus (Figs 54-55) Indonesia ..... 12 *B. klausii* sp. n.
- 24 (23) Anterior tibia with tooth or angles ..... 25
- 25 (26) Anterior tibia (Fig. 110) with sharp tooth. Habitus (Fig. 108). Malaysia ..... 32 *B. uniseriatus* (Mařan, 1940)
- 26 (25) Anterior tibia with obtuse-angled tooth or angle ..... 27
- 27 (28) Elytral interspaces with relatively dense punctuation ..... 29
- 28 (27) Elytral interspaces with very sparse punctures ..... 31
- 29 (30) Punctures of pronotum large-sized, punctures of elytral stries middle-sized (Fig. 41). Habitus (Fig. 40); anterior tibia (Fig. 42); aedeagus (Figs 43, 44). Indonesia, Malaysia ..... 10 *B. glos* (Borchmann, 1925)
- 30 (29) Punctures of pronotum middle-sized, punctures of elytral stries small-sized (Fig. 93). Habitus (Fig. 92); anterior tibia (Fig. 94). Japan, Taiwan ..... 29 *B. sauteri sauteri* (Borchmann, 1925)
- 31 (32) Punctures of pronotum small-sized (Fig. 63), antennomeres 1 and 2 same colour as basal half of further antennomeres. Habitus (Fig. 62); anterior tibia (Fig. 64). Indonesia ..... 17 *B. malangana* Pic, 1936
- 32 (31) Punctures of pronotum large-sized (Fig. 98), antennomeres 1 and 2 pale brown. Habitus (Fig. 97); anterior tibia (Fig. 99). Singapore ..... 31 *B. soleata* Fairmaire, 1896
- 33 (34) Space between eyes same length as length of antennomere 1 ..... 35
- 34 (33) Space between eyes distinctly shorter than length of antennomere 1 ..... 37
- 35 (36) Anterior tibia (Fig. 28) with distinct obtuse-angled tooth. Habitus (Fig. 26); Indonesia ..... 7 *B. discrepans* (Borchmann, 1925)
- 36 (35) Anterior tibia (Fig. 91) only with obtuse angle. Habitus (Fig. 89). Singapore ..... 26 *B. quadricollis* Fairmaire, 1896
- 37 (38) Anterior tibia with distinct obtuse-angled tooth ..... 39
- 38 (37) Anterior tibia only with obtuse angle ..... 41
- 39 (40) Pronotum shiny, interspaces between punctures of pronotum narrower (Fig. 83). Habitus (Fig. 82); anterior tibia (Fig. 84) with distinct sharper tooth; aedeagus (Figs 85-86). Malaysia ..... 24 *B. pici* sp. n.
- 40 (39) Pronotum with microgranulation, more matt, interspaces between punctures of pronotum broader (Fig. 78). Habitus (Fig. 77); anterior tibia (Fig. 79); aedeagus (Figs 80-81). Malaysia ..... 22 *B. pahangensis* sp. n.
- 41 (42) Pronotum shiny, inner side of anterior femora (Fig. 18) with row of teeth. Habitus (Fig. 16); anterior tibia (Fig. 18); aedeagus (Figs 19-20). Malaysia ..... 5 *B. borchmanni* sp. n.
- 42 (41) Pronotum with microgranulation, matt, inner side of anterior femora (Fig. 23) without row of teeth. Habitus (Fig. 21); anterior tibia (Fig. 23); aedeagus (Figs 24-25). Malaysia ..... 6 *B. cameronensis* sp. n.

## CATALOGUE

genus *Bolbostetha* Fairmaire, 1896: 117 type species *Bolbostetha soleata* Fairmaire, 1896

*Alleculodes* Borchmann, 1925: 335 type species *Alleculodes discrepans* Borchmann, 1925

1 <i>analis</i> Borchmann, 1932: 346 ( <i>Alleculodes</i> )	Indonesia, Singapore
2 <i>atricolor</i> Pic, 1944: 15	Malaysia
3 <i>baluana</i> Pic, 1936a: 29	Borneo
4 <i>baumi</i> Mařan, 1940: 156 ( <i>Alleculodes</i> )	Singapore
5 <i>borchmanni</i> sp. n.	Malaysia
6 <i>cameronensis</i> sp. n.	Malaysia
7 <i>discrepans</i> Borchmann, 1925: 338 ( <i>Alleculodes</i> )	Indonesia

8	<i>fairmairei</i> sp. n.	Malaysia
9	<i>genualis</i> Borchmann, 1925: 340 ( <i>Alleculodes</i> )	Malaysia
10	<i>glos</i> Borchmann, 1925: 341 ( <i>Alleculodes</i> )	Indonesia, Malaysia
11	<i>jakli</i> sp. n.	Indonesia
12	<i>klausi</i> sp. n.	Indonesia
13	<i>latipes</i> Borchmann, 1925: 340 ( <i>Alleculodes</i> )	Singapore
14	<i>longicornis</i> Pic, 1915: 18	Malaysia
15	<i>major</i> Pic, 1936a: 30	Malaysia
16	<i>malaisei</i> Borchmann, 1942: 24	Myanmar
17	<i>malangana</i> Pic, 1936a: 30	Indonesia
18	<i>martaipurana</i> Pic, 1936a: 29	Indonesia
19	<i>neptis</i> Borchmann, 1925: 337 ( <i>Alleculodes</i> )	Myanmar
20	<i>oliveri</i> sp. n.	Malaysia
21	<i>opaca</i> Borchmann, 1925: 342 ( <i>Alleculodes</i> )	China: Hong Kong
22	<i>pahangensis</i> sp. n.	Malaysia
23	<i>pendleburyi</i> Pic, 1936b: 172	Malaysia
24	<i>pici</i> sp. n.	Malaysia
25	<i>proavia</i> Borchmann, 1925: 343 ( <i>Alleculodes</i> )	China: Hong Kong
26	<i>quadricollis</i> Fairmaire, 1896: 117	Singapore
27	<i>tazi</i> sp. n.	Malaysia
28	<i>sauteri oshimana</i> Nakane, 1968: 85 ( <i>Alleculodes</i> )	Japan
29	<i>sauteri sauteri</i> Borchmann, 1925: 341 ( <i>Alleculodes</i> )	Japan, China: Taiwan
30	<i>socia</i> Borchmann, 1932: 345 ( <i>Alleculodes</i> )	Singapore
31	<i>soleata</i> Fairmaire, 1896: 117	Singapore
32	<i>uniseriatus</i> Mařan, 1940: 155 ( <i>Alleculodes</i> )	Malaysia
33	<i>varus</i> Borchmann, 1925: 337 ( <i>Alleculodes</i> )	Indonesia, Malaysia

## TAXONOMY

### ***Bolbostetha* Fairmaire, 1896**

*Bolbostetha* Fairmaire, 1896: 117 - type species: *Bolbostetha soleata* Fairmaire, 1896  
*Alleculodes* Borchmann, 1925: 335 - type species: *Alleculodes discrepans* Borchmann, 1925

**Diagnosis.** Body narrow, elongate, coloration pale brown to dark blackish brown, setation light. Upper part of body shiny or matt.

Male. Head widest across eyes, narrower than pronotum. Eyes large, transverse, deeply excised, vertex between eyes narrow, OI lower. Mandibles large and strong, sides of upper part with distinct sharp margin, apex straight. Ultimate maxillary palpomere broadly triangular. Penultimate maxillary palpomere shortest, penultimate and second maxillary palpomere distinctly broadest and with a few large setae at apex, both slightly, roundedly excised at inner side. Antennae long, narrow, exceeding half of body length, antennomere 2 shortest, antennomere 3 distinctly shorter than antennomere 4-11, antennomeres 3-11 distinctly broadest at apex. Pronotum narrow, distinctly narrower than base of elytra, widest

at base, sides at posterior half often straight, parallel, PI slightly higher. Anterior angles not clearly conspicuous. Elytra narrow, elongate, parallel-sided or broadest at base and regularly narrowing. Elytral epipleura broadest near base, regularly narrowing, running parallel at anterior half. Ultimate abdominal sternite sometimes with excision or impression at anterior half. Femora stronger, anterior femora sometimes with small angle near apex. Anterior tibia with obtuse-angles, teeth, excisions or depressions at inner part, apex of anterior tibia often slightly curved. Posterior tibia with flat impression at inner side of posterior half. Anterior tarsomeres 1-4 or 2-4, middle tarsomeres 3-4 and posterior tarsomere 3 broader and lobed. All tarsal claws with teeth. Basal piece of aedeagus large, strong and broad, rounded dorsally, apical piece short, longely triangular, flat.

**Female.** Eyes little smaller, vertex between eyes slightly broader, OI higher. Pronotum slightly broader, PI slightly lower. Anterior tibia without any teeth, angles, excisions or depressions. Tarsal claws with lower number of teeth.

**Remarks.** All the characters used in this paper are more or less variable and it is necessary to combine several of them for exact identification. They are as follows: shiny or matt upper surface of body, size of punctures of pronotum, size of punctures of elytron, diameter between punctures of pronotum, colour of antennae, number of broadened and lobed tarsomeres, OI and PI, number of teeth of tarsal claws. Other characters used to distinguish of males: variability of anterior femora and tibia, shape of posterior tibia, excision and shape of excision of ultimate abdominal sternite.

#### *Bolbostetha analis* (Borchman, 1932)

(Figs 1-6)

*Alleculodes analis* Borchmann, 1932: 345.

**Type locality.** Singapore.

**Type material examined.** Holotype (♂): white label ‘Singapore’ / ‘Coll. Baker’ [printed in black] // white label ‘23580’ [handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black] // white label ‘Alleculodes’ / ‘analisis n. sp.’ [handwritten]; (ZMUH).

**Other material examined.** Mentawai isls., Salappa, S SIBERUT Isl., 50-100 m, vi.2005, St. Ják lgt., (1 ♂ 1 ♀), (VNPC); Mentawai Islands, S SIBERUT ISL, 50-100 m, iii.-iv.2005, St. Ják lgt., (1 ♂), (VNPC); INDONESIA; N. SIBERUT Isl., Mentawai Isls., Bojakan, vii.2004, St. Ják lgt., (1 ♂), (VNPC).

**Remarks.** Brown, head and pronotum darker, shiny, habitus (Fig. 1), anterior tibia of male (Fig. 2), ultimate abdominal sternite of male (Fig. 3), antennae bicolorous (apex of antennomere 3-5 distinctly darker), anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. Punctuation of pronotum and elytral stries small-sized. OI 14.21; PI 93.23; L/WE (base) 2.66.

**Distribution.** Singapore, new for Indonesia.

⊕

### *Bolbostetha atricolor* Pic, 1944

*Bolbostetha atricolor* Pic, 1944: 15.

**Type locality.** Malacca.

**Original description.** Pic (1944): ‘Oblongus, parum nitidus, niger; thorace transverso, minute et sparse punctato; elytris thorace valde latioribus, sat brevibus, postice attenuatis, subconvexis. Long. 11 mill. - Voisin de *longicorne* Pic, aspect moins brillant, élytres moins longs, etc...’

**Distribution.** Malaysia.

***Bolbostetha baluana* Pic, 1936**  
(Figs 11-12)

*Bolbostetha baluana* Pic, 1936a: 29.

**Type locality.** Borneo, Kina Balu.

**Type material examined.** Holotype (♀): white label ‘Kina Balu’ [black handwritten] // white label ‘baluana’ / ‘n sp’ [black handwritten] // white label ‘Bolbostetha’ / ‘baluana’ / ‘n sp’ [black handwritten]; (MNHN).

**Redescription.** Habitus (Fig. 11), dark blackish brown, matt species, BL 15.77 mm. Broadest at elytral base, BL/EW 2.55. Posterior half of head dark brown with light setation, dense, shallow punctuation and microgranulation, interspaces between punctures narrow, slightly shiny. Clypeus brown with microgranulation, slightly shiny. OI 22.35. Antennae bicolourous, antennomeres 3-7 with distinctly darker apex. Antennae with light setation and microgranulation. Maxillary palpus dark brown with short light setation and microgranulation, slightly shiny. Palpomere 2 and penultimate palpomere broadest and with a few long setae at apex. Pronotum dark blackish brown, matt, with short light setation, microgranulation and small-sized shallow punctures; intervals broader. Base distinctly bisinuated and very finely excised against scutellum. Posterior angles roundedly right-angled, borders complete at their entire length, only at middle of apex not clearly conspicuous. Anterior angles not conspicuous. PI 81.59. Ventral side of body brown with short light setation, shallow punctures and microgranulation. Elytra dark brown with pale brown sparser setation, with distinct rows of small punctures in elytral striae; intervals between punctures in elytral striae narrower than diameter of punctures. Elytral intervals slightly rounded with very small and sparse punctures, with microgranulation, matt. Elytral epipleura well developed, with pale brown setation, regularly narrowing to first abdominal sternite. Legs dark brown with short and dense light setation. Anterior femora not conspicuously broader, anterior tibia without any teeth, depressions, excisions. Anterior tarsomeres 2-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 with lobes and broader. Both anterior tarsal claws with 12 visible teeth.

**Distribution.** Borneo, Kina Balu.

***Bolbostetha baumi* (Mařan, 1940) comb. n.**  
(Figs 13-15)

*Alleculodes baumi* Mařan, 1940: 156.

**Type locality.** Singapore.

**Type material examined.** 2 syntypes: ( $\delta$ ): white label ‘Singapore’ / ‘Dr. Baum’ [black handwritten] // red label with black margins ‘TYPUS’ [printed in black] // white label ‘Alleculodes’ / ‘baumi m. n.  $\delta$ ’ [black handwritten] / ‘Dr. Mařan det.’ [printed in black]; (NMPC). ( $\varphi$ ): white label ‘Singapore’ / ‘29 Dr. Baum’ [printed in black] // red label with black margins ‘TYPUS’ [printed in black] // white label ‘Alleculodes’ / ‘baumi m. n.  $\varphi$ ’ [black handwritten] / ‘Dr. Mařan det.’ [printed in black]; (NMPC).

**Remarks.** Brown, head and pronotum darker, matt, habitus (Fig. 13), anterior tibia of male (Fig. 14), antennae bicolorous (apex of antennomere 3-10 distinctly darker), anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. Punctuation of pronotum very small-sized, punctuation of elytral striae small-sized. OI 15.43; PI 81.68; BL/WE (half) 2.34. RL/WT (protarsus): 1.10: 0.92: 0.93: 0.77: 3.19. Female: OI 22.84; PI 75.62; BL/WE (half) 2.32. RL/WT (protarsus): 0.91: 0.85: 0.70: 1.08: 3.34.

***Bolbostetha borchmanni* sp. n.**  
(Figs 16-20)

**Type locality.** West Malaysia, Pahang, Cameron Highlands, Tanah Rata.

**Type material.** Holotype ( $\delta$ ) labelled: MALAYSIA West, PAHANG, Cameron Highlands, TANAH RATA, 1200-1500 m, 3.ii.-19.ii.2005, P. Čechovský lgt., (VNPC); Paratypes: (3  $\delta\delta$  1  $\varphi$ ): same data as holotype, (VNPC); (2  $\delta\delta$ ): MALAYSIA West, PERAK, 40 km SE of IPOH, 900 m, Banjaran Titi Wangsu, RINGLET, 29.iii.-15.iv.2004, P. Čechovský lgt., (VNPC, DHBC); (1  $\delta$ ): same data but 25.iii.-3.iv.2002, P. Čechovský lgt., (DHBC); (1  $\delta$  1  $\varphi$ ): same data but 25.iv.-5.v.2001, P. Čechovský lgt., (DHBC); (1  $\varphi$ ): MALAYSIA -W, Perak, 25 km N of IPOH, 2100 m, Banjaran Titi Wangsu mts., KORBU mt., 4.-13.iii.1998, P. Čechovský leg., (DHBC); (1  $\varphi$ ): same data but 6.-12.v.2001, P. Čechovský leg., (DHBC); (1  $\varphi$ ): MALAYSIA -W, Johor, 15 km NW of Kota Tinggi, MUNTAHAK mt., 200 m, 14.-16.iv.2001, P. Čechovský leg., (DHBC).

**Description of holotype.** Habitus (Fig. 16), body narrow, elongate, from pale brown to blackish brown, shiny, with light setation, BL 17.27 mm. Widest at elytral base; BL/EW 3.68.

Head. Relatively narrow, shiny, with light setation. Posterior half dark brown, clypeus and anterior half lighter, posterior part of clypeus with dark transverse spot, middle of anterior border with excision. Borders and apex of mandibles darker. HW 2.15 mm; HW/PW 0.61. HL (visible part) 2.35 mm. OI 18.18. Surface with small-sized punctures, interspaces between punctures broader than diameter of punctures, shiny.

Antennae. Longer, AL 12.52 mm, AL/BL 0.73. Antennomeres bicolorous, pale brown; anterior half of antennomere 3 and apex of antennomeres 4-11 dark brown. Antennomeres slightly shiny with short light setation; at apex with a few longer light setae with microgranulation and shallow, relatively large punctures. RLA (1-11): 0.70: 0.26: 1.00: 1.32: 1.87: 1.63: 1.82: 1.82: 1.80: 1.70: 1.82. RL/WA (1-11): 1.91: 1.00: 3.16: 4.94: 7.00: 7.00: 5.73: 5.73: 6.75: 5.67: 8.81.

Maxillary palpus. Dark brown with longer light setation; palpomere 2 and anterior part of penultimate and ultimate palpomere light brown. Penultimate palpomere and palpomere 2 with a few longer light setae. Palpomere 2 slightly excised at inner part. Ultimate and penultimate palpomeres with microgranulation, shiny. RLP (2-4): 1.52: 1.00: 1.24. RL/WP (2-4): 3.04: 1.82: 0.86.

Pronotum. Brown, darker than elytron, shiny, with sparser light setation and distinct shallow longitudinal impression in the middle. PL 2.96 mm; PW 3.52 mm. PI 84.18. Borders complete through their entire length, only in the middle of base and apex not clearly conspicuous, base slightly excised and with oblique impressions from both sides of scutellum, against scutellum straight. Posterior angles rounded, anterior angles rounded, not clearly conspicuous. Surface rugose, with microgranulation, shiny with dense and shallow middle-sized punctures. Interspaces between punctures narrow, shiny.

Ventral side of body. Dark brown, abdomen darker. Ultimate abdominal sternite with oval impression at middle of anterior half. Abdominal sternites with microgranulation and shallow punctures, only slightly shiny, sides of sternites with dense, light setation.

Elytron. Longer, narrow, unicolorous pale brown, with longer light setation, shiny. Setation of anterior part denser. EL 11.96 mm. Broadest near base, EW 4.70 mm. EL/EW 2.56. Elytral striae with rows of middle-sized punctures, interspaces between punctures in rows very narrow, narrower than diameter of punctures. Elytral interspaces rugose, with microgranulation, shiny and with very small sporadic punctures.

Scutellum. Pentagonal, as brown as elytron itself, sides broadly darker, shiny, rugose with sparse longer light setae.

Elytral epipleura. Brown as elytron itself, shiny, broadest near base, with sparse light setation and middle-sized punctures at posterior half, narrowing to metasternum, then running parallel with denser light setation, without distinct punctuation.

Legs. Brown, femora darker blackish brown, anterior tarsi pale brown. Setation of femora and anterior tibia shorter, setation of tarsomeres and middle and posterior tibia distinctly longer. Anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. Anterior femora with distinct angle near apex, anterior tibia (Fig. 18) with obtuse angle at posterior third, then with flat impression at inner side of anterior half. Apex of anterior tibia slightly curved. Posterior tibia distinctly arched with obtuse angle, posterior half of posterior tibia with fine flat impression. RLT: protarsus: 1.00: 0.96: 0.89: 1.07: 1.86; mesotarsus: 1.00: 0.55: 0.57: 0.75: 0.96; metatarsus: 1.00: 0.54: 0.47: 0.82. RL/WT of protarsus: 1.18: 1.03: 0.84: 1.01: 4.17.

Both anterior tarsal claws with 41 teeth.

Aedeagus (Figs 19, 20). Pale brown, apical piece slightly darker, shiny. Basal piece rounded laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, longitudinally triangular dorsally, laterally flat, regularly narrowing from base to apex,

anterior part slightly beak crooked. Ratio of length of apical piece to length of basal piece 1: 3.15.

**Female.** Both anterior tarsal claws with 14 teeth. RLA (1-11): 0.51: 0.25: 1.00: 1.40: 1.43: 1.49: 1.66: 1.70: 1.72: 1.59: 1.68. RL/WA (1-11): 1.42: 1.18: 3.79: 5.69: 6.33: 6.07: 5.50: 7.50: 9.10: 7.63: 9.88. RLT: protarsus: 1.00: 0.87: 0.90: 1.31: 2.04; mesotarsus: 1.00: 0.64: 0.61: 0.73: 1.07; metatarsus: 1.00: 0.42: 0.50: 0.78. RL/WT of protarsus: 1.15: 0.66: 0.56: 0.90: 3.83.

**Variability.** Measurements: mean (minimum - maximum). Males (n=8) BL 15.42 mm (13.66-17.27 mm); HL 2.00 mm (1.67-2.38 mm); HW 1.91 mm (1.64-2.15 mm); OI 17.61 (14.03-21.61), PL 2.61 mm (2.25-2.96 mm); PW 3.10 mm (2.62-3.52 mm); PI 84.34 (79.74-88.64); EL 10.78 mm (9.20-11.96 mm); EW 4.19 mm (3.49-7.70 mm). Females (n=5) BL 15.43 mm (14.16-16.51 mm); HL 1.89 mm (1.81-2.03 mm); HW 2.00 mm (1.84-2.17 mm); OI 22.59 (21.38-23.92), PL 2.65 mm (2.38-2.84 mm); PW 3.30 mm (2.93-3.58 mm); PI 80.29 (77.89-82.79); EL 10.82 mm (9.97-11.81 mm); EW 4.45 mm (4.09-4.82 mm).

**Differential diagnosis** (for details see the keys above). *Bolbostetha borchmanni* sp. n. belongs to *Bolbostetha quadricollis* - group, is clearly different from related species *B. discrepans* (Borchmann, 1925) mainly by having the narrowest space between eyes narrower than length of first antennomere and by posterior half of posterior tibia with distinct depression, from the species *Bolbostetha atricolor* Pic, 1944 and *B. martapurana* Pic, 1936 by having brown elytra (*B. atricolor* and *B. martapurana* with black elytra), from *B. malaisei* Borchmann, 1942 differs *B. borchmanni* sp. n. mainly by having narrowest space between eyes narrower, by having antennomeres 5-10 distinctly longer than antennomere 4 and by having anterior tarsomeres 1-4 broader and lobed.

**Name derivation.** In honour of Fritz Heinrich Christian Borchmann (1870-1943), a well-known specialist in Meloidae, Alleculinae and Lagriinae.

***Bolbostetha cameronensis* sp. n.**  
(Figs 21-25)

**Type locality.** Malaysia West, Pahang, Cameron Highlands, Tanah Rata.

**Type material.** Holotype (♂): MALAYSIA West, PAHANG, Cameron Highlands, TANAH RATA, 3.-19.ii.2005, P. Čechovský lgt., 1200-1500 m, (VNPC); Paratype (♂): MALAYSIA, KUMPUNG ULU DONG NEAR RAUB, 1.-3.03.1998, A. KUDRNA JR. LGT., (DHBC).

**Description of holotype.** Habitus (Fig. 21), body narrow, elongate, dark brown, anterior half of head, clypeus, legs, maxillary palpus and antennae lighter, elytra matt, with light setation, BL 15.10 mm. Widest near elytral half, BL/EW 3.56.

Head. Relatively narrow, posterior half dark brown, clypeus and anterior half lighter, shiny, with light setation. HW 2.03 mm; HW/PW 0.63. LH (visible part) 1.95 mm. OI 13.95. Surface with small-sized, shallow punctures, interspaces between punctures larger and shiny. Posterior half of clypeus and mandibles shiny without punctuation, anterior half distinctly excised at middle, with longer light setae and shallow, small-sized punctures.

Antennae. Longer, 10.78 mm, AL/BL 0.71. Antennomeres brown, bicolorous (first and second slightly lighter) antennomeres 1-3 slightly shiny, antennomeres 4-11 more matt, all antennomeres with short light setation, shallow punctures and microgranulation. Apex of antennomeres with a few longer light setae. RLA (1-11): 0.59: 0.32: 1.00: 1.47: 1.49: 1.64: 1.62: 1.64: 1.67: 1.56: 1.64. RL/WA (1-11): 1.46: 1.06: 3.16: 5.26: 5.33: 4.00: 4.83: 4.89: 5.63: 4.94: 5.86.

Maxillary palpus. Brown with light setation. Penultimate palpomere and palpomere 2 with a few long light setae at apex. Palpomere 2 slightly excised at inner side. Ultimate palpomere broadly triangular. Base of ultimate palpomere darker, ultimate and penultimate palpomeres with microsculpture, slightly shiny. RLP (2-4): 1.75: 1.00: 1.70. RL/WP (2-4): 3.43: 1.53: 0.89.

Pronotum. Dark blackish brown, relatively broader, matt, with relatively dense, longer, light setation. PL 2.65 mm; PW 3.23 mm. PI 81.95. Borders not complete, clearly conspicuous only at base and at anterior sides, base from both sides of scutellum and against scutellum finely excised. Posterior angles roundedly obtuse-angled, anterior angles obtuse-angled, but not clearly conspicuous. Surface rugose, matt, with small-sized punctures, interspaces between punctures broader than diameter of punctures.

Ventral side of body. Dark blackish-brown, abdominal sternites with microgranulation and small, shallow punctures. Ultimate abdominal sternite with oval depression and without punctuation at middle of anterior half.

Elytron. Long, narrow, unicolorous dark brown, slightly lighter than pronotum, with longer light setation, slightly shiny. Setation of anterior half denser. EL 10.50 mm. Broadest near half, EW 4.24 mm. EL/EW 2.47. Elytral striae with rows of smaller middle-sized punctures (larger than punctures of pronotum), interspaces between punctures in striae narrow, narrower than diameter of punctures. Elytral intervals with microgranulation, slightly rounded, shiny, with sparse, small punctures near elytral striae.

Scutellum. Dark brown as elytron itself, triangular, with longer light setation and microgranulation, matt.

Elytral epipleura. Dark brown as elytron itself, with relatively sparser light setation and large-sized punctures at posterior half, broadest near base, regularly narrowing to first abdominal sternite, then running parallel with denser and longer light setation.

Legs. Brown with short light setation. All tibia with one obtuse-angled tooth near half, anterior tibia (Fig. 23) with excision between tooth and slightly rounded apex at inner part, middle tibia with excision between angle and base at inner part, posterior tibia with excisions from both sides of angle at inner side. Broadened and lobed anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3. RLT: protarsus: 1.00: 1.13: 1.32: 1.63: 2.21; mesotarsus: 1.00: 0.71: 0.70: 0.89: 1.14; metatarsus: 1.00: 0.39: 0.39: 0.76. RL/WT: protarsus: 0.98: 0.77: 0.77: 0.94: 2.97.

Both anterior tarsal claws with 36 teeth.

Aedeagus (Figs 24-25). Pale brown, shiny. Basal piece strongly rounded laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, longitudinally triangular with rounded top dorsally, with flat anterior half of apical piece laterally. Ratio of length of apical piece to length of basal piece 1: 3.98.

**Female.** Unknown.

**Variability.** Measurements: mean (minimum - maximum). Males (n=2). BL 15.33 mm (15.10-15.55 mm); HL 2.16 mm (1.95-2.36 mm); HW 2.07 mm (2.03-2.11 mm); OI 15.57 (13.95-17.18); PL 2.56 mm (2.47-2.65 mm); PW 3.31 mm (3.23-3.39 mm); PI 77.49 (73.03-81.95); EL 10.61 (10.50-10.72 mm); EW 4.35 (4.24-4.45 mm).

**Differential diagnosis.** (for details see the keys above). *Bolbostetha cameronensis* sp. n. belongs to *Bolbostetha quadricollis* - group, is clearly different from related species *B. borchmanni* sp. n. mainly by having pronotum matt and with smaller punctures, from the species *Bolbostetha atricolor* Pic, 1944 and *B. martapurana* Pic, 1936 by having brown elytra (*B. atricolor* and *B. martapurana* with black elytra), from *B. malaisei* Borchmann, 1942 differs *B. cameronensis* sp. n. mainly by having narrowest space between eyes narrower, by having antennomeres 5-10 distinctly longer than antennomere 4 and by having anterior tarsomeres 1-4 broader and lobed.

**Name derivation.** Patronymic, after the type locality Cameron Highlands (Malaysia).

***Bolbostetha discrepans* (Borchmann, 1925)**  
(Figs 26-28)

*Alleculodes discrepans* Borchmann, 1925: 338.

**Type locality.** Java.

**Type material examined.** 2 syntypes: (♂): red label ‘Type’ [black handwritten] // pale brown label with black margins ‘Fruhstorfer’ / ‘Java’ [printed in black] // white label ‘Coll. Kraatz’ [printed in black] // white label ‘discrepans’ / ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH). (♀): red label ‘Type’ [black handwritten] // ‘Wai Lima Z. Sum.’ / ‘Lampongs’ / ‘Karny & Siebers’ / ‘XI.XII.1921 No.17’ [printed in black, ‘17’ black handwritten] // white label ‘discrepans’ / ‘Bm.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH).

**Remarks.** Brown, head and pronotum darker, shiny, habitus (Fig. 13), anterior tibia of male (Fig. 14), antennae bicolorous, anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. ♂: OI 25.26; PI 80.32; L/WE (base) 2.56. ♀: OI 28.17; PI 85.60; L/WE (base) 2.47.

**Distribution.** Indonesia.

***Bolbostetha fairmairei* sp. n.**  
(Figs 29-34)

**Type locality.** Malaysia. Cameron Highlands. Tanah Rata.

**Type material.** Holotype (♂): MALAYSIA W, Pahang, 30 km E of IPOH, 1500 m, Cameron

Highlands, TANAH RATA, 16.-18.iv.2000, P. Čechovský leg., (VNPC); Paratype (♀): MALAYSIA West, PAHANG, Cameron Highlands, TANAH RATA, 3.ii.-19.ii.2005, 1200-1500 m, P. Čechovský lgt., (VNPC).

**Description of holotype.** Habitus (Fig. 29), body narrow, elongate, brown, matt, with dense light setation, BL 14.81 mm. Widest near elytral base; BL/EW 3.86.

Head. Relatively narrow, dark brown, apex of clypeus slightly lighter, anterior border distinctly excised at middle, slightly shiny, with longer light and relative dense setation. HW 1.85 mm; HW/PW 0.66. HL (visible part) 2.06 mm. OI 20.43. Surface with middle-sized punctures, interspaces between punctures narrow and rugose, shiny.

Antennae. Unicolorous, longer, AL 11.67 mm, AL/BL 0.79. Antennomeres very narrow, long, with longer light setation. Antennomeres with microgranulation and dense, shallow, relatively large punctures. RLA (1-11): 0.72: 0.26: 1.00: 1.74: 1.84: 1.88: 1.90: 1.89: 1.75: 1.77: 1.57. RL/WA (1-11): 2.07: 1.31: 3.86: 6.71: 7.84: 7.99: 7.70: 6.96: 7.47: 7.52: 7.47.

Maxillary palpus. Dark brown with longer light setation. Penultimate palpomere with a few long light setae at apex. Palpomere 2 slightly excised at inner part. Ultimate and penultimate palpomeres with microsculpture, rugose. RLP (2-4): 1.02: 1.00: 1.37. RL/WP (2-4): 2.05: 1.80: 0.77.

Pronotum. Dark brown, relatively narrow and long, matt, with sparser light setation. PL 2.36 mm; PW 2.79 mm. PI 84.59. Borders fine, not clearly conspicuous through their entire length, base from both sides and against scutellum slightly excised. Posterior angles roundedly right-angled, anterior angles rounded, not clearly conspicuous. Surface with microgranulation, matt, with dense and shallow middle-sized punctures. Punctures inside and interspaces between punctures with microgranulation, matt.

Ventral side of body. Dark blackish-brown, ultimate abdominal sternite (Fig. 32) with impression at middle of anterior half, with small excision from both sides at anterior half and with anterior border straight.

Elytron. Long, narrow, universally brown, with light setation, matt. Setation of anterior part denser. EL 10.39 mm. Broadest at base, distinctly broader than pronotum; EW 3.84 mm. EL/EW 2.71. Elytral striae with rows of middle-sized punctures, interspaces between punctures in rows very narrow. Elytral interspaces with microgranulation, matt.

Scutellum. Brown as elytron itself, sides darker, with very dense longer light setation.

Elytral epipleura. Brown, as elytron itself, shiny, broadest at base, with light setation and middle-sized punctures at posterior half, narrowing to first abdominal sternite, then running parallel with denser light setation, without distinct punctuation.

Legs. Brown with dense, light setation. Setation of femora shorter, setation of tarsomeres and tibia distinctly longer. Anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 lobed and broad. Anterior femora slightly excised at posterior half and with distinct angle near apex, anterior tibia (Fig. 31) with sharp tooth at posterior third and with flat impression at anterior half. Apex of anterior and middle tibia distinctly curved. Posterior tibia distinctly arched with obtuse angle, posterior half of posterior tibia with fine flat impression. RLT: protarsus: 1.00: 0.85: 0.85: 1.14: 1.91; mesotarsus: 1.00: 0.60: 0.61: 0.66: 1.09; metatarsus: 1.00: 0.46: 0.52: 0.74. RL/WT of protarsus: 1.59: 1.15: 0.90: 1.12: 4.00.

Both anterior tarsal claws with 33 teeth.

Aedeagus (Figs 33, 34). Pale brown, apical piece darker, shiny. Posterior half of basal piece rounded laterally, anterior half of basal piece straight, regularly narrowing dorsally. Apical piece very short, longitudinally triangular with rounded top dorsally, laterally beak crooked. Ratio of length of apical piece to length of basal piece 1: 4.57.

**Female.** Both anterior tarsal claws with 14 teeth. BL 15.34 mm; BL/EW 3.48; HW 1.98 mm; HW/PW 0.64. HL (visible part) 1.66 mm; OI 31.75; AL 11.66 mm, AL/BL 0.76; PL 2.42 mm; PW 3.08 mm; PI 78.57; EL 11.26; EW 4.41 mm. EL/EW 2.55; RLA (1-11): 0.68: 0.26: 1.00: 1.74: 1.76: 1.82: 1.85: 1.81: 1.77: 1.61: 1.57. RL/WA (1-11): 1.68: 1.29: 2.23: 7.30: 7.04: 8.50: 7.38: 10.12: 8.28: 8.44: 9.43. RLT: protarsus: 1.00: 0.90: 0.88: 1.09: 1.98; mesotarsus: 1.00: 0.56: 0.73: 0.69: 1.32; metatarsus: 1.00: 0.42: 0.42: 0.78. RL/WT of protarsus: 1.41: 1.15: 0.90: 1.09: 4.16.

**Differential diagnosis** (for details see the keys above). Male of *Bolbostetha fairmairei* sp. n. is clearly different from related matt species of *Bolbostetha opaca* group mainly by having excised ultimate abdominal sternite at sides. Both sexes are different from all species of *opaca* group by scutellum covered in dense, pale brown setation, from *Bolbostetha tazi* sp. n., *B. baluana* Pic, 1936 and *B. baumi* (Mařan, 1946) by unicolorous antennae. *B. fairmairei* sp. n. is clearly different from *B. major* Pic, 1936 and *B. pendleburyi* Pic, 1936 by length and by larger and denser punctuation of pronotum, from *B. opaca* (Borchmann, 1925) by broader pronotum. *B. fairmairei* sp. n. is clearly different from related species of *Bolbostetha varus* group mainly by matt elytra and pronotum and by shape of excision of ultimate abdominal sternite of male.

**Name derivation.** In honour of Léon Fairmaire (1820-1906), a well known French coleopterist.

***Bolbostetha genualis* (Borchmann, 1925)**  
(Figs 35-39)

*Alleculodes genualis* Borchmann, 1925: 340.

**Type locality.** Borneo, Sandakan.

**Type material examined.** Holotype (♀): red label ‘type’ [black handwritten] // white label ‘Sandakan’ / ‘Borneo’ / ‘Baker’ [printed in black] // white label ‘Alleculodes’ / ‘genualis’ / ‘m.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’; (ZMUH).

**Other material examined.** INDONESIA, S. Kalimantan, Kandangan district, 17 km NE Loksado, 3.-22.ix.1997, St. Jákl lgt., (3 ♀♀), (DHBC); INDONESIA, S. Kalimantan, Kandangan district, 17 km NE Loksado, 23.ix.-30.x.1997, St. Jákl lgt., (1 ♂), (DHBC).

**Remarks.** Shiny, punctuation of elytra and pronotum middle-sized. Antennae bicolorous, antennomeres 1 and 2 pale brown, antennomere 3 dark brown. All femora bicolorous, base broadly pale brown, apex dark brown. OI 16.45; PI 73.62; LE/WE 2.33.

**Description of male.** Habitus (Fig. 35), larger species, BL 17.25 mm, elongate, brown, shiny, with pale brown setation. Widest near elytral base, BL/EW 3.38.

Head. Basal part brown, anterior half and clypeus lighter, with longer pale brown setation, behind eyes with a few longer, dark setae. Surface of posterior half with coarse, deep and dense middle-sized punctures, interspaces narrow, shiny. Borders and apex of mandibles darker. Apex slightly excised at middle. HW 2.32 mm; HW/PW 0.61. HL (visible part) 2.41 mm. OI 10.40.

Antennae. Bicolorous, antennomere 1 pale brown, antennomeres 2-9 brown with darker apex. Setation short and light with few longer setae at apex. Antennomeres 1-3 slightly shiny, antennomeres 4-9 with microgranulation, matt. All antennomeres with smaller, shallow punctures. Longer, AL (1-9) 10.24 mm, AL (1-9)/BL 0.59. RLA (1-9): 0.65: 0.23: 1.00: 1.86: 1.92: 1.90: 2.01: 1.90: 1.90. RL/WA (1-9): 1.87: 0.92: 3.27: 5.35: 6.26: 5.81: 5.79: 6.20: 6.64.

Maxillary palpus. Dark brown, shiny, with light setation, apex of penultimate palpomere with a few longer light setae. Ultimate palpomere with shallow punctuation, punctures small and dense. RLP (2-4): 2.31: 1.00: 2.75. RL/WP (2-4): 2.64: 1.10: 0.95.

Pronotum. Dark brown, shiny, with sparse longer pale brown setation. PL 2.72 mm; PW 3.79 mm. PI 71.70. Borders complete at base and sides, anterior border not distinct at middle. Base from both sides of scutellum distinctly excised and with fine, shallow, oblique impressions; against scutellum straight. Posterior angles roundedly obtuse-angled, borders up to half of its length (from base to apex) straight, then slightly narrowing to obtuse-angled anterior angles. Surface with middle-sized, deep and dense punctures, interspaces narrow with microgranulation, shiny.

Ventral side of body. Brown, with sparse, shorter, light setation and relatively dense, smaller punctuation. Punctuation of ultimate abdominal sternite sparser. Ultimate abdominal sternite with flat depression in middle of anterior half.

Elytron. Long, narrow, unicolorous brown, with sparse, short, light setation, shiny. Setation near apex denser. EL 12.12 mm. Broadest near base, EW 5.11 mm. EL/EW 2.37. Elytral striae with rows of middle-sized punctures. Elytral interspaces with microgranulation, shiny with small and sparse punctures near elytral striae.

Scutellum. Five-angled, brown as elytron itself, matt, with microgranulation and longer light setae.

Elytral epipleura. Brown as elytron itself, broadest near base, with sparse, light setation and middle-sized punctures at posterior half, regularly narrowing to first abdominal sternite, then leads parallel to fifth abdominal sternite. Anterior half with denser setation.

Legs. Bicolorous, brown, femora with broad yellow ring near middle and relatively dense pale brown setation. Anterior tarsomeres 2-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 lobed and broader. Anterior tibia with one obtuse-angled tooth at inner side of posterior third; and with flat depression between tooth and apex at inner part of tibia. RLT: protarsus: 1.00: 0.90: 0.93: 1.06: 1.65; mesotarsus: 1.00: 0.58: 0.73: 0.87: 1.22; metatarsus: 1.00: 0.46: 0.43: 0.79. RL/WT: protarsus: 1.32: 1.12: 1.00: 1.14: 3.95.

Both anterior tarsal claws with 34 visible teeth.

Aedeagus (Figs 38, 39). Pale brown, apical piece darker, shiny. Basal piece rounded laterally, regularly narrowing dorsally. Apical piece very short, longitudinally triangular with

rounded top dorsally, laterally very slightly rounded. Ratio of length of apical piece to length of basal piece 1: 3.71.

**Distribution.** Indonesia: Borneo, S. Kalimantan.

***Bolbostetha glos* (Borchmann, 1925)**

(Figs 40-44)

*Alleculodes glos* Borchmann, 1925: 341.

**Type locality.** Borneo.

**Type material examined.** Holotype (♀): red label ‘type’ [black handwritten] // white label ‘Borneo’ [black handwritten] // white label ‘glos’ / ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’; (ZMUH).

**Other material examined.** W MALAYSIA - Pahang, Banjaran Benom Mts., 20 km S of Kampong Ulu Dong, 17.-23.iv.1997, 1500-1900 m, P. Čechovský leg., (1 ♂), (VNPC); MALAYSIA West, PERAK, 40 km SE of IPOH, 900 m, Banjaran Titi Wangsu, RINGLET, 29.iii.-15.iv.2004, P. Čechovský lgt., (1 ♀), (VNPC); SOUTH SUMATRA, Kotaagung, Lamuran Maudi Valley, 28.ii.2000, P. Moric lgt., (1 ♀), (VNPC); MALAYSIA - Perak, Cameron Highland, Tanah Rata, 13.-16.iii.1997, Oliver Dulík lgt., (1 ♀), (VNPC).

**Remarks.** Holotype (♀): OI 24.74; PI 84.13; L/WE (half) 2.25.

**Description of male.** Habitus (Fig. 40), relatively short, BL 11.74 mm, elongate, brown, shiny, with light setation. Widest near elytral base, BL/EW 3.32.

Head. Posterior half dark brown, anterior half and clypeus lighter, with longer light setation, behind eyes with few longer, dark setae. Surface of posterior half with coarse, deep and dense middle-sized punctures, interspaces narrow, shiny. Borders and apex of mandibles darker. Clypeus slightly excised at middle with distinct shallow punctures only near sides. HW 1.64 mm; HW/PW 0.66. HL (visible part) 1.64 mm. OI 25.40.

Antennae. Unicolorous pale brown, with longer and dense light setation. Longer, AL 8.09 mm, AL/BL 0.69. Antennomeres 1-3 distinctly shiny, antennomeres 4-11 more matt. Antennomeres 3-11 rugose with microgranulation and dense shallow light punctures. RLA (1-11): 0.98: 0.33: 1.00: 1.69: 1.84: 2.08: 2.02: 1.94: 1.96: 2.06: 2.06. RL/WA (1-11): 2.27: 1.06: 2.32: 4.30: 3.92: 4.24: 6.05: 5.21: 5.56: 6.99: 6.99.

Maxillary palpus. Unicolorous light brown, shiny, same colour as clypeus, with light setation, apex of penultimate palpomere with a few longer light setae. Ultimate palpomere with punctuation, punctures small and dense. RLP (2-4): 2.34: 1.00: 3.34. RL/WP (2-4): 2.67: 1.14: 0.85.

Pronotum. Dark brown, relatively narrow, matt, with sparse shorter light setation near middle of base. Sides near borders with sparse darker setae. PL 2.19 mm; PW 2.50 mm. PI 87.50. Borders complete at base and sides, anterior border distinct only near angles. Base

from both sides and against scutellum distinctly excised and with fine, shallow, oblique impressions. Posterior angles roundedly obtuse-angled, borders up to half of their length (from base to apex) straight and parallel, then slightly narrowed to obtuse-angled anterior angles. Surface with large-sized, deep and dense punctures, interspaces very narrow and shiny; inside of punctures matt.

Ventral side of body. Brown, with sparse, shorter, light setation and relatively dense, smaller punctuation, setation at sides denser. Punctuation of ultimate abdominal sternite sparse. Ultimate abdominal sternite without excision and depression.

Elytron. Long, narrow, universally dark brown, with longer light setation, shiny. EL 7.91 mm. Broadest near half, EW 3.54 mm. EL/EW 2.23. Elytral striae with rows of large-sized punctures, interspaces between punctures in rows narrower than diameter of punctures. Elytral interspaces shiny with middle-sized, not dense punctures.

Scutellum. Dark brown as elytron itself, matt, with microgranulation and longer light setae.

Elytral epipleura. Dark brown as elytron itself, broadest near base, with light setation and sparser large-sized punctures, regularly narrowing to first abdominal sternite, then leads parallel to fifth abdominal sternite.

Legs. Universally light brown, with relatively dense light setation, setation of anterior tibia distinctly longer. Anterior tarsomeres 2-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 lobed and broader. Anterior tibia (Fig. 42) with one obtuse-angled tooth at inner part of posterior third and second obtuse-angled tooth at two thirds of length of tibia from base to apex; at this place anterior tibia broadest. Space between teeth at inner part of tibia with distinct flat impression. RLT: protarsus: 1.00: 0.79: 0.88: 1.07: 2.22; mesotarsus: 1.00: 0.63: 0.79: 0.82: 1.48; metatarsus: 1.00: 0.39: 1.35: 0.72. RL/WT: protarsus: 1.45: 1.03: 1.00: 0.98: 4.23.

Both anterior tarsal claws with 20 visible teeth.

Aedeagus (Figs 43, 44). Pale brown, apical piece darker, shiny. Posterior third of basal piece rounded laterally, anterior part of basal piece almost straight, regularly narrowing dorsally. Apical piece short, longitudinally triangular with rounded top dorsally, laterally beak crooked. Ratio of length of apical piece to length of basal piece 1: 2.95

**Distribution.** Indonesia, new for Malaysia.

***Bolbostetha jakli* sp. n.**  
(Figs 45-50)

**Type locality.** Indonesia, West Sumatra, Harau valley.

**Type material.** Holotype (♂): INDONESIA; West Sumatra; HARAU VALLEY, cca 20 km N of Payakumbuh, vi.2006, 500-800 m; St. Jákl lgt., (VNPC).

**Description of holotype.** Habitus (Fig. 45), large species, narrow, elongate, from pale brown to dark blackish brown, elytra shiny, with light setation, BL 19.96 mm. Widest at elytral base, BL/EW 3.77.

Head. Dark brown, mandibles lighter, slightly shiny, with longer light setation. HW 2.43 mm; HW/PW 0.59. HL (visible part) 2.35 mm. OI 18.18. Surface with dense, smaller

middle-sized punctures, punctures coarse, interspaces between punctures narrow and rugose. Apex of clypeus with excision at middle.

Antennae. Long, bicolorous, AL 16.37 mm, AL/BL 0.82. Antennomeres 1-3 slightly shiny, 4-11 more matt. Antennomeres 6-11 bicolorous, pale brown with dark brown apex, antennomeres 1-5 unicolorous dark brown. Antennomeres very narrow with microgranulation and dense, light setation. RLA (1-11): 0.72: 0.25: 1.00: 1.48: 1.52: 1.75: 1.79: 1.76: 1.81: 1.64: 1.79. RL/WA(1-11): 1.92: 0.95: 3.35: 6.19: 4.85: 5.85: 5.71: 5.62: 6.05: 7.33: 9.22.

Maxillary palpus. Palpomeres 2-4 dark brown, at apex lighter, with light setation. Palpomeres 2 and 3 with longer light setae at apex and slightly roundedly excised at inner part. Palpomeres 2-4 with microsculpture, rugose, matt. RLP (2-4): 1.39: 1.00: 1.61. RL/WP (2-4): 2.52: 1.74: 0.93.

Pronotum. Dark brown, darker than elytron, shiny, with sparse light setation, setation near sides darker and denser. PL 3.62 mm; PW 4.14 mm. PI 87.45. Borders complete through their entire length, base from both sides of scutellum distinctly excised and with oblique impressions at this place. Disk with longitudinal impression through middle, base against scutellum slightly rounded. Posterior angles roundedly obtuse-angled, side borders straight to half, then narrowing anteriorly. Surface with microgranulation, shiny with middle-sized punctures. Interspaces between punctures narrow with microgranulation.

Ventral side of body. Dark brown with short light setation. Abdominal sternites slightly shiny with microgranulation and small, dense punctures, setation near sides longer and denser. Ultimate abdominal sternite (Fig. 48) from both sides of anterior half roundedly excised, anterior border rounded with small excision in middle.

Elytron. Long, narrow, unicolorous brown, lighter than pronotum, with sparse light setation, shiny. EL 13.99 mm. Broadest at base, distinctly broader than pronotum; EW 5.30 mm. EL/EW 2.64. Elytral striae with rows of middle-sized punctures, interspaces between punctures in rows narrow as diameter of punctures. Elytral interspaces with microgranulation, shiny, with sparse small punctures near elytral striae.

Scutellum. Brown as elytron itself, slightly shiny, with microgranulation and dense longer light setation. Sides excised at posterior half, then rounded anteriorly.

Elytral epipleura. Brown as elytron itself, broadest near base, shiny, with sparse, shorter light setae and middle-sized punctures at posterior half. Epipleura regularly narrowing to first abdominal sternite, then running parallel with denser light setation.

Legs. Brown, ventral part of tarsi pale brown with short, light and dense setation. Anterior tarsi 1-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 broader and lobed. Anterior femora broader and rounded from outer side, with obtuse angle near apex, with excision and row of teeth at inner border. Anterior tibia (Fig. 47) with obtuse-angle teeth, one before half and second one near apex, with rounded excision and depression at inner side. Posterior tibia distinctly arched, posterior half of posterior tibia with fine flat impression. RLT: protarsus: 1.00: 0.89: 0.85: 0.95: 1.51; mesotarsus: 1.00: 0.66: 0.84: 1.00: 1.30; metatarsus: 1.00: 0.45: 0.53: 0.73. RL/WT: protarsus: 1.02: 0.81: 0.73: 0.79: 3.29.

Both anterior tarsal claws with 40 teeth.

Aedeagus (Figs 49, 50). Pale brown, apical piece darker, shiny. Basal piece rounded laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short,

longitudinally triangular with rounded top dorsally, laterally regularly narrowing from base to apex. Ratio of length of apical piece to length of basal piece 1: 3.28.

**Female.** Unknown.

**Differential diagnosis.** (for details see the keys above). *Bolbostetha jakli* sp. n. belongs to *Bolbostetha varus* - group, clearly differs from related species of *varus* - group by different shape of excision of ultimate abdominal sternite of male. *B. jakli* sp. n. clearly differs from *B. fairmairei* sp. n. mainly by having elytra shiny, from closely related species *B. analis* (Borchmann, 1932) mainly by antennae and abdomen darker than elytron and by length (*B. analis* distinctly smaller and narrower).

**Name derivation.** This species is dedicated to its collector, Stanislav Jákl (Prague), a well-known specialist in Cetoniidae.

***Bolbostetha klausii* sp. n.**

(Figs 51-55)

**Type locality.** W. Sumatra, Mount Singgalang, Annai valley.

**Type material.** Holotype (♂): W. Sumatra, 450 m, ANNAI VALLEY, 15.10.05, MT Singgalang, St. Jákl lgt., (VNPC).

**Description of holotype.** Habitus (Fig. 51), smaller species, narrow, elongate, dark brown, part of mandibles, narrow ring at apex of antennomeres 1-3 pale brown, shiny, with light setation, BL 11.29 mm. Widest near elytral half, BL/EW 3.44.

Head. Posterior half dark brown, anterior half slightly lighter, shiny, with longer, light setation. HW 1.54 mm; HW/PW 0.74. HL (visible part) 1.77 mm. OI 13.28. Surface with dense, middle-sized punctures, punctures at posterior half larger, coarse. Anterior part with smaller, shallow punctures. Interspaces between punctures narrow.

Antennae. Bicolorous, dark brown, with short, light setation, apex of antennomeres 1-3 with pale brown narrow ring, AL (1-10) 7.78 mm, AL(1-10)/BL 0.69. Antennomeres 1-3 slightly shiny, 4-10 more matt. Antennomeres with microgranulation and dense, shallow, relatively large punctures. RLA (1-10): 0.61: 0.30: 1.00: 1.50: 1.44: 1.52: 1.58: 1.61: 1.65: 1.54. RL/WA (1-10): 1.87: 1.11: 3.38: 6.29: 6.00: 6.00: 6.58: 6.70: 7.79: 7.79.

Maxillary palpus. Dark brown, apex of palpomeres pale brown, with microsculpture, more matt, with light setation. Palpomeres 2 and 3 with distinctly longer light setae at apex. Penultimate palpomere and palpomere 2 slightly excised at inner part. RLP (2-4): 1.18: 1.00: 1.29. RL/WP (2-4): 1.96: 1.61: 0.83.

Pronotum. Dark brown, PL 1.99 mm; PW 2.14 mm. PI 92.65. Borders complete through their entire length, base from both sides of scutellum distinctly excised and with oblique impressions at this place. Posterior angles roundedly right-angled, side borders straight to half, then becoming rounded anteriorly. Anterior angles not conspicuous. Surface with large-sized, coarse and deep punctures. Interspaces between punctures narrow with microgranulation, shiny.

Ventral side of body. Dark brown with light setation. Ultimate abdominal sternite with microgranulation, smaller, relative dense punctures, sparse light setation, slightly shiny, with rounded apex with long, dense, light setation.

Elytron. Long, narrow, unicolorous dark brown, slightly lighter than pronotum and legs, with sparse and shorter light setation, anterior part with denser light setation, shiny. EL 7.53 mm. Broadest near elytral half, EW 3.28 mm. EL/EW 2.30. Elytral striae darker, with rows of large-sized punctures, interspaces between punctures in elytral striae very narrow. Elytral interspaces with microgranulation, shiny.

Scutellum. Dark brown as elytron itself, borders darker, shiny, with microgranulation and sparse light setation.

Elytral epipleura. Dark brown as elytron itself, broadest near base, shiny, with light setae in large punctures at posterior half. Epipleura regularly narrowing to first abdominal sternite, then running parallel.

Legs. Dark blackish-brown with light and dense setation, anterior tarsomeres lighter. Anterior tarsomeres 1-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 broader and lobed. Anterior femora broader and rounded at outer side. Anterior tibia (Fig. 53) before apex slightly rounded. Posterior tibia at posterior half with fine flat impression. RLT: protarsus: 1.00: 0.93: 1.18: 1.36: 2.13; mesotarsus: 1.00: 0.55: 0.64: 0.95: 1.30; metatarsus: 1.00: 0.40: 0.50: 0.82. RL/WT: protarsus: 1.00: 0.77: 0.87: 1.13: 3.82.

Both anterior tarsal claws with 24 teeth.

Aedeagus (Figs 54, 55). Pale brown, apical piece darker, shiny. Basal piece slightly rounded laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, longitudinally triangular with rounded top dorsally, laterally slightly rounded. Ratio of length of apical piece to length of basal piece 1: 4.08.

**Female.** Unknown.

**Differential diagnosis** (for details see the keys above). *Bolbostetha klausii* sp. n. belongs to *Bolbostetha quadricollis* - group, clearly differs from closely related species *B. sauteri* (Borchmann, 1925) mainly by darker antennae and by length (*B. klausii* sp. n. is distinctly smaller species). Male of *B. klausii* sp. n. clearly differs from male of all species by anterior tibia without any tooth or angle, from the species *Bolbostetha atricolor* Pic, 1944 and *B. martapurana* Pic, 1936 by having brown elytra (*B. atricolor* and *B. martapurana* with black elytra), from *B. malaisei* Borchmann, 1942 differs *B. klausii* sp. n. mainly by having the narrowest space between eyes narrower, by having antennomeres 5-10 distinctly longer than antennomere 4 and by having anterior tarsomeres 1-4 broader and lobed.

**Name derivation.** This species is dedicated to president of the Czech Republic - Václav Klaus.

### ***Bolbostetha latipes* (Borchmann, 1925)**

(Figs 56-57)

*Alleculodes latipes* Borchmann, 1925: 340.

**Type locality.** Singapore.

**Type material examined.** Syntype (♀): red label 'type' [black handwritten] // white label

'Singapore' / 'Coll. Baker' [printed in black] // white label 'Alleculodes' / 'latipes' / 'Bm.' [black handwritten] // 'Sammlung' / F. 'Borchmann' / 'Eing. Nr. 5, 1943'; (ZMUH).

**Remarks.** Larger species, brown, habitus (Fig. 56), male unknown. Elytra and pronotum shiny. Punctuation of elytral striae large-sized; punctuation of pronotum medium-sized. Elytral interspaces with microgranulation and sparse small punctures. Antennae bicolorous, apex of antennomeres 3-10 distinctly darker. Anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. OI 24.79; PI 84.36; L/WE (half) 2.41.

**Distribution.** Singapore.

***Bolbostetha longicornis* Pic, 1915**

(Figs 58-59)

*Bolbostetha longicornis* Pic, 1915: 18.

**Type locality.** Malaysia. Perak.

**Type material examined.** Holotype (♀): white label 'Perak' / '(Doherty)' [black handwritten] // red label 'TYPE' [printed in black] // white label 'Bolbostetha' / 'longicornis' / 'Pic' [black handwritten]; (MNHN).

**Redescription.** Habitus (Fig. 58), dark blackish-brown, slightly shiny species, BL 11.14 mm. Broadest at elytral base, at this place 2.35 times longer than wide. Posterior half of head dark blackish-brown with light setation, dense, relatively deep and coarse punctuation, interspaces between punctures narrow, shiny. Clypeus dark blackish-brown with microgranulation, dense shallow punctuation, light setation, slightly shiny. Apex of clypeus little lighter with dense setation, anterior border with distinct excision at middle. OI 28.18. Antennae brown, antennomeres 1-3 distinctly darker. Antennae with light setation and microgranulation. Maxillary palpus darker brown with short light setation and microgranulation, slightly shiny. Palpomere 2 and penultimate palpomere broadest and with a few long setae at apex. Pronotum dark blackish-brown, slightly shiny with light setation, microgranulation and middle-sized, relatively deep and coarse punctures; intervals very narrow. Base distinctly bisinuated, against scutellum straight. Posterior angles roundedly obtuse-angled, borders complete at their entire length, only against scutellum and at middle of anterior border not clearly conspicuous. Anterior angles not conspicuous. Pronotum broadest at base. PI 79.01. Ventral side of body dark brown with short light setation, mesosternum and metasternum with larger shallow punctures inside with microgranulation. Prosternum and abdominal sternites with microgranulation. Abdominal sternites 1-3 at sides with narrow reddish stripe. Elytra shiny, dark blackish-brown with pale brown sparser setation, with distinct rows of large punctures in elytral striae; intervals between punctures in elytral striae slightly narrower than diameter of punctures. Elytral intervals distinctly rounded with small and sparse, shallow punctures near elytral striae, with fine microgranulation. Elytral epipleura well-developed, with light setation, regularly narrowing to first abdominal sternite. Posterior half with large punctures, anterior half with denser light setation. Legs dark blackish-brown with short and dense light setation. Anterior tarsomeres 2-4 broader and lobed.

**Male.** Unknown.

**Distribution.** Malaysia.

***Bolbostetha major* Pic, 1936**

(Figs 60-61)

*Bolbostetha major* Pic, 1936a: 30.

**Type locality.** Malaysia, Bukit Kutu, Selangor.

**Type material examined.** Holotype (♀): white label 'Bukit Kutu' / 'Selangor' / 'April 1915' [printed in black] / '3000-3460' [black handwritten] // white label 'Bolbostetha' / 'major n sp' [black handwritten]; (MNHN).

**Redescription.** Habitus (Fig. 60), dark blackish-brown, large, matt species, BL 20.16 mm. Broadest at elytral base, BL/EW 2.52 times longer than wide. Posterior half of head dark blackish-brown with light setation, dense and relatively deeper and coarser punctuation, interspaces between punctures narrow, slightly shiny. OI 25.34. Antennae brown, with light setation and microgranulation. Pronotum dark blackish-brown, slightly shiny with light setation, microgranulation and small shallow punctures; intervals broader than diameter of punctures. Base distinctly bisinuate, against scutellum straight. Posterior angles roundedly obtuse-angled, borders complete at their entire length, only at middle of anterior border not clearly conspicuous. Anterior angles not conspicuous. PI 77.51. Ventral side of body dark blackish-brown with short light setation, abdomen and prosternum with dense, small, shallow punctures and microgranulation. Mesosternum and metasternum with large, deeper and coarse punctures. Setation of abdomen distinctly denser. Elytra dark blackish-brown with pale brown sparse setation, with distinct rows of small punctures in elytral striae; intervals between punctures in elytral striae distinctly broader than diameter of punctures. Elytral intervals distinctly rounded with very small and sparse punctures, with microgranulation, matt. Elytral epipleura well-developed, with sparser light setation and large punctures at posterior half, regularly narrowed to first abdominal sternite. Legs dark blackish-brown with short and dense light setation. Anterior tarsomeres 1-4, middle tarsomeres 3-4 and posterior tarsomere 3 lobed and broad.

**Male.** Unknown.

**Distribution.** Malaysia.

***Bolbostetha malaisei* Borchmann, 1942**

*Bolbostetha malaisei* Borchmann, 1942: 24.

**Original description.** Borchmann (1942): 'Länge: 14 mm.- Die ansehnliche neue Art hat grosse Ahnlichkeit mit *B. socia*. Sie ist etwas grösser und schanker als diese. Schwarzbraun, Bauch, Vorderkopf, Fühler und Beine viel heller, Schenkelspitze sehr kurz schwarz, Flügeldecken rotbraun, Oberseite mit halb anliegenden, gelben Härchen; mässig glanzend. Kopf mässig stark und dicht punktiert; Oberlippe stark quer herzförmig, vorn ausgerandet,

fein punktiert; Clypeus mit breiter, gelben Gelenkhaut, von der Stirn durch einen breiten Eindruck getrennt; Stirn der Länge nach schwach eingedrückt, größer punktiert; Schläfen sehr kurz; Augenabstand  $\frac{1}{2}$  Durchmesser; Hals oben wenig abgeschnürt, viel feiner punktiert als die Stirn; Fühler lang, fadenförmig, 3. Glied bedeutend kürzer als das 4., 5. und folgende Glieder kürzer als das 4., 11. etwas kürzer als das 10. Glied. Mundteile normal. Halsschild fast so lang wie breit, breiter als der Kopf, mäßig gewölbt, ziemlich dicht, mäßig stark punktiert, mit sehr seichter Mittellinie, Basis 2 mal gebuchtet, Mittellappen breit und schwach vorgezogen, Basis mit 3 seichten Eindrücken, Ecken abgerundet rechteckig, Spitze leicht vorgezogen, in der Mitte nicht gerandet, Seiten sehr wenig verengt, Vorderecken kurz vurrundet. Schildchen zungenförmig, sehr fein und dicht punktiert. Flügeldecken etwas breiter als die Halsschildbasis, etwa von der Mitte ab nach hinten allmählich verengt, Streifen vorn mit starken, gekerbten, runden Punkten, die in der Spitze sehr fein werden; Zwischenräume gewölbt, glatt, mit sehr feinen Punkten nahe den Punktstreifen; Schultern kurz gerundet eckig; Epipleuren hinten der Mitte zur Spitze etwas erweitert und dann wieder verengt; Spitzen zusammen abgerundet. Unterseite normal; Beine lang und kräftig; Mitte mit einem stumpfen Zahn; Lappung der Füsse 3 und 4,3 und 4,3; Metatarsus der Hinterfüsse sehr wenig kürzer als die folgenden Glieder zusammen. *Malaisei* unterscheidet sich von *B. socia* BM. durch hellere Flügeldecken, viel hellere Beine, etwas längeren Halschild und weiter auseinander stehende Augen.'

**Type locality.** Tenasserim, Mekane.

**Distribution.** Myanmar.

### *Bolbostetha malangana* Pic, 1936

(Figs 62-64)

*Bolbostetha malangana* Pic, 1936a: 30.

**Type locality.** S. E. Java, Malang.

**Type material examined.** Holotype (♂): white label 'Malang' / 'S.E. Java' [printed in black] // white label 'malangana' / 'n sp' [black handwritten]; (MNHN).

**Redescription.** Habitus (Fig. 62), dark brown, slightly shiny species, BL 12.79 mm. Broadest at elytral base, BL/EW 2.54. Posterior half of head dark brown with light setation, dense, shallow punctuation and microgranulation, interspaces between punctures narrow, slightly shiny. Clypeus lighter brown with microgranulation, slightly shiny. Eyes pale brown, OI 25.34. Antennae bicolourous, antennomeres 3-6 distinctly darker, antennomeres 7 and 8 lighter with darker apex. Antennae with light setation and microgranulation. Maxillary palpus dark brown with short light setation and microgranulation, slightly shiny. Palpomere 2 and penultimate palpomere with a few long setae at apex. Pronotum dark brown, slightly shiny with light setation, microgranulation and middle-sized shallow punctures; intervals narrower than diameter of punctures. Base distinctly bisinuated. Posterior angles roundedly obtuse-angled, borders complete at their entire length, only against scutellum and at middle

of anterior border not clearly conspicuous. Anterior angles not conspicuous. PI 87.50. Ventral side of body brown with short light setation, shallow punctures and microgranulation. Elytra dark brown with pale brown sparser setation, with distinct rows of medium-sized punctures in elytral striae; intervals between punctures in elytral striae narrower than diameter of punctures. Elytral intervals slightly rounded with small and sparse punctures, with microgranulation, slightly shiny. Elytral epipleura well-developed, with light setation, regularly narrowing to first abdominal sternite. Legs brown with short and dense light setation. Femora slightly reddish-brown. Anterior femora not conspicuously broader with small tooth at inner part, anterior tibia (Fig. 64) with one obtuse-angled tooth at inner third and one obtuse-angled tooth at inner part near apex and with depression at anterior half. Anterior tarsomeres 1-4, middle tarsomeres 2-4 and posterior tarsomere 3 broader and lobed. Both anterior tarsal claws with 18 visible teeth.

**Female.** Unknown.

**Distribution.** Indonesia: Java.

### *Bolbostetha martapurana* Pic, 1936

*Bolbostetha martapurana* Pic, 1936a: 29.

**Original description.** Pic (1936): ‘Elongatus, antice et postice attenuatus, parum nitidus, griseo pubescens, niger aut rufescens, membris pro parte rufis; capite diverse punctato, oculis parum distantibus; antennis piceis, ad basin rufis; thorace nigro-submetallico, suquadrato, antice subarcuato, minute parum dense punctato; elytris piceo-metallicis, postice paulo rufescensibus, thorace paulo latioribus, elongatis, postice valde attenuatis, parum fortiter striato-punctatis, intervallis subconvexis; pedibus pro parterufis aut piceobrunneis, robustis, tibiis anticis intus sinuatis. Long 13 mill. Bornéo: Martapura. - Voisin de *longicornis* Pic, moins foncé avec le thorax autrement ponctué, les élytres plus pubescents.’

**Type locality.** Borneo, Martapura.

**Distribution.** Borneo.

### *Bolbostetha neptis* (Borchmann, 1925)

(Figs 67, 68)

*Alleculodes neptis* Borchmann, 1925: 337.

**Type locality.** Burma, Arrakan.

**Type material examined.** Holotype (♀): White label ‘Arrakan’ [black handwritten] // white label ‘neptis’ / ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH).

**Remarks.** Smaller species, brown, head and pronotum darker, habitus (Fig. 67). Elytra and pronotum shiny. Punctuation of pronotum and elytral striae very small. Antennae unicolorous,

anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. OI 24.74; PI 72.96; L/WE (base) 2.30.

**Distribution.** Myanmar.

***Bolbostetha oliveri* sp. n.**

(Figs 69-73)

**Type material.** Holotype ( $\delta$ ) labelled: MALAYSIA - Kelantan, Banjaran Titi Wangsa, Kanpong Lawa env., 24.-26.ii.1997, Oliver Dulik lgt., (VNPC); Paratypes: (1  $\delta$  2  $\varphi\varphi$ ): same data as holotype, (VNPC).

**Description of holotype.** Habitus (Fig. 69), body narrow, elongate, brown, elytra shiny, with light setation, BL 11.0 mm. Widest near elytral half, BL/EW 2.53.

Head. Posterior half dark brown, anterior half lighter, shiny, with light setation. HW 1.57 mm; HW/PW 0.80. HL (visible part) 1.70 mm. OI 18.78. Surface with middle-sized punctures, interspaces between punctures narrow and rugose. Clypeus lighter with longer setae.

Antennae. Longer, AL 7.73 mm, AL/BL 0.70. Antennomeres slightly shiny, light brown. Antennomeres very narrow with microgranulation and dense, shallow, relatively large punctures. RLA (1-11): 0.62: 0.29: 1.00: 1.49: 1.55: 1.65: 1.74: 1.71: 1.68: 1.65: 1.72. RL/WA (1-11): 1.34: 1.16: 3.30: 4.35: 4.21: 4.63: 5.28: 4.64: 5.33: 5.00: 5.96.

Maxillary palpus. Unicolorous brown with longer light setation. Palpomere 2 slightly excised at inner side. Ultimate palpomere broadly triangular. Ultimate and penultimate palpomeres with microsculpture, rugose, matt. RLP (2-4): 1.26: 1.00: 1.20. RL/WP (2-4): 2.74: 1.81: 0.77.

Pronotum. Brown, darker than elytron, relatively narrow and long, matt, with shorter light setation. PL 1.80 mm; PW 1.96 mm. PI 91.62. Borders complete through their entire length, only in the middle of anterior border not conspicuous, base from both sides of scutellum slightly excised, straight against scutellum. Posterior angles roundedly obtuse-angled, side borders straight to half, then becoming rounded anteriorly. Anterior angles not clearly conspicuous. Surface with microgranulation and rugose, matt and with middle-sized punctures. Punctures inside slightly shiny, interspaces between punctures narrower than diameter of punctures, matt.

Ventral side of body. Brown, with sparse, shorter, light setation and shallow punctuation. Abdomen lighter, penultimate and ultimate abdominal sternites with microgranulation, matt, without excision and depression.

Elytron. Long, narrow, unicolorous brown, lighter than pronotum and legs, with longer light setation, matt. Setation of anterior part denser. EL 7.50 mm. Broadest near half, EW 2.96 mm. EL/EW 2.53. Elytral striae with rows of middle-sized punctures, interspaces between punctures in rows very narrow, narrower than diameter of punctures. Elytral intervals with microgranulation, matt and with one row of small sparse punctures in the middle of elytral intervals.

Scutellum. Brown as elytron itself, sides darker, slightly shiny, with microgranulation and longer light setae, longly triangular with slightly rounded apex.

Elytral epipleura. Brown as elytron itself, broadest at base, with light setation and middle-sized punctures at posterior half, narrowing to first abdominal sternite, here narrowest, then running parallel.

Legs. Brown, darker than elytron, with dense light setation, tarsomeres slightly lighter. Anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 lobed and broad. Anterior femora slightly broader, anterior tibia with obtuse-angle tooth at posterior third and with short distinct impression near apex. Apex of anterior and middle tibia slightly curved. Posterior tibia distinctly arched, posterior half of posterior tibia with fine flat impression. RLT: protarsus: 1.00: 0.70: 0.79: 1.00: 1.89; mesotarsus: 1.00: 0.67: 0.76: 0.94: 1.33; metatarsus: 1.00: 0.50: 0.61: 0.86. RL/WT: protarsus: 1.47: 1.00: 0.76: 0.95: 3.70.

Both anterior tarsal claws with 21 teeth.

Aedeagus (Figs 72, 73). Pale brown, apical piece slightly darker, shiny. Posterior half of basal piece rounded, anterior half straight laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, slightly narrowing with relatively sharp top dorsally, straight and slightly beak crooked laterally. Ratio of length of apical piece to length of basal piece 1: 3.92.

**Female.** Both anterior tarsal claws with 13 teeth. RLA (1-11): 0.67: 0.40: 1.00: 1.67: 1.72: 1.68: 1.80: 1.78: 1.68: 1.70: 1.66. RL/WA (1-11): 1.70: 1.15: 2.81: 5.08: 5.24: 5.56: 6.85: 5.00: 5.56: 5.86: 5.48. RLT: protarsus: 1.00: 0.84: 0.74: 1.12: 2.02; mesotarsus: 1.00: 0.34: 0.78: 0.72: 1.10; metatarsus: 1.00: 0.48: 0.61: 0.77. RL/WT: protarsus: 1.29: 0.93: 0.69: 1.02: 4.03.

**Variability.** Measurements: mean (minimum - maximum). Males (n=2) BL 12.95 mm (11.00-14.89 mm); HL 1.97 mm (1.70-2.24 mm); HW 1.75 mm 1.57-1.92 mm); OI 19.53 (18.78-20.28); PL 2.20 mm (1.80-2.60 mm); PW 2.34 mm (1.96-2.71 mm); PI 93.90 (91.62-96.17); EL 8.78 mm (7.50-10.05 mm); EW 3.43 mm (2.96-3.89 mm). Females (n=2) BL 14.00 mm (12.24-15.76 mm); HL 2.10 mm (1.73-2.47 mm); HW 2.01 mm (1.70-2.31 mm); OI 26.25 (25.08-27.41); PL 2.42 mm (2.10-2.74 mm); PW 2.67 mm (2.32-3.02); PI 90.76 (90.68-90.83); EL 9.48 mm (8.41-10.55 mm); EW 4.05 mm (3.51-4.58 mm).

**Differential diagnosis** (for details see the keys above). The new smaller species *Bolbostetha oliveri* sp. n. belongs to *Bolbostetha opaca* - group, clearly differs from related species by short size of length, from *B. baluana* Pic, 1936, *B. baumi* (Mařan, 1946), *B. pendleburyi* Pic, 1936 and *B. tazi* sp. n. by antennae unicolorous, from *B. fairmairei* sp. n., *B major* Pic, 1936 and *B. opaca* (Borchmann, 1925) clearly differs by diameter of intervals between punctures of pronotum distinctly narrower than diameter of punctures.

**Name derivation.** This species is dedicated to its collector, Oliver Dulík, after his first name.

***Bolbostetha opaca* (Borchmann, 1925)**  
(Figs 74-76)

*Alleculodes opaca* Borchmann, 1925: 342.

**Type locality.** Hongkong.

**Type material examined.** Syntype (♂): Red label ‘type’ [black handwritten] // white label ‘Hongkong’ // white label ‘opaca’ / ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH).

**Remarks.** Large species, brown, legs and antennae pale brown, habitus (Fig. 74). Elytra and pronotum matt. Punctuation of elytral striae very small, punctuation of pronotum small-sized. Antennae unicolorous, anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. Anterior tibia of male (Fig. 76). OI 21.30; PI 95.70; L/WE (half) 2.74.

**Distribution.** China: Hongkong.

***Bolbostetha pahangensis* sp. n.**

(Figs 77-81)

**Type locality.** Malaysia West, Pahang, Cameron Highlands.

**Type material.** Holotype (♂): Malaysia West, PAHANG, Cameron Highlands, TANAH RATA, 3.ii.-19.ii.2005, P. Čechovský lgt., 1200-1500 m, (VNPC).

**Description of holotype.** Habitus (Fig. 77), body narrow, elongate, from brown to dark brown, elytra shiny, with light setation, BL 11.90 mm. Widest at elytral base; BL/EW 3.92.

Head. Posterior half dark brown, anterior half and mandibles lighter, shiny, with light setation. Clypeus pale brown with longer light setation, at middle of anterior border distinctly excised. HW 1.64 mm; HW/PW 0.72. HL (visible part) 1.78 mm. OI 11.54. Surface with middle-sized, shallow punctures, interspaces between punctures shiny, anterior half with microgranulation.

Antennae. Unicolorous brown with short light setation, shiny, longer, AL 9.69 mm, AL/BL 0.81. Apex of antennomeres with a few longer light setae. All antennomeres with microgranulation, antennomeres 4-11 with shallow punctures. RLA (1-11): 0.70: 0.28: 1.00: 1.58: 1.65: 2.02: 2.07: 2.12: 2.12: 1.96: 2.10. RL/WA (1-11): 1.89: 1.09: 2.68: 4.25: 5.07: 6.20: 5.93: 7.59: 5.06: 6.00: 7.50.

Maxillary palpus. Unicolorous brown as colour as antennae with light setation and microgranulation, shiny, apex of palpomeres 2 and 3 with a few longer light setae. Palpomere 2 and penultimate palpomere slightly excised at inner side. RLP (2-4): 1.58: 1.00: 1.66. RL/WA (2-4): 2.82: 1.75: 0.96.

Pronotum. Dark brown, darker than elytron, relatively narrow and long, slightly shiny, with shorter, light setation. Distinctly narrower than elytra, PL 1.99 mm; PW 2.27 mm. PI 87.48. Borders conspicuous through their entire length, only in the middle of anterior border not conspicuous, base from both sides of scutellum excised. Posterior angles roundedly right-angled, sides straight to half, then narrowing to not clearly conspicuous obtuse-angled anterior angles. Surface with microgranulation, slightly shiny with small-sized, shallow, dense punctures, interspaces between punctures narrow.

Ventral side of body. Dark brown with sparse setation, shiny with small, shallow punctures. Ultimate abdominal sternite without excision and depression, middle of ultimate abdominal sternite with microgranulation, matt.

Elytron. Long, narrow, unicolorous brown, lighter than pronotum, with light setation, denser at anterior half, shiny. EL 8.13 mm. Broadest at base, EW 3.04 mm. EL/EW 2.67. Elytral striae with rows of large-sized punctures, interspaces between punctures in elytral striae very narrow. Elytral intervals with microgranulation, shiny and with small-sized, sparse punctures near elytral stries.

Scutellum. Brown as elytron itself, sides darker, slightly shiny, with microgranulation and few longer light setae, longly triangular.

Elytral epipleura. Brown as elytron itself, broadest near base, with light setation and middle-sized punctures at posterior half, narrowing to first abdominal sternite, here narrowest, then running parallel.

Legs. Brown with dense light setation. Anterior tarsi 2-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 lobed and broad. Anterior femora slightly broader with one obtuse angle near apex at inner part, anterior tibia (Fig. 79) with obtuse-angle tooth at posterior third and with rounded apex. Apex of middle tibia slightly curved. Posterior half of posterior tibia with fine flat impression at inner side. RLT: protarsus: 1.00: 1.00: 1.10: 1.00: 1.73; mesotarsus: 1.00: 0.47: 0.49: 0.61: 0.96; metatarsus: 1.00: 0.48: 0.31: 0.73. RL/WT: protarsus: 1.35: 1.00: 0.87: 0.78: 3.60.

Both anterior tarsal claws with 30 teeth.

Aedeagus (Figs 80, 81). Pale brown, apical piece darker, shiny. Basal piece rounded laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, longitudinally triangular with finely rounded top dorsally, straight with slightly beak crooked laterally. Ratio of length of apical piece to length of basal piece 1: 3.16.

**Female.** Unknown.

**Differential diagnosis** (for details see the keys above). *Bolbostetha pahangensis* sp. n. belongs to *Bolbostetha quadricollis* - group, clearly differs from closely related species *Bolbostetha neptis* (Borchmann, 1925) by body widest near elytral base and by narrower and more matt pronotum without distinct impressions, from the species *Bolbostetha atricolor* Pic, 1944 and *B. martapurana* Pic, 1936 by having brown elytra (*B. atricolor* and *B. martapurana* with black elytra), from *B. malaisei* Borchmann, 1942 differs *B. pahangensis* sp. n. mainly by having narrowest space between eyes narrower, by having antennomeres 5-10 distinctly longer than antennomere 4 and by having anterior tarsomeres 1-4 broader and lobed.

**Name derivation.** Patronymic, after the type locality district Pahang (Malaysia).

### *Bolbostetha pendleburyi* Pic, 1936

*Bolbostetha pendleburyi* Pic, 1936b: 172.

**Original description.** Pic (1936): ‘Elongata, antice et postice attenuata, parum nitida, griseo pubescens, nigro-picea, pro parte rufescens. Capite elongato, diverse pro parte minute et dense punctato; oculis sat distantibus; antennis gracilibus et elongatis, nigris, articulis 2 primis rufescentibus; thorace parum breve, sata lato, antice paulo attenuato, medio longitudinaliter sulcato, subalutaceo, parum fortiter non dense punctato; scutello sat valido; elytris thorace sat latioribus, elongatis, postice longe et valde attenuatis, fortiter striatis, striis minute punctatis, intervallis convexis, parum et minute punctatis; pedibus parum robustis; femoribus anticis

mediocre crassis, tibiis apice paulo curvatis, intermediis subarcuatis, posticis subsinuatis et longioribus. Long. 18 mm.

Voisin de *B. major* Pic, diffère par le prothorax autrement ponctué la base des antennes foncée.'

**Type locality.** Malaysia, Pahang, Cameroon Highlands.

**Distribution.** Malaysia.

***Bolbostetha pici* sp. n.**

(Figs 82-86)

**Type locality.** Malaysia west, Perak, Banjaran Titi Wangsu.

**Type material.** Holotype ( $\delta$ ): MALAYSIA West, PERAK, 40 km SE of IPOH, 900 m, Banjaran Titi Wangsu, RINGLET, 29.iii.-15.iv.2004, P. Čechovský lgt., (VNPC); Paratypes: (1  $\delta$  1  $\varphi$ ): same data as holotype, (VNPC); (3  $\delta$  1  $\varphi$ ): MALAYSIA; Tioman; 0-400 m; rd. Kampong Tekek -K. Juara, 4.-16.iii.1998, 2,48N 104,11E, D. Hauck leg., (DHBC).

**Description of holotype.** Habitus (Fig. 82), body narrow, elongate, brown, elytra shiny, with light setation, BL 14.21 mm. Widest at elytral base; BL/EW 3.96.

Head. Posterior half dark brown, anterior half lighter, shiny, with light setation. Clypeus light brown with longer light setation, at middle distinctly excised. HW 1.88 mm; HW/PW 0.65. HL (visible part) 2.27 mm. OI 18.06. Surface with middle-sized punctures, punctures inside with microgranulation, interspaces between punctures shiny.

Antennae. Unicolorous brown, with short light setation, longer, AL 10.22 mm, AL/BL 0.72. Apex of antennomeres with a few longer light setae. Antennomeres 1-3 slightly shiny, all antennomeres with microgranulation, antennomeres 4-11 more matt with shallow punctures. RLA (1-11): 0.63: 0.25: 1.00: 1.53: 1.63: 1.75: 1.84: 1.81: 1.86: 1.68: 1.86. RL/WA (1-11): 1.70: 1.00: 3.04: 5.09: 4.96: 6.08: 5.82: 5.28: 6.18: 6.83: 7.99.

Maxillary palpus. Unicolorous pale brown with light setation, shiny, apex of palpomeres with a few longer light setae. Palpomere 2 and penultimate palpomere slightly excised at inner part. Ultimate palpomere broadly triangular. RLP (2-4): 1.31: 1.00: 1.59. RL/WP (2-4): 2.44: 1.80: 0.79.

Pronotum. Dark brown, darker than elytron, relatively narrow and long, shiny, with light setation, denser at anterior part and near sides. PL 2.60 mm; PW 2.88 mm. PI 90.05. Borders thin and not clearly distinct through their entire length, in the middle of anterior border not conspicuous, base from both sides of scutellum excised and with flat longitudinal impression, straight against scutellum. Posterior angles roundedly obtuse-angled, sides straight to half, then becoming rounded anteriorly. Anterior angles not clearly conspicuous. Surface with microgranulation, shiny with middle-sized, shallow, dense punctures, interspaces between punctures very narrow.

Ventral side of body. Dark brown with light setation, abdominal sternites slightly shiny and lighter with dense, smaller, shallow punctures. Ultimate abdominal sternite with fine, flat, oval impression and sparse punctuation at middle of anterior half.

Elytron. Long, narrow, unicolorous brown, lighter than pronotum, with light setation, denser at anterior half, shiny. EL 9.42 mm. Broadest at base, EW 3.60 mm. EL/EW 2.62. Elytral striae with rows of large-sized punctures, interspaces between punctures in rows very narrow, punctures closed together. Elytral interspaces with microgranulation, shiny and with one row of small-sized, sparse punctures near elytral striae.

Scutellum. Brown as elytron itself, sides darker, slightly shiny, with microgranulation and longer light setae, longly triangular with slightly rounded apex.

Elytral epipleura. Brown as elytron itself, broadest at base, with light setation and middle-sized punctures at posterior half, narrowing to first abdominal sternite, here narrowest, then running parallel.

Legs. Unicolorous brown with shorter, pale brown setation, tibia and tarsomeres with denser setation. Anterior tarsomeres 1-4, middle tarsomeres 3 and 4 and posterior tarsomere 3 lobed and broad. Anterior femora with small obtuse-angle tooth near apex. Anterior tibia (Fig. 84) with obtuse-angled tooth at posterior third, with distinct depression at inner part of anterior half and with distinctly curved apex. Posterior half of posterior tibia with flat impression, curved. RLT: protarsus: 1.00: 0.74: 0.94: 1.03: 1.56; mesotarsus: 1.00: 0.65: 0.67: 0.72: 1.30; metatarsus: 1.00: 0.36: 0.45: 0.73. RL/WT: protarsus: 1.16: 0.74: 0.79: 0.90: 3.12.

Both anterior tarsal claws with 35 teeth.

Aedeagus (85, 86). Pale brown, apical piece darker, shiny. Basal piece rounded laterally, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, longitudinally triangular with sharp top dorsally, laterally slightly rounded at posterior part, then regularly narrowing at anterior half, apex shortly beaked. Ratio of length of apical piece to length of basal piece 1: 2.85.

**Female.** Both anterior tarsal claws with 14 teeth. RLA (1-10): 0.66: 0.20: 1.00: 1.25: 1.47: 1.56: 1.68: 1.67: 1.64: 1.63. RL/WA (1-10): 1.91: 0.95: 3.20: 4.00: 4.86: 5.77: 5.37: 5.92: 6.82: 7.42. RLT: protarsus: 1.00: 0.92: 0.95: 1.35: 1.85; mesotarsus: 1.00: 0.50: 0.73: 0.78: 1.33; metatarsus: 1.00: 0.36: 0.48: 0.83. RL/WT: protarsus: 1.00: 0.65: 0.61: 0.93: 3.53.

**Variability.** Measurements: mean (minimum - maximum). Males (n=5) BL 14.18 mm (12.27-15.26 mm); HL 2.10 mm (1.78-2.29 mm); HW 1.88 mm (1.59-2.05 mm); OI 16.15 (11.11-20.80); PL 2.57 mm (2.13-2.73 mm); PW 2.93 mm (2.43-3.28 mm); PI 87.67 (85.58-90.05); EL 9.53 mm (8.36-10.39 mm); EW 3.78 mm (3.28-4.18 mm). Females (n=2) BL 14.94 mm (13.97-15.91 mm); HL 2.13 mm (2.00-2.25 mm); HW 1.96 mm (1.80-2.11 mm); OI 25.56 (23.70-27.42); PL 2.53 mm (2.33-2.72 mm); PW 3.12 mm (2.84-3.39 mm); PI 81.20 (80.18-82.22); EL 10.29 mm (9.39-11.19 mm); EW 4.42 mm (3.92-4.91 mm).

**Differential diagnosis** (for details see the keys above). *Bolbostetha pici* sp. n. belongs to *Bolbostetha quadricollis* - group, clearly differs from closely related species *Bolbostetha pahangensis* sp. n. by pronotum more shiny and anterior tibia of male with distinct sharper tooth, from the species *Bolbostetha atricolor* Pic, 1944 and *B. martapurana* Pic, 1936 by having brown elytra (*B. atricolor* and *B. martapurana* with black elytra), from *B. malaisei* Borchmann, 1942 differs *B. borchmanni* sp. n. mainly by having narrowest space between eyes narrower, by having antennomeres 5-10 distinctly longer than antennomere 4 and by having anterior tarsomeres 1-4 broader and lobed.

**Name derivation.** In honour of Maurice Pic (1866-1957), a well known French coleopterist.

***Bolbostetha proavia* (Borchmann, 1925)**  
(Figs 87, 88)

*Alleculodes proavia* Borchmann, 1925: 343.

**Type locality.** Hongkong.

**Type material examined.** Syntype (♀): red label ‘type’ [black handwritten] // white label ‘Hongkong’ [black handwritten] // white label ‘proavia’ / ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH).

**Remarks.** Large species, brown, head and pronotum darker, legs and antennae pale brown, habitus (Fig. 87). Elytra and pronotum shiny. Punctuation of pronotum and elytral striae large-sized. Antennae unicolorous, anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. OI 34.60; PI 84.19; BL/WE 2.37.

**Distribution.** China: Hongkong.

***Bolbostetha quadricollis* Fairmaire, 1896**  
(Figs 89-91)

*Bolbostetha quadricollis* Fairmaire, 1896: 117.

**Type locality.** Java occidentalis, Pangalengan.

**Type material examined.** Holotype (♂): white label ‘Java occident.’ / ‘Pengalengan’ / ‘4000’ 1893 / ‘H. Fruhstorfer.’ [printed in black] // white label ‘58’ [black handwritten] // white label ‘sp n Bolbostetha’ / ‘4-collis type’ [black handwritten]; (MNHN).

**Redescription.** Habitus (Fig. 89), large, from brown to blackish-brown, shiny species, BL 17.53 mm. Broadest at elytral base, BL/WE 2.57. Head dark blackish-brown with ligh setation, dense and shallow punctuation, interspaces between punctures narrow, with microgranulation, more matt. Mandibles lighter with microgranulation, slightly shiny. Anterior half of head with longer ligh setation and larger punctures. OI 24.87. Antennae bicolorous, antennomeres 1-3 distinctly dark brown, antennomeres 4-11 pale brown with dark brown apex. Antennae with short, light setation and microgranulation, apex of antennomeres 1-11 with a few longer ligh setae. Maxillary palpus pale brown with short light setation and microgranulation, more matt. Palpomere 2 and penultimate palpomere with a few longer light setae at apex. Pronotum dark blackish-brown, slightly shiny with light setation, microgranulation and middle-sized, relatively deep and coarse punctures; intervals very narrow, approximately five times smaller than diameter of punctures. Base distinctly excised from both sides of scutellum, against scutellum straight. Posterior angles roundedly right-angled, borders complete at their entire length. Anterior angles not conspicuous. PI

81.76. Ventral side of body dark brown, shiny with short light setation, mesosternum and metasternum with larger shallow punctures. Abdominal sternites with microgranulation and smaller shallow punctures. Ultimate abdominal sternite with large oval depression at anterior half. Elytra shiny, brown with light setation, with distinct rows of middle-sized punctures in elytral striae. Elytral intervals distinctly rounded with very sparse, small and shallow punctures near elytral striae, with fine microgranulation. Elytral epipleura well-developed, with light setation, regularly narrowing to first abdominal sternite. Posterior half with large punctures, anterior half with denser light setation. Legs pale brown with narrowly dark brown apex of femora and dense light setation. Anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broader and lobed. Anterior tibia and mesotibia slightly curved at apex. Anterior tibia (Fig. 91) with two obtuse-angled teeth, one at posterior third, secondone near apex and with longitudinal depression at inner side.

**Female.** Unknown.

**Distribution.** Indonesia. Java.

***Bolbostetha sauteri sauteri* (Borchmann, 1925)**

(Figs 92-94)

*Alleculodes sauteri* Borchmann, 1925: 341.

**Type locality.** Formosa, Taihorinsho.

**Type material examined.** 2 syntypes (♂): red label ‘type’ [black handwritten] // white label ‘Taihorinsho’ / ‘Formosa’ / ‘H. Sauter’ [printed in black] // white label ‘sauteri’/ ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH). (♀): red label ‘type’ [black handwritten] // white label ‘Taihorinsho’ / ‘Formosa’ / ‘Sauter viii 7 09’ [printed in black] // white label ‘sauteri’/ ‘n. sp.’ [black handwritten] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH).

**Remarks.** Large species, brown, head and pronotum slightly darker, legs pale brown, habitus (Fig. 92). Elytra and pronotum shiny, anterior tibia of male (Fig. 94). Punctuation of pronotum and elytral striae middle-sized. Antennae unicolorous, anterior tarsomeres 1-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. ♂: OI 20.72; PI 90.96; L/WE (half) 2.49. ♀: OI 31.79; PI 83.73; L/WE (half) 2.39.

**Distribution.** China: Taiwan, Japan.

***Bolbostetha sauteri oshimana* (Nakane, 1968) comb. n.**

*Alleculodes sauteri oshimana* Nakane, 1968: 85.

**Original description.** Nakane (1968): ‘The present form is very closely related to the typical, but the upper surface is dark reddish brown (the elytra are not lighter in colour than head and pronotum), the pronotum is not so densely punctured, and the median puncture row of elytral

intervals is reduced and only represented by a few widely separated punctures. The aeneous tint of elytra is, though faint, well-recognizable. Body length: 17.5 mm.'

**Type locality.** Hatsumo, Amami-Oshima, Japan.

**Remark.** Described by Nakane (1968) as *Alleculodes* Borchmann, 1925, at present formally transferred to *Bolbostetha* Fairmaire, 1896.

**Distribution.** Japan.

***Bolbostetha socia* (Borchmann, 1932)**  
(Figs 95, 96)

*Alleculodes socia* Borchmann, 1932: 345.

**Type locality.** Singapore.

**Type material examined.** Syntype (♀): white label 'Singapore' / 'Coll. Baker' [printed in black] // white label 'Sammlung' / 'F. Borchmann' / 'Eing. Nr. 5, 1943' [printed in black] // white label 'Alleculodes' / 'socia n. sp.' [black handwritten]; (ZMUH).

**Remarks.** Smaller species, brown, legs and antennae lighter, habitus (Fig. 95). Elytra and pronotum shiny. Punctuation of pronotum and elytral striae small-sized. Antennae bicolorous, apex of antennomeres 3-10 distinctly darker. Anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. OI 20.94; PI 79.20; L/WE (half) 2.27.

**Distribution.** Singapore.

***Bolbostetha soleata* Fairmaire, 1896**  
(Figs 97-99)

*Bolbostetha soleata* Fairmaire, 1896: 117.

**Type locality.** Singapore.

**Type material examined.** Holotype (♂): white label 'Singapore' [black handwritten] // white label 'soleata Frm' [black handwritten] // white label 'type' [black handwritten] // white label 'Bolbostetha soleata' [black handwritten]; (MNHN).

**Other material examined.** (♀): MALAYA, Kuala Lumpur, at light, May 1<sup>st</sup>, 1931, H. M. Pendlebury; (MNHN).

**Redescription.** Habitus (Fig. 97), smaller species, from brown to dark brown, shiny, BL 11.58 mm. Broadest at elytral half, BL/WE 2.21. Head dark brown with longer, light setation, dense, relatively deep and coarse punctuation, interspaces between punctures broader, shiny. Anterior half with larger punctures, with microgranulation at middle distinctly excised. OI 21.80. Antennae bicolorous, antennomeres 1 and 2 pale brown, antennomeres 3-11 dark brown. Antennomeres with brown setation, with microgranulation and distinct punctures, apex

of antennomeres with a few longer setae. Maxillary palpus pale brown, ultimate palpomere darker, with longer and relative dense, light setation and microgranulation, slightly shiny. Apex of palpomeres with a few long setae. Pronotum dark brown, darker than elytron, shiny with pale brown setation and large-sized, relatively deep and coarse punctures; intervals very narrow with microgranulation. Punctures of pronotum more than four times broader than width of intervals. Base distinctly excised from both sides of scutellum, against scutellum straight. Posterior angles slightly rounded obtuse-angled, borders complete at their entire length. Anterior angles not conspicuous. PI 74.71. Ventral side of body dark brown with short light setation, mesosternum and metasternum with large, deep and coarse punctures. Abdomen with microgranulation, smaller and denser punctuation. Abdominal sternites 1-3 slightly lighter. Elytra shiny, brown with light setation, setation of anterior half dense. Elytral striae with distinct rows of small-sized punctures; intervals between punctures in elytral striae slightly narrower than diameter of punctures. Elytral intervals slightly rounded with very small and very sparse, shallow punctures near elytral striae, with fine microgranulation. Elytral epipleura well-developed, shiny, with sparse light setation, regularly narrowing to first abdominal sternite. Posterior half with large punctures, anterior half with denser light setation. Legs brown with short and dense pale brown setation, femora, lobes and claws pale brown. Anterior tarsomeres 1-4, middle tarsomeres 1-4 and posterior tarsomeres 2 and 3 broader and lobed. Anterior tibia with one obtuse-angled tooth near base and fine depression at inner side. Anterior femora with fine obtuse-angled tooth near apex.

**Distribution.** Singapore, Malaysia.

***Bolbostetha tazi* sp. n.**

(Figs 103-107)

**Type locality.** Malaysia West, Pahang, Tanah Rata.

**Type material.** Holotype (♂): MALAYSIA -W, Pahang, 30 km SE of IPOH, 1500 m, Banjaran Titi Wangsa, TANAH RATA, 14.-15.iii.2002, P. Čechovský leg., (VNPC).

**Description of holotype.** Habitus (Fig. 103), brown, shiny, with light setation, BL 15.39 mm. Widest near elytral base, BL/EW 3.52.

Head. Dark brown, with light setation, apex of anterior half lighter, behind eyes with a few longer, dark setae. Surface with shallow, relatively sparse, small punctures, interspaces and punctures inside with microgranulation, matt. Borders and apex of mandibles darker. Anterior border slightly excised at middle. HW 2.05 mm; HW/PW 0.57. HL (visible part) 2.06 mm. OI 15.39.

Antennae. Bicolorous, with short and dense, light setation, apex of antennomeres with a few longer setae. Longer, AL 10.24 mm, AL/BL 0.66. Antennomeres 1 and 2 and apex of all antennomeres narrowly pale brown, rest of antennomeres 3-11 dark brown. All antennomeres with microgranulation, more matt. RLA (1-11): 0.65: 0.31: 1.00: 1.54: 1.39: 1.35: 1.53: 1.55: 1.49: 1.47: 1.43. RL/WA (1-11): 2.03: 1.16: 3.03: 3.92: 3.54: 3.85: 3.89: 4.42: 5.00: 5.31: 5.36.

Maxillary palpus. Bicolorous, slightly shiny, with light setation, apex of palpomeres

pale brown, base darker. Apex of palpomere 2 and 3 with a few longer light setae. Ultimate palpomere with microgranulation. RLP (2-4): 1.23: 1.00: 1.41. RL/WP (2-4): 2.55: 1.81: 0.96.

Pronotum. Dark brown, matt, with longer light setation, near sides setation darker. PL 2.46 mm, PW 3.61 mm. PI 68.12. Borders complete at sides at middle of base and middle of anterior border - borders not clearly conspicuous. Base from both sides and against scutellum distinctly excised. Posterior angles slightly sharp-angled, borders narrowing to half, then slightly rounded. Surface with middle-sized, shallow and dense punctures, interspaces very narrow; inside of punctures and interspaces matt.

Ventral side of body. Dark blackish-brown, slightly shiny, with short light setation. Ultimate abdominal sternite without excision and depression, at middle with microgranulation, matt.

Elytron. Long, narrow, unicolorous dark brown, with longer light setation, matt. EL 10.87 mm. Broadest near half, EW 4.37 mm. EL/EW 2.49. Elytral striae with rows of small-sized, shallow punctures, interspaces between punctures in rows slightly broader than diameter of punctures. Elytral interspaces with microgranulation and very small, sparse punctures near elytral striae.

Scutellum. Dark brown as elytron itself, five-angled, matt, with microgranulation and longer light setae.

Elytral epipleura. Dark brown as elytron itself, broadest near base, with light setation and sparser punctures, regularly narrowing to first abdominal sternite, then leads parallel to fifth abdominal sternite.

Legs. Dark brown, protarsus and mesotarsus pale brown, with relatively dense, short, light setation. Anterior and middle tarsomeres 2-4 and posterior tarsomere 3 lobed and broader. Anterior tibia (Fig. 105) with one obtuse-angled tooth at inner posterior third and with distinct flat impression between tooth and apex at inner part of tibia. RLT: protarsus: 1.00: 1.06: 1.32: 1.39: 2.03; mesotarsus: 1.00: 0.49: 0.77: 0.94: 1.27; metatarsus: 1.00: 0.35: 0.50: 0.65. RL/WT: protarsus: 1.25: 1.17: 1.07: 1.16: 4.19.

Both anterior tarsal claws with 48 visible teeth.

Aedeagus (Figs 106-107). Pale brown, with microgranulation, slightly shiny. Posterior half of basal piece slightly rounded laterally, anterior half almost straight, regularly narrowing at anterior half of basal piece dorsally. Apical piece short, longitudinally triangular with rounded top dorsally, laterally straight at posterior part, slightly rounded at apex. Ratio of length of apical piece to length of basal piece 1: 3.91.

**Female.** Unknown.

**Differential diagnosis** (for the details see the keys above). *Bolbostetha tazi* sp. n. belongs to *Bolbostetha opaca* - group, clearly differs from related species *Bolbostetha baluana* Pic, 1936, *B. baumi* (Mařan, 1946), *B. fairmairei* sp. n., *B. major* Pic, 1936, *B. oliveri* sp. n., *B. opaca* Borchmann, 1925 and *B. pendleburyi* Pic, 1936 mainly by punctures of pronotum almost 5 times broader than intervals between punctures, by broader pronotum and by sides of pronotum regularly narrowing at posterior half.

**Name derivation.** Named after the hero of TV cartoons Taz, male of *Sarcophilus laniarius*.



***Bolbostetha uniseriatus* (Mařan, 1940) comb. n.**  
(Figs 108-110)

*Alleculodes uniseriatus* Mařan, 1940: 155.

**Type locality.** Malaysia, Mallaca, Batu Pahat.

**Type material examined.** Holotype (♂): white label ‘BATU PAHAT.’ / ‘Mallaca Baum’ [printed in black] // red label ‘TYPUS’ [printed in black] // white label ‘Alleculodes ♂’ / ‘uniseriatus m n.’ [black handwritten] / ‘Dr. Mařan det.’ [printed in black]; (NMPC).

**Remarks.** Smaller species, brown, from pale brown to brown, habitus (Fig. 108). Elytra shiny, pronotum slightly shiny. Punctuation of elytral striae middle-sized, punctures in darker oval, transverse spots; punctuation of pronotum small-sized. Elytral intervals with microgranulation and sparse small punctures. Antennae unicolorous, pale brown. Anterior tarsomeres 2-4, middle tarsomeres 3, 4 and posterior tarsomere 3 broad and lobed. Anterior tibia of male with small sharp tooth near middle (Fig. 110). OI 18.42; PI 95.72; L/WE (half) 2.45.

**Distribution.** Malaysia.

***Bolbostetha varus* (Borchmann, 1925)**  
(Figs 111-116)

*Alleculodes varus* Borchmann, 1925: 337.

**Type locality.** Sumatra, Tebing tinggi.

**Type material examined.** Holotype (♂): red label ‘type’ [black handwritten] // white label ‘26384’ [black handwritten] // white label ‘N.O. Sumatra’ / ‘Tebing tinggi’ / ‘Dr. Schultheiss.’ [printed in black] // white label ‘coll. Kraatz’ [printed in black] // white label ‘Sammlung’ / ‘F. Borchmann’ / ‘Eing. Nr. 5, 1943’ [printed in black]; (ZMUH).

**Other material examined.** MALAYSIA, KAMPUNG ULU DONG, NEAR RAUB, 1.-3.03.1998, A. KUDRNA JR. LGT. (1 ♂), (VNPC); MALAYSIA, Pahang distr., 30 km NE RAUB, 200-400 m, LATA LEMBIK, 22.iv.-15.v.2002, 3°56'N; 101°38'E; E. Jendek & O. Šauša leg., (1 ♂), (DHBC); MALAYSIA West, PAHANG, Cameron Highlands, TANAH RATA, 3.-19.ii.2005, 1200-1500 m, P. Čechovský lgt., (1 ♀), (VNPC); MALAYSIA W., PAHANG, 50 km N of Kuala Rompin, Endau Rompin Nat. P., 400 m, G. Keriung (Kg. Tebu Hitam); 9.-30.iv.2008, P. Čechovský lgt., (2 ♂♂), (VNPC).

**Remarks.** Larger species, brown, habitus (Fig. 111). Elytra and pronotum shiny. Punctuation of elytral striae small-sized; punctuation of pronotum middle-sized. Elytral intervals with microgranulation and sparse very small punctures. Antennae bicolorous, apex of antennomeres 3-5 distinctly darker. Anterior tarsomeres 1-4, middle tarsomeres 3 and 4 and

posterior tarsomere 3 broad and lobed. Anterior tibia of male (Fig. 113), ultimate abdominal sternite of male (Fig. 114). OI 16.80; PI 93.46; L/WE (base) 2.75.

**Distribution.** Indonesia, new for Malaysia.

#### SPECIES EXCLUDING FROM *BOLBOSTETHA*

##### *Allecula angustiformis* (Pic, 1944) comb. n. (Figs 7-10)

*Bolbostetha angustiformis* Pic, 1944: 16.

**Type locality.** Malaysia, Perak, Larut Hills.

**Type material examined.** Holotype: white label 'PERAK F.M.S.' / 'Larut Hills' [printed in black] / '4500' [black handwritten] 'ft.' / '22 nd' [black handwritten] 'Feb: 1932.' / 'H. M. Pendlebury.' [printed in black] // white label '*Bolbostetha angustiformis* n sp' [black handwritten]; (MNHN).

**Redescription.** Habitus (Fig. 7), smaller, dark blackish brown species, BL 11.06 mm. Broadest near elytral two third from base to apex, BL/EW 2.28. Posterior half of head dark blackish brown with light setation, dense punctuation, slightly shiny, interspaces between punctures narrow. Clypeus lighter brown with microgranulation, matt, with very sparse setae. Eyes large, transverse, dark with deep excision. Vertex between eyes narrow. OI 23.69. Antennae bicolourous, antennomeres 1 and 2 distinctly lighter than brown antennomeres 3-11. Antennomere 3 of approximately same length as antennomere 4 (Fig. 9), not shorter as usual for *Bolbostetha*-species; antennomere 2 shortest. Maxillary palpus pale brown with short light setation, slightly shiny. Ultimate palpomere knife-shaped (Fig. 8), not broadly triangular as usual for *Bolbostetha*-species. Pronotum matt, dark blackish brown with short light setation, microgranulation and small-sized punctures; intervals broader. Base distinctly bisinuate, posterior angles roundly right-angled, borders not conspicuous at middle of base and at middle of apex. Sides distinctly excised near base, apex excised. Pronotum broadest near apex and longest near sides. PI 74.93. Ventral side of body dark blackish brown with short light setation, dense shallow punctures and microgranulation, more matt. Abdomen five-segmented. Elytra dark blackish brown with distinct rows of small punctures in elytral striae; intervals between punctures in elytral striae broader than diameter of punctures. Elytral intervals slightly rounded with very small and sparse punctures, with microgranulation, matt. Elytral epipleura well-developed, distinctly lighter than elytra themselves. Legs dark blackish brown with short light setation, tarsomeres slightly lighter. Anterior femora not conspicuously broader, anterior tibia without any teeth, depressions, excisions. Anterior tarsomeres 3 and 4 (Fig. 10), middle tarsomeres 3 and 4 and posterior tarsomere 3 with lobes, but not broader as usual for *Bolbostetha*-species. Both anterior tarsal claws with 6 visible teeth.

**Distribution.** Malaysia.



***Allecula maxima* Pic, 1910**  
(Figs 65, 66)

*Allecula maxima* Pic, 1910: 94.

**Type locality.** China, Yunnan.

**Type material examined.** 1 specimen: white label ‘Yunan’ [black handwritten] // white label ‘type’ [black handwritten] // red label ‘TYPE’ [printed in black] // white label ‘Allecula’ / ‘maxima Pic’ [black handwritten]; (MNHN).

**Remarks.** Large species, BL 17.72 mm, dark brown, habitus (Fig. 65). Antennomeres 1-5 (Fig. 66), antennomere 3 distinctly longer than antennomere 4. Anterior tarsomeres 3 and 4 broader and lobed. *Allecula maxima* Pic, 1910 was mistakenly listed as *Bolbostetha* by Borchmann (1925) and this information was taken over by Novák (2008).

**Distribution.** China: Yunnan.

***Allecula subensellata* (Pic, 1936) comb. n.**  
(Figs 100-102)

*Bolbostetha subensellata* Pic, 1936a: 30.

**Type locality.** Indonesia, Sumatra, Palembang.

**Type material examined.** Holotype (♂): white label ‘Palembang’ / ‘Sumatra’ [printed in black] // white label ‘male’ [black handwritten] // ‘Bolbostetha’ / ‘subensellata’ / ‘n sp’; (MNHN).

**Redescription.** Habitus (Fig. 100), larger species, from brown to dark brown, shiny, BL 15.66 mm. Broadest at elytral base, BL/WE (base) 2.47. Head dark brown with sparse, light setation, with relatively shallow punctuation, punctures larger, interspaces between punctures narrower with microgranulation, slightly shiny. Eyes large, transverse, deeply excised, space between eyes relatively broader. OI 30.01. Antennae bicolorous, antennomeres 1-4 slightly darker than pale brown antennomeres 5-10. Antennomere 3 (Fig. 101) of approximately same length as antennomere 4 (not usual for *Bolbostetha* species). Antennomeres with pale brown setation, with microgranulation and distinct shallow punctures, apex of antennomeres with a few longer setae. Maxillary palpus pale brown, with shorter and relative dense, pale brown setation and microgranulation, slightly shiny. Penultimate palpalome shortest. Pronotum dark brown, darker than elytron, slightly shiny with pale brown setation and smaller, shallow punctures; intervals between punctures narrower than punctures. Setation near sides darker. Base distinctly excised from both sides of scutellum, against scutellum straight. Posterior angles slightly roundedly obtuse-angled, borders complete at their entire length, only at middle of anterior border not clearly distinct. Anterior angles not conspicuous. PI 83.08. Ventral side of body dark brown with short pale brown setation, setation of abdomen

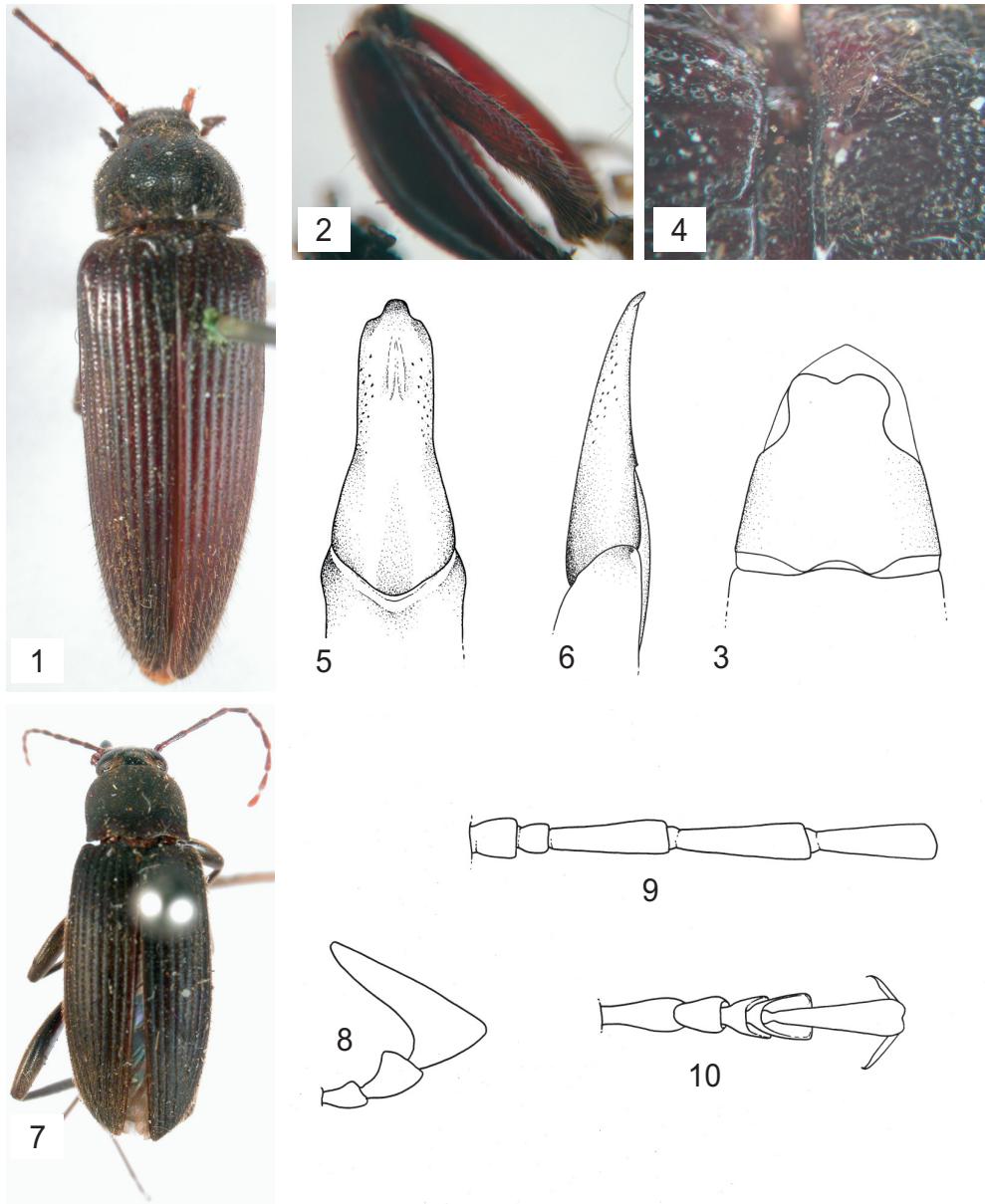
distinctly denser, with microgranulation, slightly shiny. Elytra shiny, brown with sparse light setation, setation of anterior half denser. Elytral striae with distinct rows of middle-sized punctures; intervals between punctures in elytral striae slightly narrower than diameter of punctures. Elytral intervals with fine microgranulation, distinctly rounded with very small and very sparse punctures. Elytral epipleura well-developed, brown as elytron itself, shiny, regularly narrowing to first abdominal sternite. Anterior half with parallel sides and short pale brown setation. Posterior half with large punctures. Legs brown, tarsomeres lighter. Femora with short and dense, tibia and tarsomeres with longer and dense pale brown setation. Only anterior tarsomeres 3 and 4 broad and lobed (Fig. 102). Middle tarsomeres 3 and 4 and posterior tarsomere 3 broader and lobed. Anterior tibia with one sharper tooth near base. Posterior tibia without depression at posterior half.

**Distribution.** Indonesia.

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REFERENCES

- BORCHMANN F. 1910: *Coleopterorum Catalogus. Pars 3: Alleculidae*. In: JUNK W. & SCHENKLING S. (eds.): *Coleopterorum Catalogus*. Berlin: W. Junk, 80 pp.
- BORCHMANN F. 1925: Neue Heteromeren aus dem Malayischen Gebiete. *Treubia* 6: 329-354.
- BORCHMANN F. 1932: Die Alleculiden-fauna der Philippinen. *The Philippine Journal of Science* 48: 305-381.
- BORCHMANN F. 1942: Entomological Results from the Swedish Expedition 1934 to Burma and British India. Coleoptera: Lagriidae und Alleculidae. Gesammelt von René Malaise. *Arkiv för Zoologi* 33A (9): 1-32.
- CAMPBELL J. M. 1965: A revision of the genus *Charisius* (Coleoptera: Alleculidae). *The Coleopterist's Bulletin* 19: 43-56.
- CAMPBELL J. M. & MARSHALL J. D. 1965: The ocular index and its application to the taxonomy of the Alleculidae (Coleoptera). *The Coleopterist's Bulletin* 18: 42.
- FAIRMAIRE L. 1896: Note XII. Coléoptères de l'Inde boréale, Chine et Malaise. *Notes from the Leyden Museum* 18: 81-129.
- MAŘÁN J. 1940: Dva nové druhy rodu *Alleculodes* Borch. (Coleoptera: Alleculidae). [Duae novae species generis Alleculodes Borch. (Coleoptera: Alleculidae)]. *Sborník Entomologického Oddělení Národního Muzea v Praze* 18: 155-157.
- NAKANE T. 1968: New or little-known Coleoptera from Japan and its adjacent regions. *Fragmenta Coleopterologica* 27 (21): 83-85.
- NOVÁK V. & PETTERSSON R. 2008: *Alleculidae*, pp. 319-339. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic Coleoptera, Vol. 5. Tenebrionoidea*. Stenstrup: Apollo Books, 670 pp.
- PIC M. 1910: Coléoptères exotiques nouveaux ou peu connus (Suite). *L'Échange, Revue Linnéenne* 26: 94-95.
- PIC M. 1915: Descriptions abrégées diverses. *Mélanges Exotico-entomologiques* 12: 3-20.
- PIC M. 1936a: Nouveautés diverses. *Mélanges Exotico-entomologiques* 68: 10-36.
- PIC M. 1936b: Coléoptères nouveaux de la presqu'île Malaise et de Borneo. *Journal of the Federated Malay States Museums* 18: 167-172.
- PIC M. 1944: Opuscula martialis. *L'Echange, Revue Linnéenne, Numéro spécial* 12: 1-16.



Figs 1-10: 1-6. *Bolbostetha analis* (Borchmann, 1932): 1- habitus of male; 2- anterior tibia of male; 3- ultimate abdominal sternit of male; 4- punctuation of pronotum and elytra; 5- aedeagus, dorsal view; 6- aedeagus, lateral view. 7-10. *Allecula angustiformis* (Pic, 1944) comb. n.: 7- habitus; 8- maxillary palpus; 9- antennomeres (1-5); 10- anterior tarsomeres.



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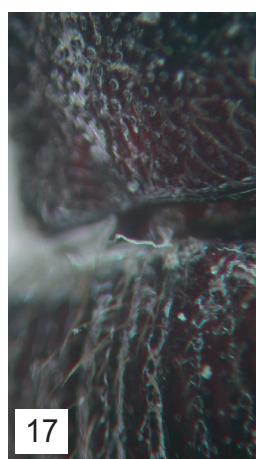
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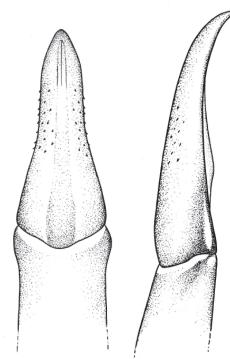
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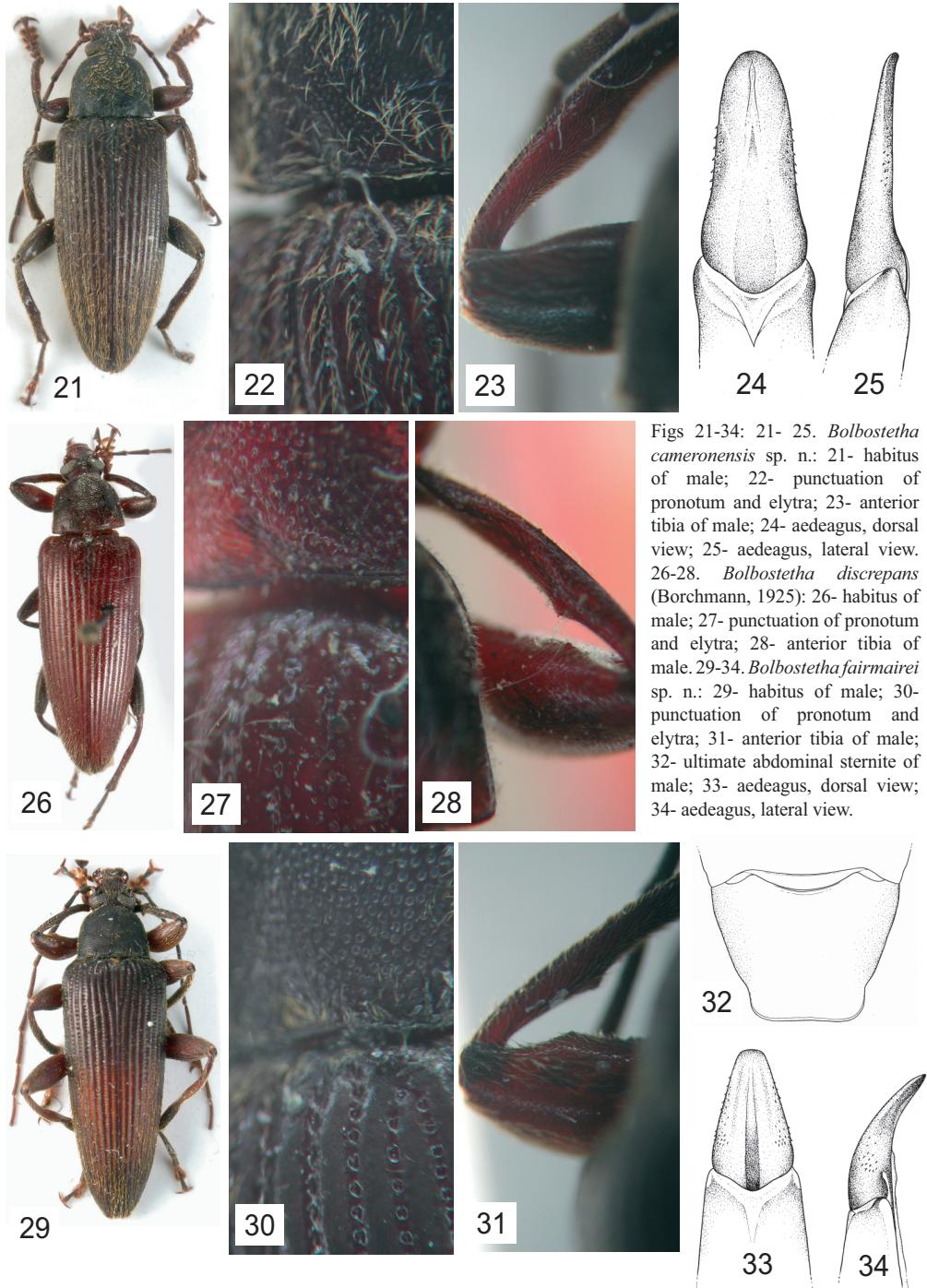


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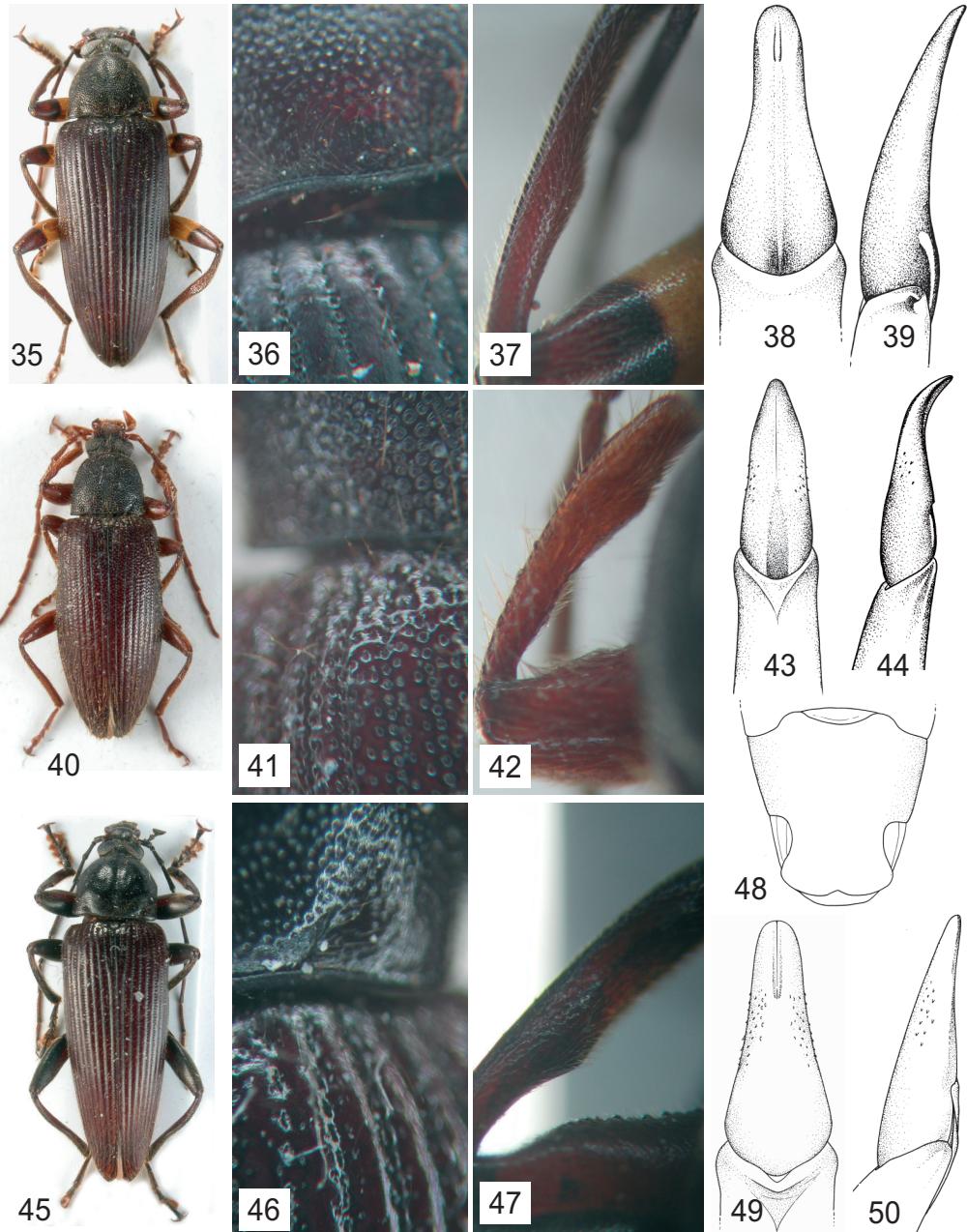


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Figs 21-34: 21- 25. *Bolbostetha cameronensis* sp. n.: 21- habitus of male; 22- punctuation of pronotum and elytra; 23- anterior tibia of male; 24- aedeagus, dorsal view; 25- aedeagus, lateral view. 26-28. *Bolbostetha discrepans* (Borchmann, 1925): 26- habitus of male; 27- punctuation of pronotum and elytra; 28- anterior tibia of male. 29-34. *Bolbostetha fairmairei* sp. n.: 29- habitus of male; 30- punctuation of pronotum and elytra; 31- anterior tibia of male; 32- ultimate abdominal sternite of male; 33- aedeagus, dorsal view; 34- aedeagus, lateral view.



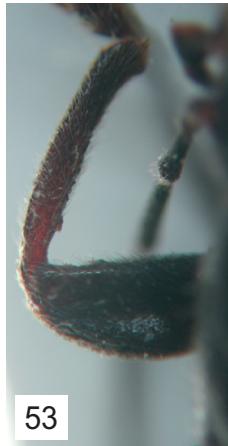
Figs 35-50: 35-39. *Bolbostetha genualis* Borchmann, 1925: 35- habitus of male; 36- punctuation of pronotum and elytra; 37- anterior tibia of male; 38- aedeagus, dorsal view; 39- aedeagus, lateral view. 40-44. *Bolbostetha glos* (Borchmann, 1925): 40- habitus of male; 41- punctuation of pronotum and elytra; 42- anterior tibia of male; 43- aedeagus, dorsal view; 44- aedeagus, lateral view. 45-50. *Bolbostetha jakli* sp. n.: 45- habitus of male; 46- punctuation of pronotum and elytra; 47- anterior tibia of male; 48- ultimate abdominal sternite of male; 49- aedeagus, dorsal view; 50- aedeagus, lateral view.



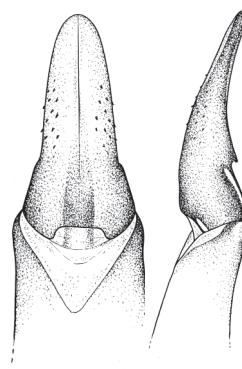
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Figs 51-61: 51-55. *Bolbostetha klausii* sp. n.: 51-habitus of male; 52- punctuation of pronotum and elytra; 53- anterior tibia and femora of male; 54-aedeagus, dorsal view; 55- aedeagus, lateral view. 56, 57. *Bolbostetha latipes* (Borchmann, 1925): 56- habitus; 57- punctuation of pronotum and elytra. 58, 59. *Bolbostetha longicornis* Pic, 1915: 58- habitus; 59- punctuation of pronotum and elytra. 60, 61. *Bolbostetha major* Pic, 1936: 60- habitus; 61- punctuation of pronotum and elytra.



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Figs 62-73: 62-64. *Bolbostetha malangana* Pic, 1936: 62-habitus of male; 63-punctuation of pronotum and elytra; 64-anterior tibia of male. 65, 66. *Allecula maxima* Pic, 1910: 65- habitus; 66- antennomeres (1-5). 67, 68. *Bolbostetha neptis* (Borchmann, 1925): 67- habitus; 68- punctuation of pronotum and elytra. 69-73. *Bolbostetha oliveri* sp. n.: 69- habitus of male; 70- punctuation of pronotum and elytra; 71- anterior tibia of male; 72- aedeagus, dorsal view; 73- aedeagus, lateral view.



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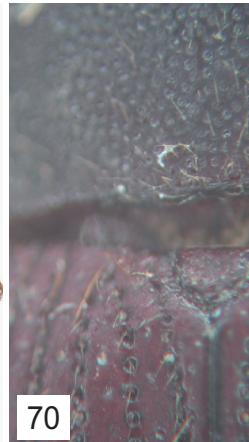
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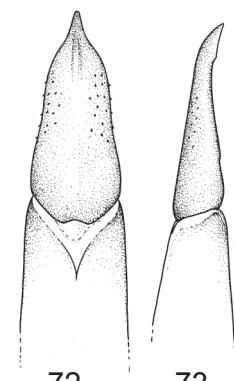
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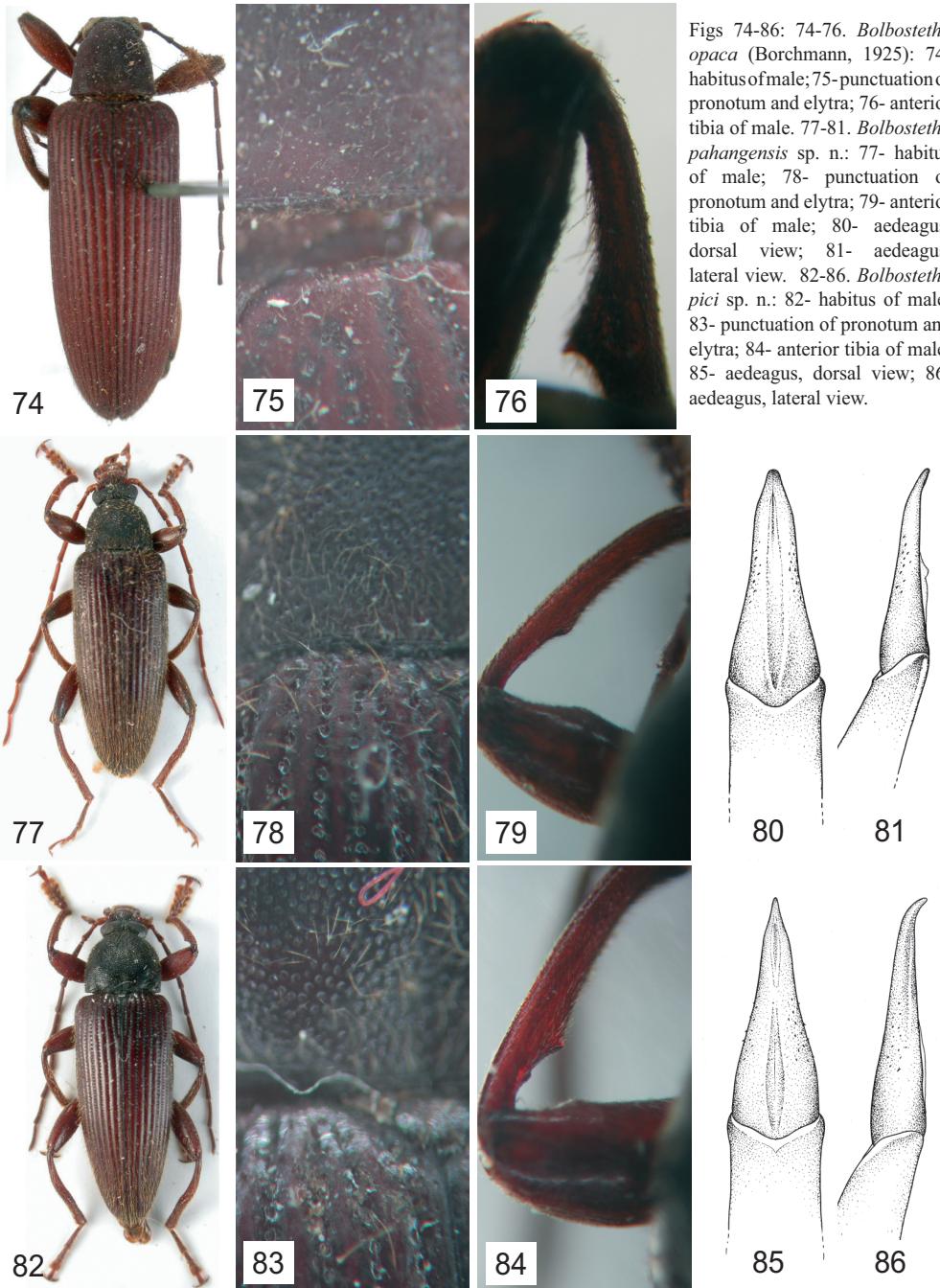


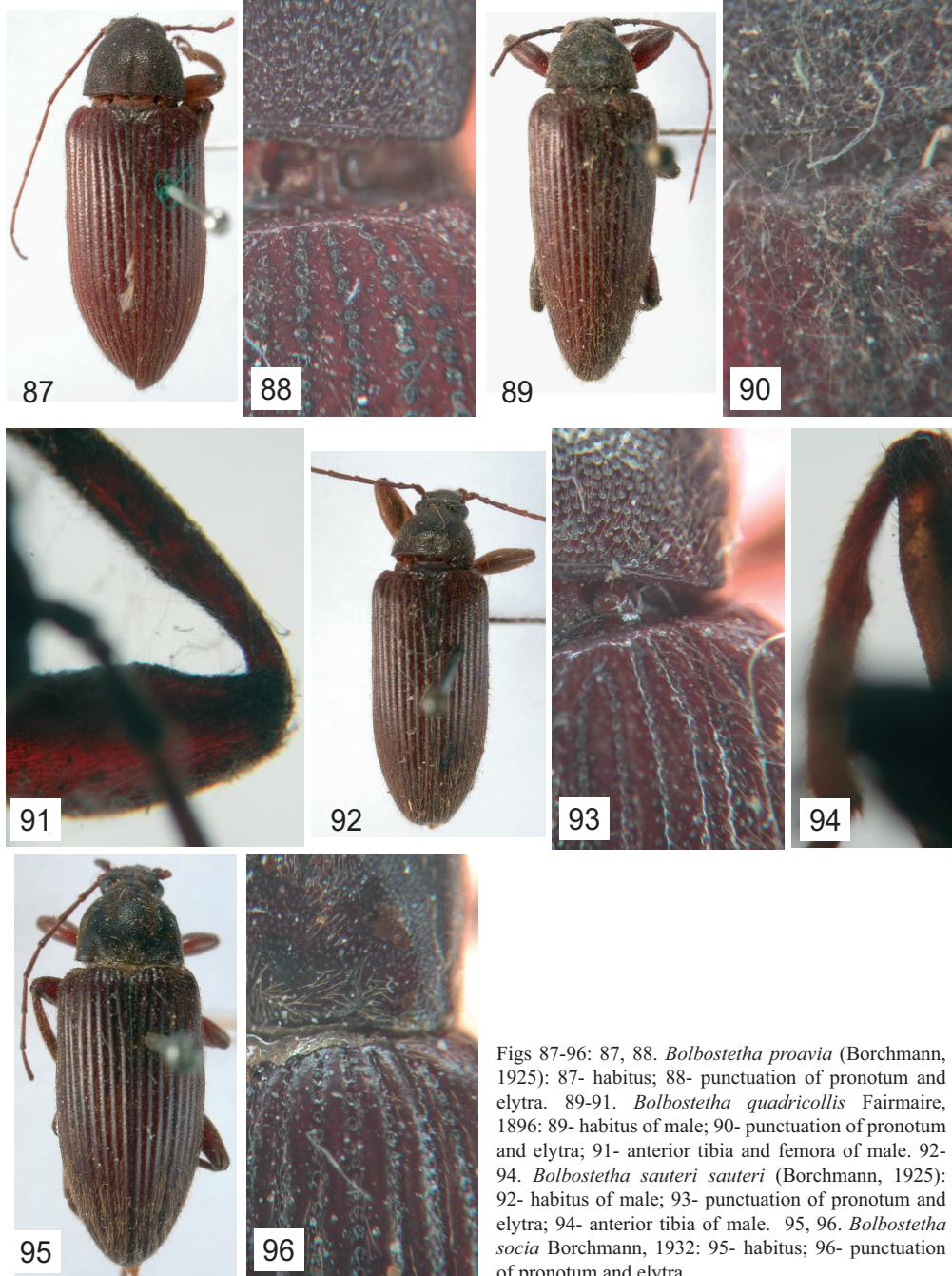
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Figs 87-96: 87, 88. *Bolbostetha proavia* (Borchmann, 1925); 87- habitus; 88- punctuation of pronotum and elytra. 89-91. *Bolbostetha quadricollis* Fairmaire, 1896; 89- habitus of male; 90- punctuation of pronotum and elytra; 91- anterior tibia and femora of male. 92-94. *Bolbostetha sauteri sauteri* (Borchmann, 1925); 92- habitus of male; 93- punctuation of pronotum and elytra; 94- anterior tibia of male. 95, 96. *Bolbostetha socia* Borchmann, 1932: 95- habitus; 96- punctuation of pronotum and elytra.



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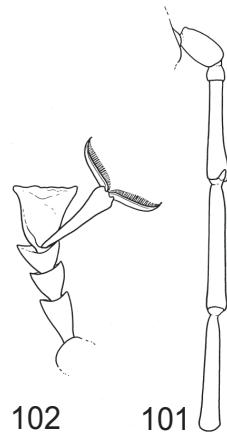
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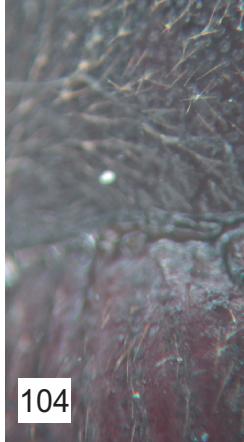
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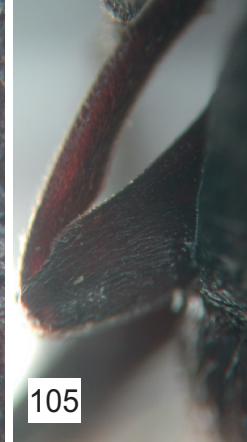
Figs 97-107: 97-99. *Bolbostetha soleata* Fairmaire, 1896: 97- habitus of male; 98- punctuation of pronotum and elytra; 99- anterior tibia of male. 100-102. *Allecula subensellata* (Pic, 1936) comb. n.: 100- habitus of male; 101- antennomeres (1-5); 102- anterior tarsomeres. 103-107. *Bolbostetha tazi* sp. n.: 103- habitus of male; 104- punctuation of pronotum and elytra; 105- anterior tibia of male; 106- aedeagus, dorsal view; 107- aedeagus, lateral view.



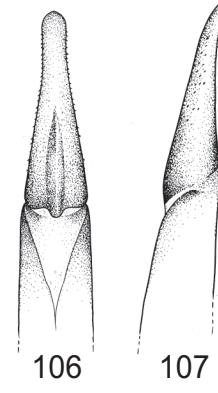
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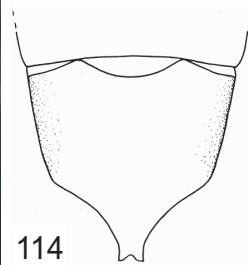
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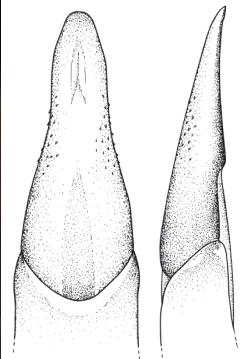
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Figs 108-116: 108-110. *Bolbostetha uniserialatus* (Mařan, 1940) comb. n.: 108- habitus of male; 109- punctuation of pronotum and elytra; 110- anterior tibia of male. 111-116. *Bolbostetha varus* (Borchmann, 1925): 111- habitus of male; 112- punctuation of pronotum and elytra; 113- anterior tibia of male; 114- ultimate abdominal sternite of male; 115- aedeagus, dorsal view; 116- aedeagus, lateral view.