

Three new species of the genus *Asticostena* Fairmaire, 1897 (Coleoptera: Tenebrionidae: Alleculinae) from India

Vladimír NOVÁK

District Museum Prague – East, Masarykovo nám. 97, CZ-250 01,
Brandýs nad Labem; e-mail: novak@ompv.cz

Taxonomy, new species, Coleoptera, Tenebrionidae, Alleculinae, *Asticostena*, India

Abstract. *Asticostena karanatakaensis* sp. n., *A. keralaensis* sp. n. and *A. sulphurea* sp. n. from India are described, keyed and illustrated. Three new species were compared and keyed with the type material of the species *Asticostena alternata* Fairmaire, 1897; *A. andrewesi* Borchmann, 1937; *A. basicornis* Borchmann, 1929; *A. cognata* Borchmann, 1937; *A. niemeyeri* Borchmann, 1937.

INTRODUCTION

Fairmaire (1897) has described new tenebrionid genus *Asticostena* and the species *Asticostena alternata* from India. It differs from widely distributed near genus *Allecula* Fabricius, 1801 mainly by broader mesosternum and by the third antennomere, only slightly shorter than the fourth antennomere. Body usually long and narrow; antennomeres from the third very long and narrow. Relatively a few species of this genus have been described mainly from the territory of India. *Asticostena pallidicolor* was described by Pic (1909); *A. basicornis* has been described from Java by Borchmann (1929); *A. andrewesi*, *A. cognata*, and *A. nilgiriensis* were described from Nilgiri Hills, *A. niemeyeri* from Carin Chebá by Borchmann (1937).

South Indian material was collected during the year 1999 by Z. Kejval and M. Trýzna. In this paper new species *Asticostena karanatakaensis*, *A. keralaensis* and *A. sulphurea* are described, illustrated and keyed.

MATERIAL AND METHODS

Material and new species from South India were examined and compared with type material from Borchmann collection (deposited in Zoologisches Institut und Zoologisches Museum der Universität Hamburg). Loaning material were species: *Asticostena alternata*, *A. andrewesi*, *A. basicornis*, *A. cognata*, *A. nilgiriensis*, *A. niemeyeri*.

Two important quotients are used for description of species of subfamily Alleculinae – „Ocular index“ dorsally (Campbell & Marshall, 1964) is calculated by measuring minimum distance between the eyes and dividing this value by the maximum dorsal width across eyes. The quotient resulting from this division is then converted into an index by multiplying by 100. „Pronotal index“ (Campbell, 1965) expresses the ratio of the length of pronotum along the midline to the width at the basal angles. This ratio is multiplied by 100 for convenience in handling.

Specimens of presently described species are provided with one red label printed: „*Asticostena*

karanatakaensis sp. n. or *Asticostena keralaensis* sp. n. or *Asticostena sulphurea* sp. n.
HOLOTYPUS or PARATYPUS V. Novák det. 2005.

The following abbreviations are used in the paper:

DHBC collection David Hauck, Brno, Czech Republic
VNPC collection Vladimír Novák, Prague, Czech Republic

KEY TO THE SPECIES

- | | | |
|----|--|--|
| 1 | elytra unicolorous | 2 |
| - | elytra bicolorous, almost with light and dark intervals | 4 |
| 2 | no whole antennomere dark blackish brown, abdomen universally unicolorous | 3 |
| - | antennomeres from the second to the fourth dark blackish brown, other antennomeres light brown, three latest abdominal sternites distinctly darker | <i>A. basicornis</i> Borchmann, 1929 |
| 3 | from yellowish to redish light brown, apex of femora and tarsi partly brown, third, fifth and seventh elytral intervals wider than others | <i>A. pallidicolor</i> Pic, 1909 |
| 4 | elytra with light and dark intervals | 6 |
| - | only elytral base with transverse, narrow and dark strip, eventually elytral suture narrow dark, antennomeres from the second to the fifth dark blackish brown | 5 |
| 5 | elytral base without transverse strip. Elytra light brown with darker suture. | <i>A. cognata</i> Borchman, 1937 |
| - | elytral base transverse strip dark blackish brown, broader than scutellum, scutellum distinctly lighter, elytral suture up to two thirds its length from base dark blackish brown, punctures of elytral striae smaller, elytra, pronotum and underside of body sulphuric yellow, antennomeres from the second to the fifth dark brownish black, antennomeres from the sixth to the eleventh lighter, but distinctly darker than elytra | <i>A. sulphurea</i> sp. n. |
| 6 | first elytral interval and elytral suture dark | 7 |
| - | first elytral interval and elytral suture light yellowish brown; elytral intervals second, fourth, sixth and eighth dark brown as colour as legs; antennomeres on apex darker | <i>A. alternata</i> Fairmaire, 1897 |
| 7 | first and second, eventually ninth elytral intervals dark | 8 |
| - | elytral intervals first and second, further each even elytral interval dark, elytra striped | 10 |
| 8 | punctures of elytral striae smaller | 9 |
| - | punctures of elytral striae large and coarse, each inside of great, transverse, oval spots, underside of body dark brownish black, first and second abdominal sternite on apex with light, narrow and transverse strip; apex of femora darker | <i>A. niemeyeri</i> Borchmann, 1937 |
| 9 | underside of body dark brownish black, thorax with narrow, longitudinal and light strip up pronotum side margin, pronotum and elytra with long and dense light setation | <i>A. nilgiriensis</i> Borchmann, 1937 |
| - | metathorax and abdomen darker blackish brown, prothorax and mesothorax lighter, third and fifth abdominal sternite with very narrow and light transverse strip on apex, pronotum and elytra with sparse short light setation | <i>A. karanatakaensis</i> sp. n. |
| 10 | only third and seventh elytral intervals complete light yellowish brown, antennomeres and femora on apex narrowly darker | <i>A. keralaensis</i> sp. n. |
| - | from third elytral interval each odd interval light yellowish brown, legs and antennae universally unicolorous light | <i>A. andrewesi</i> Borchmann, 1937 |

DESCRIPTIONS

Asticostena karanatakaensis sp. n.

(Figs 1-2, 7, 10, 13, 16-17)

Type material. Holotype (♂) labelled: „S-INDIA, Karanataka state, Coorg. Distr., 10 km SE of VIRAJPET, near road Virajpet-Cannanore, 75° 46' E, 12° 06' N, 500-900 m, 5.-7.vi.1999, Z. Kejval & M. Trýzna lgt.“ (VNPC); Paratypes (5 ♂♂ 2 ♀♀): „same data as holotype“ (DHBC, VNPC); (1 ♂): „S-INDIA, Karanataka state, COORG Distr., NE of Virajpet, 75° 50' E, 12° 13' N,

cca 500 m, 4.-8.vi.1999, Z. Kejval & M. Trýzna lgt.“ (VNPC).

Description of holotype. Elongate; bicolorous, light yellowish brown and dark brown; body length 11.26 mm; 3.76 times longer its width; widest near elytral half.

Head (Fig. 7). Larger, light yellowish brown, basal part somewhat darker, with short light setation, apical part and clypeus with long light setae. Width across eyes approximately 0.73 of pronotal base width. Head length (visible part) 1.73 mm; broadest across eyes 1.62 mm. Ratio L/W (length/most width) 1.07. Eyes large, transverse, dark, strongly cut out, space between eyes very narrow. Ocular index 11.39. Mandibles light yellowish brown, apical end dark. Surface of basal part of head with shallow and clear punctation, apical part and clypeus devoid of conspicuous punctation. Head with fine microsculpture, rather matt.

Antennae. Universally light yellowish brown, matt, very narrow and long. Length 9.10 mm; reaching up 0.81 of body length. Antennomeres with short light setation, on apical top with longer light setae. Second antennomere shortest, first antennomere broadest, fourth antennomere longest. Antennomeres from fourth to ninth longer than antennomere third. Ratio of relative lengths of antennomeres from base to apex as follows: 0.51: 0.21: 1.00: 1.40: 1.22: 1.29: 1.31: 1.23: 1.19: 0.98: 0.92. Ratio L/W (length/most width) of antennomeres from base to apex as follows: 1.69: 1.38: 5.97: 9.20: 6.47: 6.47: 9.27: 8.71: 8.41: 7.52: 7.00.

Maxillary palpus (Fig. 13). Light yellowish brown, ultimate palpomere somewhat darker, with light longer setation. Second palpomere relatively narrow, slightly broader on apex; penultimate palpomere slightly triangular, conspicuously broader on apex; ultimate palpomere broadly triangular. Ratio of relative lengths of palpomeres from second to fourth from base to apex as follows: 1.23: 1.00: 1.65. Ratio L/W (length/most width) of palpomeres from second to fourth from base to apex as follows: 2.56: 1.61: 0.95.

Pronotum (Fig. 7). Nearly quadratic, light yellowish brown, margins darker, matt, with short, dense light setation, narrower than elytra. Longest through the middle; length 1.89 mm; widest at base 2.21 mm. Pronotal index 82.88. Margins darker, conspicuous and complete at all sides. Base clearly cut out in outer third, posterior angles perpendicular with rounded tip. In basal half sides parallel, in apical half regularly rounded, anterior angles rounded, not clearly conspicuous. Surface punctated, punctures medium size, circular, deep and relatively dense, interspaces with fine microsculpture, matt. Underside of thorax matt, dark brown, near pronotum narrowly yellowish brown. Setation short and light, punctuation relatively dense.

Elytron (Fig. 10). Two coloured, light yellowish brown, base, margins, first two and latest elytral intervals between stries dark brown (in basal part near base dark spot reaching up to fourth elytral interval; apical part without dark spot). Covered with longer light setation, setae directed backwards. Elytral length 7.64 mm; widest near elytral half 2.99 mm. Elytra 2.55 times longer its width. Elytra parallel from base up to two third its length. Punctures in stries clearly conspicuous, relatively large, punctures diameter larger than its interspaces; diameter in stries, larger than diameter of pronotums punctures. Intervals between stries with very fine microsculpture, matt, with sparse and very small, shallow punctures. Elytral epipleura dark brown, with longer light setae, sparsely, longely rugulose; in basal half regularly narrowed, in apical half runs parallel.

Legs. Long, light yellowish brown; with longer light setation. Femora strong, anterior femora inside angled; tibia very narrow; mesotibia slightly rounded. Protarsal tarsomeres from first to

fourth nearly transverse, broader than mesotarsal and metatarsal tarsomeres. Penultimate tarsomeres of all tarsi with membranous lobes. Ratio of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.70: 0.89: 1.11: 1.39; mesotarsus: 1.00: 0.69: 0.73: 0.83: 1.05; metatarsus: 1.00: 0.42: 0.59: 0.78.

Anterior tarsal claws both with 45 teeth.

Ventral side of body. Dark, brownish black, with shorter light setation. Setation of middle of mesothorax, metathorax and abdominal sternites from first to third denser; setation of episternums of mesothorax and metathorax, sides of mesothorax and metathorax and abdominal sternites fourth and fifth sparser. Episternums of mesothorax and metathorax and sides of metathorax with medium sized, sparser punctures, interspaces shining. Abdominal sternites without clearly conspicuous punctation, with fine microsculpture, more matt.

Genitalia (Figs 16, 17). Light yellowish brown. Apical part of genitalia triangular with rounded apex; sides of apex with a few small dentiform setae.

Basal part of genitalia at apical and basal pice rounded, in middle linear. Ratio of relative lengths of apical part to basal part 1: 2.90.

Male (Figs 1, 7, 16, 17). Anterior tarsal claws both with 45 teeth.

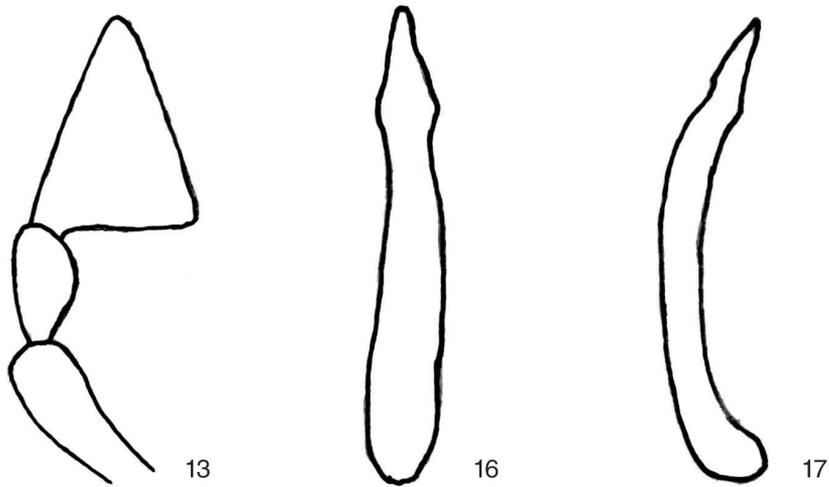
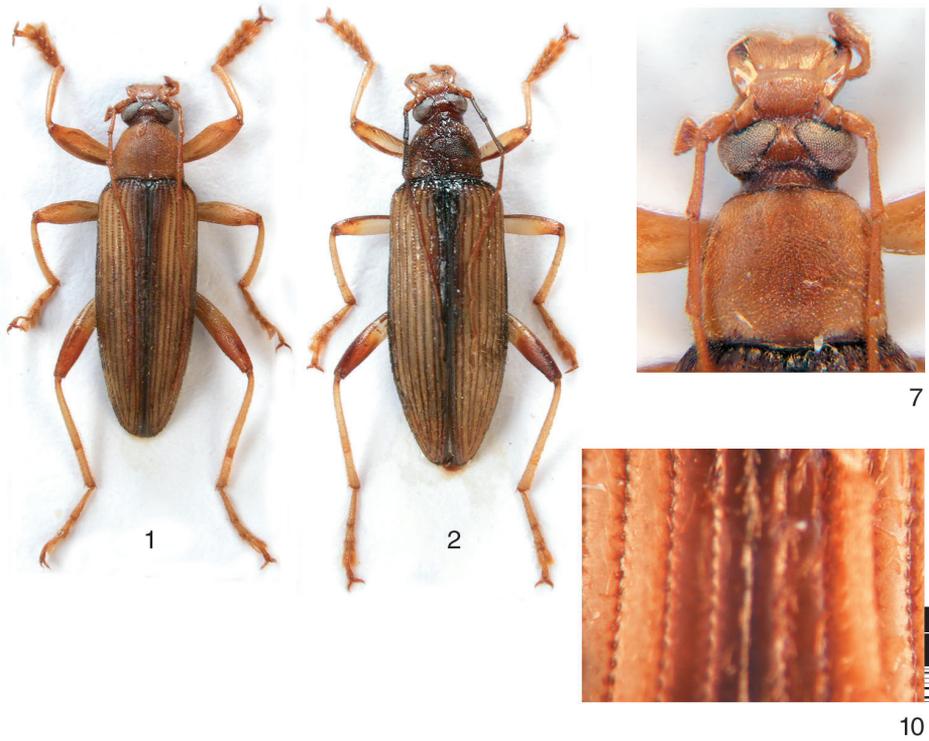
7 males: length: 12.26 mm approximately (ranging from 11.26 to 13.24 mm); head length 1.94 mm approximately (ranging from 1.73 to 2.04 mm); head width 1.68 mm approximately (ranging from 1.57 to 1.82 mm). Ocular index approximately 12.59 (ranging from 9.98 to 14.93). Pronotal length (in middle) 2.02 mm approximately (ranging from 1.89 to 2.22 mm); pronotal width at base 2.31 mm approximately (ranging from 2.21 to 2.41 mm). Pronotal index approximately 85.84 (ranging from 82.21 to 87.92). Elytral length 8.30 mm approximately (ranging from 7.64 to 8.98 mm). Elytral width 3.23 mm approximately (ranging from 2.99 to 3.50 mm).

Female (Fig. 2). Anterior tarsal claws both with 13 teeth.

Ratio of relative lengths of antennomeres from base to apex as follows: 0.43: 0.16: 1.00: 1.36: 1.20: 1.28: 1.37: 1.11: 1.09: 1.00: 0.91. Ratio L/W (length/most width) of antennomeres from base to apex as follows: 1.84: 1.15: 5.60: 7.60: 6.70: 6.94: 8.46: 6.44: 6.73: 7.36: 7.63. Ratio of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.84: 1.02: 1.15: 1.39; mesotarsus: 1.00: 0.77: 0.85: 1.02: 1.42; metatarsus: 1.00: 0.45: 0.61: 0.76.

2 females: length 12.63 mm approximately (ranging from 12.14 to 13.12 mm); head length 1.97 mm approximately (ranging from 1.91 mm to 2.03 mm); head width 1.71 mm approximately (ranging from 1.63 to 1.78 mm). Ocular index 18.85 approximately (ranging from 18.21 to 19.49). Pronotal length (in middle) 1.92 mm approximately (ranging from 1.80 to 2.04 mm); pronotal width at base 2.44 mm approximately (ranging from 2.33 to 2.54 mm). Pronotal index 78.78 approximately (ranging from 77.06 to 80.50). Elytral length 8.74 mm approximately (ranging from 8.43 to 9.05 mm). Elytral width 3.64 mm approximately (ranging from 3.46 to 3.81 mm).

Name derivation. Named after the name of type locality (Indian state – Karnataka).



Figs: *Asticostena karanatakaensis* sp. n.: 1- Habitus of male (Holotype); 2- Habitus of female; 7- Head and pronotum (Holotype); 10- Punctuation of elytron; 13- Maxillary palpus; 16- Male genitalia from dorsal view; 17- Male genitalia from lateral view.)

Asticostena keralaensis sp. n.

(Figs 3-4, 8, 11, 14, 18-19)

Type material. Holotype (♂) labelled: „S-INDIA, Kerala state, Kallar env., 30 km NE of Trivandrum, valley of riv. Kallar, 77° 05' E, 8° 45' N, ca 300-500 m, 7.-13.v.1999, Z. Kejval & M. Trýzna leg.“ (VNPC); Paratypes (1 ♂): „same data as holotype“ (DHBC); (2 ♀♀): „S-INDIA, Kerala state, Ponmudi hill resort, 30 km NE of Trivandrum, 77° 06' E, 8° 46' N, ca 1300-1500 m, 7.-13.v.1999, Z. Kejval & M. Trýzna leg.“ (DHBC, VNPC).

Description of holotype. Elongate; bicolorous, light yellowish brown and dark brown. Body length 12.37 mm; 3.58 times longer its width; widest near elytral half.

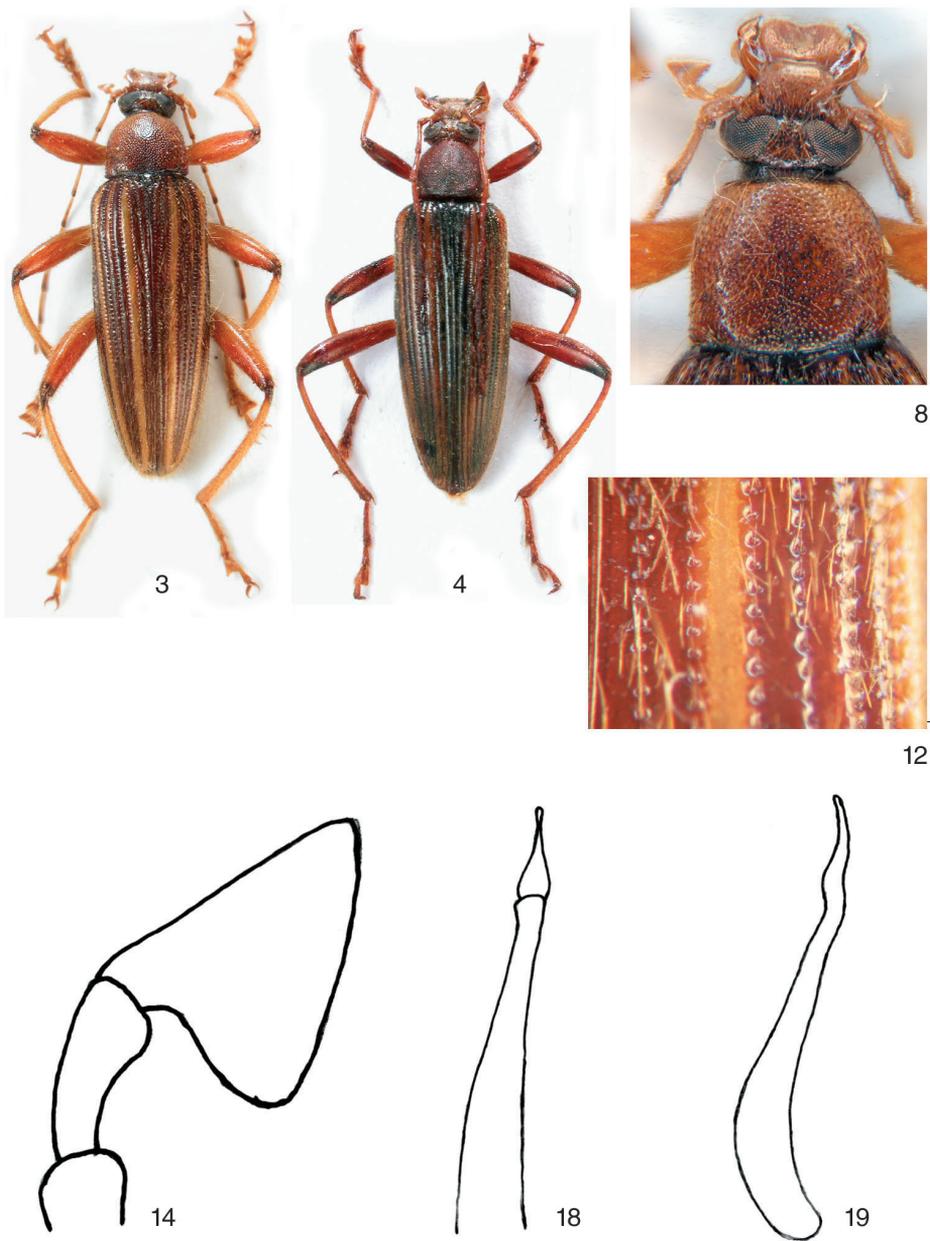
Head (Fig. 8). Larger, light brown, basal part somewhat darker, with long light setation. Width across eyes approximately 0.70 of pronotal base width. Head length (visible part) 1.73 mm; broadest across eyes 1.77 mm. Ratio L/W (length/most width) 0.98. Eyes large, dark, transverse, strongly cut out, space between eyes relatively narrow. Ocular index 24.55. Mandibles strong, with dark brown tip. Punctuation not dense, shallow and not clearly conspicuous, only vertex with denser, larger and coarse punctures; space between punctures with fine microsculpture, more matt; mandibles shining.

Antennae. Longer, narrow, bicolorous. Antennomeres slightly shining, light yellowish brown, on apex narrowly darker brown. Length (antennomeres 1-10) 8.94 mm; reaching up 0.72 of body length. Antennomeres with light setation and fine microsculpture. Second antennomere shortest, first antennomere broadest, fourth antennomere longest. Antennomeres from fourth to tenth longer than antennomere third, their lengths approximately equal. Ratio of relative lengths of antennomeres (1-10) from base to apex as follows: 0.56: 0.36: 1.00: 1.37: 1.25: 1.29: 1.28: 1.24: 1.25: 1.24. Ratio L/W (length/most width) of antennomeres (1-10) from base to apex as follows: 2.00: 2.03: 7.40: 7.70: 6.60: 8.24: 8.78: 7.42: 7.96: 8.49.

Maxillary palpus (Fig. 14). Light yellowish brown, with light setation. Palpomeres second and third with longer setae. Second palpomere long, narrow, slightly broader on apex; penultimate palpomere shorter, distinctly broader on apex, slightly triangular; ultimate palpomere broadly triangular; broadest on apex, slightly transverse. Ratio of relative lengths of palpomeres from second to fourth from base to apex as follows: 1.49: 1.00: 1.41. Ratio L/W (length/most width) of palpomeres from second to fourth from base to apex as follows: 2.84: 1.81: 0.81.

Pronotum (Fig. 8). Nearly quadratic, narrower than elytra, light brown, apical part lighter, margins distinctly darker. Setation on disk sparse and light, near margins setae darker and denser. Length 2.18 mm; broadest at base 2.55 mm. Pronotal index 85.74. Margins distinctly darker, complete at all sides. Base not conspicuously cut out in outer third; against scutellum linear. Posterior angles right, with a rounded tip, in basal half sides parallel, in apical half regularly rounded. Anterior angles very slightly conspicuous. Punctuation relatively dense, punctures medium sized, slightly coarse, inside with microsculpture; interspaces with fine granulation, shining. Underside of thorax brown with sparse light setation, punctuation not dense, punctures medium sized.

Elytron (Fig. 11). Bicolorous, brown, third and seventh complete and part of fifth and ninth elytral intervals light yellowish brown, margins brown. Covered with relatively dense, long light setation. Elytral length 8.46 mm; widest near elytral half 3.46 mm. Elytra 2.44 times longer than



Figs: *Asticostena keralaensis* sp. n.: 3- Habitus of male (Holotype); 4- Habitus of female; 8- Head and pronotum (Holotype); 11- Punctuation of elytra; 14- Maxillary palpus; 18- Male genitalia from dorsal view; 19- Male genitalia from lateral view.)

wide. Elytra parallel from base up to two third its length. Punctures in rows clearly conspicuous, large, deep and coarse, close together, interspaces between punctures in striae narrow; punctures diameter larger than interspaces diameter. Intervals between striae with small sparse and shallow punctures and very fine microsculpture, shining. Elytral epipleura well developed, dark brown, with longer light setation; in basal half regularly narrowed, in apical half runs parallel. Basal half large, relatively sparse punctures present. Apical half from first abdominal sternite devoid of large punctures.

Legs. Long, light yellowish brown, only narrow ring on apical part of femora and basal part of tibia darker – brown. Entire legs covered with long, dense, light setation. Femora strong, tibia narrow, broadest and slightly rounded on apex. Protarsal tarsomeres from second to fourth, mesotarsal tarsomeres third and fourth and metatarsal tarsomere third broader than others, but not transverse. Penultimate tarsomere of each tarsi with membranous lobes. Ratio of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.52: 0.57: 0.85: 1.49; mesotarsus: 1.00: 0.31: 0.40: 0.60: 1.09; metatarsus: 1.00: 0.45: 0.47: 0.93.

Anterior tarsal claws both with 45 teeth.

Ventral side of body. Universally dark brownish black with longer and relatively denser, light setation. Abdominal segments with small, shallow and relatively sparse punctures, on sides of abdominal sternite fourth and fifth punctures slightly larger. Sides of abdominal sternites from first to third longitudinally rugose. Abdomen and metasternum with very fine microsculpture, shining. Mesosternum more matt; punctures shallow and not clearly conspicuous. Punctures of metasternum in middle denser, near sides punctures larger and not so dense. Episternums of mesothorax and metathorax with sparse larger punctures.

Genitalia (Figs 18, 19). Light yellowish brown, apical part slightly darker. Apical part of genitalia slightly rounded, basal part of genitalia at basal part rounded, on apical part linear. Apical part of genitalia on apex from both sides with small rounded tip (outgrowth). Ratio of length of apical part to basal part 1: 3.19.

Male (Figs 3, 8, 18, 19). Anterior tarsal claws both with 45 teeth.

2 males: length 12.37 mm approximately (ranging from 12.37 to 12.57 mm); head length 1.82 mm approximately (ranging from 1.73 to 1.91 mm); head width 1.74 mm approximately (ranging from 1.71 to 1.77 mm). Ocular index approximately 22.04 (ranging from 19.52 to 24.55). Pronotal length (in middle) 2.14 mm approximately (ranging from 2.10 to 2.18 mm); pronotal width at base 2.43 mm approximately (ranging from 2.31 to 2.55 mm). Pronotal index approximately 88.21 (ranging from 85.74 to 90.68). Elytral length 8.50 mm approximately (ranging from 8.46 to 8.53 mm). Elytral width 3.38 mm approximately (ranging from 3.29 to 3.46 mm).

Female (Fig. 4). Anterior tarsal claws both with 14 teeth.

Ratio of relative lengths of antennomeres from base to apex as follows: 0.41: 0.20: 1.00: 1.05: 0.93: 0.95: 0.92: 0.87: 0.84: 0.77: 0.95. Ratio L/W (length/most width) of antennomeres from base to apex as follows: 1.92: 1.44: 6.08: 5.19: 5.06: 6.50: 6.00: 5.96: 5.30: 5.25: 6.50. Ratio of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.51: 0.70: 0.91: 1.54; mesotarsus: 1.00: 0.50: 0.53: 0.64: 1.11; metatarsus: 1.00: 0.50: 0.46: 0.62.

2 females: length 14.37 mm approximately (ranging from 13.25 to 15.49 mm); head length 2.29 mm approximately (ranging from 2.21 mm to 2.36 mm); head width 1.89 mm approximately (ranging from 1.73 to 2.05 mm). Ocular index 22.30 approximately (ranging from 22.23

to 22.36). Pronotal length (in middle) 2.21 mm approximately (ranging from 1.98 to 2.43 mm); pronotal width at base 2.49 mm approximately (ranging from 2.21 to 2.76 mm). Pronotal index 88.84 approximately (ranging from 88.15 to 89.53). Elytral length 10.01 mm approximately (ranging from 9.29 to 10.72 mm). Elytral width 3.83 mm approximately (ranging from 3.41 to 4.24 mm).

Name derivation. Named after the name of type locality (Indian state – Kerala).

Asticostena sulphurea sp. n.

(Figs 5-6, 9, 12, 15, 20-21)

Type material. Holotype (♂) labelled: „S-India, Karnatake state, COORG distr., NE of Virajpet, 75° 50' E; 12° 13' N; 500 m, 4.-8.vi.1999, Z. Kejval & M. Trýzna lgt.“ (VNPC); Paratypes (2 ♀♀): „same data as holotype“ (DHBC, VNPC).

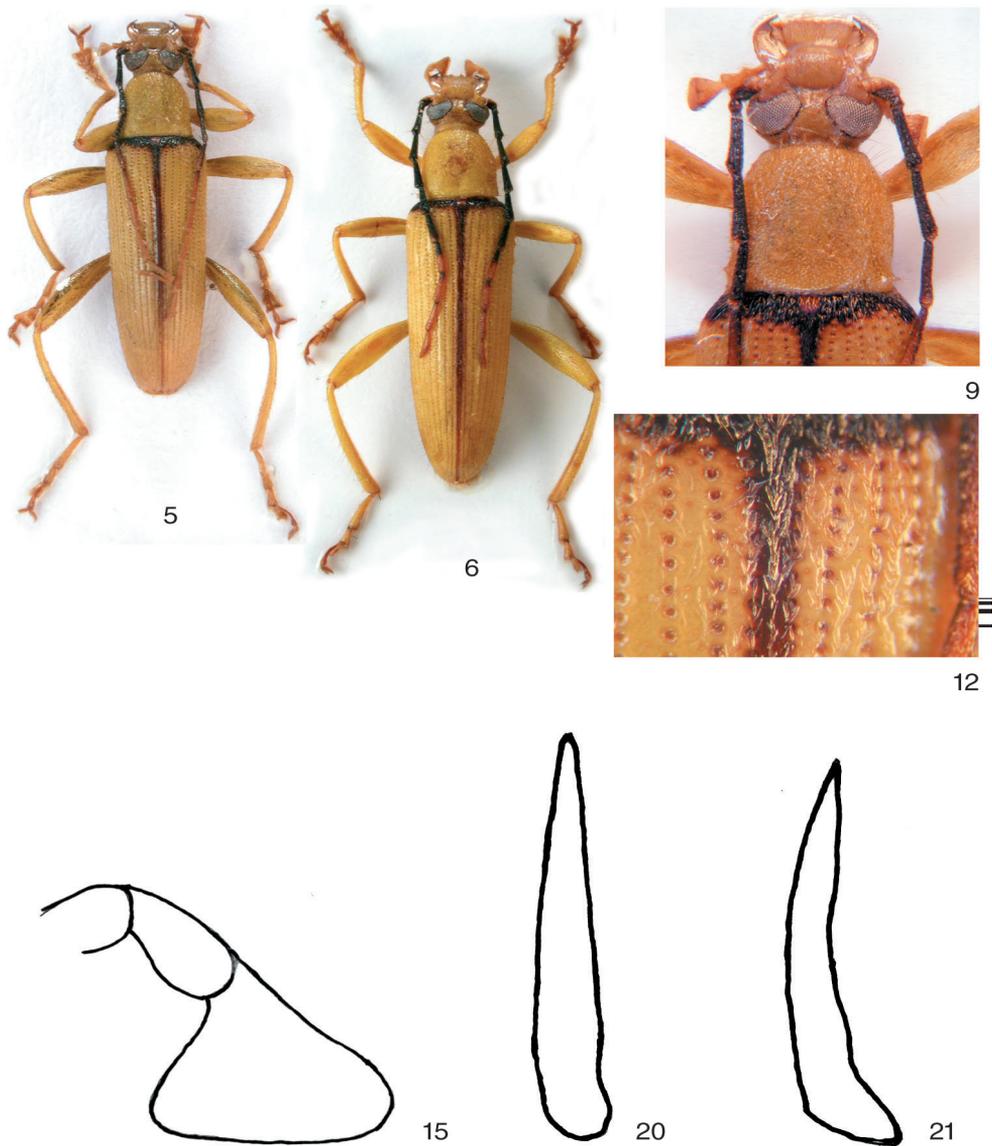
Description of holotype. Elongate, narrow, body length 11.98 mm; 4.18 times longer its width; broadest near elytral half.

Head (Fig. 9). Larger, light yellowish brown, with shorter light setation; mandibles on apex darker. Width across eyes approximately 0.79 of pronotal base width. Head length (visible part) 1.78 mm; widest across eyes 1.69 mm. Ratio L/W (length/most width) 1.04. Eyes large, dark, transverse, strongly cut out, space between eyes relatively narrow. Ocular index 15.71. Before eyes deep transverse impression. Mandibles strong with dark brown tip. Punctuation not conspicuous, microsculpture not distinct, shining.

Antennae. Longer, narrow, two coloured, with short, relatively sparse setation. Length 9.31 mm, reaching up 0.78 of body length. Basal half of first antennomere and antennomeres from sixth to eleventh light brown; apical part of first antennomere and antennomeres from second to fifth dark brownish black. Antennomeres from fourth to eleventh with conspicuous punctuation and granulation. Second antennomere shortest, first antennomere broadest. Antennomeres from fourth to eleventh longer than antennomere third. Ratio of relative lengths of antennomeres from base to apex as follows: 0.64: 0.24: 1.00: 1.06: 1.24: 1.28: 1.26: 1.25: 1.18: 1.22: 1.32. Ratio L/W (length/most width) of antennomeres from base to apex as follows: 1.81: 1.36: 3.73: 3.46: 5.26: 5.21: 5.11: 6.75: 6.03: 5.21: 6.38.

Maxillary palpus (Fig. 15). Light yellowish brown, apex of ultimate palpomere darker, with light setation. Second palpomere longest, narrow, slightly broader on apex. Penultimate palpomere slightly triangular, broadest on apex. Ultimate palpomere broadly triangular, transverse, broadest on apex. Surface with fine microsculpture. Ratio of relative lengths of palpomeres from second to fourth from base to apex as follows: 1.00: 1.00: 1.41. Ratio L/W (length/most width) of palpomeres from second to fourth from base to apex as follows: 1.84: 1.64: 0.88.

Pronotum (Fig. 9). Sulphuric yellow, nearly quadratic, narrower than elytra, with short light setation and sporadic long light setae. Length 2.10 mm; broadest at base 2.14 mm. Pronotal index 98.13. Pronotum sixangled, margins on sides distinct, at base and on apex not clearly conspicuous. Base almost linear, only very slightly cut out before angles. Posterior angles perpendicular with rounded tip. Sides parallel at basal half, thence regularly narrowed to anterior angles.



Figs: *Asticostena sulphurea* sp. n.: 5- Habitus of male (Holotype); 6- Habitus of female; 9- Head and pronotum (Holotype); 12- Punctuation of elytron; 15- Maxillary palpus; 20- Male genitalia from dorsal view; 21- Male genitalia from lateral view.)

Anterior angles very slightly conspicuous, apex slightly rounded. Punctuation relatively dense, punctures medium sized and shallow. Interspaces finely granulated, slightly shining. Underside of thorax sulphuric yellow without setation, punctures small and sparse.

Elytron (Fig. 12). Bicolourous, sulphuric yellow, base brownish black, elytral suture brown; narrow, with short light setation and sporadic long light setae. Elytral length 8.09 mm; broadest near base 2.86 mm. Elytra 2.83 times longer its width, very narrow, parallel up to two thirds of its length from base. Punctures in striae clearly conspicuous, smaller – medium sized, elytral intervals with very fine granulation, slightly shining. Elytral epipleura well developed, relatively narrow, sulphuric yellow with brown punctures in basal half; in apical half light yellowish brown and devoid of punctures. In basal half epipleura regularly narrowed to first abdominal sternite, thence runs parallel. Punctures smaller, same size as elytron punctures in striae.

Legs. Sulphuric yellow, tarsi slightly darker – light yellowish brown, long with light setation. Femora strong, tibia very narrow; narrowest at base, broadest on apex. Anterior tarsomeres from first to fourth broader, but not transverse. Penultimate tarsomeres of each tarsus with membranous lobes. Ratio of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.80: 0.88: 0.98: 1.34; mesotarsus: 1.00: 0.44: 0.44: 0.71: 1.04; metatarsus: 1.00: 0.40: 0.46: 0.77.

Anterior tarsal claws both with 42 teeth.

Ventral side of body. Brown, abdomen light brown, five-segmented with very sparse light setae, fine microsculpture and shallow, smaller punctures, slightly shining. Setation of mesothorax and metathorax more denser. Punctuation of middle of metathorax dense, punctures very small and shallow; sides of metathorax and episternum of metathorax and mesothorax with larger, sparse punctures.

Genitalia (Figs 20, 21). Light yellowish brown. Basal part of basal part strongly rounded, thence to apex only slightly rounded. Apical part triangular, regularly narrowed to apex, before apex slightly broadened to rounded oval apex. Apical part with very short dentiform setae. Ratio of relative lengths of apical part to basal part 1: 2.99.

Male (Figs 5, 9, 20, 21). Only the holotype data.

Female (Fig. 6). Anterior tarsal claws both with 19 teeth.

Ratio of relative lengths of antennomeres from base to apex as follows: 0.54: 0.32: 1.00: 0.97: 0.99: 1.22: 1.22: 1.13: 1.09: 0.95: 1.10. Ratio L/W (length/most width) of antennomeres from base to apex as follows: 1.90: 1.55: 3.39: 2.49: 3.36: 3.76: 3.56: 3.84: 4.07: 3.84: 4.42. Ratio of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.55: 0.61: 0.58: 1.28; mesotarsus: 1.00: 0.47: 0.52: 0.52: 0.76; metatarsus: 1.00: 0.44: 0.41: 0.67.

2 females: length 13.56 mm approximately (ranging from 13.35 to 13.76 mm); head length 2.17 mm approximately (ranging from 2.09 mm to 2.25 mm); head width 1.77 mm approximately (ranging from 1.75 to 1.79 mm). Ocular index 20.26 approximately (ranging from 19.65 to 20.87). Pronotal length (in middle) 2.21 mm approximately (ranging from 2.15 to 2.26 mm); pronotal width at base 2.11 mm approximately (ranging from 2.07 to 2.14 mm). Pronotal index 104.73 approximately (ranging from 103.87 to 105.59). Elytral length 9.15 mm approximately (ranging from 9.05 to 9.25 mm). Elytral width 3.06 mm approximately (ranging from 3.01 to 3.11 mm).

Name derivation. Named after the colour – same as in „elementary sulphur“.

REFERENCES

- BORCHMANN F. 1910: *Coleopterorum Catalogus. Pars 3 - Alleculidae*. In: JUNK W. & SCHENKLING S. (eds.): *Coleopterorum Catalogus*. Berlin: W. Junk, 80 pp.
- BORCHMANN F. 1929: Ueber die von Herrn J. B. Corporaal in Ost-Sumatra gesammelten Lagriiden, Alleculiden, Meloiden und Othniiden. *Tijdschrift voor Entomologie* 72: 1-39.
- BORCHMANN F. 1937: Neue Alleculiden aus dem Deutschen Entomologischen Institut, Berlin-Dahlem. *Arbeiten über Morphologische und Taxonomische Entomologie aus Berlin-Dahlem* 4: 210-231.
- 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. 1964: The ocular index and its applications to the taxonomy of the Alleculidae (Coleoptera). *The Coleopterist's Bulletin* 18: 42.
- FAIRMAIRE L. 1897: Note XXV. Description de Coléoptères Nouveaux de la Malaisie, de l'Inde et de la Chine. *Notes from the Leyden Museum* 19: 209-255.
- PIC M. 1909: Coléoptères exotiques nouveaux ou peu connus. *L'Echange, Revue Linnéenne* 25 (293): 133-134.