

New species of Eurytomidae (Hymenoptera: Chalcidoidea) from Turkey

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Five new species belonging to the family Eurytomidae (Chalcidoidea) are described from Turkey: *Tetramesa anatolica* spec. nov., *Eurytoma turkezia* spec. nov., *E. brevicoxa* spec. nov., *Systole minima* spec. nov. and *S. brunnicornis* spec. nov.

Introduction

The fauna of the family Eurytomidae Walker, 1833 (Hymenoptera: Chalcidoidea), from Turkey is not well known. A small collection made by the third author and M. Doganlar contains five new species belonging to three genera, which are described in this paper. The biology and the male sex (except of *Eurytoma turkezia* spec. nov.) are unknown. The descriptions were prepared by the first author and the drawings by the second author. The holotypes of the new species are deposited in the collection of the Shmalhausen Institute of Zoology at Kiev (Ukraine).

Abbreviations of depositories

RMNH – Department of Entomology, Nationaal Natuurhistorisch Museum, Leiden, Netherlands; SIZK – Schmalhausen Institute of Zoology, Ukrainian Academy of Sciences, Kiev, Ukraine.

Descriptions

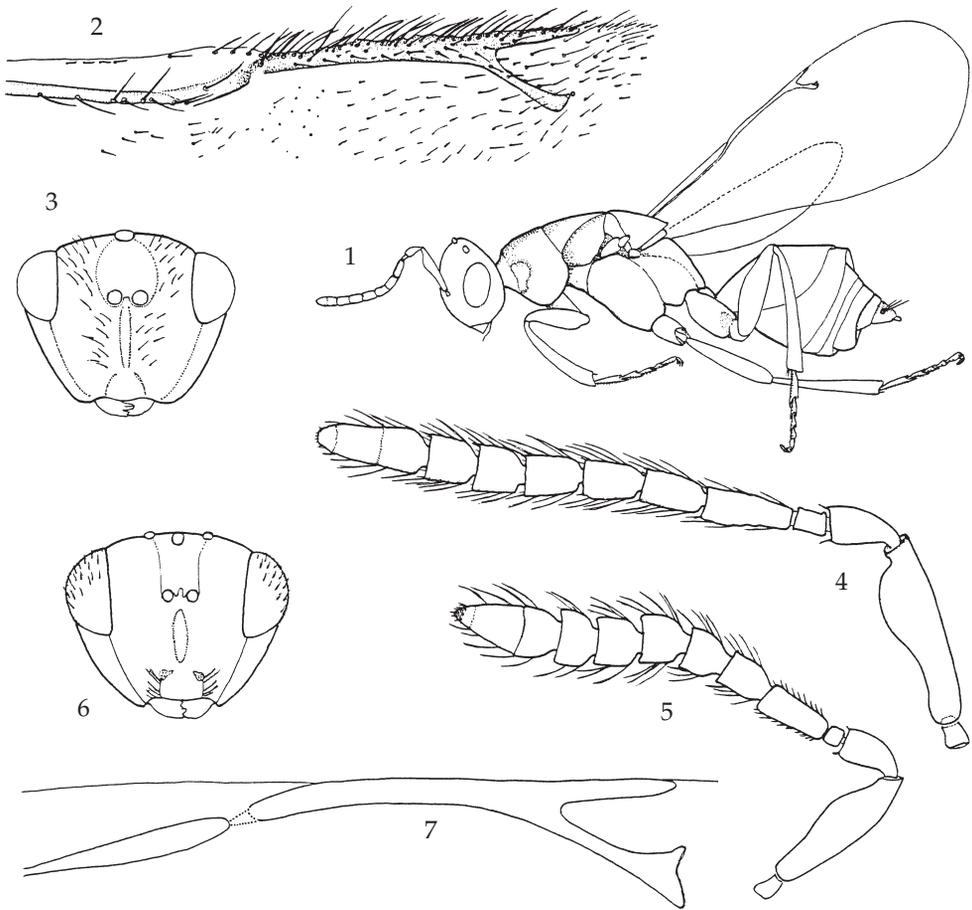
Tetramesa anatolica Zerova & Çam, spec. nov.
(figs 1-4)

Material.— Holotype, ♀ (SIZK), "Turkey, Fidanlik-Tokat, 20.v.1993, H. Çam".

Holotype, ♀, length of body 3.3 mm. Body stout with short metasoma. Vertex and dorsum of thorax with distinct reticulation.

Colour.— Pronotum with a pair of yellow spots antero-laterally, scape and pedicel rufo-testaceous, anellus and funicle brownish-black; coxae black, femora basally black; remainder of legs, tip of ovipositor and mandible rufous; wings without infuscation.

Head.— Head in dorsal view almost twice as broad as long, stout, distinctly wider



Figs 1-4, *Tetramesa anatolica* spec. nov., ♀, holotype; figs 5-7, *T. gracilipennis* (Szeleny), ♀, Hungary. 1, habitus, lateral aspect; 2, 7, fore wing venation; 3, 6, head, frontal aspect; 4, 5, antenna;

than pronotum; temples rounded laterally, 0.8 times as long as eye. Head in frontal view almost as broad as high (ratio 12:11), gena long, malar space longer than longitudinal eye diameter (ratio 18:13). Eyes bare. Ventral margin of clypeus distinctly produced and curved; tentorial pits slightly developed, face and vertex with distinct reticulation and long pubescence. Face with a smooth oblong elevation medially. Antennae inserted distinctly above middle of face; antennal scape long, reaching level of lower margin of anterior ocellus, near upper third distinctly bulging (fig. 4); pedicel long; narrowing basally. Funicle with one long anellus (length to width: 7:4); first funicular segment very long (length to distal width: 70:17). Second flagellar segment 2.5 times as long as wide, fifth segment square; club not wider than previous flagellar segments, with two distinct segments and one (apical) very small segment (fig. 4); flagellum with rather long setae.

Mesosoma.— Mesosoma with long narrow pronotum and slightly wider than long. In lateral view mesepisternum slightly bulging anterior to middle coxa. Middle lobe of mesoscutum shorter than pronotum or scutellum. Propodeum with distinct but rather shallow median furrow, heavily rugulose laterally. Fore wings with very short and dense setosity; marginal vein much longer than postmarginal vein (57:17), postmarginal vein slightly shorter than stigmal vein. Hind coxae small and very finely reticulate.

Metasoma.— Metasoma short, slightly shorter than mesosoma (13:15), narrowing to the apex. Petiolus distinct, square. Surface of tergites flat, shiny, without sculpture. Ovipositor sheaths slightly projecting.

Notes.— The new species belongs to the *T. eximia* group (sensu Zero, 1976). It resembles *Tetramesa gracilipennis* Szeleny, 1968 (figs 5-7) in the structure of the antenna and in the shape of the head. The new species differs from it by the shorter metasoma, the bare eyes (figs 3, 5), the longer flagellar segments (figs 4, 5) and the narrow stigmal vein (figs 2, 7).

Eurytoma turkezia Zero & Çam, spec. nov.
(figs 8-15)

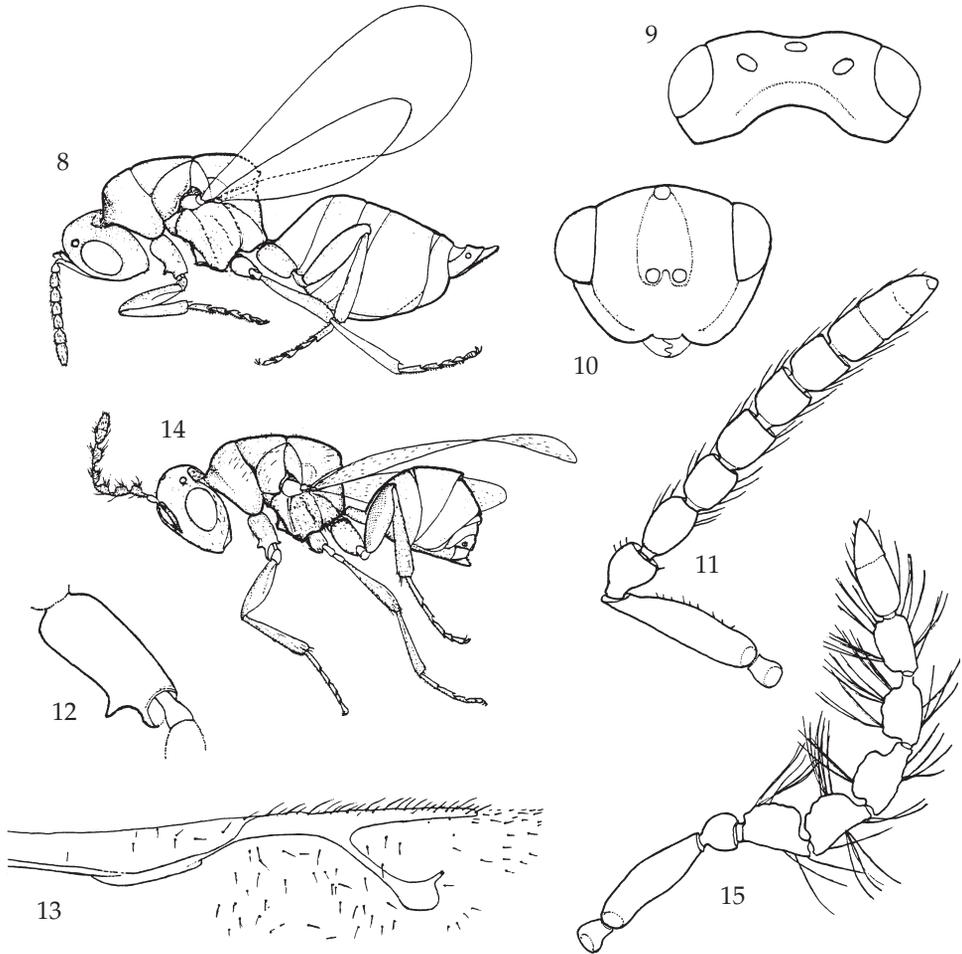
Material.— Holotype: ♀ (SIZK), "Turkey, Taşlıçiftlik-Tokat, 1.ix.1993, reared from stems of *Verbascum* sp., H. Çam". Paratype: ♂, same data, but 30.viii.1993.

Holotype, ♀, body length 2.5 mm. Head and thorax (dorsally) with umbilicate sculpture and very short and sparse pubescence.

Colour.— Head, mesosoma and metasoma black, only ventral part of metasomal tergites somewhat brownish, coxae black, hind femur and tibia mainly black, only basally and apically pale yellowish, middle and fore femora somewhat brownish, middle tibiae brownish-yellow, fore tibia yellow, tarsi pale yellow; tip of ovipositor dark-brown; scape, pedicel and funicle yellow; veins of fore wing subhyaline, almost white.

Head.— Head in dorsal view short, almost 3 times wider than long, somewhat wider than pronotum, temple in dorsal view much shorter than eye. Head in frontal view broader than high (ratio 45:32); malar space equal to height of eye. Ventral margin of clypeus somewhat projecting; face with umbilicate sculpture and dense white pubescence. Head in profile not bulging. Lower face without wrinkles. Eyes bare. Postgenal carina sharp and high. Antennae inserted near middle of face; scape short, remaining removed from anterior ocellus; pedicel short, 0.7 times length of first flagellar segment, second-fourth segments longer than wide, fifth segment square, club not shorter than funicle, lower face not bulging. Pubescence of funicle very short, sparse and decumbent.

Mesosoma.— Mesosoma bulging in profile, pronotum collar 2.6 times as broad as long, shorter than mesoscutum. Mesepisternum with distinct longitudinal carina and thin punctation, mesepimeron with reticulation. Mesosternal keel high, triangular. Propodeum in profile sloping at almost 90° to plane of mesoscutum, with wide but shallow median carina and fine striation near median carina. Legs rather slender, fore coxa with sharp projection anteriorly, hind coxa almost bare, only with a few setae on distal part. Ratio of marginal, postmarginal and stigmal veins of fore wing: 23:27:23;



Figs 8-15, *Eurytoma turkezia* spec. nov., ♀, holotype, but 11 and 15 of ♂ paratype. 8, 11, habitus, lateral aspect; 9, head, dorsal aspect; 10, head, frontal aspect, 13, 15, antenna; 12, fore coxa; 14, fore wing venation.

pterostigma almost square; pilosity of wing disc sparse, very short and pale.

Metasoma.— Metasoma somewhat longer than mesosoma (45:32), tergites almost bare, only sixth tergite with few setae, surface of all tergites flat and shiny.

Male.— Length of body 1.7 mm. Similar in colour to female. Antenna with short almost round pedicel, anellus very short, flagellum 5-segmented, pubescence long but sparse. Petiole of gaster twice as long as wide, about 0.8 times length of hind coxa.

Notes.— *Eurytoma turkezia* spec. nov. belongs to the *E. robusta* group. It is similar to *E. nova* Zerova, 2001 (Zerova, 2001), but differs by the shorter petiole in the female, the shape of the fore coxa and the long cheeks of the head. In the male the new species differs from *E. nova* by the shorter funicular segments. In both sexes it differs by the shorter postmarginal vein.

Eurytoma brevicoxa Zerova & Çam, spec. nov.
(figs 16-19)

Material.— Holotype, ♀ (SIZK), "Turkey, Tokat, 15.vii.1986, from greenhouse, H. Çam".

Holotype, ♀, length of body 3 mm. Head and thorax with umbilicate sculpture and with short white pubescence.

Colour.— Head and body black, but ventral part of metasomal tergites brown, coxae black, femora mainly black with yellow tips, tibiae and tarsi yellow; scape pedicel and funicle yellow; tip of ovipositor dark yellow, mandible yellow; veins of fore wing almost subhyaline.

Head.— Head in dorsal view 3 times wider than long, narrow, its width almost equal to width of pronotum. Head in frontal aspect as broad as high, malar space as long as height of eye. Eyes black, bare. Ventral margin of clypeus straight. Head in profile distinctly bulging (fig. 18). Lower face without wrinkles. Head posteriorly with very thin postgenal carina. Antennae inserted in middle of face; with scape reaching level of anterior ocellus, scape long, thin, not bulging medially, pedicel short, much shorter than the first flagellar segment; anellus distinctly transverse (fig. 17), all flagellar segments longer than wide, with basal segment twice as long as wide, club 3-segmented, its last segment very short; flagellum with white and sparse decumbent pubescence.

Mesosoma.— Mesosoma bulging in profile, pronotal collar short, 2.8 times as wide as long and 0.8 times as long as mesoscutum, scutellum as broad as long. Mesepisternum with longitudinal carina and fine punctation, mesepimeron with transverse striation. Mesosternal keel absent. Propodeum in profile sloping at almost 90° to plane of mesoscutum, medially with oval and finely reticulate area, laterally propodeum coarsely reticulate. Legs rather stout, front coxa strongly bulging anteriorly (fig. 19); hind coxa dorsally entirely pilose. Marginal, postmarginal and stigmal veins of fore wing: 20:25:20; pterostigma thin, elongate (fig. 16). Pilosity of disc of fore wing sparse, light and very short.

Metasoma.— Metasoma curved in profile, somewhat longer than mesosoma (14:10), seventh tergite and external part of ovipositor projecting upwards. Ovipositor 1.5 times longer than seventh tergite. Petiole very short.

Notes.— It is very hard to put *Eurytoma brevicoxa*, spec. nov. in any species group of the genus *Eurytoma*. In structure of the front coxa it resembles the species of *E. robusta*-group. But all species of this group have a distinct mesosternal keel, which is absent in the new species.

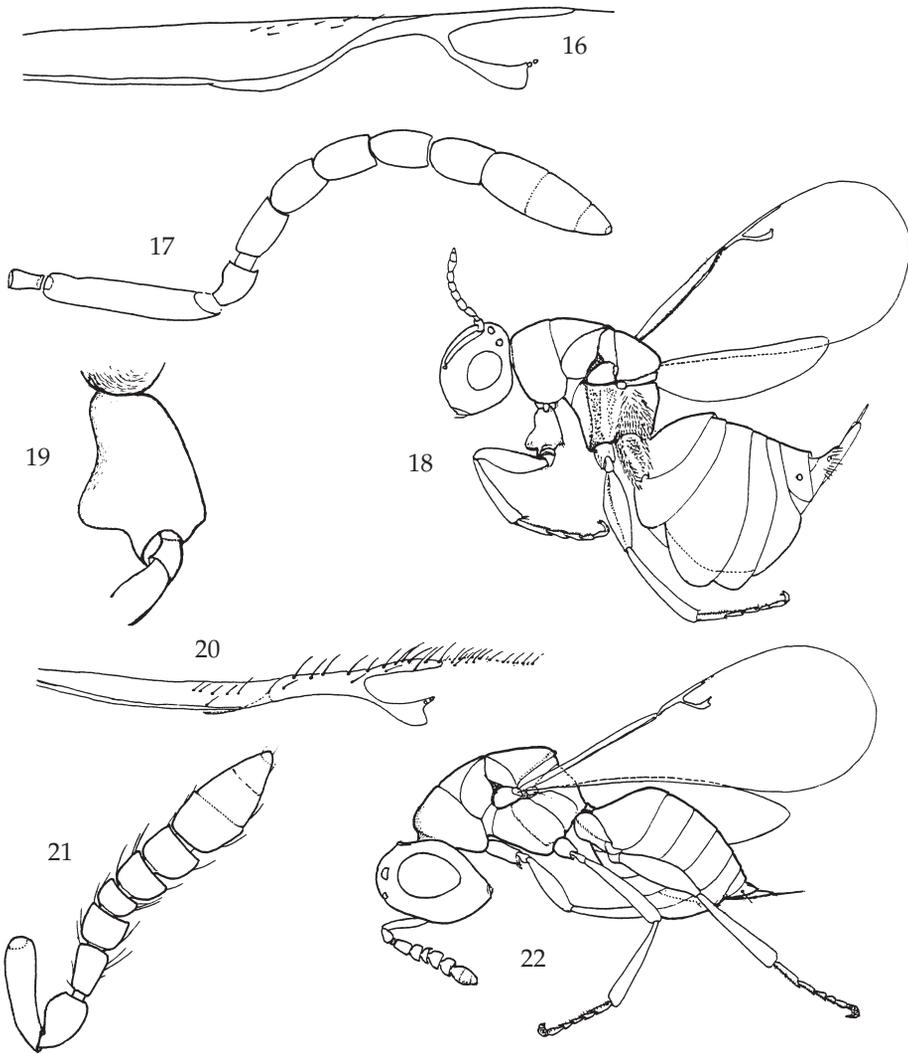
Systole minima Zerova & Çam, spec. nov.
(figs 20-22)

Material.— Holotype, ♀ (SIZK), "Turkey, Karata?-Adana, 8.viii.1984, M. Doganlar".

Holotype, ♀, length of body 1.2 mm. Small, but stocky species with big stout head.

Colour.— Body brownish black, antennae including scape, pedicel and funicle yellow, legs (including coxae) dark yellow, venation of fore wing pale.

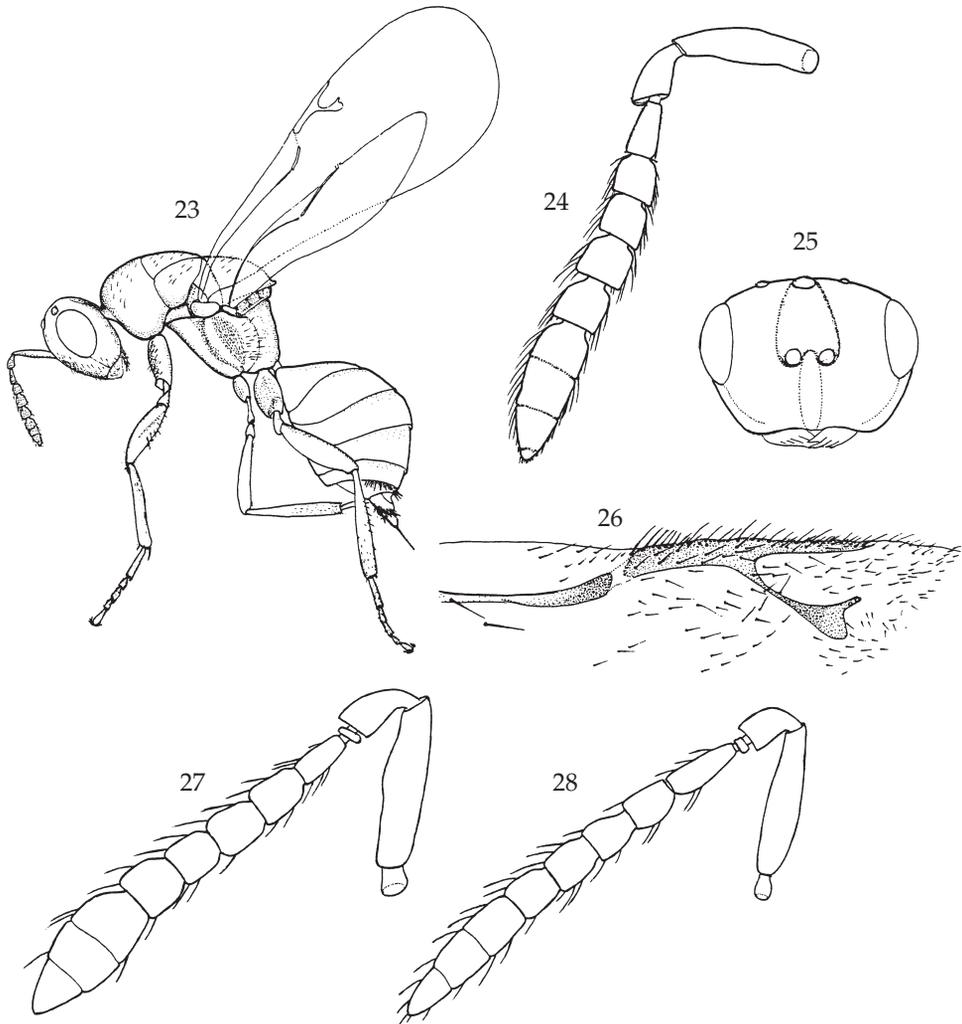
Head.— Head in dorsal view stout, much wider than pronotal collar, its frontal margin semicircular. Head in frontal view 1.3 times wider than high, malar space 0.5 times height of eye; eye bare; ventral margin of clypeus straight, lower face somewhat



Figs 16-19, *Eurytoma brevicoxa* spec. nov., ♀, holotype; figs 20-22, *Systole minima* spec. nov., ♀, holotype. 16, 20, fore wing venation; 17, 21, antenna; 19, fore coxa; 18, 22, habitus, lateral aspect.

bulging in profile, face and vertex with very fine reticulation, almost smooth. Antennae inserted near middle of face, scape short, stout, not reaching anterior ocellus; pedicel longer than first funicular segment, widened medially; anellus very short, first flagellar segment very long, much longer than following flagellar segments (fig. 21), third flagellar segment shorter than other flagellar segments; club stout, 3-segmented and wider than previous flagellar segments; flagellum with pale sparse pubescence.

Mesosoma.— Mesosoma somewhat bulging in profile, pronotal collar transverse, very short, ratio width to length: 4:1, twice as short as mesoscutum, scutellum as long as mesoscutum, mesosoma dorsally finely reticulate, almost smooth. Propodeum



Figs 23-26, *Systole brunnicornis* spec. nov., ♀, holotype; fig. 27, *S. elongata* Zerova, ♀, holotype; fig. 28, *S. prangicola* Zerova, ♀, holotype. 23, habitus, lateral aspect; 24, 27, 28, antenna; 25, head, frontal aspect; 26, fore wing venation.

slightly declivous, with irregular cells and without a distinct median furrow. Legs rather stout, coxae narrow, elongate, hind coxa finely reticulate. Ration of marginal, postmarginal and stigmal veins of fore wing: 20:15:14, disc of wing with very sparse and hardly visible pilosity.

Metasoma.— Metasoma as long as mesosoma, surface of tergites smooth, polished; petiole very short, transverse.

Notes.— *Systole minima* spec. nov. belongs to subgenus *Systole* Walker, 1832. It differs from all known species of the subgenus by the shape of the antenna: the first funicular segment is elongate and the third segment is short (fig. 21).

Systole brunnicornis Zerova & Çam spec. nov.
(figs 23-26)

Material.— Holotype: ♀ (SIZK), “[Turkey], Ö. Sunar Çift-Tokat, 4.vii.1989, H. Çam”. Paratypes (4 ♀ ♀): 1 ♀ (SIZK), “Fidanlik-Tokat, 6.vi.1989, H. Çam”; 1 ♀ (RMNH), “Taşlıçiftlik-Tokat, 27.vi.1989, H. Çam”; 1 ♀ (RMNH), “Tokat, 27.vii.1989, H. Çam”; 1 ♀ (SIZK), id., but 17.vii.1989.

Type-series, ♀, length of body 2.1-2.3 mm. Head and thorax (dorsally) finely reticulate and with very short and sparse pubescence.

Colour.— Head, mesosoma and metasoma black, coxae black, hind femur black, with yellow tip, middle and fore femora medially brownish-yellow, and remainder yellow, tibiae and tarsi yellow, tip of ovipositor black, scape, pedicel and funicle dark brown; veins of fore wing brown.

Head.— Head in dorsal view about 2.5 times wider than long, somewhat wider than pronotum, temple in dorsal view much shorter than eye. Head in frontal view broader than high (ratio 44:30), malar space as long as height of eye, eyes bare, ventral margin of clypeus straight, face with very fine sculpture, nearly smooth, covered with dense white pubescence. Lower face with a smooth oblong elevation medially. Antenna in lateral view inserted in middle of face; scape thin, almost reaching anterior ocellus, pedicel as long as first funicular segment, anellus very short, first flagellar segment narrow and long, second-fifth segments equal in length, almost square, club long, not wider than previous flagellar segments (fig. 24), flagellum with sparse pale pubescence.

Mesosoma.— Mesosoma stout, somewhat bulging, pronotal collar long, 2.2 times wider than long, a little shorter than mesoscutum, mesoscutum as long as scutellum. Propodeum somewhat sloping, its median area with fine reticulation. Marginal, postmarginal and radial veins of fore wing of equal length. Disc of wing with very sparse and hardly visible pilosity, almost bare.

Metasoma.— Metasoma as long as mesosoma, petiole transverse, but distinct; surface of tergites smooth.

Notes.— *Systole brunnicornis* spec. nov. belongs to the subgenus *Systole* Walker, 1832. The new species resembles *S. elongata* Zerova, 1970 (fig. 27) and *S. prangicola* Zerova, 1972 (fig. 28), because of the long and narrow first flagellar segment. The new species differs from both species by the straight ventral margin of the clypeus, the shorter metasoma and the shorter postmarginal vein of the fore wing.

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