Zeitschrift: Mitteilungen der Schweizerischen Entomologischen Gesellschaft = Bulletin de la Société Entomologique Suisse = Journal of the Swiss Entomological Society

Herausgeber: Schweizerische Entomologische Gesellschaft

Band: 75 (2002)

Heft: 3-4

Artikel: A new species of Sicus from Central Europe (Diptera : Conopidae)

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DOI: https://doi.org/10.5169/seals-402831

MITTEILUNGEN DER SCHWEIZERISCHEN ENTOMOLOGISCHEN GESELLSCHAFT
BULLETIN DE LA SOCIÉTÉ ENTOMOLOGIQUE SUISSE
75, 245 – 252, 2002

A new species of *Sicus* from Central Europe (Diptera: Conopidae)

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Sicus alpinus spec. nov. is described on the basis of material from Central Europe. A key for the known *Sicus*-species is presented.

Key words: *Sicus*, Conopidae, Diptera, key, new species, Austria, France, Germany, Central Europe, Palaearctic.

INTRODUCTION

Six Palaearctic species belong to the genus *Sicus* SCOPOLI, 1763 (CHVALA & SMITH 1988; RIVOSECCHI & MEI 1998). No valid species is described from outside the Palaearctic region. The status of the species „*Sicus indicus* F." redescribed in 1940 from the Himalayas by KRÖBER (1940: 244) remains uncertain. The type of this species is lost and the original description does not present any character that allows us to distinguish it from other *Sicus* species. KRÖBER (1915) listed two Nearctic *Sicus* species: one of these belongs to the Hybotidae (*Tachypeza fenestratus* [Say, 1823]), the other to the conopid genus *Robertsonomyia* (*R. palpalis* [Robertson, 1901]) (CAMRAS & HURD 1957; STONE et al. 1983).

Mr. Claus CLAUßEN (Flensburg, D) has recently sent me a *Sicus* specimen that is clearly distinguished from the other known species, and while identifying material in the collections at museums in Amsterdam, Berlin and Munich I also found additional material of this unknown species. In this paper the new species is described and a key is presented to separate it from the other known species of the genus.

MATERIAL AND METHODS

The location and nature of the materials consulted in the present study is listed below. Morphological terminology follows MCALPINE (1981) and STUCKENBERG (1999). For investigation of the genitalia and the taxonomically important sternites it is necessary to macerate the whole abdomen, for example in caustic soda ($NaOH_{aq}$), and to dissect it completely. The relative length and degree of projection of the theca, and the angle of the field of spines referred to in the key is affected by the degree to which the abdomen is extended. For comparative purposes the abdomen therefore was reflexed to a point where the dorsal surfaces of tergites 4–6 are more-or-less in line.

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RESULTS

Sicus alpinus spec. nov.

(Figs 1–2, 4, 11)

Holotype ♀, Austria, Kärnten, in the south of Mauthen, 15.–16.VII.1939, leg. ZWICK, coll. Museum für Naturkunde der Humboldt Universität Berlin [ZMHB]. *Paratypes*: 1 ♀ (same label as holotype); 1 ♀ (Austria, Kärnten, Kötschach, 17.VII. 1939, leg. ZWICK, coll. ZMHB); 1 ♀ (Austria, West-Tirol, Paznauntal in the east of Kappl, 1300 m, 27.VII.1986, leg. et coll. CLAUßEN); 1 ♀ (Germany, Bayern, Bamberg, no date, collector unknown, coll. Zoologische Staatssammlung des Bayrischen Staates München [ZSMC]; this specimen has been previously determined as *Sicus abdominalis* by CHVALA 1962 and STUKE 1995 [STUKE 1996]); 1 ♀ (France, Alpes-de-Hautes-Provence, Peyruis, 16.VI.1980, leg. LANGOHR, coll. Zoologisch Museum Universiteit van Amsterdam [ZMAN]).

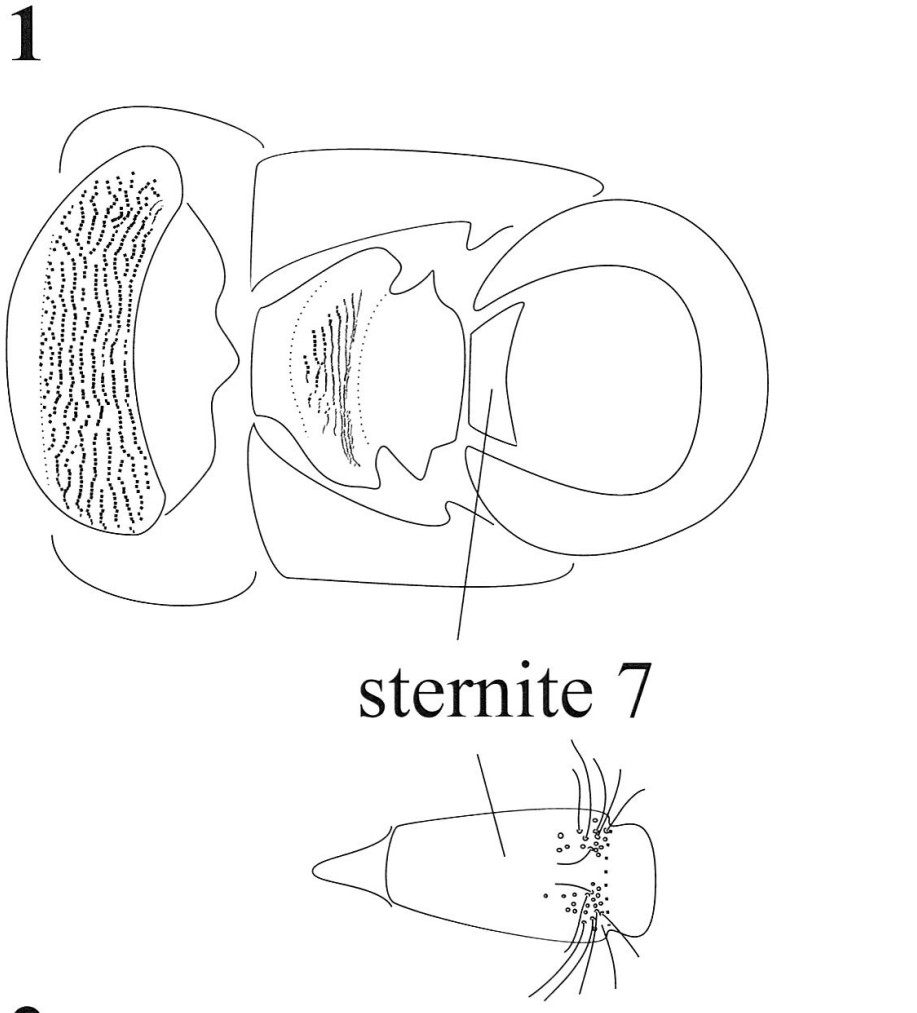
Derivatio nominis: The species has so far been found mainly in the Alpine region of Europe.

Description (female): **Head**: Antennae orange, with only the arista black apically; completely covered with white microtrichia. Scape apically with black bristles. Pedicel with black bristles which are shorter at the outside and which do not cover the whole surface. Eyes not hairy, brown, facets uniform in size. Ocelli light. Ocellar triangle light yellowish. Ocellar tubercle slightly darker, with two black ocellar bristles clearly separated by a distance equivalent to their length, and several smaller bristles. Face light yellow, darkened immediately below the antennae and covered with microtrichia. Genae light yellow, densely covered with light golden microtrichia and therefore shining strongly when observed from a suitable angle. Frons light yellow, covered with a few very short black hairs and light microtrichia; at the posterolateral border there are a few long black bristles. Occiput light brown, covered with black bristles that are longer dorsally, and with short golden microtrichia. Occipital sclerite without bristles medially. Clypeus light brown. Proboscis mainly dark, covered with light microtrichia. Labrum black. Labium black to dark brown. Labellum coloured as labium, becoming lighter apically. Palpi long, dark brown to black, with long black bristles.

Thorax orange brown. A few areas are black coloured, namely the scutum with the exception of the lateral borders, mediotergite without the postscutellum, laterotergite near the base of the haltere, antepronotum (only slightly darkened), katepisternum with the exception of the dorsal part and the katepimeron ventrally; there is a poorly defined black spot on the ventral anepisternum and another on the ventral anepimeron. Thorax completely covered with white or golden microtrichia, but the resulting dusting is less clear on the anterior part of the anepisternum, the anterior part of the katepisternum and the ventral part of the humerus. The whole scutum and the humerus with the exception of the margin covered with regular black bristles, these bristles are clearly longer posteriorly and on the postalar calli; posterolaterally there are additionally a few golden bristles. Scutellum posteriorly with long black and golden bristles, otherwise with much shorter black bristles; all these bristles occur at about the same density. Other bristles are only present dorsally on the katepisternum and ventrally on the propleuron.

Legs completely orange brown; only the coxae are clearly covered with microtrichia, microtrichia otherwise found only on the tibia; legs completely cov-

ered with black bristles. The following features are obvious on the legs: some bristles on the ventral surface of the femur are at least as long as the corresponding tibia is wide (Fig. 2); femur 3 anteroventrally with two rows of short spines, separating a ventral area without any black bristles; tibiae 1 and 3 apically with fields of dense black and sometimes golden bristles; tarsi medioventrally with dense golden hairs, otherwise with black bristles. Claws light brown, apically black. Pulvillae and empodia light brown.



Figs 1-2: *Sicus alpinus* spec. nov. - 1: sternites 5–7, ventral (paratype from Austria, Kärnten, in the south of Mauthen). - 2: femur 3, lateral (holotype).

Wings 7.5–9.0 mm long (Ø: 7.9 mm, n = 4, measured from the tip of the wing to the tegula). Wing completely covered with microtrichia, becoming yellow towards the base of the wing. Venation at the base of the wing yellow, apically black. Tegula and costa with black bristles, becoming shorter towards the tip of the wing. Calypters white. Haltere light yellow.

Abdomen mainly orange brown, with dark areas only apically on tergite 6, anterolaterally on tergite 7, on sternite 7 and on the teeth of the syntergosternite. Apical border of tergites 2–5 contrasting brightly. Tergites covered with regular black bristles, only tergite 1 laterally with obviously denser and longer bristles. Freshly emerged specimens perhaps completely covered with microtrichia, but the dusting in the existing material is only obvious on the lighter borders of tergites 2–5. The sternites are shown in Figs 1 & 10.

Diagnosis: *Sicus alpinus* differs from all other *Sicus* species by the characteristic form of the theca in the female (Figs 4 & 11): this species has a protruding theca but the field of spines on this structure is situated only on the ventral surface, parallel to the dorsal surface of tergite 5. The male is unknown and may not be distinguishable from similar species using characters that are currently in use.

Key to the species of the genus Sicus

Females and some males of the known species may be determined using the following key. The males of several species are not, however, sufficiently well known to allow separation and are likely to closely resemble each other. Identification is therefore not possible in these cases.

(1) Anepisternum with bristles (caution: these may be broken off); pile on thorax long, denser laterally than medially; scutellum with long hairs which are denser apically; ♀: sternite 7 without fields of bristles; theca as Figs 5 & 12: theca projecting ventrally about as far as the tip of the abdomen; its length about the same as its width at base; maximum width of theca is at the base; field of spines on sternite 5 directed posteriorly, flat or concave; currently known from the Caucasus and adjacent areas only. ..... ***caucasicus* ZIMINA, 1963**

– Anepisternum without bristles; pile on thorax shorter, lateral and medial pile mostly of the same density; ♀: sternite 7 with two fields of bristles. **2**

(2) Frons dark lateral to the ocellar triangle, clearly distinguished from the lighter anterior area (Fig. 17); femora 1 and 2 mainly dark (but can be faded in old specimens); scutellum with shorter black hairs which are not denser apically and without outstanding apical bristles; theca as Figs 9 & 16: theca projecting ventrally about as far as the tip of the abdomen, wider at base than long, with the maximum width at the middle; field of spines on sternite 5 directed posteroventrally, flat or convex. ..... ***nishitapensis* (MATSUMURA, 1916)**

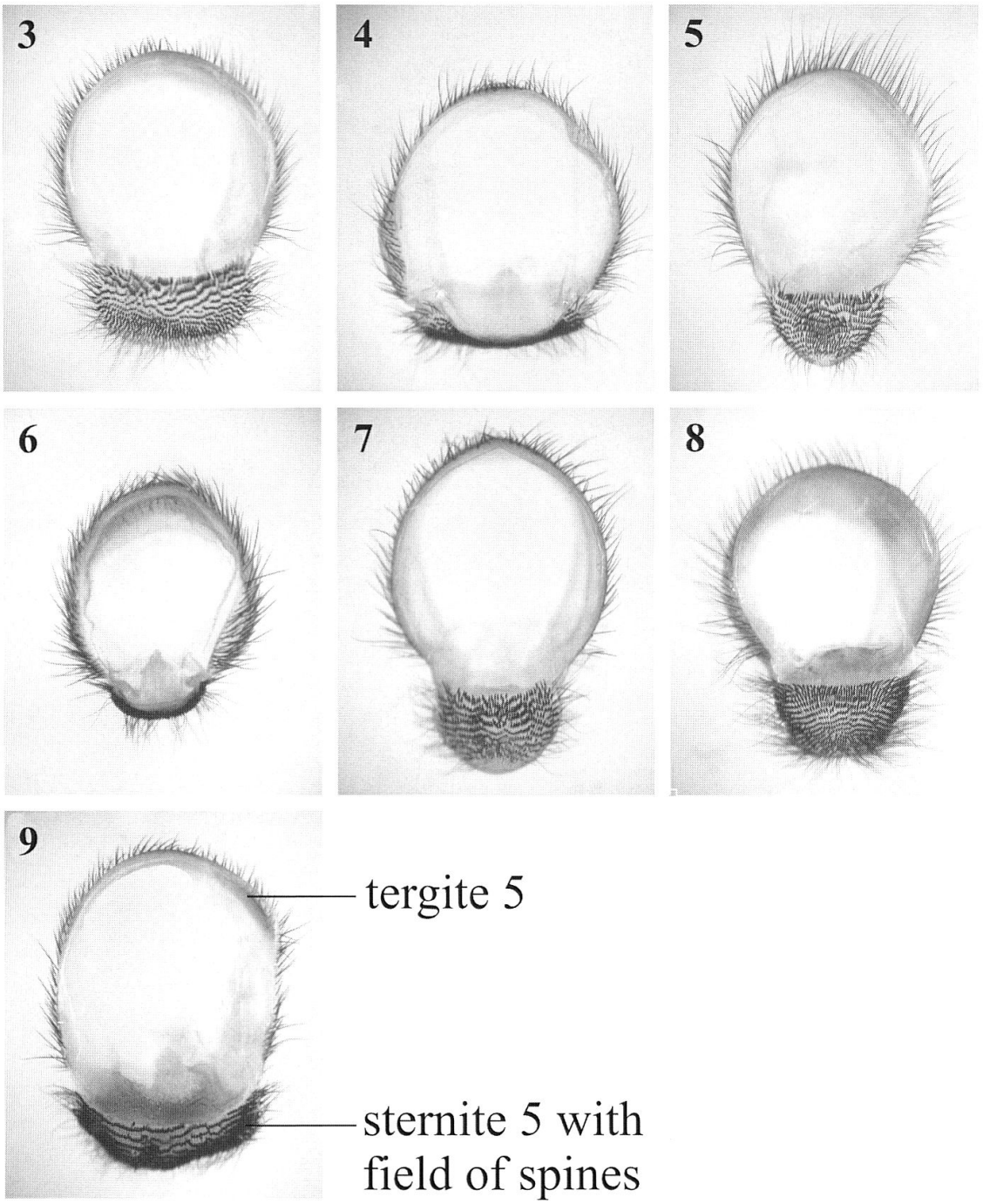
– Frons and femora pale. **3**

(3) Tarsomeres black; trochanters and coxae partly darkened; theca as Figs 8 & 15: theca projecting about as far as the tip of the abdomen or a little less, about as long as width at base, maximum width of theca is at the base; field

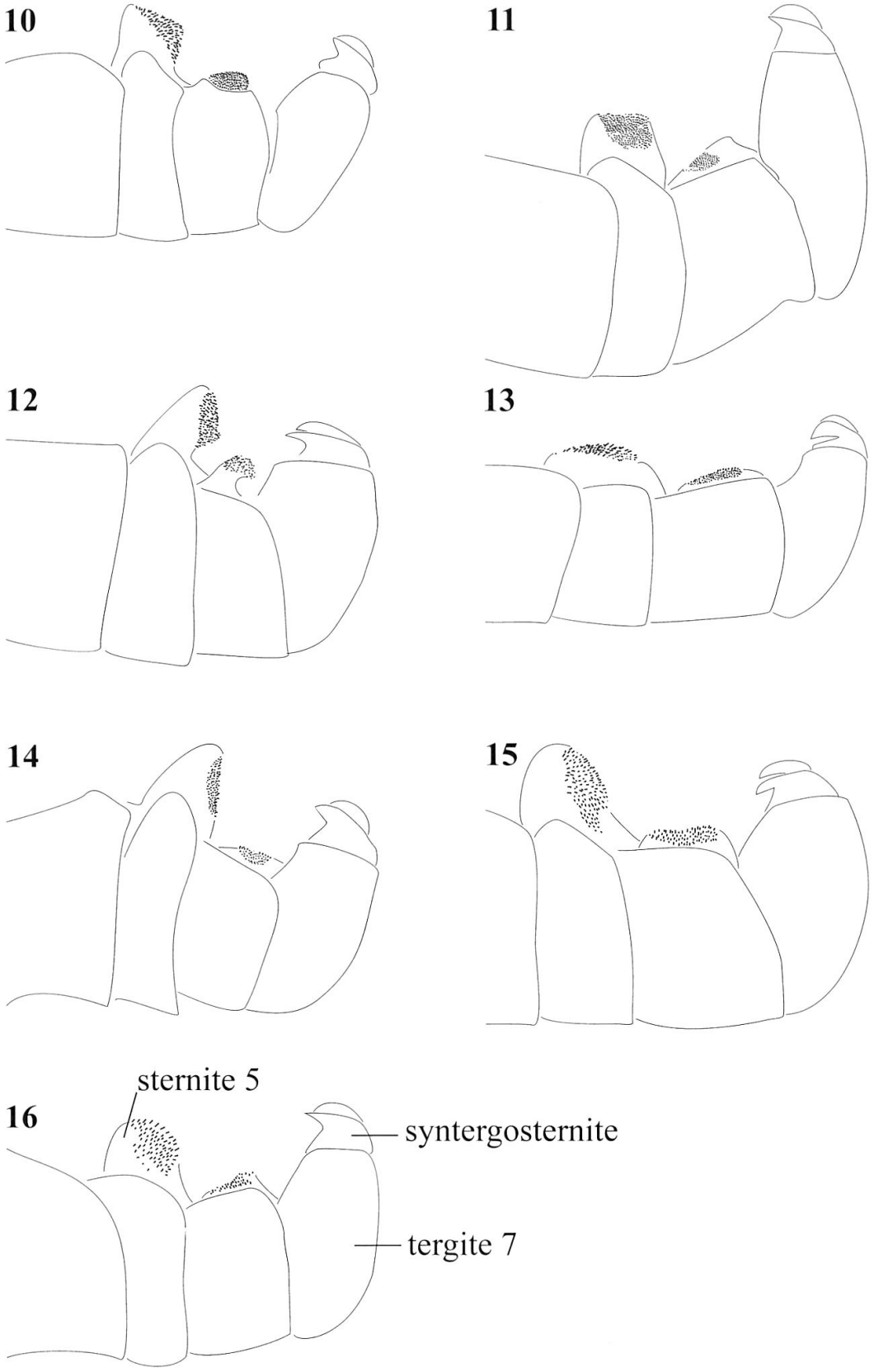
of spines on sternite 5 directed posteriorly, flat or concave. .....
..... ***nigritarsis* ZIMINA, 1975**

– Tarsomeres light; trochanters and coxae not darkened..... **4**

The males of the following four *Sicus* species cannot be separated at this time, the remainder of this key therefore applies only to females.



Figs 3-9: Abdominal segment 5 of recognised *Sicus* species in posterior (transverse section) view. - 3: *Sicus abdominalis* KRÖBER, 1915; 4: *Sicus alpinus* spec. nov. (paratype from Germany, Bamberg); 5: *Sicus caucasicus* ZIMINA, 1963; 6: *Sicus ferrugineus* (LINNAEUS, 1761); 7: *Sicus fusenensis* ÔUCHI, 1939; 8: *Sicus nigritarsis* ZIMINA, 1975; 9: *Sicus nishitapensis* (MATSUMURA, 1916).



Figs 10-16: Abdominal segments 5–7 of recognised *Sicus* species seen from side. - 10: *Sicus abdominalis* KRÖBER, 1915; 11: *Sicus alpinus* spec. nov.; 12: *Sicus caucasicus* ZIMINA, 1963; 13: *Sicus ferrugineus* (LINNAEUS, 1761); 14: *Sicus fusenensis* ÔUCHI, 1939; 15: *Sicus nigritarsis* ZIMINA, 1975; 16: *Sicus nishitapensis* (MATSUMURA, 1916).

(4) Theca as Figs 6 & 13: theca very short, clearly not projecting ventrally as far as the tip of the abdomen; field of bristles on sternite 5 directed ventrally..... ***ferrugineus* (LINNAEUS, 1761)**
– Theca longer. **5**

(5) Field of spines on sternite 5 situated on ventral surface only, parallel to the dorsal surface of tergite 5 (Figs 4 & 11); palpi long and dark; currently known from Central Europe only..... ***alpinus* spec. nov.**
– Field of spines on sternite 5 not confined to the ventral surface and not parallel to the dorsal surface of tergite 5; palpi shorter; species with wider ranges in the Palaearctic. **6**

(6) Theca as Figs 3 & 10: theca a little less protruding than the tip of the abdomen, wider at base than long, maximum width is at the middle; field of spines directed posteroventrally, flat or convex..... ..... ***abdominalis* KRÖBER, 1915**
– Theca as Figs 7 & 14: theca projecting ventrally as far as the tip of the abdomen, about as long as width at base, maximum width is at the base; field of spines directed posteriorly, flat or concave. .... ***fusenensis* ÔUCHI, 1939**

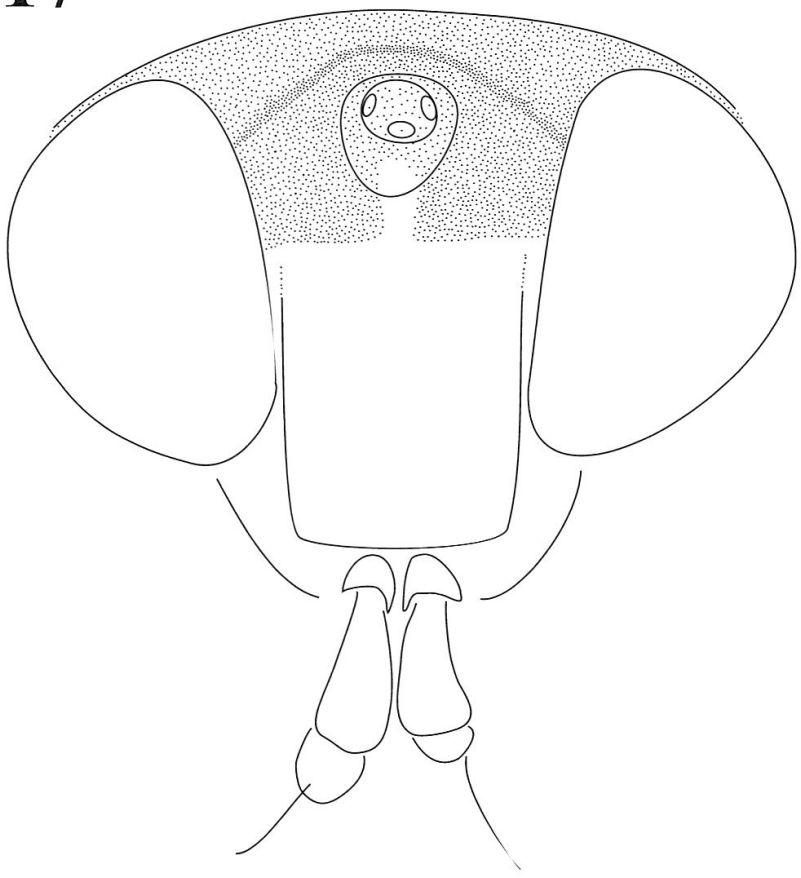


Fig. 17: Frons of *Sicus nishitapensis* (MATSUMURA, 1916).

ACKNOWLEDGEMENTS

I am grateful to the following curators for the loan of material: Ben BRUGGE (Zoologisch Museum Universiteit van Amsterdam), Hella WENDT and Dr. Marion KOTRBA (Museums für Naturkunde der Humboldt Universität Berlin) and Wolfgang SCHACHT (Zoologische Staatssammlung München). Prof. Dr. Milan CHVALA (Prague), Claus CLAUßEN (Flensburg), Martin HAUSER (Urbana), Prof. Dr. Yasuo MEATA (Tottorri) and Dr. Thomas ROMIG (Stuttgart) loaned additional material. David CLEMENTS (Cardiff) checked the English and gave valuable comments on earlier drafts of this work.

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(received August 19, 2002; accepted October 8, 2002)