POLSKA AKADEMIA NAUK
INSTYTUT ZOOLOGII

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Systematic and zoogeographic study on the family *Salticidae* (*Araneae*) from Viet-Nam

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[With 645 figures, 46 maps and 5 tables in the text]

Abstract. The paper contains descriptions and taxonomic drawings of 100 species of *Salticidae* from Viet-Nam. 51 species are described as new, 8 new genera are also distinguished: *Heliceroides, Eupoa, Kinhia, Langerra, Lechia, Magyarus, Meata, Nungia*. In a zoogeographical aspect the Vietnamese Salticid fauna has an Oriental character with some admixtures of East-Palaearctic elements and single pantropical, Ethiopian and Australian species.

Introduction

The fauna of *Salticidae* from Viet-Nam is practically unknown and SIMON's (1886, 1896, 1903b, 1904, 1906, 1908) and HOGG's (1922) publications on the subject are contributions of little significance. Although they contain a list of 20 species — their identification is not possible without a revision of the type specimens. The same can be said about materials from adjacent areas: Thailand (GIEBEL 1863, SIMON 1886), Burma (SIMON 1884, THORELL 1887, 1895, PETRUNKEVITCH 1914) or Malaya and Indonesia (e.g., C.L. KOCH 1846, THORELL 1877–1894, SIMON 1885–1905, PECKHAM and PECKHAM 1907), although in some there are descriptions of numerous species. An exception are the better documented papers of STRAND (1911, 1914), amongst others on *Salticidae* from islands Aru and Kei and the paper by SCHENKEL (1963) on spiders from China.

The mid-sixties were the turning point as regards systematic studies on *Salticidae* and other spider families. A detailed analysis of the morphology of copulatory organs (pedipalps and internal structures of epigynes), allowing to compare all species, made it possible to present more accurate and full diagnoses and to group the species into genera according to their significant characters from the point of their phylogenesis. Thus a number of valuable works was published, which concerned, amongst others, *Salticidae* from China

(Song Daxiang 1980, Wesołowska 1981a, b, Yin Chang-min and Wang Jia-fu 1979, 1981), Korea and Mongolia (Wesołowska 1981a, Prószyński 1982), Himalaya (Bohdanowicz 1978, 1979, in press, Prószyński 1978b, Żabka 1980a–c, 1981a, b) and from the Asiatic part of the Soviet Union (Prószyński 1979), including the most valuable papers being a kind of revision of Oriental genera (Prószyński 1967, 1968a–d, 1983a–c, 1984a–c, 1985, Wanless 1978b–e, 1979, 1980a–d, 1981a–c, 1982, 1984) and putting in some order the phylogenetic problems and the terminology.

The present study has been made within the programme of revision of the *Salticidae* faunae from Palaearctic and Oriental Region carried out by the Department of Zoology, Agricultural and Teachers University in Siedlce (Research Project MR. II. 6. sponsored by the Polish Academy of Sciences). The aim of these investigations is to learn about the fauna from various areas, the geographical range of species and further on the historical reconstruction of faunae of both zoogeographical regions. Thus it has been of great importance to know the *Salticidae* from Viet-Nam. Knowing this gives the possibility for comparative studies of *Salticidae* from Indochina and neighbouring Asiatic regions, makes it easier to trace the interactions among Oriental, Palaearctic and Australian fauna. This kind of research has been conducted for a long time and several hundred types from already mentioned regions were revised (Prószyński 1984a, Hęciak and Żabka — in prep.).

As the literature does not provide sufficient grounds the elaboration of new unidentified material required first of all a revision of documentary materials from earlier publications, both on fauna from Viet-Nam and adjacent regions. Therefore, I have made use of specimens from various zoological collections in the world. I have also used as comparative and complementary data the figures and descriptions of a number of species given by members of our research group — authors of these data are indicated in the systematic part.

This study — as I have already mentioned — is a part of group research and it was only possible thanks to the collected for years documentation on several hundred species (only some of it published). I would also like to mention here how many people and institutes helped me in many ways with my work. Dr P. T. Lehtinen (University of Turku) made available his own material (found in the systematic part under the abbreviation PTL), Dr Z. Kaszab (Hungarian Natural History Museum, Budapest) made available the vast material collected in Viet-Nam by Hungarian expedition of Topál (T) and Topál and Matskási (TM). Doc. Dr W. Staręga (Institute of Zoology, Polish Academy of Sciences, Warsaw) kindly lent me the specimens collected by Polish zoologists — B. Pisarski and J. Prószyński (PP) and by R. Bielawski and B. Pisarski (BP). The basis of the present study were the *Salticidae* from the three collections mentioned. The specimens identified earlier by various authors and comparative materials were sent by curators of a number of arachnological collections; they are placed in an alphabetical order:

BMNH — British Museum (Natural History), London (Mr F. R. Wanless),
HNHM — Természettudományi Múzeum, Budapest (Dr Z. Kaszab, Dr S. Mahunka),
IZPAN — Instytut Zoologii PAN, Warszawa (Doc. Dr W. Staręga, Dr E. Kierych),
MCSN — Museo Civico di Storia Naturale, Genova (Dr G. Arbocco),
MCZ — Museum of Comparative Zoology, Harvard University, Cambridge (Mass.) (Prof. Dr H. W. Levi),
MNHN — Muséum National d'Histoire Naturelle, Paris (Mr M. Hubert),
NHMB — Naturhistorisches Museum, Basel (Dr W. Wittmer),
NMW — Naturhistorisches Museum, Wien (Dr J. Gruber),
NRS — Naturhistoriska Riksmuseet, Stockholm (Mr T. Kronestedt),
SMF — Naturmuseum und Forschungsinstitut Senckenberg, Frankfurt a. M. (Dr M. Grasshoff),
ZMB — Zoologisches Museum der Humboldt-Universität, Berlin (Dr M. Moritz),
ZMK — Zoologisk Museum, København (Dr H. Enghoff).

Owing to the kindness of Prof. Dr O. Kraus and Dr G. Rack I had been able, during my

stay at the University of Hamburg[1], to work out the types of 120 Australian species, which I later used for comparative purposes. Illustrations of new genera and species were consulted with Mr F. R. WANLESS (British Museum NH), who approved them. I am also grateful for valuable criticism throughout the study by Doc. Dr A. DZIABASZEWSKI (A. Mickiewicz University in Poznań) and Doc. Dr W. STARĘGA (Institute of Zool. Pol. Acad. of Sci.), for suggestions of Dr W. WESOŁOWSKA (University of Wrocław) and my colleagues from the Department of Zoology of our University.

I am especially grateful to Prof. Dr J. PRÓSZYŃSKI for his valuable criticism of the manuscript, for providing material in the form of drawings and descriptions as well as manuscripts of unpublished papers. Furthermore I would like to thank him for all the encouragement and advice in everything I had done in the field of arachnology.

Some remarks on the taxonomy and terminology of *Salticidae*

In the case of *Salticidae*, apart from problems connected with the identification and classification of particular species, the main difficulty is the lack of a commonly accepted natural system of the family as a whole, which puts in a phylogenetic order the relations of genera and subfamilies. Although in the last tens of years some attempts have been made to solve this problem, some were unsound, others concerned only selected genera, subfamilies of regional faunae.

One of the first attempts to put into an order the *Salticidae* of the world has been made by SIMON (1901, 1903a), but the criteria assumed by him are not satisfactory as they frequently neglect the affinities among genera. Thus it is an artificial system, similarly as its modification suggested by PETRUNKEVITCH (1928). Nowadays they both are mainly of a historical value, although SIMON's system is still being used by many arachnologists for the lack of anything more modern.

Studies on a version of natural system — especially concerning the Holarctic *Salticidae* — have been undertaken by PRÓSZYŃSKI (1970, 1972, 1976, JACKOWSKA and PRÓSZYŃSKI 1975) on the basis of the commonly accepted criterion which is the structure of copulatory organs. Also the geographical distribution is treated here as a significant element of the characteristic of species and groups of species. Nevertheless the results obtained are open to discussion and require some further detailed studies.

In the last years the phylogenetic relations within the Oriental and Ethiopian *Salticidae* have been also examined by WANLESS as shown by his earlier publications (already cited) and information from his letters.

LEHTINEN (1967) has suggested (for all families higher spiders) to take into consideration more of significant in his opinion morphological characters, which properly arranged and treated as a whole may be a better criterion than those available. Thus formulated system has not been commonly accepted and is

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[1] I was invited by Deutscher Akademischer Austauschdienst.

still being debated. As for *Salticidae* it places this family only in the suborder *Araneomorpha* and no other conclusions are drawn.

It seems that these authors do not pay enough attention to the possibility of convergent development of species groups. This is a result of the dominant morphological approach, limited frequently only to the analysis of the structure of copulatory organs, to which the rules of convergence may apply, although to a smaller extent than for other characters. Such cases are known from investigations on other animal groups, and are discussed, amongst others, by MAYR (1974a, b, 1976). For a taxonomist, who works on a fixed material, the danger of a morphological approach and difficulties connected with the use of the biological species definition are understandable and obvious (MAYR 1974a). Therefore, so important are the recent intensive studies, which may provide other than traditional identification methods used in systematics. One should mention here the scanning microphotographies of complicated cuticular structures or copulatory organs of spiders from different families made by e. g. LEHTINEN 1975, PLATNICK 1977, WANLESS 1978e, 1984, the variety and specific character of behaviour and ecological requirements (e. g., DONDALE 1964, 1967, PLATNICK 1971, EDWARDS 1975, 1980, JACKSON 1982), also genetic and cytological studies (e. g., DAS and DAS 1974, BENAVENTE and WETTSTEIN 1977, MADDISON 1982). But these methods are only auxiliary ones as they are not commonly applied and the results for about 4 thousands of *Salticidae* species cannot be compared. If they are used for identification they are given beside conventional drawings of copulatory organs or other anatomical details (WANLESS 1978b, 1984, for other families — LEVI 1981, PLATNICK and SHADAB 1979–1983).

Altogether it can be said that not enough is known about the systematics of *Salticidae*. Past studies are useful only to some extent, whereas modern ones have a limited approach to this subject. Under these conditions it is absolutely nesessary to cite the evidence available for proper terminology, identification of genera and species and to distinguish new unknown yet taxa.

Methods

The collection of *Salticidae* was kept in 75% ethanol. I used in the study sexually mature forms, giving the juvenile ones in the list of material only when their identification was possible. Descriptions, drawings and measurements (in mm) were made according to the pattern used by PRÓSZYŃSKI (1968d) and others; I did not measure the legs, but whenever necessary made drawings of their significant taxonomic characters. The internal structures of female epigynes were drawn after their preparation, maceration in 20% KOH (hot maceration ca 30 min., cold maceration ca 24 hrs) at constant control. The object was coloured in chlorazol black E and cleared in a drop of glycerin or clove oil. These undurable preparations — otherwise than those sealed in Canada balsam — allow to handle the object and its structure can be analysed more easily. All this was done using Zeiss Jena microscopes type "Amplival" and "Citoval", scaled previously to the hunredth part of a millimetre for particular enlargements.

The systematic part

The elaborated collection of *Salticidae* covers all museum material I have managed to obtain including descriptive types of SIMON, THORELL, C. L. KOCH, KARSCH and HOGG, and is the greatest one at present from Indochina. However, some species and genera are distinguished on the basis of scarce, sometimes single specimens and in the future their description may not be sufficient and with the progress of investigations their verification will be required.

Out of 100 species described — 50 can be distinguished as new ones. The drawings and descriptions, allowing to identify the species, include the cases of variability, but because of insufficient knowledge of the fauna and the necessity of revising a number of Oriental genera it is too early to elaborate a key.

During typing of the paper some new comparative materials have been received and their taking into consideration destroyed somewhat an alphabetical order of genera as well as species within particular genera. Besides in the case of a possible affinity (e.g. *Bianor* — *Harmochirus*, *Portia* — *Neobrettus*, species of the genus *Phintella*), an alphabetical order have been desisted purposely. For those reasons the alphabetic species index is given at the end of paper.

Bianor PECKHAM et PECKHAM, 1885

1885 *Bianor* PECKHAM et PECKHAM, Proc. nat. Hist. Soc. Wisc., **1**: 284.

A broadly distributed genus having 25 nominal species. In literature found are only separate descriptions of its particular representatives (SCHENKEL 1963, PRÓSZYŃSKI 1979, BOHDANOWICZ and HĘCIAK 1980, YIN CHANG-MIN and WANG JIA-FU 1981), there are no syntheses nor revisions with precise diagnoses of species and their individual variety within them.

As regards its morphology this genus has a slightly flattened and enlarged cephalothorax (Fig. 50) — usually brown. Abdomen of males sometimes with scutum, in some species with white (clothed with hairs) spots forming lateral bands on the sides. Sometimes a herring-bone pattern on the abdomen (Figs. 5, 13). Legs I thick, lack of specially enlarged segments and feathery setae present in *Harmochirus* SIM. (Figs. 51, 53). Epigyne with a vast bell-shaped pocket in the midst of an oval depression, copulatory canals running from tangled loops surrounding the barely visible and greatly varying individually spermathecae. Palps uniform in shape, small and difficult to grasp differences among species. The copulatory organs of *Bianor* greatly resemble those of genus *Harmochirus*. Apart from these two there are few other related genera. Some (e. g., *Stichius* THOR.) should most probably require synonymization.

Bianor hotingchiehi SCHENKEL, 1963

1963 *Bianor hotingchiehi* SCHENKEL, Mem. Mus. Hist. nat., N. S., Zool., **25**: 434.

Material: 1 ♂, 2 ♀♀ — Phu Que, new, dry forest — tree trunks and branches, 16 VI 1959; 1 ♀ Chine, 80 km SW Ha Noi, in forest litter and under lime stones, 26 VI 1959, PP; 1 ♀ — Ha Noi, 3 V 1966, BP, IZPAN. 1 ♀ — Yen So, SW of Ha Noi, netted in grasses, 23 IV 1966;

1 ♀ – netted in water, 20 IV 1966; 1 ♂ – beaten from trees, 19 IV 1966; 1 ♀ – beaten from trees in village, 22 IV 1966, T; 1 ♂ – Minh Xuan, near Luc Yen, prov. Yen Bai, 300 m, swept in grasses, 2 XII 1971, TM, HNHM.

Comparative material: 1♂ "*Bianor hotingchiehi,* Type, China, Wuchang, Cho Ting Chich, det. SCHENKEL 1946", MNHN.

Male. Cephalothorax dark brown, surroundings of lateral eyes I, eyes II and III black. Back and lateral surfaces and near the submargin have white hairs, above eyes I longer, greyish-white and brown bristles. Length of cephalothorax 2.10, length of eye field 1.01, width of eye field I 1.40, width of eye field III 1.69. Abdomen greyish-brown with irregular orange-brown spots and four (sometimes six) symmetric tufts of white hairs (Fig. 5). Whole abdomen, especially on its margin covered with white-greyish hairs. Length of abdomen 2.02. Spinnerets grey-brown. Clypeus light brown with white hairs overhanging towards the bases of chelicerae. Chelicerae brown with characteristic teeth (Figs. 4, 6). Maxillae and labium brown, sternum lighter in colour. Venter yellow-greyish in its median part; laterally dark grey with longitudinal rows of paler spots and stripes. Palpal organ (Figs. 1–3) with a bent sharp-ended apophysis. Legs I thick, brown with light grey and brown protruding hairs and short brown spines. Other legs orange-brown, proximal and distal segments of lighter colour, hairs and spines the same colour as segments on which they grow.

Female. Eye field and lateral surfaces of cephalothorax dark brown, surroundings of eyes black, further on brown. On the posterior and lateral surfaces white scale-like hairs, around eyes I longer white-grey hairs. Length of cephalothorax 2.31, length of eye field 1.10, width of eye field I 1.51, width of eye field III 2.01. Abdomen (Fig. 13) grey-brown with light grey spots and streaks due to pigmentation and hair tufts. On the anterior margin denser and longer hairs, whole abdomen covered with brown fine bristles. Varying intensity of light spots. Length of abdomen 3.02. Spinnerets orange-brown. Clypeus brown with white hairs. Chelicerae (Fig. 14) brown, pedipalps orange, maxillae, labium and sternum orange-brown. Venter yellowish-grey, laterally becoming darker with spots as on the dorsal aspect. Epigyne (Figs. 7–12) externally greatly varying due to different degree of sclerotization of its internal structures and their different position. Central pocket varies also in size and shape. Legs I (Figs. 15) orange-brown, thick with light grey and grey-brown hairs and short, orange spines. Other legs lighter in colour and more delicate.

Species known only from China (SCHENKEL 1963, BOHDANOWICZ and HĘCIAK 1980, YIN CHANG-MIN and WANG JIA-FU 1981) (Map 1).

Bianor maculatus (KEYSERLING, 1883)

1883 *Scythropa maculata* KEYSERLING, Arachn. Austral.: 1447.
1901 *Bianor maculatus* : SIMON, Hist. nat. des Araign., **2** (3): 638, 641.

Material: 1 ♂ – Phu Ruy, 80 km NW Vinh, borderline of dry deciduous forest and dry cut rice-field, 17 VI 1959, PP, IZPAN.

Comparative material: ♂♂, ♀♀ "*Bianor maculatus* (KEYS.), 4.229 Nouméa, 4.225, 5.872 Sydney", MNHN.

Male. Cephalothorax dark brown, surroundings of eyes black with sparse grey-orange setae. Posterior and lateral surfaces with white setae. Length of cephalothorax 1.80, length of eye field 1.01, width of eye field I 1.20, width of eye field III 1.55. Abdomen gleaming, with an indistinct scutum, light brown. Posterior and lateral surfaces with rows of orange dots on a grey-brown background. Light grey hairs on the margin, posteriorly darker and dense. In some specimens symmetrical tufts of white hairs as in the former species. Length of abdomen 2.10. Spinnerets grey-brown. Clypeus brown with white scale-like hairs and longer hairs overhanging cheliceral bases. Chelicerae brown (Fig. 19), maxillae and labium similar in colour, sternum grey-brown, venter slightly darker. Palpal organ (Figs. 16–18, 20, 21) resembling that of *B. hotingchiehi* but bulbus distinctly enlarged, embolus longer. Legs I thick, proximal segments dark brown, distal ones gradually paler — tarsi orange-brown. Proximal segments of other legs brown, colour gradation of other segments as in legs I. Hairs grey and grey-orange, spines darker.

Specimens compared varied as to their colour intensity, but in general were similar to those from Viet-Nam, having also the same structure of palpal organs (Figs. 20, 21) and chelicerae.

Female (from Australia). Cephalothorax orange-brown, surroundings of lateral eyes I, eyes II and III dark brown. All surface covered with numerous white and single brown hairs — longer around eyes. Length of cephalothorax 1.65, length of eye field 0.90, width of eye field I 1.25, width of eye field III 1.65. Abdomen beige with dense light grey setae forming an indistinct herring-bone pattern, some longer brown hairs. In one of the females four light grey spots forming a square. Length of abdomen 2.75. Spinnerets beige. Clypeus orange-brown with white scale-like hairs and longer ones overhanging cheliceral bases. Under median eyes I three protruding light brown bristles. Chelicerae dark orange, pedipalps yellow. Maxillae, labium and sternum orange-brown slightly grey. Venter as in the dorsal aspect. Epigyne (Figs. 22–25) externally variable with highly translucent semicircle spermathecae. Internal canals longer and more sclerotized than in the former species. Legs I thick, orange, other dark yellow, covered with hairs and spines as in males.

B. maculatus is the type-species of the genus, known (Map 3) from Australia, New Caledonia and Samoa (BONNET 1955). It differs from *B. hotingchiehi* in the structure of male chelicerae, presence of scutum, shape of bulbus and length of embolus. Females differ mainly in the course of internal canals of epigyne.

***Bianor monster* sp. n.**

Material: 1 ♀ holotype — Phu Que, 80 km NW Vinh, new, dry forest — tree trunks and branches, 16 VI 1959, PP, IZPAN.

Dorsal aspect (Fig. 27). Cephalothorax orange-brown, its posterior part cut by a distinct margin, grey. Surroundings of eyes black-brown. Whole cephalothorax covered with sparse brown hairs. Length of cephalothorax 1.75, length of eye field 0.80, width of eye field I 1.15, width of eye field III 1.45. Abdomen yellowish, posteriorly grey with a mosaic of irregular spots and four bigger symmetric spots. Dense hairs, grey-brown. Length of abdomen 2.40. Spinnerets grey-brown. Clypeus yellow-orange with sparse white and white-yellow hairs. Chelicerae (Fig. 29) orange-brown, pedipalps white-yellow. Maxillae and labium orange, sternum yellow-grey, venter yellow. Epigyne (Fig. 26) resembling in its external structure that of other representatives of the genus, but close to epigastric furrow two small openings not found in any of the known species. During preparation the epigyne was deformed and its internal structures are not shown in the drawing. Legs I (Fig. 28) orange-brown, slightly thicker than other, yellow. Hairs orange- and grey-brown, short spines of a similar colour.

A distinct margin in the posterior part of cephalothorax, light colour of body and openings on the epigyne surface — these characters distinguish the species among other representatives of the genus.

Bianor simoni sp. n.

Material: 1 ♂ holotype — Phu Ruy, 80 km NW Vinh, borderline of dry deciduous forest and cut rice-fields, 17 VI 1959, PP, IZPAN.

Dorsal aspect (Fig. 34). Cephalothorax massive, dark brown, surroundings of eyes black. Whole surface covered with sparse white and greyish-white setae. Length of cephalothorax 2.50, length of eye field 1.30, width of eye field I 1.61, width of eye field III 2.20. Abdomen orange with dark grey tint forming irregular spots. Medially four orange spots, similarly brighter anterior margin. Whole surface with single grey-white and grey hairs. Length of abdomen 2.70. Spinnerets grey-brown. Clypeus orange-brown with sparse white hairs. Chelicerae (Fig. 33) thick, reddish-brown, teeth resembling those of *B. hotingchiehi*. Maxillae and sternum orange-brown, labium darker. Venter orange-grey, posteriorly darker, laterally longitudinal orange streaks. Palpal organ (Figs. 30–32) thicker than in previous species, tibial apophysis spatuliform. Legs I brown, thick, other legs orange-brown. All legs covered with orange-brown and grey hairs and light brown spines.

The species is strongly built which distinguishes it from other species as well as the structure of palpal organs.

Harmochirus Simon, 1885

1885 *Harmochirus* Simon, Bull. Soc. zool. Fr., **10**: 440.

A genus known from Japan, considerable part of Oriental Region and Africa (Bonnet 1957). Its characters are described faithfully by Simon (1903a),

in more recent papers by YAGINUMA (1974) and by BOHDANOWICZ and PRÓSZYŃSKI (in press).

The structure of copulatory organs proves the close affinity of the genus to *Bianor*; nevertheless *Harmochirus* has some distinguishing characters of its own (Figs. 50–53):

— cephalothorax on the level of eyes III broader than in *Bianor*, eyes highly elevated,
— abdomen having a more distinct scutum (especially in males),
— legs I much elongated, tibia broader, with long feathery bristles — found also on femora,
— spines on legs longer than in *Bianor*.

Harmochirus brachiatus (THORELL, 1877)

1877 *Ballus brachiatus* THORELL, Ann. Mus. Stor. nat. Genova, **10**: 626.
1892 *Harmochirus brachiatus*: THORELL, Ann. Mus. Stor. nat. Genova, **31**: 250, 473.

Material: 5♂♂, 6♀♀, 8 juv. — Ha Noi, Thu Le, park, 10 X 1978, 1♀ — Bac Thai, Bac Can, 850 m, tea plantation, 17 X 1978, 1♀ — Vinh' Phu, Tam Dao, 7 km S, 450 m, roadside wall, 21 X 1978, PTL. 1 ♀ — Co Loa, 20 km NE Ha Noi, 10 V 1966, 1♀ — Yen So, 10 km Ha Noi, 20 V 1966, BP, IZPAN. 1♀ — Cuc Phuong, prov. Ninh Binh, netted in forest undergrowth, 12 V 1966, T, HNHM.

Male. Cephalothorax dark brown, lighter posteriorly and laterally with scale-like pearly setae. Eyes surrounded with longer grey hairs. Length of cephalothorax 1.90, length of eye field 1.10, width of eye field I 1.30, width of eye field III 1.61. Abdomen dark brown with gleaming scutum. Around on the margin light grey and longer grey setae. Length of abdomen 1.80. Spinnerets black-brown. Clypeus brown with sparse grey hairs. Chelicerae, maxillae and labium brown, sternum lighter. Venter black-grey with grey setae having a metallic lustre. Palpal organ (Figs. 35–37) grey-brown, resembling in structure the representatives of the genus *Bianor*, the embolus only shorter and thinner. Legs I (Fig. 38) light brown with lighter much elongated two distal segments. Femora and puffed tibiae with feathery bristles. There are also grey-orange (on lighter segments) and black-brown hairs and spines. Other legs more delicate, black-brown with grey and grey-brown hairs and spines.

Female. (Fig. 43). Coloration and hairs of cephalothorax as in the male. Length 1.40, length of eye field 0.85, width of eye field I 1.10, width of eye field III 1.30. Abdomen greyish-black, gleaming, without a distinct scutum. In some specimens small, hardly visible, paler spots, but all specimens have setae with a metallic lustre forming spots. Around on the margin longer grey and brown hairs. Length of abdomen 1.90. Spinnerets brown. Clypeus brown with sparse grey and single brown hairs. Chelicerae (Fig. 45) orange-brown, maxillae, labium and sternum of a similar colour. Pedipalps greyish-orange, venter dark grey with grey setae, sometimes a light grey elongated patch. Epigyne (Figs. 39–42, 46–49) externally variable, pocket centrally as in the genus *Bianor*. Internal

structure quite complex: copulatory canals form a number of loops and join the spermathecae, proximally having the character of big reservoir, distally bent in the shape of letter "S". Legs I (Fig. 44) thick, orange-brown, lighter metatarsus and tarsus, with grey and light brown hairs. Femur and tibia with feathery long bristles. Spines brown. Other legs yellowish-grey, without feathery bristles, hairs as on legs I.

Species having a vast geographical range — from Japan, Pacific Islands, Indochina, up to India (BONNET 1957) (Map 15).

Bristowia REIMOSER, 1934

1934 *Bristowia* REIMOSER, Proc. zool. Soc. London, **1934**: 17.

Monotypic, known only from Krakatau (Map 2).

Bristowia heterospinosa REIMOSER, 1934

1934 *Bristowia heterospinosa* REIMOSER, Proc. zool. Soc. London, **1934**: 17.

Material: 1 ♂ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN.

Comparative material: ♂, ♀ "*Bristowia heterospinosa* REIM., Type, Krakatau, BRISTOWE", NMW.

Male (Fig. 57). Cephalothotax reddish-brown, surroundings of eyes black, eyes III on distinct elevations. Environs of eyes and lateral surfaces surrounded by sparse grey hairs. Length of cephalothorax 1.75, length of eye field 0.90, width of eye field I 1.15, width of eye field III 1.25. Abdomen dark grey with vast yellow-orange spots, lateral surfaces margined in the same colour. Sparse grey hairs. Length of abdomen 1.80. Spinnerets grey-orange. Clypeus dark brown with single grey hairs. Chelicerae dark brown, maxillae and labium lighter, sternum orange. Venter light grey with two dark grey streaks, median towards spinnerets. Lateral abdomen surfaces dark grey with rows of yellowish spots. Palpal organ (Figs. 54–56) with elongated bulbus, embolus dagger-like and small tibial apophysis. Legs I (Fig. 58) longer than others, slender, dark brown, two distal segments only lighter. Patellae and tibiae ventrally with numerous bristles forming a scopula. Other legs grey-orange, lateral surfaces darker, hairs and spines orange.

The documentation for the female is a drawing of epigyne (Fig. 59) made available by J. PRÓSZYŃSKI.

The structure of copulatory organs indicates the affinity to genera *Phintella* and *Chrysilla*.

Carrhotus THORELL, 1891

1891 *Carrhotus* THORELL, Kongl. Svenska Vet.-Akad. Handl., **24** (2): 140.
1902 *Eugasmia* SIMON, Ann. Soc. ent. Fr., **71**: 395.

A genus having very few species and not well known. Distributed in the Palaearctic and the Oriental Region. Localities in Africa given by BONNET (1956) are not easy to verify because of unsufficient data.

The genus *Eugasmia* requires synonymization with *Carrhotus* because of affinities of the type-species of both genera: *C. viduus* (C. L. K.) and *E. sannio* (PRÓSZYŃSKI 1984a).

Carrhotus coronatus (SIMON, 1885) **comb. n.**

1885 *Ergane coronata* SIMON, Ann. Soc. ent. Belg., **29**: 33.
1903 *Eugasmia coronata*: SIMON, Hist. nat. des Araign., **2** (4): 296, 297, 703, 708.

Material: 3 ♀♀ — Thanh Liet, SW of Ha Noi, beaten from trees, 23 IV 1966, T, HNHM

Comparative material: ♀♀ "*Ergane coronata* SIM., Kagok", 1 ♀ "*Eugasmia coronata* SIM., JACOBSON", det. W. KULCZYŃSKI, IZPAN.

Female. Cephalothorax orange-brown, around posterior and lateral surfaces a broad brown belt covered with numerous white hairs. On surroundings of eyes I yellow and orange setae and brown bristles. Length of cephalothorax 3.04, length of eye field 1.20, width of eye field I 2.00, width of eye field III 2.08. Abdomen grey-yellow with numerous brown hairs, forming spots and dots, with white-yellow hairs forming large spots posteriorly. Also numerous dark brown bristles. Length of abdomen 3.12. Spinnerets dark orange. Clypeus orange with yellow and white hairs varying in length. Below posterior median eyes some orange bristles. Chelicerae (Fig. 62) and pedipalps orange, maxillae and labium darker, sternum yellow-orange. Venter medially grey-yellow or grey. Epigyne (Figs. 60, 61) in the form of two small depressions, copulatory openings hardly visible. Copulatory canals bow-shaped, join elongated spermathecae. Accessory glands distinct, although not as well developed as in *C. sannio*. Legs orange, thick, with numerous protruding white and light brown long hairs, spines brown.

Particular specimens differ as to coloration intensity and hairs on the abdomen.

Species known only from Malay Archipelago (Map 4).

Carrhotus sannio (THORELL, 1877)

1877 *Plexippus sannio* THORELL, Ann. Mus. Stor. nat. Genova, **10**: 617.
1902 *Eugasmia sannio*: SIMON, Ann. Soc. ent. Fr., **71**: 395.

Material: 4 ♂♂, 2 juv. — 120 km NW Vinh, sandy dunes on the river, shrub and herb belts, 18 VI 1959, 1 ♂, 4 ♀♀ — Chine, 80 km SW Ha Noi, in the litter, under calcareous rocks, 26 VI 1959, PP, 1 ♂, 1 juv. — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, 2 ♂♂ — Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 2 ♀♀ — Coc Xan, prov. Lao Cai, 400 m, beaten from bushes, 27 XI 1971, TM, HNHM. 2 ♀♀, 2 juv. — Quang Ninh, Ha Long, pine slope close to seashore, 12 X 1978, 1 ♀ — Vo Nhai, Dinh Ca, 200 m, thicket at the base of steep rock, 16 X 1978, 1 ♂ — Bac Thai, Bac Can, 850 m, tea plantation, 17 X 1978, 1 ♀ — Vinh Phu, Tam Dao, 1450 m, stony jungle slope, 19 X 1978, PTL.

Male. Cephalothorax grey-brown, sometimes grey- or dark orange, even

black. Surroundings of eyes dark grey. Posterior and lateral surfaces with dark or grey tint, and with dark brown and white-grey setae, more numerous around eyes, where grey-brown bristles occur additionally. Length of cephalothorax 1.82–3.00, length of eye field 0.84–1.08, width of eye field I and III 1.32–2.30. Abdomen in various shades of grey and brown, and a mosaic of lighter spots, laterally in diagonal rows. Covered with sparse, white-grey and brown hairs, more numerous on anterior margin. Length of abdomen 1.80–2.70. Spinnerets brown. Clypeus orange-brown with numerous hairs of a similar colour and single brown hairs. Chelicerae (Fig. 66) orange, frequently darker — even dark brown. Characteristic shape, on frontal surfaces at the basal part numerous white hairs. Maxillae and labium the same colour as chelicerae, sternum brown with a lighter edge, covered with small pale spots. Venter with grey-brown median patch and longitudinal rows of pale spots. Sometimes the median patch and its surroundings lighter, sometimes almost dark. Palpal organ (Figs. 63–65) grey-orange or darker. Bulbus elongated, embolus bow-shaped, apophysis large, in apical part of cymbium small outgrowth. Legs I and II grey-orange, frequently darker — even black-brown. Distal segments lighter similarly as in legs III and IV. Hairs long, protruding, grey and grey-brown, spines numerous, similar in colour.

Female. Cephalothorax with black-brown eye field, remaining part dark brown, slightly greyish. Whole cephalothorax covered with light hairs, posteriorly and laterally also dark ones. Sometimes traces of light longitudinal stripes formed by hairs. Length of cephalothorax 1.86, length of eye field 0.78, width of eye field I 1.26, width of eye field III 1.32. Abdomen beige, frequently with darker spots, arranged in a herring-bone pattern. On the whole surface grey and grey-brown hairs, frontal surface with a characteristic fringe of dark grey and brown hairs. Length of abdomen 2.28. Spinnerets beige. Clypeus orange-brown with sparse hairs similar in colour. Chelicerae the same colour as clypeus, pedipalps white-yellow. Maxillae orange-brown, labium grey-brown, sternum somewhat darker with numerous pale spots. Venter light grey, slightly yellowish, on its surface three brown longitudinal streaks forming sometimes a uniform patch.

Epigyne (Figs. 67–70) in the form of two longitudinal, delicate depressions divided by a ridge. Copulatory canals (larger and longer than in the previous species) join the elongated spermathecae having a distinct accessory gland on the outer wall.

Legs greyish-orange, slightly brown, covered with white-grey and orange protruding hairs. Spines as in the male.

An oriental species, known mainly from south-eastern Asia, India; PRÓSZYŃSKI and ŻOCHOWSKA (1981) record it also [as *C. xanthogramma* (LATR.)] from Yarkand (Map 5). Both species, although related, differ in the shape of tibial apophysis, embolus length and apical part of cymbium. Spermathecae of *C. sannio* females elongate and not oval as in *C. xanthogramma* (PRÓSZYŃSKI 1973).

Chalcoscirtus Bertkau, 1880

1880 *Chalcoscirtus* Bertkau, Verh. naturh. Ver. preuss. Rheinl., **37**: 284.

The genus is known from the Palaearctic and Nearctic (Bonnet 1956), not numerous, represented by few species. Structure of body and copulatory organs show close relation to *Euophrys*, but the difference between these genera is not clear. According to Prószyński (oral information) it may be possible to show their different characters thanks to studies on the internal structure of female copulatory organs, and especially on the structure and position of accessory glands. At present the distinction is easier due to the presence of scutum on the abdomen of many representatives of the genus *Chalcoscirtus*.

Chalcoscirtus vietnamensis sp. n.

Material: 1♂ holotype "*Heliophanus* sp., Ha Noi. (Vlg.)," MNHN 22980.

Dorsal aspect (Fig. 75). Cephalothorax thickset, brown, surroundings of eyes darker. Hairs sparse, white-grey and brown, forming tufts in the frontal part. Length of cephalothorax 1.70, length of eye field 0.75, width of eye field I 1.25, width of eye field III 1.20. Abdomen egg-shaped, flattened, light brown, darker towards the margins, with traces of lighter median belt. On frontal margin characteristic, protruding yellow-grey and brown bristles. Whole surface covered with scutum. Length of abdomen 1.60. Spinnerets grey-orange. Clypeus light brown with sparse long hair, similar in colour. Chelicerae brown, maxillae and labium orange-brown, sternum orange. Venter medially grey-orange, laterally longitudinal rows of dark grey thin streaks. Pedipalps (Figs.71–74) with a meandering canal on bulbus surface and short embolus accompanied by a flaky outgrowth. Tibial apophysis long spatular. Legs I orange-brown, other legs grey-orange, all rather squat. Hairs and spines the same colour as segments on which they accur.

The structure of copulatory organs resembles that of *Ch. martensi* Żabka — — a species known from the Himalayas and Pamir (Żabka 1980b).

Cheliceroides gen. n.

The genus is represented by spiders of a considerable size (ca 8 mm), square built (Fig. 77). Basic segment of chelicerae much elongated, proximal and distal parts with teeth and outgrowths (Fig. 76). Also a claw with tubercles. Palps long, especially tibia (Figs. 78–80). Apophysis long and narrow, bulbus oval with a seminal reservoir "S"-shaped. Embolus thin, growing on the side of apophysis, surrounding the bulbus, its distal part towards the cymbial apex.

Body form and structure of chelicerae resembles that of the genus *Opisthoncus* (Żabka in prep.), but palps obviously different.

Heliceroides longipalpis sp. n.

Material: 1 ♂ holotype — Cuc Phuong, tropical rain forest, calcareous rocks, 9 VI 1966 BP, IZPAN.

Dorsal aspect (Fig. 77). Eye field chestnut-brown, surroundings of posterior somewhat darker, of other black with single grey and grey-yellow hairs. Eye field with red-orange edge, fringed with numerous, scale-like orange and white hairs. Posterior part of cephalothorax brown, darkening towards the lower margin. Length of cephalothorax 4.20, length of eye field 1.80, width of eye field I 2.70, width of eye field III 2.60. Abdomen grey-brown with a broad, posteriorly darker median belt. Laterally oblong yellow spots. Frontal part fringed with white hairs, on the remaining surface sparse grey-brown hairs. Length of abdomen 4.10. Spinnerets dark brown with light-grey apices. Clypeus dark brown, red-brown beneath lateral eyes, with sparse, ligth brown hairs. Chelicerae (Fig. 76) with light brown basic segments, at the basal part two large teeth, distal part with considerable outgrowths. Claws with characteristic tubercles. Maxillae and labium orange-brown, sternum yellow with a darker margin. Venter frontally white-yellow, posteriorly grey-brown with longitudinal rows of pale spots laterally. Palpal organ (Figs. 78–80) elongate and hairy, bulbus oval with a meandering canal "S"-shaped, embolus long and thin, apophysis long and narrow. Coxae of legs I and II orange-brown. Other segments brown. Coxae, trochanters, proximal parts of femora and tarsi of legs III and IV yellow, metatarsi orange, all the rest brown. All legs with sparse, white and more numerous light grey and brown hairs and spines.

Chrysilla Thorell, 1887

1846 *Plexippus*: C. L. Koch, Die Arachniden, **13**: 103, 125.
1887 *Chrysilla* Thorell, Ann. Mus. Stor. nat. Genova, 2, **5**: 378.

The structure of copulatory organs of representatives of the genus suggests that it is related to the genera *Icius* and *Phintella*. Once the mutual relations between these genera are determined it would be possible to describe precisely their geographical distribution and diagnostic characters. Attempts in this direction have been undertaken by Prószyński (1983a, c), but it seems that the problem requires some further studies. Here, the traditional approach to the genus remains, assuming also the partly modified data of Bonnet (1956) on geographical distribution.

Drawings of *Ch. lauta* are faithful illustration of copulatory organs of representatives of this genus, as it is its type-species.

Chrysilla lauta Thorell, 1887

1887 *Chrysilla lauta* Thorell, Ann. Mus. Stor. nat. Genova, 2, **5**: 378.
1903 *Cosmophasis longiventris* Simon, Ann. Soc. ent. Fr., **71**: 148, **syn. n.**
Material: 1 ♂ "*Cosmophasis longiventris* E. S., Phuc Son, (...)", MNHN 22120.
Comparative material: 1 ♂ "*Chrysilla lauta* Th., Typus, Birmania, Bhamó, 1885 L. Fea", MCSN.

The drawings of J. PRÓSZYŃSKI, being the only documentation of the species, contain a remark: "Body structure as in *Cosmophasis thalassina* (KOCH), small difference in coloration".

Palpal organ (Figs. 81, 82) much elongated, quite thick. Tibial apophysis rather big, quite long sinuous.

Species known only from Burma and Viet-Nam (Map 6).

Chrysilla versicolor (C. L. KOCH, 1846)

1846 *Plexippus versicolor* C. L. KOCH, Die Arachniden, **13**: 103.
1890 *Chrysilla versicolor*: THORELL, Ann. Mus. Stor. nat. Genova, 2, **10**: 275.
1903 *Viciria caprina* SIMON, Ann. Soc. ent. Fr., **71**: 734 (part.).
1963 *Dexippus davidi* SCHENKEL, Mem. Mus. Hist. nat., N. S., Zool., **25**: 446–449, **syn. n.**
1963 *Dexippus tschekiangensis* SCHENKEL, Mem. Mus. Hist. nat., N. S., Zool., **25**: 449–451, **syn. n.**
1981 *Icius davidi*: WESOŁOWSKA, Ann. zool., **36**: 135, 136.
1981 *Icius tschekiangensis*: WESOŁOWSKA, Ann. zool., **36**: 135–137.

Material: 2♂♂, 2 juv. – Ha Noi, Bac Thao, park, 9 X 1978, 1♂ – Ha Noi, Thong Nhat, park, 10 X 1978, 1♀ – Ha Noi, Thu Le, park, 10 X 1978, 8♂♂, 4♀♀, 10 juv. – Bac Thai, Bac Can, 850 m, tea plantation, 17 X 1978, PTL. 2♀♀ – Co Loa, 20 km NE Ha Noi, 10 V 1966, 1♂ – Yen So, 10 km S Ha Noi, 18 V 1966, 1♂ – Ha Noi, 26 V 1966, 1♂ – Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1♂ – Mai Lam, NE of Ha Noi, beaten from bushes, 14 IV 1966, 2♂♂, 2♀♀, 4 juv. – Dinh Vy, NE of Ha Noi, beaten from bushes, 15 IV 1966, 1♀, 1 juv. – Mai Lam, NE of Noi, beaten from bushes in village, 16 IV 1966, 4♂♂, 4♀♀, 4 juv. – Yen So, SW of Ha Noi, beaten from trees, 19 IV 1966, 7♀♀, 1 juv. – beaten from trees in village, 22 IV 1966, 7♀♀, 2♂♂ – Tanh Liet, SW of Ha Noi, beaten from trees, 23 IV 1966, T, 2♀♀ – An Phu, Luc Yen distr., prov. Yen Bai, 300 m, beaten from bushes, 3 XII 1971, TM, HNHM.

Comparative material: 1♂ "*Plexippus versicolor* KOCH, Type, Bintang", ZMB 1624. 1♂ "*Viciria caprina* E. S., Phuc Son (FR)", MNHN 22104.

Male. Eye field grey-brown, surroundings of eyes II and III black with white adpressed hairs. Cephalothorax posteriorly with orange median belt with numerous, white hairs, lateral surfaces similar. There are also longer sparse grey-brown hairs – especially around eyes. Length of cephalothorax 2.30, length of eye field 1.01, width of eye field I 1.71, width of eye field III 1.62. Abdomen (Fig. 87) greyish-white, medially light grey slightly brown, covered with brown-grey scale-like hairs. Lateral surfaces haired similarly. On anterior margin and posteriorly longer grey-brown hairs. Length of abdomen 2.90. Spinnerets grey-yellow. Clypeus dark brown with sparse, brown hairs and a tuft of white hairs, overhanging beneath basal part of chelicerae. Chelicerae dark brown with lighter tips. Maxillae and labium brown, sternum white-yellow, venter beige. Palpal organ (Figs. 83–86, 88–92) white-yellow, slender, resembling those of *Ch. lauta* but tibia shorter, its apophysis more delicate, on the surface of bulbus a distinct protuberance. Legs I dark brown with sparse, white, scale-like hairs, brown bristles and spines. Consecutive legs gradually paler, legs IV grey-orange. Coxae and trochanters white-yellow.

Coloration of males varies, different pigmentation intensity, scale-like hairs tend to fall out, but all specimens have a broad dark streak along the abdomen, contrasting coloration of cephalothorax and abdomen and light palpal organs.

Female. Coloration and hairs on cephalothorax of a similar type as in male but paler: eye field greyish-orange, surroundings of eyes grey-brown, the remaining part white-yellow. Scale-like white hairs in the eye field, posteriorly and on ventral margin grey-brown. Also light brown bristles around eyes. Length of cephalothorax 2.20, length of eye field 1.00, width of eye field I 1.50, width of eye field III 1.40. Abdomen (Fig. 96) white-yellow, covered with grey-orange, red or grey-brown scale-like hairs. They fall out easily, sometimes may only form small irregular spots. Whole surface covered with single grey-brown bristles. Length of abdomen 3.01. Spinnerets white-yellow. Clypeus white-yellow with numerous silver-white hairs. Beneath posterior median eyes two protruding grey-brown bristles. Chelicerae greyish-orange, pedipalps, maxillae and labium white-yellow. Venter similar in coloration, only laterally diagonal rows of brown-grey hairs. Epigyne (Figs. 93–95) with vast median depression and translucent spermathecae. Copulatory canals broad, spermathecae pear-shaped, the fertilization canals and accessory glands well visible. Legs white-yellow, barely any hairs.

Females (similarly as males) vary as to their external appearance due to varying intensity of pigmentation and hairs.

Species of an Oriental and East Palaearctic distribution (Map 7), described, amongst others, by PRÓSZYŃSKI (1973), SCHENKEL (1963), and WESOŁOWSKA (1981b). In the two last papers individuals from both sexes are described as separate species.

Colyttus THORELL, 1891

1891 *Colyttus* THORELL, Svenska Vet.-Akad. Handl., **24** (2): 132.

The only known species of the genus — *C. bilineatus* THORELL described from the Malay Peninsula and Sumatra. The original description by THORELL is not sufficient for identification, as well as the later one by SIMON (1903a). The drawing documentation of the type-species of the genus presented by Prószyński (1984a).

Colyttus lehtineni sp. n.

Material: 1 ♂ holotype, 1 ♀ allotype, 1 juv. ♀ paratype — Vinh Phu, Tam Dao, 1450 m, bamboo and ferns, 20 X 1978, 1 ♂ paratype — bamboo-pine forest, 20 X 1978, PTL. 1 ♂ paratype — Lao Cai, 5 km E of town, 200 m, beaten from bushes in valley of a creek, 26 XI 1971, TM, HNHM.

Comparative material: 1 ♂ "*Colyttus bilineatus* TH., Padang, WEY.", MNHN.

Male (holotype). (Fig. 100). Eye field orange-brown with slightly lighter spots, surroundings of eyes black. Eye field surrounded by a broad orange fringe with a wedge running to the posterior margin of cephalothorax. Remaining surface (above ventral margin) light brown. Whole cephalothorax with single white and brown hairs, the latter more numerous around eyes, where also brown and grey bristles occur. Length of cephalothorax 3.30, length of eye field 1.60, width of eye field I and III 2.40. Abdomen white-yellow with median grey-orange small apodemes, on the whole surface grey-brown setae and bristles. Length of abdomen 3.40. Spinnerets grey-orange. Clypeus narrow brown with sparse long grey hairs. Basal part of chelicerae dark brown, distal — dark orange — similarly as maxillae and labium. Sternum, basal leg segments and venter white--yellow. Palpal organ (Figs. 97–99) dark orange, bulbus and seminal reservoir on its surface resembling those of representatives of *Euophrydinae* (sensu PRÓSZYŃSKI 1976). Embolus — together with dagger-like conductor — on an oval, scale-like basis. Legs I grey-brown with white and brown hairs, brown bristles and spines. Other legs gradually lighter, legs IV yellow-orange slightly grey.

Female (allotype). Eye field grey-orange, surroundings of eyes black, remaining surface white-yellow. Whole area with grey-brown hairs, around eyes also white hairs and brown bristles. Length of cephalothorax 3.10, length of eye field 1.30, width of eye field I 2.30, width of eye field III 2.10. Abdomen (Fig. 103) coloration and hairs as in the male. Length 2.80. Spinnerets orange. Clypeus white-yellow with three brown-grey bristles in median part. Ventral aspect: all parts of body yellow. Epigyne (Figs. 101, 102) in a shape of very vast depression, surrounded by a distinct margin. On the side of epigastric furrow divided by wedge-shaped median ridge. Copulatory openings vast with accessory glands, spermathecae pear-shaped. Legs yellow with hairs and bristles similar in colour.

Paratypes varying in coloration intensity. One of the juvenile females has the already forming copulatory organs (Figs. 104, 105).

The structure of palp and epigyne resembles that of genus *Thiania*, but the body form and inner structures of epigyne are quite different. This confirms the theory of convergent development of some characters in non-related groups of species.

Emathis SIMON, 1899

1890 *Hasarius*: THORELL, Ann. Mus. Stor. nat. Genova, 2, **10**: 170.
1899 *Emathis* SIMON, Ann. Soc. ent. Belg., **43**: 107.

The genus contains 8 species, of which 3 (including type-species, *E. weyersi*) are known from Sumatra and Borneo (BONNET 1956) (Map 14). Other species — described from South America are difficult to verify at present, although the character of distribution shows that these two groups of species may belong to separate genera.

Emathis weyersi Simon, 1899

1899 *Emathis weyersi* Simon, Ann. Soc. ent. Belg., **43**: 108.

Material: 1♀ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, 5 VI 1966, BP, IZPAN.

Comparative material: 1♀ "*Emathis weyersi* Sim., Luzon: M. Makling, Baker, Sammlung Reimoser", NMW.

Dorsal aspect (Fig. 108). Cephalothorax square-built, thickset and tall. Eye field yellow, surroundings of anterior median eyes orange, of other black. Posterior part of cephalothorax orange, darkening towards the ventral margin. Around eyes sparse white-grey hairs and orange-brown bristles. Length of cephalothorax 2.10, length of eye field 1.05, width of eye field I 1.70, width of eye field III 1.65. Abdomen white-yellow with a delicate grey pattern of spots medially and bow-shaped stripes posteriorly. Lateral surfaces grey. Whole abdomen covered with orange-brown hairs and bristles. Length of abdomen 1.85. Spinnerets yellow. Clypeus yellow-orange with sparse yellow hairs. Chelicerae, maxillae and labium orange, pedipalps and venter white-yellow, sternum yellow. Epigyne (Figs. 106, 107) weakly sclerotized, with translucent internal canals, forming a double coil, with a vast spermathecae at the end. Legs white-yellow with yellow and orange-brown hairs and spines.

Epeus Peckham et Peckham, 1885

1885 *Epeus* Peckham et Peckham, Trans. Wisc. Acad. Sci. Arts Let., **6**: 271, 334.
1903 *Viciria*: Simon, Hist. nat. des Araign., **2** (4): 742–748.
1976 *Plexippoides* (?) Prószyński, Rozprawy WSP, **6**, ff. 427–436.

A small, counting only few species, Oriental genus [type-species — *E. tener* (Simon), Figs. 125, 126] wrongly classified within the genus *Viciria*. Its characteristic feature is the structure of palpal organ with a long outgrowth of cymbium towards tibia. Epigyne with long translucent canals, forming several loops. On the cephalothorax of males protruding, upwards directed bristles. Legs, both of males and females, well covered with hairs and numerous spines (Figs. 113–115).

At present stage of investigations it is difficult to determine the relations between the genus and *Plexippoides* (given in synonyms). Although the structure of copulatory organs resembles the structure plan, it is not certain, whether this really indicates the affinity of these two groups of species. Problems concerning the genus, including the morphological characteristics and full synonymy, are discussed by Prószyński (1984b).

Epeus alboguttatus (Thorell, 1887)

1887 *Viciria alboguttata* Thorell, Ann. Mus. Stor. nat. Genova, **2**, **5**: 397.

Material: 1♂ — Chine, 80 km SW Ha Noi, calcareous rocks, shrubs, grass, 24 VI 1959, PP, IZPAN. 1♀ — Viet Tri, near Pagoda Den Hung, prov. Vinh Phu, 200 m, beaten from bushes, 9 XII 1971, TM, HNHM.

Comparative material: 1♀ "*Viciria alboguttata,* Typus, Burma, Rangoon, L. Fea 1885", MCSN.

Male. Cephalothorax (Figs. 113, 114) tall, thickset, orange. Eye field and lateral surfaces darker. Surroundings of median eyes I light brown, other — black with fine white hairs. On anterior part of cephalothorax projecting orange bristles and shorter adpressed hairs. Length of cephalothorax 3.70, length of eye field 1.70, width of eye field I 2.40, width of eye field III 2.20. Abdomen yellow-orange with median dark grey streak and similar ones laterally. Whole abdomen with numerous yellow- and grey-orange hairs and single darker bristles. Length of abdomen 5.00. Spinnerets brown. Clypeus black-brown with sparse grey hairs and single white-grey bristles. Chelicerae dark brown, maxillae and labium brown with lighter tips, sternum yellow with a darker margin. Along the venter a dark grey, broad median belt, gradually becoming grey-yellow laterally. Palpal organ (Figs. 109–112) slender, lateral outgrowth of cymbium relatively small, embolus long, filamentous. Legs I (Fig. 115) dark brown slender and long, with numerous, equally dark hairs, bristles and spines. Other legs gradually lighter, legs IV light brown slightly grey, also their hairs and spines lighter and less numerous.

Female. Cephalothorax of a similar shape as in the male, yellow-orange. Surroundings of median eyes I brown, of others — black-brown with white and orange scale-like hairs and single yellow-orange bristles. Similar hairs on posterior part of cephalothorax. Length 3.40, length of eye field 1.60, width of eye field I 2.40, width of eye field III 2.10. Abdomen (Fig. 120) yellow with dark grey streaks as in the male. Whole surface covered with numerous, yellow hairs, anteriorly also darker hairs and single dark orange bristles. Length of abdomen 4.40. Spinnerets grey. Clypeus yellow with dense white-yellow bristles, falling below its lower margin. Under median eyes I two longer and darker bristles. Chelicerae yellow, basal segments of pedipalps similar, distal ones orange with numerous long yellow hairs. Maxillae, labium and sternum yellow, venter also yellow with two grey longitudinal streaks, merging together posteriorly. Epigyne (Figs. 116–118) with strongly translucent internal canals, forming numerous loops. Vast copulatory openings, slit-like, perpendicular to epigastric furrow. Legs long, yellow-orange. Hairs varying in length, yellow-orange, coloration of spines similar.

The holotype is greatly macerated, natural colours probably much changed. Eye field yellow-orange, surroundings of eyes brown, posterior part of cephalothorax honey-yellow. Length 2.70, length of eye field 1.15, width of eye field I 1.75, width of eye field III 1.60. Abdomen grey-yellow with sparse, orange hairs. Length 3.20. Spinnerets black-brown. Clypeus yellow, coloration of hairs similar. Chelicerae yellow-orange, pedipalps slightly lighter, venter as the dorsal aspect. Epigyne (Fig. 119) with cup-shaped copulatury openings, internal canals long, vast, forming numerous loops. Legs, hairs and spines on their surface honey-yellow.

Species known only from Burma (Map 8), closely related to *E. flavobilineatus* (DOLESCHALL). Small differences in the shape of lateral outgrowth of cymbium and tibial apophysis in males and the shape of copulatory openings in females. The small outgrowth of cymbium allows to place the species at the beginning of the morphological order, as in other representatives of the genus this character is developed better. Nowadays it is difficult to say, whether such localization of the species corresponds with its phylogenetic position, because the rank of character discussed is unknown, and the structure of female copulatory organs does not provide here any information.

Epeus glorius sp. n.

Material: 1 ♂ holotype – Phu Que, 80 km NW Vinh, young, dry deciduous forest, 16 VI 1959, PP, IZPAN.

Comparative material: ♂♂, ♀♀ "*Viciria tenera* SIM., Java, Palembang", det. W. KULCZYŃSKI, IZPAN.

Cephalothorax thickset, tall, yellow. Surroundings of median eyes I orange, of others – black with white and yellow adpressed hairs. On eye field protruding orange bristles – as in *E. alboguttatus*, whereas posteriorly orange hairs of various length. Length of cephalothorax 2.90, length of eye field 1.30, width of eye field I 1.90, width of eye field III 1.70. Abdomen white-yellow, along the median part numerous, yellow-orange hairs and single bristles. Furthermore, on the margin grey and grey-brown protruding hairs. Length of abdomen 3.50. Spinnerets yellow-grey. Clypeus orange with yellow and orange hairs. Chelicerae, maxillae and labium orange, sternum yellow, venter white-yellow. Palpal organ (Figs. 121–124) orange, lateral outgrowth of cymbium and embolus longer than in *E. alboguttatus*, resembling those of *E. tener* (Figs. 125, 126), but tibial apophysis in *E. glorius* spread spatularly, also small but distinct differences in the bulbus structure. Legs long, yellow-orange, with longer and shorter, quite numerous hairs similar in colour, and with numerous light brown spines.

The characters described point to a very close affinity of the species with *E. tener*.

Epocilla THORELL, 1887

1887 *Epocilla* THORELL, Ann. Mus. Stor. nat. Genova, 2, **5**: 378.
1907 *Goajara* PECKHAM et PECKHAM, Trans. Wisc. Acad. Sci. Arts Let., **15**: 615, **syn. n.**

A little known Oriental-East Palaearctic genus (BONNET 1956). Its type-species is *E. aurantiaca* (SIMON). Other species described are strongly built (especially males), with longitudinal orange streaks. Pedipalps with a double lateral apophysis, on the surface of bulbus distinct outgrowth, embolus varying in length, sometimes "sinuous". Epigyne externally variable, weakly sclerotized. Spermathecae oval, accessory glands well developed. Copulatory canals very short or lacking – then copulatory openings join the spermathecae. The stru-

cture of copulatory organs (especially in males) suggests its relation to such genera as *Phintella* and *Icius*. Genus *Goajara* PECKH. described from Borneo (type-species — *G. crassipes* PECKH.) is a synonym of genus *Epocilla*.

Epocilla blairei sp. n.

Material: 1 ♂ holotype, 1 ♀ allotype "*Epocilla aurantiaca* SIM., Tonkin, (BLAIRE)", MNHN 22415.

Comparative material: ♂♂, ♀♀ "*Epocilla aurantiaca* SIM., Colombo, Kandyl gulle, Types (?) — design. M. E. GALIANO (1959)", MNHN 16293.

Species incorrectly identified by SIMON as *E. aurantiaca* (SIMON) — different than types revised by GALIANO.

I have been using here the drawings of J. PRÓSZYŃSKI (without descriptions). so only a brief characteristic is possible.

Palpal organ (Figs. 127–129) with double tibial apophysis, on the surface of bulbus a rounded outgrowth, embolus long, broad, "sinuous".

Epigyne (Figs. 130, 131) with on oval incision on the side of epigastric furrow, spermathecae oval, accessory glands and fertilization canals well developed, copulatory canals (otherwise than in the next species) are not visible.

Epocilla calcarata (KARSCH, 1880), comb. n.

1880 *Plexippus calcaratus* KARSCH, Zeits. gesam. Naturw., **53**: 398.

1907 *Goajara crassipes* PECKHAM et PECKHAM, Trans. Wisc. Acad. Sci Arts Let., **15**: 616, **syn. n.**

1981 *Epocilla rufa* WESOŁOWSKA, Ann. zool., **36**: 52–54, **syn. n.**

Material: 2 ♂♂ — Yen So, SW of Ha Noi, beaten from trees, 19 IV 1966, 1 ♀ — beaten from trees in village, 22 IV 1966, T, HNHM. 1 ♂ — Ha Noi, 3 V 1966, 1 ♀ — Yen So, 10 km S Ha Noi, 18 V 1966, 1 ♂ — Ha Noi, 21 V 1966, BP, IZPAN.

Comparative material: 1 ♂ "*Plexippus calcaratus* KARSCH, Type, Macassar, CONRAD", ZMB 2999. 1 ♂ "*Goajara crassipes* PECKHAM, Type, Borneo, Sarawak" MCZ 1432.

Male. (Fig. 136). Eye field dark orange, surroundings of eyes black. Between the edge of eye field and posterior margin of cephalothorax and on lateral surfaces orange streaks, covered with numerous white scale-like hairs. The remaining surface orange-brown with short orange and longer brown hairs. Length of cephalothorax 2.35, length of eye field 0.95, width of eye field I 1.55, width of eye field III 1.45. Sometimes the coloration of cephalothorax darker — brown but then only pale broad streaks remain on lateral surfaces (Fig. 145). Also body dimensions vary greatly (e.g. in "*Goajara crassipes*" the length of cephalothorax 3.40). Abdomen with a broad orange-brown longitudinal median belt covered with scale-like setae similar in colour. Laterally white-yellow broad streaks — as in cephalothorax. Lateral sides grey-brown. Length of abdomen 3.30 (in "*G. crassipes*" — 4.80). Spinnerets grey-orange. Coloration of abdomen often more intensive, but always with a dark median belt, laterally surrounded by a light field. Clypeus dark brown, lower margin dark grey, under lateral eyes I white scale-like hairs. Chelicerae (Figs. 137, 141) orange, maxillae and labium orange-

brown, sternum white-grey with an orange margin. Venter light grey, laterally longitudinal rows of pale spots. Palpal organ (Figs. 132–135, 138–140, 142–144) white-grey, distal segment brown. Tibia with a double apophysis, on the surface of bulbus a pointed outgrowth. Embolus short and blunt tipped differentiates the species from *E. blairei*. Legs I much longer and thicker than others, orange-brown, only the tarsi lighter. Scant hairs orange-brown, spines similar in colour. Other legs dark yellow, hairs and spines also lighter.

Female. Cephalothorax with two orange or slightly lighter streaks, running from lateral eyes I to the posterior margin. On their surface hairs similar in colour. The remaining part of cephalothorax yellow or yellow-orange with yellow, laterally also white numerous setae. Also single lighter brown bristles. Length of cephalothorax 2.58, length of eye field 1.02, width of eye field I 1.62, width of eye field III 1.56. Abdomen yellow or grey-yellow with two streaks of orange or red, scale-like hairs. Bristles as on the cephalothorax. Length of abdomen 4.20. Spinnerets grey-yellow. Clypeus yellow, covered with white scale-like setae and longer grey-yellow fine hairs. Chelicerae yellow-orange, pedipalps, maxillae, labium, sternum and venter slightly lighter. Epigyne (Figs. 146–148) externally variable, weakly sclerotized, with a triangular or square incision on the side of epigastric furrow Its internal structures resembling those of *E. blairei*, but additionally with short copulatory canals. Legs yellow or yellow orange, their distal segments darker. Hairs and spines yellow, orange-brown and grey.

Species known only from Borneo (PECKHAM and PECKHAM 1907), Celebes (KARSCH 1880) and China (WESOŁOWSKA 1981b) (Map 9).

Euophrys C. L. KOCH, 1834

1834 *Euophrys* C. L. KOCH, Faun. Insect. Germ. init.: 123, pl. 7, 8.

One of the most numerous genera of the *Salticidae* (about 145 species) having not clear morphological borders with other related *Euophrydinae* (sensu PRÓSZYŃSKI 1976, SIMON 1901), which also requires some thorough verification.

Wide geographical distribution, which according to BONNET (1956) covers all continents, is at present difficult to verify. Palaearctic is the distribution centre, and some not numerous species are also known from other areas — amongst others from North America (PECKHAM and PECKHAM 1909) and South America (GALIANO 1962b, 1968). There are reliable data on oriental representatives of the genus for three species described from Nepal (ŻABKA 1980b). Other — from India (DYAL 1935), Java (THORELL 1892a) and Burma (PETRUNKEVITCH 1914) — have to be confirmed. Despite the considerable progress in studies on *Salticidae* from Australia (PRÓSZYŃSKI 1983b, ŻABKA in prep.) not one species has been found there, although representatives of some other genera (e.g. *Jotus*, *Saitis*) show a great similarity in the structure of copulatory organs to *Euophrys*. But it is difficult to say, whether this similarity is phylogenetically justified.

Known to me species of the genus *Euophrys* are rather small spiders (2–4

mm) with a pale coloured pattern on the dark abdomen. Palpal organs with a meandering canal on the surface of bulbus, embolus frequently coiled, sometimes with a conductor. Spermathecae of females in the form of oval reservoirs, copulatory canals varying in length in different species. A significant character for diagnosis, both within the genus and the subfamily — is the locality and structure of accessory glands. The type-species is *E. frontalis* (WALCKENAER).

Euophrys cooki sp. n.[1]

Material: 1 ♀ holotype — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI 1959, PP, IZPAN.

Surroundings of eyes black-brown, remaining part of cephalothorax brown. On eye field quite numerous grey and single white hairs, and longer black-brown ones. Length of cephalothorax 1.80, length of eye field 0.80, width of eye field I 1.40, width of eye field III 1.25. Abdomen dark grey with a slight shade of orange. Anteriorly with small light grey irregular spots, posteriorly also transverse streaks. Whole abdomen with light grey and light brown setae, more numerous on the margin. Length of abdomen 1.60. Spinnerets greyish-yellow. Clypeus orange-brown with sparse light brown long hairs. Beneath median eyes I three protruding bristles. Chelicerae, maxillae and labium the same coloration as clypeus, pedipalps grey-brown, sternum grey-orange, venter covered with light and dark grey spots. Epigyne (Figs. 149, 150) in the form of two oval, delicate depressions and with translucent internal structures, visible after preparation as long copulatory canals joining oval spermathecae. Accessory glands not visible. Legs I grey-brown, covered with brown and orange hairs and spines, tarsi lighter — orange. Coxae of other legs orange-grey, trochanters and femora greyish-yellow — their lateral surfaces greyish. Other segments orange, with darker joints areas. Hairs and spines orange.

The species distinguished by long copulatory canals.

Euophrys poloi sp. n.[2]

Material: 1 ♂ holotype, 1 ♀ allotype, 6 ♀♀ paratypes — Quang Ninh, Ha Long, 10 m, jungle slope close to seashore, 12 X 1978, PTL.

Male (holotype). Cephalothorax dark, grey-brown, covered with sparse grey and grey-brown hairs, posteriorly with a greenish metallic lustre. Length of cephalothorax 1.24, length of eye field 0.56, width of eye field I 0.96, width of eye field III 0.88. Abdomen grey-brown with a mosaic of grey-orange spots and with sparse grey setae. Length 1.01. Spinnerets grey. Clypeus grey-brown with a single hairs similar in colour. Chelicerae, maxillae and labium grey-brown, sternum slightly lighter. Venter grey-brown with four longitudinal rows of grey-

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[1] Species named in honour of captain James COOK (1728–1779).

[2] Species named in honour of Marco POLO (1254–1324).

-orange spots. Palpal organ (Figs. 151–156) with a broad meandering canal on the surface of bulbus, embolus short — similarly as the conductor there. Tibial apophysis squat, its apex hooked. Legs having a metallic lustre, dark brown--grey, only tarsi lighter. Hairs and spines grey-brown.

Female (allotype). Hairs and coloration of cephalothorax as in the male. Length 1.20, length of eye field 0.56, width of eye field I 0.88, width of eye field III 0.84. Abdomen (Fig. 160) grey-black with a mosaic of white-yellow spots varying in size, larger ones covered with fine white hairs. Hairs very sparse, more numerous on the margin — grey and grey-brown, sometimes having a metallic lustre. Length of abdomen 1.16. Spinnerets grey-yellow. Clypeus as in the male. Chelicerae grey-brown, pedipalps grey-yellow, maxillae and labium orange-brown slightly grey, sternum lighter. Venter with a broad square greyish-yellow patch and grey-brown hairs. Epigyne (Figs. 157–159) weakly sclerotized. Its internal structures greatly translucent. Copulatory canals short, spermathecae oval, accessory glands and fertilization canals well visible at a great magnification only. Coxae and trochanters of legs I and II orange-grey, two distal segments grey-orange, other grey-brown. Similar coloration of legs III and IV, but proximal parts of three median segments lighter, distal ones darker. All legs having a blue-green metallic lustre. Hairs and spines grey-brown.

Coloration of both sexes similar, but pigmentation of male more intensive — thus pale spots on the abdomen less visible.

Eupoa gen. n.

Only one species of the genus has been found, and these are very small spiders (ca 2 mm), with a square-built, anteriorly broadened cephalothorax. Lateral eyes I exceptionally big — in the male almost the same size as the median eyes I. Eyes III also bigger than usual. Abdomen egg-shaped, of a similar length as the cephalothorax (Figs. 165, 166). Copulatory organ of a very complex structure (Figs. 161–164): on patella, tibia and bulbus surface numerous apophyses, flanges and hooks varying in size and shape. Embolus thin, filamentous. The complex structure of palps does not resemble any other genus of the *Salticidae*.

Epigyne (Figs. 167–169) weakly sclerotized. internal structure are long delicate canals, passing into more sclerotized canals, accompanied by vast pockets — where palpal apophyses probably attached. Spermathecae small, pear-shaped.

Eupoa prima sp. n.

Material: 1 ♂ holotype, 1 ♀ allotype, 1 ♂ paratype — Bac Thai, Bach Thuong, Duong Quang, jungle slope, 900 m, 17 X 1978, 1♀ paratype — Bac Thai, Phu Luong, Nong Thinh, moist brook valley, 750 m, 17 X 1978, 13 juv. paratypes — Vinh Phu, Tam Dao, 1500 m, in litter of bamboo, 21 X 1978, PTL. 2 juv. paratypes — Coc Xan, prov. Lao Cai, 400 m, sifted litter, 27 XI 1971, 1♀, 5 juv. paratypes — Lao Cai, 5 km E of town, 200 m, sifted litter of forest, 1 juv. paratype — Luc Yen, prov. Yen Bai, 300 m, sifted litter in forest, 1 XII 1971, TM, HNHM.

Male (holotype) (Fig. 165). Cephalothorax broad, narrowing posteriorly. Lateral eyes I and eyes III bigger than usual. Coloration grey-brown, a greyish--yellow oblong patch in the middle part. Surroundings of eyes III black. Anteriorly sparse grey-brown setae. Length of cephalothorax 0.93, length of eye field 0.46, width of eye field I 0.86, width of eye field III 0.77. Abdomen black-brown with a grey-orange oblong patch anteriorly and similar transverse ones posteriorly. Very sparse setation, grey-brown. Length of abdomen 0.96. Spinnerets light grey. Clypeus narrow, under median eyes I greyish-orange, laterally brown, lower edge black-grey. Setae sparse, light grey and white. Chelicerae yellowish--grey, maxillae, labium, coxae and trochanters of legs light grey, sternum slightly darker. Venter with a yellowish large patch in the middle, perpendicularly cut posteriorly, the remaining area black-brown. Palpal organ (Figs. 161–164) thick, of a complex structure: on patella, tibia and bulbus surface numerous apophyses, embolus long, filamentous. Femora grey, distal segments gradually lighter.

Female (allotype) (Fig. 166). Cephalothorax resembling that of the male, with a broad grey-orange patch, surroundings of eyes dark grey-brown with sparse white setae. Ventral margin with a grey-brown fringe. Length of cephalothorax 0.93, length of eye field 0.49, width of eye field I 0.83, width of eye field III 0.77. Abdomen more oval than in the male, brown-grey with light grey spots, forming transversal belts. Whole abdomen covered with sparse grey-brown setae — longer on the lower margin. Length 1.11. Spinnerets light grey. Clypeus brown, its lower edge black. Chelicerae grey-orange, pedipalps, maxillae, labium and sternum yellowish-grey. Venter — like in the male with a big light yellow patch in the middle. Epigyne (Figs. 167–169, 167 — paratype) externally simple, its internal structures complex: delicate (copulatory?) canals, their connections unclear. Vast, strongly sclerotized pocket-like structures are probably places where apophyses of palps become attached, mediating (?) simultaneously between copulatory canals and spermathecae. Legs yellowish-grey.

Various specimens — depending on their age — vary as to the intensity of their pigmentation, but the coloration elements remain as described above.

Evarcha SIMON, 1902

1902 *Evarcha* SIMON, Ann. Soc. ent. Fr., **71**: 397.

A genus having a wide geographic distribution, requiring a verification and determination of interrelations of its various development lines towards the type-species — *E. falcata* (CLERCK). It is also necessary to eliminate species, which in reality represent other genera (e.g. *E. natalica* SIMON, *E. longipalpis* Bös. et STR.), and to include other that have been wrongly classified (e.g. *Hyllus fischeri* etc.). Here, some attempts at putting it into order are made, which continued will allow for a revision of geographical ranges and for a full morphological definition.

Evarcha arcuata (CLERCK, 1758)

1758 *Araneus arcuatus* CLERCK, Aranei Suecici ..., p. 125.
1837 *Attus arcuatus*: C. L. KOCH, Übersicht des Arachnidensyst., **1**: 33.
1876 *Hasarius arcuatus* : SIMON, Les Arachnides de France, **3**: 83.
1901 *Evarcha arcuata*: SIMON, Hist. nat. des Araign., **2** (3): 382.

Material: 1 pedipalpus of male – Phu Que, 80 km NW Vinh, young, dry, thick forest – trunks and branches, 16 VI 1959, PP, IZPAN.

The isolated palpal organ (Figs. 170–172) has been found in the sample – together with other species of *Salticidae* from Viet-Nam. Because of the typical Palaearctic character (Map 10) of distribution, one may doubt, whether the species does occur in Viet-Nam. The isolated pedipalpus could have fallen accidentally into the sample, while sorting the material. Therefore this locality should be confirmed.

***Evarcha bulbosa* sp. n.**

Material: 1 ♂ holotype – Ta Pinh, Sa Pa distr., prov. Lao Cai, 1400 m, beaten from bushes, 21 X 1971, TM, HNHM. 1 ♂ paratype "*Evarcha kochi* SIM., Java, Palembang, Tenger", MNHN 20349.

Male (holotype). Eye field black-brown, with a dark-orange fringe covered with white adpressed setae. The remaining part of cephalothorax brown. All over grey- and dark brown hairs and bristles, anteriorly also white hairs. Length of cephalothorax 2.34, length of eye field 0.96, width of eye field I and III 1.50. Abdomen brown-dark grey, posteriorly darkening. Anteriorly traces of orange median belt, also longitudinal and diagonal rows of yellow and orange spots. Hairs light grey and brown, bristles similar in colour. Length of abdomen 2.64. Spinnerets grey-orange. Clypeus orange-brown with sparse hairs similar in colour. Chelicerae brown, armed as in *E. pococki*, maxillae and labium similar in colour, sternum grey-brown. Venter with a vast, brown-grey patch and four rows of dark yellow spots. Palpal organ (Figs. 173–175) brown, distal part of cymbium yellow. Bulbus round broad, cymbium inclined towards tibial apophysis. Embolus long, resembling that of *E. pococki*, much longer and thinner than in *E. flavocincta*. The translucent seminal reservoir on bulbus surface also different then in the latter species. The apex of tibial apophysis two-cleft. Coxae and tarsi of legs I yellow-orange, trochanters orange-brown, other segments brown. Legs II additionally with grey-orange ventral part of femora, legs III and IV with dark orange fringes in middle parts of patellae and tibiae. All legs – especially legs I – with numerous white-grey and brown long hairs. Spines brown.

Paratype bigger – length of cephalothorax 3.12, of abdomen 3.18, its coloration less intensive. Cephalothorax with an orange fringe of eye field, remaining area brown. Abdomen with mosaic of dark grey spots on orange background and an orange median belt.

The species is distinguished by a split apophysis and lack of depression on the surface of an exceptionally broad bulbus.

Evarcha (?) *crassipes* (KARSCH, 1881)

1881 *Plexippus crassipes* KARSCH, Berl. ent. Zeits., **15**: 38.
1971 *Evarcha crassipes*: PRÓSZYŃSKI and STARĘGA, Kat. fauny Pol., **16**: 272.

Material: 1 ♂ — Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN.

Cephalothorax thickset, square-built red-brown, surroundings of median eyes I brown, of other — black. From the edge of eye field to the posterior margin a red-orange belt. Posteriorly and laterally and along the ventral margin white hairs, near eyes white-yellow ones. Length of cephalothorax 3.70, length of eye field 1.90, width of eye field I and III 2.80. Abdomen (Fig. 179) with a yellow broad median belt and four distinct apodemes. Laterally, on a beige background, rows of yellow spots. Whole abdomen covered with brown bristles, especially on the anterior margin, and with grey and brown hairs. Length 4.60. Spinnerets long, grey-brown. Clypeus red-brown with numerous protruding forwards white hairs. Chelicerae red-brown, maxillae and labium orange-brown, sternum lighter. Venter orange-grey, covered with light brown setae. Laterally two longitudinal light grey streaks with dark grey spots. Palpal organ (Figs. 176–178) orange-brown with an oval bulbus and dagger-like embolus with a flaky outgrowth. Coxae, trochanters and tarsi of legs I orange-brown, middle segments brown. Other legs gradually lighter, all with numerous grey and grey-br own long hairs. Spines numerous, dark brown.

Species known only from Japan (amongst others PRÓSZYŃSKI 1973), but a single specimen, identified as *E. crassipes*, has been also found in Poland — (Map 11) — it is however not certain, whether it was properly identified. Similar doubts concern the generic position of the species and it should be treated as a temporary one.

Evarcha pococki sp. n.

1895 *Plexippus* (?) *pocockii* THORELL, Descr. Cat. Spid. Burma, p. 368 (part.).

Material: 1 ♂ holotype "*Evarcha kochi* SIM., Annam, Phuc Son, (FR.)", MNHN 22151. 1 ♂ paratype "*Hasarius pococki* TH. Burma, Tharrawaddy, OATES", BMNH. 1 ♂ paratype — Bhutan: Balu-Jhura, 200 m, 28 IV 1972, 1 ♂ paratype — 87 km von Phuntsholing, 22 V 1972, 1 ♂ paratype — Sampa-Kotoka, 1400–2600 m, 9 VI 1972, NHMB.

Male (holotype). Eye field brown, surroundings of eyes darker. Posterior part of cephalothorax orange-brown, darkening towards the ventral margin. Above eyes I and laterally tufts of white hairs, also in the anterior part single light brown bristles. Length of cephalothorax 2.10, length of eye field 0.78, width of eye field I and III 1.32. Abdomen with a yellow-orange median belt. Laterally a black background with longitudinal rows of orange spots and transverse lines. Along lateral surfaces yellow streaks. Hairs and bristles sparse, light brown and white (in the anterior part). Length of abdomen 2.10. Spinnerets brown-grey. Clypeus light brown slightly greyish, covered with light brown hairs and bristles. Chelicerae (Fig. 183) brown, maxillae, labium and sternum greyish-brown. Venter with a broad grey-brown patch, on its surface longitudinal rows of yellow-

-orange spots. Palpal organ (Figs. 180–182, 184–186 — paratype) brown, distal part of cymbium yellow. In comparison with *E. bulbosa* palps are less opened, bulbus surface with a dictinct depression, apophysis is not split. These characters are indicated in figures by arrows. Coxae, trochanters and tarsi of legs I dark orange, other segments brown. Consecutive legs gradually lighter, legs IV grey-orange, darker around joints. All legs (especially legs I) covered with numerous brown-grey and orange hairs. Spines similar in colour.

Species known from Burma and Bhutan (Map 12).

Evarcha flavocincta (C. L. Koch, 1848), **comb. n.**

1848 *Maevia flavocincta* C. L. Koch, Die Arachniden, **14**: 74.
1892 *Hasarius Simonis* Thorell, Ann. Mus. Stor. nat. Genova, **31**: 418, 477, **syn. n.**
1902 *Evarcha kochi* Simon, Ann. Soc. ent. Fr., **71**: 397, **syn. n.**
1903 *Evarcha heteropogon* Simon, Ann. Soc. ent. Fr., **71**: 733, **syn. n.**
1906 *Hyllus fischeri* Bösenberg et Strand, Abh. senck. naturf. Ges., **30**: 358, **syn. n.**

Material: 1 ♀ — Tanh Liet, SW of Ha Noi, beaten from trees, 23 IV 1966, T, HNHM. 1 ♀ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN. 1 ♀, 3 juv. — Bac Thai, Bac Can, tea plantation, 17 X 1978, PTL.

Comparative material: 1 ♀ "*Evarcha heteropogon* E. S., Tonkin, (Blaire), MNHN 22432. 5 ♂♂, 3 ♀♀ "*Evarcha kochi* E. S., Java, Palembang, Tenger, Tr.", MNHN 20349. 1 ♀ "*Hyllus fischeri* Bös. et Str., Typus, Japan, Saga, W. Dönitz 1882", SMF 2507. 1 ♀ "*Maevia flavocincta* C. L. Koch, Holotypus, Bintang, Roettger" ZMB 1605.

Male[1]. Eye field brown with grey and grey-brown setae and brown bristles. Also above eyes I numerous white setae — similarly as on the surface of an orange fringe around eye field. Posterior part of cephalothorax orange-brown covered with light brown setae. Length of cephalothorax 2.82, length of eye field 1.02, width of eye field I and III 1.68. Abdomen with a median belt — anteriorly orange, posteriorly yellow. Laterally a mosaic of orange and dark-grey spots in longitudinal rows. In the posterior part dark colours are more intensive — almost black. On the anterior margin white hairs, on the whole surface also yellow and brown ones and brown bristles. Length of abdomen 2.82. Spinnerets grey-brown. Clypeus orange-brown with brown long hairs. Chelicerae brown, maxillae and labium lighter, sternum grey-orange, venter grey-brown. Pedipalps (Figs. 193–195) brown, only their distal part orange. Tibial apophysis split at the end (similarly as in *E. bulbosa*), embolus quite broad, membraneously flattened at the end, surrounds half of the bulbus circumference. Coxae and trochanters of legs I dark orange slightly grey, tarsi orange, other segments brown. Consecutive legs gradually lighter. Plenty of grey, white and brown hairs — especially on patellae and tibiae I and II ventrally. Spines brown.

Particular specimens vary as to the coloration intensity.

Female (Fig. 187). Eye field black-brown with white and brown bristles, remaining part of cephalothorax orange-brown, all covered with numerous brown (posteriorly) and white (laterally and close to eyes) hairs. At the level of eyes I

[1] Description made on the basis of the comparative specimens from Java.

characteristic tufts of protruding dark brown bristles ("horns"). Length of cephalothorax 3.30, length of eye field 1.30, width of eye field I and III 2.01. Coloration of abdomen: groups of dark grey spots forming diagonal streaks on yellow background. On the posterior part large, dark brown areas. On dark areas numerous grey-brown hairs, whole abdomen covered with white (anteriorly) and brown bristles. Length 4.10. Spinnerets dark brown. Clypeus orange with white bristles. Chelicerae orange, pedipalps yellow with white and grey-brown bristles. Maxillae, labium and sternum yellow-orange. Venter yellow with a dark grey median belt. Epigyne (Figs. 188–192, 196) with two depressions, surrounded by a distinct margin and divided by a broad ridge. On the side of epigastric furrow two small pockets — sometimes barely visible. Internal structures quite complex: from the copulatory openings run vast membraneous canals, which in turn run into more sclerotized canals forming numerous loops. Legs I orange, consecutive ones lighter — yellow-orange. All covered with numerous brown hairs, bristles and spines.

The size of individuals and their coloration do not vary greatly, but they always have the protruding bristles ("horns") on the cephalothorax. As the epigyne externally resembles that of some representatives of genera *Pancorius* or *Pseudamycus* — proper indification requires an analysis of its internal structures.

The synonyms cited are a good example of wrong classification, when proper documentation is lacking.

Scattered localities of synonymized species form a vast Oriental-Palaearctic range — from Java through Indochina to Japan (Map 13).

I have used here drawings of J. PRÓSZYŃSKI (Figs. 191, 192), concerning "*E. heteropogon*" and "*H. fischeri*".

Flacillula STRAND, 1932

1901 *Flacilla* SIMON, Hist. nat. des Araign., **2** (3): 556, 558.
1932 *Flacillula* STRAND, Folia zool. hydrobiol., **4**: 137.

BONNET (1956) has mentioned four species of the genus — all having an Oriental distribution. Scarce data do not allow yet for a more detailed decription.

Flacillula incognita **sp. n.**

Material: 1 ♀ holotype — Ha Noi, (VLG.), MNHN 23000.

The only documentation of the species are the drawings of epigyne (Figs. 197, 198), which I have got from J. PRÓSZYŃSKI. The external surface of the epigyne is drawn schematically, its internal structures in the form of long

copulatory canals falling into vast spermathecae. Accessory glands well developed. The copulatory canals on the drawing are indicated by a broken line, because in the course of preparation they became detached from the spermathecae.

Hasarius Simon, 1871

1825 *Attus*: Savigny and Audouin, Hist. Nat., **1** (4): 169.
1871 *Hasarius* Simon, Ann. Soc. ent. Fr., 5, **1**: 329.
1922 *Tachyscarthmus* Hogg, Proc. zool. Soc. London, **1922**: 310, **syn. n.**

The verification made by Prószyński and Żabka (unpublished data) has shown that many species described as *Hasarius* are wrongly classified and should be moved to other genera. This concerns first of all species described by Thorell and Karsch, although other species not having proper documentation should be also redescribed. The genus *Tachyscarthmus* (type-species *T. annamensis*) should be synonymized with *Hasarius*.

Hasarius adansoni (Savigny et Audouin, 1825)

1825 *Attus Adansoni* Savigny et Audouin, Hist. Nat., **1** (4): 169.
1871 *Hasarius Adansoni*: Simon, Ann. Soc. ent. Fr., 5, **1** : 330.
1881 *Hasarius adansoni*: Pickard-Cambridge, Proc. Dorset Nat. Hist. F. C., **1881**: 556.
1922 *Tachyscarthmus annamensis* Hogg, Proc. zool. Soc. London, **1922**: 310, **syn. n.**

Material: 1 ♂ — Ha Noi, 1 VI 1959, 1 ♀ — Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, IZPAN. 1 ♀ — Quang Ninh, Ha Long, garden, 13 X 1978, PTL.

Comparative material: 1 ♂ "*Tachyscarthmus annamensis* Hogg, Dran, Tangbian Mts, 3000, S Annam, L. Boden Klass", BMNH 1927.

Male. Cephalothorax light brown slightly grey, eye field dark brown, surroundings of eyes black. In the anterior part fine dark brown setae, around eyes III white ones. Also on eye field, especially above eyes I longer brown hairs and bristles. Length of cephalothorax 2.70, length of eye field 1.15, width of eye field I 1.85, width of eye field III 1.75. Abdomen (Fig. 202) anteriorly fringed with light grey hairs, with a longitudinal median belt formed by orange spots. The remaining part of abdomen dark grey slightly brown. On the posterior part two pale spots. All surface covered with long grey and brown hairs. Length of abdomen 2.52. Spinnerets orange-grey. Clypeus brown with long grey hairs. Chelicerae light brown, maxillae, labium and sternum dark orange, venter beige. Palpal organ (Figs. 199–201) orange-brown, slender, embolus and apophysis rather small, on bulbus surface a translucent canal.

Basal segments of legs I and II grey-orange, distal ones darker — brown. Legs III and IV greyish-orange. Hairs protruding, grey-orange and brown. Spines light brown.

Female. Eye field dark brown, surrounded with a lighter fringe, near eyes black. Posterior part of cephalothorax brown slightly greyish. Very sparse hairs brown and white — more numerous around eyes, where there are also longer grey-brown hairs. Length of cephalothorax 2.76, length of eye field 1.08, width of eye field I and III 1.86. Abdomen dark grey with a fringe around the anterior part and a median belt as in the male. Also on the whole surface rows of yellow and yellow-orange spots. Whole abdomen covered with grey and brown hairs of various length. Length of abdomen 3.18. Spinnerets grey-orange. Clypeus brown in the middle, covered with sparse grey and brown hairs, towards lateral areas dark orange — additionally with white hairs. Chelicerae (Fig. 205) orange-brown, pedipalps yellow, maxillae and labium dark orange, sternum dark yellow. Venter medially grey-yellow with grey spots, laterally and dorsally identical coloration. Hairs grey-orange. Epigyne (Figs. 203, 204, 206, 207) externally variable, its internal structures in the form of few chambers joined together. Near the epigastric furrow a dichotomous pocket. Coxae and trochanters of legs I and II dark yellow, other segments orange-grey. Legs III and IV lighter, all with grey and grey-brown hairs, orange-brown bristles and spines.

The species has pantropical distribution, but brought by man occurs also in colder climatic zones, where it lives in artificial environments (e.g. greenhouses) resembling their natural conditions (Map 17).

Hasarius kulczynskii sp. n.

Material: 1 ♀ holotype, 1 ♀ paratype — Cuc Phuong, prov. Ninh Binh, from 25 pitfal traps in forest, 5–18 V 1966, T, HNHM.

Female (holotype). Cephalothorax rather thickset, tall. Eye field brown-black with numerous fine grey setae and grey-brown bristles near eyes. The remaining part of cephalothorax chestnut-brown, darkening towards the ventral margin, covered with grey setae. Its length 2.64, length of eye field 1.14, width of eye field I 1.74, width of eye field III 1.62. Abdomen oval. On a dark grey background a mosaic of yellow-orange irregular spots — more distinct anteriorly, merging with the background posteriorly. Laterally longitudinal and transverse rows of yellow and grey streaks. Hairs grey and brown, varying in length. Length of abdomen 2.64. Spinnerets orange. Clypeus brown with grey-orange sparse long hairs. Chelicerae (Fig. 210), maxillae and labium red-brown. Basal segments of pedipalps light brown, distal ones darker. Sternum black-brown, venter dark grey with a greyish-yellow rectangular patch in the middle part. Epigyne (Figs. 208, 209) with a dichotomous pocket posteriorly and spermathecae of several chambers. As compared with *H. adansoni* the spermathecae are shorter and less sclerotized. Legs thick, dark orange, only legs IV slightly lighter, darker around joints. All legs covered with grey, orange and light brown hairs and protruding spines of the same colour.

The paratype of a less intensive coloration, legs yellow-orange, the light patch on the ventral surface of abdomen less distinct.

A species related to *H. adansoni*. Differs in coloration of abdomen (pale fringe and median belt lacking), armature of chelicerae and in details of epigyne structure.

Habrocestum Simon, 1876

1876 *Habrocestum* Simon, Les Arachnides de France, **3**: 131.

The list of representatives of the genus made by Bonnet (1957) contains a number of unrelated species representing separate genera and even subfamilies. When comparing them with the type-species (H. *pullatum* Simon) and species related with it, one can eliminate from the genus *Habrocestum* a number of North American species, described by Peckham (1909), Gertsch (1935) and Kaston (1948), the majority of which represent the subfamily *Euophrydinae* (sensu Prószyński 1976) — not related with the genus *Habrocestum*. The same should be done with regard to some African species (Berland and Millot 1941) and the Australian species (L. Koch and Keyserling 1871–1883, Żabka in prep.).

The data available allow to assume that the genus (sensu stricto) has West Palaearctic distribution with its centre in the Mediterranean zone and single species in other zoogeographical regions.

The structure of copulatory organs of its representatives is distinguished by a characteristically broadened bulbus in males and a long bow-shaped or falcate embolus. Internal structures of epigyne in the form of few oval chambers. The type-species and the one described below have a distinct pocket near the epigastric furrow.

Habrocestum orientale sp. n.

Material: 1 ♂ holotype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 2 VI 1966, BP, IZPAN. 1 ♀ allotype — singled in forest in limestone hills, 3 V 1966, T, HNHM.

Comparative material: 1 ♀ "*Habrocestum pullatum* Sim., Pyrenées", MNHN 11121.

Male. Eye field brown, brighter in the middle, surroundings of eyes darker, with numerous grey and brown hairs. On the anterior part also bristles similar in colour. Posterior part of cephalothorax orange, darkening towards the ventral margin, hairs sparse, white and brown. Length of cephalothorax 3.30, length of eye field 1.40, width of eye field I 2.10, width of eye field III 2.01. Abdomen with a mosaic of yellow and grey spots, the latter forming a herringbone pattern posteriorly. Lateral surfaces greyish-yellow. Whole abdomen covered with numerous light brown hairs — longer in the anterior part. Length of abdomen 2.70. Spinnerets greyish-yellow. Clypeus orange, covered with

sparse grey and brown hairs. Chelicerae orange, maxillae and labium darker, sternum dark yellow, venter grey-yellow, turning grey laterally. Palpal organ (Figs. 211–213) orange-brown with a falcate embolus, bulbus much broader at the bottom. Coxae of legs I and II yellow-orange, other segments dark orange. Legs III and IV lighter — yellowish. The surroundings of joints of all legs greyish, hairs grey and grey-brown, spines brown.

Female. Eye field dark brown, in the middle part having a violet metallic lustre. Surroundings of eyes black with sparse yellow-grey and grey hairs and single brown bristles. Around the eye field an orange-brown fringe, remaining part of cephalothorax brown, hairs brown and white, bristles brown. Length of cephalothorax 2.58, length of eye field 1.26, width of eye field I 1.98, width of eye field III 1.86. Abdomen oval, beige, with irregular grey streaks and spots forming diagonal rows laterally. Whole abdomen covered with quite numerous light brown protruding short hairs. In the anterior part also light brown bristles. Length of abdomen 3.42. Spinnerets orange. Clypeus dark orange with numerous grey and orange hairs. Chelicerae (Fig. 216) brown, their armature in the form of a serrate tooth on the inner edge, with 6 (in the male — 5) tubercles. On the external edge few teeth varying in size. Pedipalps and sternum orange, maxillae and labium brown, venter beige. Epigyne (Figs. 214, 215) with two oval deep depressions, divided by a broad ridge. In the median part, near the epigastric furrow a large pocket well visible after preparation. Proximal part of copulatory canals in the form of pockets passing into spermathecae of several chambers. Legs rather thick, orange slightly grey, covered with sparse orange and brown hairs. Spines similar in colour.

Structure plan of the epigyne — oval inner chambers and a pocket near the epigastric furrow — similarly as in the type-species of the genus — *H. pullatum* SIMON.

Hyllus C. L. KOCH, 1846

1846 *Hyllus* C. L. KOCH, Die Arachniden, **13**: 161.

Species of this genus are big — frequently over 10 mm — they have a broad thickset cephalothorax and long squat legs densely covered with hairs. In some species the palpal organ has an interesting membraneous structure ("keel"), which accompanies the embolus. Epigynes frequently have two pockets near the epigastric furrow.

Hyllus diardi (WALCKENAER, 1837)

1837 *Attus Diardi* WALCKENAER, Hist. nat. des Insectes, **1**: 460.
1886 *Hyllus Diardi*: SIMON, Act. Soc. linn. Bord., **40**: 139.
1895 *Hyllus diardi*: THORELL, Descr. Cat. Spid. Burma, p. 373.

Material: 1 ♀ "*Hyllus diardi* W., Siam, Chataboun (PAVIE)", MNHN 8147.

Comparative material: 1 ♀ "*Hyllus diardi* W., Tonkin, BL.", (?) MNHN.

Female[1]. Cephalothorax thickset, broad (Fig. 217), eye field red-brown, surroundings of eyes darker, the remaining area orange. Whole cephalothorax covered with numerous white hairs and less numerous light brown ones. There are also brown bristles forming in the anterior part two tufts ("horns"). Length of cephalothorax 5.92, length of eye field 2.12, width of eye field I 3.04, width od eye field III 3.19. Abdomen (Fig. 218) egg-shaped, dense brown and dark brown hairs forming a regular pattern on a yellow background. Also present numerous dark brown and yellow bristles, the latter found especially on the margin of anterior part. Length of abdomen 6.42. Spinnerets brown with brown and grey hairs. Clypeus orange with dense long yellow and white hairs. Chelicerae thick, dark brown, anteriorly with numerous protruding white hairs, posteriorly with brown and grey ones. Maxillae and labium red-brown with numerous white hairs. Sternum orange, venter yellow, covered with numerous hairs, along its median part a belt of brown hairs. Epigyne (Figs. 219, 220) with two oval depressions divided by a median ridge, near the epigastric furrow two pocket-like depressions. Vast copulatory canals joining strongly sclerotized two-chamber spermathecae. Legs thick, orange, distal segments (especially in legs I and II) darker. Hairs dense, protruding, white and brown, spines brown.

The species is known from Indochina and Malaysia (Map 16).

Hyllus lacertosus (C. L. Koch, 1846)

1846 *Plexippus lacertosus* C. L. Koch, Die Arachniden, **13**: 94.
1892 *Hyllus lacertosus*: Thorell, Ann. Mus. Stor. nat. Genova, **31**: 384, 476.

Material: 1 ♂ — Bac Thai, Vo Nhai, Phuong Huang, 300 m, moist brook valley, 16 X 1978, PTL.

Comparative material: 1 ♂ "*Plexippus lacertosus* Koch, Type, Java", ZMB 1697.

Cephalothorax thickset, broad, chestnut-brown, surroundings of eyes black. Its whole surface covered with fine adpressed grey hairs and with longer black-brown bristles. The latter denser around eyes. Length of cephalothorax 6.01, length of eye field 2.20, width of eye field I and III 3.20. Abdomen brown of a black-grey shade, covered (especially laterally) with light grey adpressed setae, on the margin also dark brown longer hairs. Length of abdomen 6.40. Spinnerets brown. Clypeus narrow brown, covered with sparse grey and brown hairs. Chelicerae dark brown with long white hairs along the internal parts. Maxillae and labium dark brown, yellow apically, sternum brown, margined with white hairs. Venter dark grey, slightly brown, laterally longitudinal rows of yellow spots. Palpal organ (Figs. 221–226) brown with numerous brown hairs and bristles. Along the embolus a membraneous "keel", a not very long apophysis

[1] Species also known from Viet-Nam (see comparative material), but here the only specimen available was the one from Thailand.

blunt tipped. Legs dark brown, long, with dense dark brown hairs and bristles. Spines similar in colour.

The species is known only from the Malay Peninsula, Sumatra and Java (Map 18).

Icius Simon, 1876

1876 *Icius* Simon, Les Arachnides de France, **3**: 54.

The genus is widely distributed – Holarctic Region, Oriental and Ethiopian Regions. The Nearctic localities should be verified.

Andreeva, Hęciak and Prószyński (1984) have given a modified definition of the genus, suggesting to include species of the genus *Pseudicius*. These and other problems, concerning mainly affinities and phylogenesis, require further investigations.

Icius kaszabi sp. n.

Material: 1 ♂ holotype – Xuan Dinh, NW Ha Noi, beaten from hedge, 27 IV 1966, T, HNHM.

Dorsal aspect (Figs. 231, 232). Cephalothorax slender, flat, brown with a darker eye field and black surroundings of eyes (with the exception of median eyes I). Laterally and near eyes quite dense white setae. On the anterior part also grey setae and brown bristles. Length of cephalothorax 1.39, length of eye field 0.59, width of eye field I 0.77, width of eye field III 0.80. Abdomen slender, elongate. Coloration: grey herring-bone pattern on a greyish-orange background. On the anterior margin white and brown protruding bristles, on the whole surface grey and grey-orange hairs. Length of abdomen 1.46. Spinnerets orange-grey. Clypeus very narrow, covered with brown hairs. Chelicerae brown, maxillae and labium grey-brown, sternum grey-orange. Venter grey in the middle part, laterally becoming slightly orange. Palpal organ (Figs. 227–230) brown. Dorsally on patella a tuft of white dense hairs. Femur with two small triangular outgrowths. Tibial apophysis split (one of the characteristic features of the genus). Bulbus elongate, with a narrow translucent canal. Embolus falcate. Legs I thick, metatarsi and tarsi yellow, other segments grey-brown. Whole legs covered with long fine grey, grey-brown and orange hairs. Spines similar in colour. Other legs delicate greyish-yellow, darker around the joints. Also hairs and spines lighter.

The structure of the body – small slender and flattened cephalothorax and the structure of palps are typical characters of the genus.

Icius originalis sp. n.

Material: 1 ♀ holotype – Ha Noi, 3 V 1966, BP, IZPAN.

Cephalothorax elongate and flat. Eye field brown, surroundings of eyes darker. The remaining surface orange-brown. Whole cephalothorax covered

with numerous adpressed white hairs, near eyes single brown bristles. Laterally — under eye field — a row of nine papillae, out of which short bristles grow — this character is found in many representatives of the genus (oral inf. J. PRÓSZYŃSKI). Length of cephalothorax 1.44, length of eye field 0.60, width of eye field I and III 0.88. Abdomen (Fig. 235) with a grey-brown pattern on yellow background, darkening posteriorly. Dark areas covered with sparse setae similar in colour, on the margin white-yellow longer hairs. Length of abdomen 1.88. Spinnerets grey-brown. Clypeus orange, covered with numerous white hairs and bristles. Chelicerae brown with white hairs and bristles. Pedipalps yellow, haired as clypeus. Maxillae and labium orange-brown, sternum grey-yellow, venter yellow. Epigyne (Figs. 233, 234) vast, strongly sclerotized with egg-shaped depressions in the middle part with transluced canals. Their proximal membraneous parts form next a double loop and strongly sclerotized large spermathecae. Legs I squat, orange, other yellow-orange. All legs suffused with dark around the joints. Hairs and spines orange.

Irura PECKHAM et PECKHAM, 1901

1901 *Irura* PECKHAM et PECKHAM, Bull. Wisc. nat. Hist. Soc., N. S., **1**: 227.

SIMON (1903a) classifies the genus — together with some others — to the group *Simaethae*, having a characteristic flattened and broadened body and a similar armature of chelicerae and legs. Vietnamese species match this description. Additionally on the surface of abdomen there are big orange apodemes and the internal canals of epigyne are "S"-shaped. BONNET (1957) has mentioned three species of the genus — known from Ceylon, Malay Peninsula and Indochina. The type-species is *I. pulchra* PECKHAM.

***Irura bicolor* sp. n.**

Material: 1 ♀ holotype — Vinh Phu, Tam Dao, 1450 m, bamboo and ferns, 20 X 1978 PTL.

Dorsal aspect (Fig. 239). Cephalothorax flat and broadened, dark brown, eye field black. In the middle part sparse brown setae, to lateral surfaces and near eyes white-grey, scale-like hairs, on the margin longer grey-brown ones, above eyes I — grey, having a metallic lustre. Length of cephalothorax 1.55, length of eye field 0.75, width of eye field 1.30, width of eye field III 1.55. Abdomen light beige with orange apodemes, the surroundings of spinnerets darker — almost black. Whole abdomen covered with rather dense grey-brown setae having an orange metallic lustre. Length of abdomen 2.10. Spinnerets greyish-brown. Clypeus brown with sparse grey hairs. Chelicerae (Fig. 240) greyish-brown, thick. Pedipalps brown with sparse protruding greyish-brown hairs having a metallic lustre. Maxillae brown, labium darker slightly turning grey. Sternum greyish-brown. Venter yellowish with a dark grey median patch; on its surface rows of small yellow spots. Epigyne (Figs. 236, 237) hairy, with

two oval depressions. Internal canals in the shape of letter "S" — in comparison with the next species — more elongate, copulatory openings closer to the epigastric furrow. Legs I (Fig. 238) orange-brown slightly grey, thick, covered with grey and grey-brown hairs and spines. Other legs more delicate, yellowish--grey with grey-brown hairs and spines.

Irura mandarina Simon, 1903

1903 *Irura mandarina* Simon, Ann. Soc. ent. Fr., **71**: 735.

Material: 1♀ "*Irura mandarina* Sim., Cochinchina, (Typus? — M. E. Galiano IX 1959)", MNHN 1239.

Comparative material: 1♀ "*Irura pulchra* Peckham, Ceylon, Modunkeni, April 1904, D. A. Willy", BMNH.

Cephalothorax (Fig. 241) flat, orange-brown, surroundings of eyes grey--brown. Numerous gleaming scale-like setae — grey and dark orange. Length of cephalothorax 1.85, length of eye field 1.01, width of eye field I 1.50, width of eye field III 1.85. Abdomen (Fig. 242) yellowish-grey, much lighter than the cephalothorax, with dark orange big apodemes. Numerous fine yellow hairs — gleaming and orange-brown. Length of abdomen 2.85. Spinnerets grey. Clypeus orange-brown with light grey and dark orange hairs. Chelicerae (Fig. 243) orange-brown, pedipalps, maxillae and labium similar in colour. Sternum light orange, venter yellowish, near spinnerets grey. Epigyne (Figs. 244, 245) weakly sclerotized, with an elongate, delicate incision from the side of epigastric furrow. Internal canals vast, bent in the shape of letter "S". Accessory glands big. Legs I thick, orange-brown, covered with numerous fine protruding orange-brown hairs. Spines quite long — similar in colour. Other legs more delicate and paler.

The structure of copulatory organs similar in both species described. The differences concern the shape of internal canals and the size of copulatory openings.

I. mandarina is known only from Indochina.

Kinhia gen. n.

At present a monotypic genus, in body form resembling *Rhene* and other related genera (Fig. 250). Cephalothorax flat and broad, abdomen egg-shaped, legs I thicker than other, armed with short spines. Palpal organ (Figs. 246–248) with an oval bulbus and quite long thin embolus. Tibial apophysis rather small. The genus is characterized by a long outgrowth on the posterior-lateral surface of cymbium reaching the patella. Similar outgrowths are also in other — not related genera *Epeus* and *Plexippoides*.

Kinhia prima sp. n.

Material: 1♂ holotype — Ha Noi, (Vlg), 22951 MNHN.

Dorsal aspect[1] (Fig. 250). Cephalothorax broadened, flat, medially and posteriorly darker. The nearest surroudings of eyes black-brown, further — light brown. Abdomen light yellow. Chelicerae (Fig. 249) yellowish, palpal organ similar in colour, its structure (Figs. 246–248) is characterized by the presence of long cymbial outgrowth. Legs I long and thick, orange with short spines. Other legs more delicate, similar in colour.

Langerra gen. n.

The only species known from the genus — *L. oculina*. A small spider (ca 4 mm) with a thickset tall cephalothorax and egg-shaped abdomen. It is characterized by the structure of the epigyne: the entrance to the copulatory openings is from the side of the epigastric furrow, vast copulatory canals go towards the pedicel and turn back towards the posterior part, passing into chamber spermathecae.

Langerra oculina sp. n.

Material: 1 ♀ holotype — Luc Yen, prov. Yen Bai, 300 m, beaten from bushes in forest, 5 XII 1971; TM, HNHM.

Dorsal aspect (Fig. 254). Cephalothorax tall and thickset, orange-brown, surroundings of eyes I dark brown, of other — black. Beyond the eye field a slightly paler patch in the form of wedge towards the posterior margin of cephalothorax. Anteriorly white, light grey and light brown hairs, surroundings of eyes also with single bristles. Length of cephalothorax 2.22, length of eye field 1.02, width of eye field I 1.80, width of eye field III 1.68. Abdomen egg-shaped, macerated, grey, darkening posteriorly, covered with grey-brown hairs and bristles. Length 1.92. Spinnerets grey-orange-brown. Clypeus brown with white and grey-brown hairs and bristles. Chelicerae dark orange (Fig. 253), pedipalps, maxillae and labium similar in colour. Sternum orange, venter orange-grey, laterally with longitudinal dark grey streaks, hairs quite dense, brown. Epigyne (Figs. 251–252) strongly sclerotized, its posterior margin distant from the epigastric furrow, internal structures with vast copulatory canals go towards the pedicel and turn back towards the posterior part, passing into several-chamber spermathecae. Legs I dark orange, only femora slightly grey, tarsi yellow. Legs II similar, legs III and IV lighter. On all legs dark grey fringe around joints. Hairs numerous, light grey, orange and brown.

Laufeia Simon, 1889

1889 *Laufeia* Simon, Ann. Soc. ent. Fr., 6, 8: 248.

The genus is known — among other — from Japan (Bohdanowicz and Prószyński in press), whereas the species described by Thorell and Urquhart

[1] Description made on the basis of drawings of J. Prószyński.

from Sumatra and New Zealand represent in reality other not related genera (PRÓSZYŃSKI 1984). The structure of copulatory organs of *Laufeia* indicates that it belongs to *Euophrydinae* (sensu PRÓSZYŃSKI 1976) and is related also to the genus *Thiania*.

Laufeia scutigera sp. n.

Material: 1 ♂ holotype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 2 VI 1966, BP, IZPAN.

Eye field dark brown with sparse grey and brown hairs, surroundings of eyes black-brown. Posterior part of cephalothorax brown, darker towards the ventral margin, with brown and light grey hairs. Length of cephalothorax 2.46, length of eye field 1.08, width of eye field I 1.80, width of eye field III 1.68. Abdomen elongate, with brown scutum with indistinct edges, surrounded by a thin light grey fringe. Whole abdomen covered with single brown and grey hairs, more numerous on the anterior margin and near spinnerets. Length of abdomen 3.01. Spinnerets brown. Clypeus orange-brown, the lower edge covered with white hairs. Chelicerae brown, their external surface strongly protruding, maxillae and labium light brown, sternum yellow-orange with a darker margin. Venter dark grey. Palpal organ (Figs. 255–257) dark orange. On the surface of bulbus a translucent meandering canal, apex of bulbus triangular. Embolus set laterally, long, coiled, comes out with a broad basis from the oval structure. Lateral edge of the cymbium has a characteristic protrusion near tibial apophysis. Legs I long and thick (Fig. 258), brown, only tarsi yellow. On the ventral surface a scopula of numerous brown bristles. Other legs more delicate, femora grey-brown with brown hairs, other segments yellow, in some places slightly grey. Hairs and spines orange and light brown.

The generic position of the species is uncertain. The structure of palpal organs resembles that of *Saitis mundatus* PECKHAM described from Africa, but the latter is wrongly classified [different from the type of the genus *Saitis* — *S. barbipes* (SIMON)] and can not be considered as reliable. Thus the species described has been included to the genus *Laufeia*, assuming at the same time that further studies are required.

Lechia gen. n.[1]

The genus has been distinguished on the basis of the structure of epigyne, externally resembling that of some representatives of the genus *Euophrys* (e.g. *E. jirica* ŻABKA) (ŻABKA 1980b). Vast depressions lead to pocket-like copulatory openings, which pass into short canals. Spermathecae big, oval, their distal part more developed than in *Euophrys*. Accessory glands are not visible. Abdomen covered with clusters of scale-like setae. Only one species is known.

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[1] Named after Lech, the legendary founder of Poland.

Lechia squamata sp. n.

Material: 1 ♀ holotype – Ha Noi, 26 V 1966, BP, IZPAN. 1 ♀ paratype – Viet Tri, near Pagoda Den Hung, prov. Vinh Phu, 200 m, beaten from bushes, 9 XII 1971, TM, HNHM.

Female (holotype). Cephalothorax slender, eye field orange, surroundings of eyes I black-brown, of other – black. Between the limit of eye field and posterior margin an orange belt, around the ventral margin a broad yellow fringe. The remaining surface orange-brown. Hairs white and white-grey scale--like, and longer light brown ones – more numerous near eyes. Length of cephalothorax 2.24, length of eye field 0.96, width of eye field I 1.32, width of eye field III 1.26. Abdomen (Fig. 262) yellowish with clusters of grey scale-like hairs. There are also sparse grey and grey-brown hairs. Length of abdomen 3.30. Spinnerets yellow. Clypeus yellow-orange with white hairs. Beneath median eyes I three yellow-orange bristles. Chelicerae, pedipalps, maxillae and labium yellow-orange. Venter white-yellow, lateral surfaces as on the dorsal aspect. Epigyne (Figs. 259, 260) with two pocket-like depressions out of which come the copulatory canals. Spermathecae oval, big, their distal part well developed, accessory glands not visible. Legs yellow, lateral surfaces of femora I with grey longitudinal streaks, grey fringes around the joints of all legs. Hairs grey, spines grey-brown.

Coloration of cephalothorax in the paratype more uniform, orange spots on the abdomen. Epigyne (Fig. 261) slightly smaller, almost flattened in the direction of the epigastric furrow.

Gedea Simon, 1902

1902 *Gedea* Simon, Ann. Soc. ent. Belg., **46**: 390.

This is a monotypic genus (type-species: *G. flavogularis* Simon), known only from Java. The spiders are rather small (ca 5 mm) and are distinguished by the structure of copulatory organs (Figs. 263–266) and chelicerae (Fig. 267). The palpal tibia with a double prolateral and retrolateral apophysis, the latter in the form of ragged calpac. Bulbus elongate, embolus quite long, band-like. Chelicerae characteristic in form, with a tuft of long hairs in the distal part of basal segment and with numerous teeth on the inner edge.

Gedea tibialis sp. n.

Material: 1 ♂ holotype – Ha Noi, Bac Thao, park, 9 X 1978, PTL.

Comparative material: 1 ♂ "*Gedea flavogularis* Sim., Java, Palembang, (Fr), (Typus? IX 1959 M. E. Galiano)", MNHN 20390.

Cephalothorax dark brown, surroundings of eyes black, paler beyond the eye field, covered with numerous adpressed hairs. On the anterior part also darker – grey and grey-brown hairs and bristles. Length of cephalothorax 2.16, length of eye field 0.96, width of eye field I 1.38, width of eye field III 1.26. Abdomen anteriorly with traces of orange medial belt, one third of ab-

domen. Laterally longitudinal grey streaks, the posterior half of abdomen grey, darker near spinnerets. Length 2.04. Spinnerets yellow-orange. Clypeus orange with numerous long white hairs. Chelicerae (Fig. 267) dark orange, elongated, with a tuft of long hairs in the distal part of basal segment. Labium and maxillae similar in colour. Sternum grey-orange, venter with a big beige patch in a form of wedge from the epigastric furrow to spinnerets. The patch covered with numerous light brown hairs. The remaining part of venter light grey with darker spots formed by hairs and pigment. Palpal organ (Figs. 263–266) orange, covered with numerous, long, white and white-grey hairs. Tibial apophysis double: small prolateral with a tuft of bristles and longer retrolateral one with ragged calpac at the end. Bulbus elongate, embolus "sinuous". Basal segments of legs I and II grey-orange slightly brown, other segments lighter. Proximal parts of femora grey-brown, also darker around joints, all the rest orange. All legs covered with white, orange and grey-brown hairs and spines.

In comparison with *G. flavogularis* — palpal organ more slender, a relatively slightly longer embolus, prolateral apophysis smaller without a flaky tip as in the type-species, but with a small triangular tooth. Palpal organ covered with even less hairs, on the inner edge of chelicerae five teeth (in *G. flavogularis* — three).

Magyarus gen. n.[1]

The only known species of the genus is ca 4 mm long. Its palpal organ resembles those of the genera *Phlegra* and *Langona* (Hęciak and Prószyński 1983), but the specific developed upper part of bulbus formed of furrows and flanges, small protuberance on its surface and a long embolus tending to coil are different than in these two genera. On the lateral surface of bulbus a slightly meandering canal, apophysis split with a small inner outgrowth.

Magyarus typicus sp. n.

Material: 1 ♂ holotype — Cuc Phuong, prov. Ninh Binh, from 12 pitfall traps near creek, 6–18 V 1966, T, HNHM.

Cephalothorax brown with a darker eye field, covered with sparse brown hairs. Length 2.16, length of eye field 0.96, width of eye field I 1.50, width of eye field III 1.38. Abdomen macerated, dark grey (originally probably grey-brown) with a yellow margin and traces of brown median belt. On its whole surface quite numerous brown hairs, on the margin also white-grey ones. Length of abdomen 1.86. Spinnerets grey-brown. Clypeus brown with single hairs similar in colour. Chelicerae brown, maxillae, labium and sternum yellow-orange-

[1] Named in honour of Hungarians — Topál and Matskási, who collected the *Salticidae* from Viet-Nam.

-grey. Palpal organ (Figs. 268–271) yellow-orange, slender. The upper part of bulbus with flanges and furrows forming together with embolus a uniform functional part. On the lateral surface of bulbus a small protuberance and translucent seminal reservoir. Tibial apophysis short split, with an additional internal outgrowth. Legs I orange-brown, ventral surfaces lighter. Consecutive legs grey-orange. All with grey fringes around joints, covered with brown hairs and light brown spines.

Marpissa C. L. Koch, 1846

1846 *Marpissa* C. L. Koch, Die Arachniden, **13**: 60.

The genus has a wide geographical distribution, but Palaearctic species prevail. Its morphological characters are described, amongst others, by Barnes (1958), Locket and Millidge (1951) and Prószyński (1979).

Marpissa magister (Karsch, 1879)

1879 *Icius magister* Karsch, Verh. naturh. Ver. preuss. Rheinl., **36**: 83.
1973 *Marpissa magister*: Prószyński, Ann. zool., **30**: 116.

Material: 1 ♂, 1 ♀ – Phu Que, 80 km NW Vinh, young, dry, thick forest – trunks and branches, 16 VI 1959, 1 ♂ – borderline of dry deciduous forest and cut rice fields, 17 VI 1959, PP, 1 ♀ – Ha Noi, 26 VI 1966, BP, IZPAN.

Male. Cephalothorax brown with darker eye field, the nearest surroundings of eyes black. Posteriorly barely visible lighter spots. All surface covered with white and brown setae, the former more numerous around eyes, where there are also sparse brown bristles. Length of cephalothorax 3.01, length of eye field 1.10, width of eye field I 1.50, width of eye field III 1.60. Abdomen light brown, turning grey towards lateral surfaces, with big white-yellow irregular spots and rows of small yellow spots. Hairs sparse, grey and grey-brown, anteriorly and posteriorly also brown bristles. Length of abdomen 4.50. Spinnerets grey-brown. Clypeus brown, covered with grey and brown hairs. Chelicerae brown, maxillae and labium orange-brown, sternum grey-brown. Venter greyish--yellow with three grey longitudinal streaks. Towards lateral surfaces rows of grey and greyish-yellow spots. Palpal organ (Figs. 272–274) orange-brown, its structure shown in figures. Legs I dark brown, covered with quite numerous but fine grey and brown hairs. Spines brown. Other legs more delicate and slightly lighter.

Female. Cephalothorax orange, anterior and posterior part of eye field slightly darker, surroundings of eyes black-brown. Thorax with grey-brown spots and lines. All covered with white-grey hairs and brown bristles, more numerous on the eye field. Also present fine light brown setae. Length of cephalothorax 2.80, length of eye field 1.10, width of eye field I 1.50, width of eye field III 1.60. Abdomen (Fig. 278) yellow with two longitudinal grey streaks formed by setae. Also there are fine white-grey and grey-brown hairs – more nume-

rous anteriorly and posteriorly. Length of abdomen 4.90. Spinnerets white--yellow. Clypeus orange with single grey-brown and more numerous white hairs. Chelicerae dark orange, sternum and pedipalps white-yellow, maxillae and labium orange. Venter white-yellow with a longitudinal grey median belt. Epigyne (Figs. 275–277) in the form of two oval depressions near the epigastric furrow, divided by a wedge-like furrow. Internal canals in the distal part coiled several times — frequently translucent on the surface. Legs I thick, orange with white and grey hairs and brown spines. Other legs more delicate and lighter.

Specimens of both sexes of considerable size, with a thickset elongate body.

Species known from Japan (SAITO 1960, YAGINUMA 1970, PRÓSZYŃSKI 1973, BOHDANOWICZ and PRÓSZYŃSKI in press) and China (YIN CHANG-MIN and WANG JIA-FU 1979, SONG DAXIANG 1980) (Map 42).

Meata gen. n.

The genus distinguished on the basis of one species of small (ca 4 mm) spiders. The structure plan of copulatory organs in the type-species does not occur in any other of the described genera of *Salticidae*, and this character has been chosen as the main criterion for distinguishing the genus *Meata*. The cup-like parallel copulatory canals form characteristic contractions, which at the sharp turn pass into two-chamber spermathecae. The first one has a much elongated accessory gland.

Meata typica sp. n.

Material: 1 ♀ holotype "*Heliophanus* sp., Ha Noi, (VLG.)", MNHN 22980.

Dorsal aspect (Fig. 281). Cephalothorax orange-brown, surroundings of eyes I and II brown, of eyes III — black. On the whole surface rather numerous white adpressed hairs. Length of cephalothorax 1.60, length of eye field 0.75, width of eye field I 1.05, width of eye field III 0.95. Abdomen rotund, light grey, posteriorly and laterally traces of darker patches. Hairs sparse, grey. Length of abdomen 2.45. Spinnerets yellow. Clypeus yellow-orange. Chelicerae (Fig. 282), maxillae and labium orange, sternum lighter, pedipalps yellow, venter white-yellow. Epigyne (Figs. 279, 280) with a depression in anterior part — leading to copulatory openings and with strongly translucent spermathecae. Internal canals proximally cup-shaped, run parallel towards the epigastric furrow, where they form contractions, turn about and end by two-chamber spermathecae. Accessory glands long. Legs yellow-orange, hairs and spines similar in colour.

Menemerus SIMON, 1868

1868 *Menemerus* SIMON, Ann. Soc. ent. Fr., 4, 8: 662.

The genus has a wide geographical distribution — it is known both from the Old and New World. Three species described from Viet-Nam by HOGG

(1922) — *M. crassus*, *M. dabanis* and *M. felix* — represent in reality other genera, whereas *M. bivittatus* and *M. brachygnathus* known from Indochina — have been confirmed in Viet-Nam.

Particular representatives of the genus have a similar appearance: slender, cephalothorax slightly flattened, around its ventral margin numerous protruding white hairs. Abdomen in the shade of beige or brown. Palpal organ usually thick, bulbus squat, embolus falcate — frequently with a membraneous outgrowth — probably playing the part of conductor. Epigynes vary considerably among individuals. They are in the form of vast depressions, divided in the middle by a distinct ridge. Internal structures in the form of cup-shaped copulatory canals run into pear-shaped spermathecae.

Menemerus bivittatus (DUFOUR, 1831)

1831 *Salticus bivittatus* DUFOUR, Ann. sci. nat. Zool., **22**: 369.
1901 *Menemerus bivittatus* SIMON, Hist. nat. des Araign., **2** (3): 599, 600, 603, 604, 611.

Material: 1 ♀ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN. 3 ♂♂, 1 ♀ — Ha Noi, Thong Nhat, park, 10 X 1978, PTL.

Comparative material: ♂♂, ♀♀ "*Menemerus bivittatus* DUF., Kagok F. 1825, St. Vincent, Colte Grau, Venezuela, Caracas F. 1830, Paraguay F. 1849, Samarang, Terraba, Pasurum, Sipurio de Talamanca F. 1856, Zambesi, Lebak sive, Krakatau, Djedjek, Kaligangsu F. 1859". All mat. det. W. KULCZYŃSKI, IZPAN.

Male. Eye field dark brown slightly grey, with a grey-orange-brown margin. Posterior part of cephalothorax dark brown. Around the ventral margin numerous protruding, white hairs. Also in the anterior part light grey hairs, posteriorly dark brown, near eyes also brown bristles. Length of cephalothorax 3.28, length of eye field 1.28, width of eye field I 1.85, width of eye field III 1.76. Abdomen (Fig. 287) with a broad grey-brown median belt, half the length of abdomen, passing further into a herring-bone pattern. Lateral surfaces similar in colour. In the posterior part two oval yellow patches, the remaining part of abdomen grey-orange. Dense hairs — grey-brown on the dark area, yellow and grey-orange on light surfaces. Also present numerous grey and brown bristles. Length of abdomen 3.36. Spinnerets grey-brown. Clypeus orange-brown, covered with dense white hairs. Chelicerae brown, with tufts of white hairs at the basal part. Maxillae and labium orange-grey, sternum slightly darker, white haired. Venter yellowish-grey. Palpal organ (Figs. 283–286) dark orange, smaller and more delicate than in the next species, tibial apophysis also of a different shape. Embolus shorter, slightly falcate with a membraneous outgrowth. Legs I and II orange-grey, legs III and IV lighter. Very dense hairs (especially on legs I and II) dark brown, white and orange. Bristles dark brown, spines grey-brown.

In a series of specimens coloration varying in intensity — frequently much darker: cephalothorax black-brown, abdomen brown-grey with a darker median belt. Also the colour of other parts of the body accordingly darker.

Female. Eye field black, remaining part of cephalothorax brown. All covered with numerous brown and white hairs, the latter especially visible along the ventral margin. Near eyes black-brown bristles. Length of cephalothorax 2.72, length of eye field 1.12, width of eye field I 1.68, width of eye field III 1.60. Coloration of abdomen (Fig. 292) composed of dense hairs. Central part yellow with a delicate grey-brown pattern and a dark brown fringe. Lateral surfaces yellow. Whole abdomen, especially the frontal margin and surroundings of spinnerets covered with white and grey bristles. Length of abdomen 3.20. Spinnerets orange-brown. Clypeus with numerous white-yellow hairs varying in length. Chelicerae dark brown, pedipalps orange, labium and maxillae grey-brown, sternum the same colour as pedipalps, with white hairs. Venter yellow-grey with two barely visible narrow grey streaks. Epigyne (Figs. 288–291) externally variable, with two oval depressions divided by a triangular median ridge. Copulatory openings strongly sclerotized passing into short canals running into spermathecae. Otherwise than in *M. brachygnathus* accessory glands (x) barely visible. Legs yellow-orange, covered with numerous white--yellow and light brown hairs and spines.

In one of the females the abdomen dark grey-brown with lighter beige spots and darker median belt.

This is a pantropical species having a vast and well documented literature (among others BARNES 1958, CHRYSANTHUS 1968). Its distribution shown on map 20.

Menemerus brachygnathus (THORELL, 1887)

1887 *Tapinattus brachygnathus* THORELL, Ann. Mus. Stor. nat. Genova, 2, **5**: 346.
1901 *Menemerus brachygnathus* SIMON, Hist. nat. des Araign., **2** (3): 604.

Material: 1 ♀ — Chine, 80 km SW Ha Noi, calcareous rocks, shrubs, grass, 25 VI 1959, PP, 1 ♀ — Co Loa, 20 km NE Ha Noi, on rice, 6 V 1966, 1 ♂, 2 ♀♀ — Ha Noi, 3 VI 1966, 1 ♂ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN.

Comparative material: 1 ♂ "*Menemerus brachygnathus* (TH.), Annam, Phuc Son", MNHN 22135. ♂♂, ♀♀ "*Menemerus brachygnathus* (TH.), Sumatra, Buitenzorg, Hankow" — det. W. KULCZYŃSKI, IZPAN.

Male. Eye field black with black-brown bristles around eyes I. The remaining part of cephalothorax dark brown, covered with white and black-brown hairs. Also numerous white hairs protruding around the ventral margin. Length of cephalothorax 2.58, length of eye field 0.96, width of eye field I 1.44, width of eye field III 1.38. Abdomen grey-brown with a darker — brown median belt, a mosaic of small beige spots and two bigger grey-orange patches posteriorly. Whole abdomen covered with grey and grey-brown hairs and bristles, more numerous anteriorly and posteriorly. Length of abdomen 2.52. Spinnerets grey-brown. Clypeus orange-brown with numerous white protruding hairs, around eyes short grey-orange setae. Chelicerae dark brown with tufts of white setae at the basal part, maxillae and labium brown. Sternum orange-brown,

on its surface dark grey small dots and white protruding hairs. Venter orange-grey with traces of three longitudinal slightly lighter streaks. Palpal organ (Figs. 293–299) orange-brown, thicker than in *M. bivittatus,* bulbus more squat, embolus longer with a membraneous conductor. Tibia with an oval protrusion, on its posterior-lateral surface a triangular apophysis. One of the palps fixed in its functional position (Figs. 297–299). Legs orange-brown, the surroundings of joints darker, covered with light grey and brown hairs and bristles. Also present short white setae and light brown spines.

Some specimens have a more intensive coloration. Externally males resemble *M. bivittatus.*

Female. Coloration and hairs on cephalothorax as in the male. Length 2.52, length of eye field 1.14, width of eye field I and III 1.56. Abdomen as in the female of *M. bivittatus* — yellow with a dark brown fringe and traces of grey-brown median belt. Length 3.48. Spinnerets orange-brown. Clypeus orange--brown with numerous yellowish and white hairs. Chelicerae dark brown, pedipalps yellow, maxillae light brown, labium darker, sternum orange-brown, venter yellow. Epigyne (Figs. 300–305) bigger than in *M. bivittatus,* externally also variable. Internal structures similar, only accessory glands better developed. Legs I dark orange, lateral surfaces and surroundings of joints darker. Other legs orange. All — with white, grey and brown hairs. Spines brown.

The species has an Oriental-Palaearctic distribution (Map 19) and is well documented, amongst others, by BOHDANOWICZ and PRÓSZYŃSKI (in press). Quite faithful illustrations of palps are also given by BÖSENBERG and STRAND (1906).

Myrmarachne MACLEAY, 1839

1839 *Myrmarachne* MACLEAY, Ann. Nat. Hist., **2**: 10.

This is a genus having a cosmopolitan distribution, it is one of the most abundant ones among *Salticidae.* BONNET (1957) has mentioned 139 species — largely Oriental ones. Recently some papers have been published synonymizing some species and giving descriptions of many new species — from Africa (WANLESS and CLARK 1975, WANLESS 1978a), South America (GALIANO 1969, 1974) and India (TIKADER 1973a). Thus the number given by BONNET increases up to some 200 species.

The genus is distinguished by a great similarity of the structure of copulatory organs (especially in males), chelicerae and the whole body, and thus the criteria used for other genera are here insufficient. A complex analysis of groups of characters is necessary, although even then correct diagnoses are difficult, because the similar body form and other similar characters are found in some separate genera of *Salticidae* (similar cases of mimicry occur also among other families of spiders). It seems that *Bocus* PECKH. and *Belippo* SIM. are the closest relatives of *Myrmarachne.* The former (known from Philippines)

is distinguished by the shape of sternum and the presence of intercoxal plates (WANLESS 1978b). The structure of copulatory organs does not however differ from the plan found in many *Myrmarachne* species. The genus *Belippo* was distinguished on the basis of the shape of tibial apophysis in males and the presence of double spermathecae in females (WANLESS 1978a). Other ant-like genera (*Sobasina* SIM., *Marengo* PECKH).) known from the Oriental Region or from adjacent areas (Pacific Islands) — differ basically in the structure of copulatory organs and are distant phylogenetically (WANLESS 1978c, d).

Among the ten Vietnamese species of *Myrmarachne* — five are known from Africa, but they have been distinguished on the basis of paper of WANLESS (1978a). It is very interesting as none of these species have been found on the area dividing African and Vietnamese localities and such a wide distribution have only very few representatives of the family — those with pantropical or cosmopolitan distribution. Perhaps the present situation is a relict of ancient wider distribution disrupted by climatic (?) changes or other factors. Thus the problem requires further investigations. It is also possible that this is the case of sibling species or the case of convergent evolution. For these reasons the identification of Vietnamese species has yet to be confirmed.

Myrmarachne annamita sp. n.

Material: 1 ♂ holotype, 1 ♀ allotype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 3 VI 1966, BP, IZPAN.

Male (holotype) (Fig. 309). Cephalothorax slender, dark brown, with slight constriction. Surroundings of eyes darker. All surface covered with sparse adpressed setae, also near eyes protruding grey ones. Length of cephalothorax 2.05, length of eye field 0.80, width of eye field I 1.01, width of eye field III 1.05. Abdomen slender, beige, covered with sparse grey and grey-brown fine setae. Length of abdomen 2.70. Spinnerets grey-brown. Clypeus brown with sparse grey and single brown hairs. Chelicerae (Fig. 310) light brown, with two rows of teeth. Maxillae, labium and sternum similar in colour, slightly grey. Venter beige, anteriorly darker. Palpal organ (Figs. 306–308) grey-brown. On bulbus surface a meandering "S"-shaped seminal reservoir, embolus with a membraneous keel, distally filamentous. Tibial apophysis rather thick, hooked to the side and backwards. Legs I slender — as in all representatives of the genus — grey-orange, other legs greyish-yellow. Setae grey and grey-brown, spines delicate — similar in colour.

Female (allotype). The specimen in general resembling the male, only abdomen more rotund and elongate, all legs uniformly yellow. Chelicerae (Fig. 313) thicker, its teeth bigger. Length of cephalothorax 2.20, length of eye field 0.85, width of eye field I 1.01, width of eye field III 1.05, length of abdomen 3.35. Epigyne (Figs. 311, 312) with two oval depressions, distant from the

epigastric furrow. Internal structures simple, pockets developed similarly as in *M. insulana* ROEWER.

Body form in both sexes and pocket-like structures of the epigyne allow to distinguish the species among other representatives of the genus.

Myrmarachne elongata SZOMBATHY, 1915

1915 *Myrmarachne elongata* SZOMBATHY, Ann. hist.-nat. Mus. hung., **13**: 475.

Material: 3 ♀♀ – Thanh Hoa, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1 ♀ – An Phu, Luc Yen distr., prov. Yen Bai, 300 m, beaten from bushes, 3 XII 1971, TM, HNHM.

Dorsal aspect (Fig. 316). Cephalothorax with a constriction in the median part, dark orange, surroundings of eyes black with sparse grey and grey-orange hairs. Length of cephalothorax 2.75, length of eye field 0.90, width of eye field I 1.30, width of eye field III 1.40. Abdomen egg-shaped, anteriorly light grey, posteriorly a light grey median patch, the remaining part grey. Whole abdomen covered with sparse grey setae. Length of abdomen 3.01. Spinnerets dark grey. Clypeus orange with fine grey and longer grey-brown hairs, beneath median eyes I three long grey-brown bristles. Chelicerae (Fig. 317) thick, with teeth on both edges, orange — similarly as pedipalps and sternum. Maxillae and labium yellow-orange, venter light grey, darkening posteriorly. Epigyne (Figs. 314, 315) with two depressions of an almost triangular shape. Near the epigastric furrow two pockets which are well visible after preparation. Internal canals form a not complicated loop, proximal parts accompanied by membraneous structures. Legs grey-brown with sparse hairs similar in colour and with light brown spines.

Particular specimens differ slightly in size and pigmentation intensity.

The species resembles *M. ichneumon* (SIMON). The differences concern the general appearance, the position of depressions of the epigyne in relation to internal canals. Pockets close to one another, similar in size and shape — are not found in any of the Vietnamese species, although similar ones occur in some African representatives of the genus (*tristis*-group, WANLESS 1978a).

M. elongata has been only mentioned from central and southern part of Africa (Map 21).

Myrmarachne gigantea sp. n.

Material: 1 ♂ holotype — Thanh Ha, prov. Hoa Binh, 14 VI 1966, 1 ♀ allotype, 1 ♂ paratype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 9 VI 1966, BP, IZPAN. 1 ♂ paratype — Cuc Phuong, prov. Ninh Binh, beaten from bushes in forest, 6 V 1966, T, HNHM.

Male (holotype). Cephalothorax tall, thickset, with a median constriction, dark orange. Eye field slightly darker, surroundings of eyes black-brown. Anterior part with fine grey setae, posteriorly and near eyes tufts of white

setae. Length of cephalothorax 3.10, length of eye field 1.20, width of eye field I 2.15, width of eye field III 1.95. Abdomen oval, with vast brown-grey scutum with an indistinct margin. Surface of scutum covered with fine grey setae. Length of abdomen 3.05. Spinnerets grey. Clypeus dark orange with numerous yellow-grey hairs. Chelicerae (Fig. 322) dark orange, thick, long, with characteristic large teeth near the base of the claw. On both edges there are also smaller teeth. Maxillae and labium grey-orange, sternum yellow, venter grey, towards lateral surfaces lighter longitudinal streaks. Palpal organ (Figs. 318–321) big, with an oval bulbus and embolus forming a double loop. Tibial apophysis slightly hooked laterally. On the lateral surface long dense bristles, two short spines in the distal part of cymbium. Legs very long and delicate. Legs I grey-orange, other turning grey. All covered with small sparse hairs and light brown spines.

Female (allotype) (Fig. 325). Cephalothorax with a strong median constriction, slender, brown, surroundings of eyes darker. On the whole surface white and grey hairs. Length of cephalothorax 3.01, length of eye field 1.01, width of eye field I 1.25, width of eye field III 1.35. Abdomen without a scutum, grey, in the median part a broad lighter belt. Anteriorly two small apodemes. On the whole surface light grey spots. Length of abdomen 3.10. Spinnerets yellowish-grey. Pedicel (Fig. 326) of a characteristic shape. Clypeus light brown with grey and brown hairs. Chelicerae (Fig. 327) thick, orange-brown. Pedipalps brown, maxillae and labium exceptionally long, light brown with orange apices. Sternum light orange, venter medially light grey, towards lateral surfaces darker with longitudinal light streaks. Epigyne (Figs. 323, 324) with a pocket in the median part. Internal structures simple. In their proximal part membraneous, barely visible canals, in the distal part accessory glands. Three proxima. segments of legs I white-grey, only lateral surfaces of femora with darker streaks-Patellae orange-brown, their lateral surfaces darker. Distal parts of tibiae yellowl -orange, other segments brown-grey. Legs II shorter, coxae and trochanters grey-brown, femora white-grey, distally darker. Other segments yellow-orange, laterally darker. Legs III grey-brown, distal part of metatarsus and tarsus yellow--orange. Trochanters and proximal parts of patellae of legs IV white-grey, remaining part grey-brown.

Specimens of both sexes similar in body form and coloration.

The structure of copulatory organs indicates a relationship between the species and representatives of groups "*formicaria*" and "*voliatilis*" (WANLESS 1978a). *M. gigantea* has however its own complex of distinguishing characters:

— big body size and characteristic body form,
— strong and thick chelicerae,
— palps of males with a brush of dense bristles and two spines at the apical part of cymbium,
— structure of pedicel in females,
— simple in structure, much elongated internal canals of epigyne.

Myrmarachne globosa WANLESS, 1978

1978 *Myrmarachne globosa* WANLESS, Bull. Brit. Mus. nat. Hist., **33**: 97–99.

Material: 1 ♀ – Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, IZPAN.

Dorsal aspect (Fig. 329). Cephalothorax with a median constriction, dark brown, covered with single, small, grey hairs – more numerous near eyes. Length of cephalothorax 2.50, length of eye field 1.20, width of eye field I 1.41, width of eye field III 1.50. Abdomen oval, dark grey slightly brown, anteriorly slightly darker. On the whole surface small, barely visible, lighter spots. Hairs single, grey. Length of abdomen 3.01. Spinnerets orange-grey. Clypeus orange-brown, covered with small light grey setae and longer darker hairs. Chelicerae (Fig. 330) brown, thick, with teeth on both edges. Pedipalps dark brown, maxillae, labium and sternum lighter. Venter grey, towards lateral surfaces longitudinal rows of lighter spots. Epigyne (Figs. 328, 331) with two big depressions divided by a median ridge. Medially a single pocket. Internal canals club-shaped, without a loop, slightly bent, distally much broader. Legs orange-brown slightly turning grey, covered with sparse grey hairs and orange-brown spines.

The species is distinguished by the structure of internal canals of epigyne, not found in any other representatives of the genus. *M. globosa* has been mentioned only from Angola and Zaire (Map 22) (WANLESS 1978a).

Myrmarachne hanoii sp. n.

Material: 1 ♂ holotype – Co Loa, 20 km NE Ha Noi, 10 V 1966, BP, IZPAN.

Dorsal aspect (Fig. 335). Cephalothorax with a constriction, brown, surroundings of eyes black. Anteriorly sparse grey setae, posteriorly – white ones. Length of cephalothorax 1.60, length of eye field 0.65, width of eye field I 0.90, width of eye field III 1.01. Abdomen oval, gleaming, covered with an anterior and posterior scutum divided by an indistinct edge and a streak of white setae. Coloration of abdomen dark grey slightly brown. On the whole surface single grey setae. Length of abdomen 1.30. Spinnerets brown. Clypeus brown, covered with grey, rather dense hairs. Chelicerae (Fig. 336) thick, club-shaped, longer than cephalothorax, with sparse teeth and papillae. Maxillae orange, labium brown, sternum orange, venter anteriorly grey-brown, further on black-grey. Laterally rows of grey-orange small dots and spots. Palpal organ (Figs. 332–334) grey-orange, thick. Embolus long, filamentous, bulbus with a triangular outgrowth in the upper part. Tibia with strongly developed apophyses. Legs greyish-orange. Hairs sparse, grey and orange, spines similar in colour.

The structure of palps resembling that of some African species from the "*electrica*" group (WANLESS 1978a), but the structure of tibiae and general appearance prove the distinct character of the species.

Myrmarachne kiboschensis LESSERT, 1925

1925 *Myrmarachne kiboschensis* LESSERT, Rev. suisse Zool., **32**: 441.

Material: 1 ♂ — Co Loa, 20 km NE Ha Noi, 10 V 1966, 2 ♂♂ — Thanh Hoa, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1 ♂ — Yen So, SW of Ha Noi, beaten from bushes, 19 IV 1966, T, HNHM.

Dorsal aspect (Fig. 341). Cephalothorax with a median constriction, light brown, surroundings of eyes darker. Laterally and posteriorly single white setae, the surroundings of eyes with brown-grey longer hairs. Length of cephalothorax 1.25, length of eye field 0.55, width of eye field I 0.70, width of eye field III 0.80. Abdomen grey-brown, with anterior and posterior scutum — divided by a distinct constriction and sparse grey setae. Length of abdomen 1.15. Spinnerets grey-orange. Clypeus orange, covered with sparse grey hairs. Chelicerae (Fig. 340) orange, thick. Maxillae, labium and sternum grey-orange. Venter anteriorly grey-orange, posteriorly dark grey slightly brown. Laterally rows of light grey lines. Palpal organ (Figs. 337–339) grey-orange. Embolus quite long and broad, tibial apophysis single and small. Legs grey-yellow. Hairs grey-yellow and grey, spines delicate, similar in colour.

The species is known only from central part of Africa (Map 23) (WANLESS 1978a) and related to *M. cowani* (PECKHAM). It has a slightly broader and longer embolus, tibial apophysis thicker.

Myrmarachne legon WANLESS, 1978

1978 *Myrmarachne legon* WANLESS, Bull. Brit. Mus. nat. Hist., **33**: 69–72.

Material: 1 ♂ — Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, 2 ♀♀ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, 5 VI 1966, 1 ♂ — Thanh Ha, prov. Hoa Binh, 14 VI 1966, 1 ♂, 1 ♀ — Ha Noi, 26 VI 1966, BP, IZPAN. 1 ♂ — Mai Lam, NE of Ha Noi, beaten from bushes in village, 16 IV 1966, 1 ♂, 1 ♀ — Yen So, SW of Ha Noi, beaten from trees in village, 22 IV 1966, 1 ♂ — Tanh Liet, SW of Ha Noi, beaten from trees, 23 IV 1966, T, HNHM.

Male (Fig. 346). Cephalothorax with a median constriction, dark orange, near eyes black, with sparse light grey hairs. On the remaining surface single grey hairs. Length of cephalothorax 2.20, length of eye field 0.90, width of eye field I 1.30, width of eye field III 1.40. Abdomen with a double scutum: anterior — light grey and posterior — grey-brown. Covered with single grey protruding setae. Length of abdomen 2.40. Spinnerets grey-brown. Clypeus orange, with rather dense grey hairs and three light brown bristles protruding beneath median eyes I. Chelicerae (Fig. 345) long (2.10 mm), dark orange, with numerous small teeth on both edges. Maxillae, labium and sternum orange. Venter light grey slightly brown, laterally rows of dark grey lines. Palpal organ (Figs. 342–344) slender, with a laterally hooked single apophysis. On the surface of bulbus a meandering "S"-shaped seminal reservoir. Embolus with a filamentous terminal part. Legs long, grey-orange, laterally grey-brown.

Coloration of specimens varies in intensity of pigmentation: orange colours are replaced by shades of brown, and grey ones — by various shades of grey and also by black colour. There are small differences as regards dentition of chelicerae.

Female. Cephalothorax with a delicate median constriction, dark brown, surroundings of eyes black. Whole surface covered with quite numerous white-grey hairs. Length of cephalothorax 2.30, length of eye field 0.90, width of eye field I 1.20, width of eye field III 1.30. Abdomen with an anterior constriction, without a distinct scutum, brown-grey — especially medially. Posteriorly longitudinal transverse and diagonal rows of small light grey dots. Surface of abdomen covered with grey hairs — more numerous anteriorly. Length 2.50. Spinnerets brown-grey. Clypeus light brown with numerous white-grey hairs. Chelicerae and pedipalps brown, maxillae, labium and sternum lighter. Venter grey with lateral longitudinal rows of light and dark lines. Epigyne (Figs. 347, 348) with a small dichotomous pocket in the vicinity of epigastric furrow. Internal canals not complicated, strongly sclerotized, proximal parts with delicate membraneous structures. Legs I and III light grey, laterally grey-brown. Proximal segments of legs III greyish-brown, dorsal and ventral sides of three distal segments greyish-yellow. Coxae and trochanters of legs IV light grey, other segments as in legs III. All legs with light grey and grey-brown hairs, on legs I and II additionally grey-brown delicate spines.

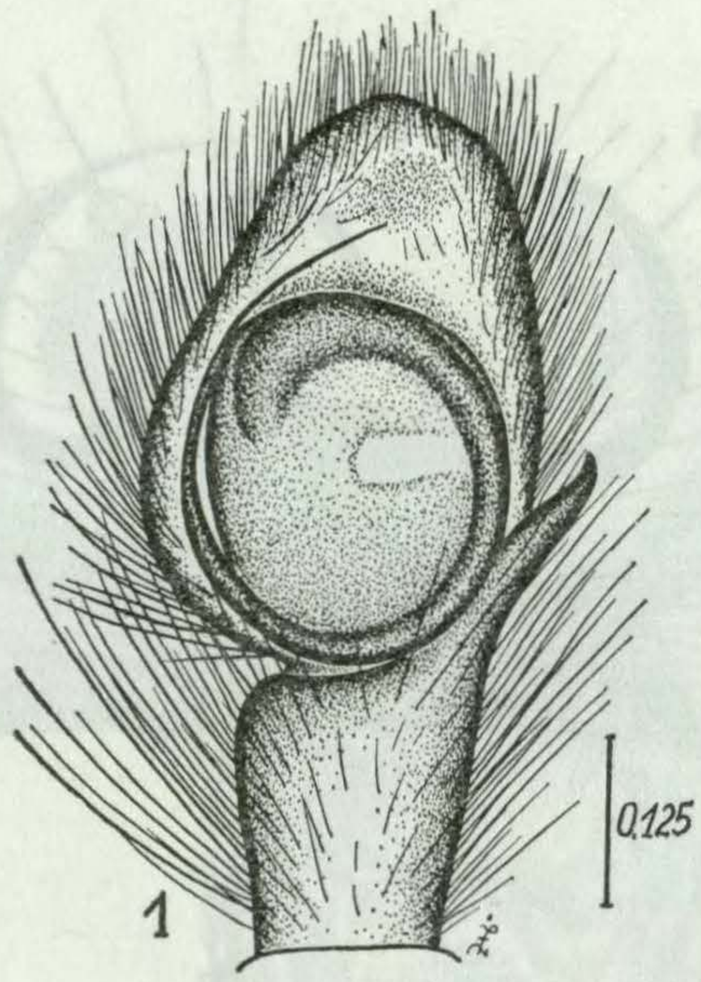
The species known only from Ghana and Ivory Coast (Map 24) is mainly distinguished by the structure and localization of epigynal pockets.

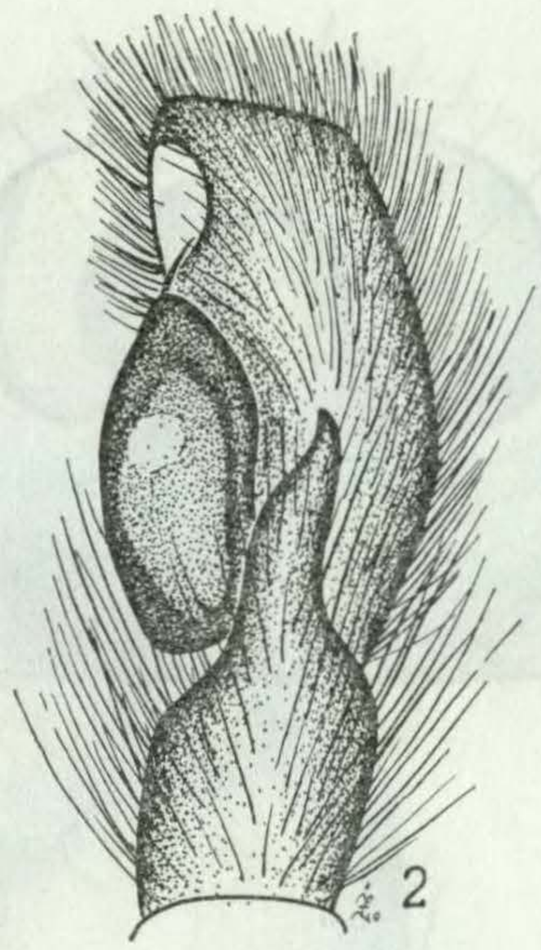
Myrmarachne lugubris (Kulczyński, 1895)

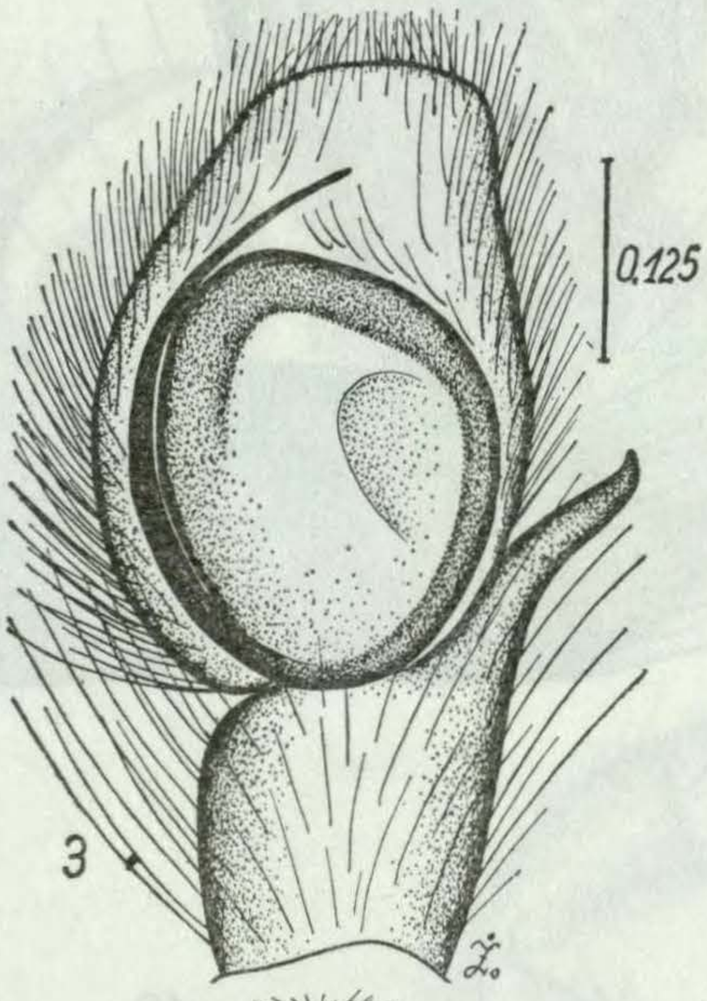
1895 *Salticus lugubris* Kulczyński, Rozpr. Spraw. Wydz. mat.-przyr. PAU, **32**: 46.
1901 *Myrmarachne lugubris*: Simon, Hist. nat. des Araign., **2** (3): 503.

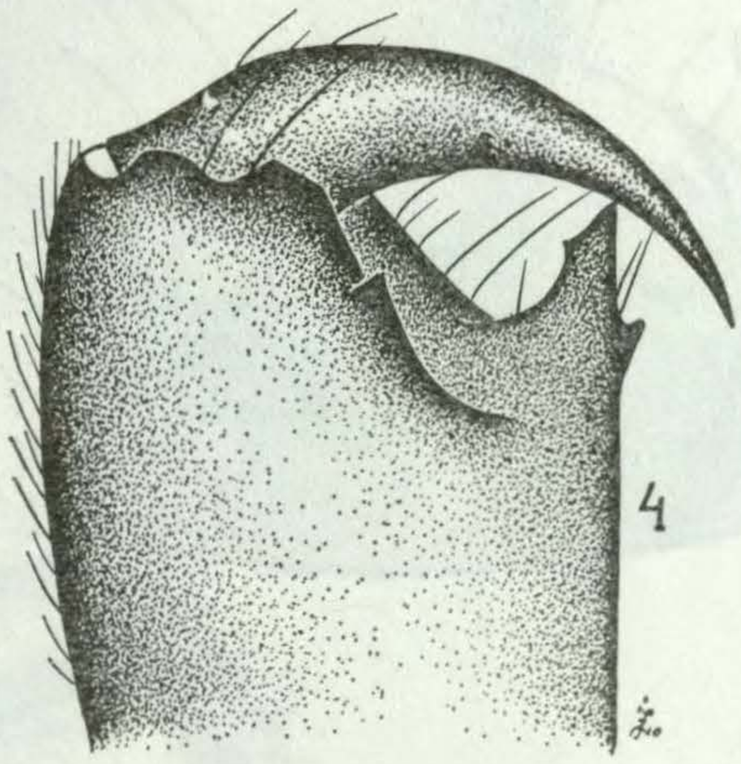
Material: 1 ♂, 1 ♀ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 2 VI 1966, BP, IZPAN. 1 ♂ — Yu Do, near Luc Yen, prov. Yen Bai, beaten from bushes, 4 XII 1971, TM, HNHM.

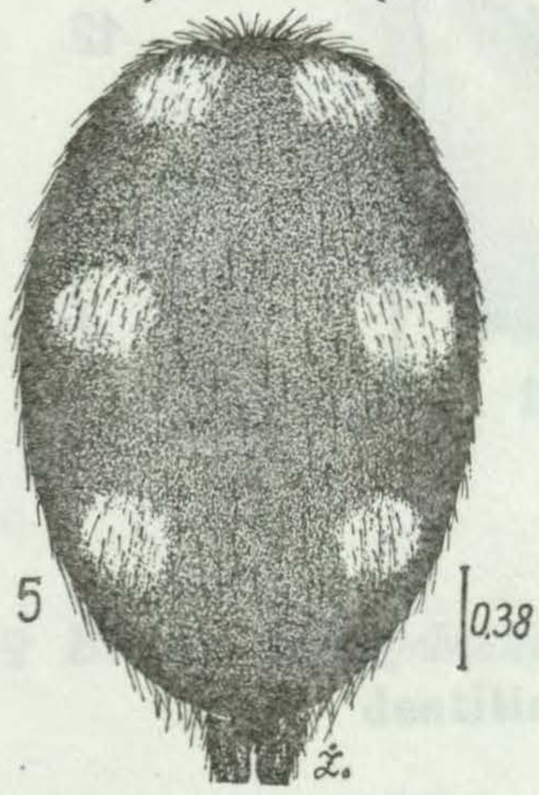
Male (Fig. 352). Eye field orange, surroundings of lateral eyes I, eyes II and III — black. Posterior part of cephalothorax grey-orange, darkening towards the ventral margin, divided by a distinct constriction. The surroundings of eyes with white-grey setae, medially and posteriorly also single white setae. Length of cephalothorax 2.80, length of eye field 1.11, width of eye field I 1.41, width of eye field III 1.60. Abdomen orange-grey, posteriorly dark grey with the anterior and posterior scutum divided by a constriction. Whole abdomen covered by sparse grey setae. Length 2.70. Spinnerets grey. Clypeus orange, covered with white-grey hairs. Beneath median eyes I three orange-brown bristles. Chelicerae (Fig. 353) light orange, longer than cephalothorax (3.50 mm), slender. Maxillae and labium grey-orange, sternum yellow. Venter medially yellowish-light-grey, laterally longitudinal rows of dark grey streaks. Palpal organ (Figs. 349–351) grey, with a double apophysis, filamentous embolus and a spine in

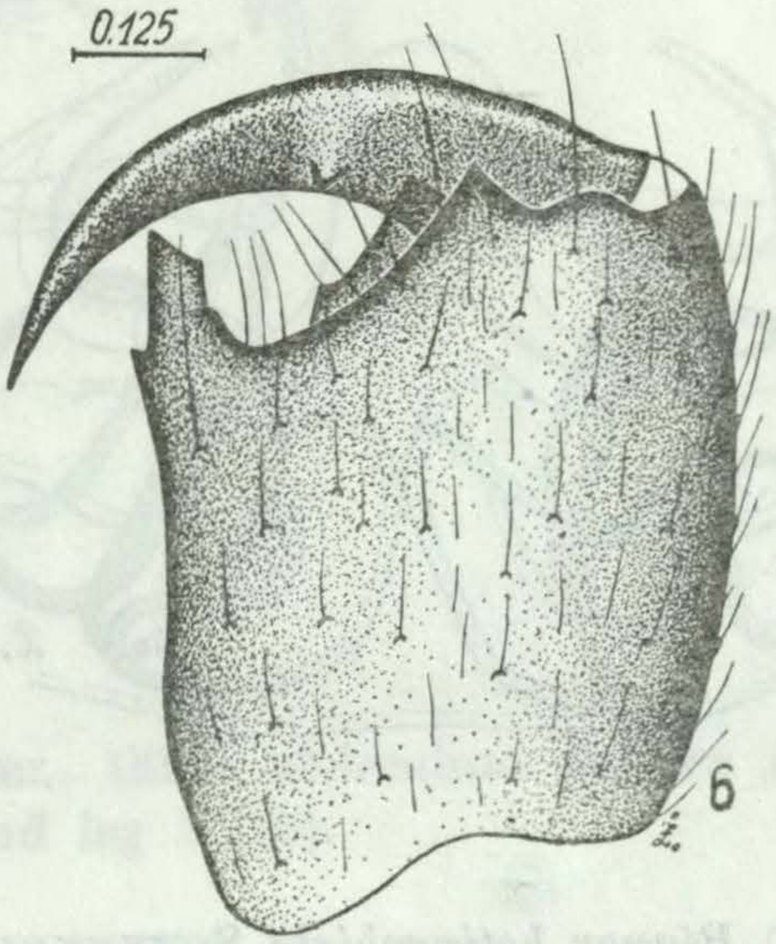




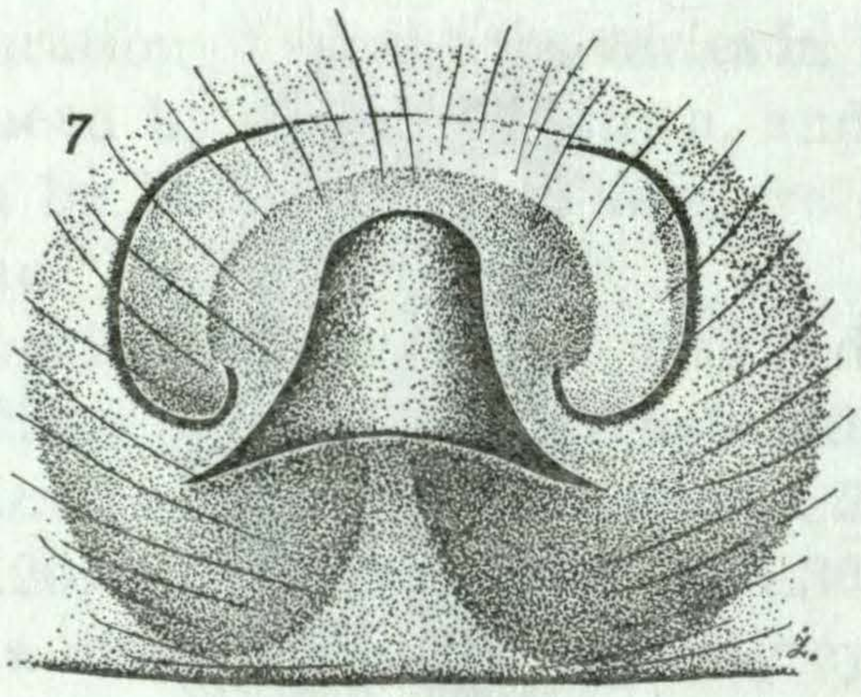


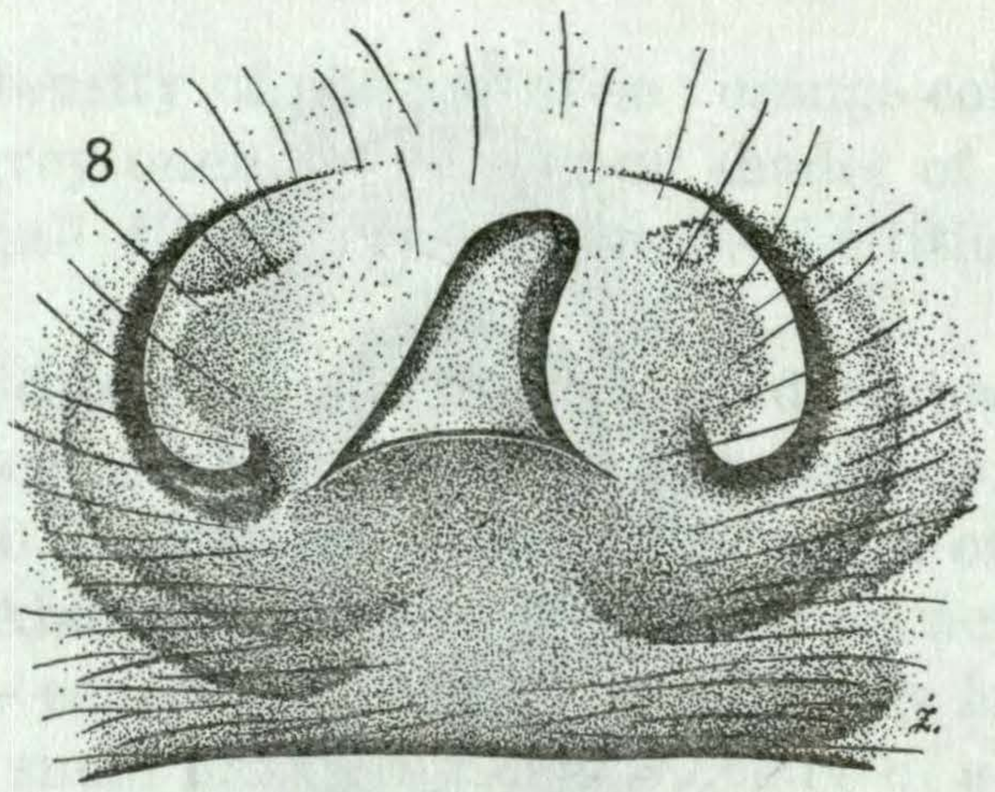






Figs. 1–6. ♂ *Bianor hotingchiehi* SCHENKEL, 1963: palpal organ (1–3), cheliceral dentition (4, 6), abdominal pattern (5).





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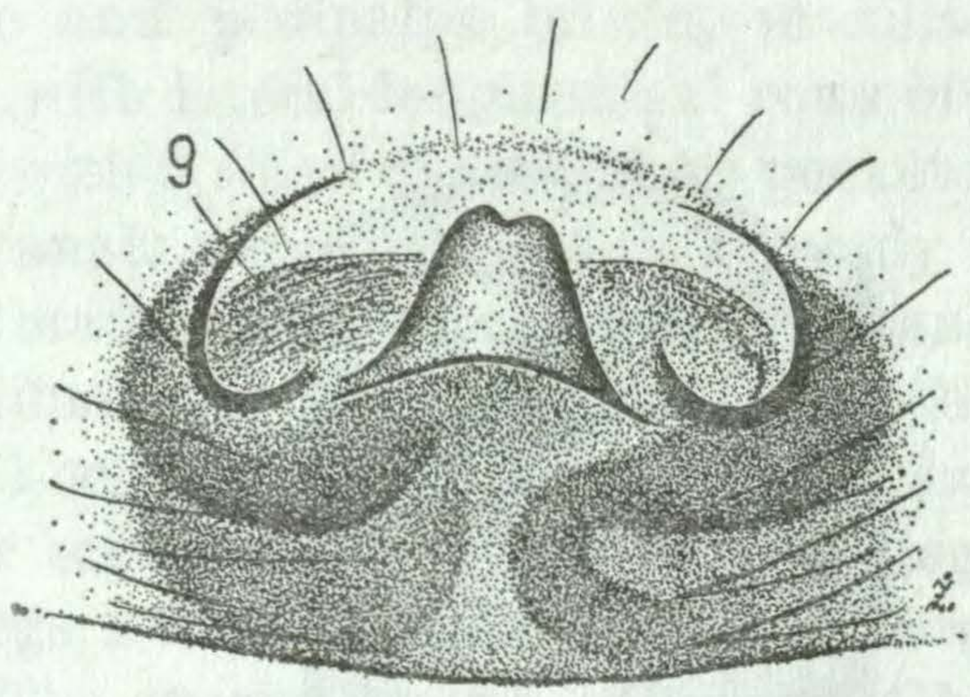
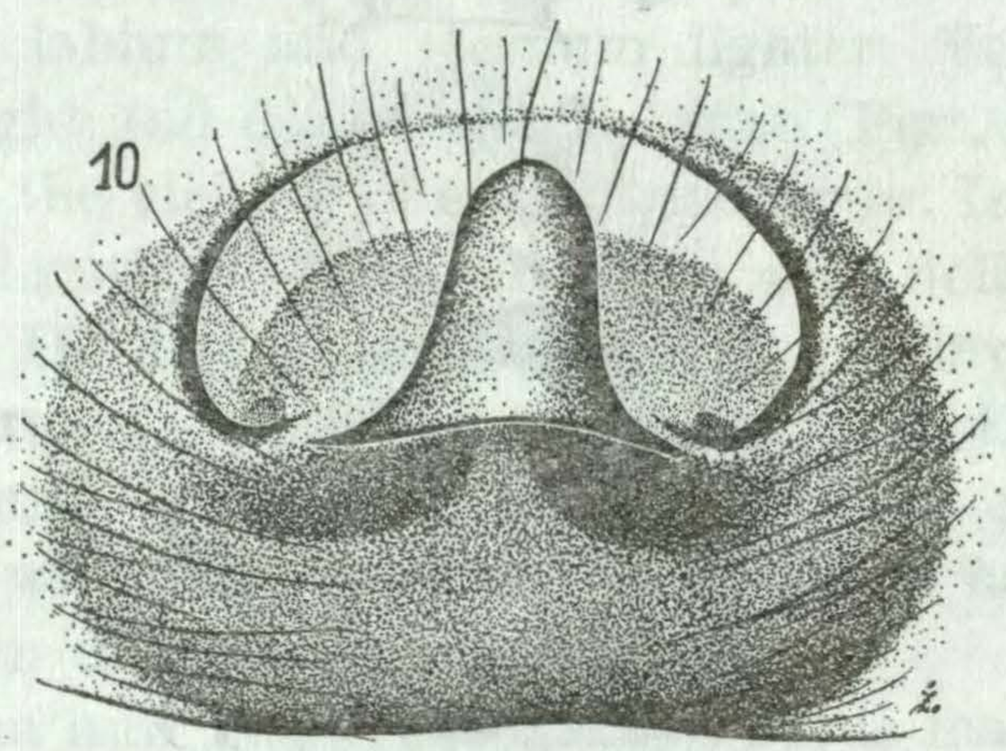
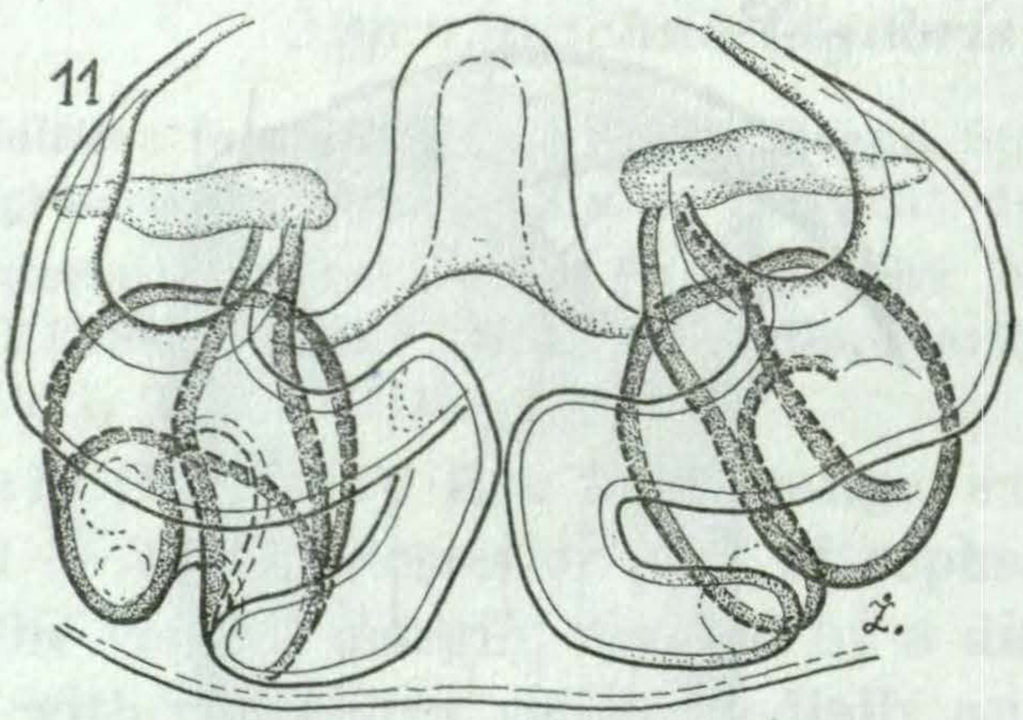
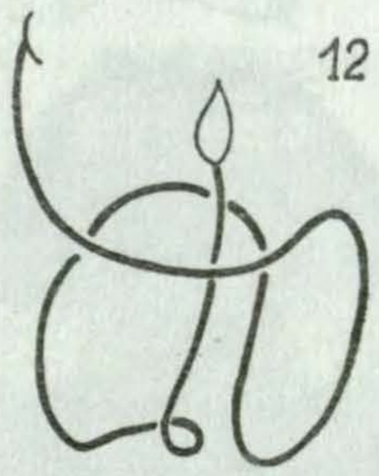
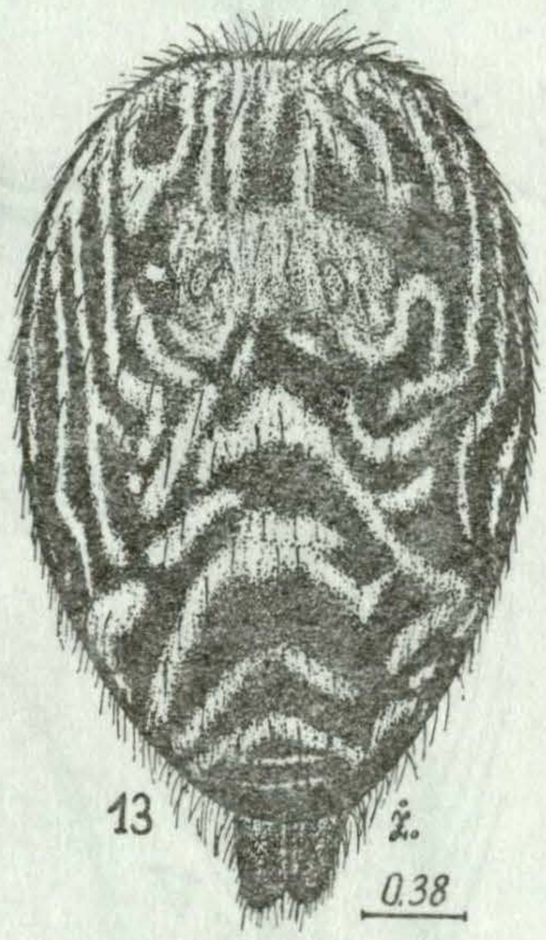


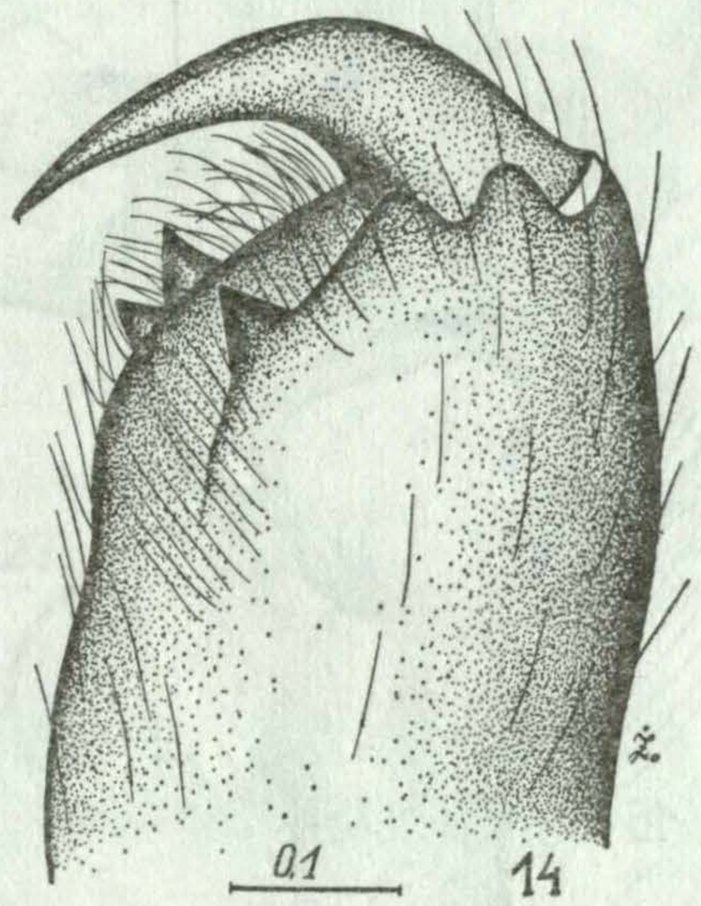


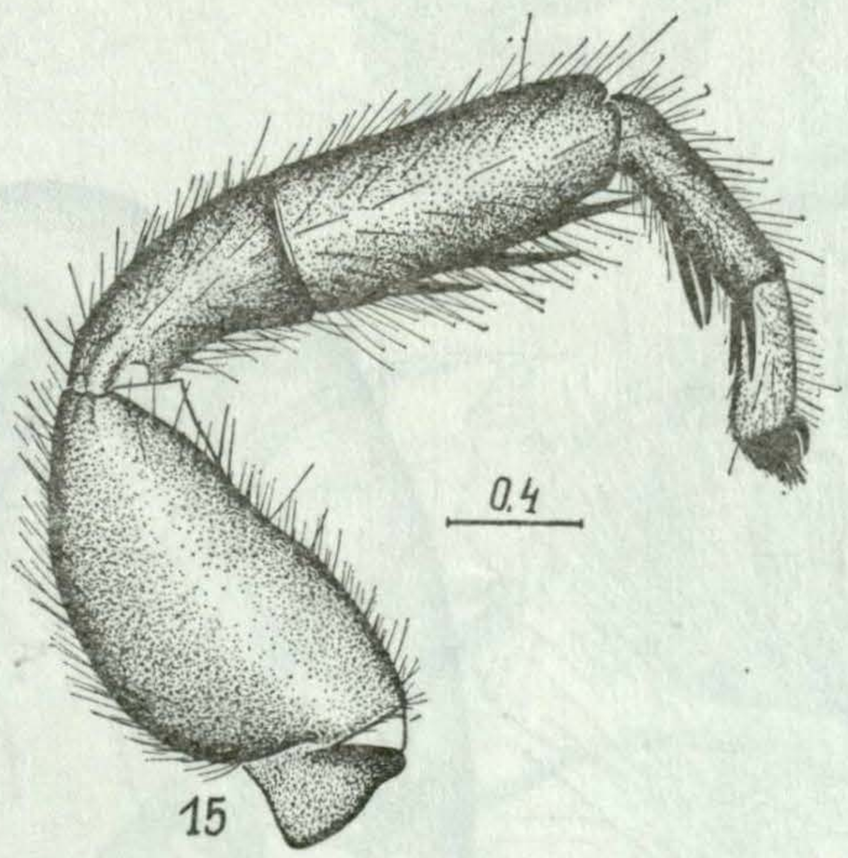




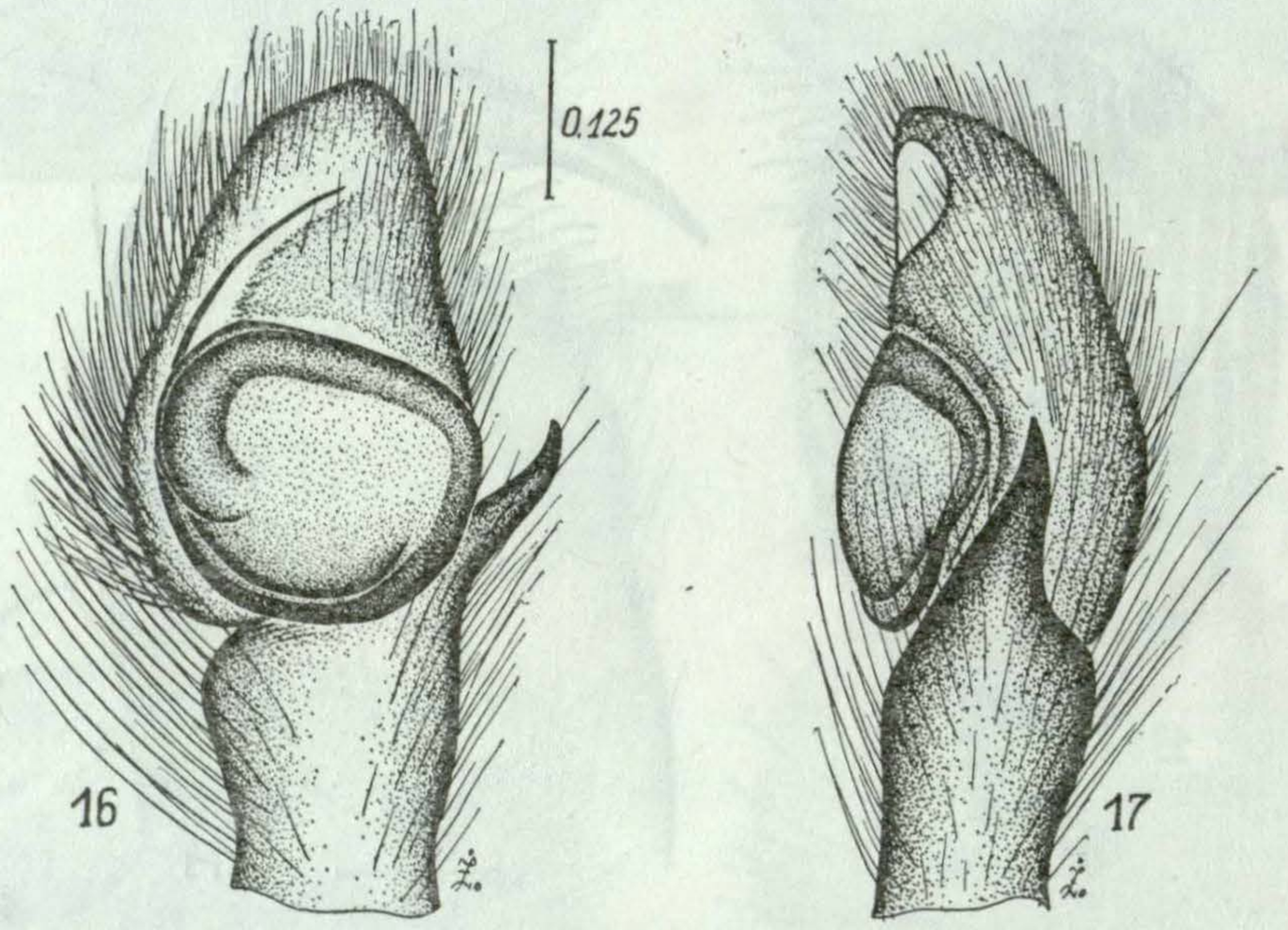
Figs. 7–12. ♀ *Bianor hotingchiehi* SCHENKEL, 1963: variability of epigyne (7–10), internal structures (11) and its diagrammatic course (12).



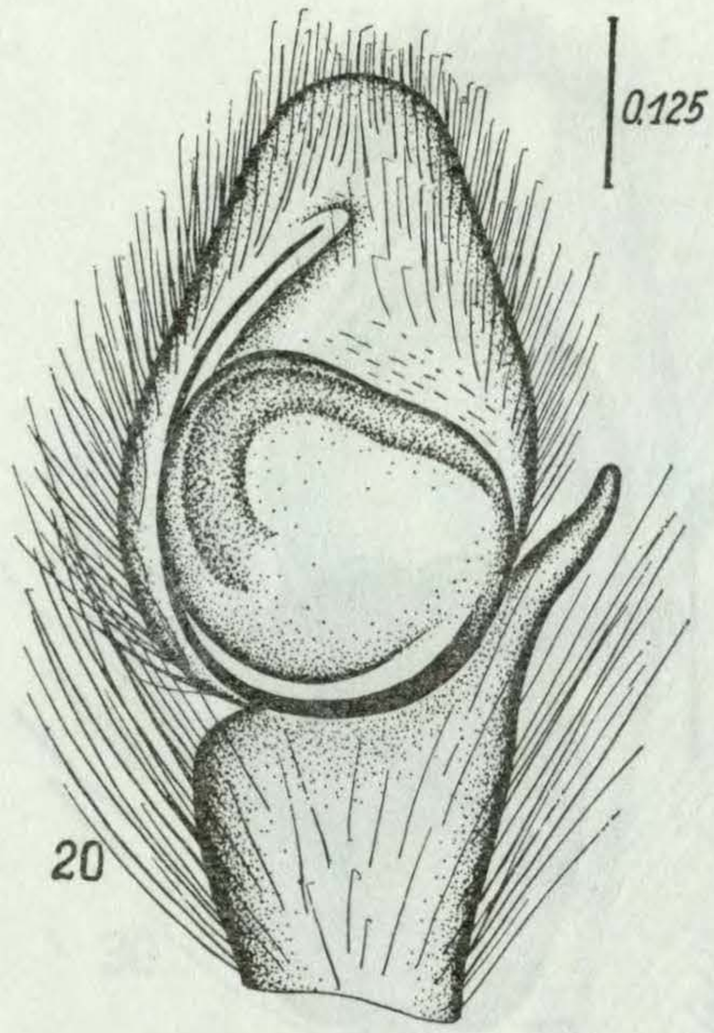


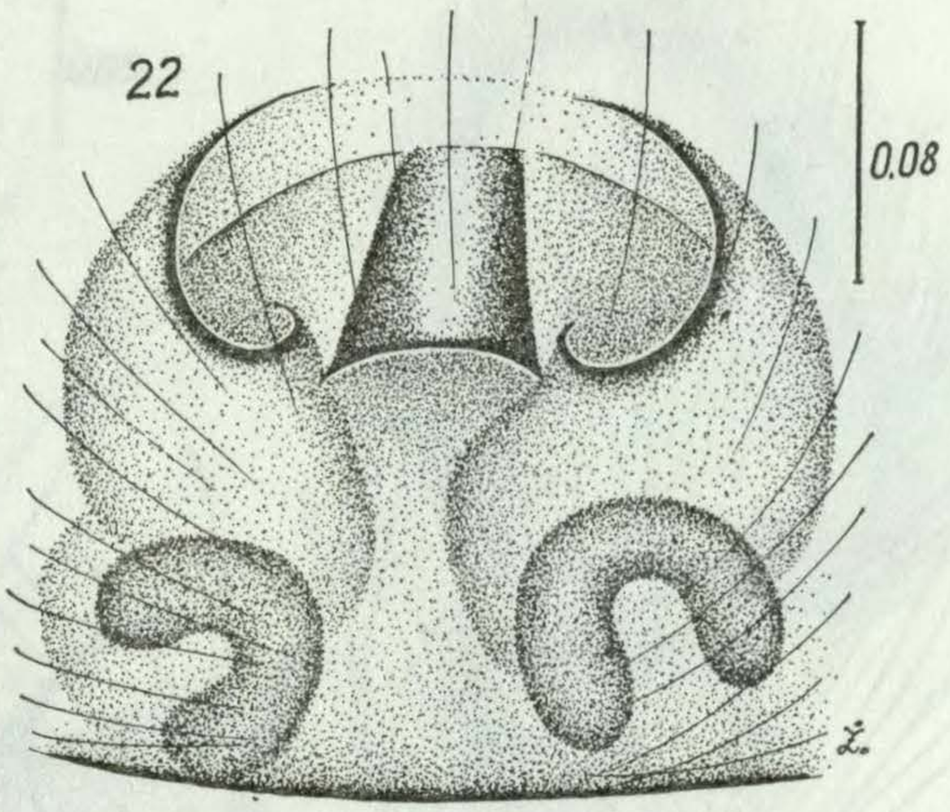


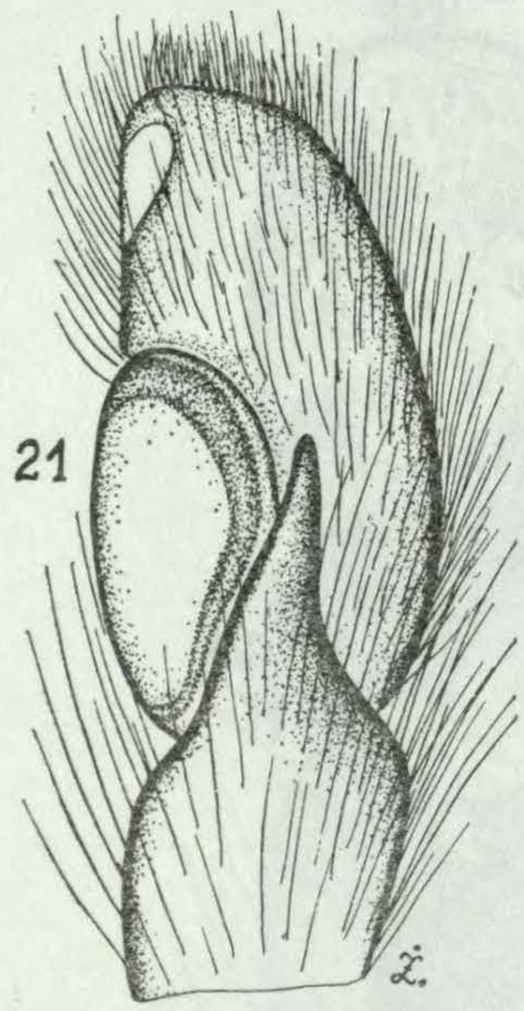
Figs. 13–15. ♀ *Bianor hotingchiehi* SCHENKEL, 1963: abdominal pattern (13), cheliceral dentition (14) and leg I (15).

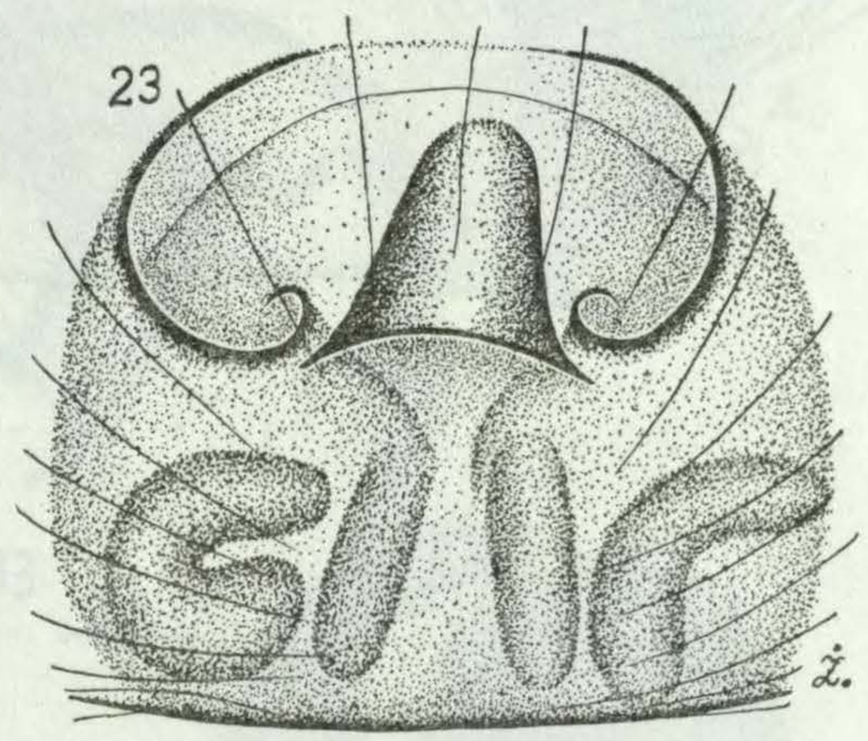


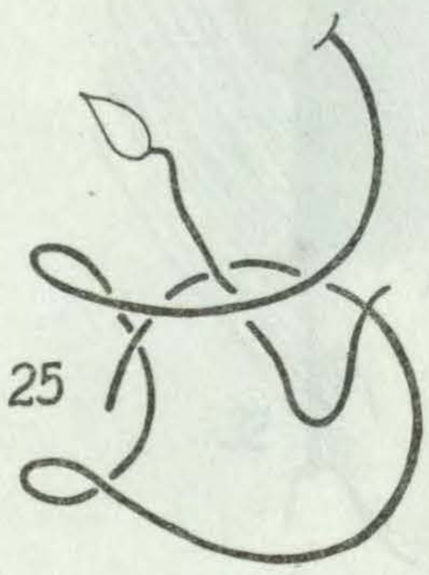
Figs. 16–19. ♂ *Bianor maculatus* (KEYSERLING, 1883): palpal organ (16–18) and cheliceral dentition (19).

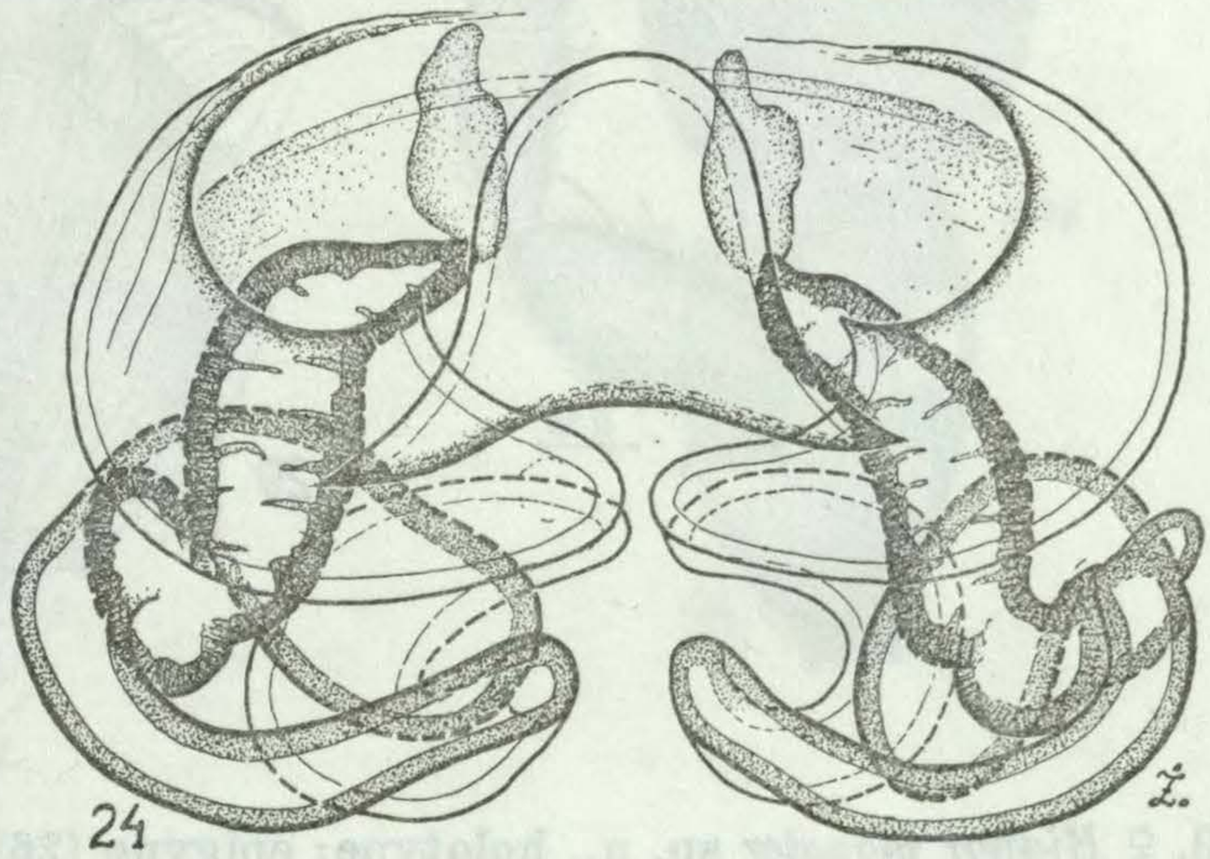




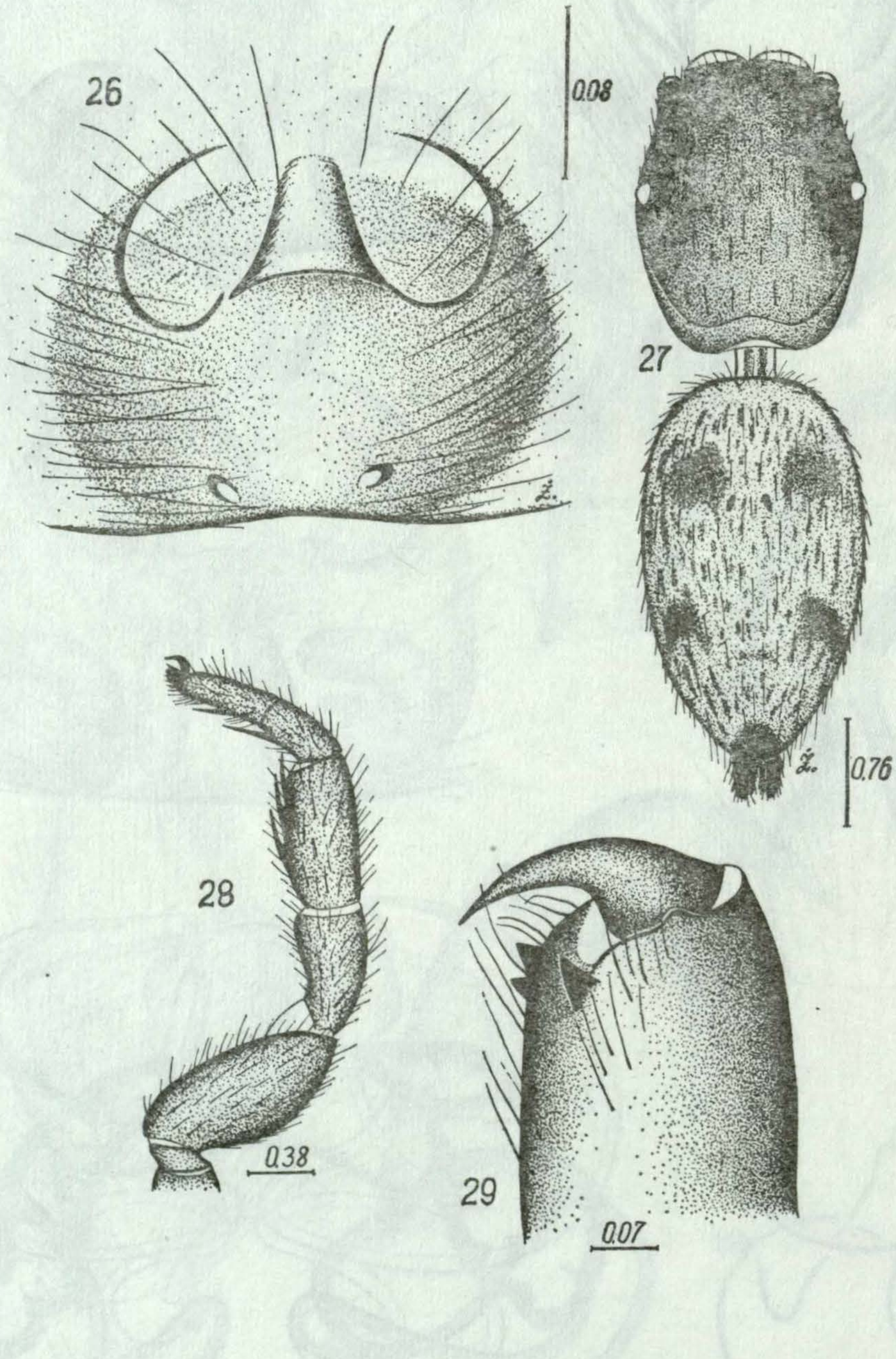




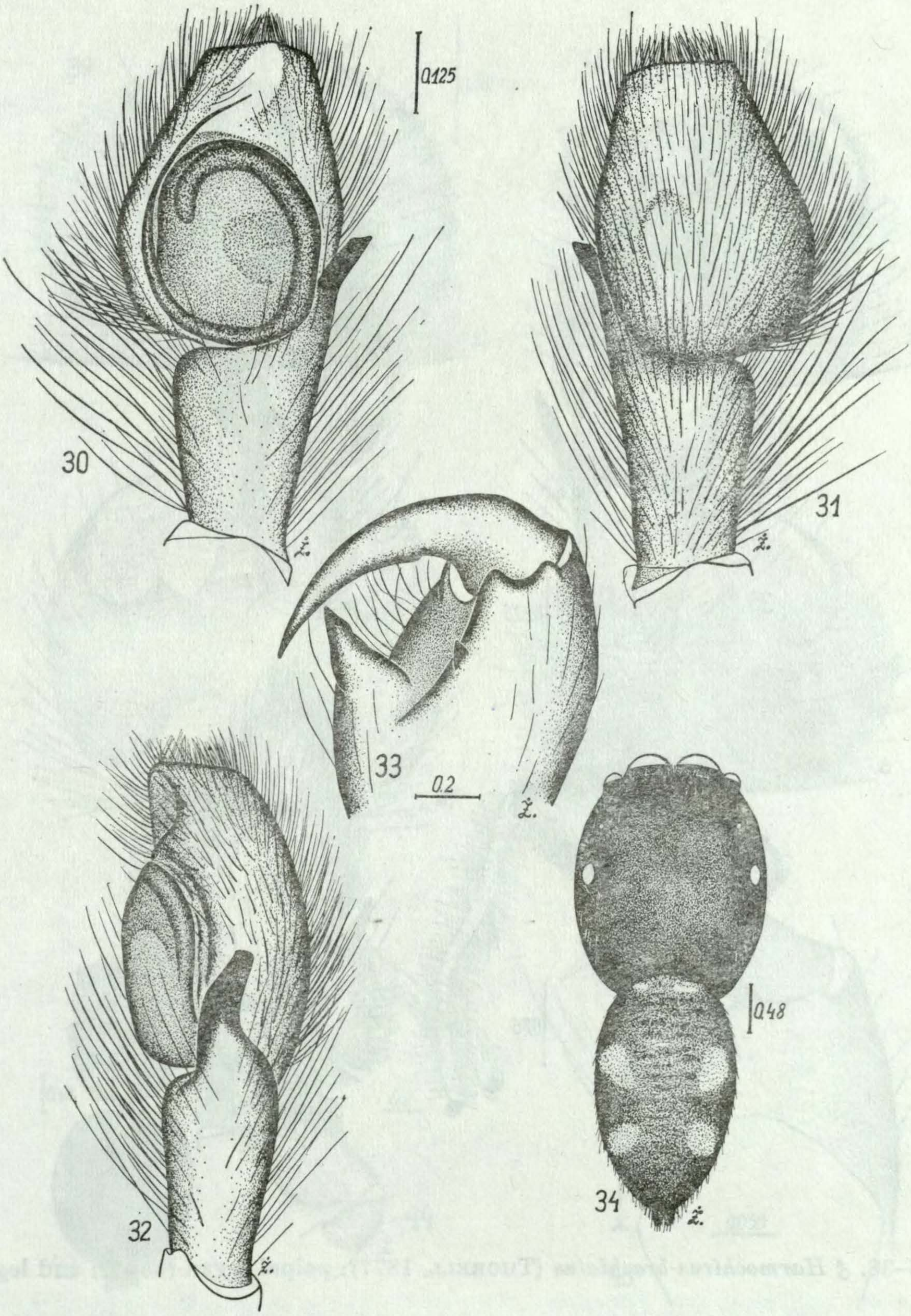




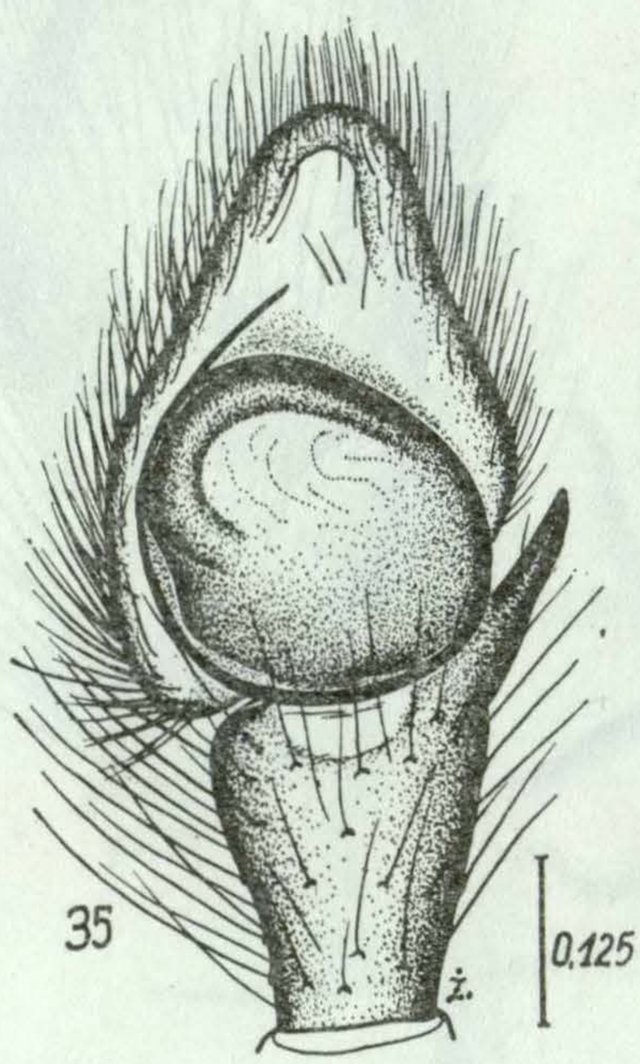
Figs. 20–25. ♂, ♀ *Bianor maculatus* (KEYSERLING, 1883): palpal organ (20, 21), epigynes (22, 23), internal structures (24) and its diagrammatic course (25). Drawings made on the basis of comparative specimens from Australia.

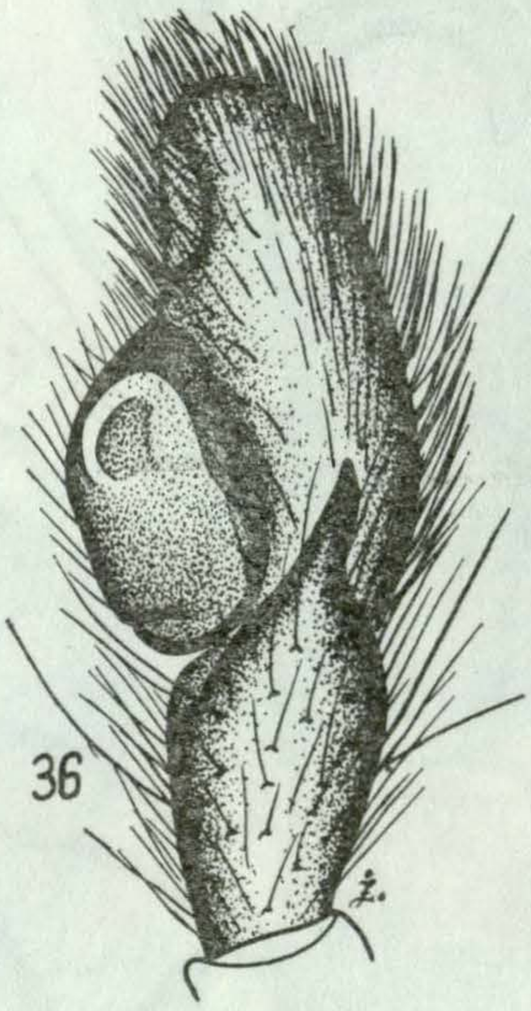


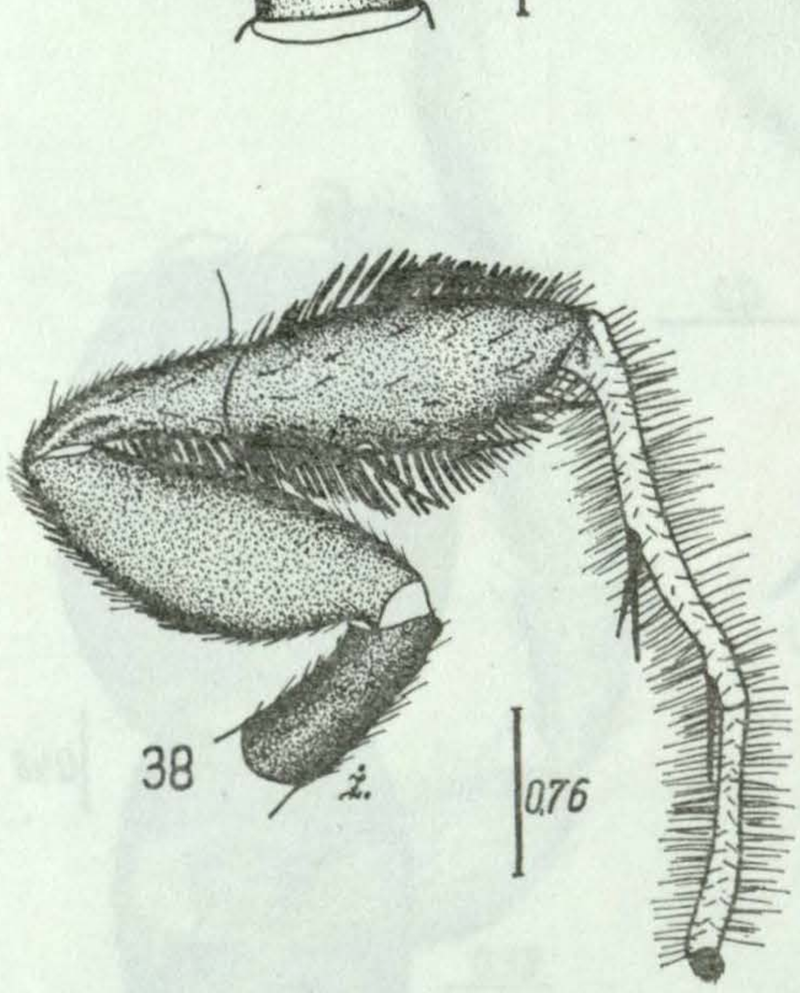
Figs. 26–29. ♀ *Bianor monster* sp. n., holotype: epigyne (26), general appearance (27), leg I (28) and cheliceral dentition (29).

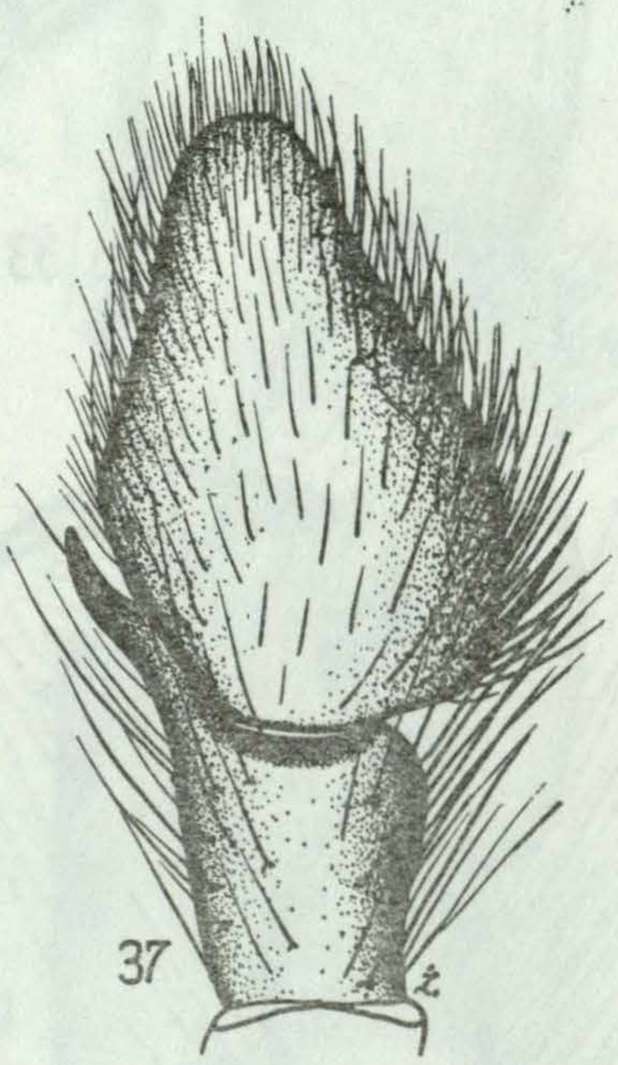


Figs. 30–34. ♂ *Bianor simoni* sp. n., holotype: palpal organ (30–32), cheliceral dentition (33) and general appearance (34).

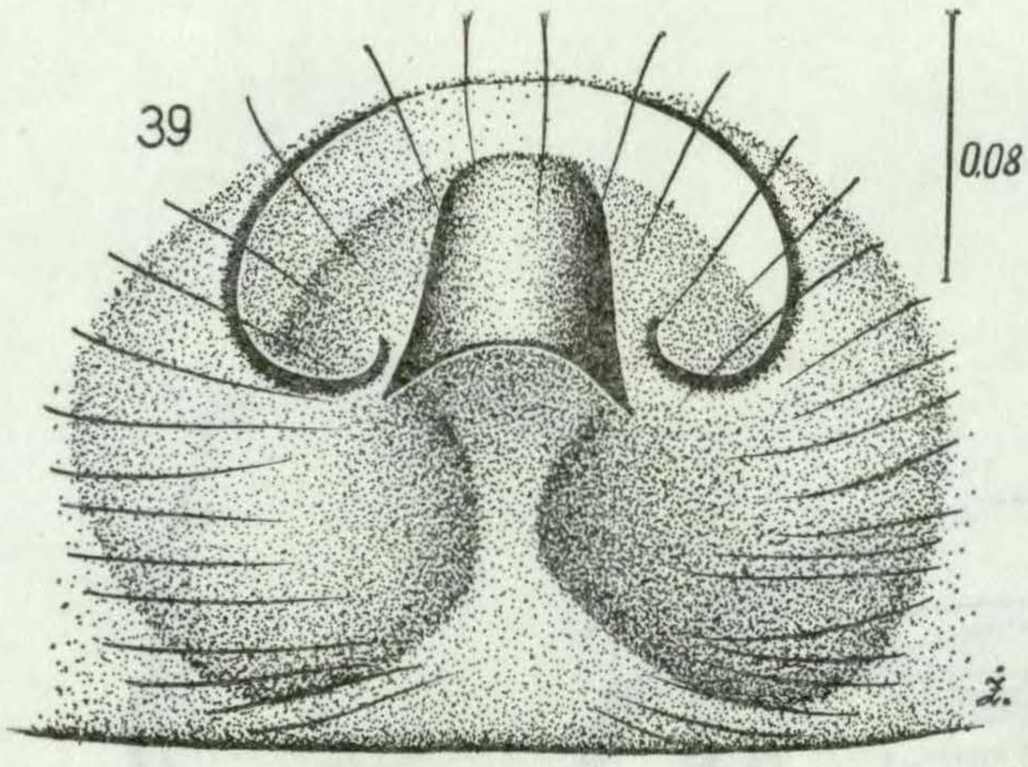


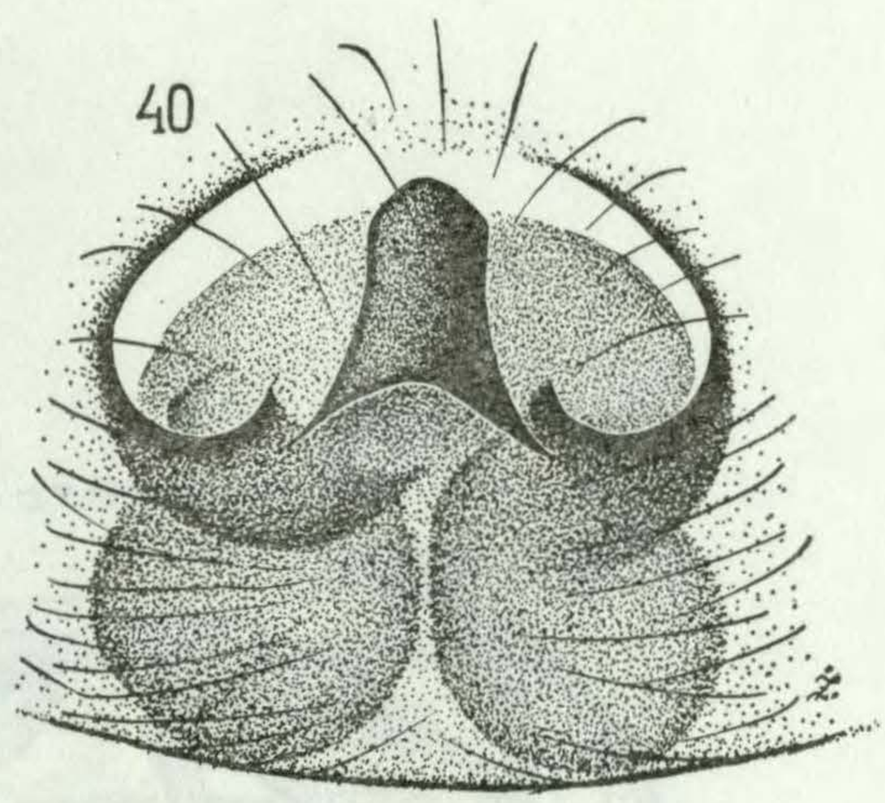


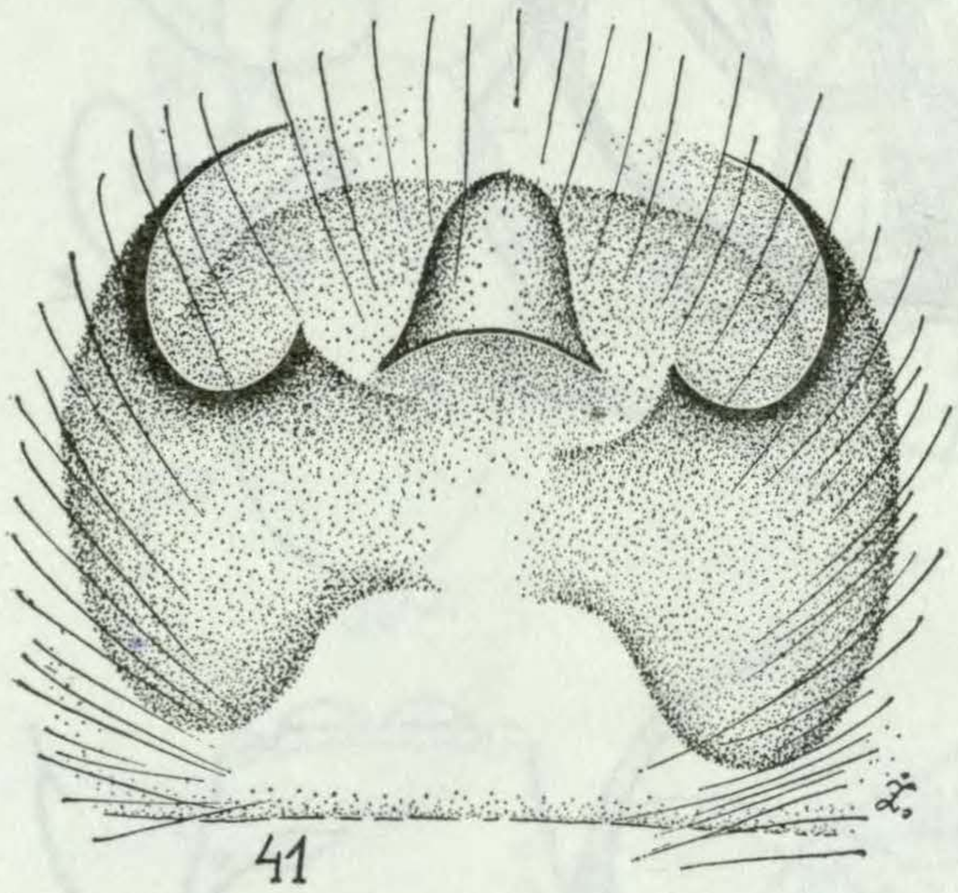


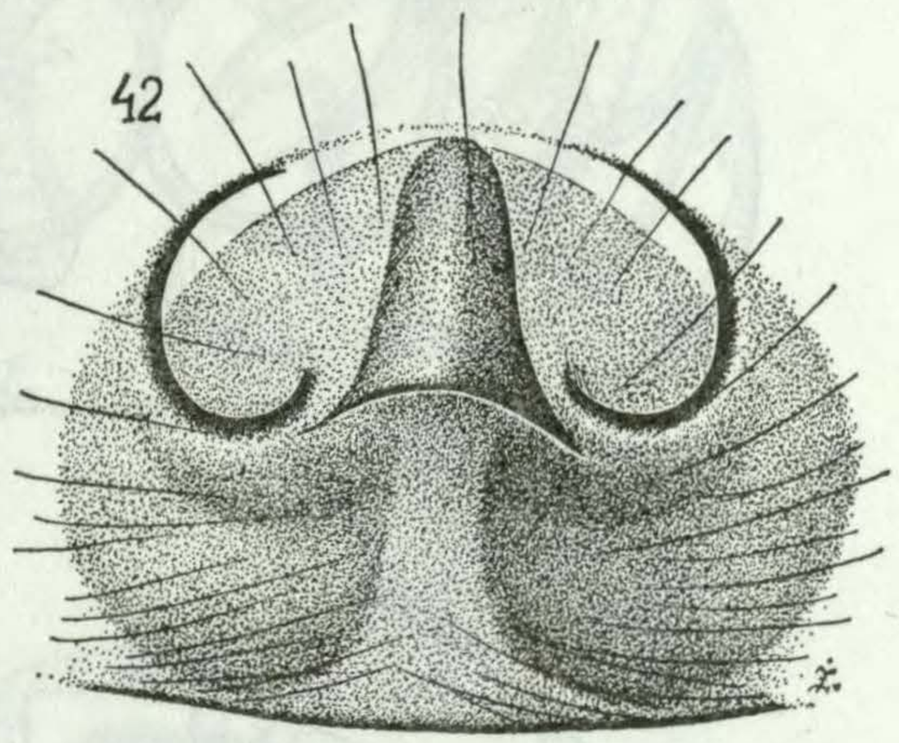


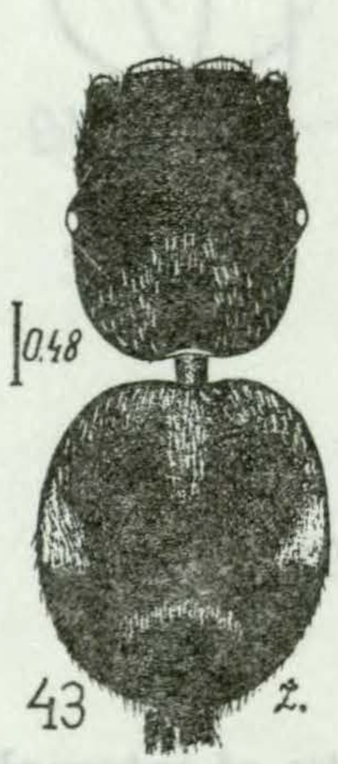
Figs. 35–38. ♂ *Harmochirus brachiatus* (THORELL, 1877): palpal organ (35–37) and leg I (38).

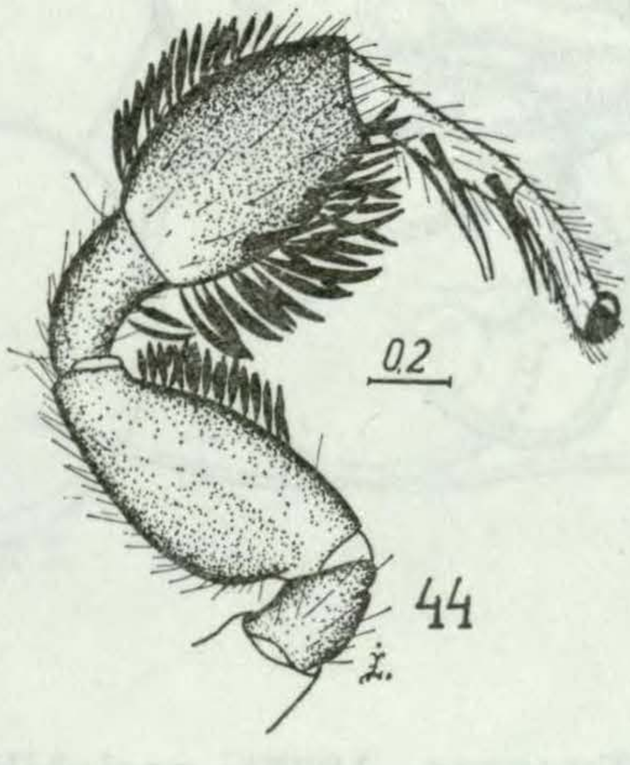


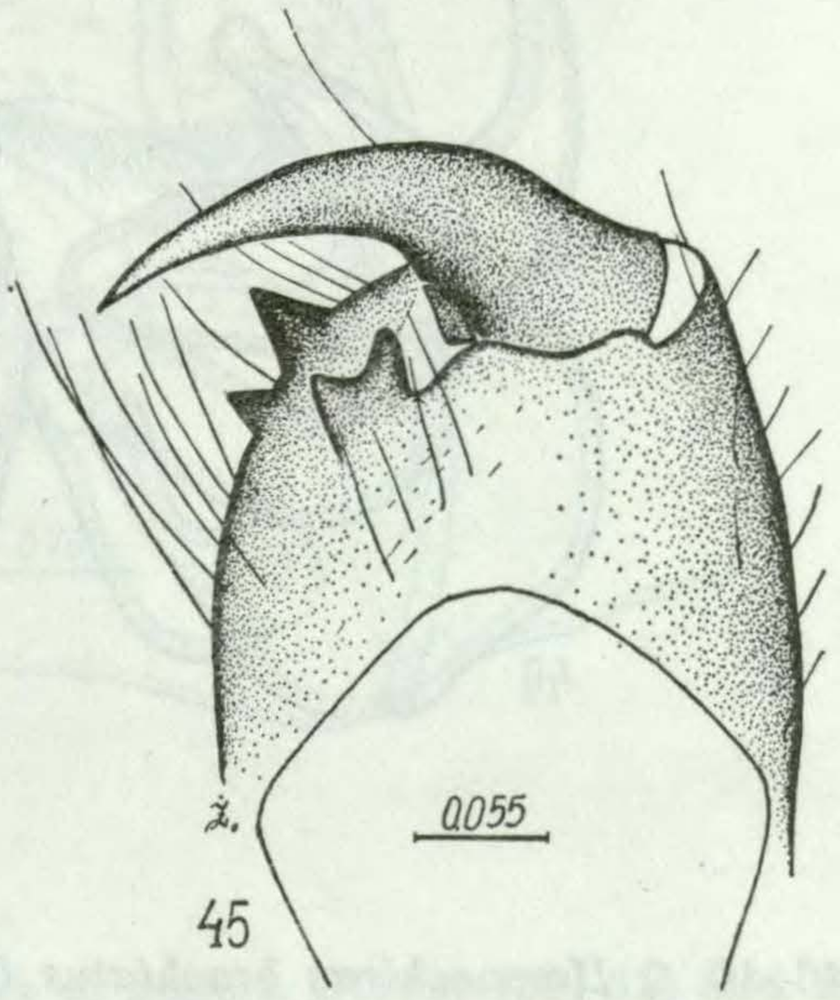




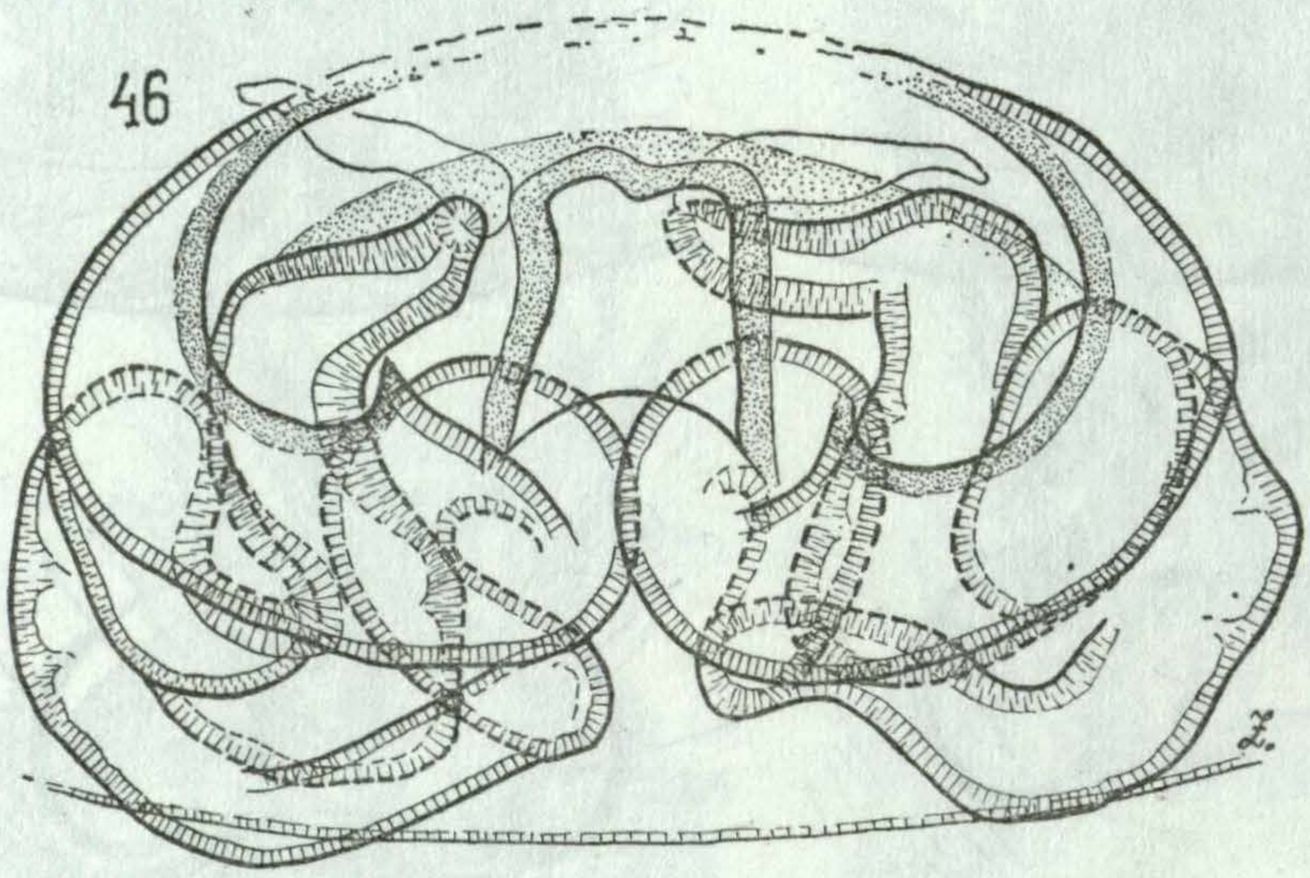


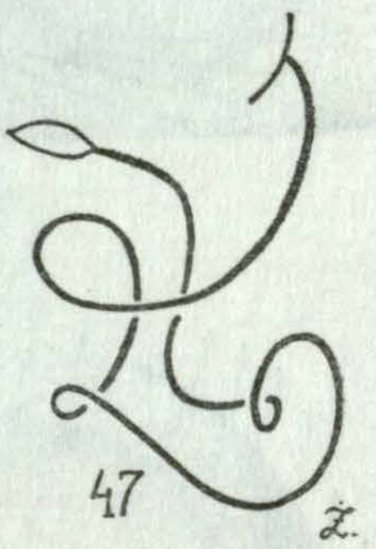


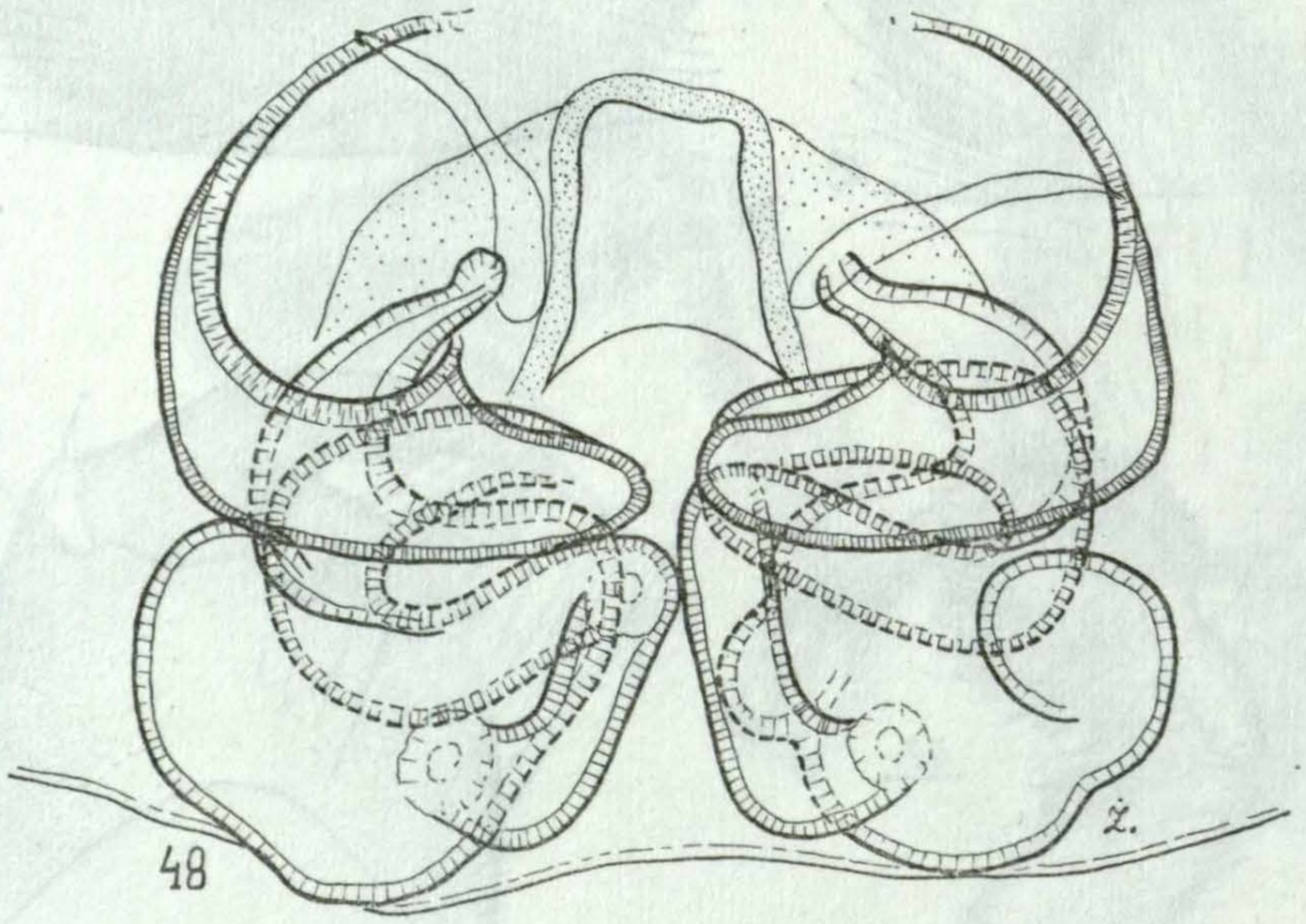


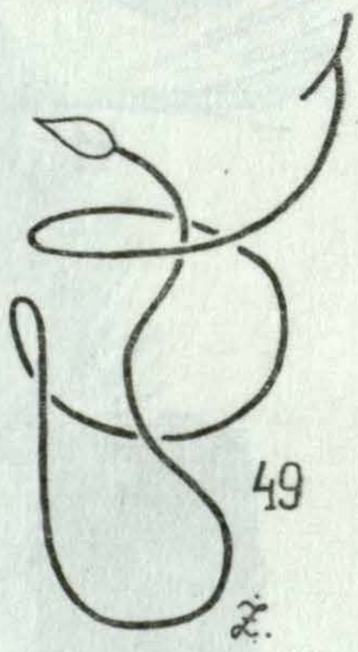


Figs. 39–45. ♀ *Harmochirus brachiatus* (THORELL, 1877): variability of epigyne (39–42), general appearance (43), leg I (44) and cheliceral dentition (45).

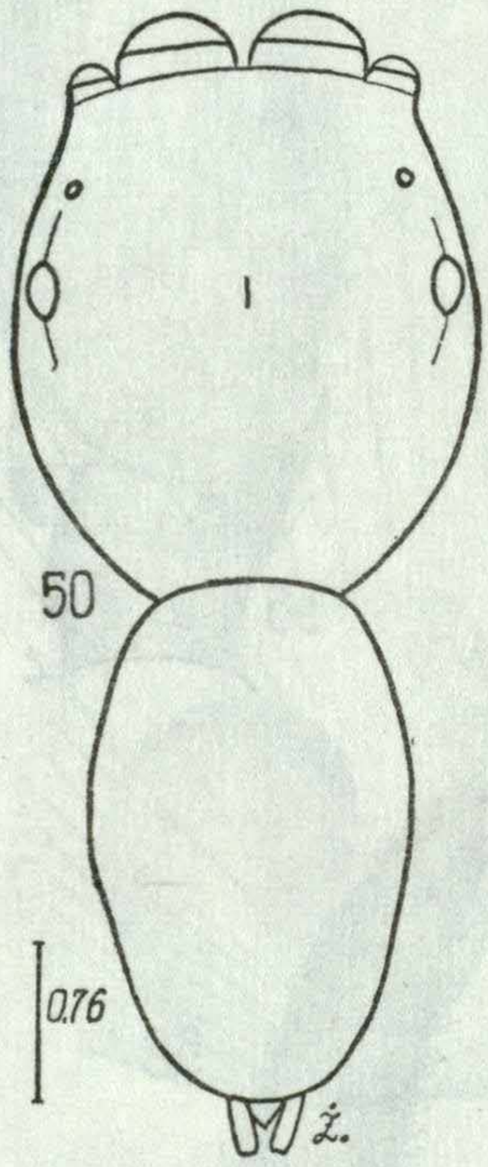


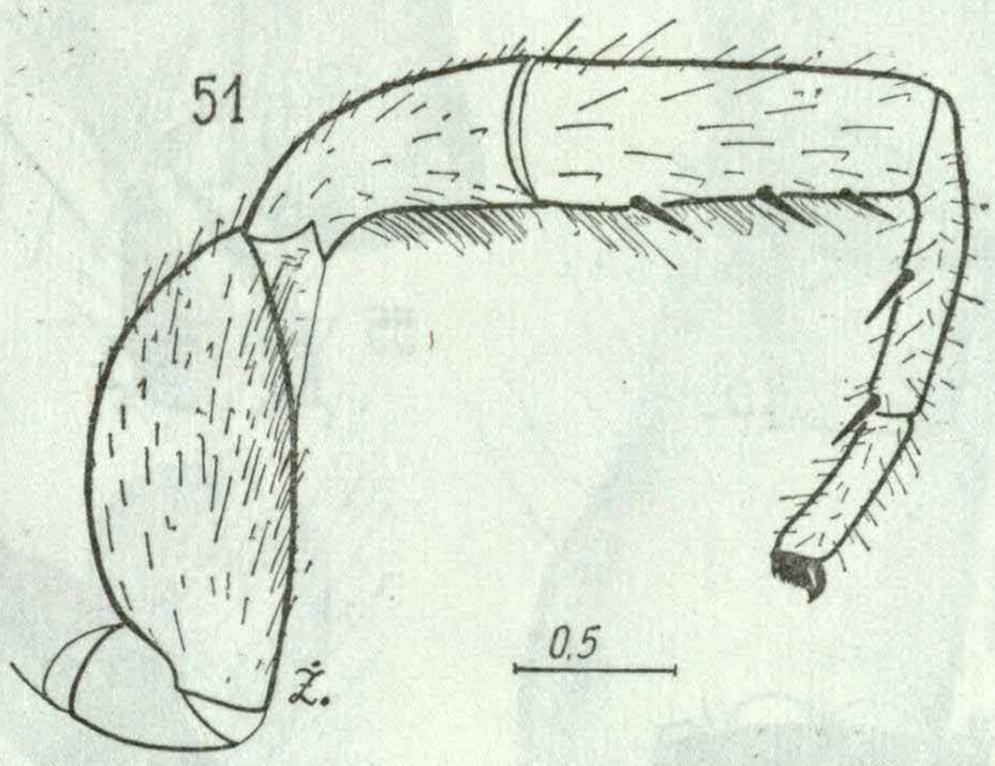


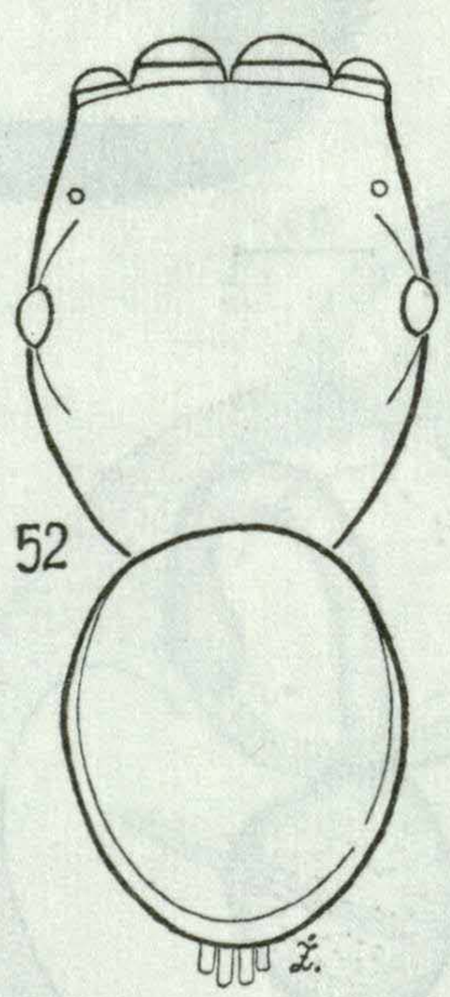


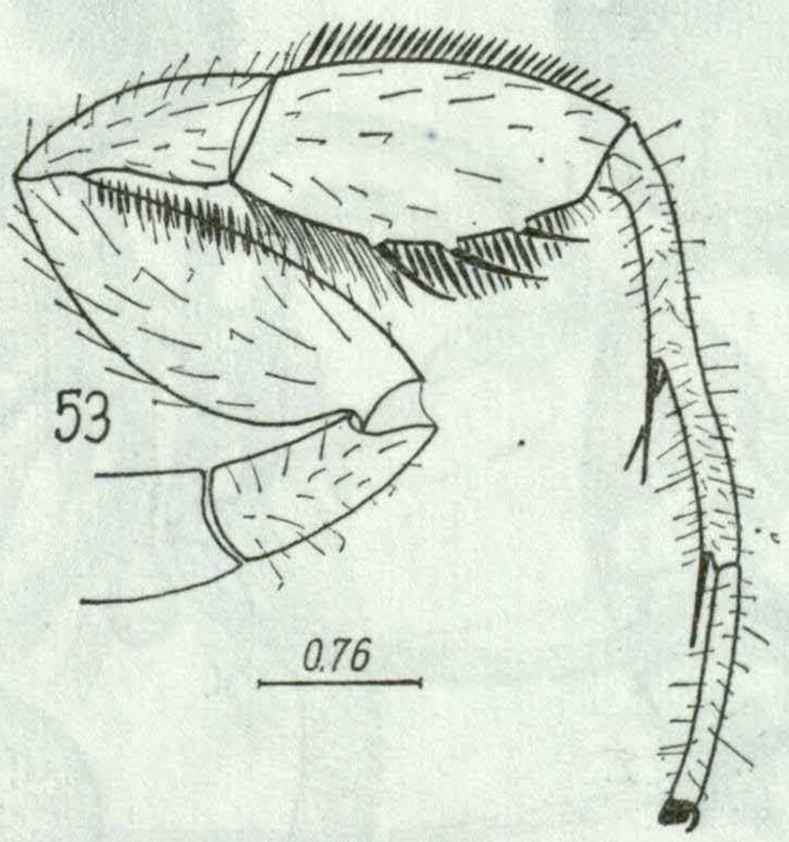


Figs. 46–49. ♀ *Harmochirus brachiatus* (THORELL, 1877): variability of internal structures of epigyne (46, 48) and its diagrammatic course (47,49).

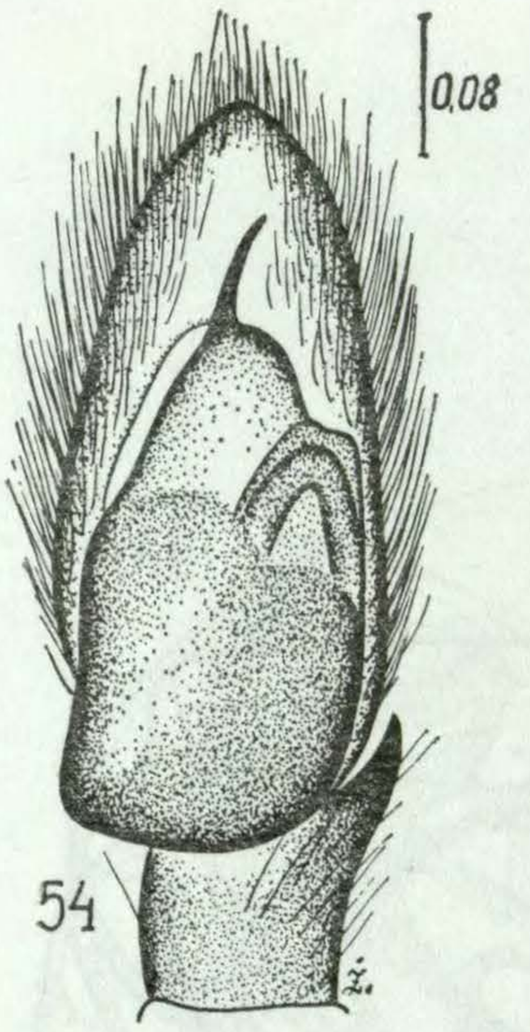


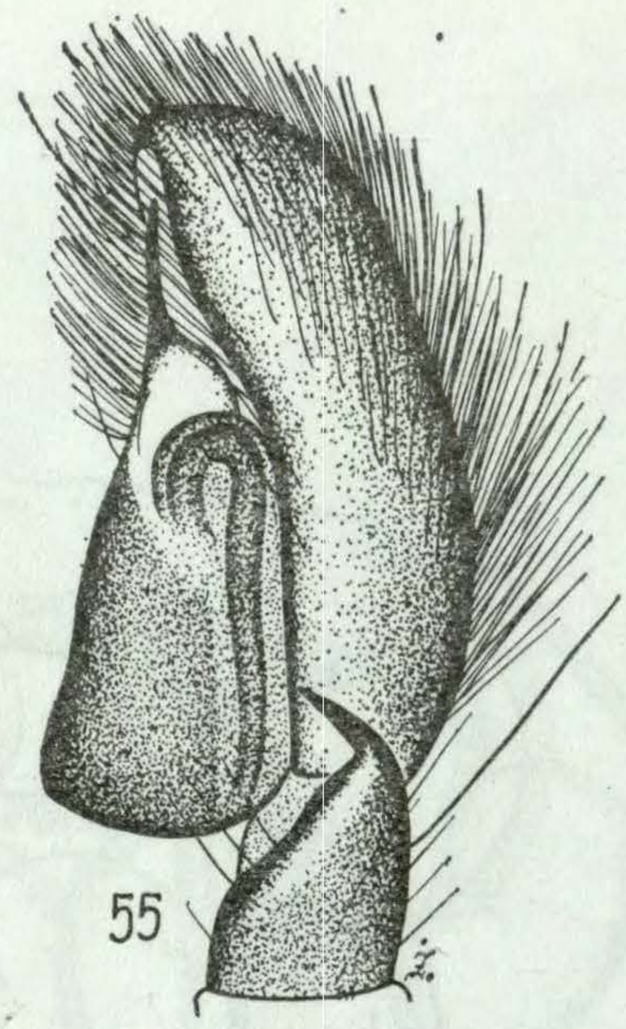


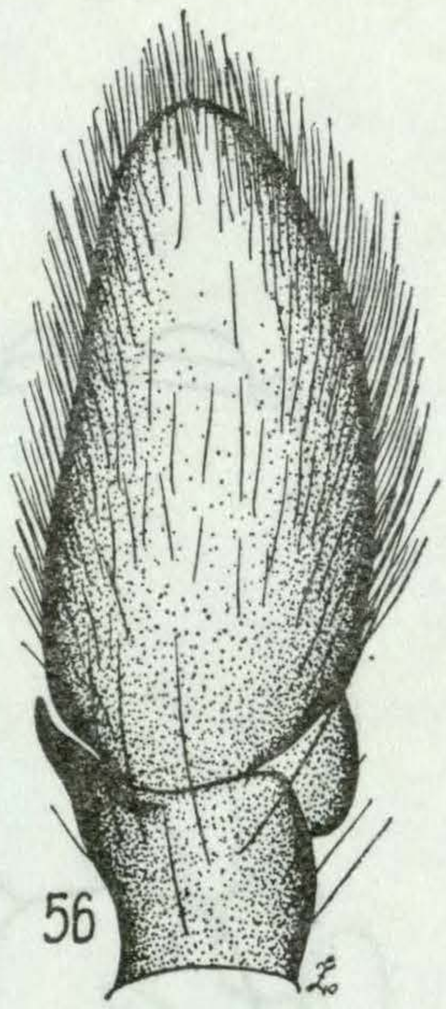


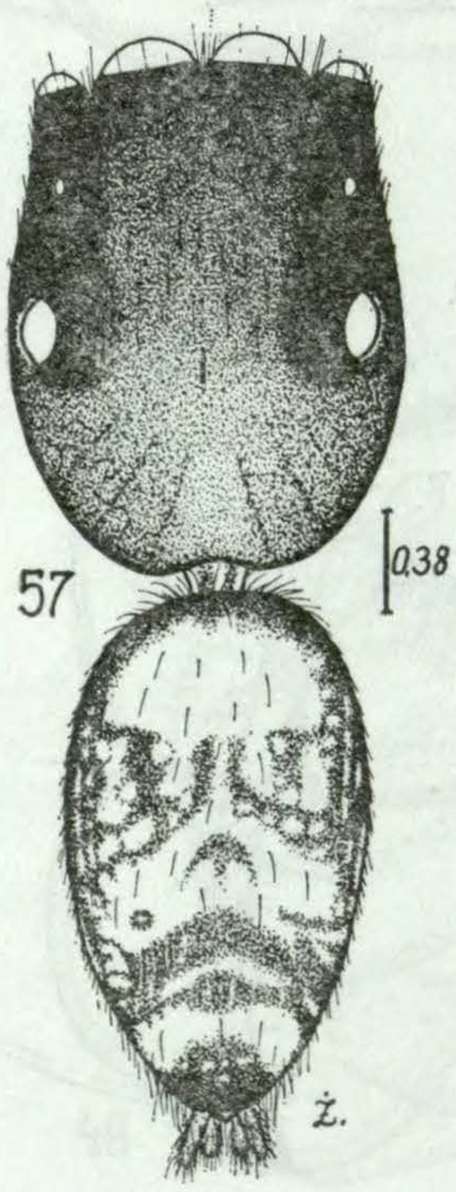


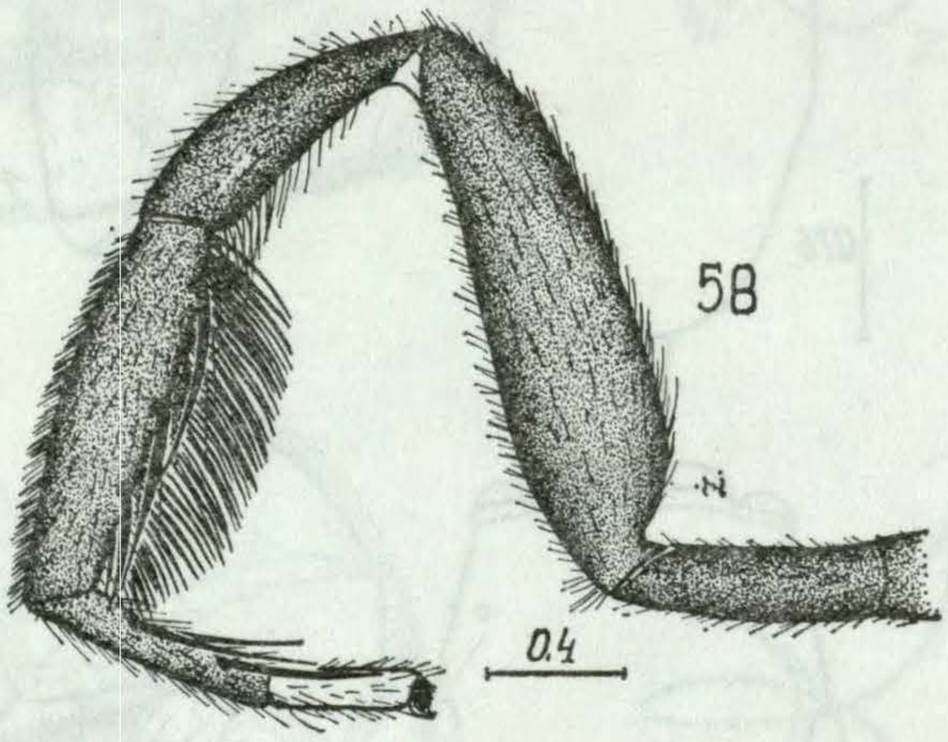
Figs. 50–53. General appearance and legs I in males of genera *Bianor* (50, 51) and *Harmochirus* (52, 53).

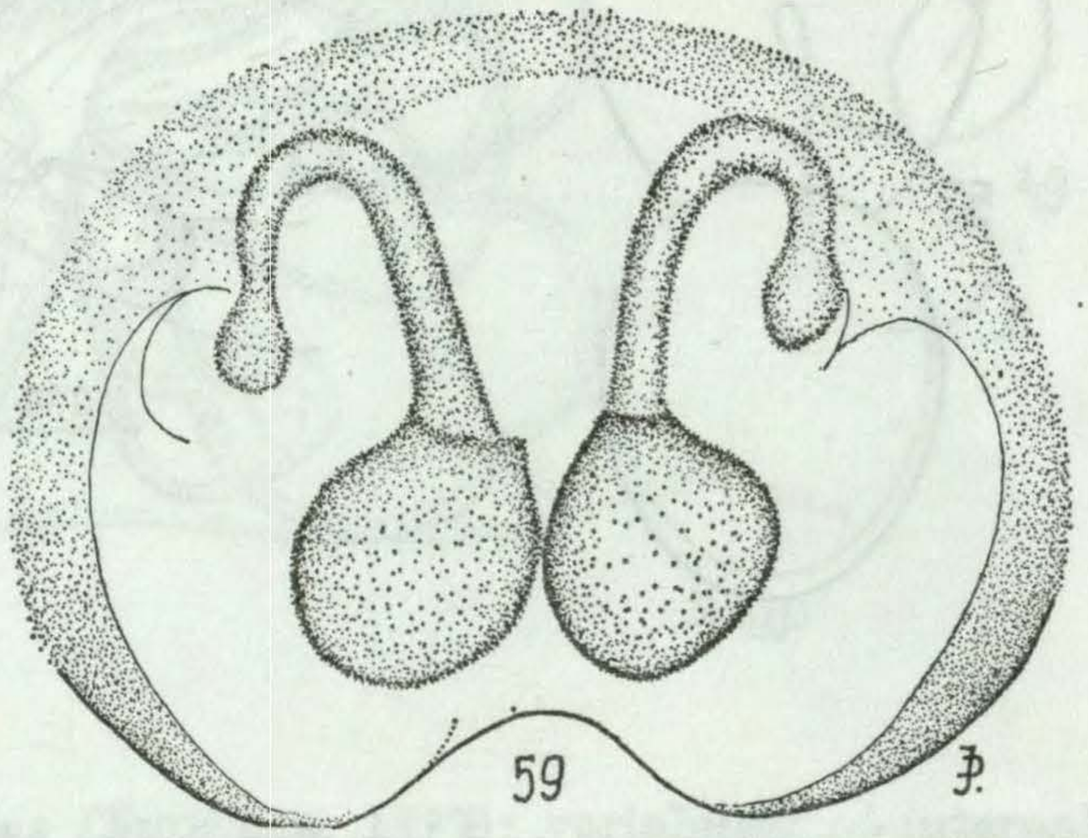




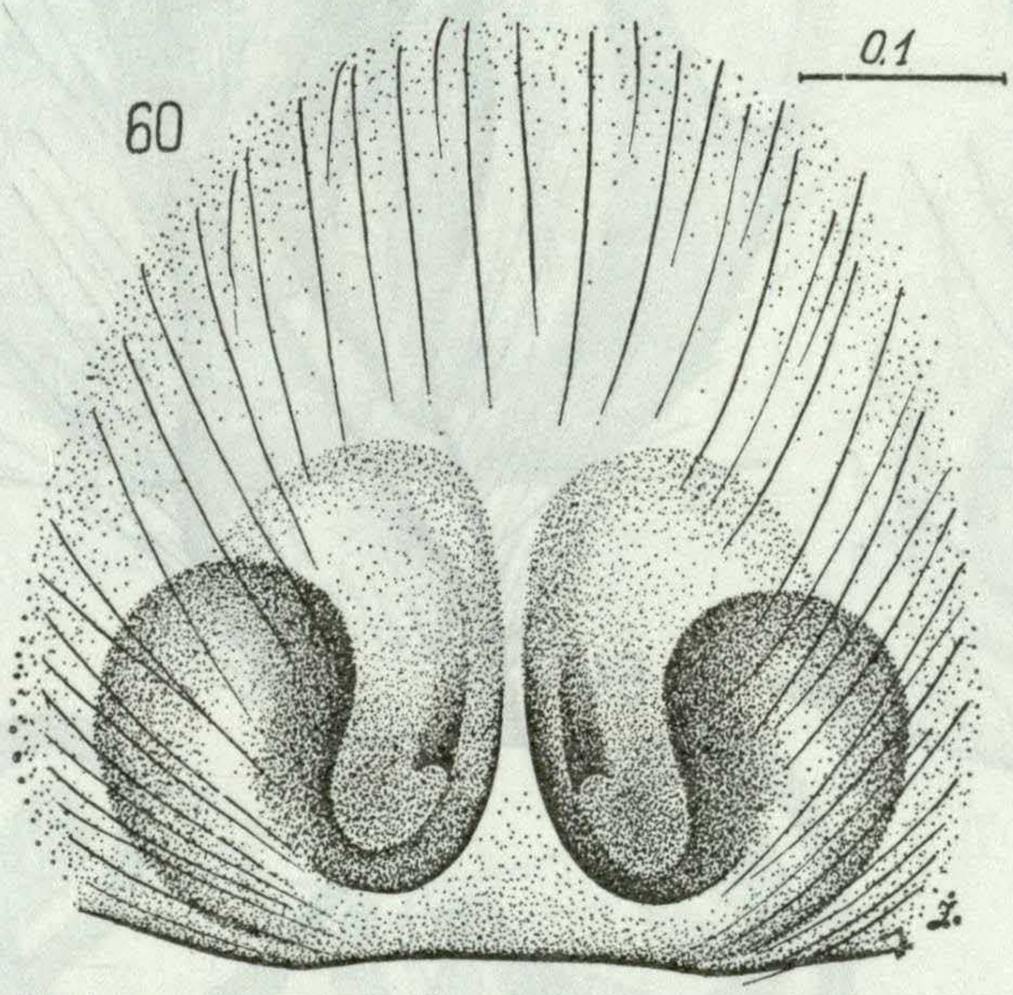


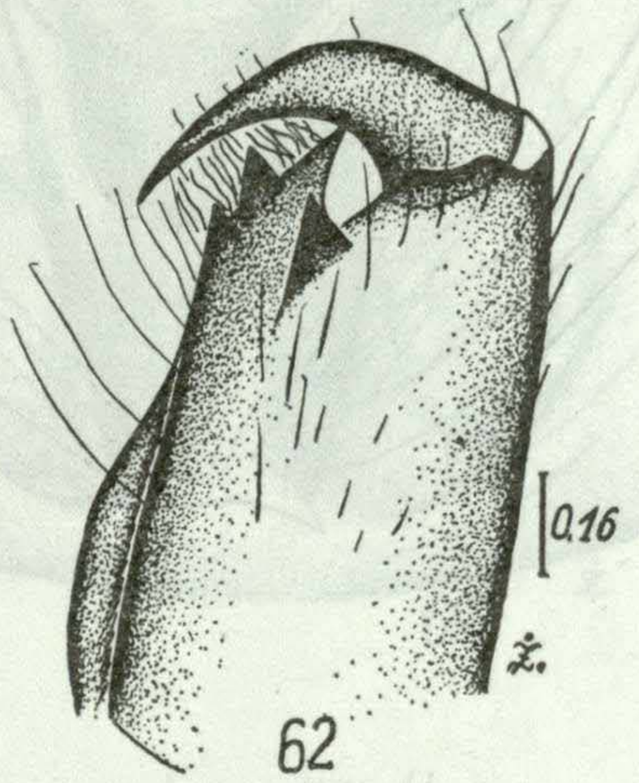


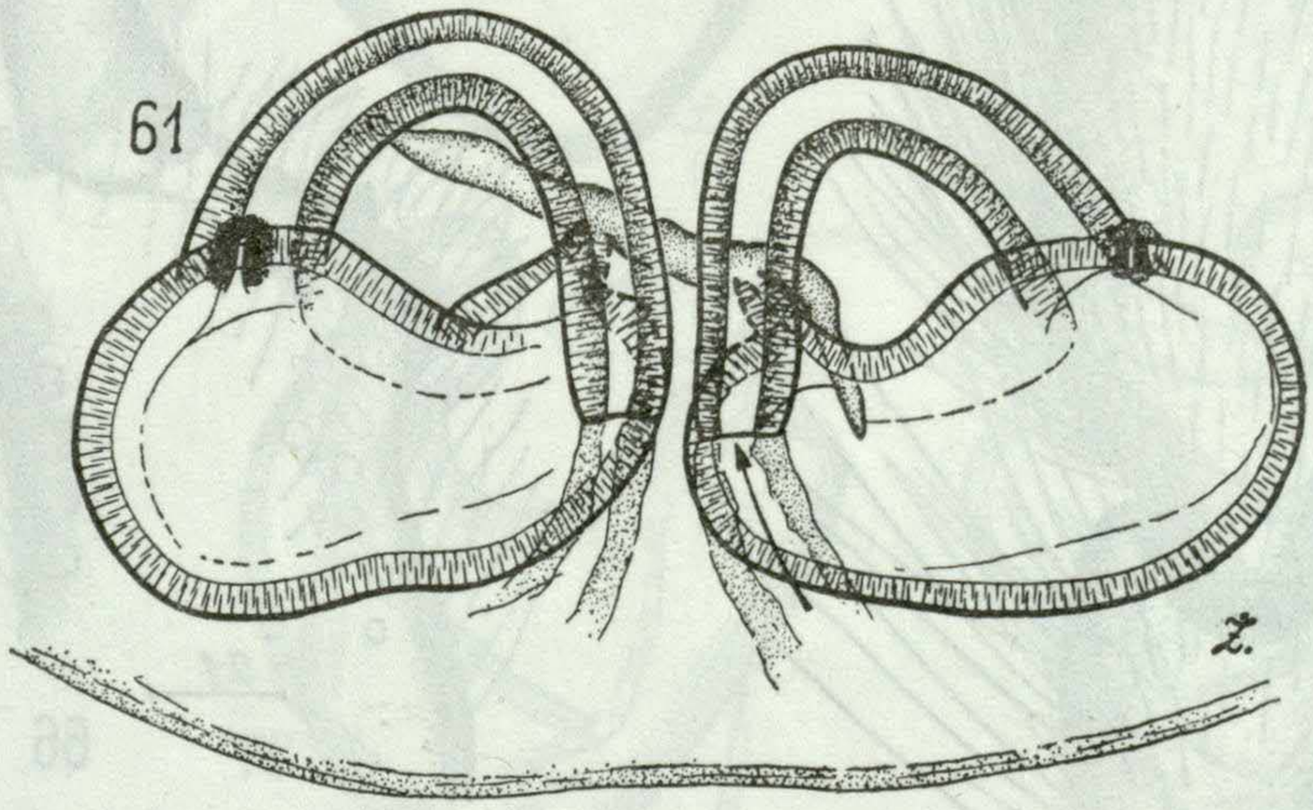




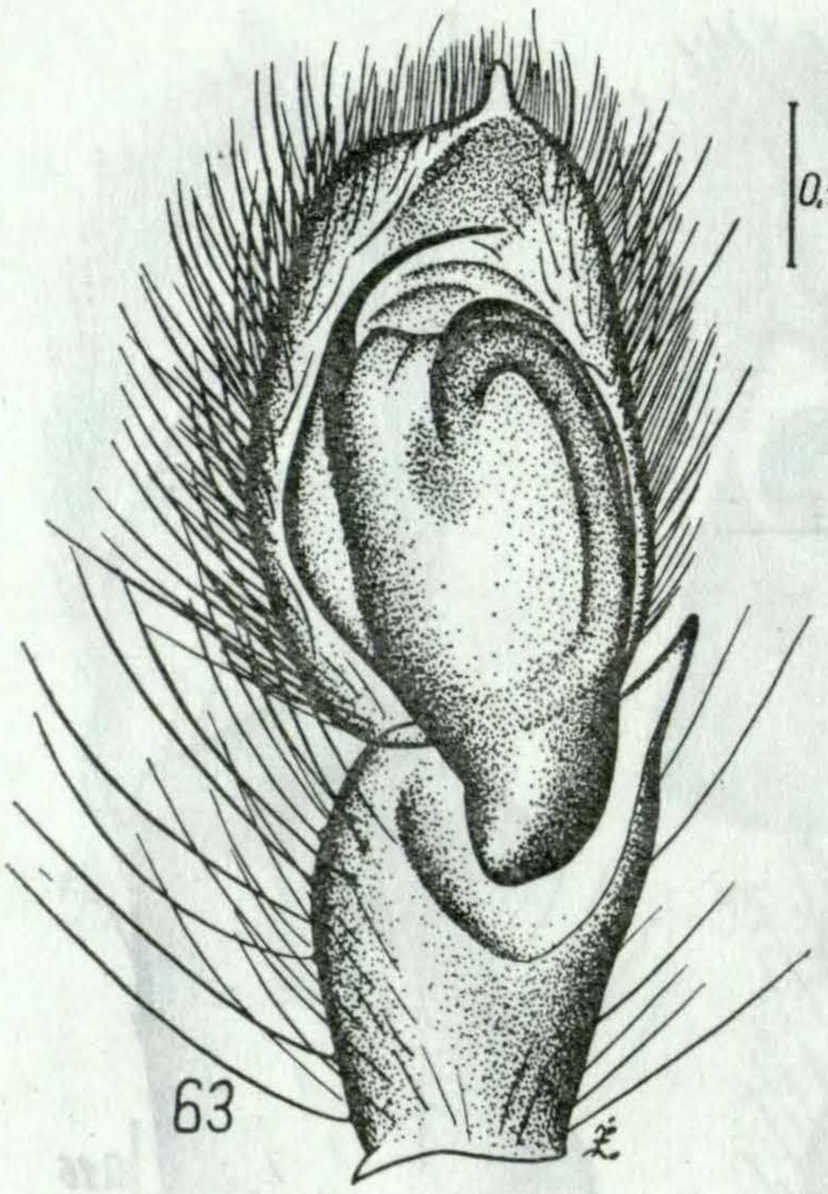
Figs. 54–59. ♂, ♀ *Bristowia heterospinosa* Reimoser, 1934: palpal organ (54–56), general appearance (57) and leg I (58) in male; epigyne (59). 59 – drawn by J. Prószyński.

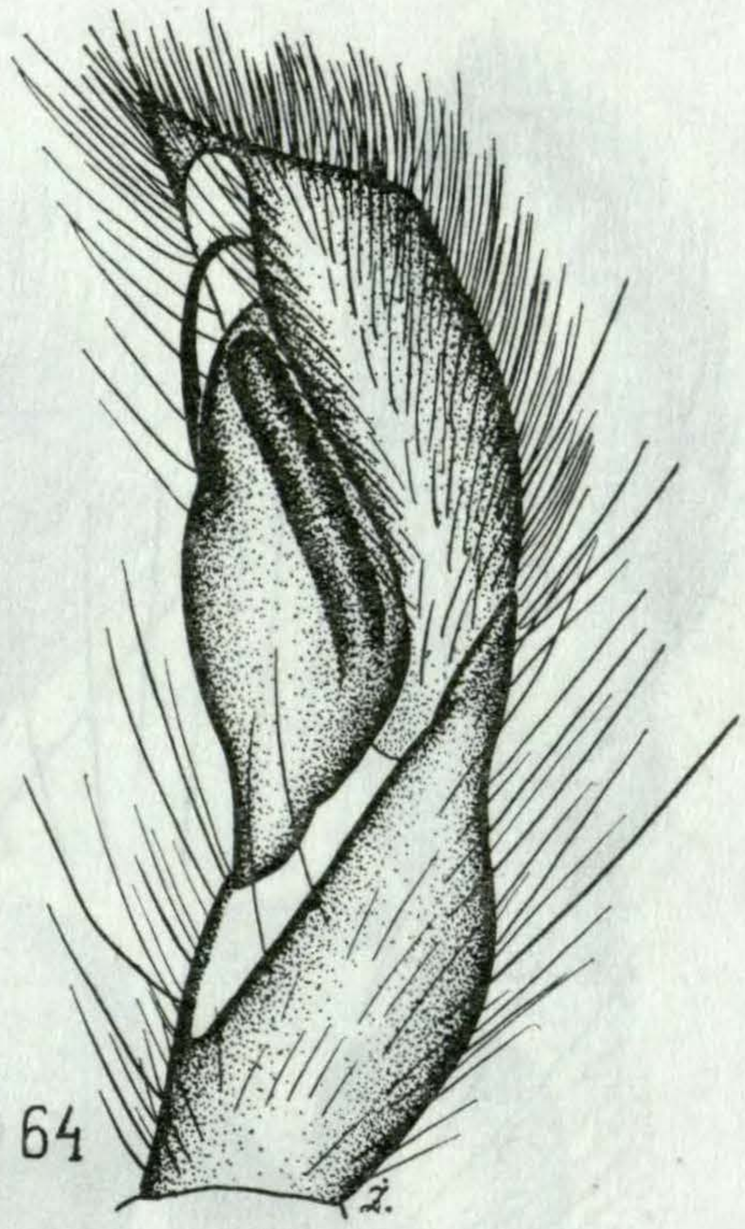


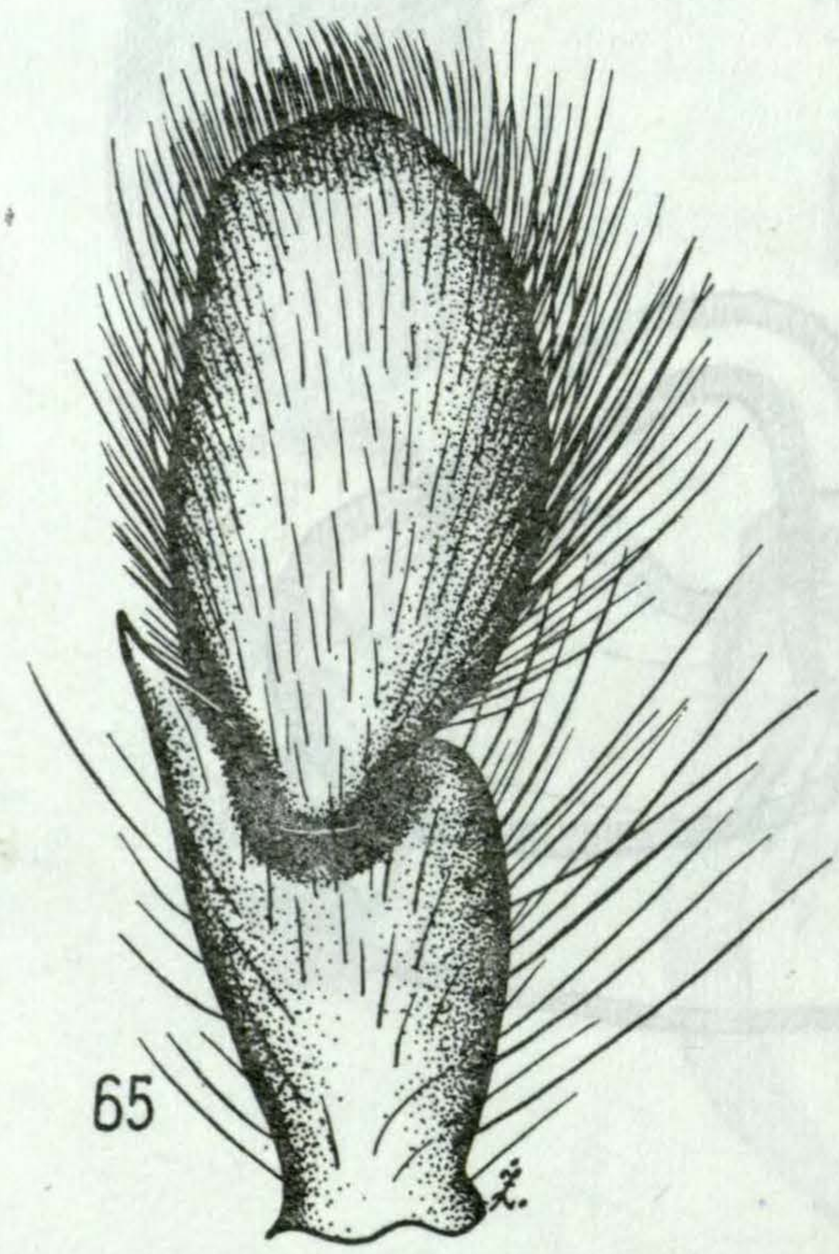


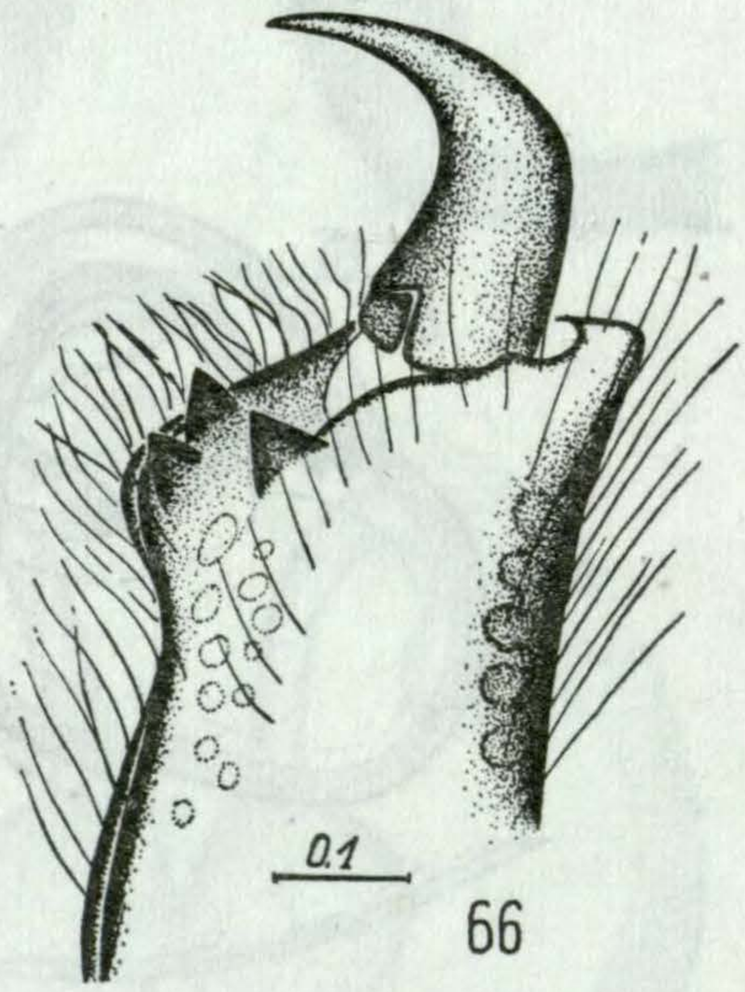


Figs. 60–62. ♀ *Carrhotus coronatus* (SIMON, 1885): epigyne (60), its internal structures (61) and cheliceral dentition (62).

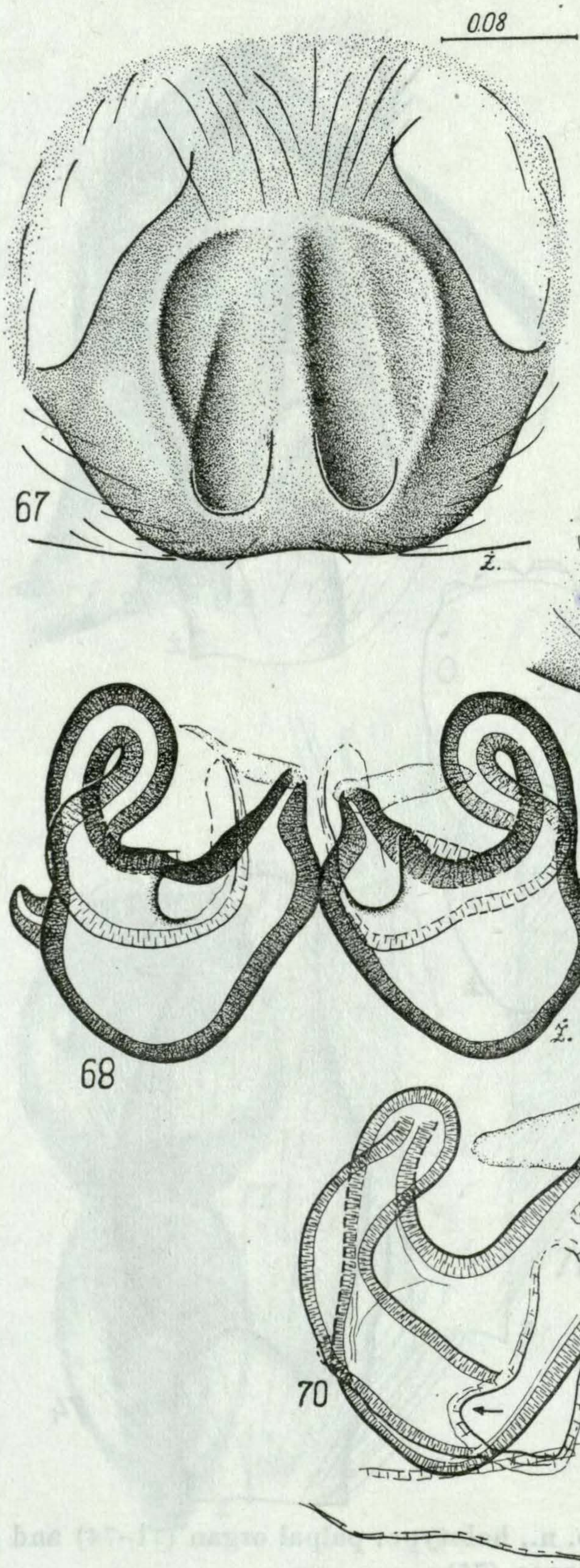


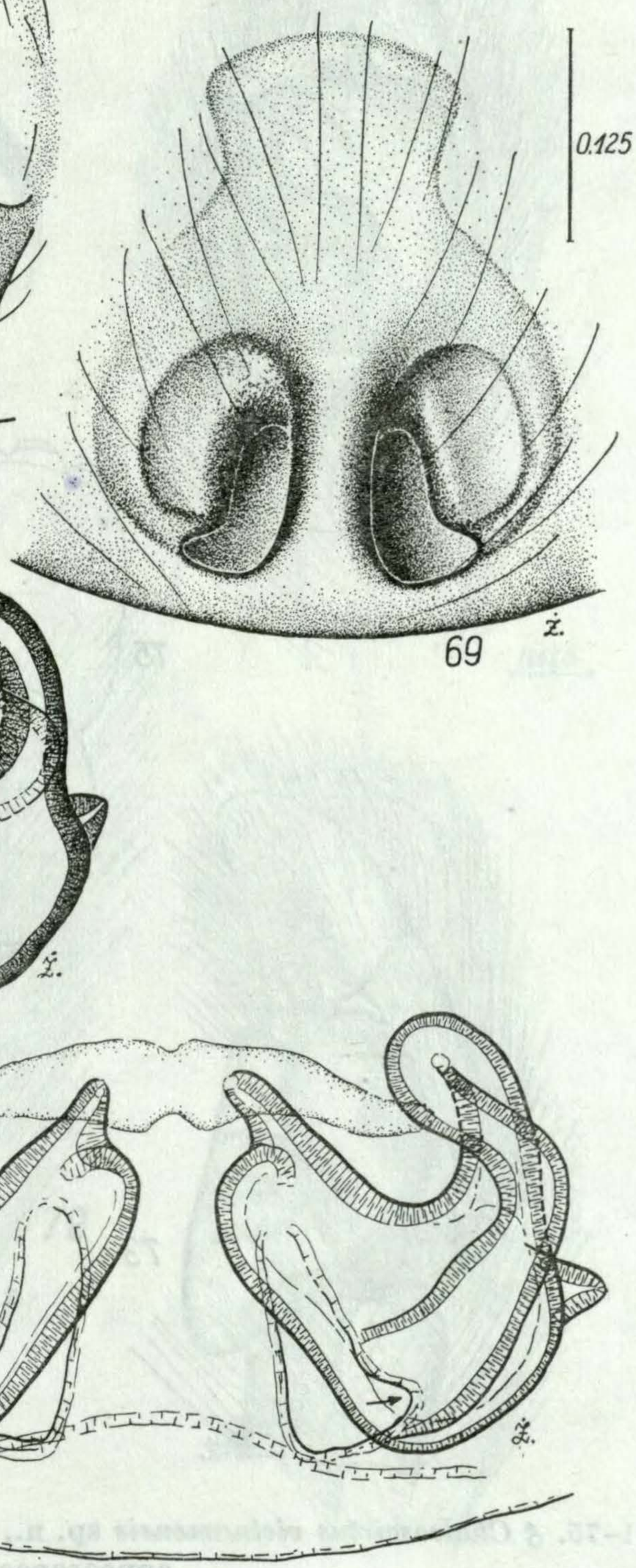




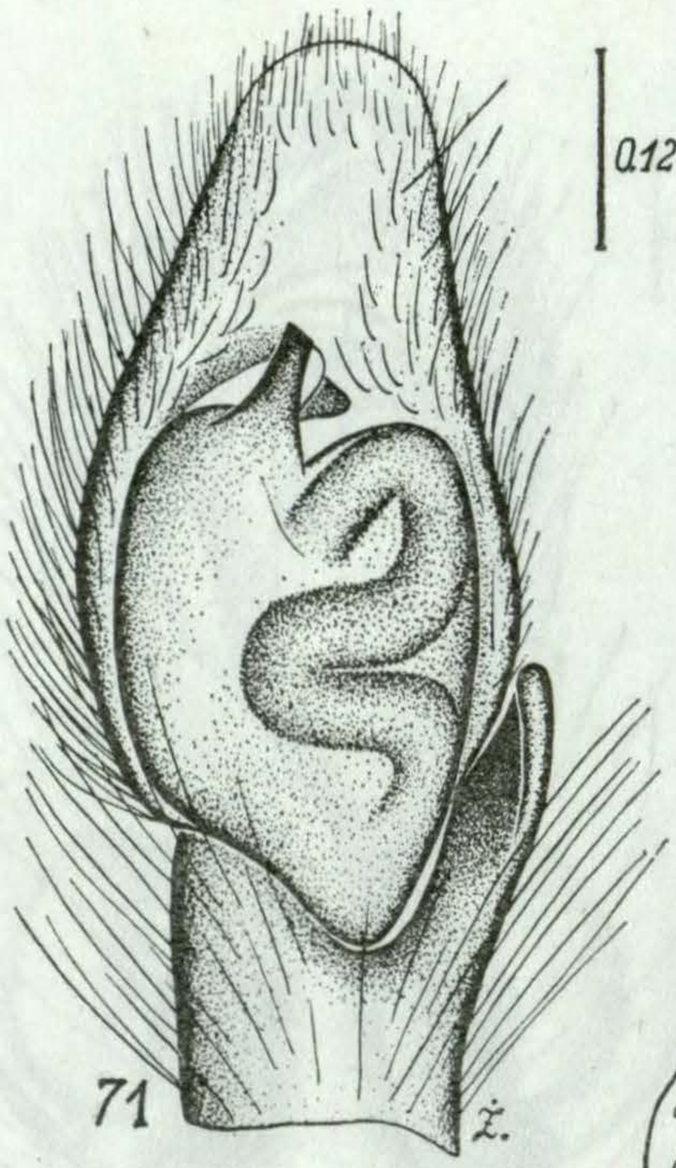


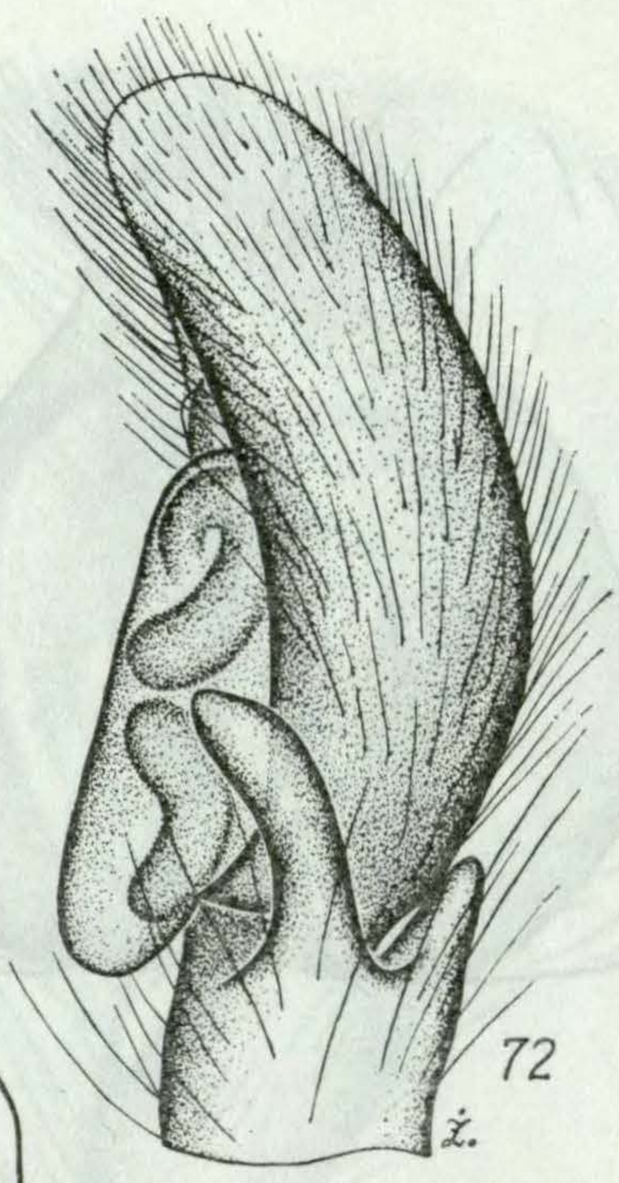
Figs. 63–66. ♂ *Carrhotus sannio* (THORELL, 1877): palpal organ (63–65), cheliceral dentition (66).

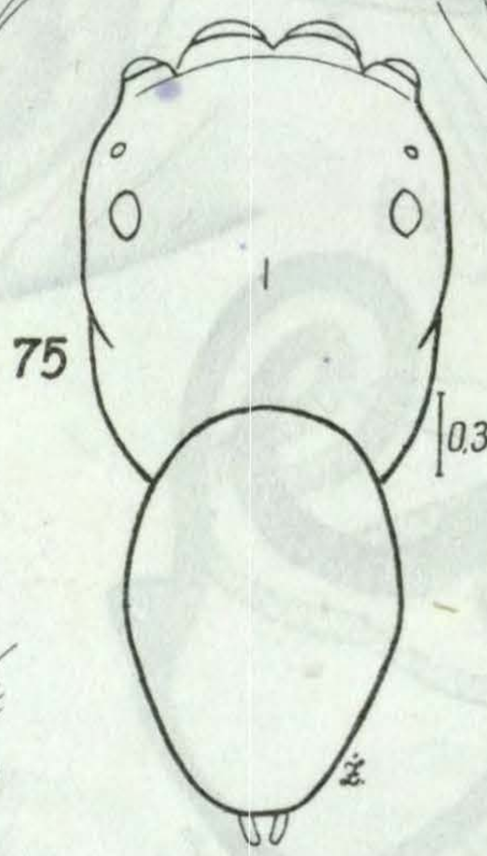


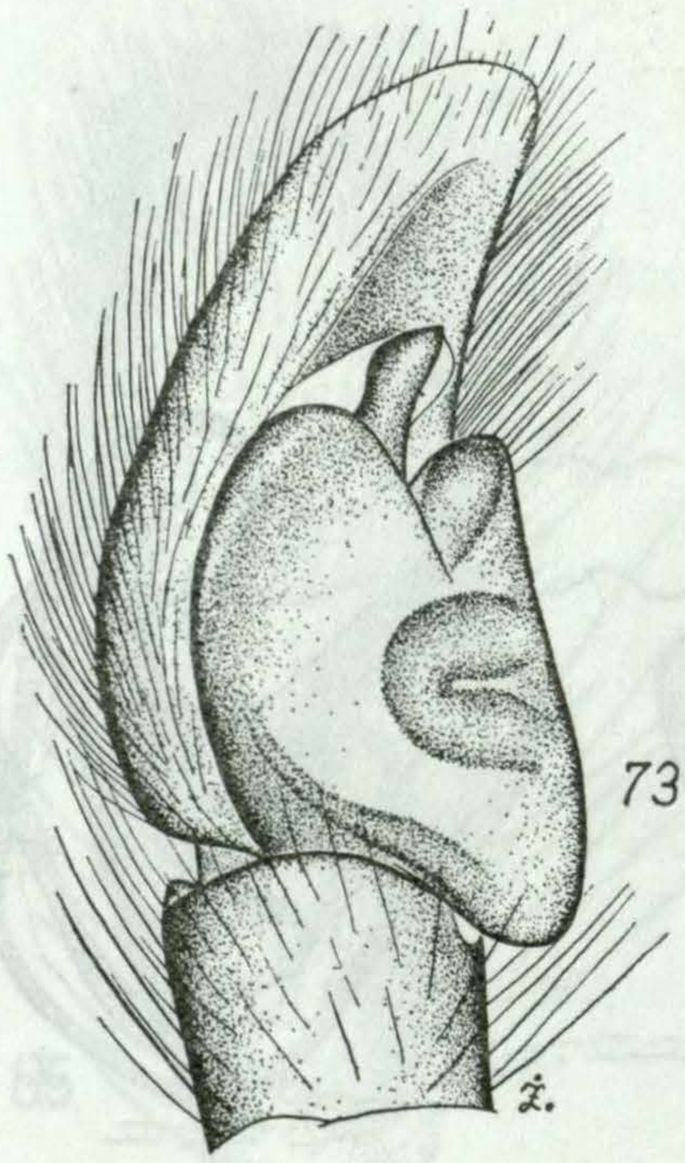


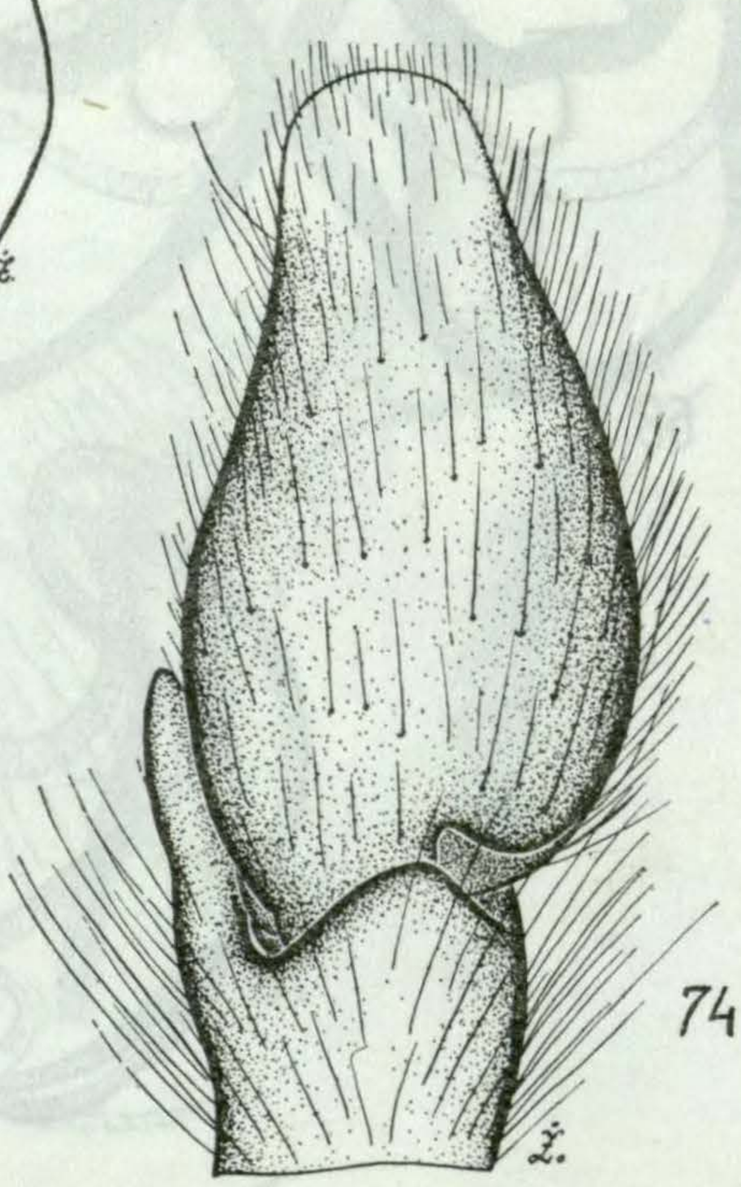
Figs. 67–70. ♀ *Carrhotus sannio* (THORELL, 1877): variability of epigyne (67, 69) and its internal structures (68, 70).



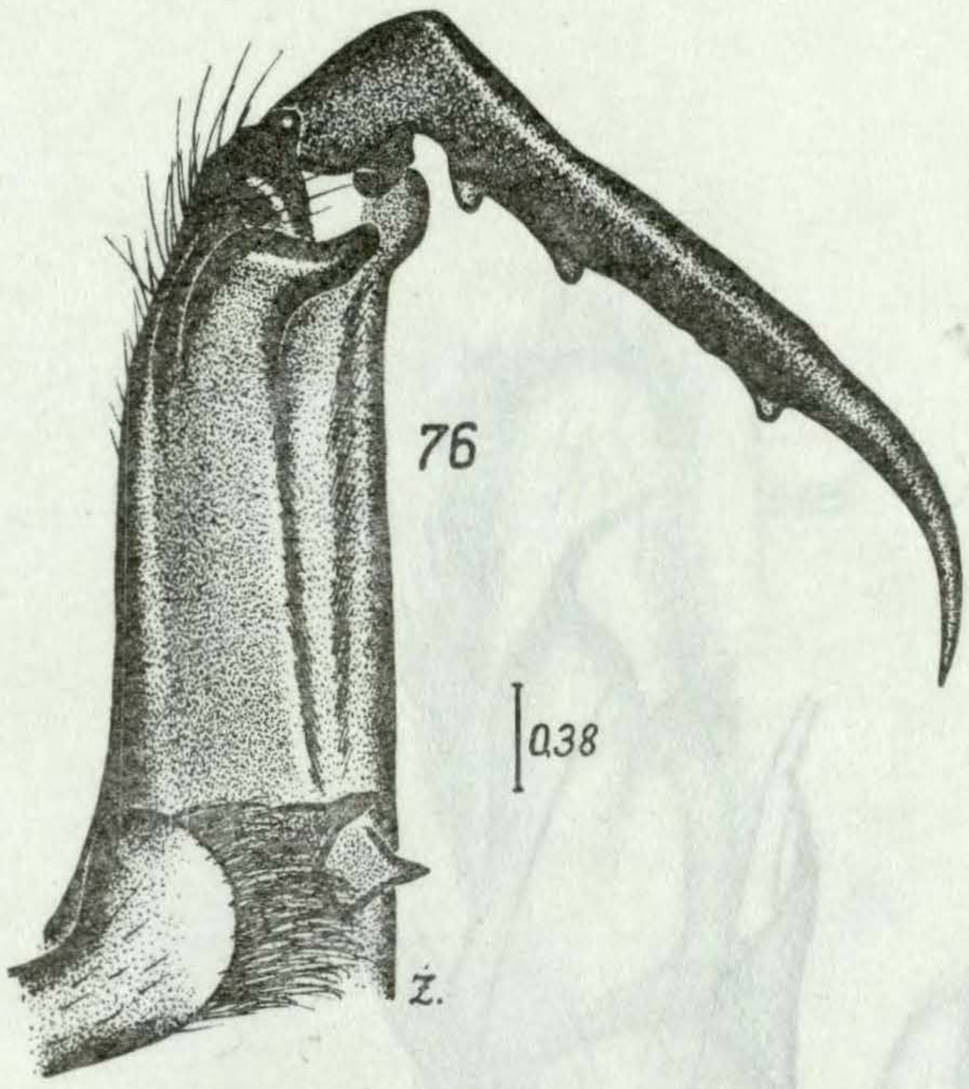


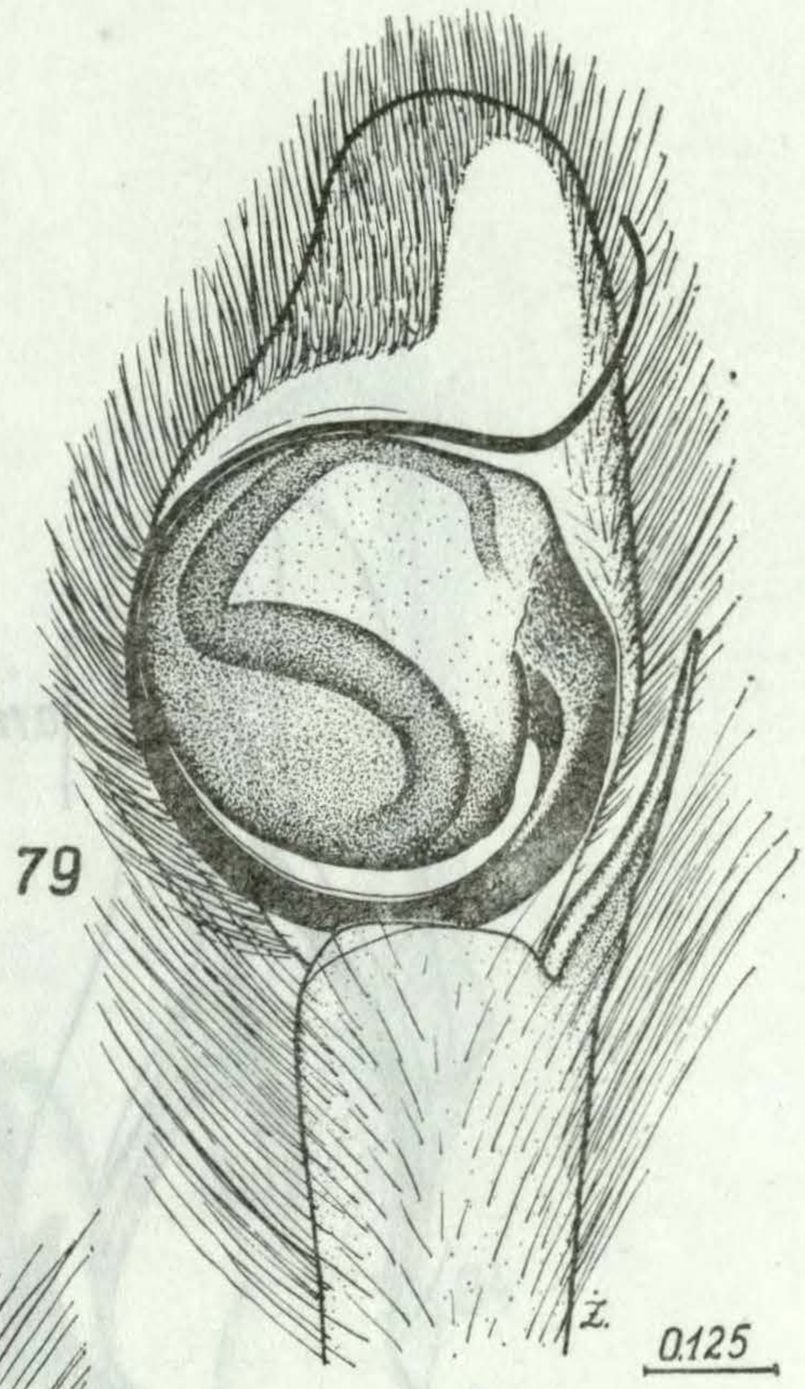


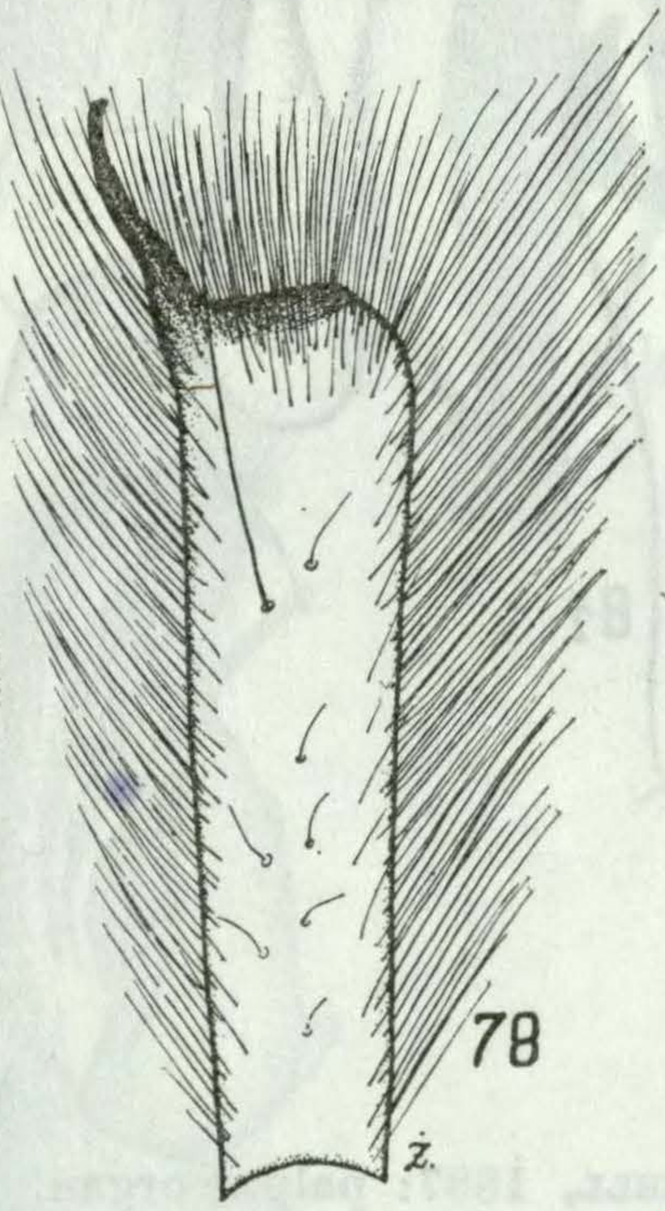


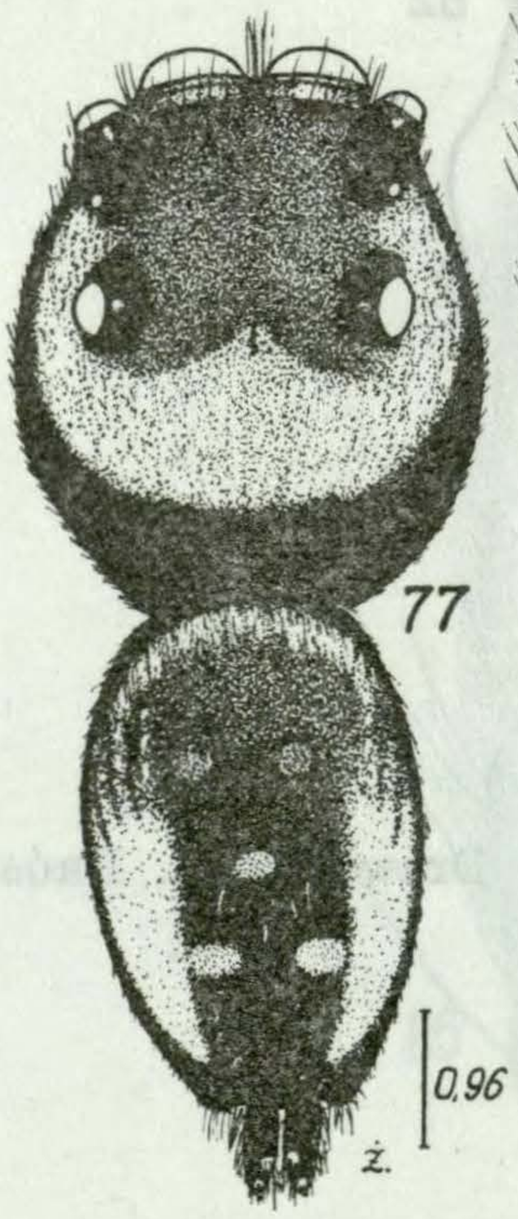


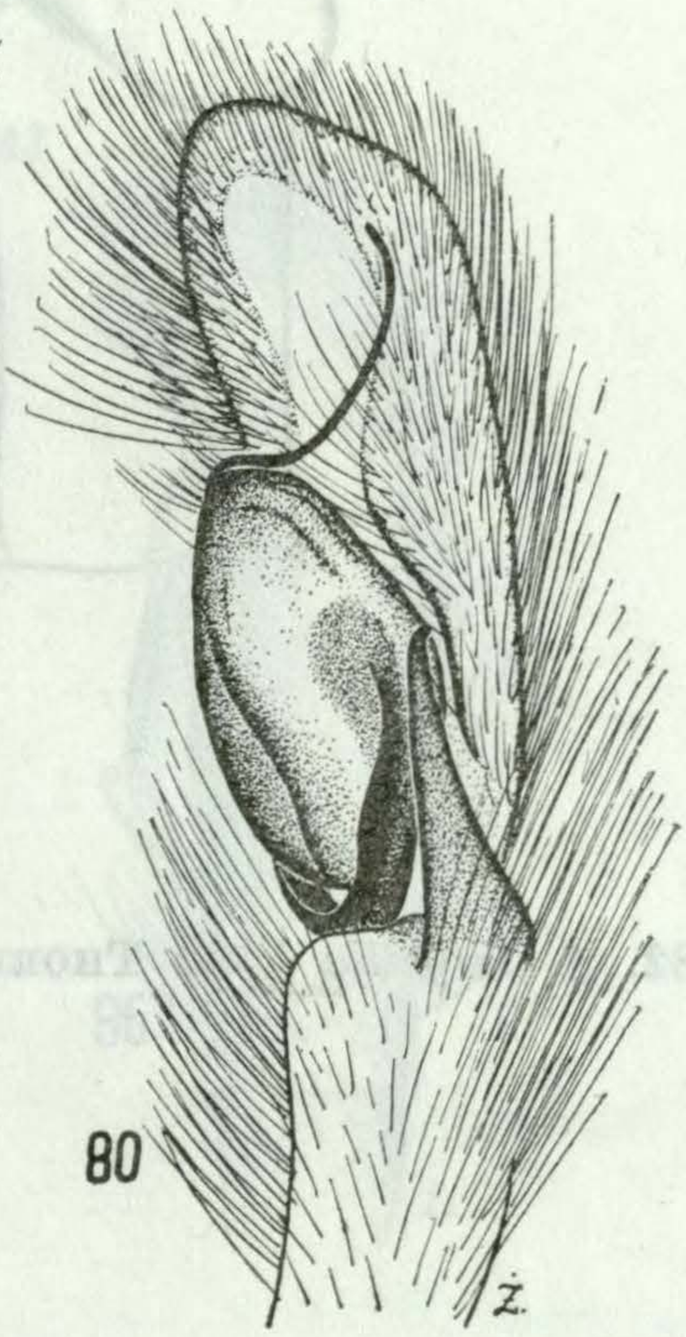
Figs. 71–75. ♂ *Chalcoscirtus vietnamensis* **sp. n., holotype: palpal organ (71–74) and general appearance (75).**



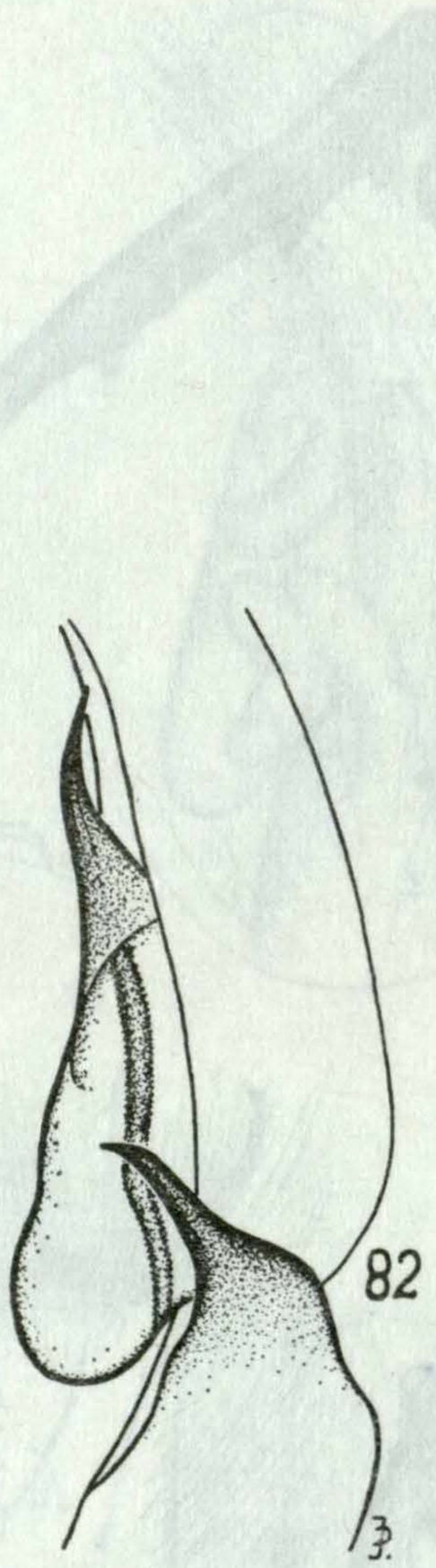




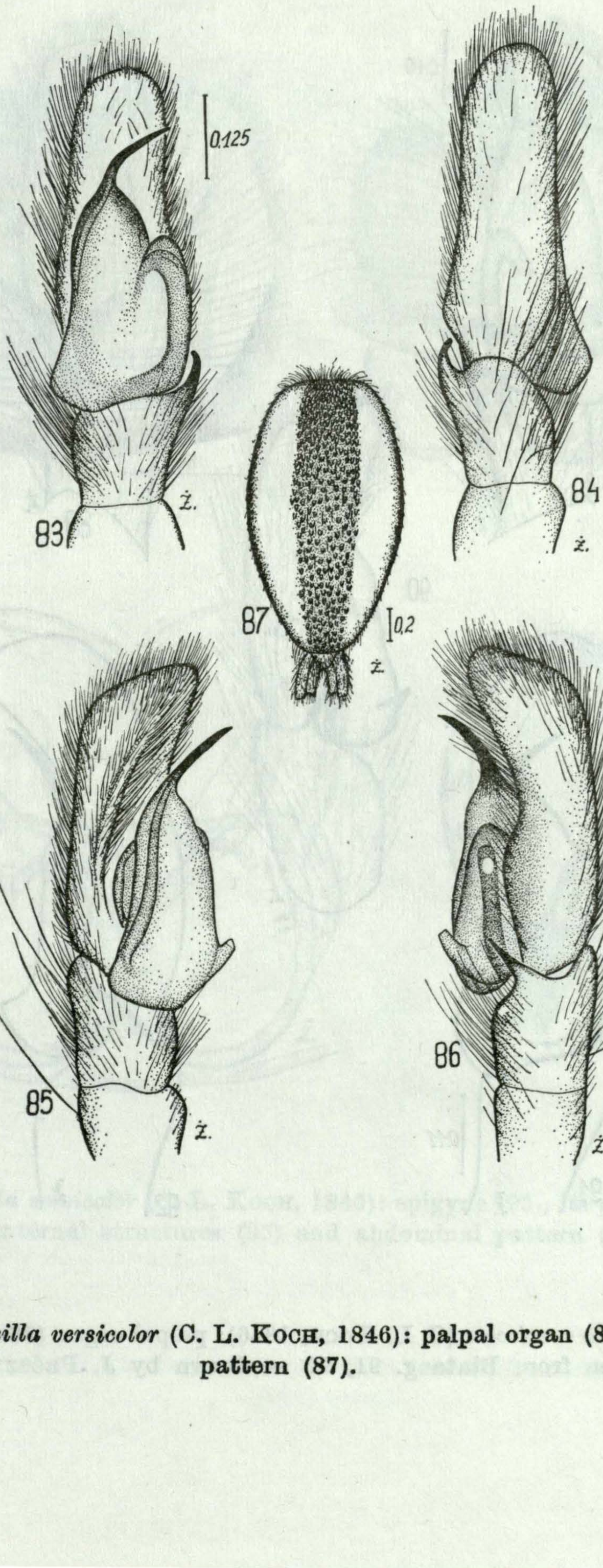




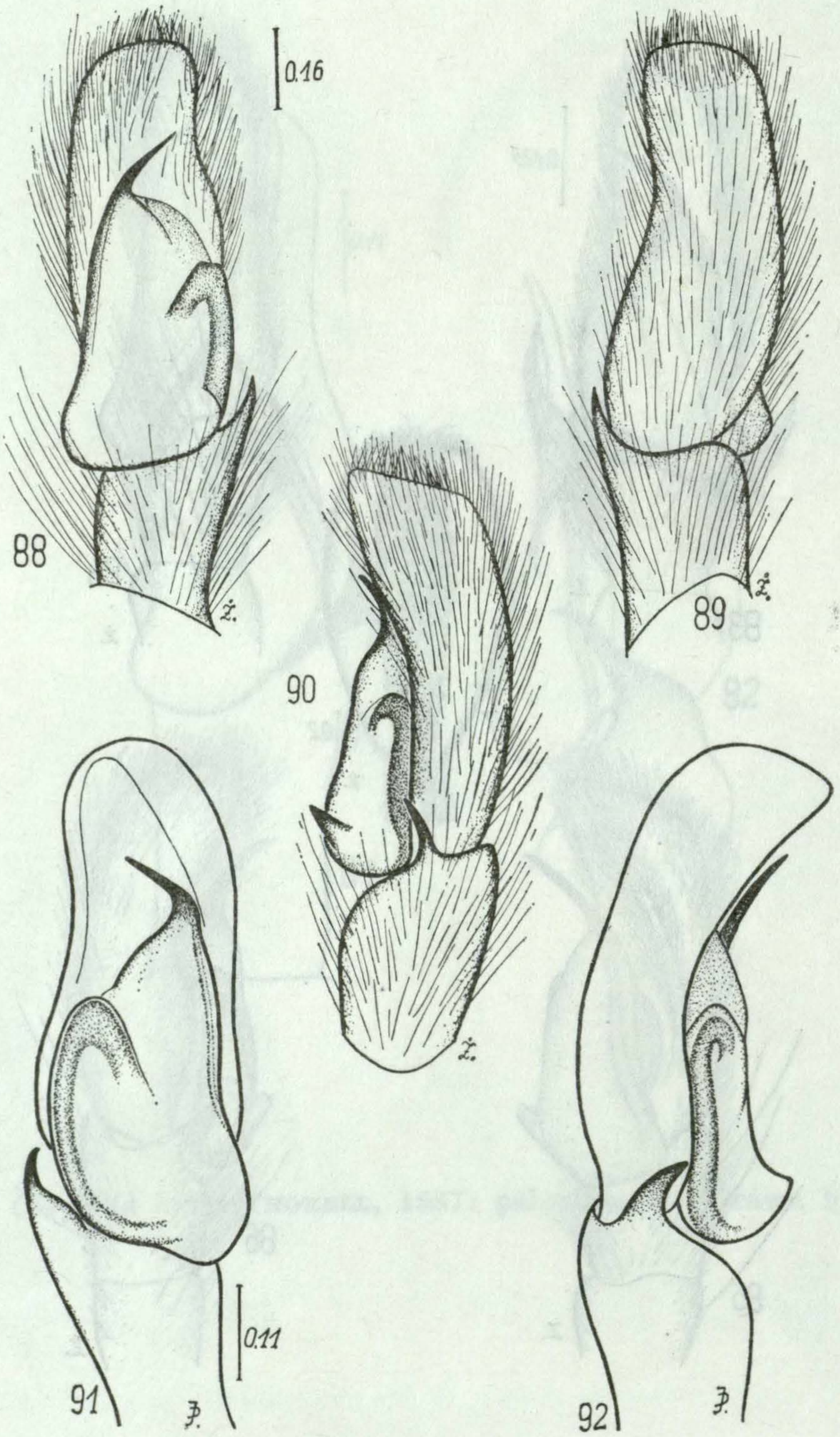
Figs. 76–80. ♂ *Cheliceroides longipalpis* **sp. n., holotype: cheliceral dentition (76), general appearance (77) and palpal organ (78–80).**



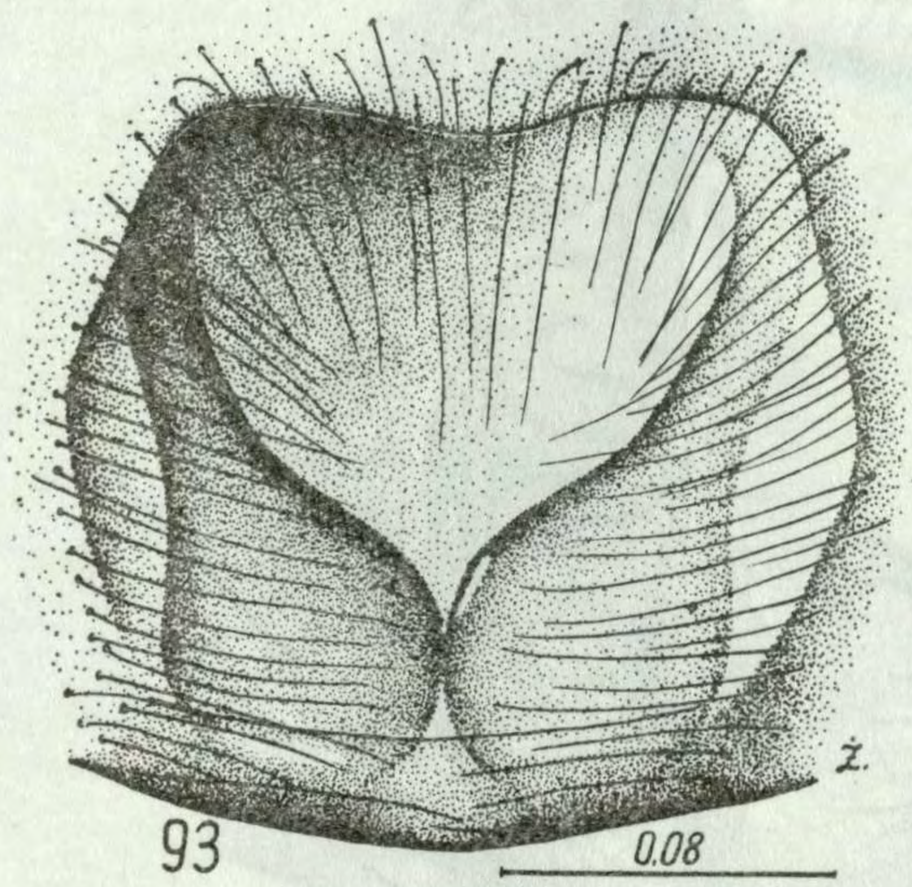
Figs. 81–82. ♂ *Chrysilla lauta* THORELL, 1887: palpal organ. Drawn by J. PRÓSZYŃSKI.

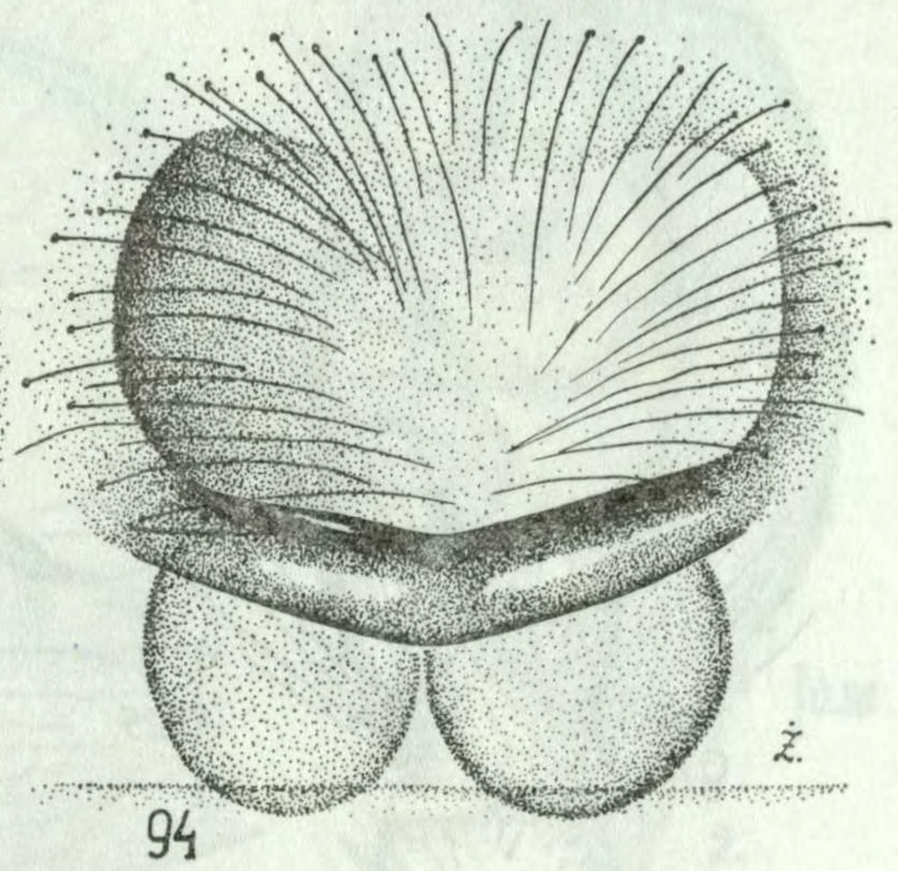


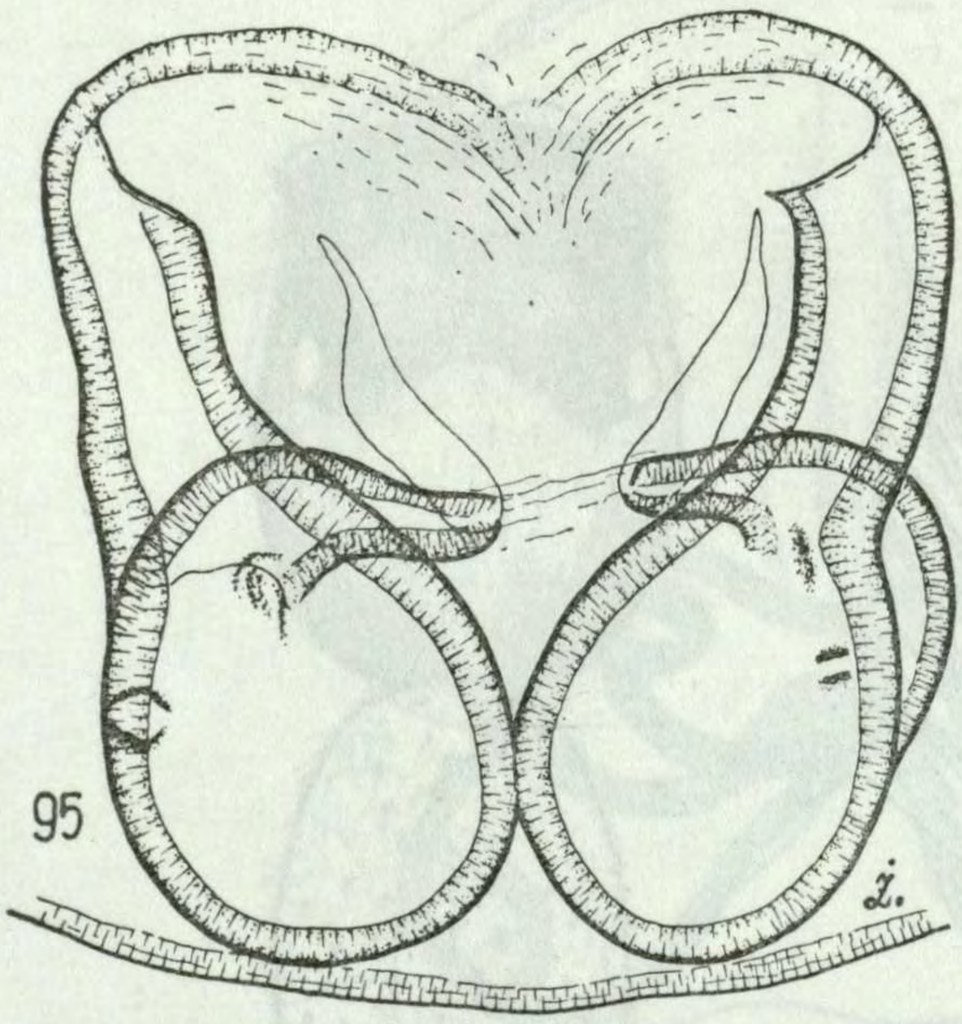
Figs. 83–87. ♂ *Chrysilla versicolor* (C. L. KOCH, 1846): palpal organ (83–86) and abdominal pattern (87).

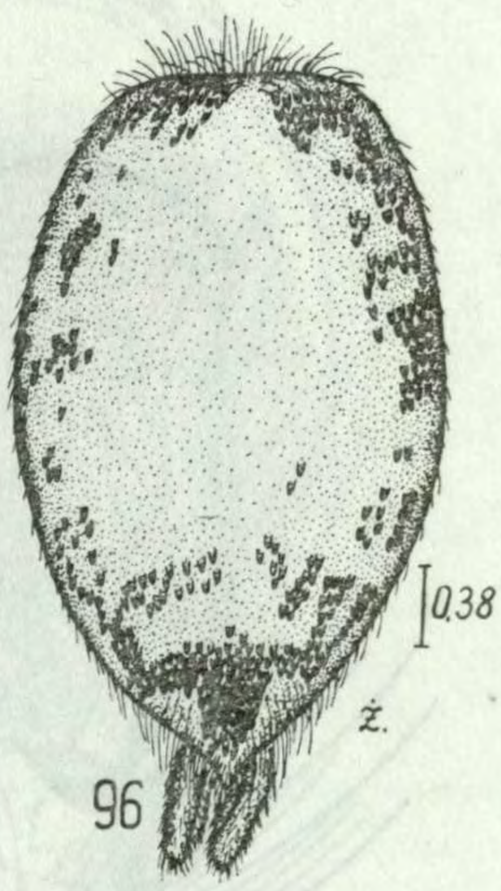


Figs. 88–92. ♂ *Chrysilla versicolor* (C. L. Koch, 1846): palpal organ (88–92). 88–90 — type-specimen from Bintang. 91, 92 — drawn by J. Prószyński.

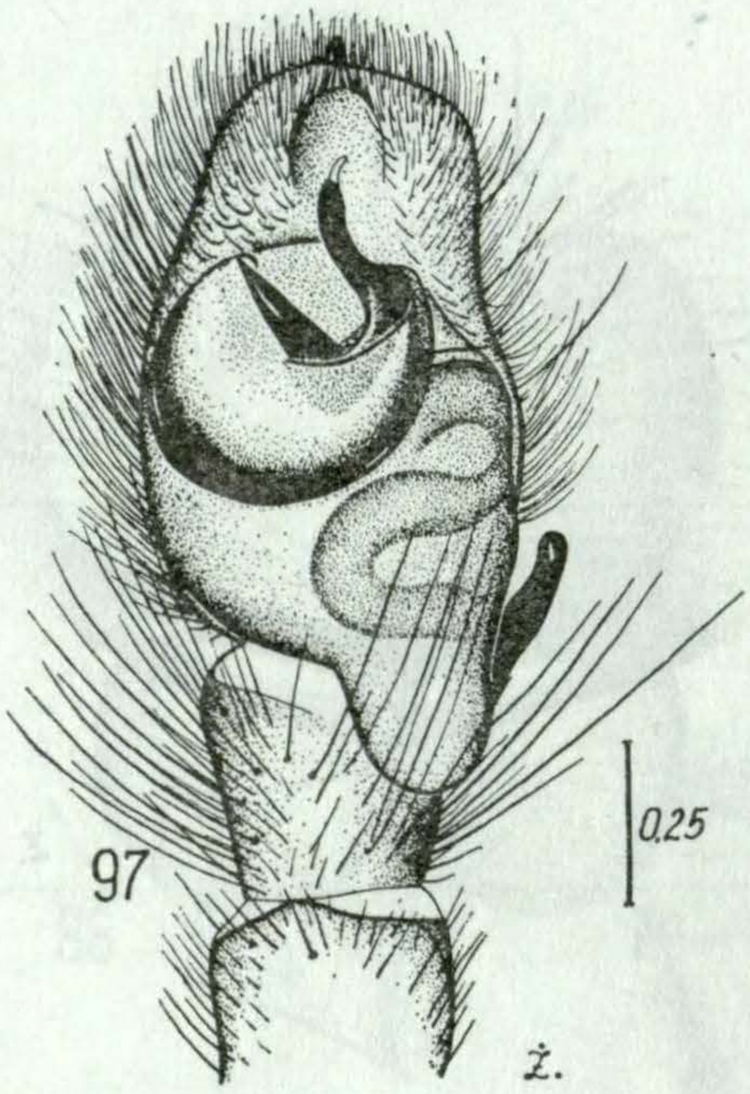


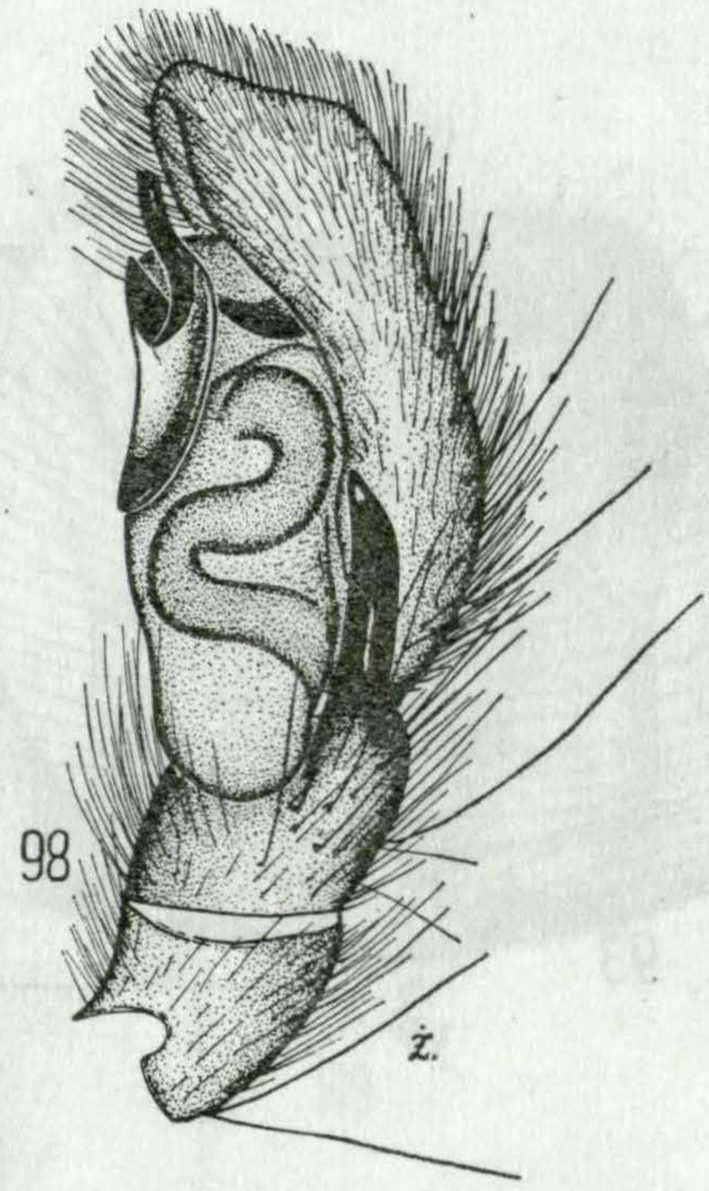


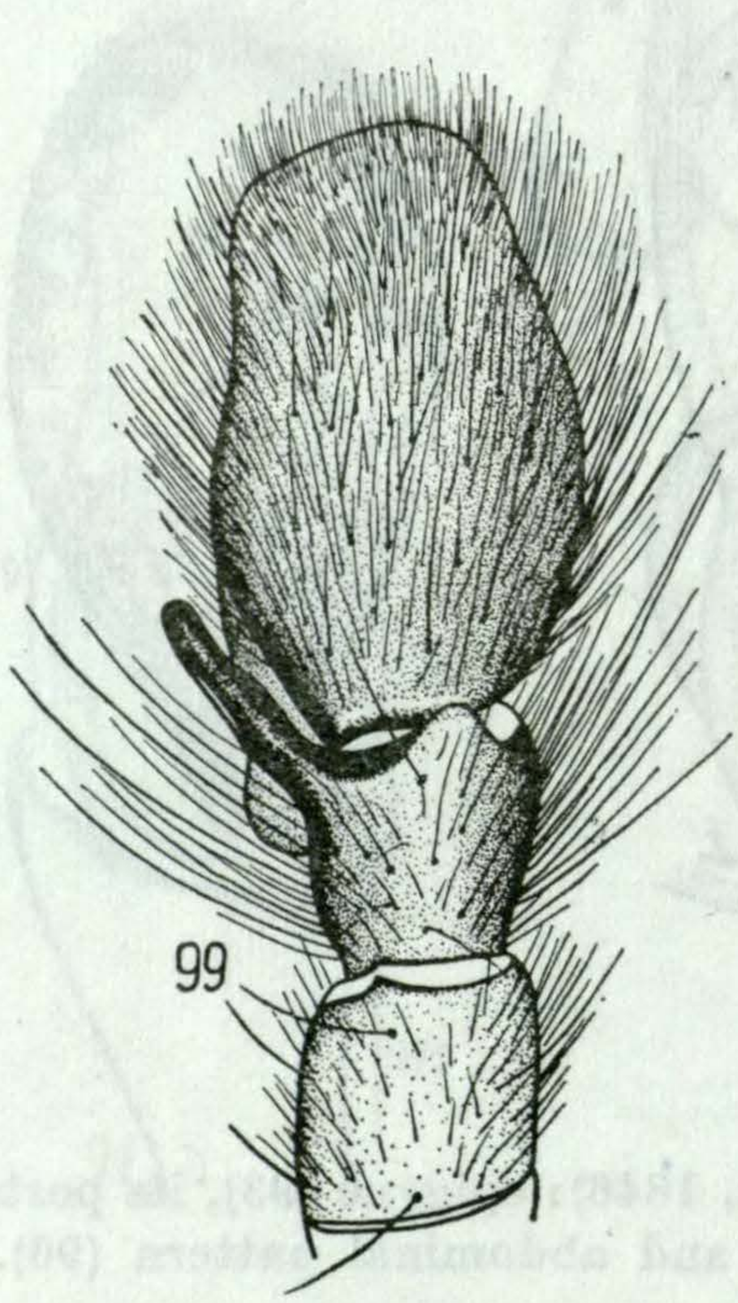


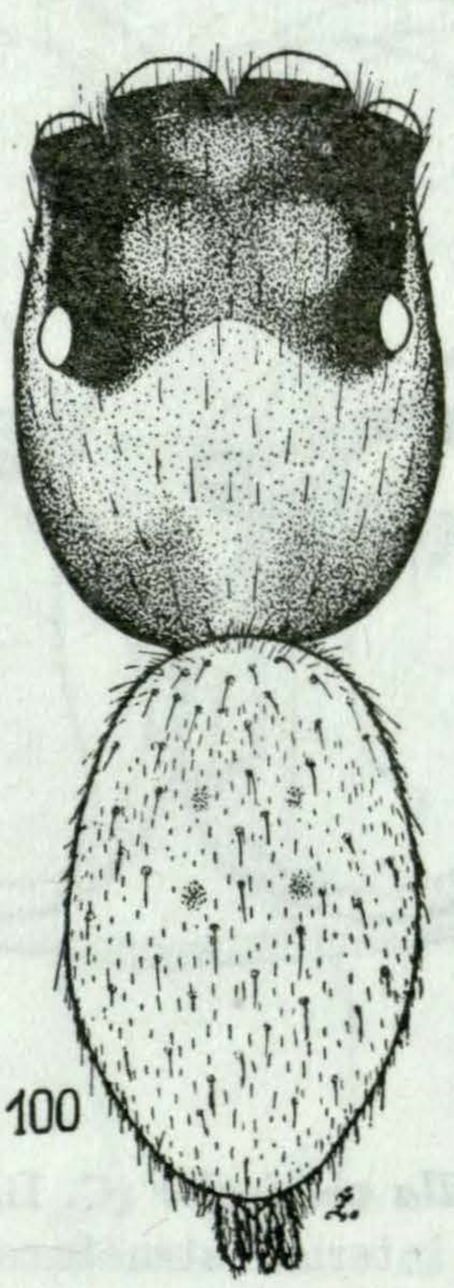


Figs. 93–96. ♀ *Chrysilla versicolor* (C. L. Koch, 1846): epigyne (93), its postero-ventral view (94), internal structures (95) and abdominal pattern (96).

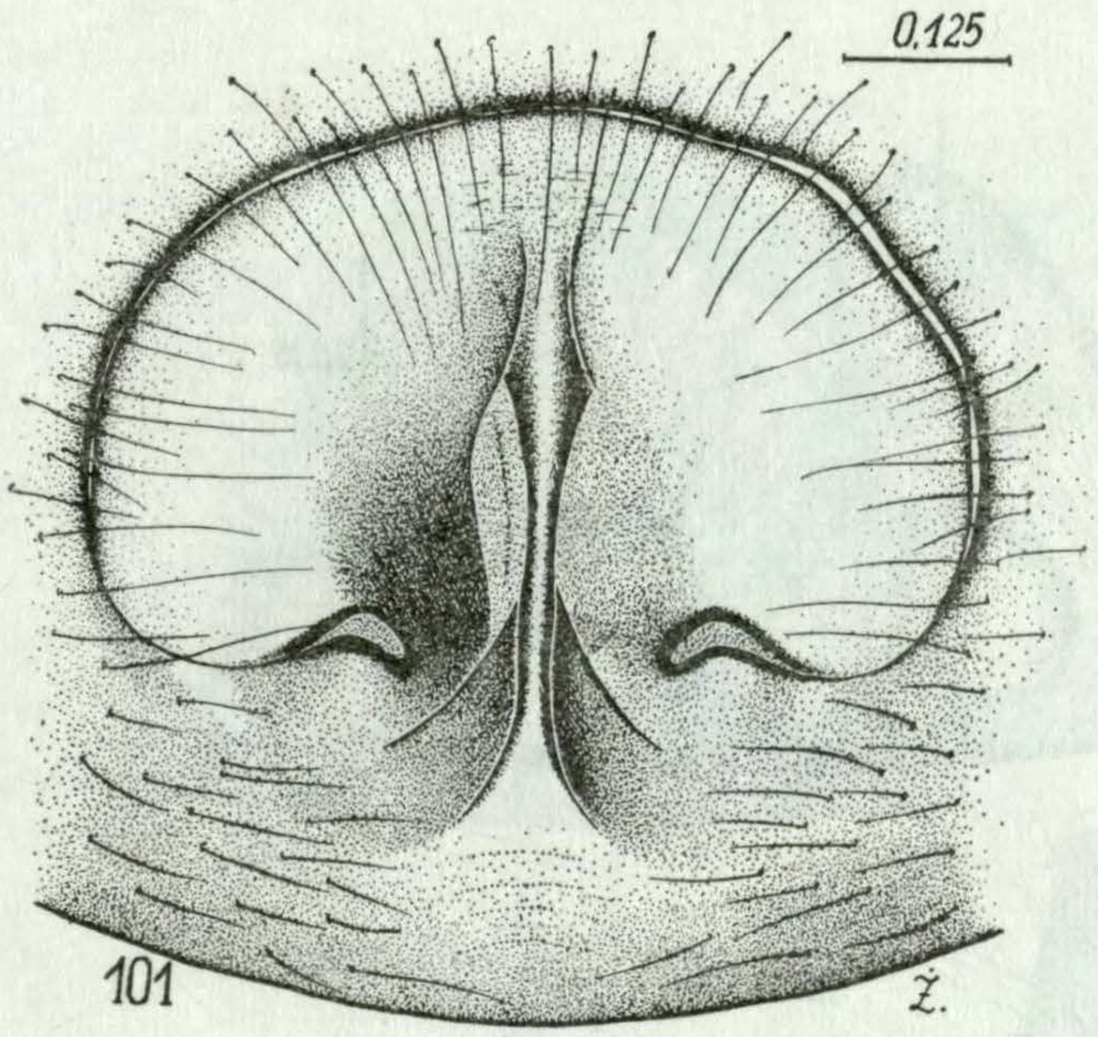


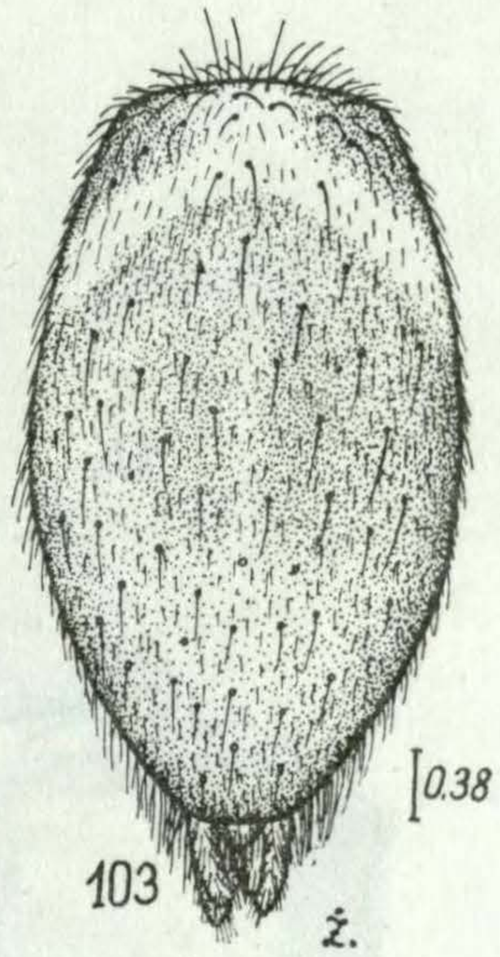


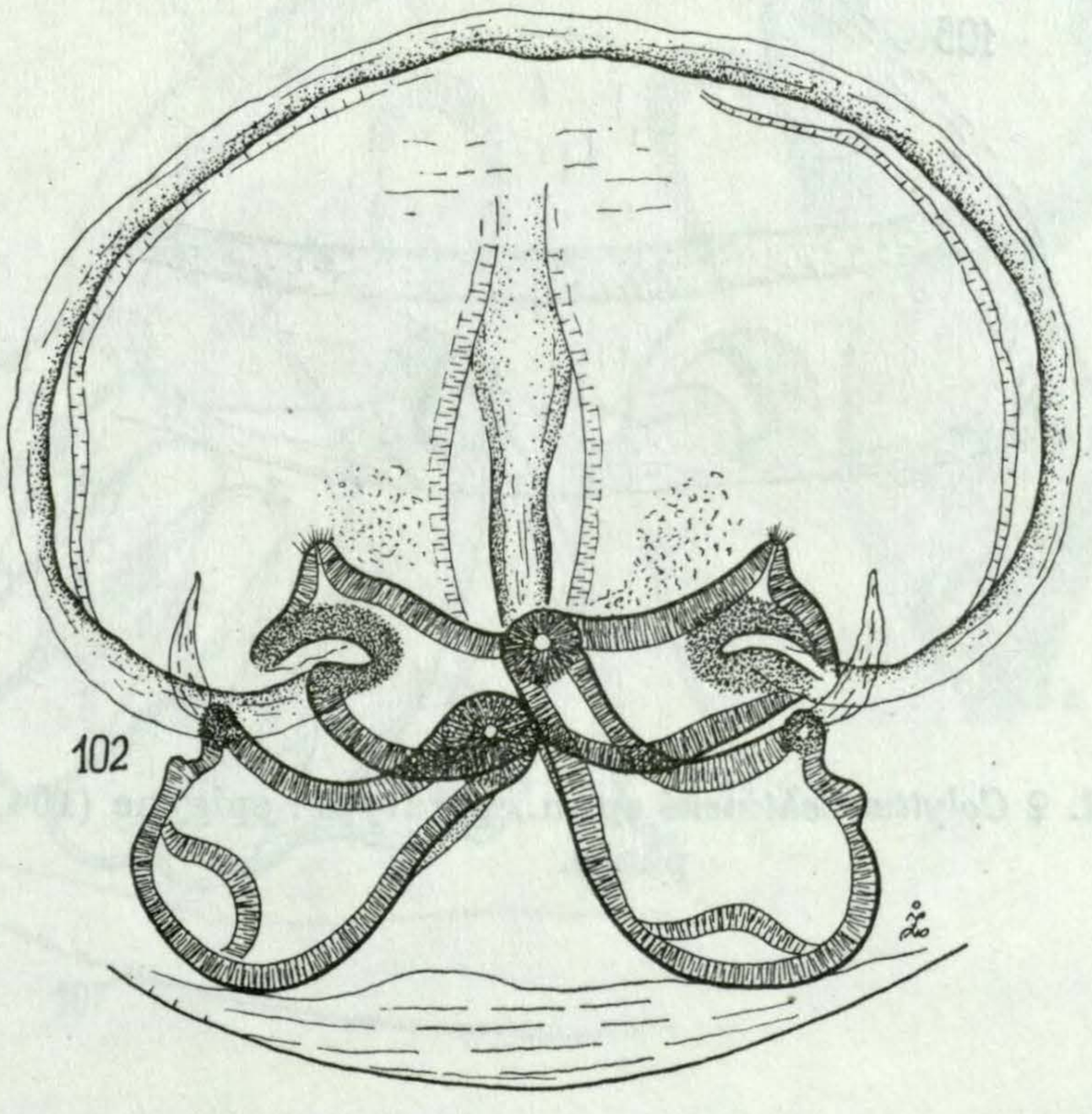




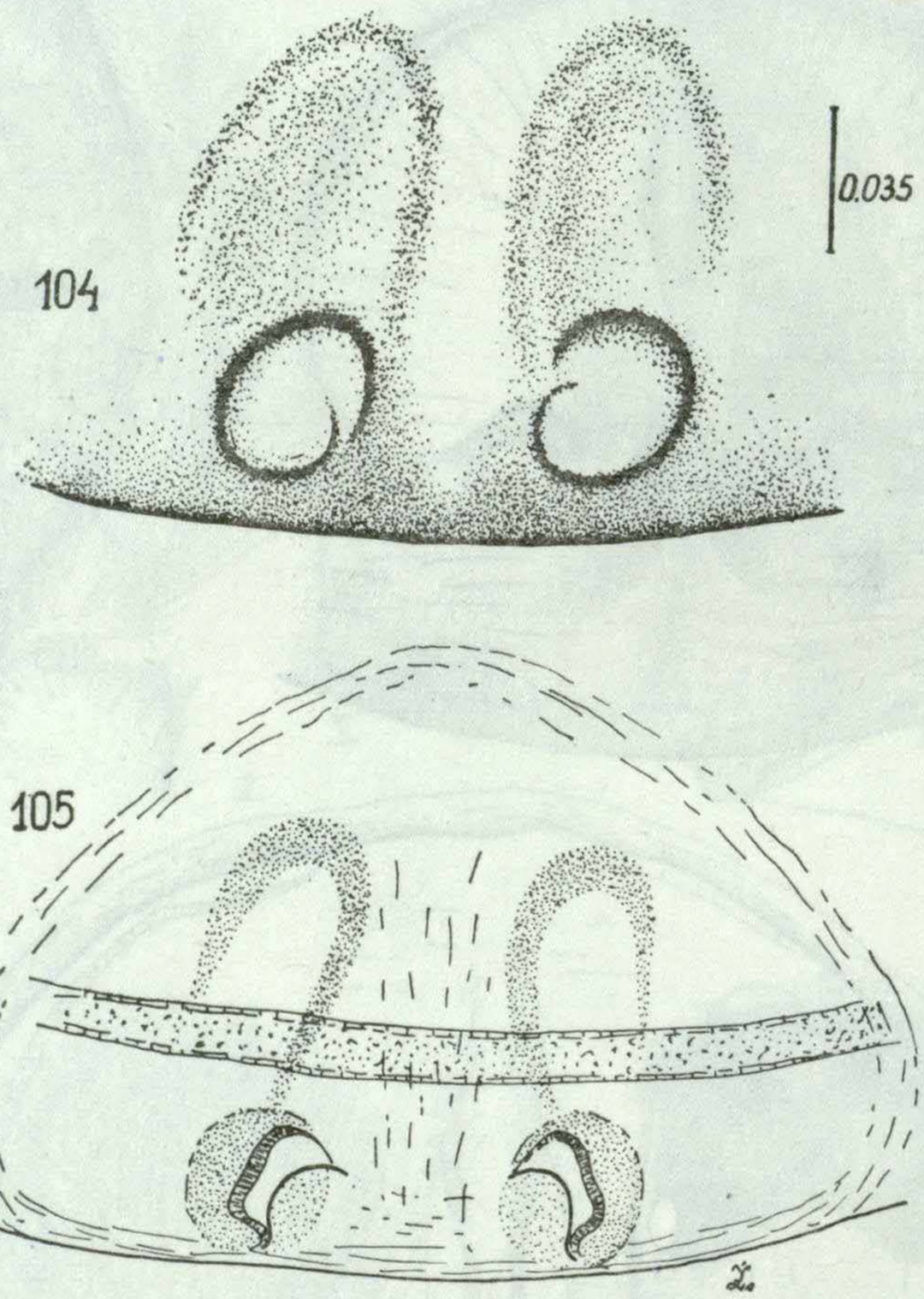
Figs. 97–100. ♂ ***Colyttus lehtineni*** **sp. n., holotype: palpal organ (97–99) and general appearance (100).**



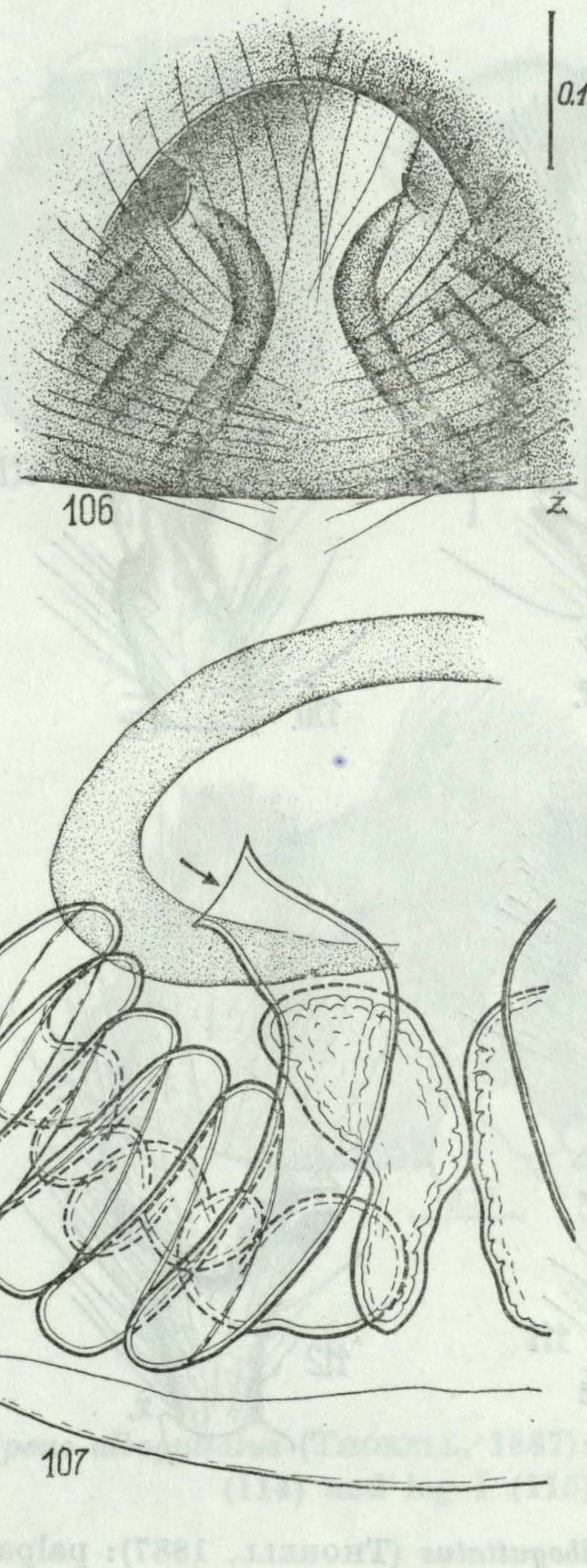


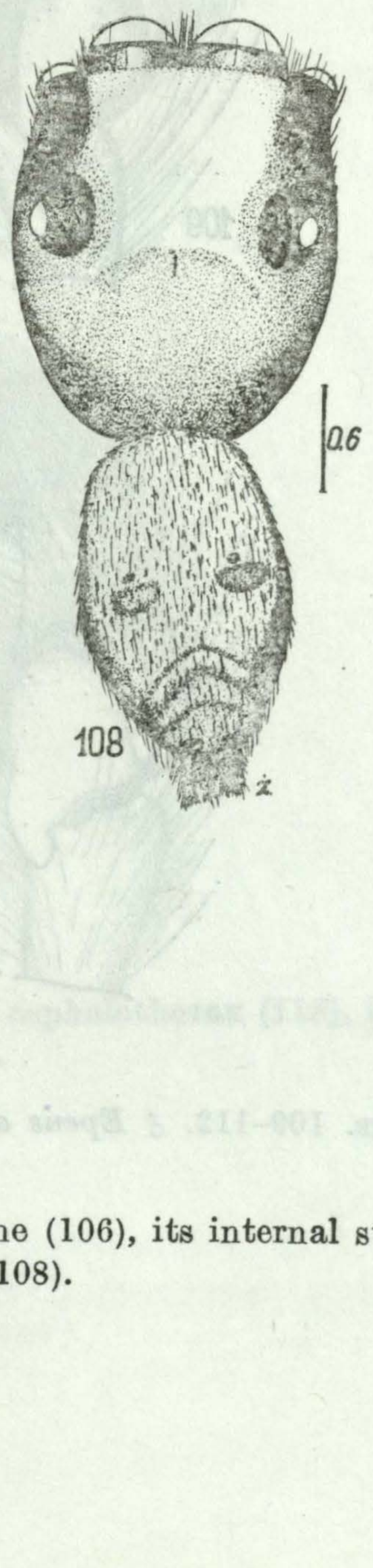


Figs. 101–103. ♀ ***Colyttus lehtineni*** **sp. n., allotype: epigyne (101), its internal structures (102) and abdominal pattern (103).**

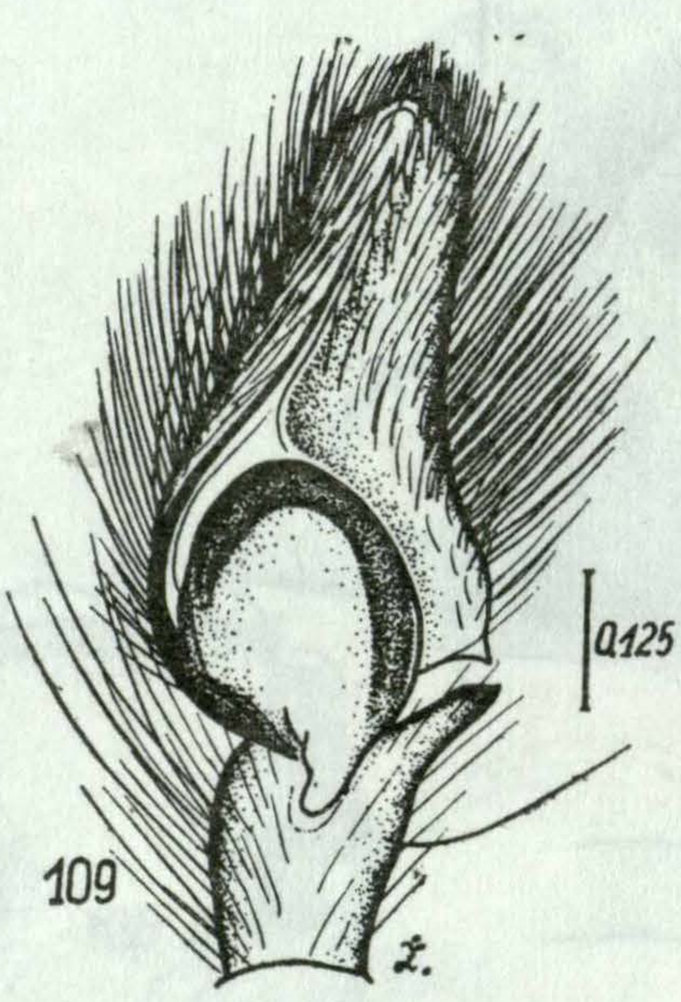


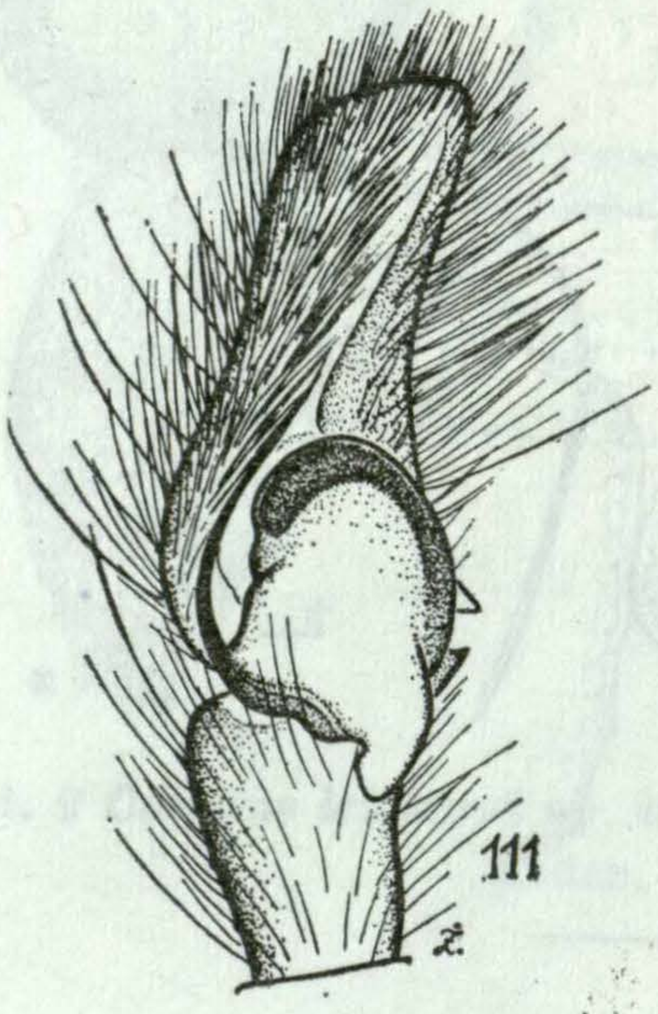
Figs. 104–105. Subad. ♀ *Colyttus lehtineni* sp. n., paratype: epigyne (104, 105) — its initial phase.

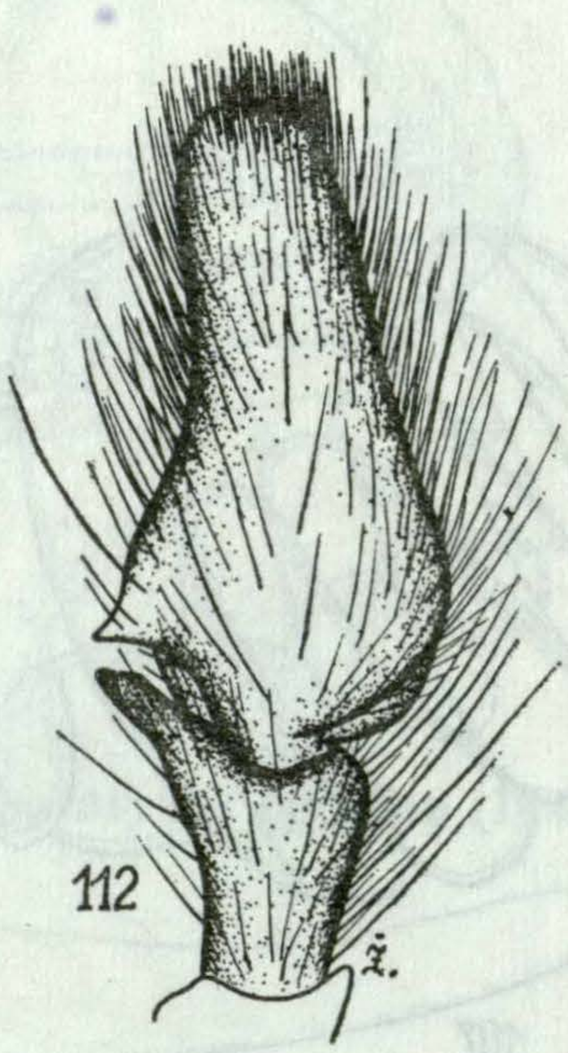




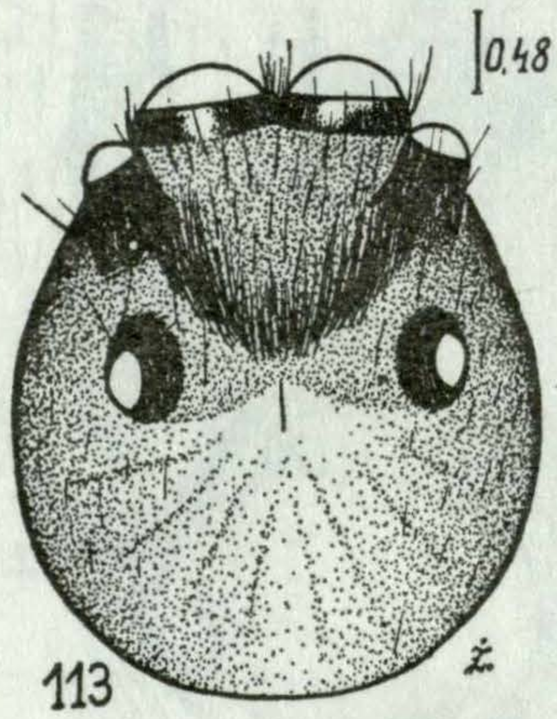
Figs. 106–108. ♀ *Emathis weyersi* SIMON, 1899: epigyne (106), its internal structures (107) and general appearance (108).

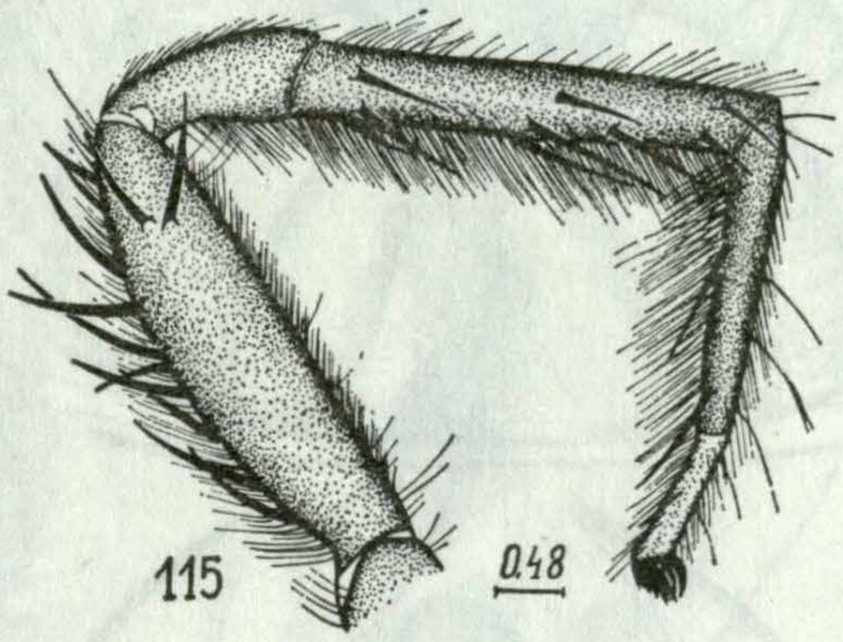


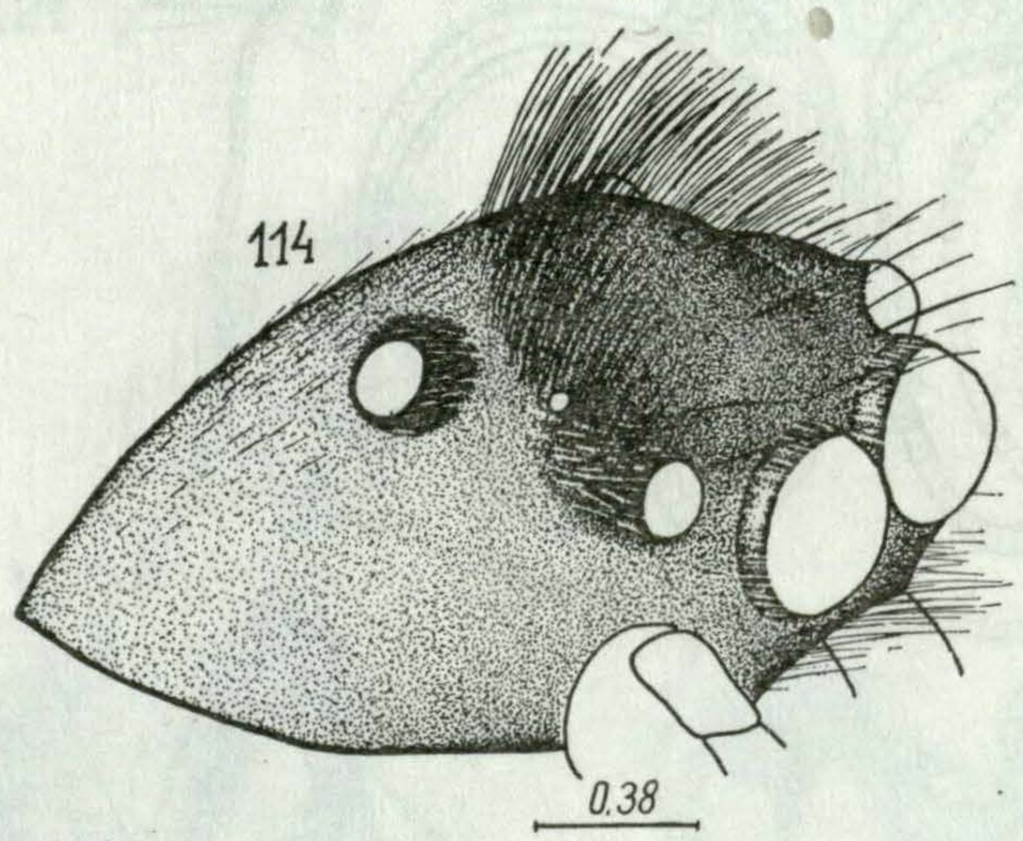




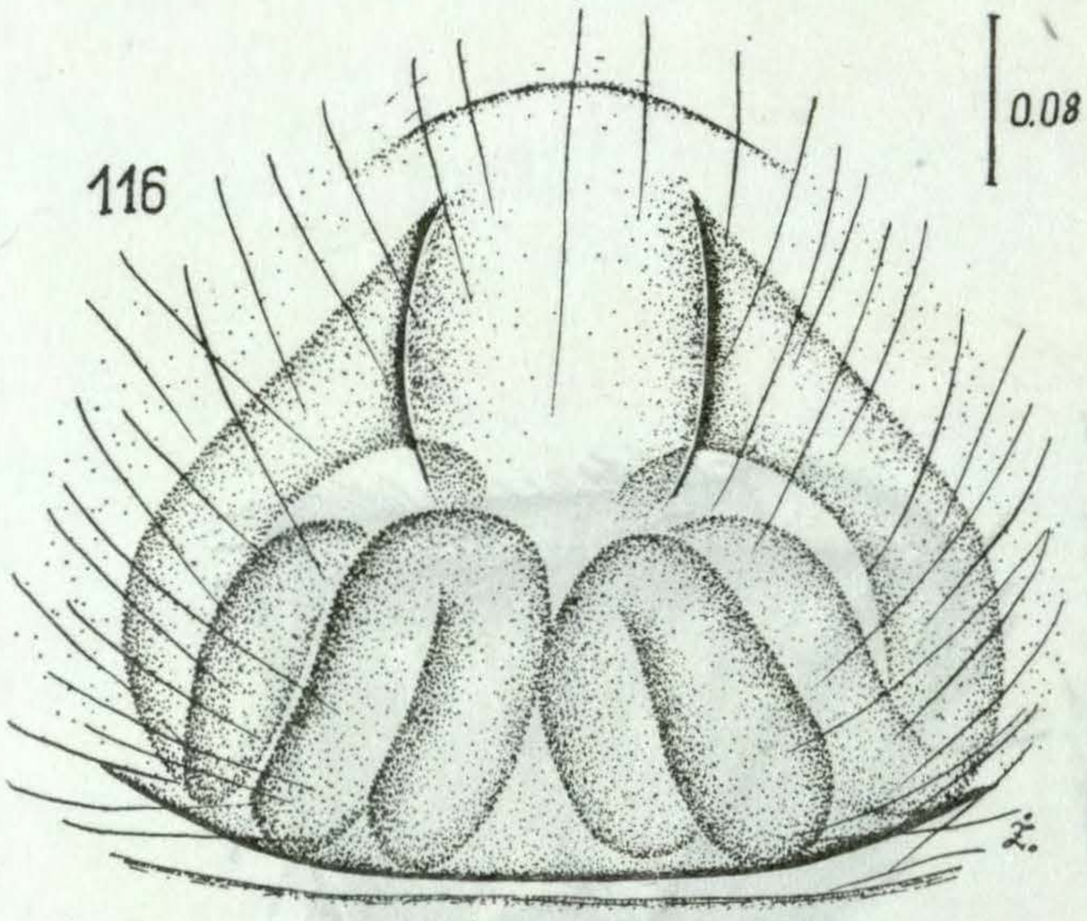
Figs. 109–112. ♂ *Epeus alboguttatus* (THORELL, 1887): palpal organ.

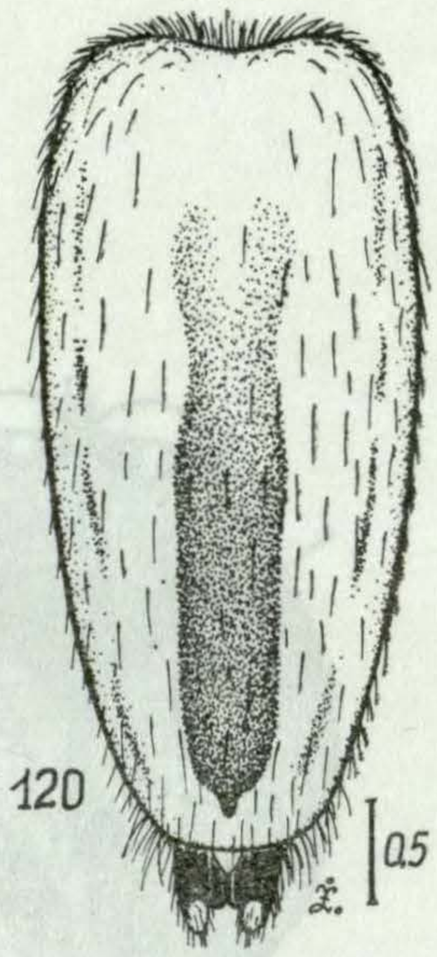


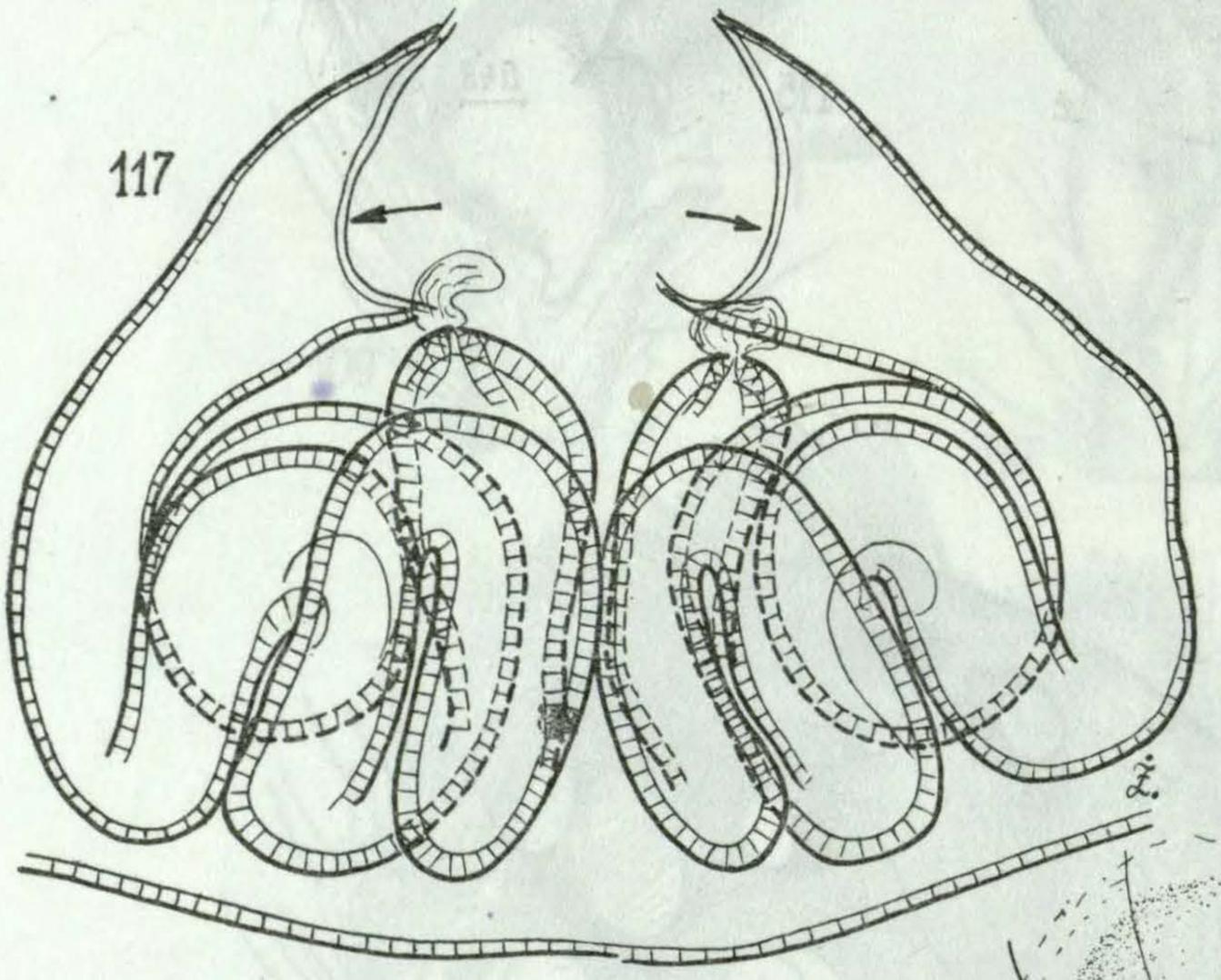


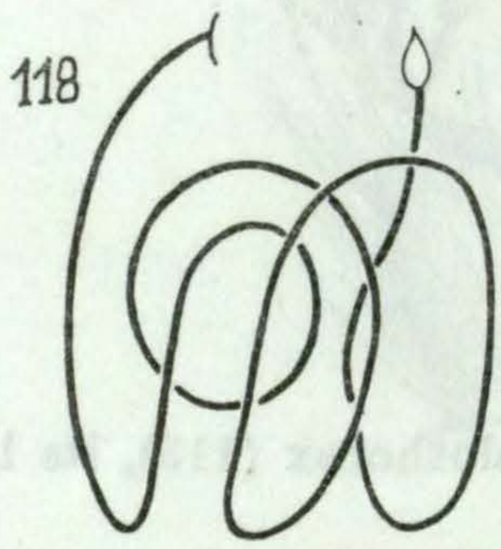


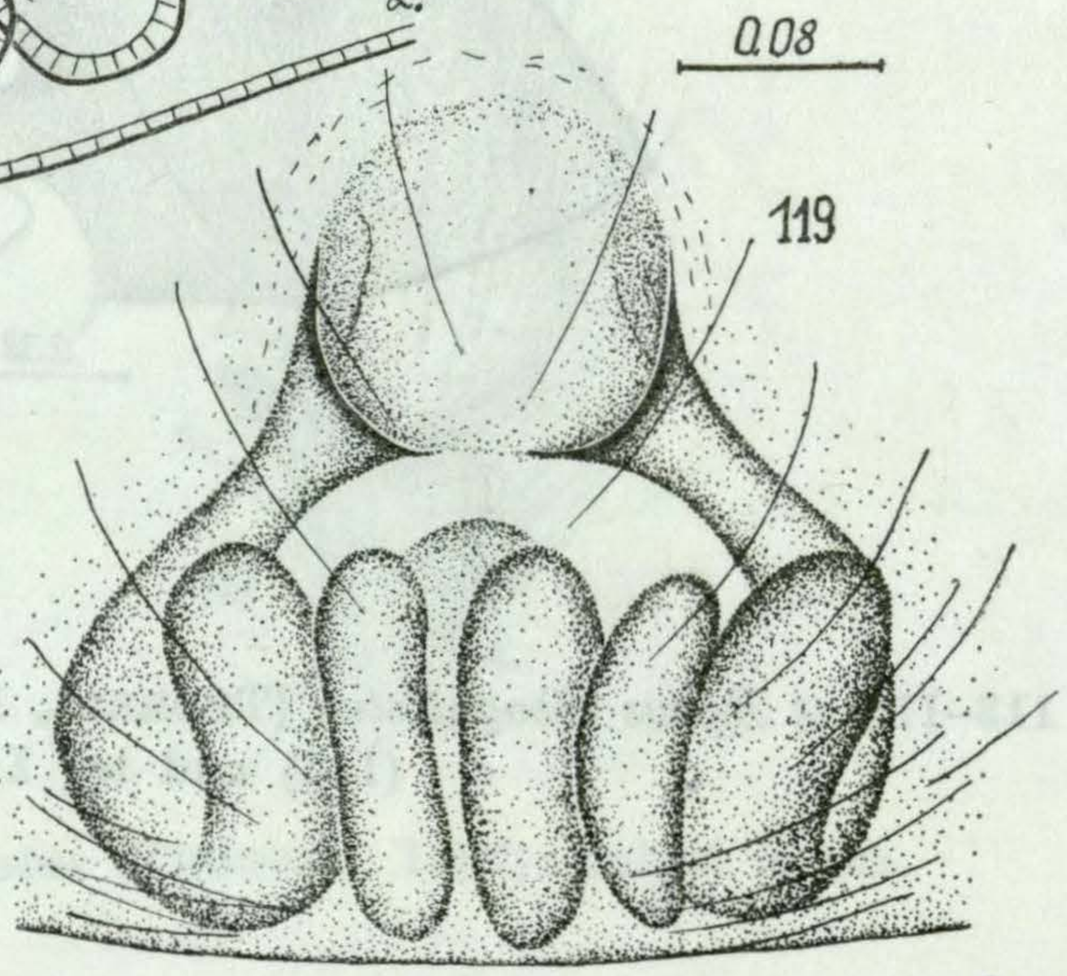
Figs. 113–115. ♂ *Epeus alboguttatus* (THORELL, 1887): cephalothorax (113), its lateral view (114) and leg I (115).



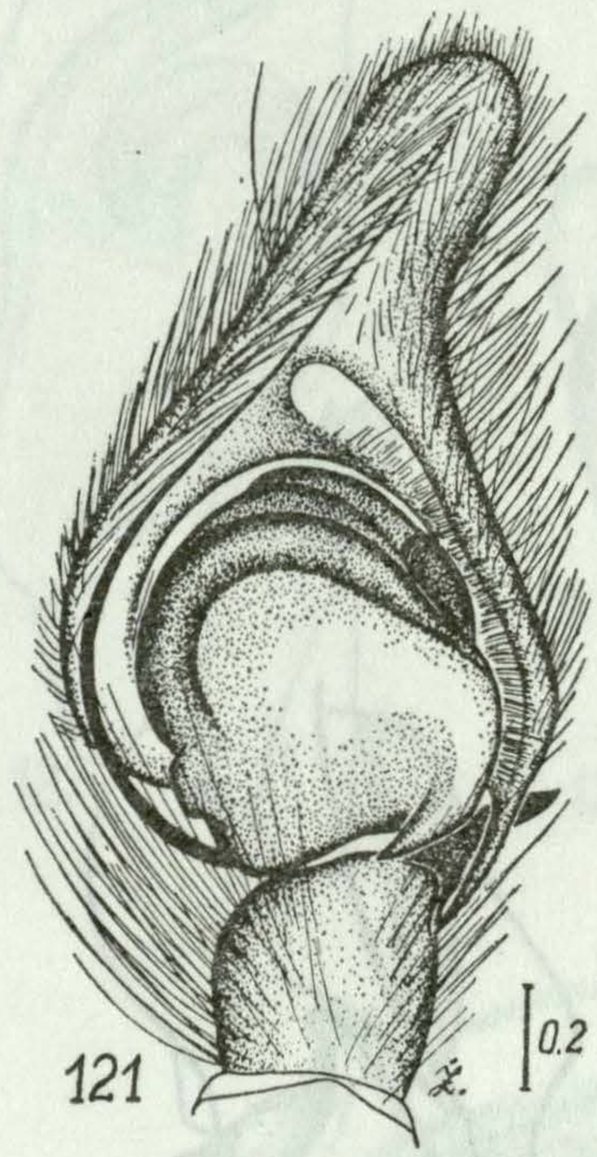


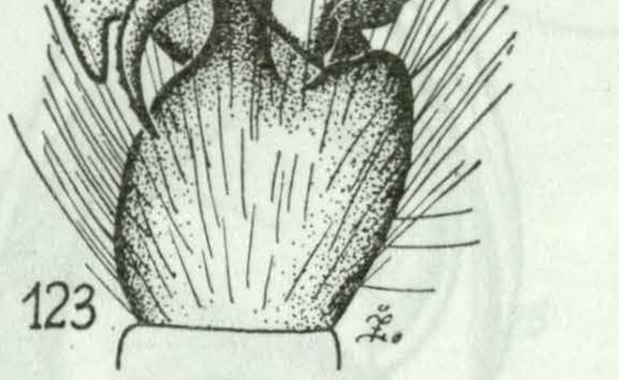


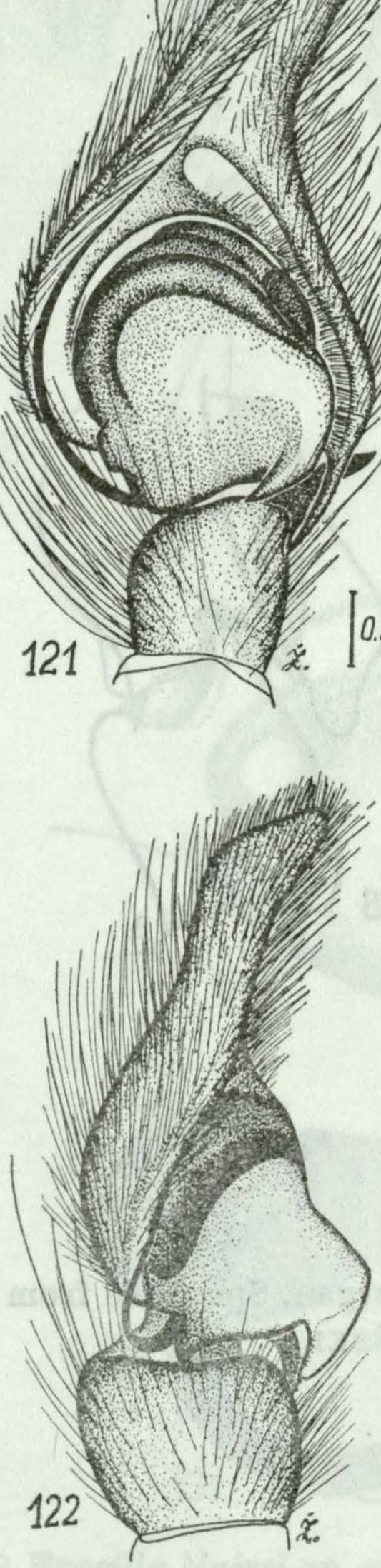


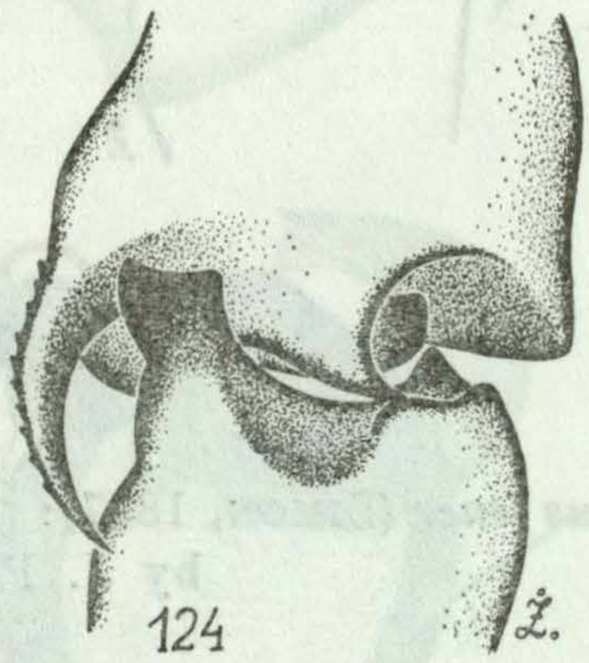


Figs. 116–120. ♀ *Epeus alboguttatus* (THORELL, 1887): epigyne (116, 119), internal structures (117), its diagrammatic course (118) and abdominal pattern (120). 119 – type-specimen of *Viciria alboguttata* THORELL.

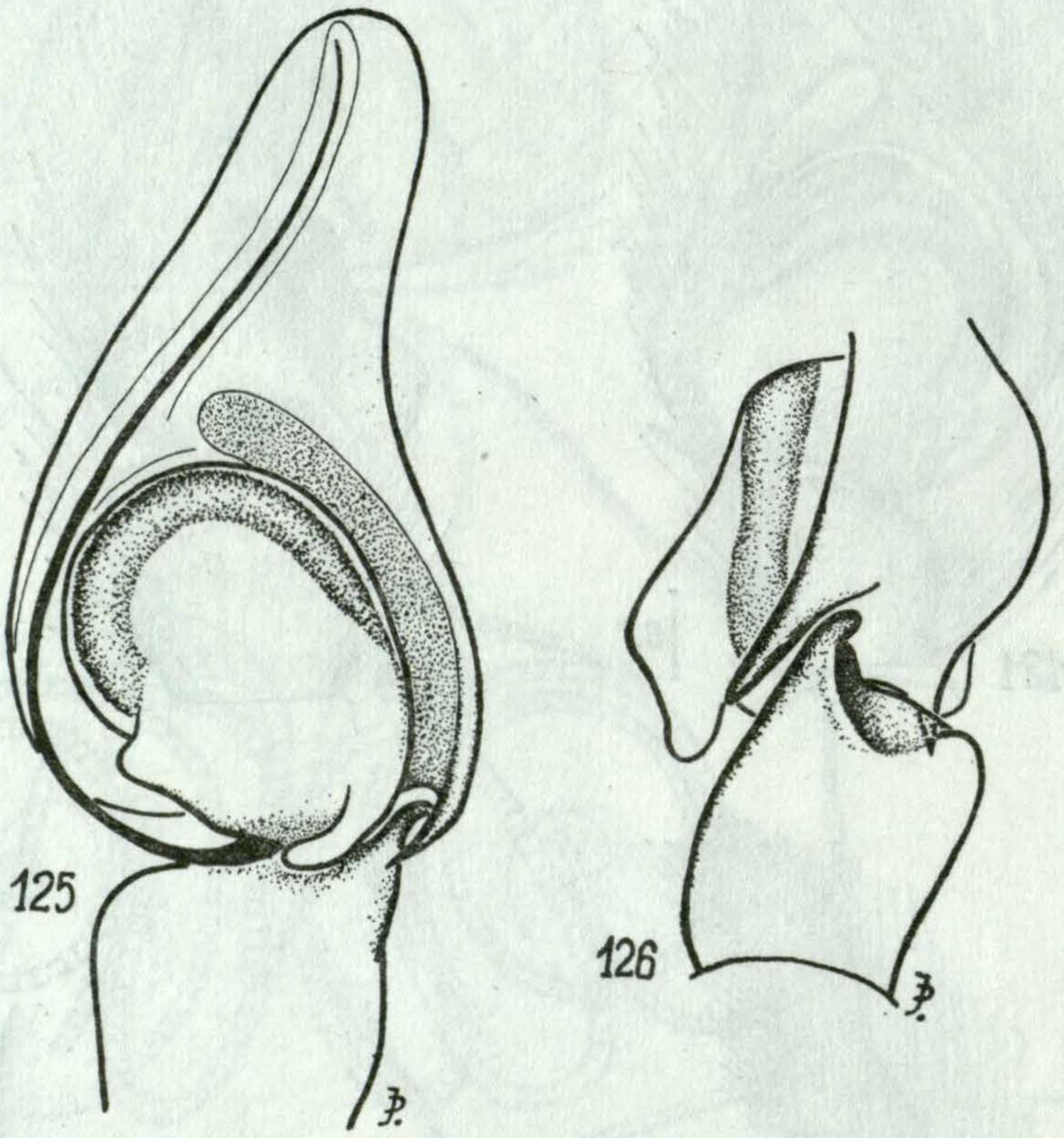




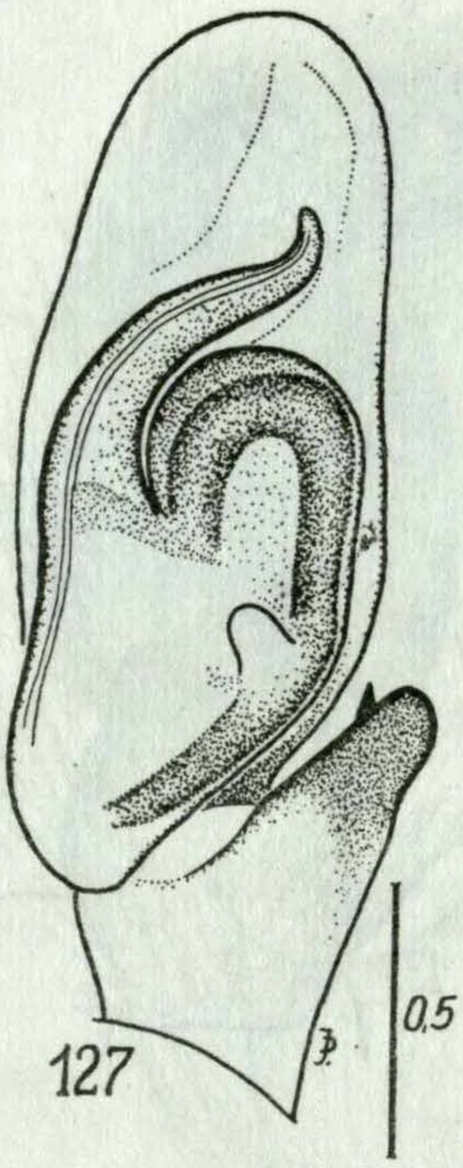


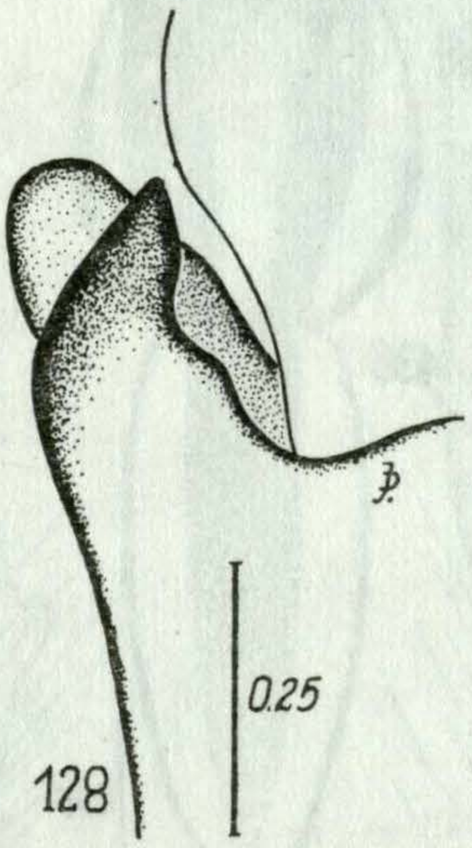


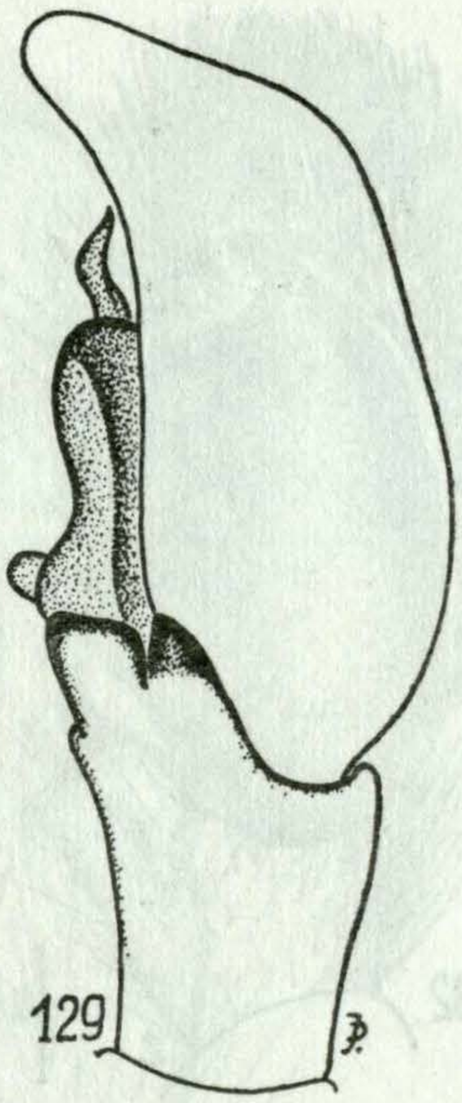
Figs. 121–124. ♂ *Epeus glorius* sp. n., holotype: palpal organ.

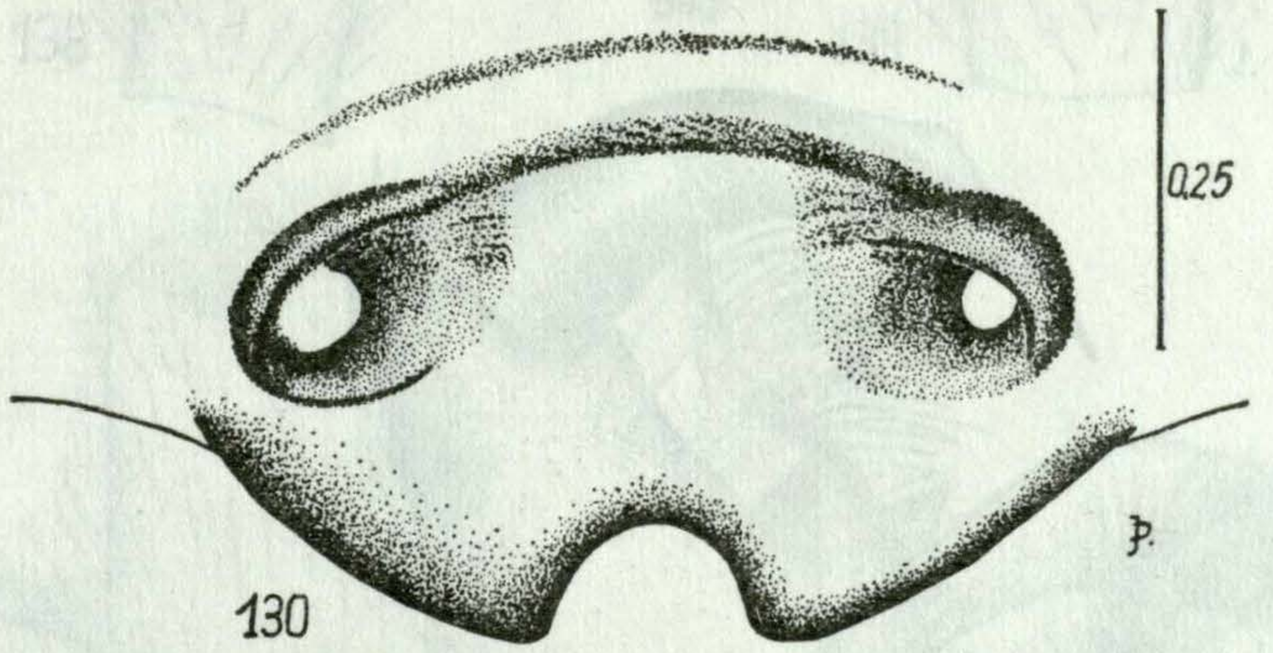


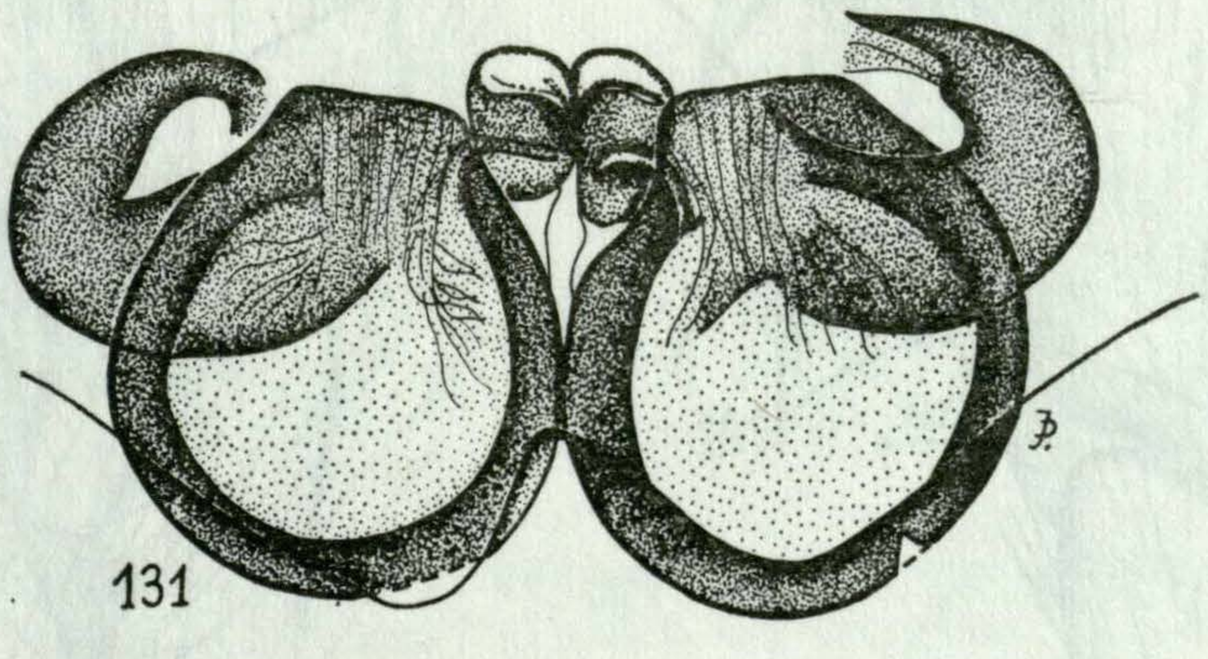
Figs. 125–126. ♂ *Epeus tener* (Simon, 1877): palpal organ. Specimen from Palembang, drawn by J. Prószyński.



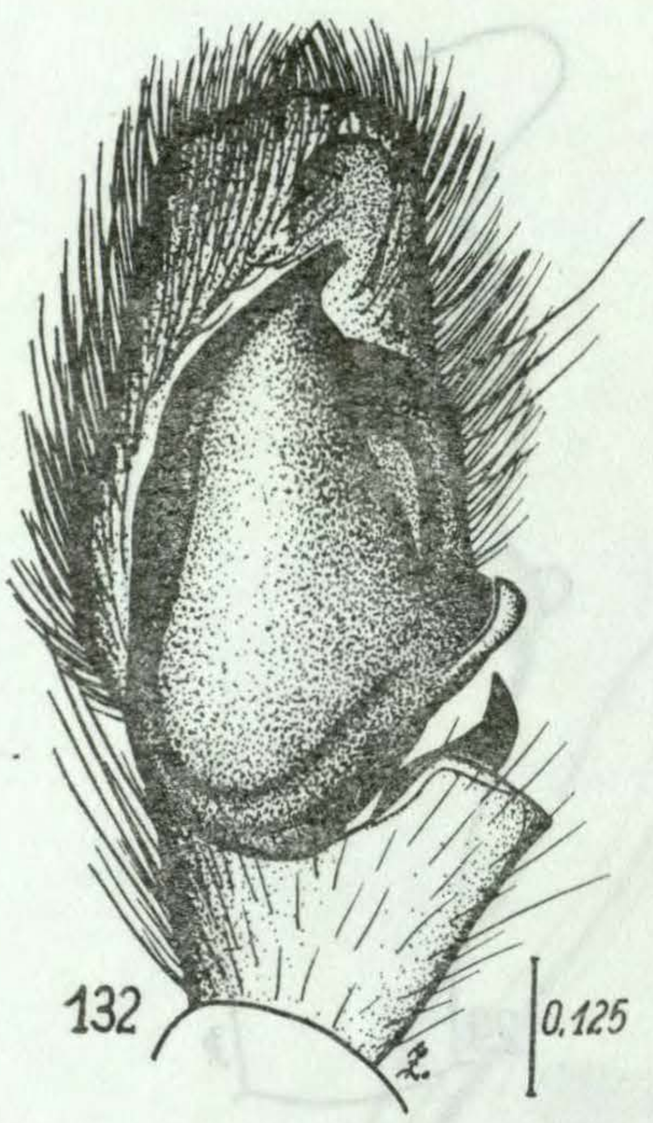


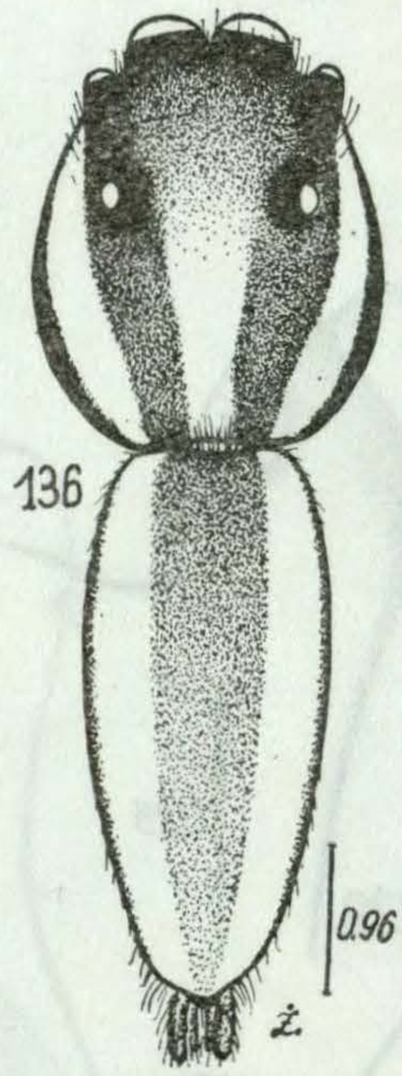


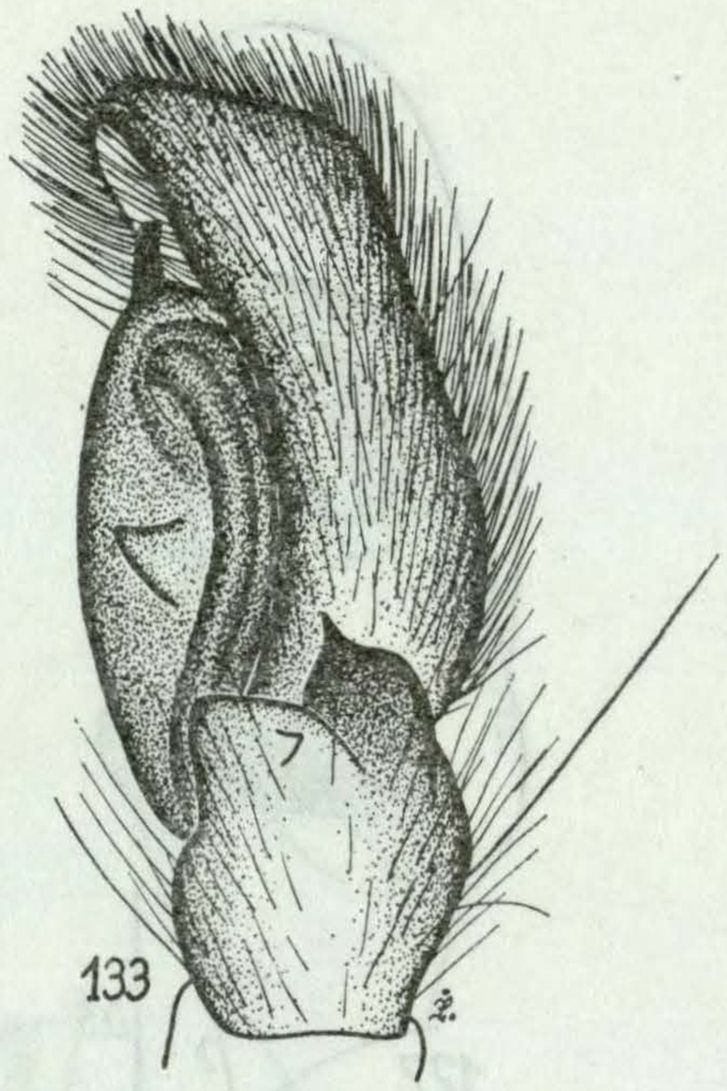


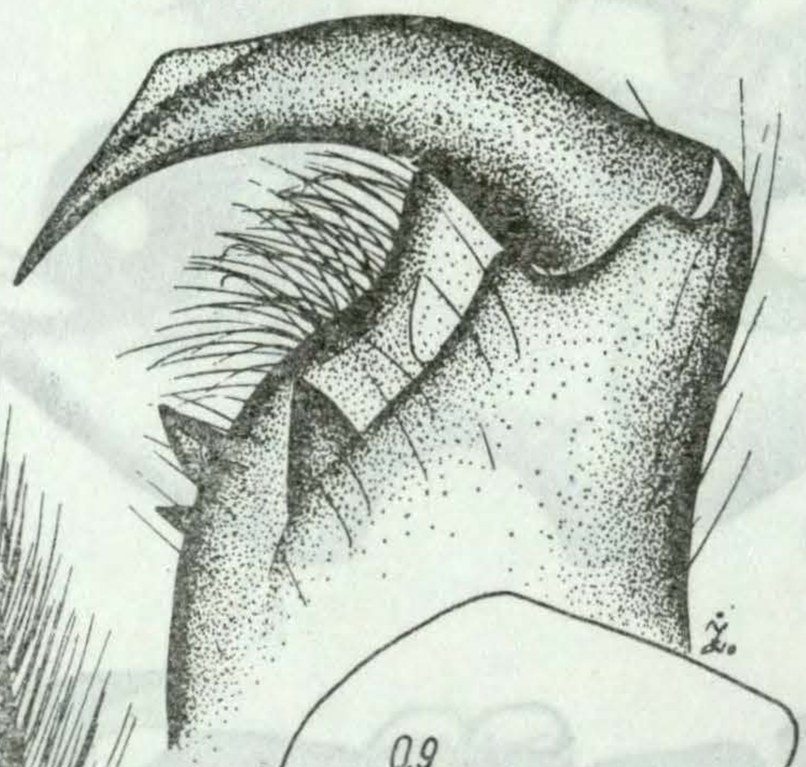


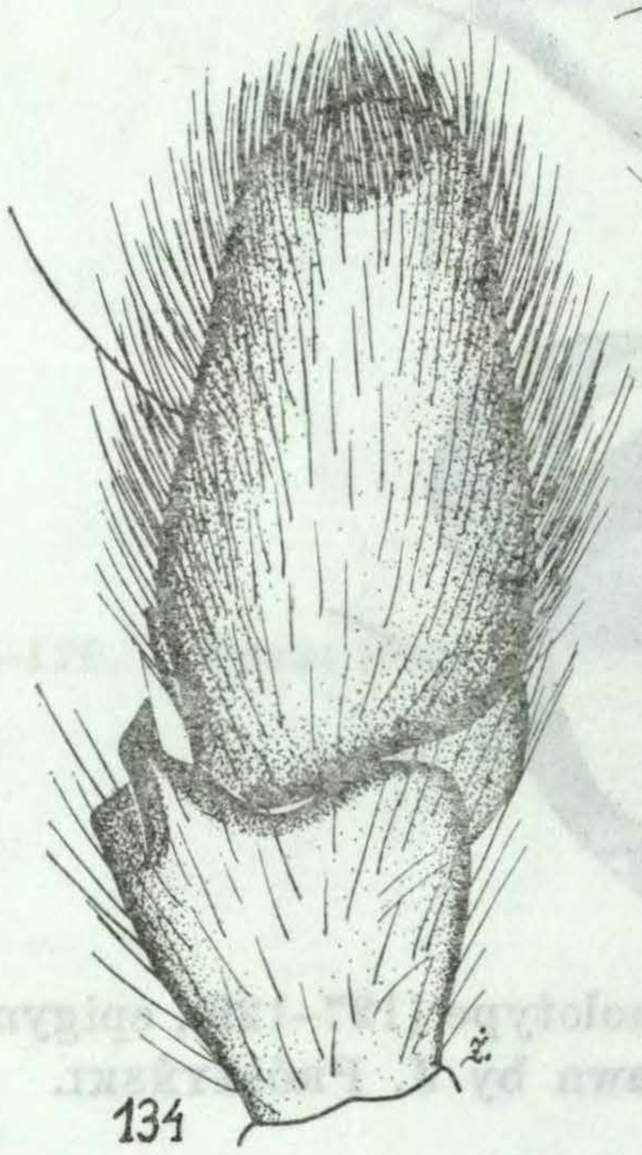
Figs. 127–131. ♂, ♀ *Epocilla blairei* sp. n.: palpal organ of holotype (127–129), epigyne (130) and its internal structures of allotype (131). Drawn by J. Prószyński.

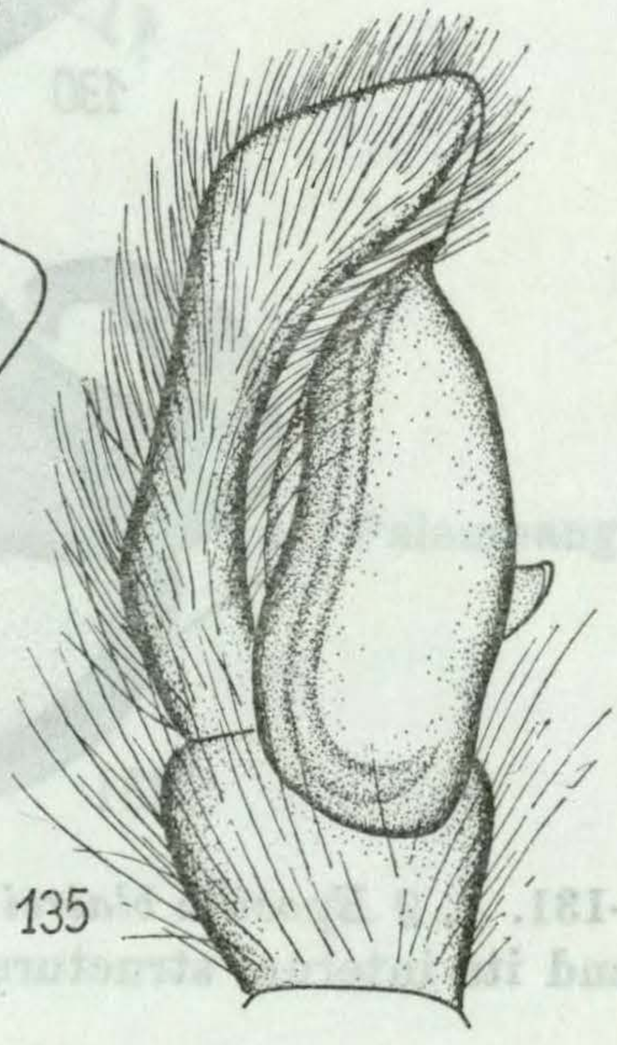




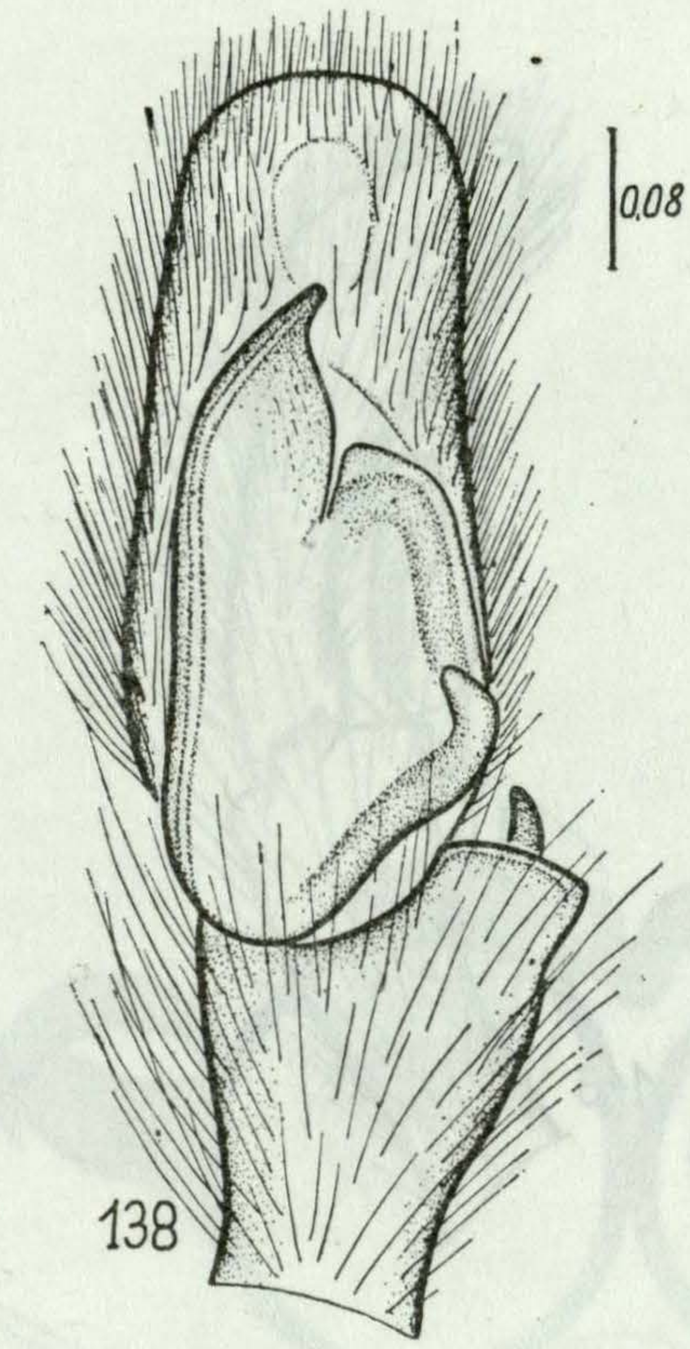




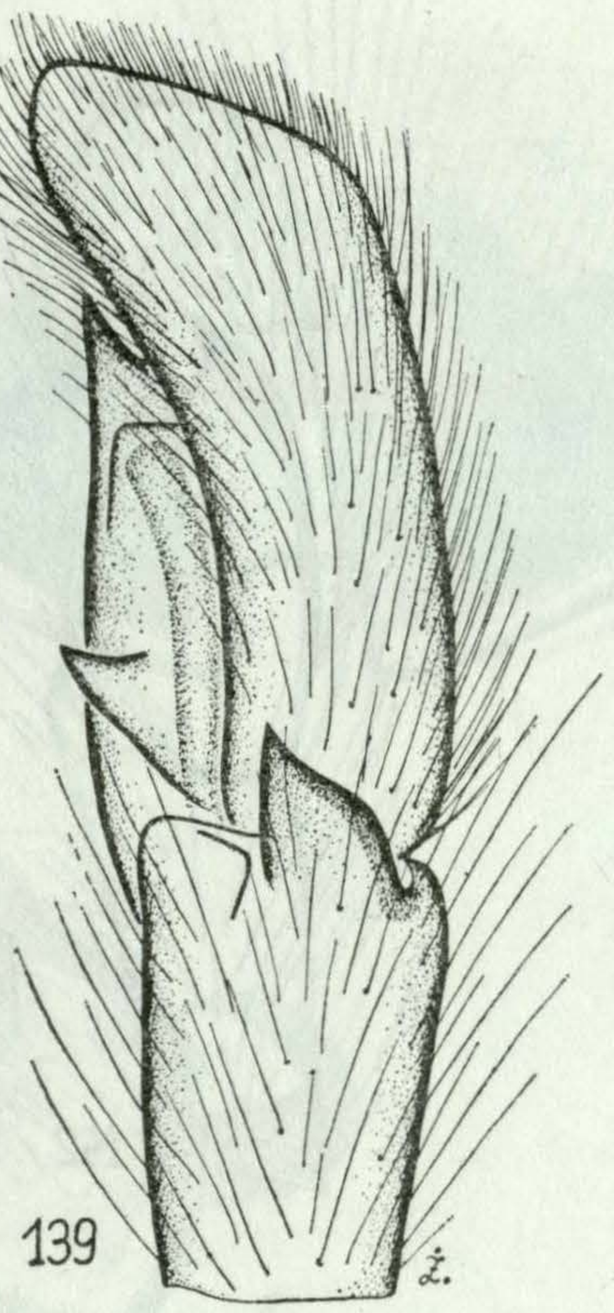




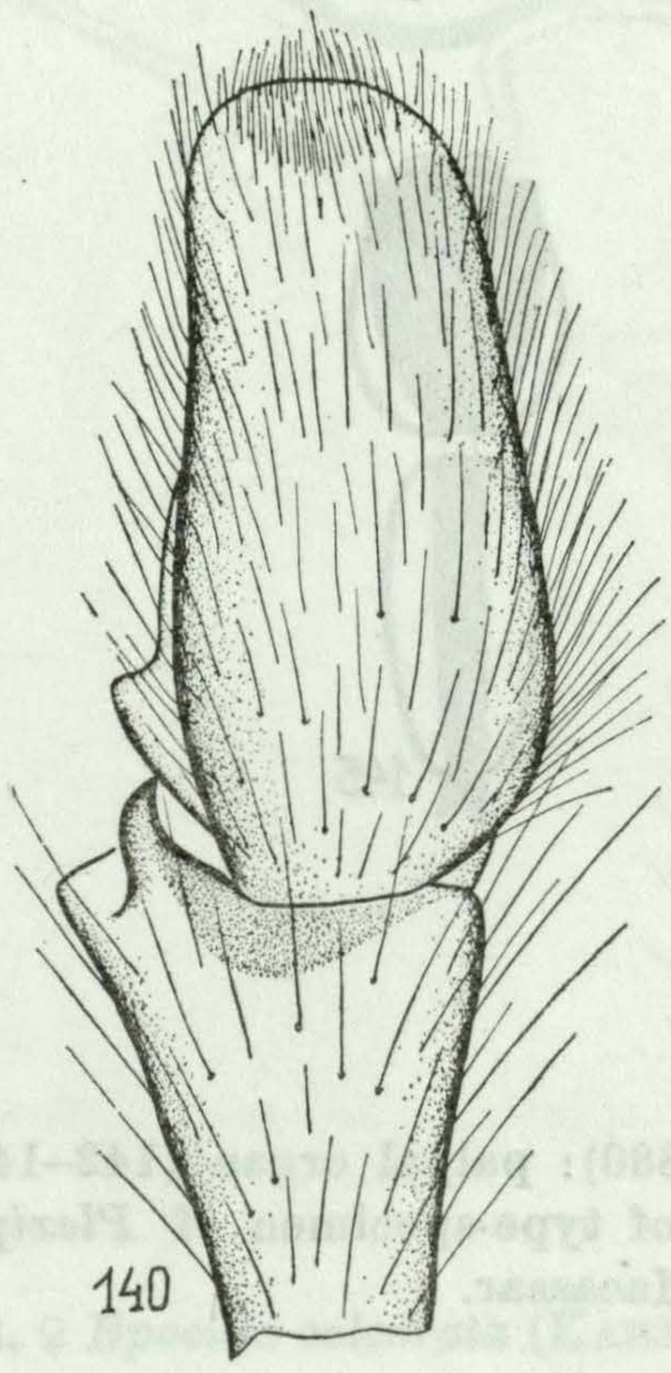
Figs. 132–137. ♂ *Epocilla calcarata* (KARSCH, 1880): palpal organ (132–135), general appearance (136) and cheliceral dentition (137).



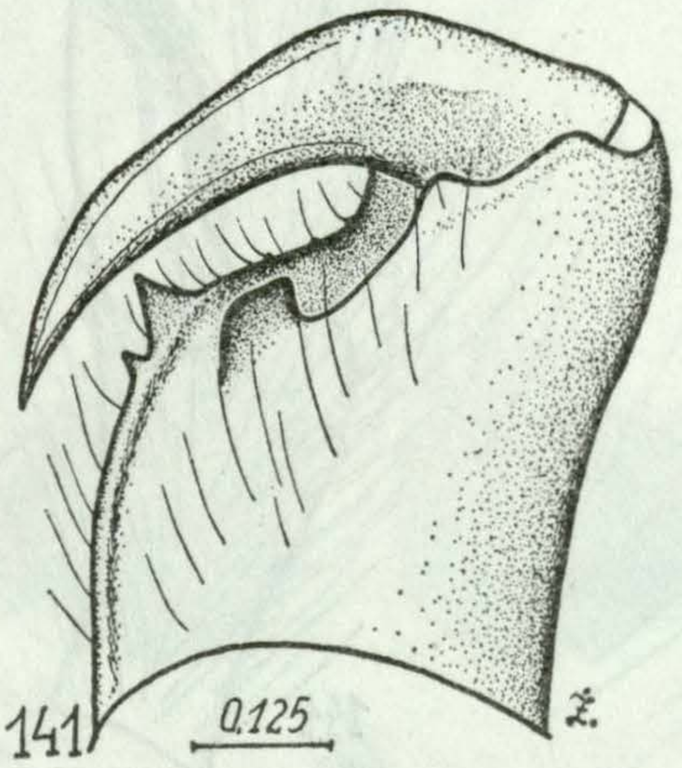
138



139



140



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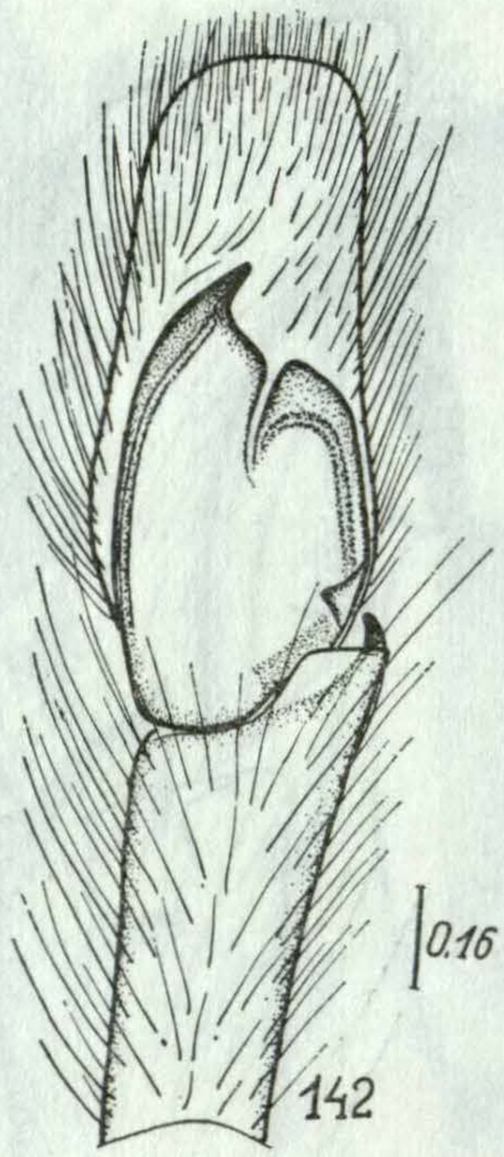
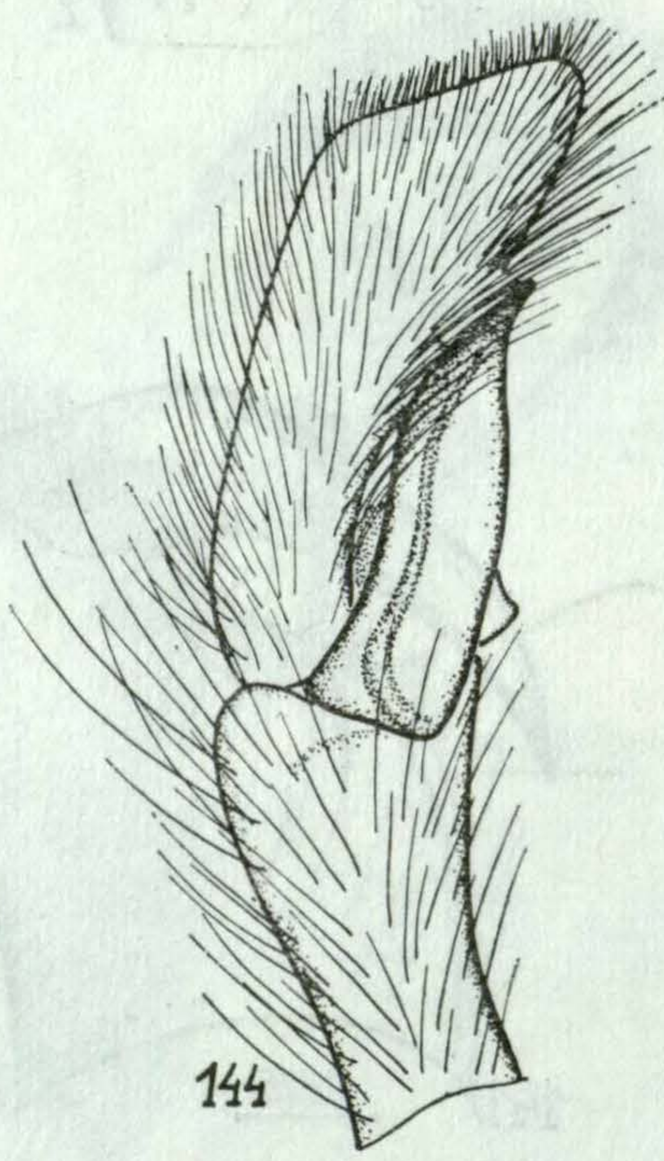
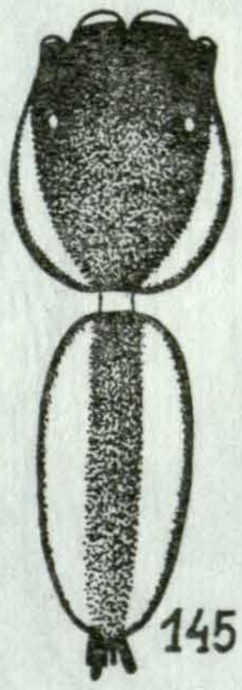
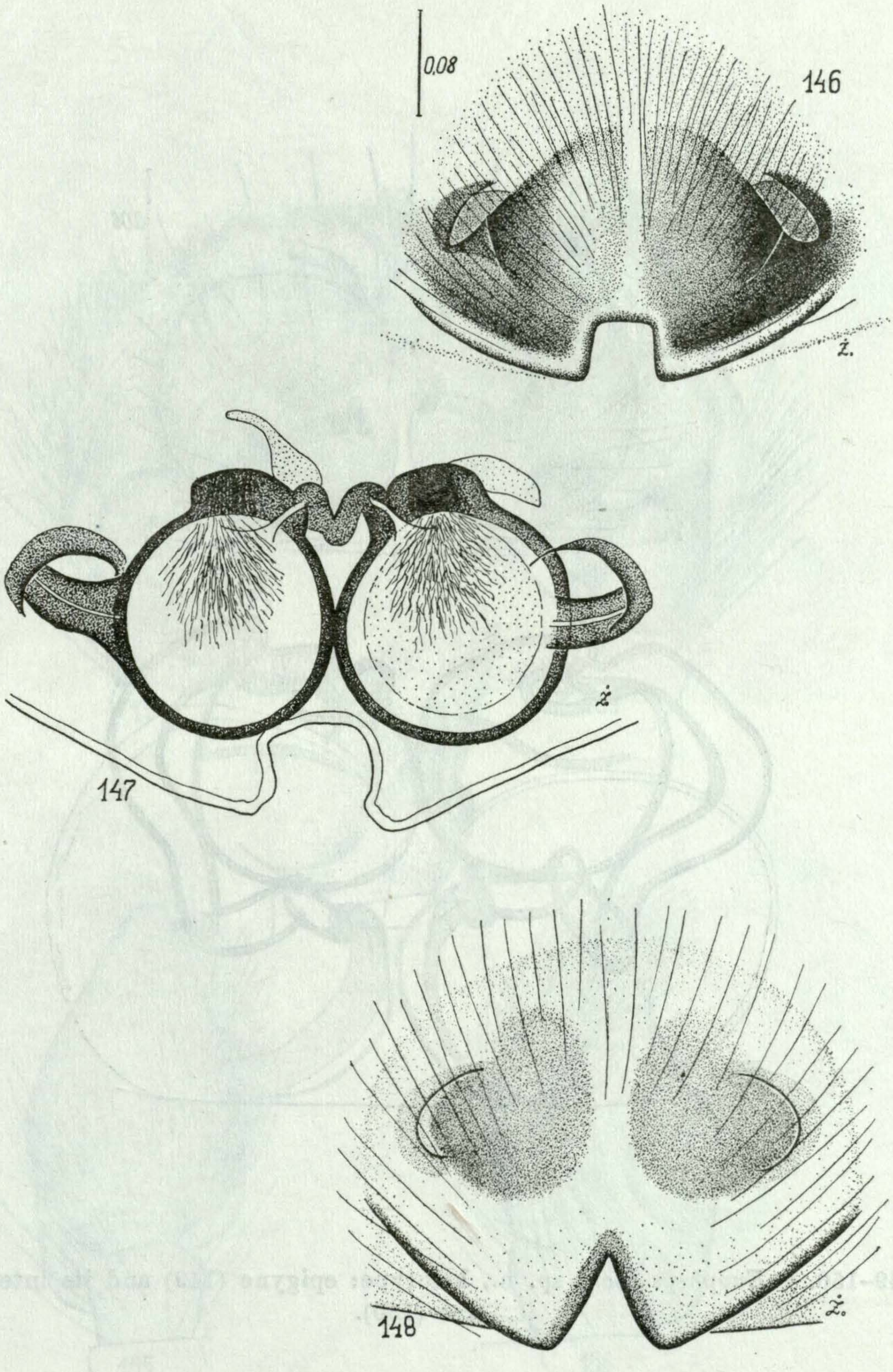
Figs. 138–141. ♂ *Epocilla calcarata* (KARSCH, 1880): palpal organ (138–140) and cheliceral dentition (141). Drawings made on the basis of *Goajara crassipes* PECKHAM from Borneo.



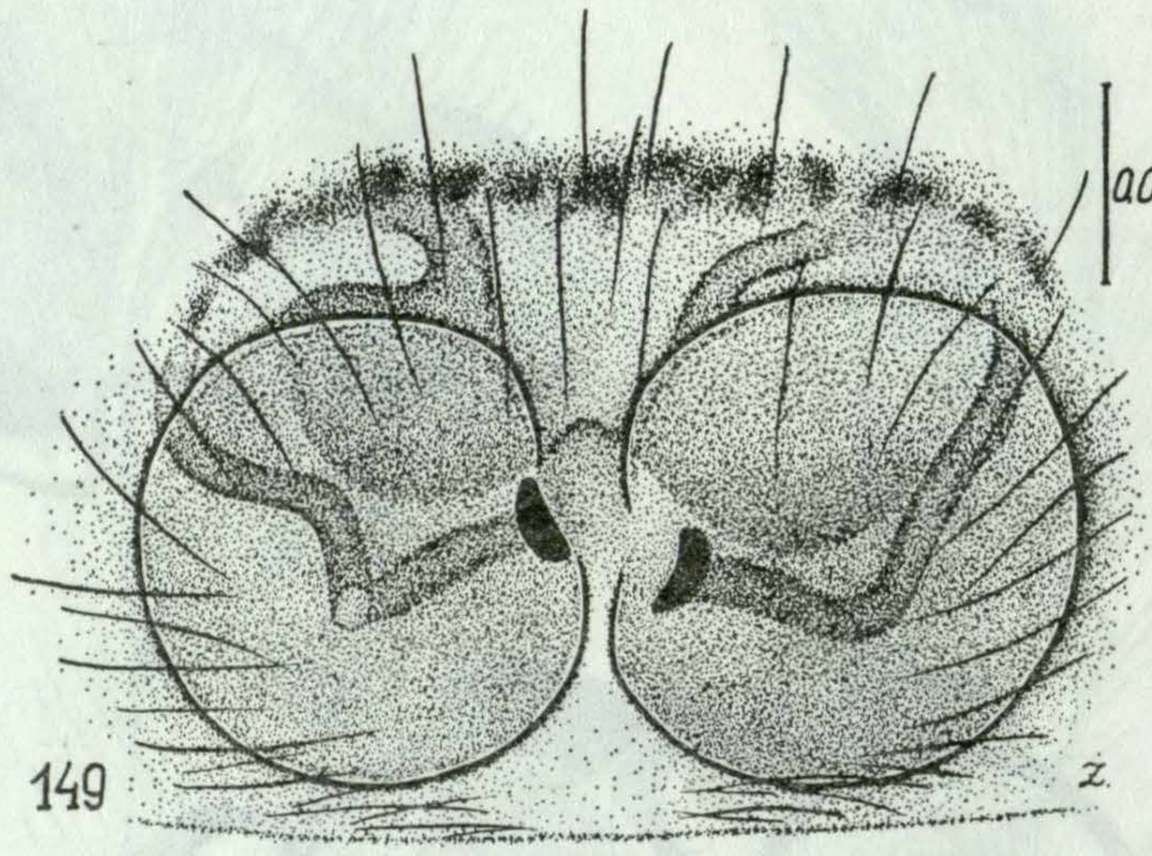


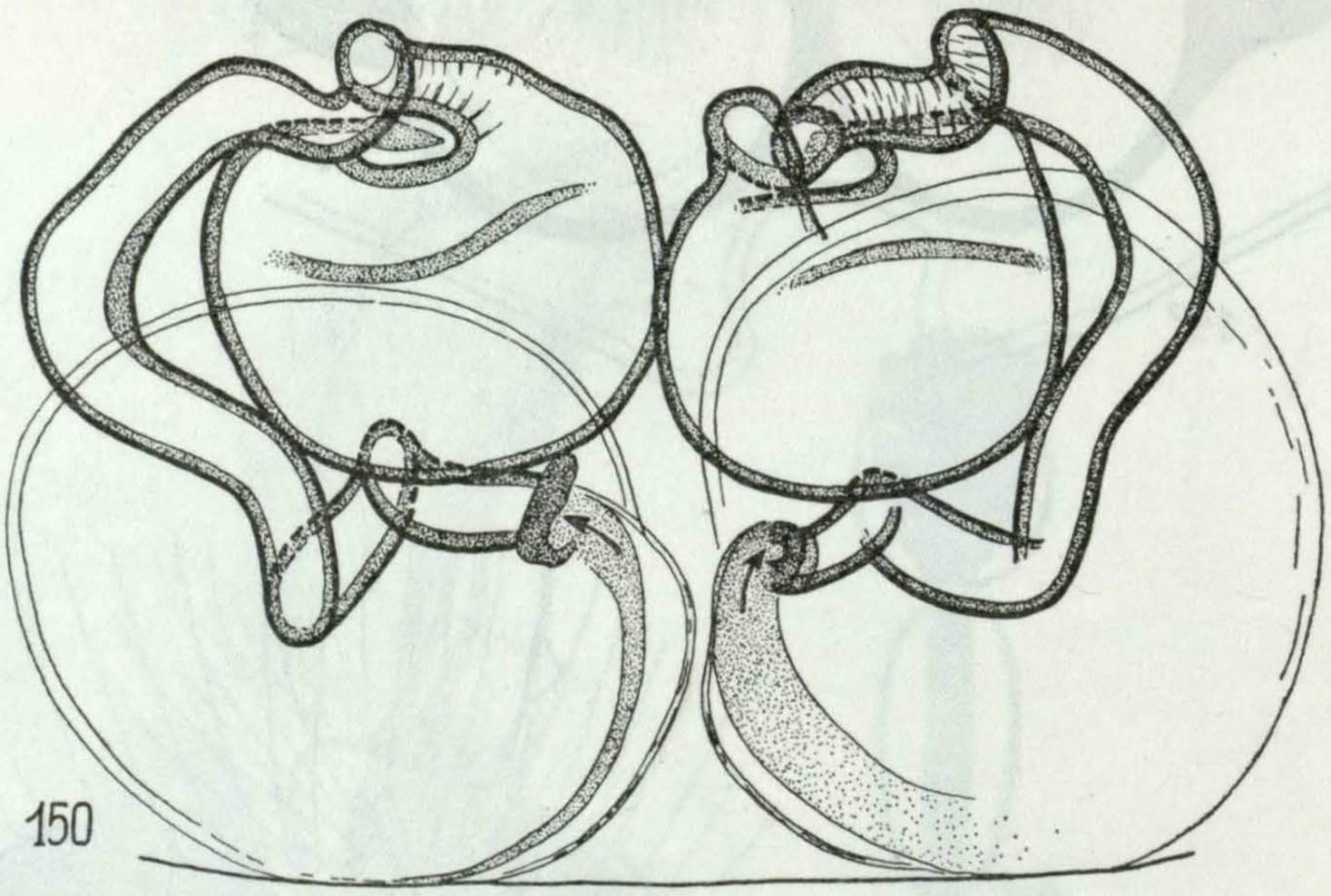


Figs. 142–145. ♂ *Epocilla calcarata* (KARSCH, 1880): palpal organ (142–144) and general appearance (145). Drawings made on the basis of type-specimen of *Plexippus calcaratus* KARSCH from Macassar.

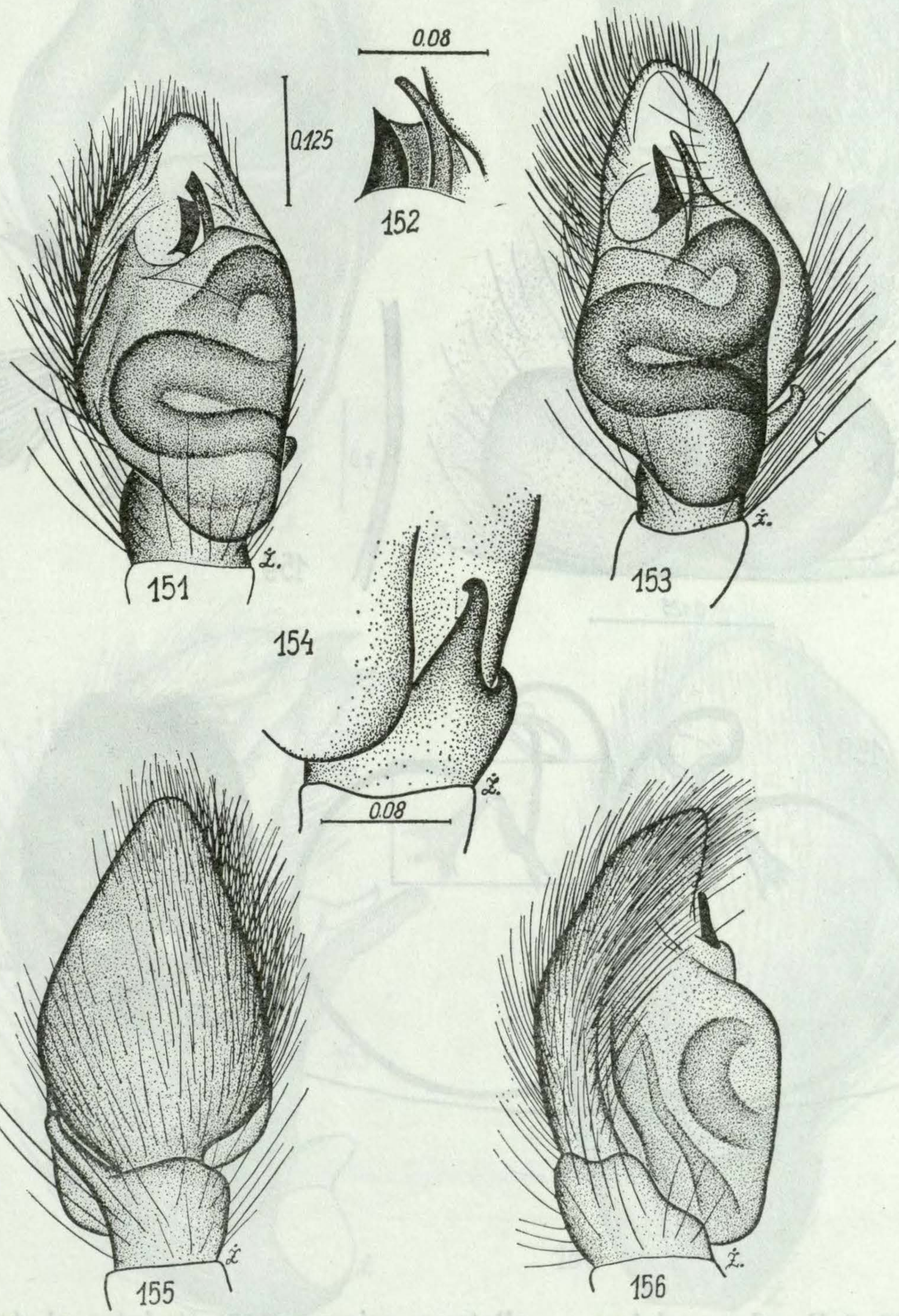


Figs. 146–148. ♀ *Epocilla calcarata* (KARSCH, 1880): epigyne (146, 148) and its internal structures (147).

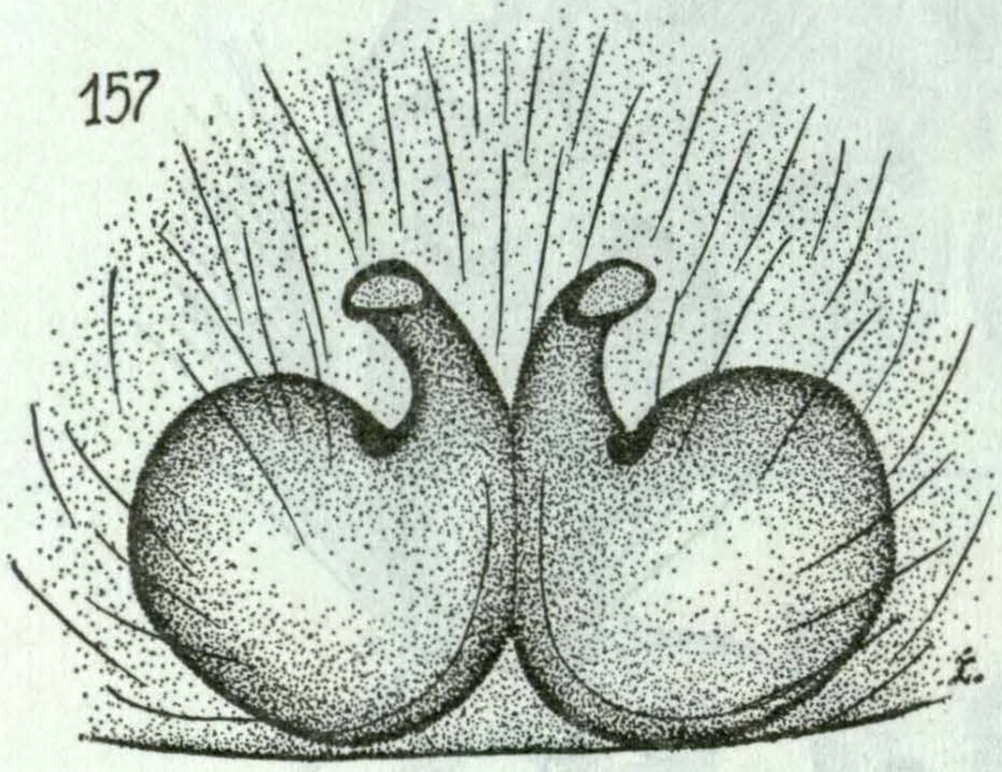


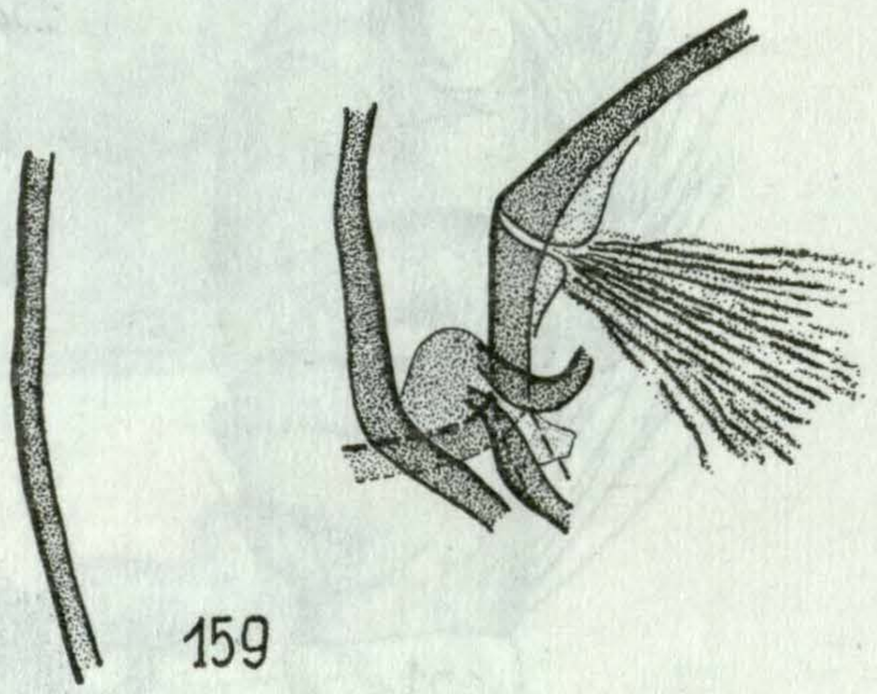


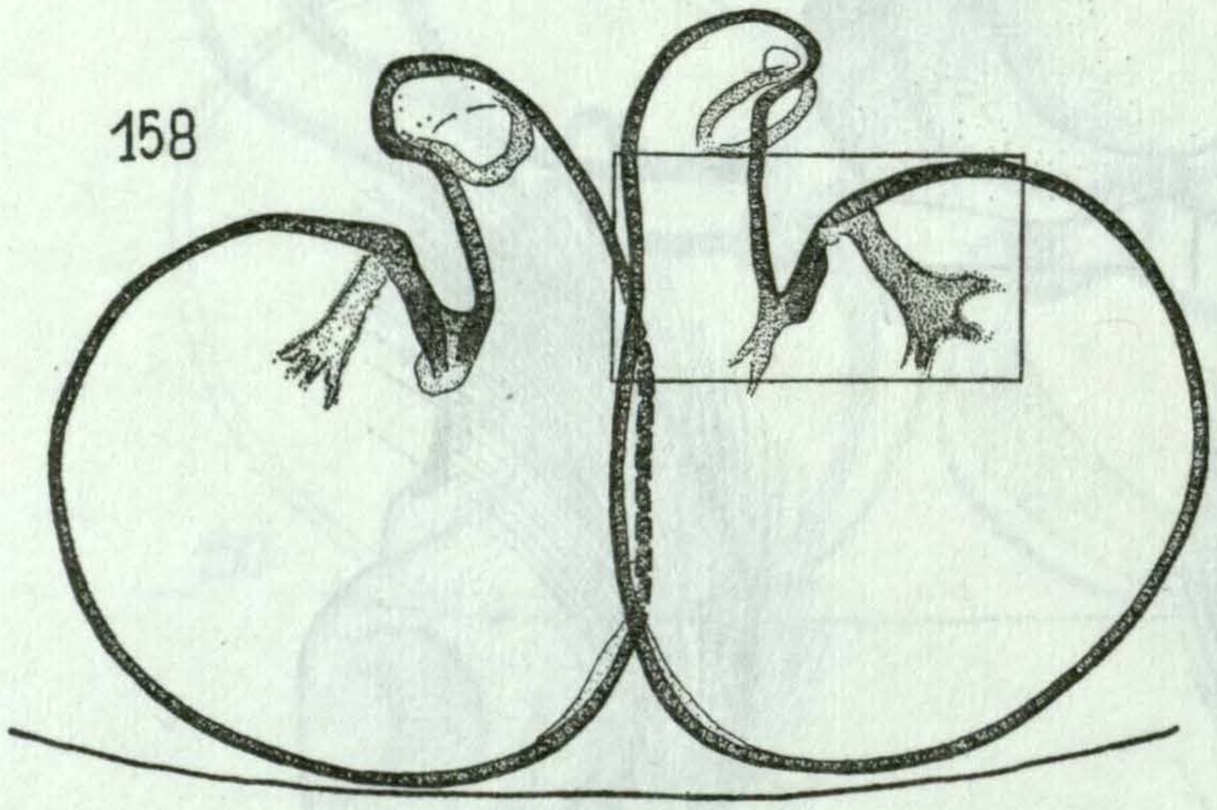
Figs. 149–150. ♀ *Euophrys cooki* sp. n., holotype: epigyne (149) and its internal structures (150).

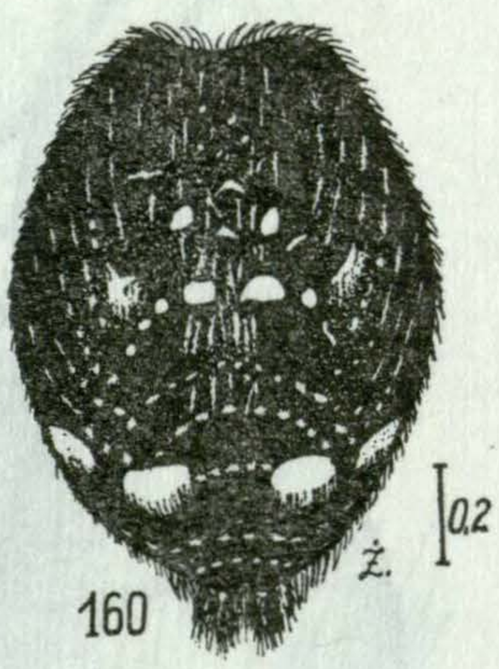


Figs. 151–156. ♂ *Euophrys poloi* sp. n., holotype: palpal organ.

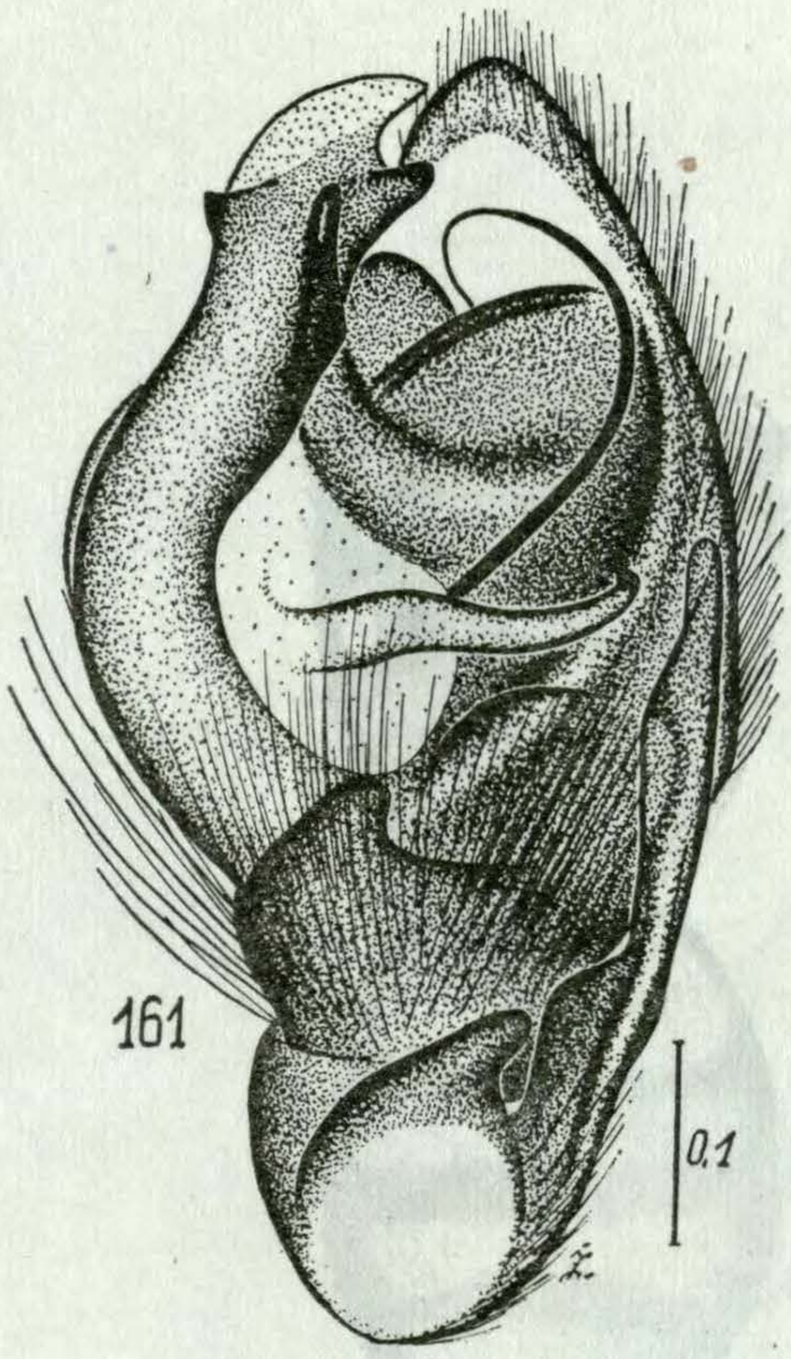


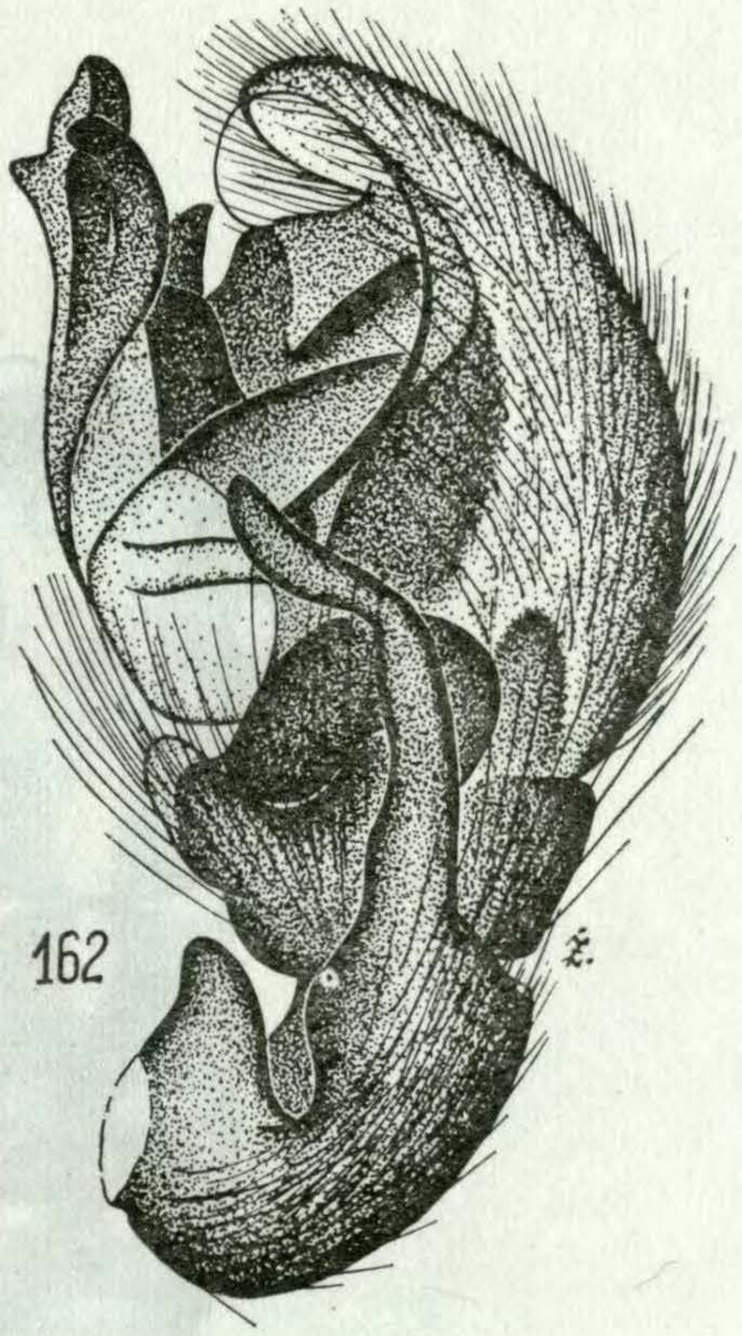


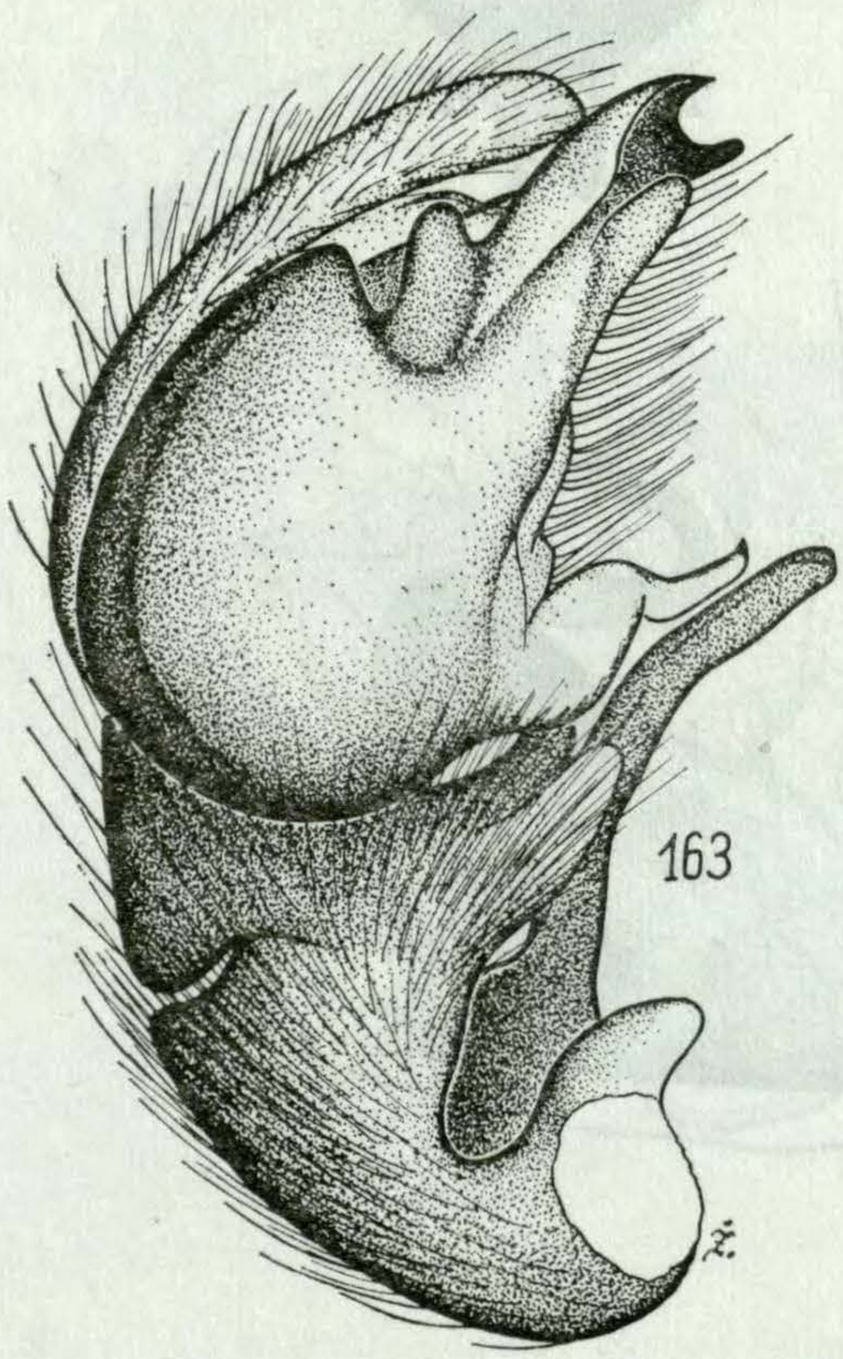


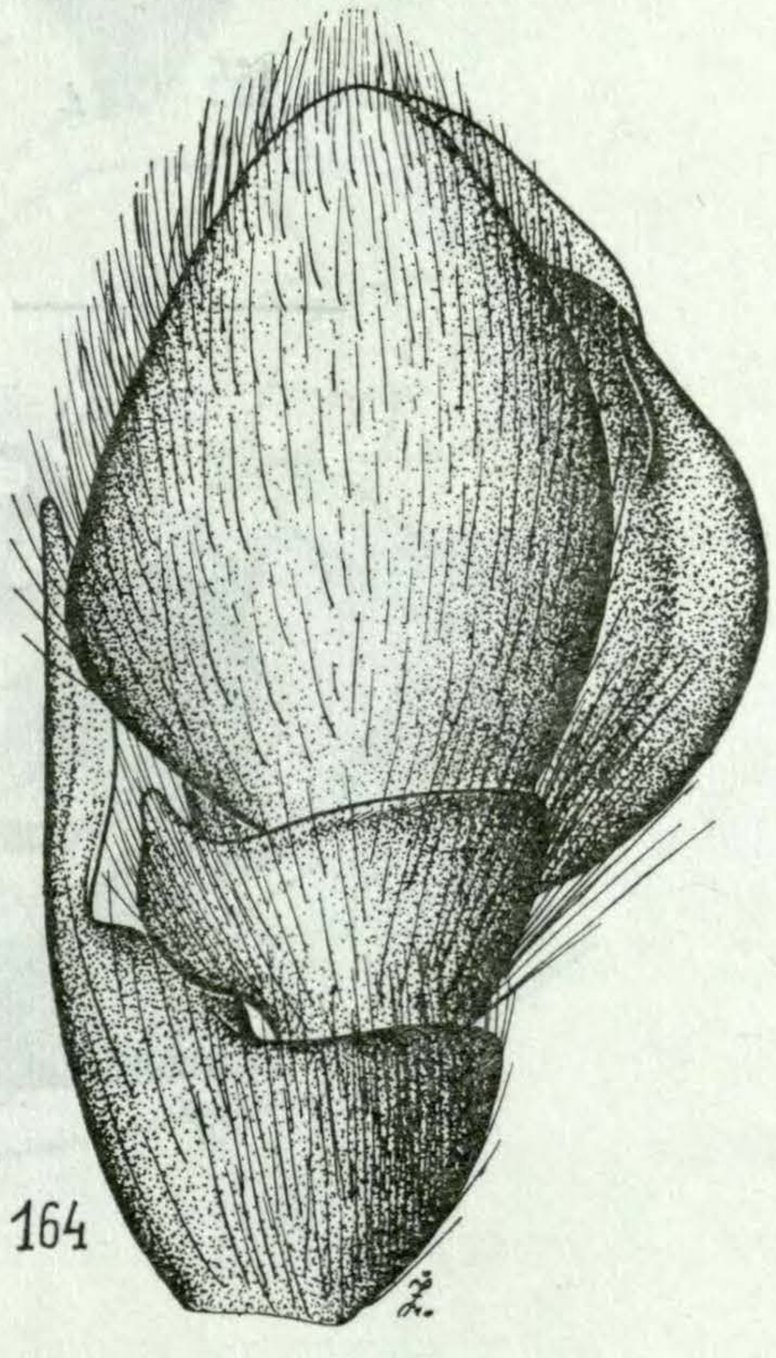


Figs. 157–160. ♀ *Euophrys poloi* sp. n., allotype: epigyne (157), its internal structures (158, 159) and abdominal pattern (160).

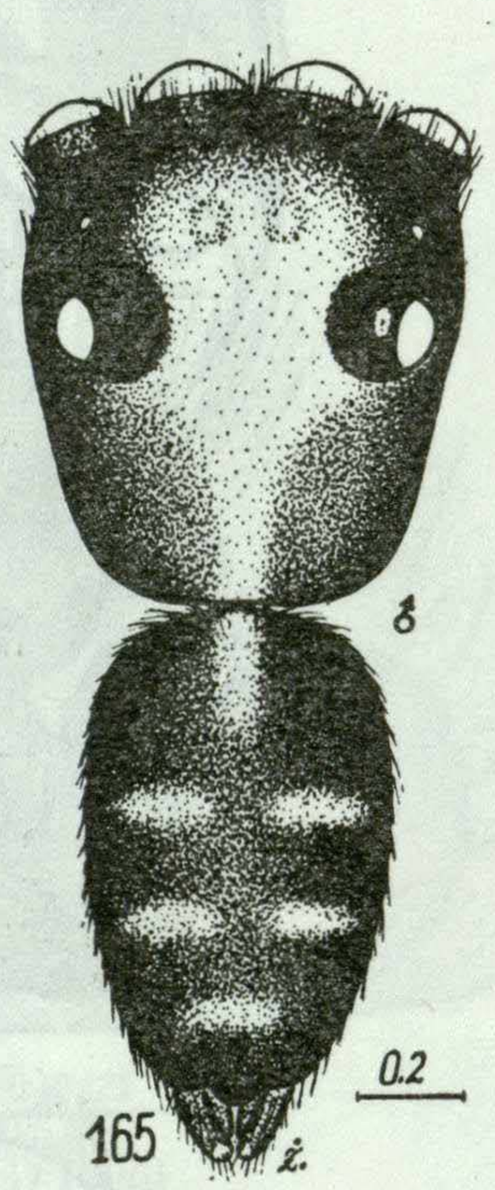


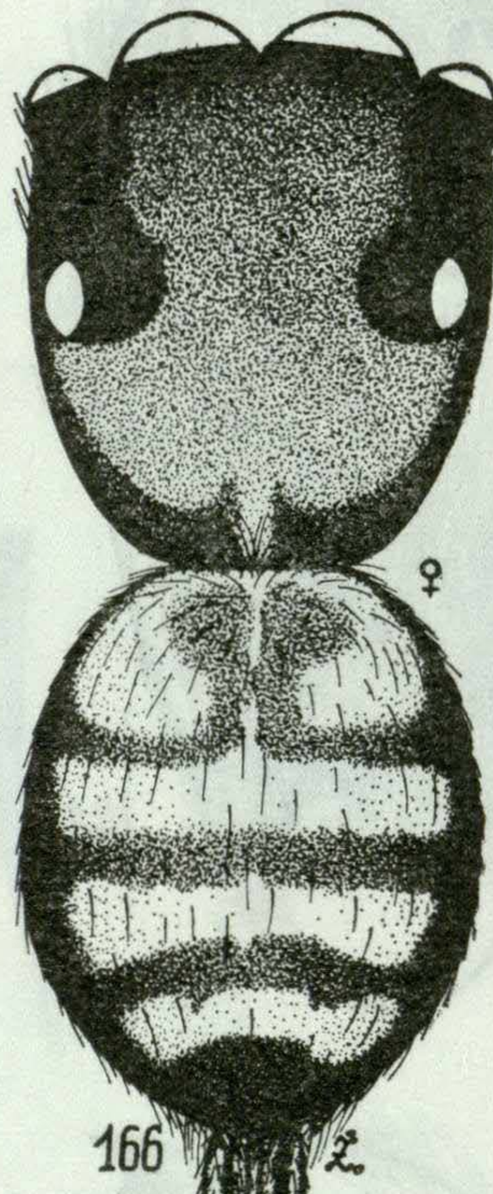


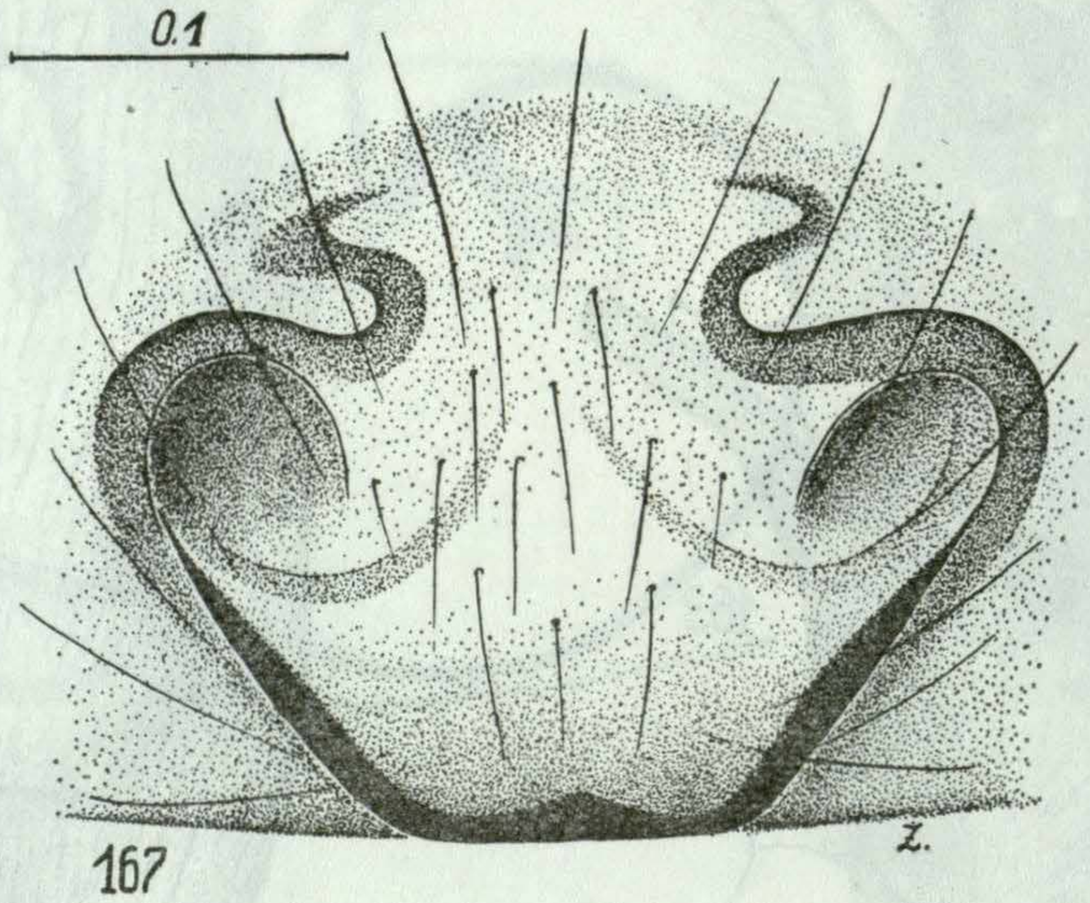




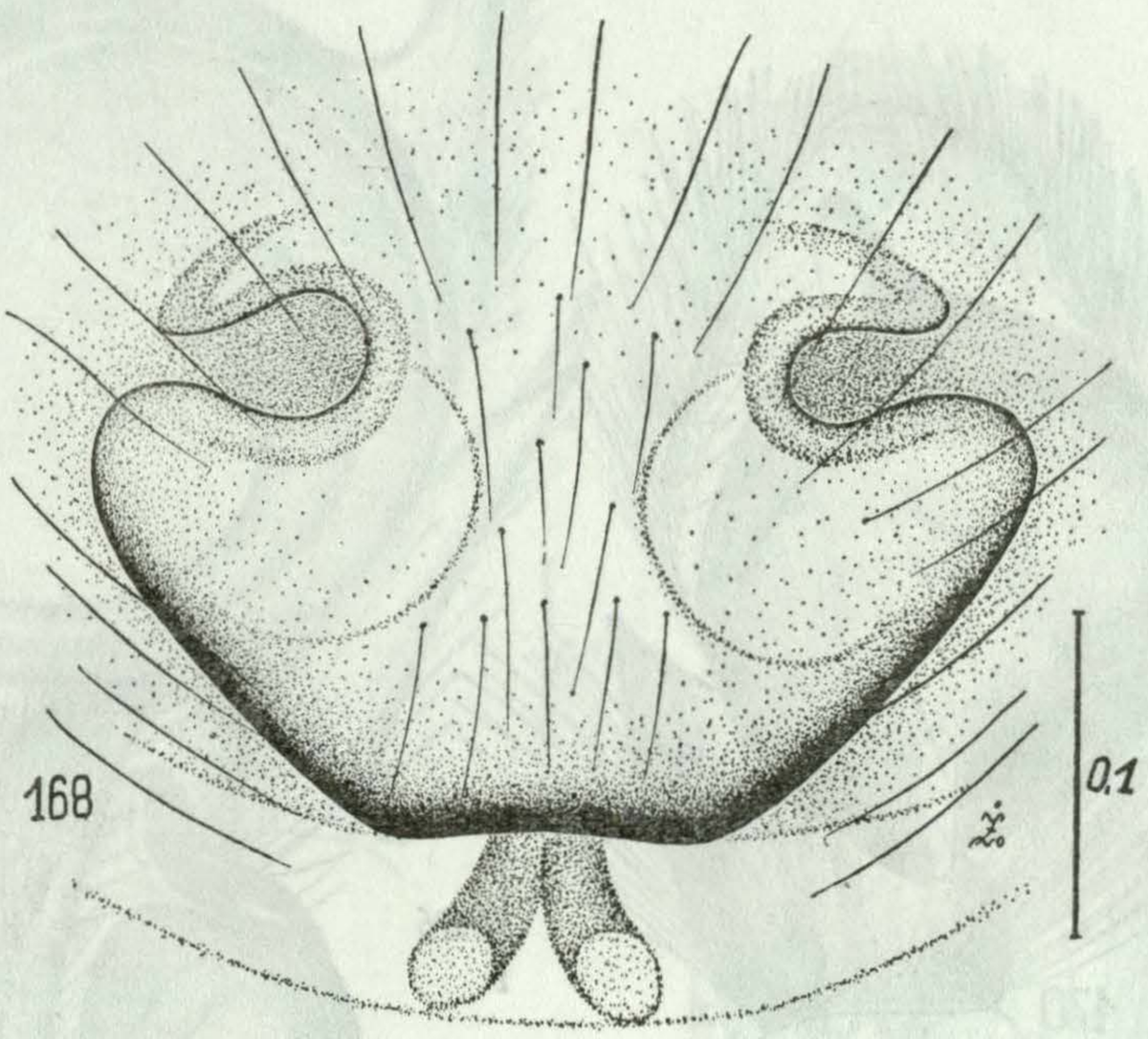
Figs. 161–164. ♂ *Eupoa prima* sp. n., holotype: palpal organ.

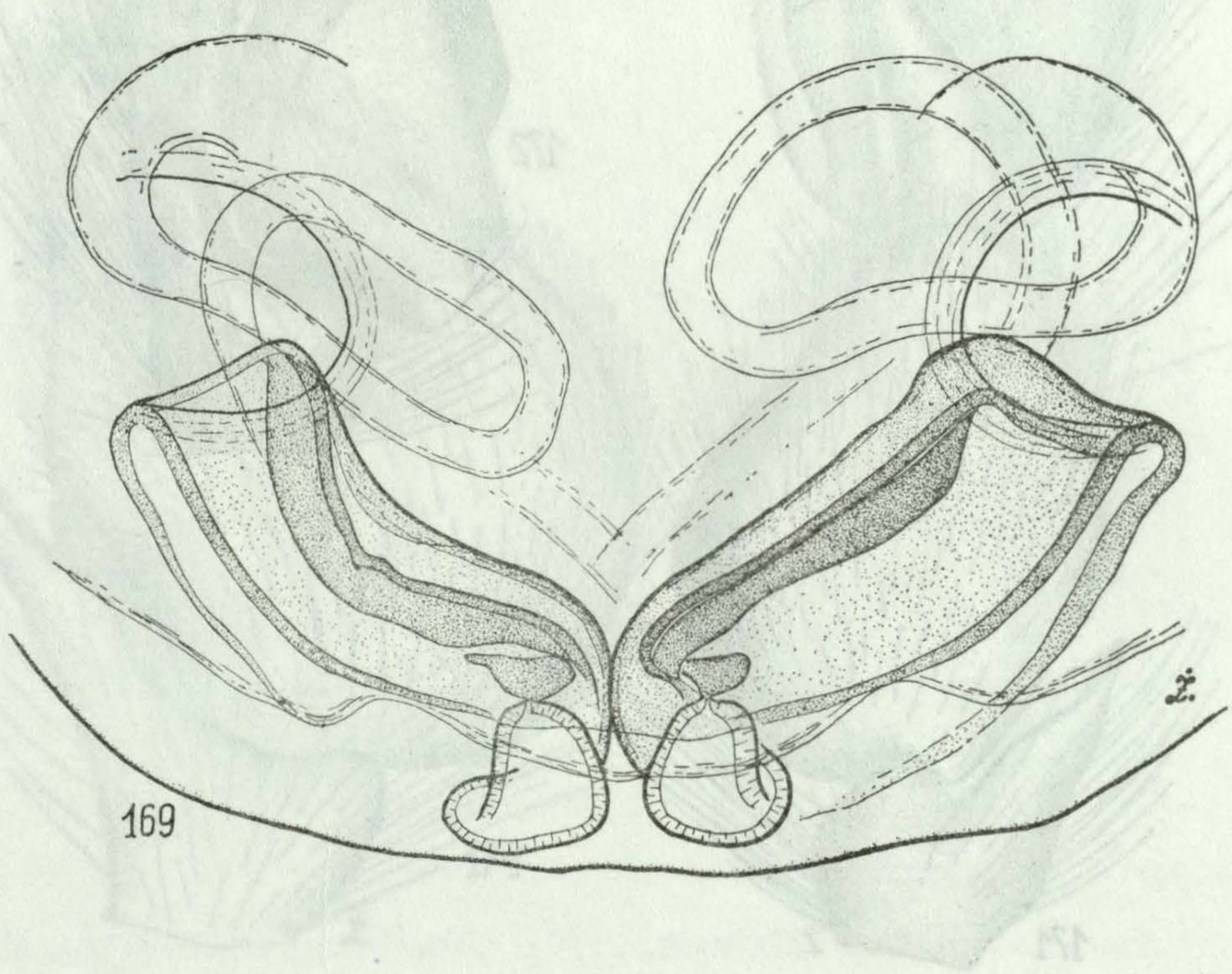




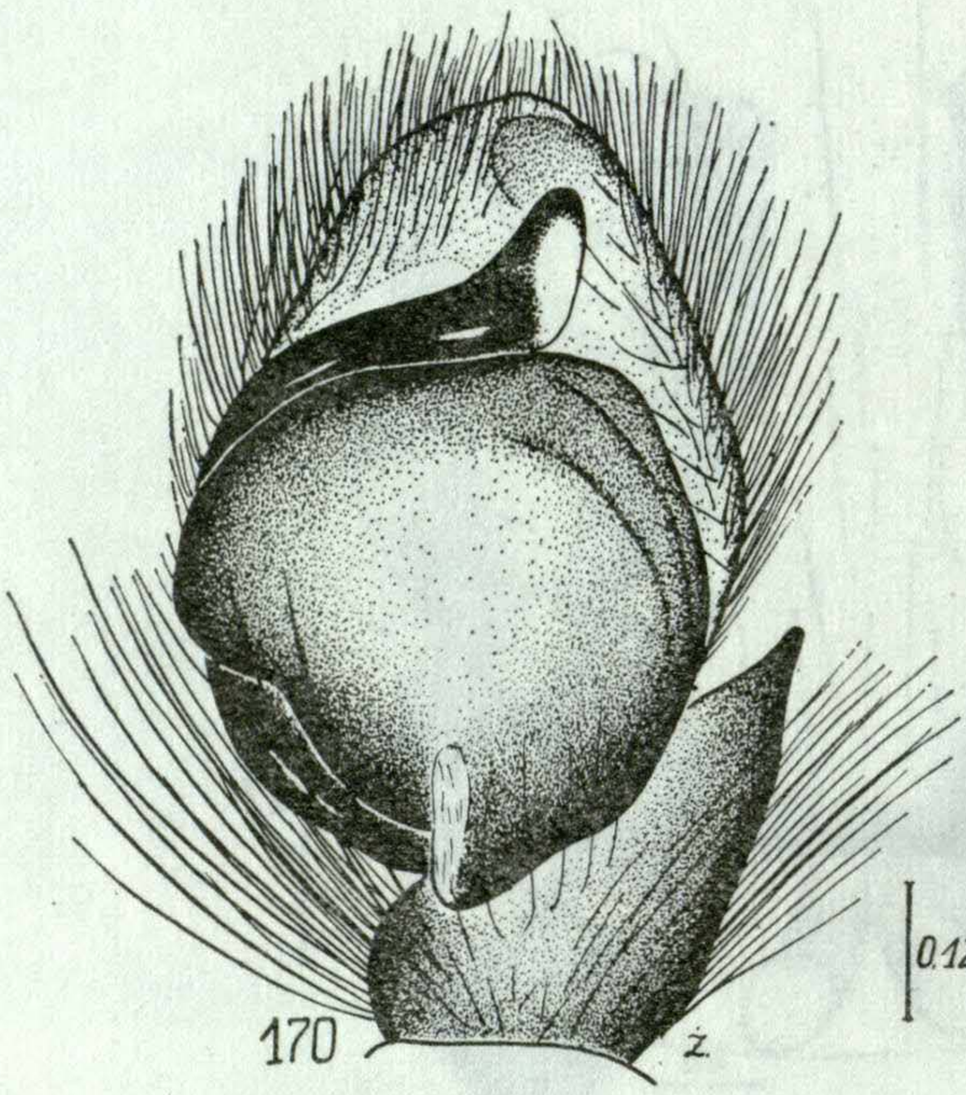


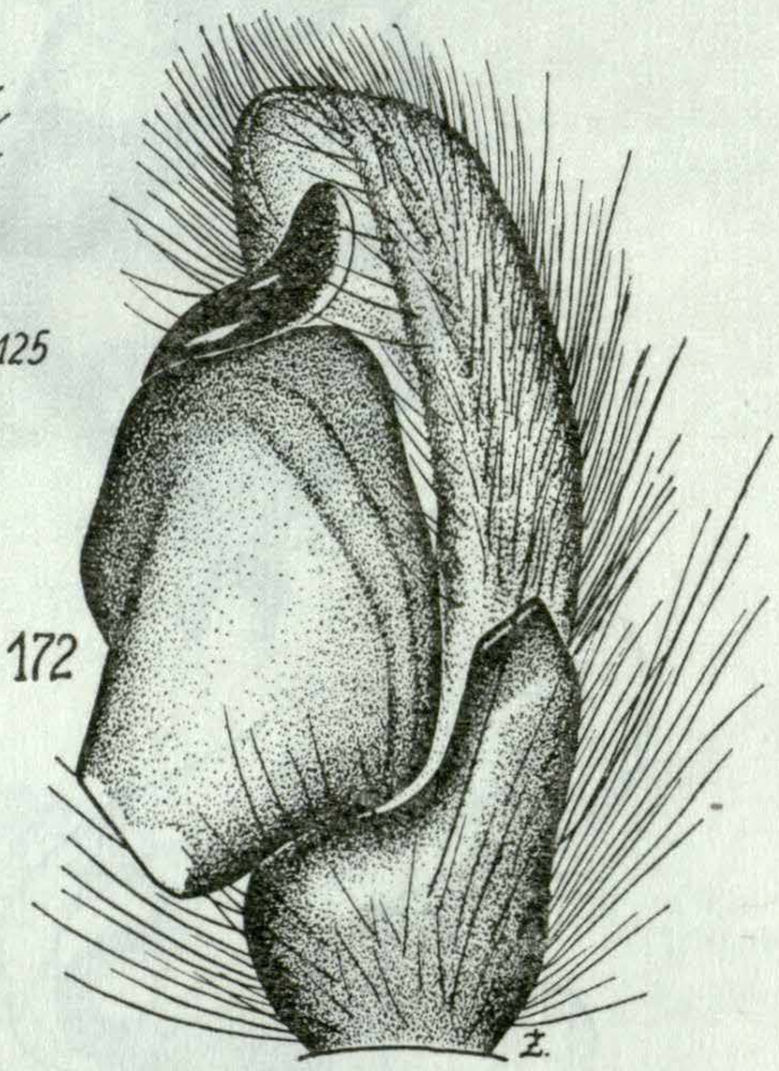
Figs. 165–167. ♂, ♀ *Eupoa prima* sp. n.: general appearance of holotype (165) and allotype (166), epigyne of paratype (167).

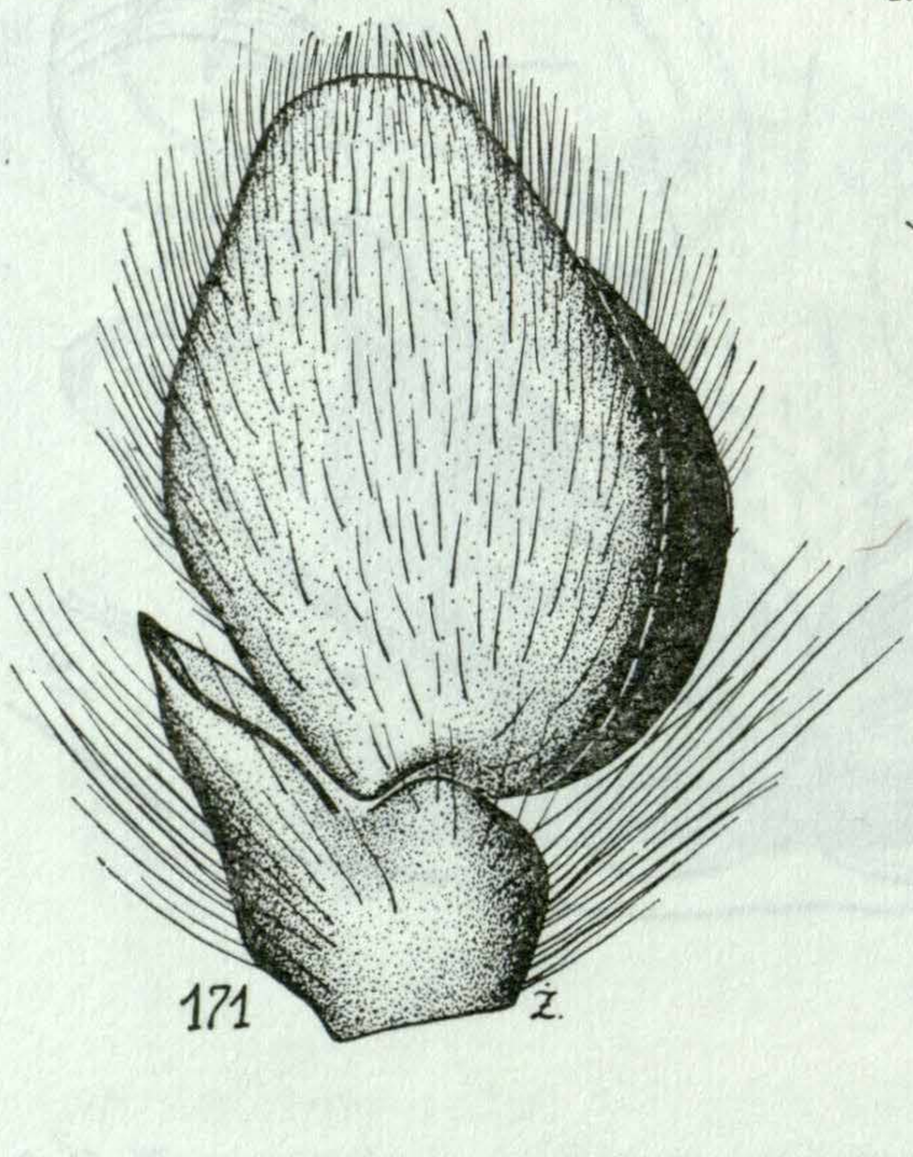




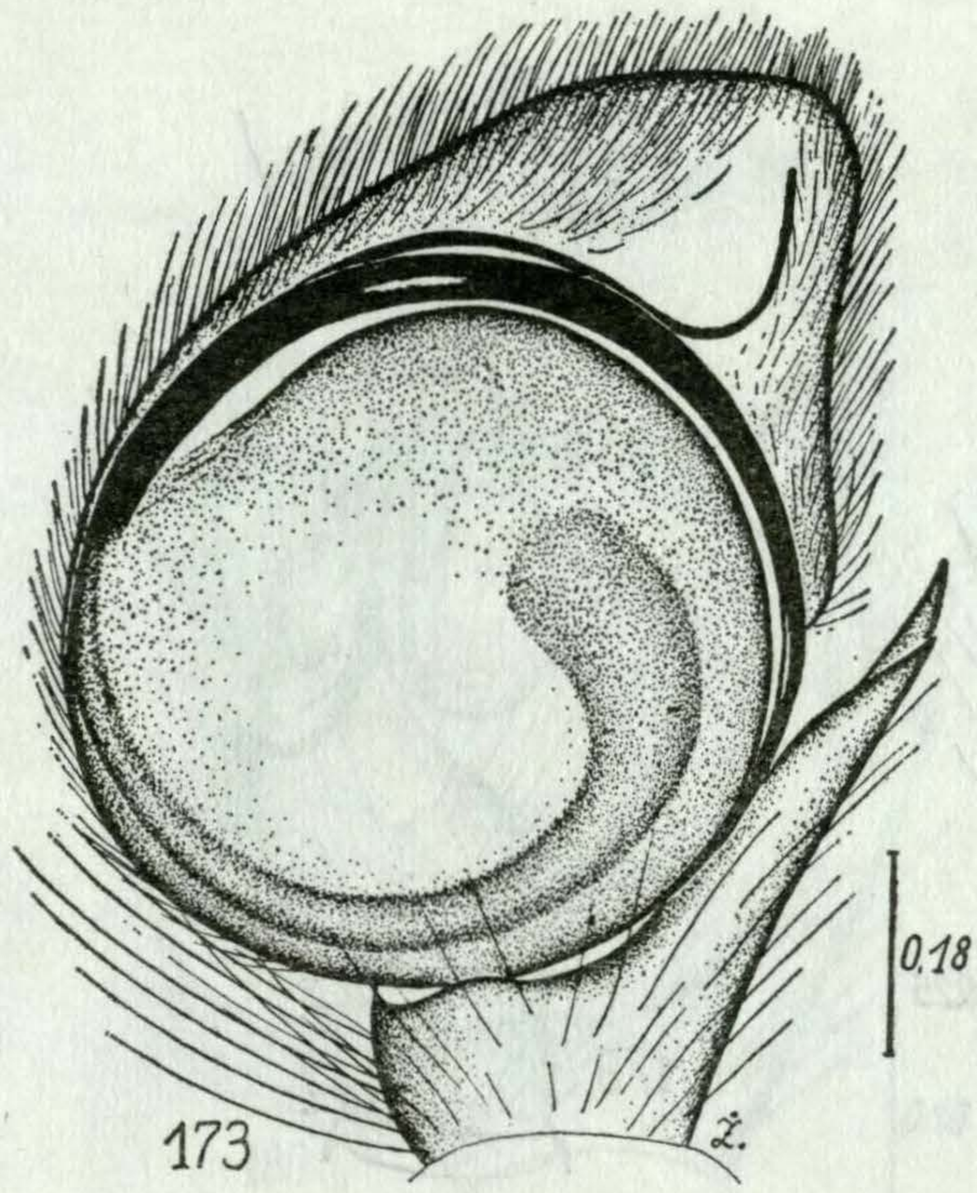
Figs. 168–169. ♀ ***Eupoa prima*** **sp. n., allotype: epigyne (168) and its internal structures (169).**



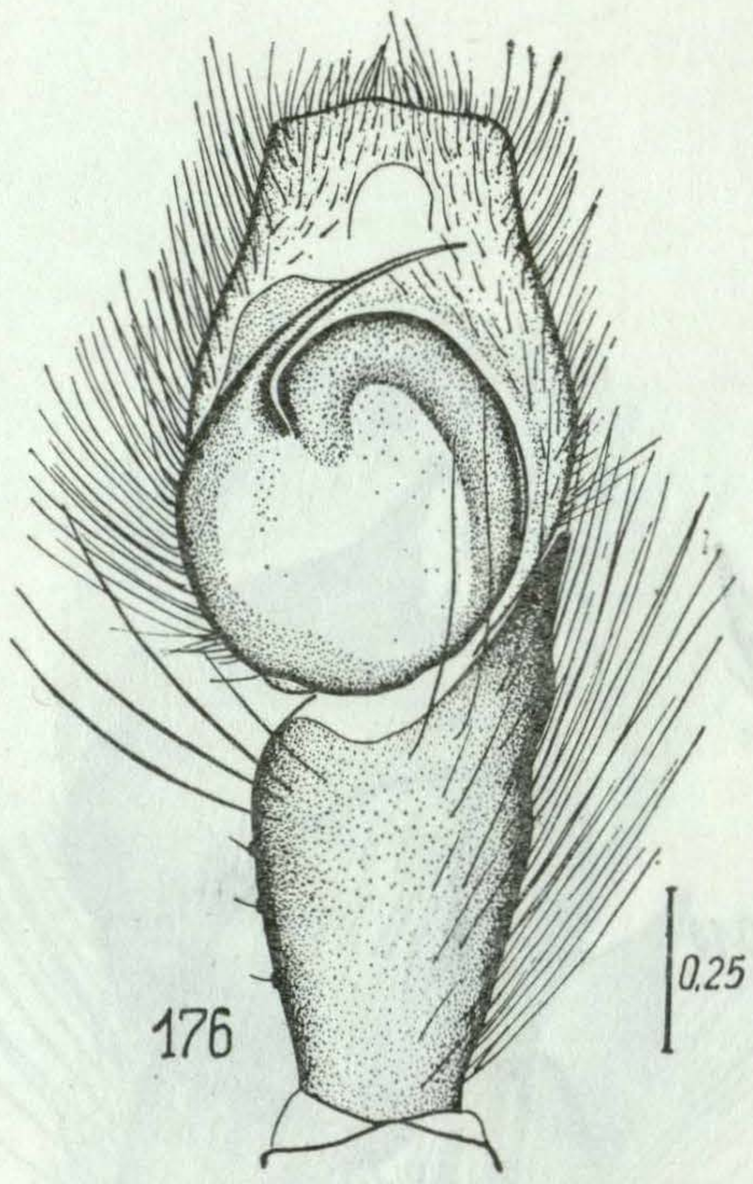


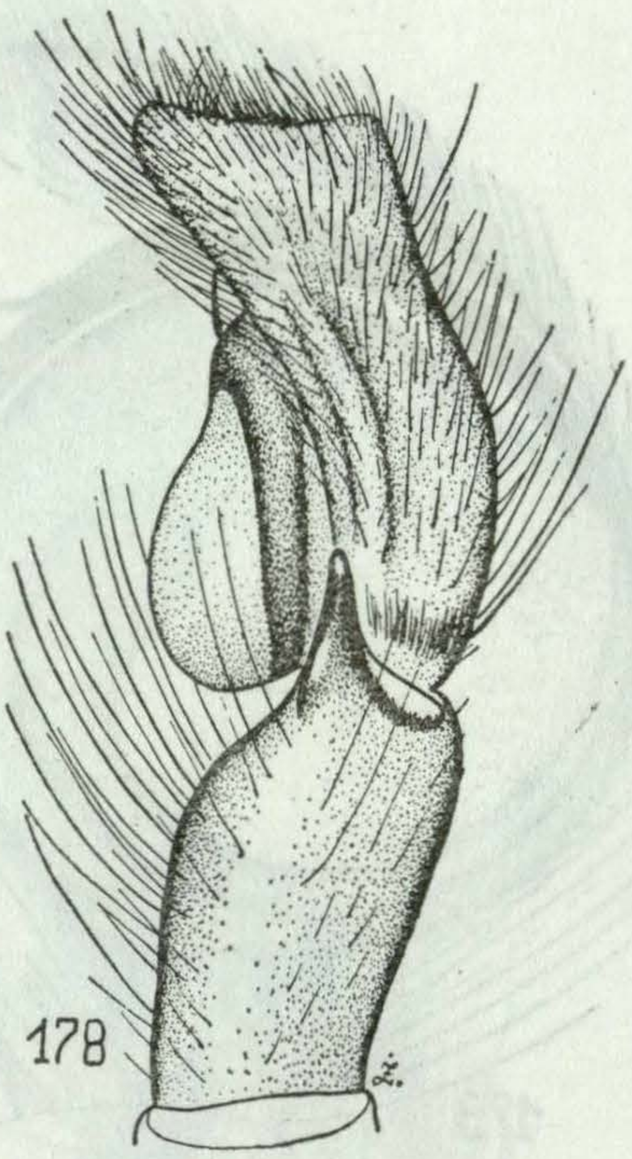


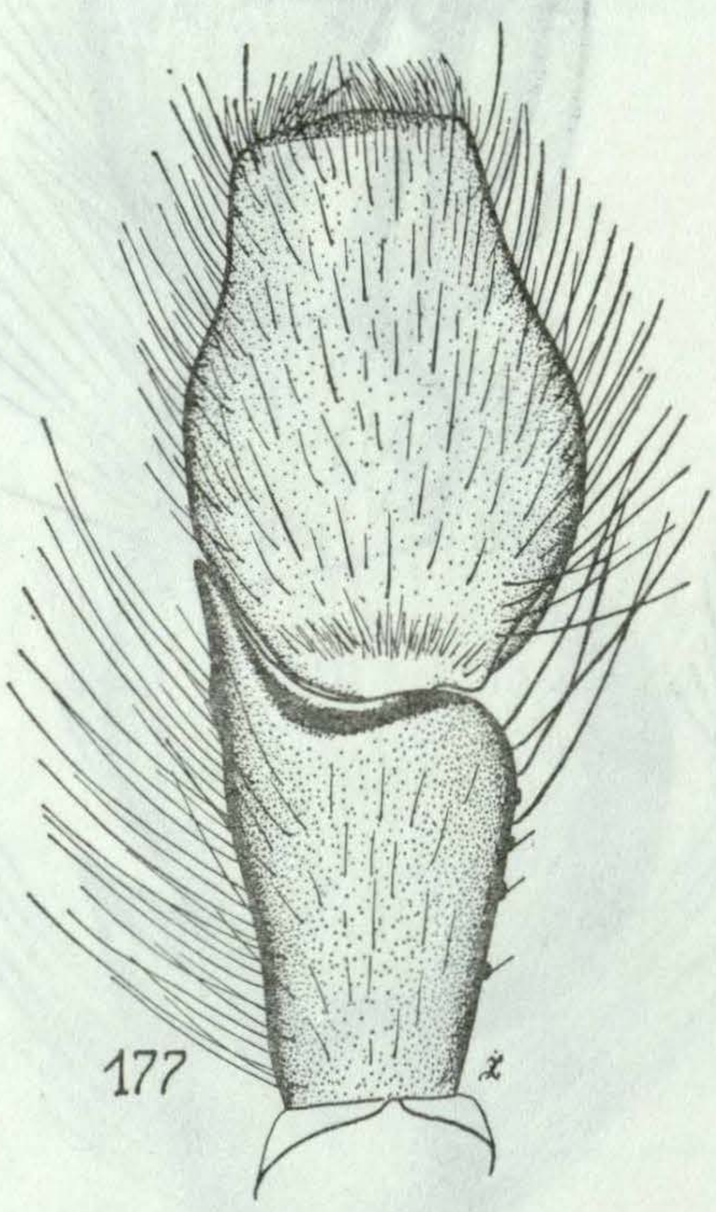
Figs. 170–172. ♂ *Evarcha arcuata* (CLERCK, 1758): palpal organ.

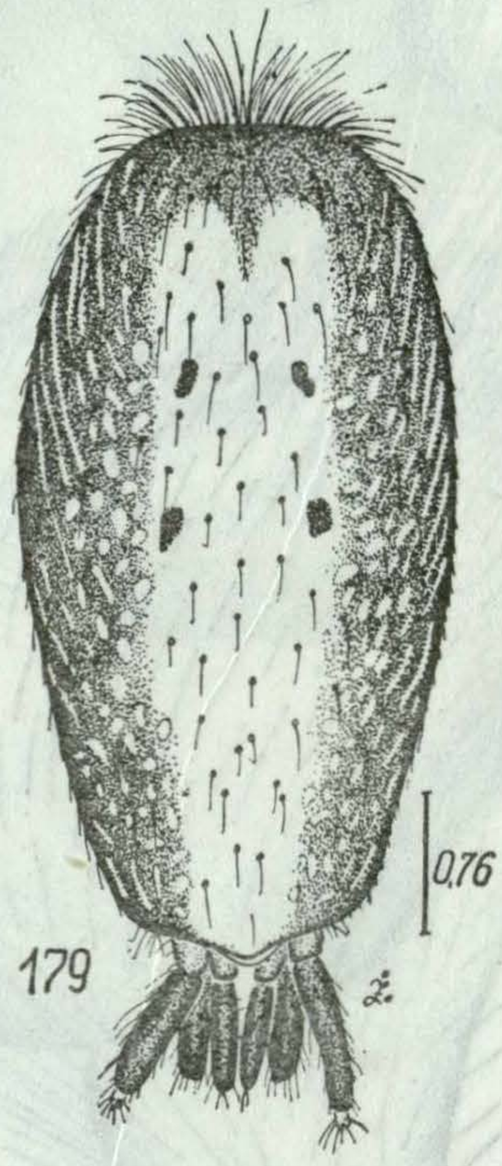


Figs. 173–175. ♂ *Evarcha bulbosa* sp. n., holotype: palpal organ.

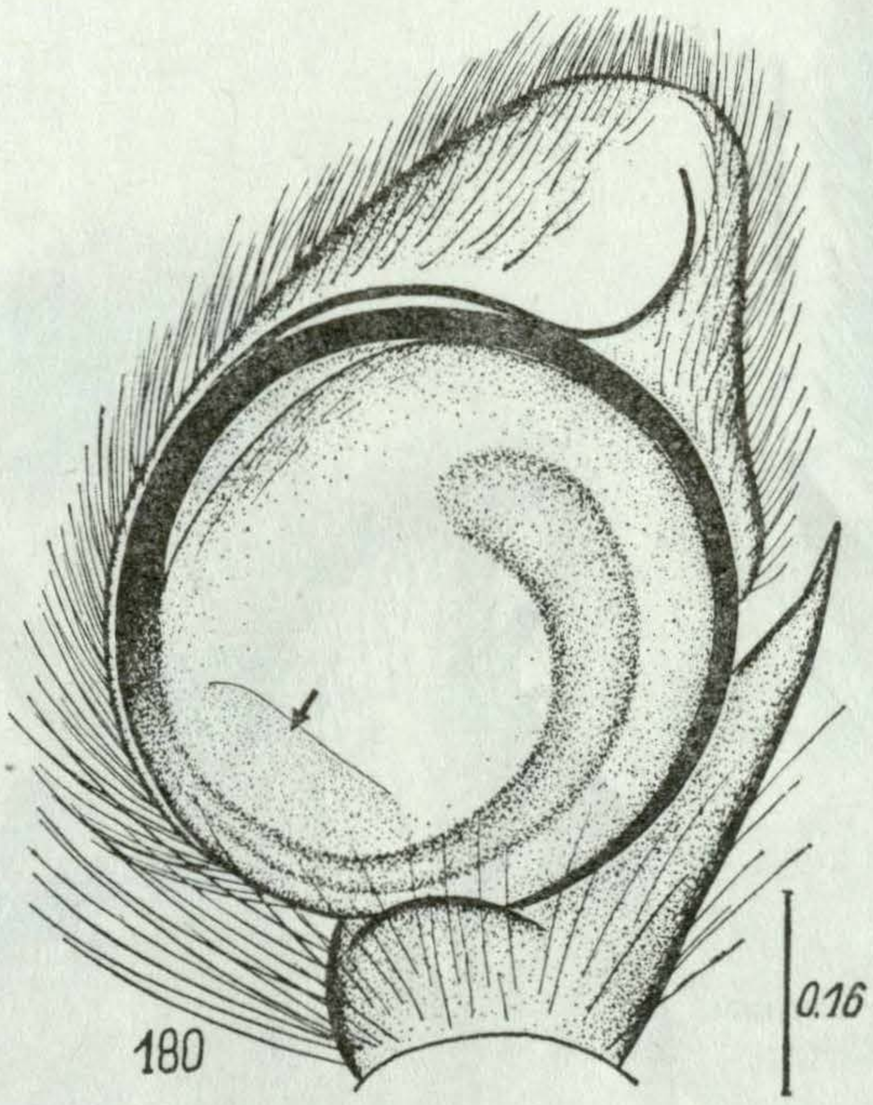


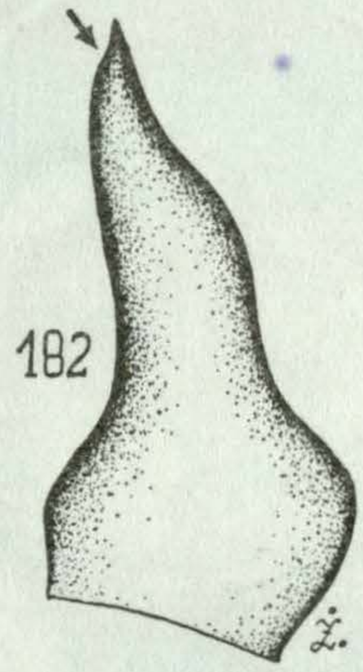


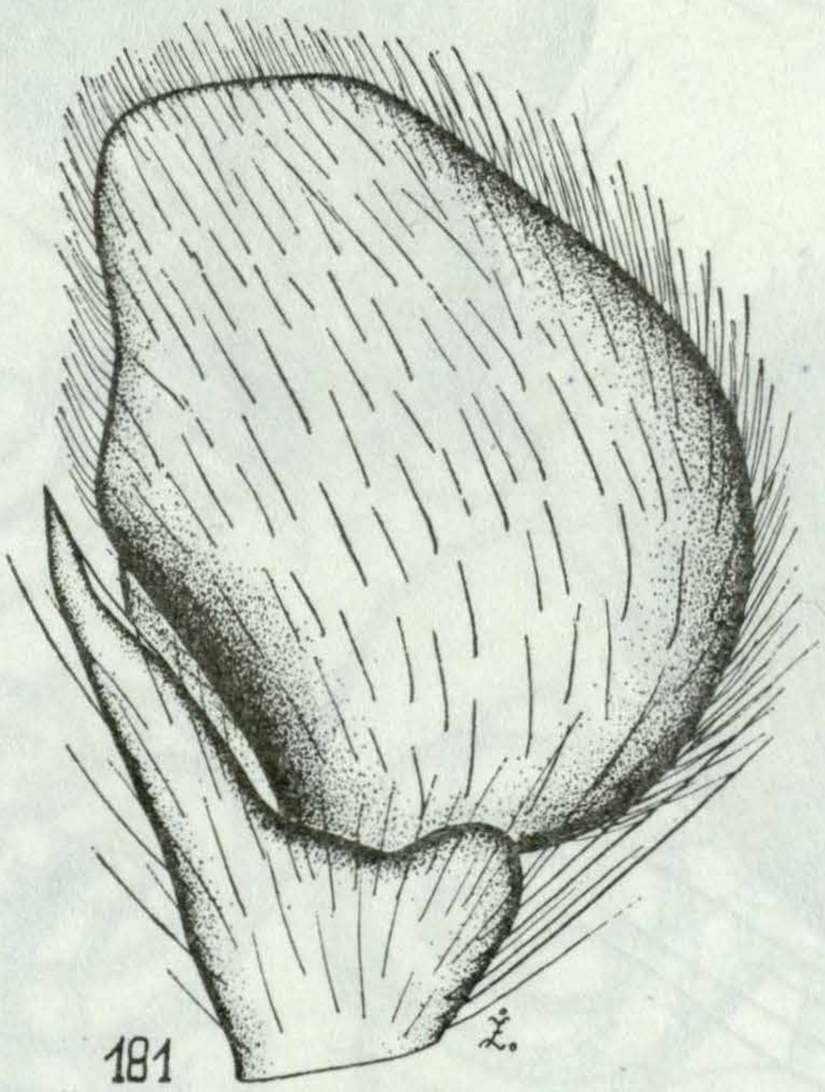


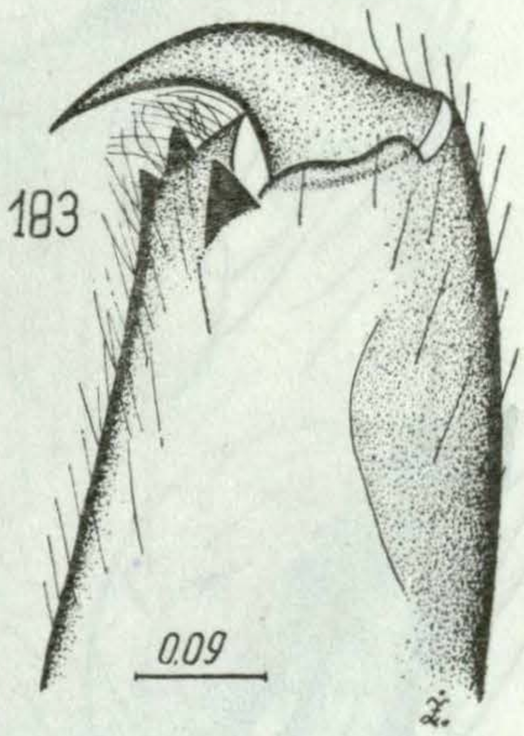


Figs. 176–179. ♂ *Evarcha crassipes* (KARSCH, 1881): palpal organ (176–178), abdominal pattern (179).

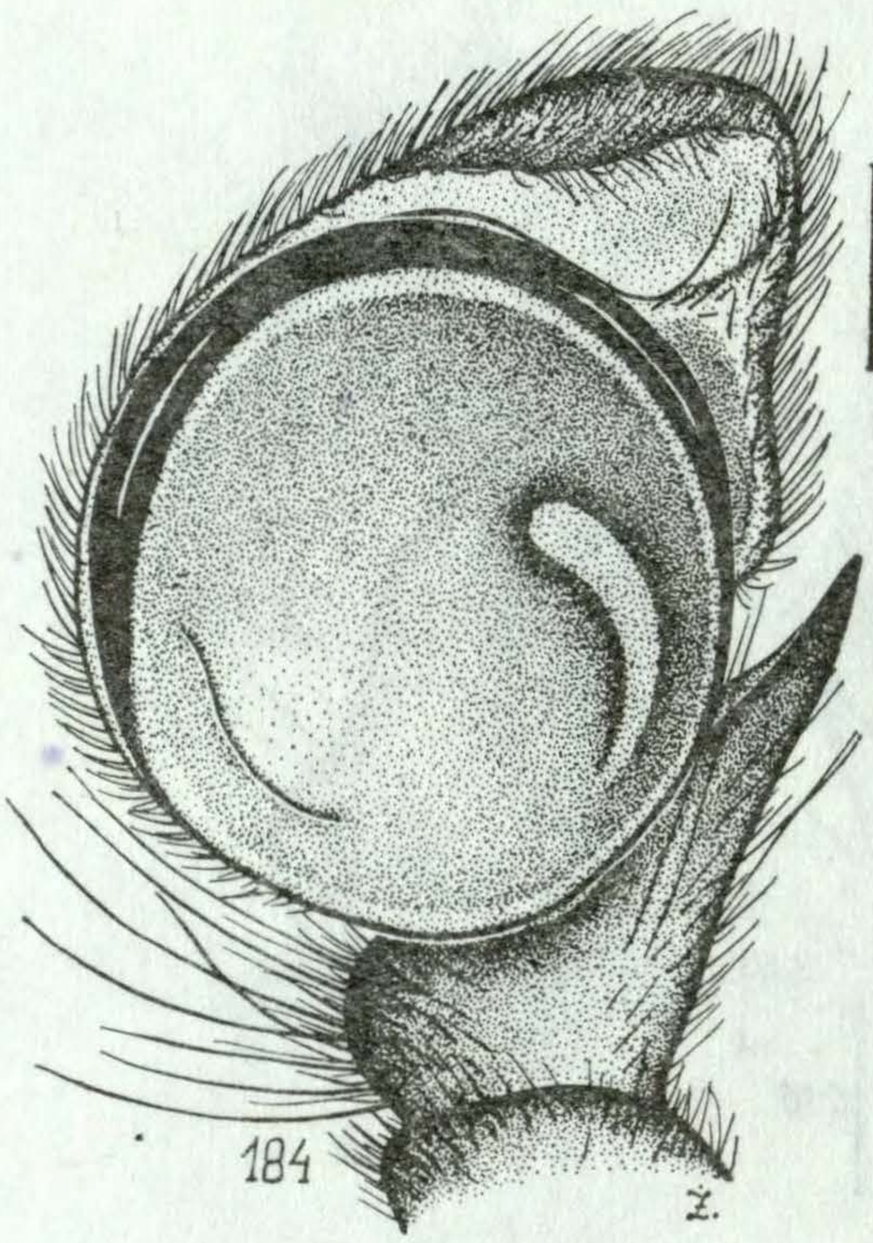


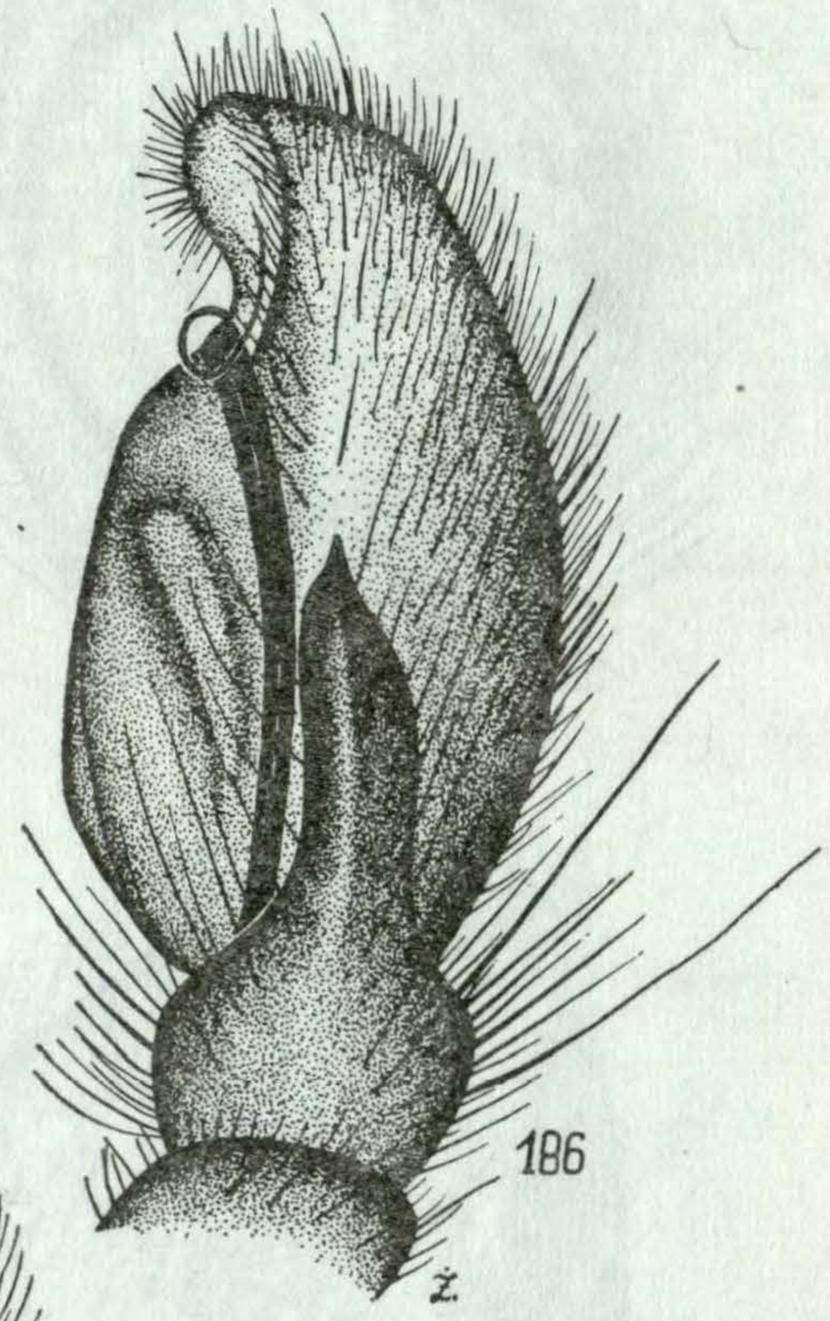


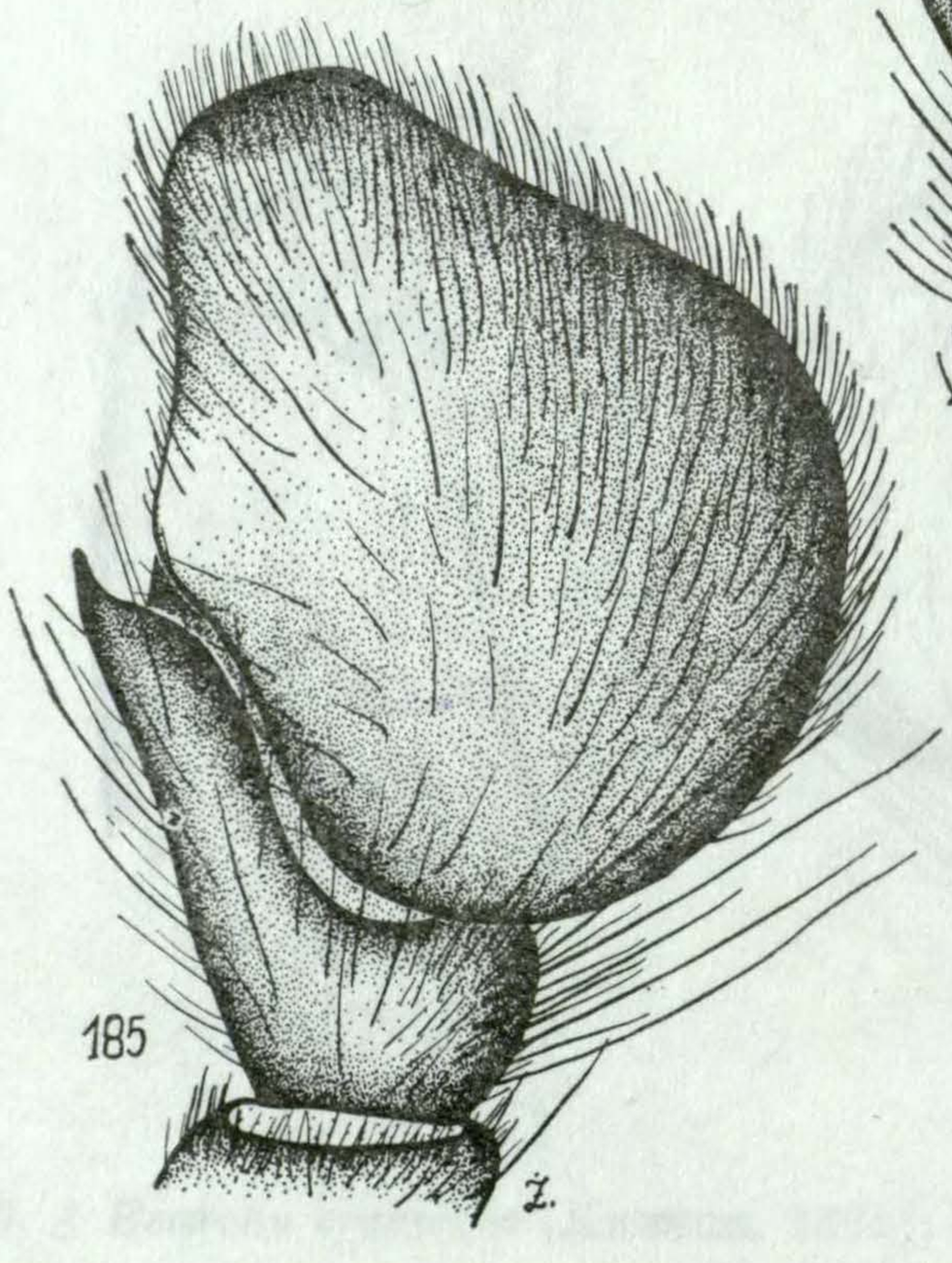




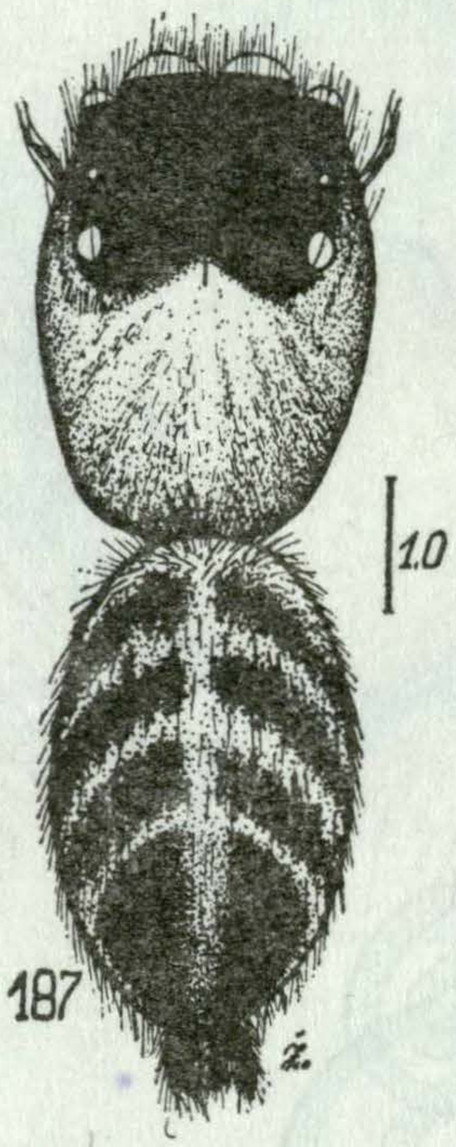
Figs. 180–183. ♂ *Evarcha pococki* sp. n., holotype: palpal organ (180–182) and cheliceral dentition (183).

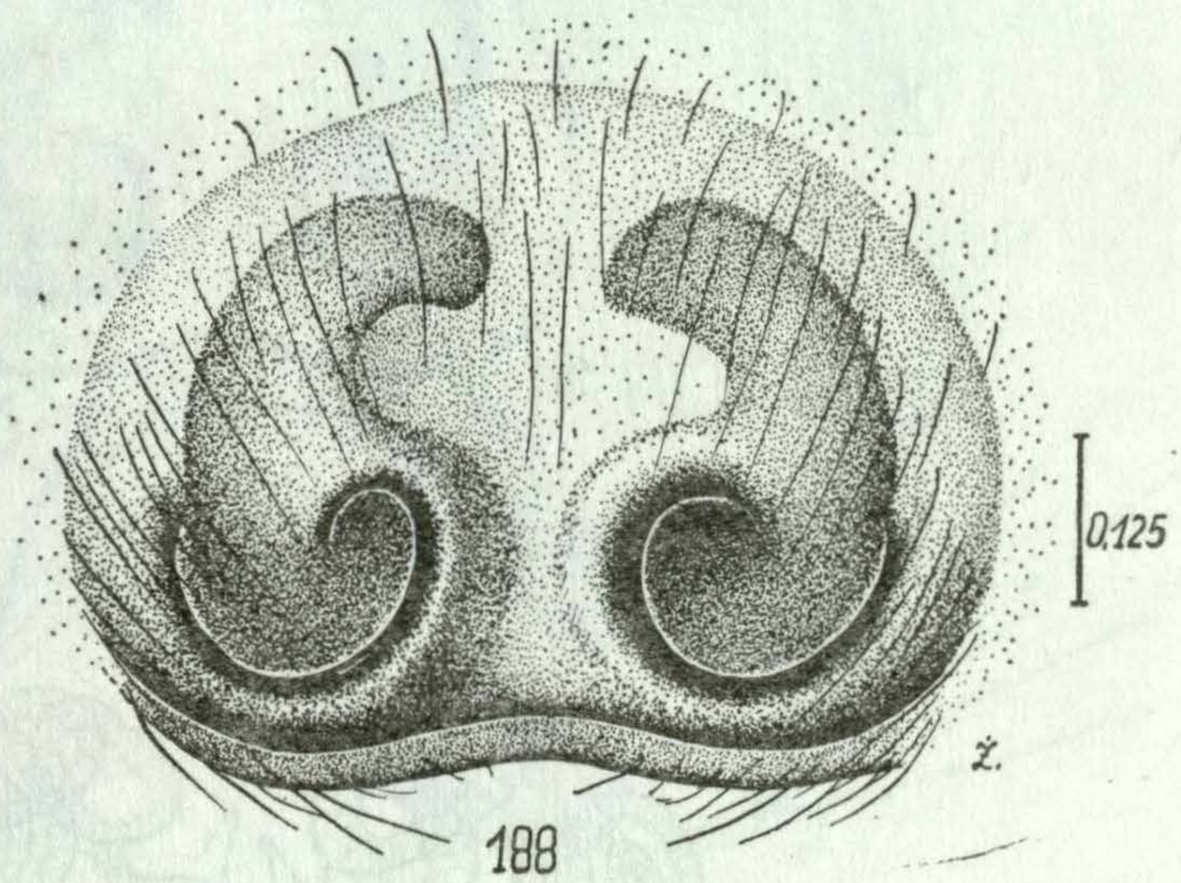


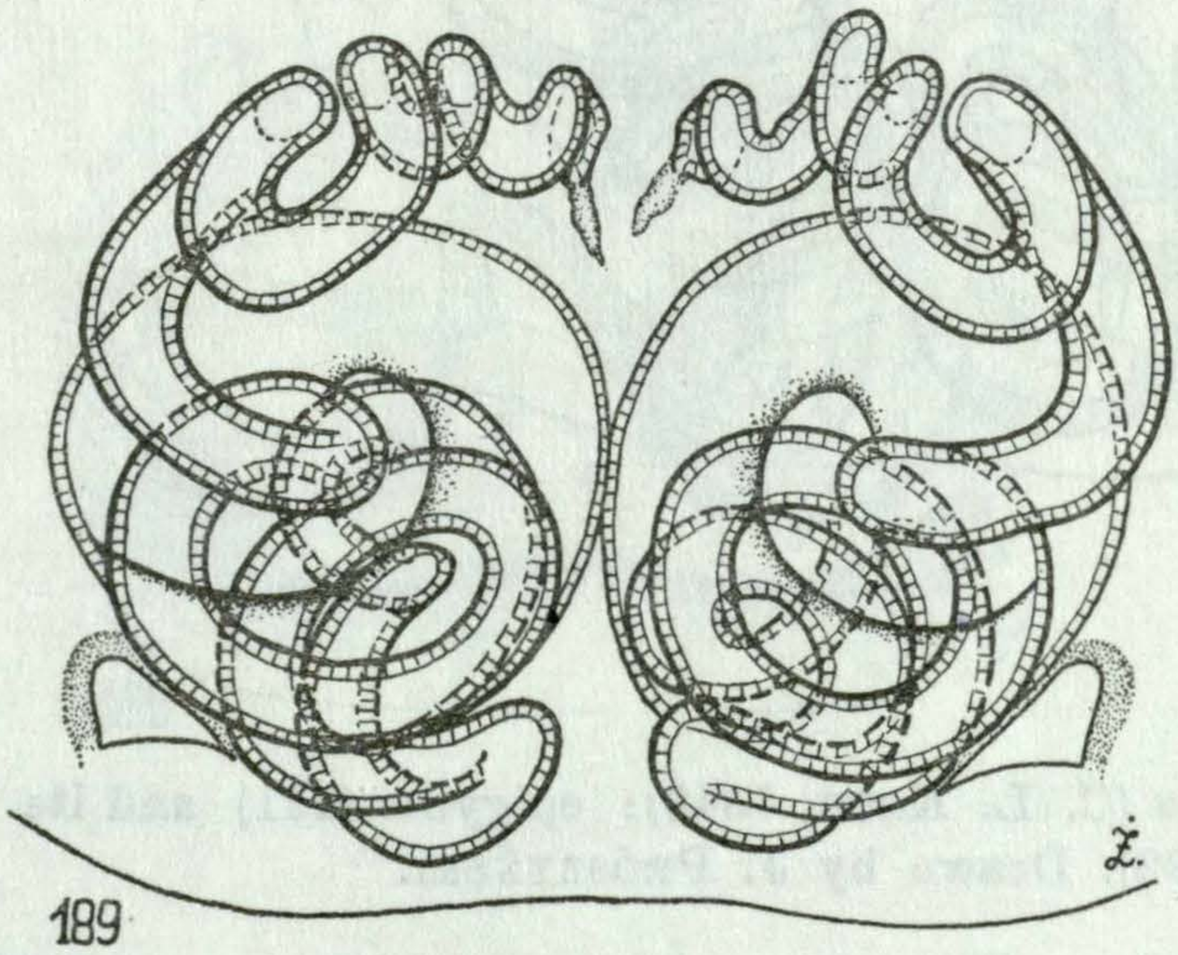


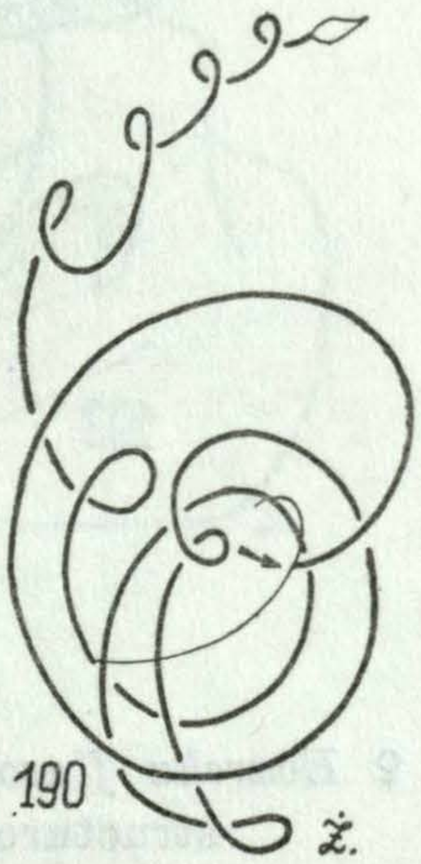


Figs. 184–186. ♂ *Evarcha pococki* sp. n., paratype: palpal organ. Specimen from Bhutan.

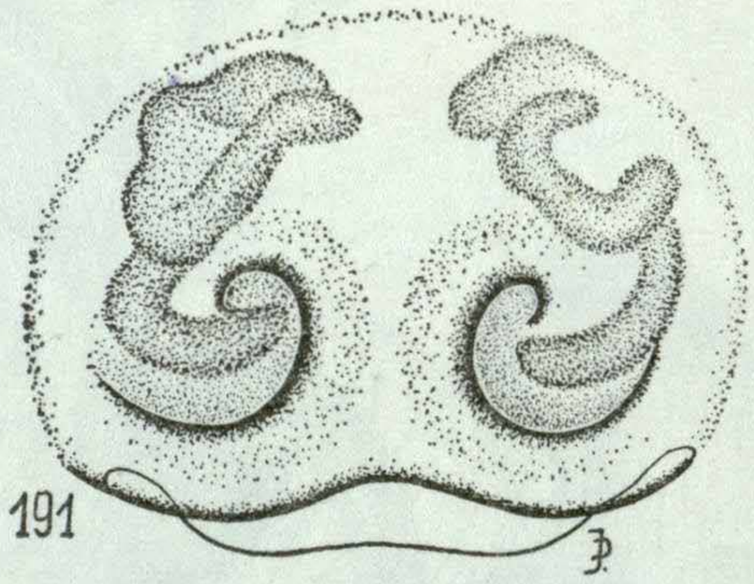


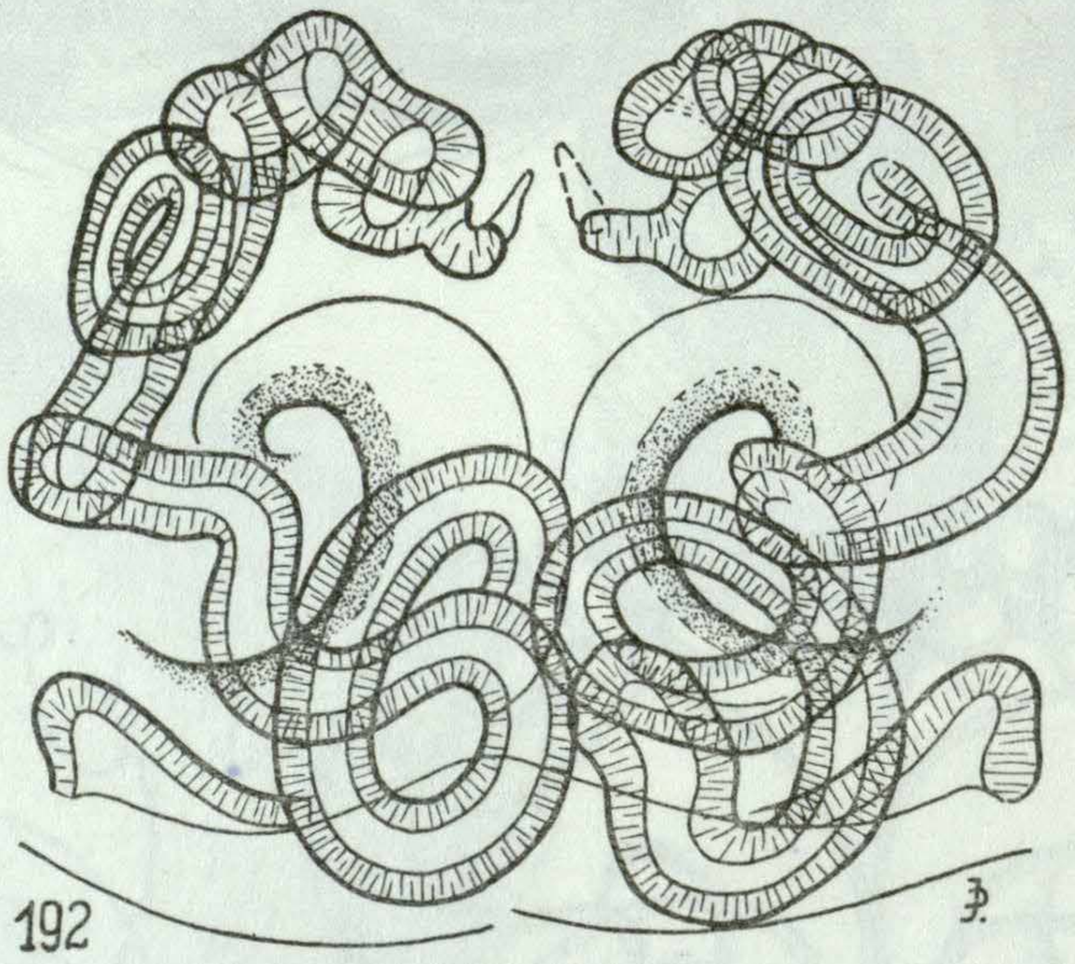




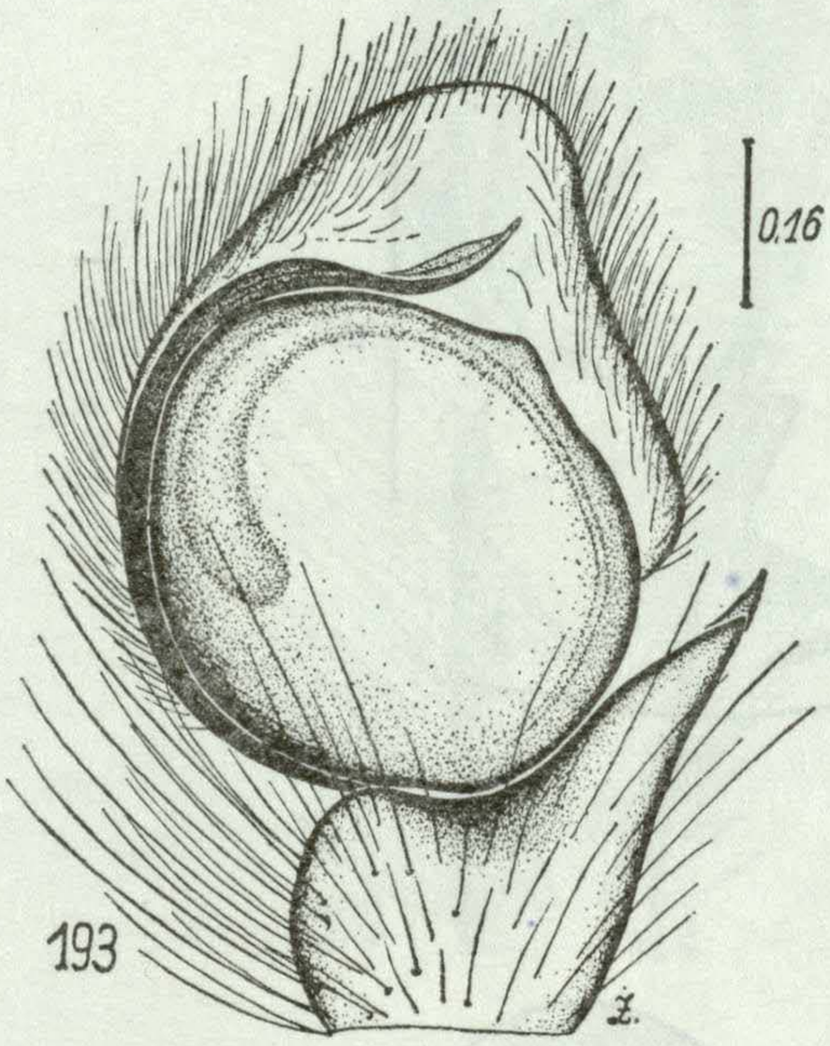


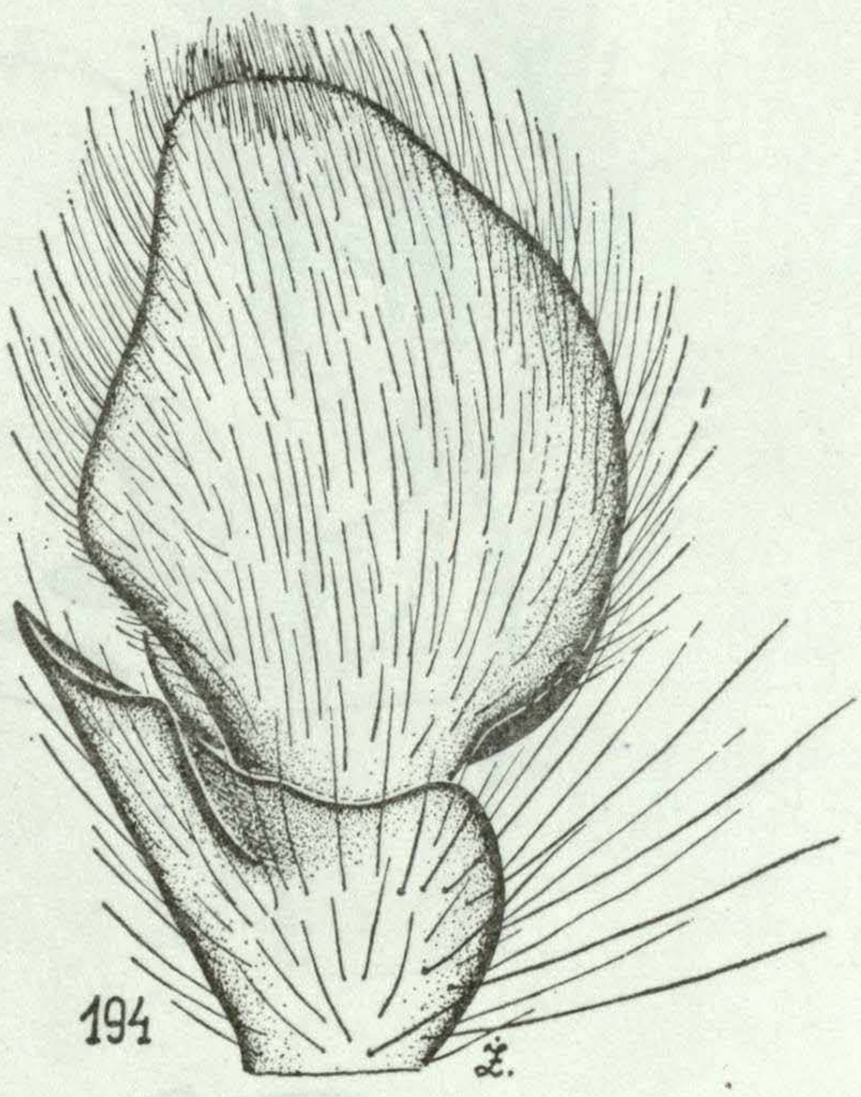
Figs. 187–190. ♀ *Evarcha flavocincta* (C. L. Koch, 1848): general appearance (187), epigyne (188), internal structures (189) and its diagrammatic course (190).

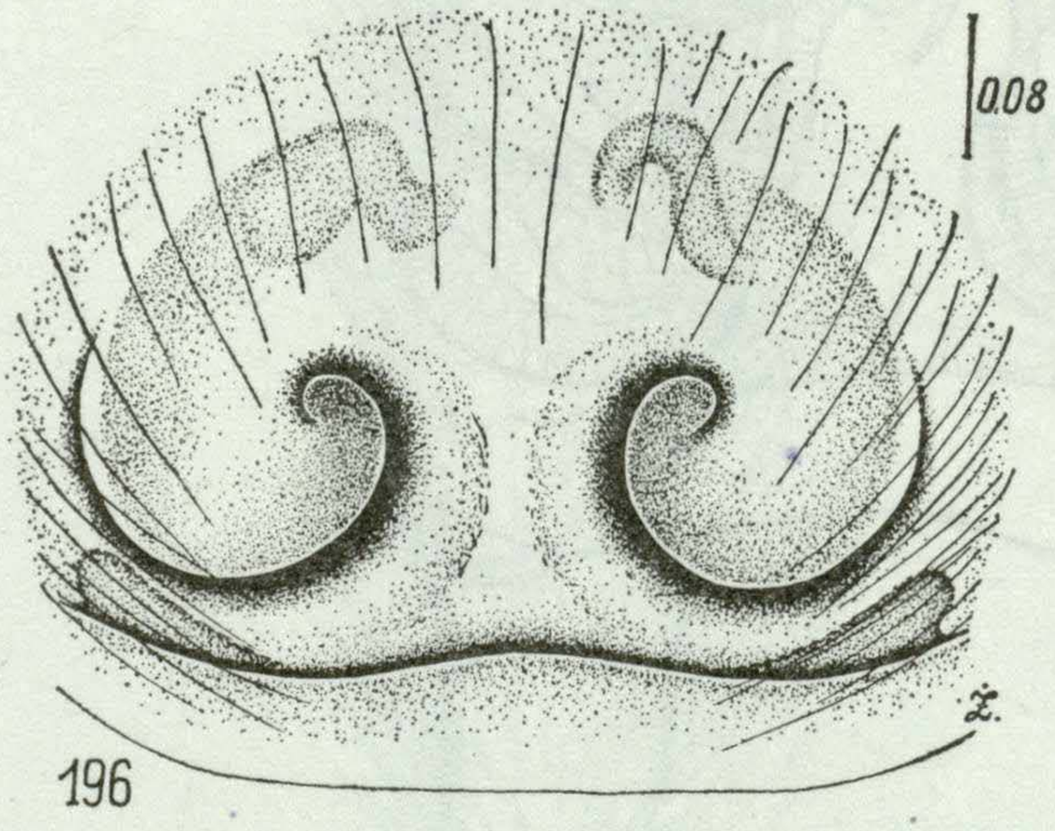


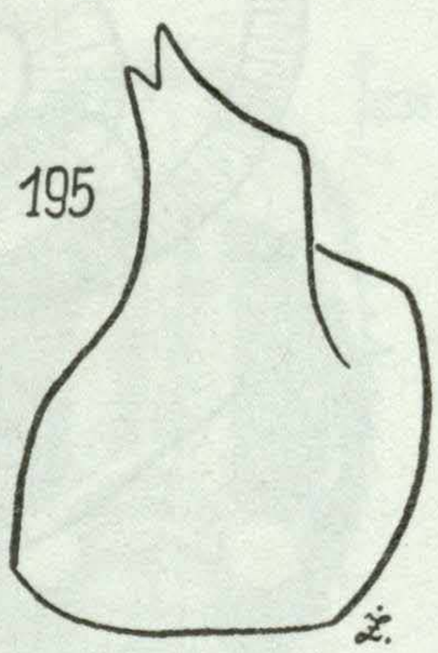


Figs. 191–192. ♀ *Evarcha flavocincta* (C. L. Koch, 1848): epigyne (191) and its internal structures (192). Drawn by J. Prószyński.

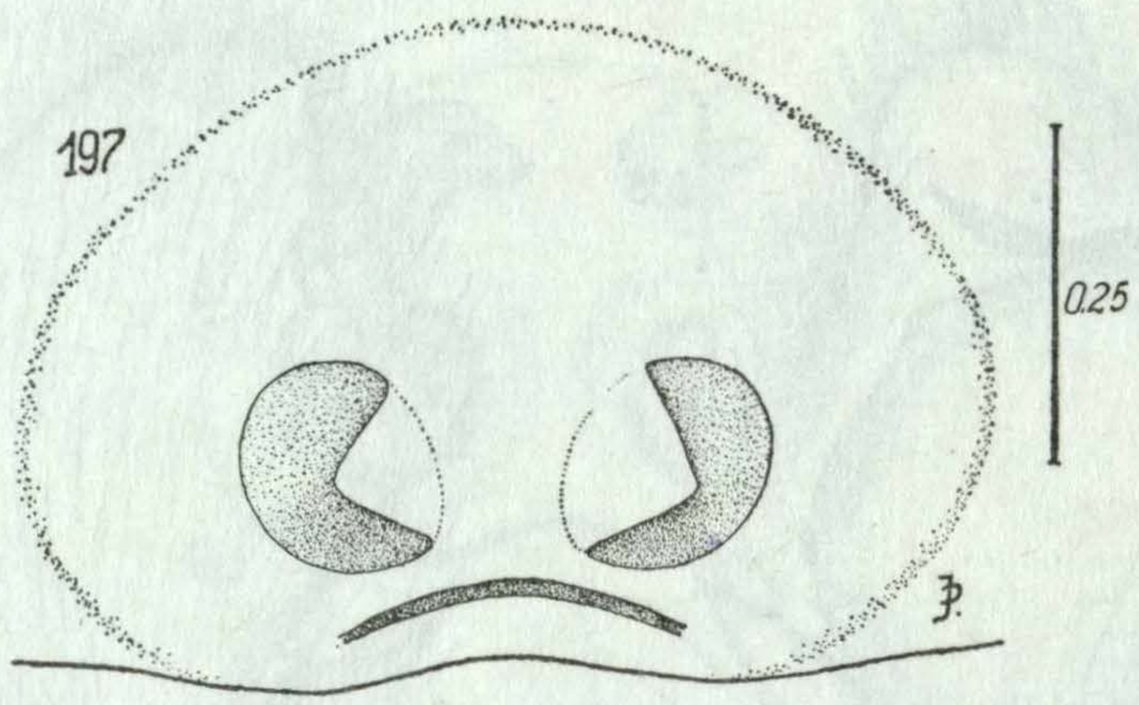


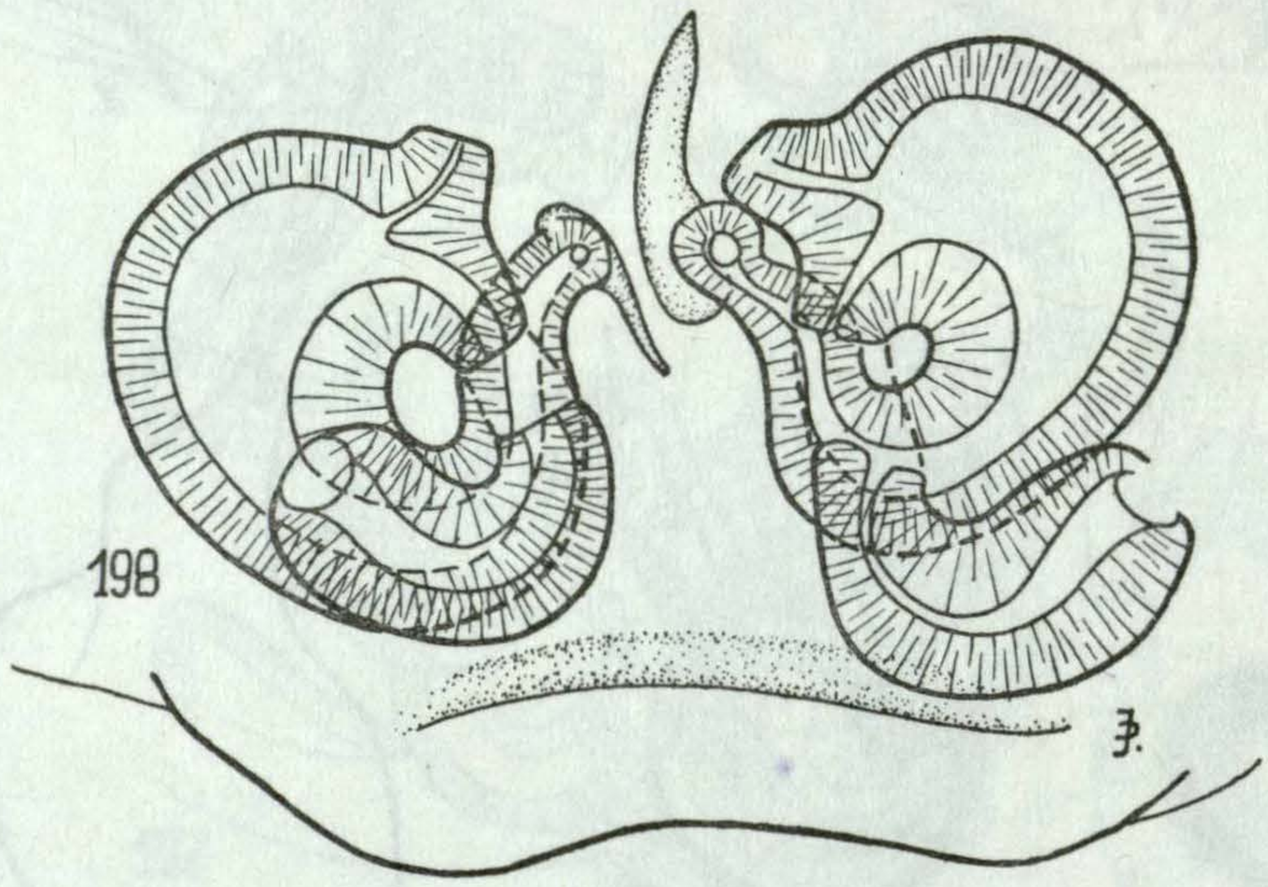




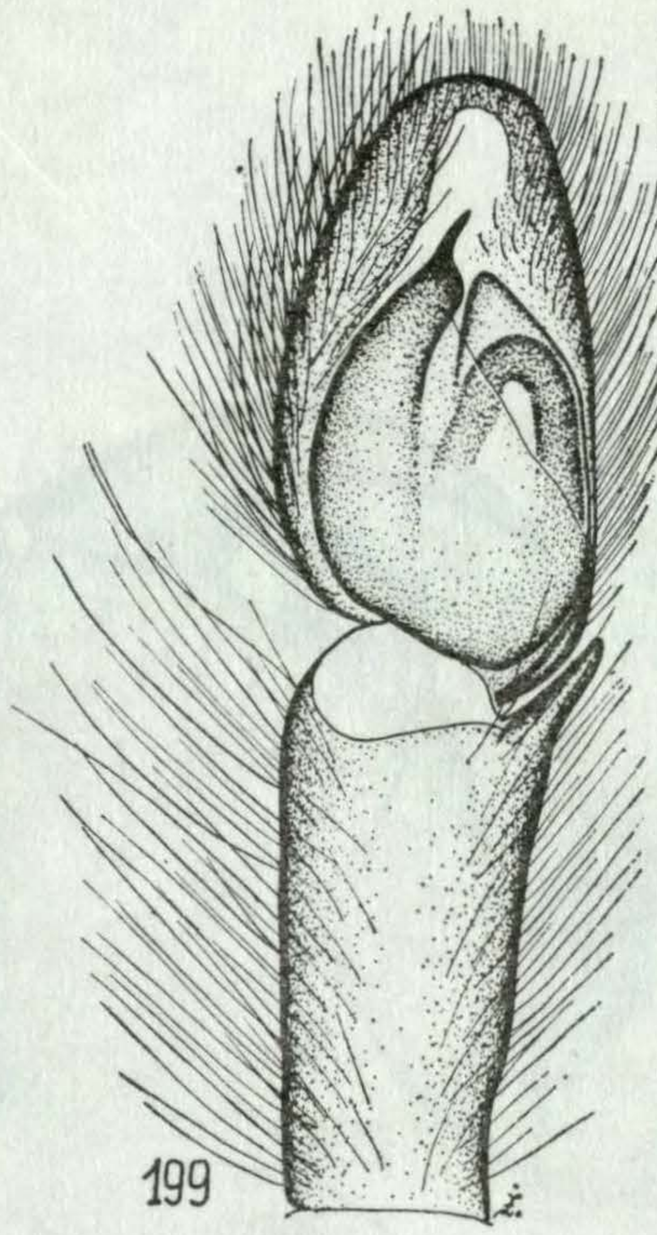


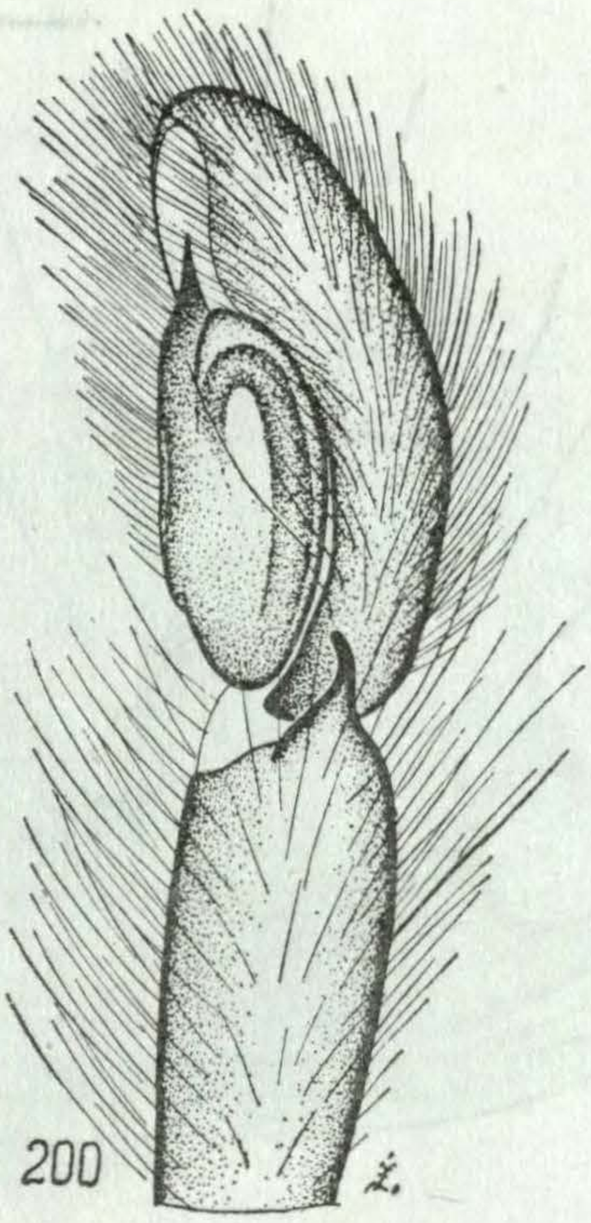
Figs. 193–196. ♂, ♀ *Evarcha flavocincta* (C. L. Koch, 1848): palpal organ of male (193–195), epigyne (196). Drawings made on the basis of specimens of *Evarcha kochi* Simon from Palembang.

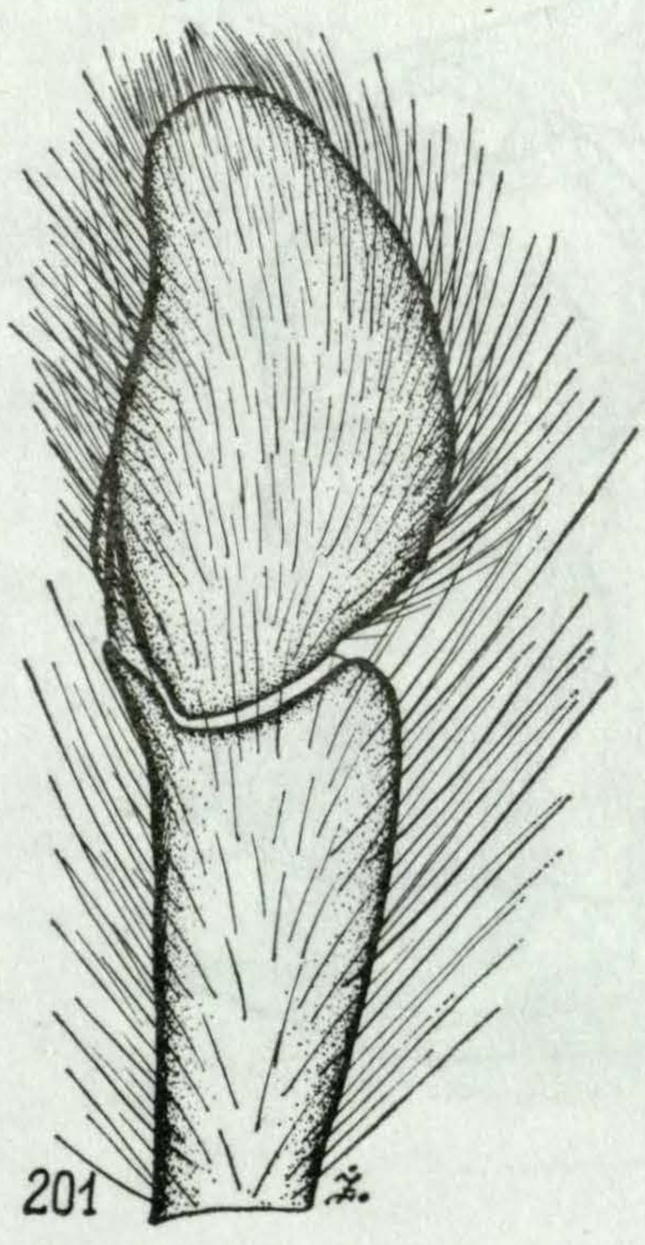


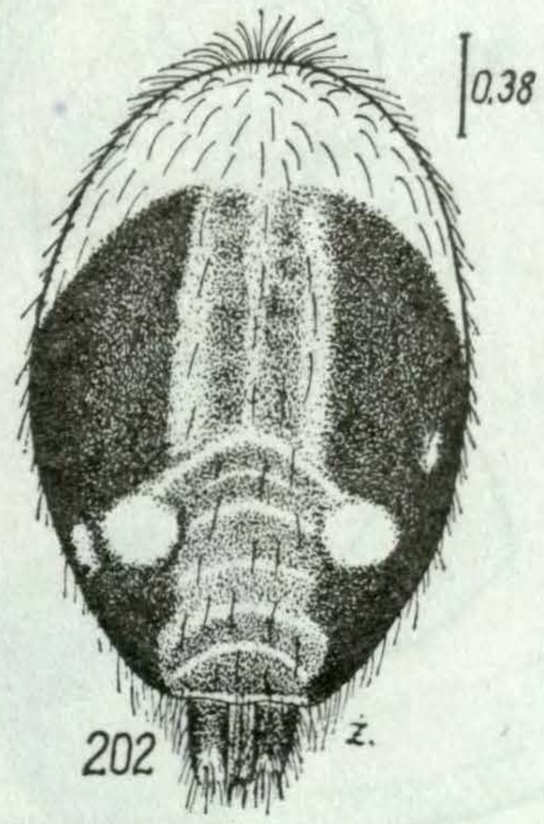


Figs. 197–198. ♀ *Flacillula incognita* sp. n., holotype: epigyne (197) and its internal structures (198). Drawn by J. Prószyński.

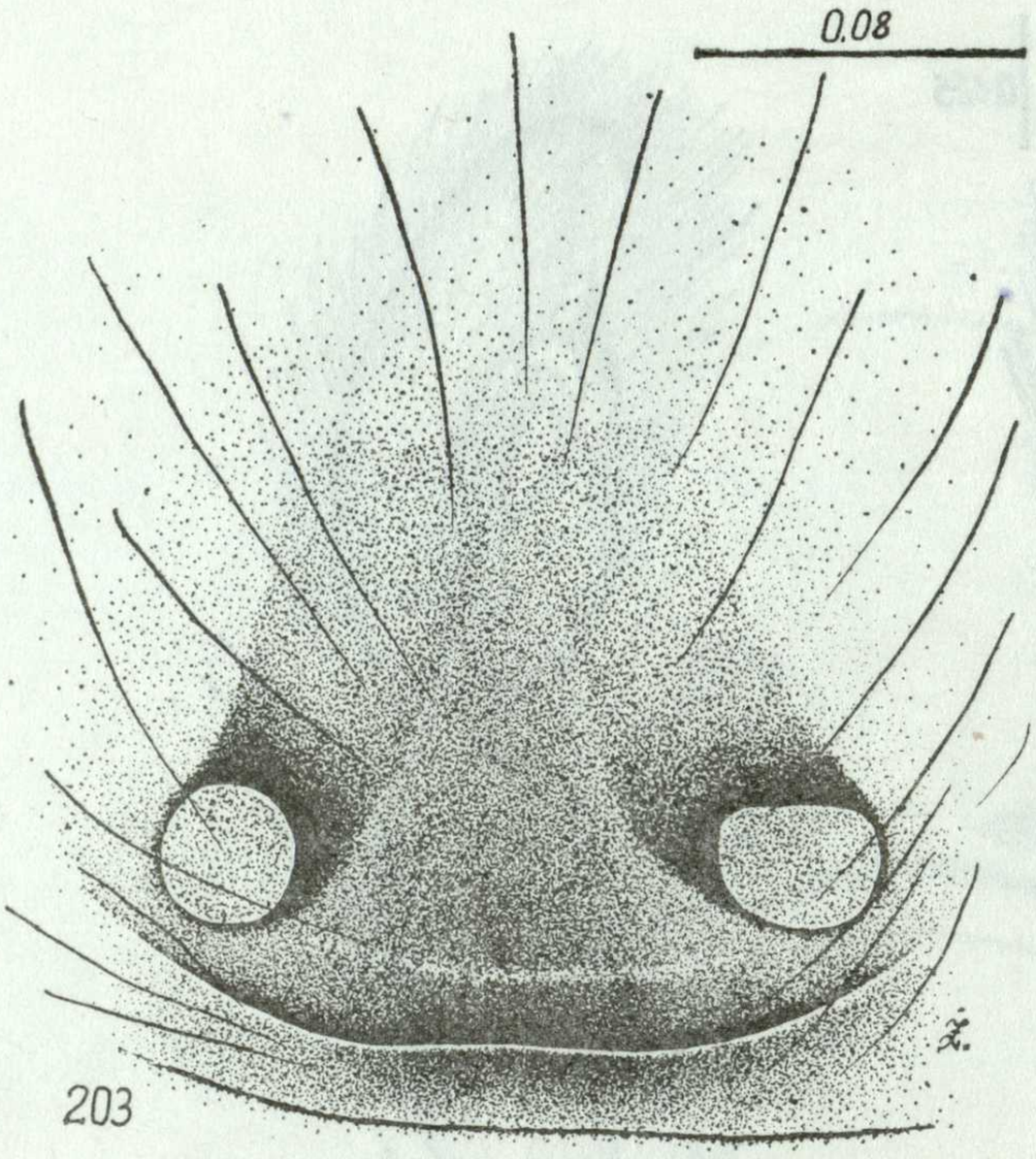




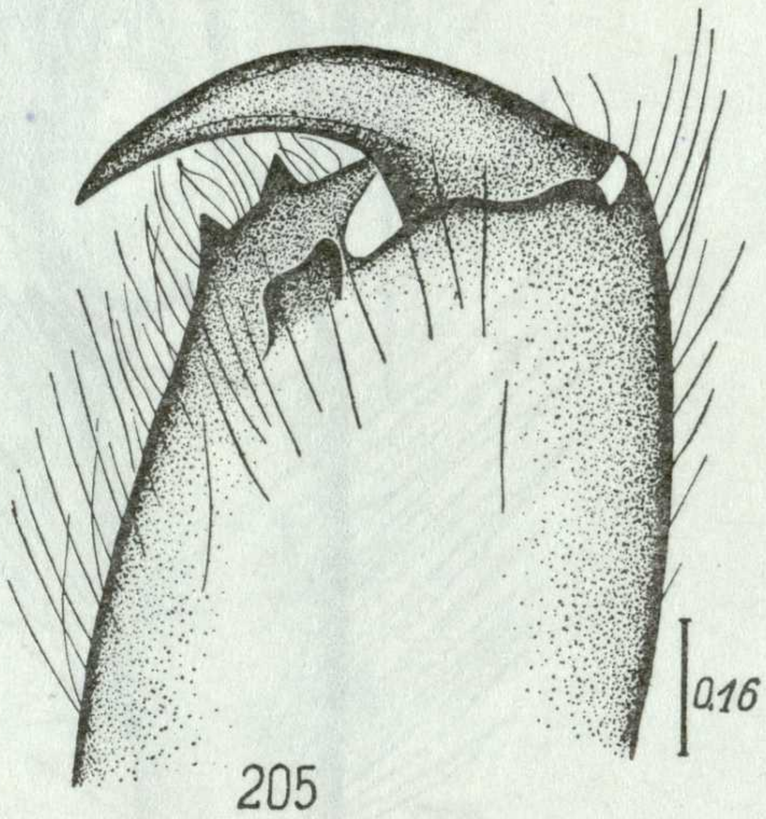




Figs. 199–202. ♂ ***Hasarius adansoni*** **(Savigny et Audouin, 1825): palpal organ (199-201), abdominal pattern (202).**



203



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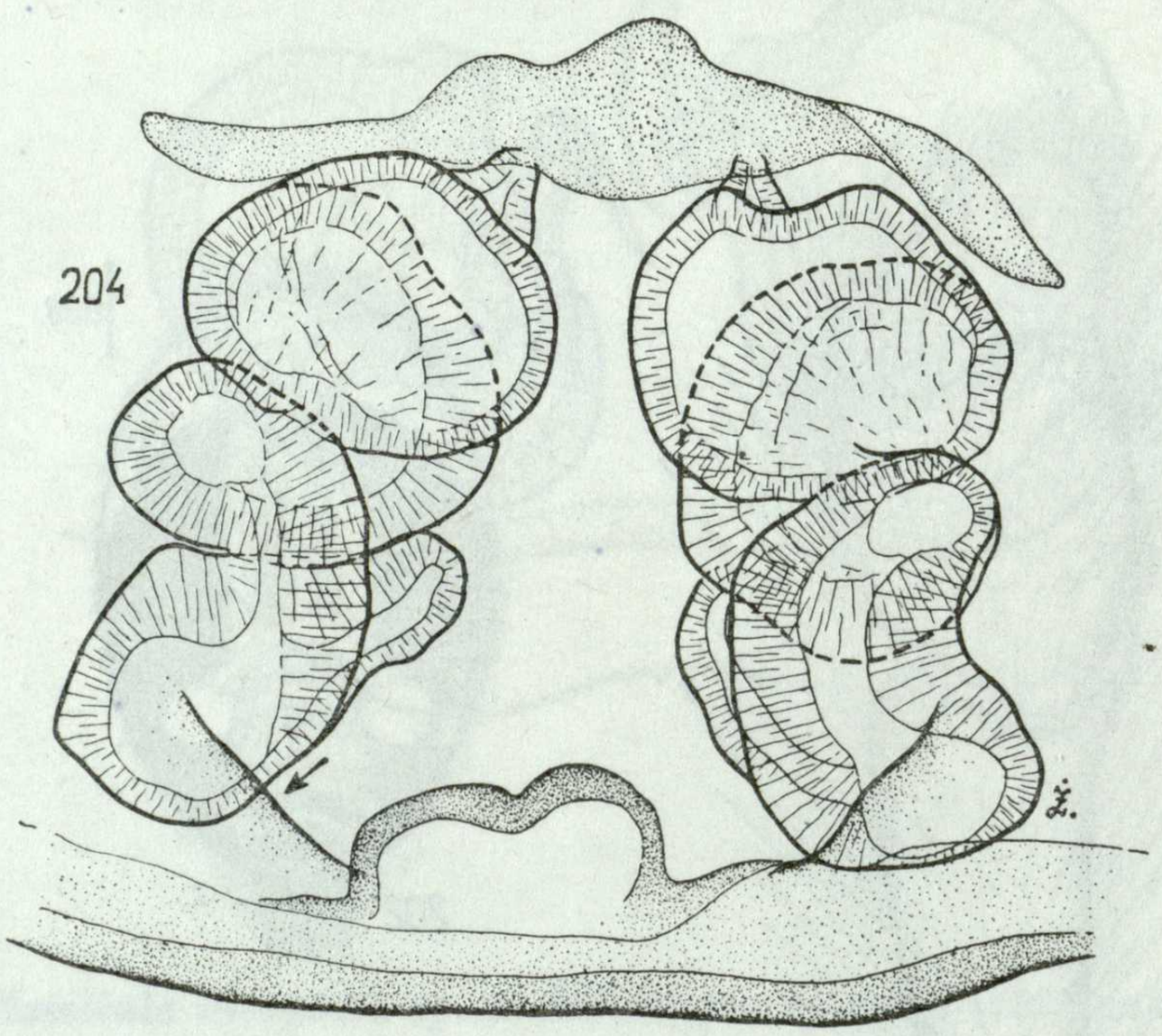
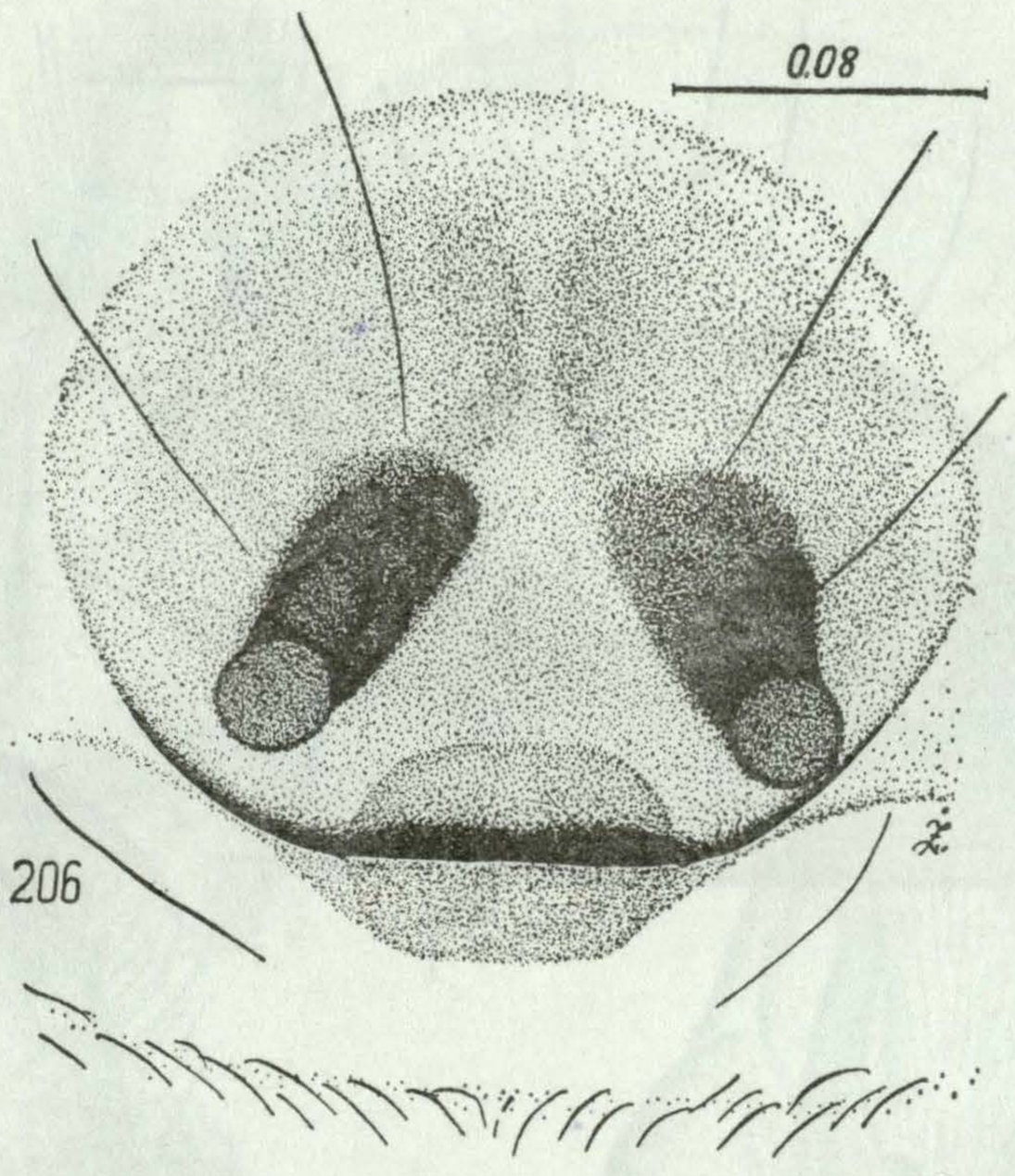
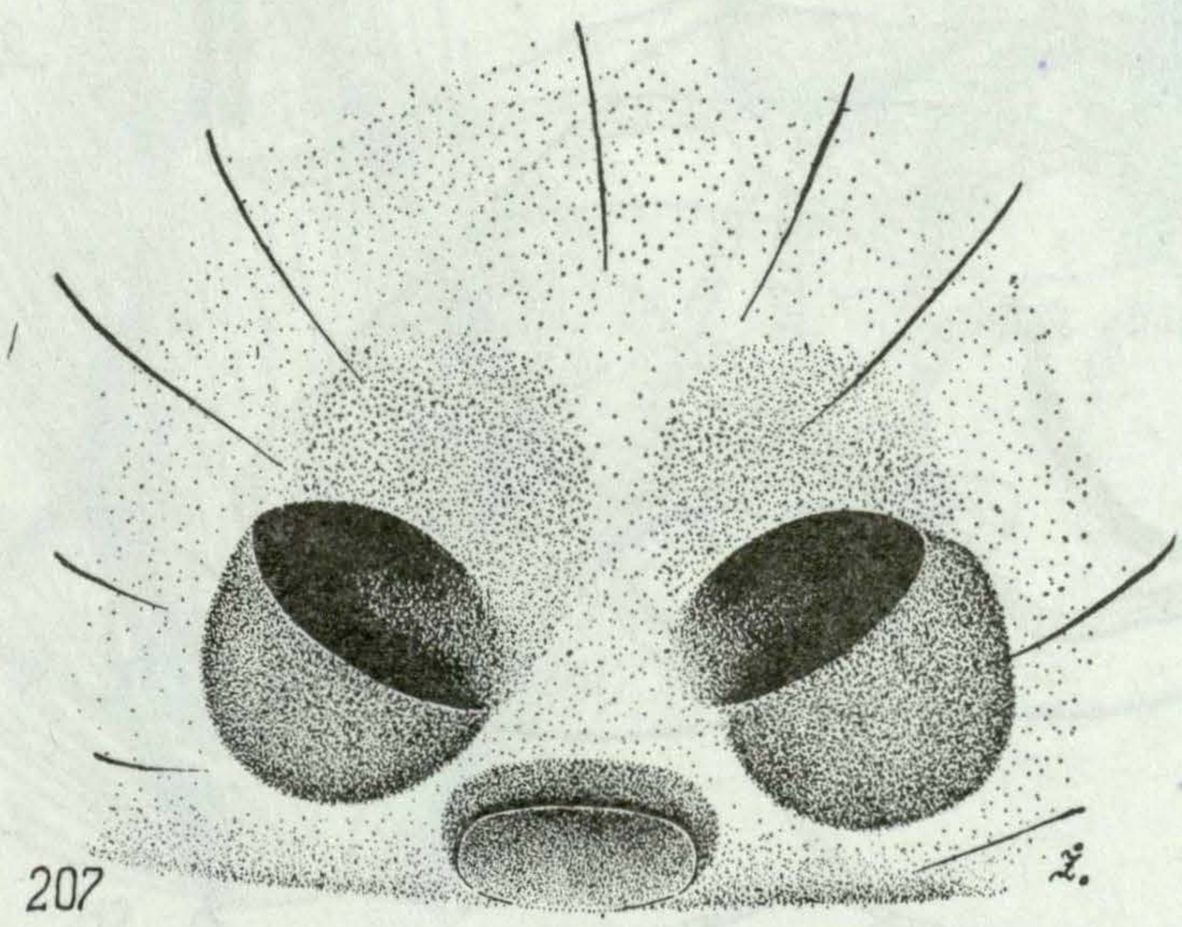


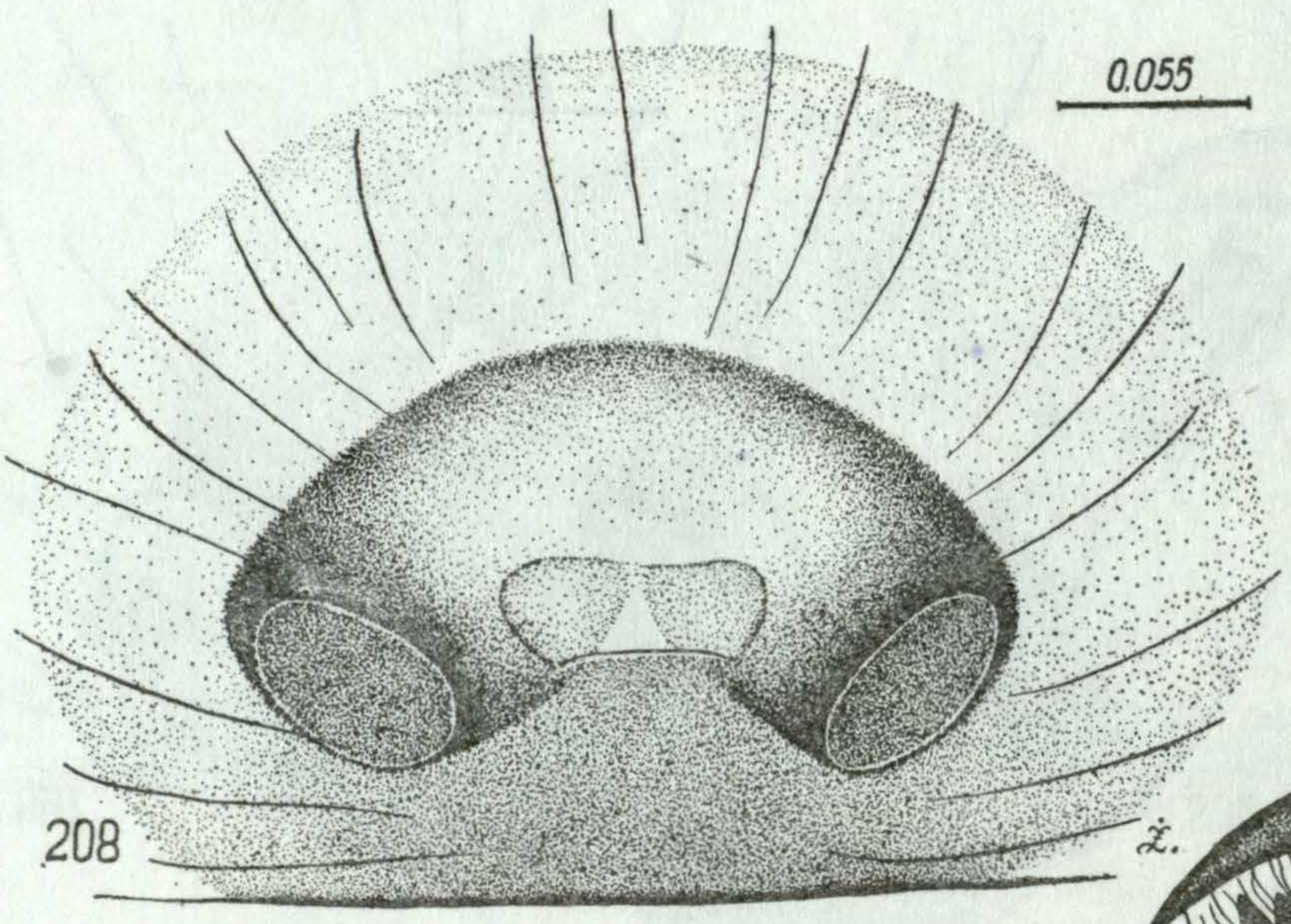
204

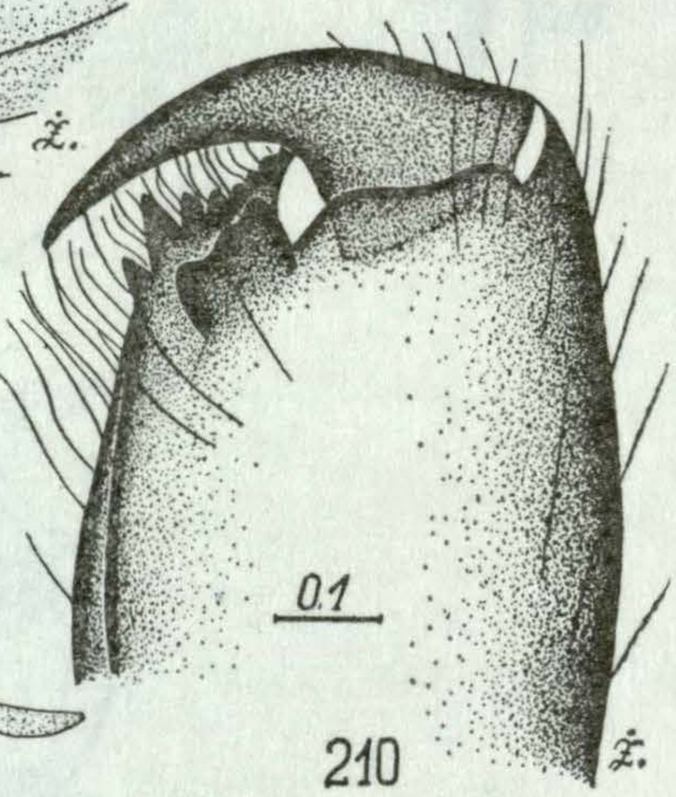
Figs. 203–205. ♀ *Hasarius adansoni* (Savigny et Audouin, 1825): epigyne (203), its internal structures (204) and cheliceral dentition (205).

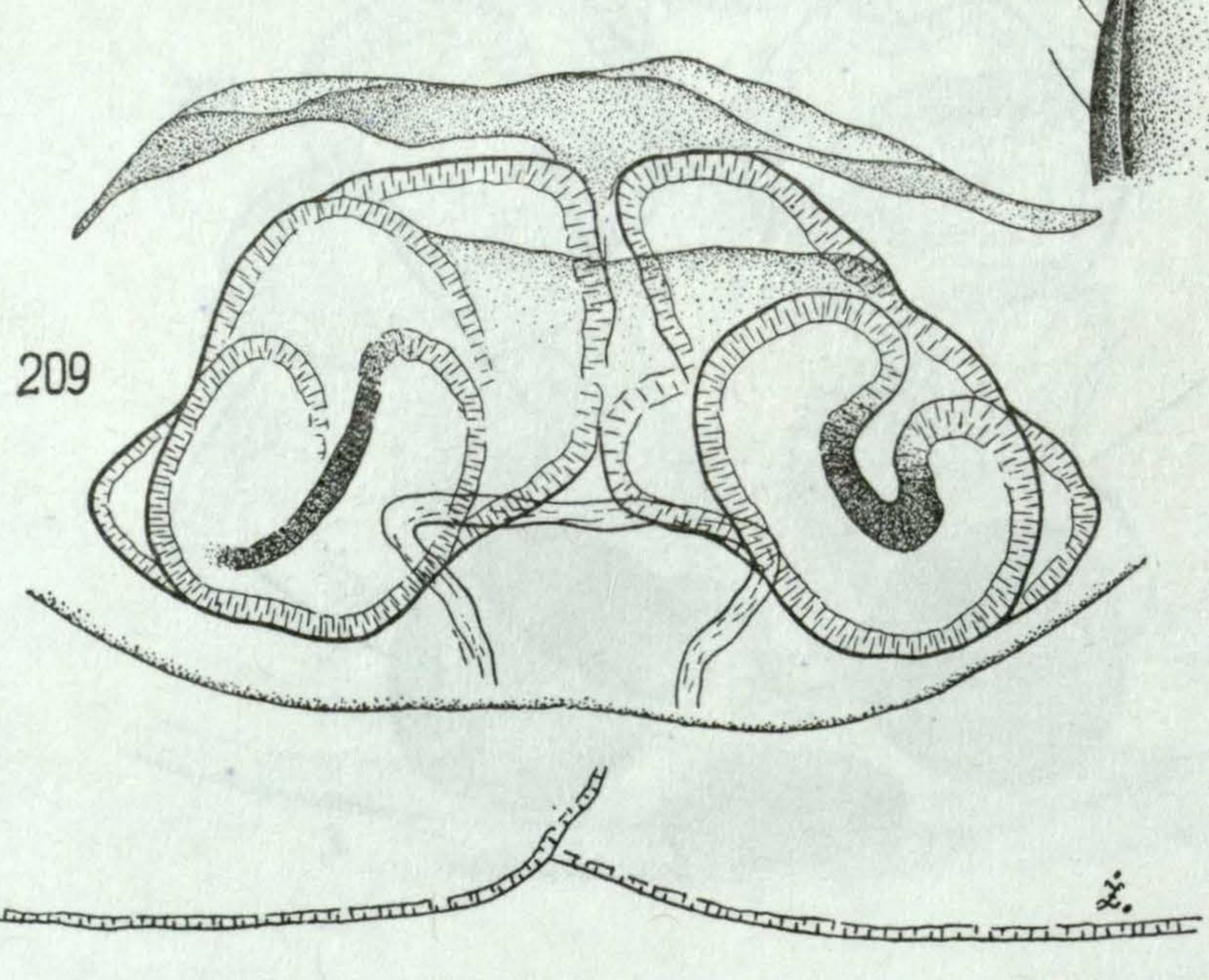




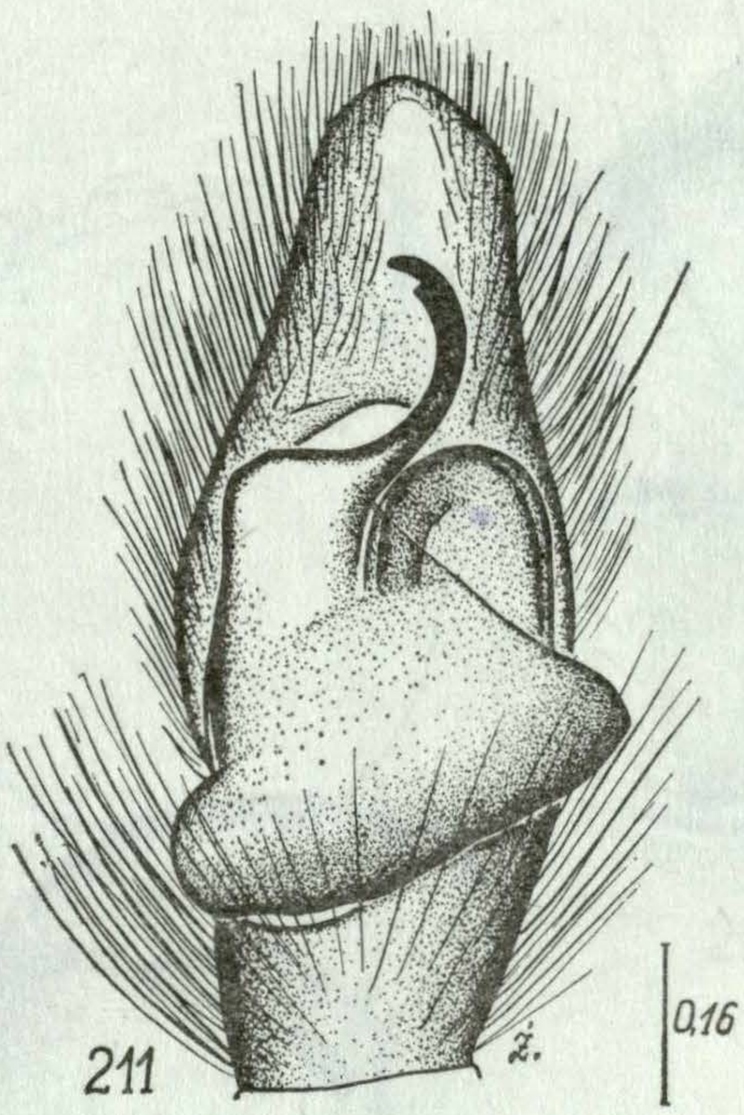
Figs. 206–207. ♀ *Hasarius adansoni* (Savigny et Audouin, 1825): epigyne — ventral (206) and postero-ventral (207) views.

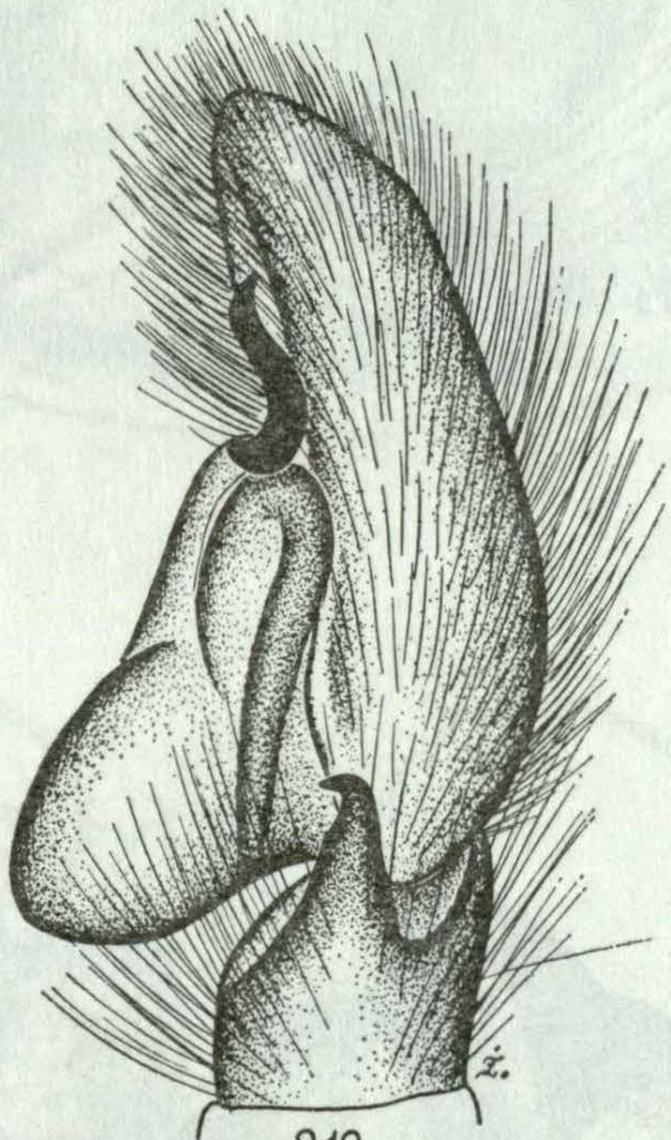


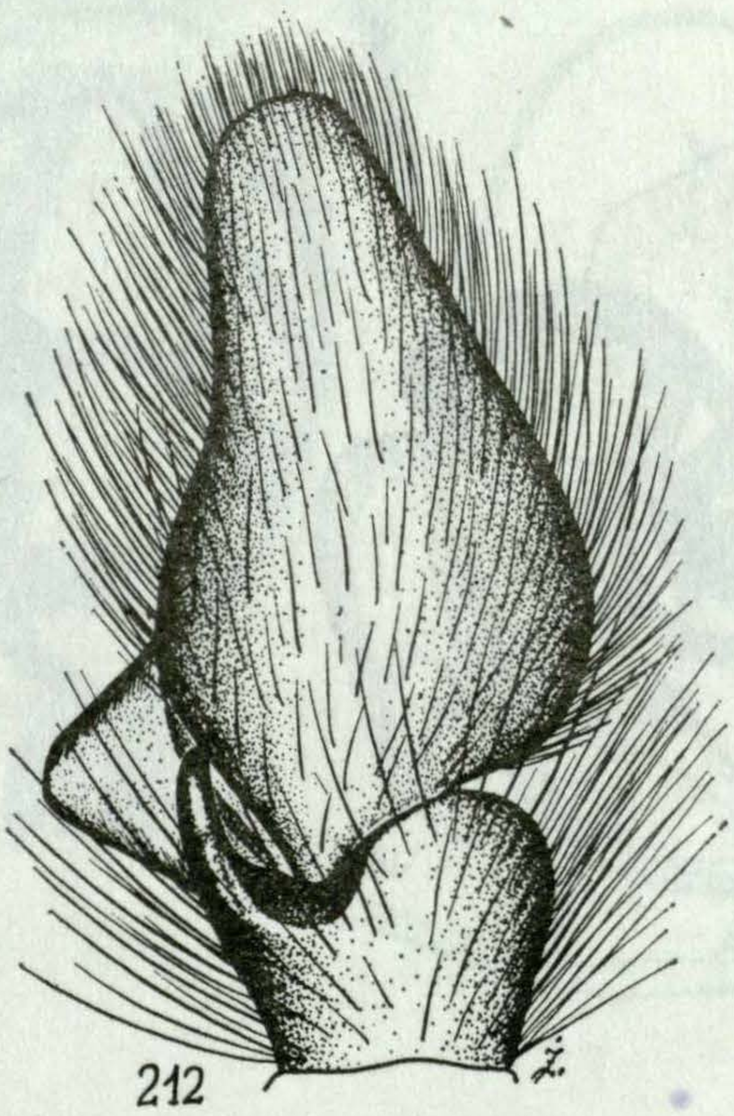




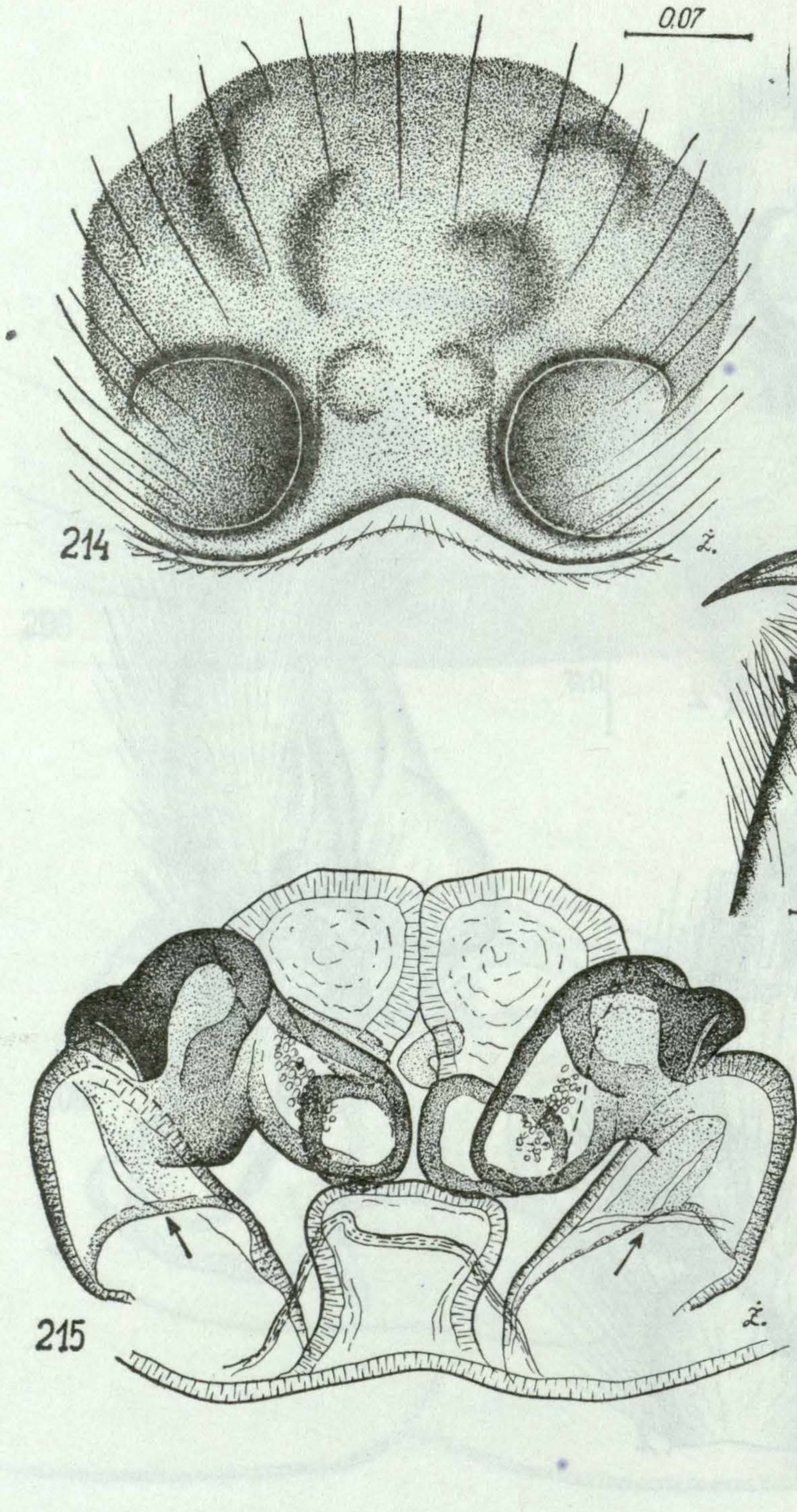
Figs. 208–210. ♀ *Hasarius kulczynskii* sp. n., holotype: epigyne (208), its internal structures (209) and cheliceral dentition (210).



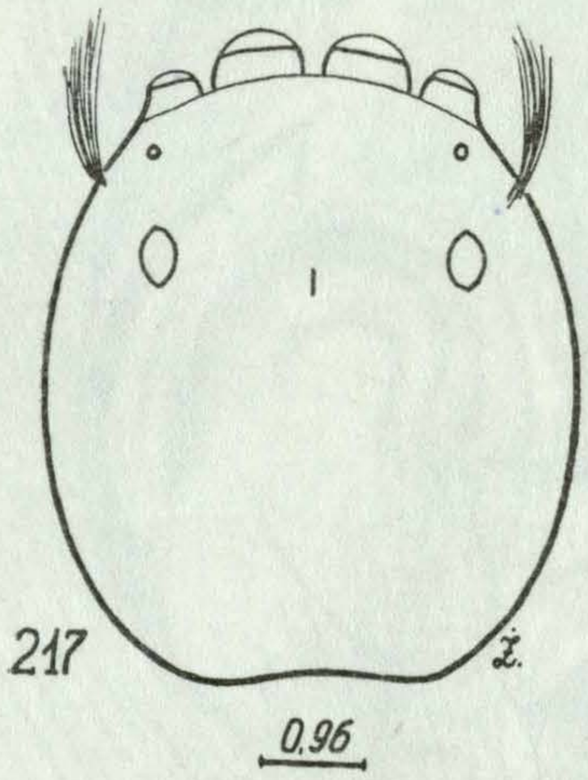


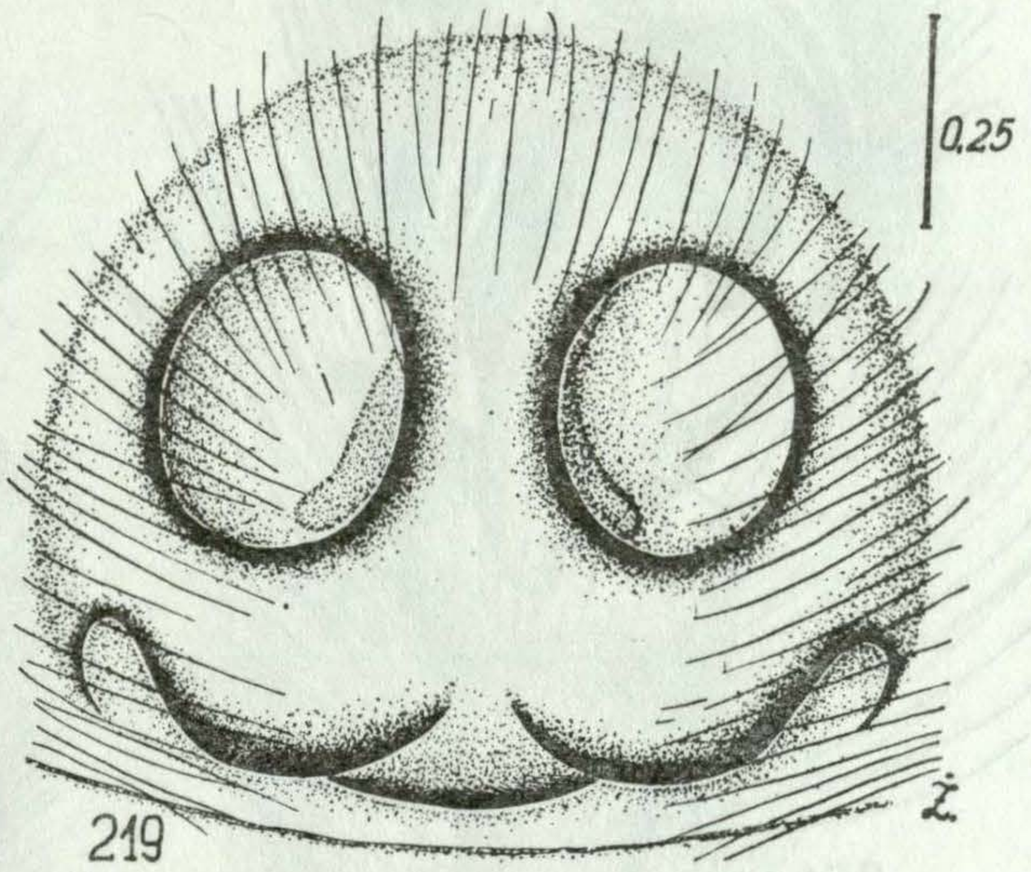


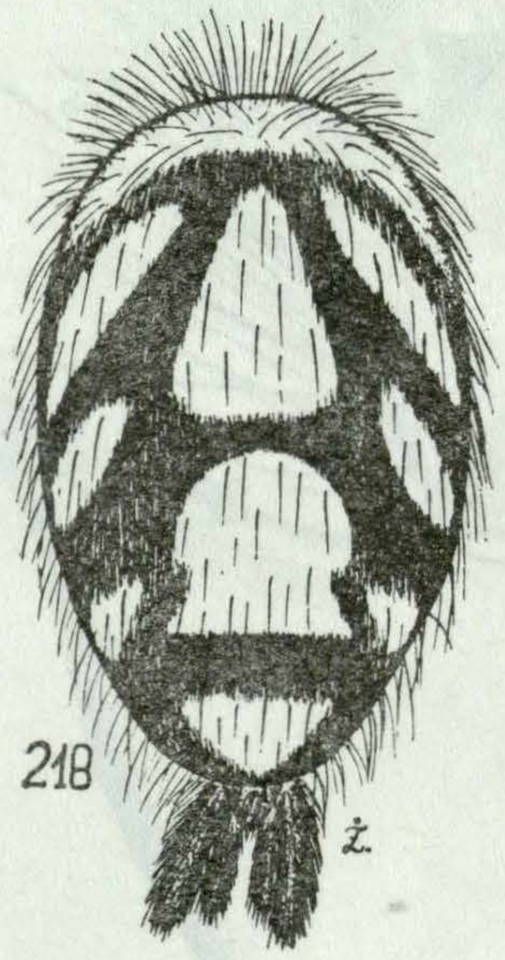
Figs. 211–213. ♂ *Habrocestum orientale* **sp. n., holotype: palpal organ.**

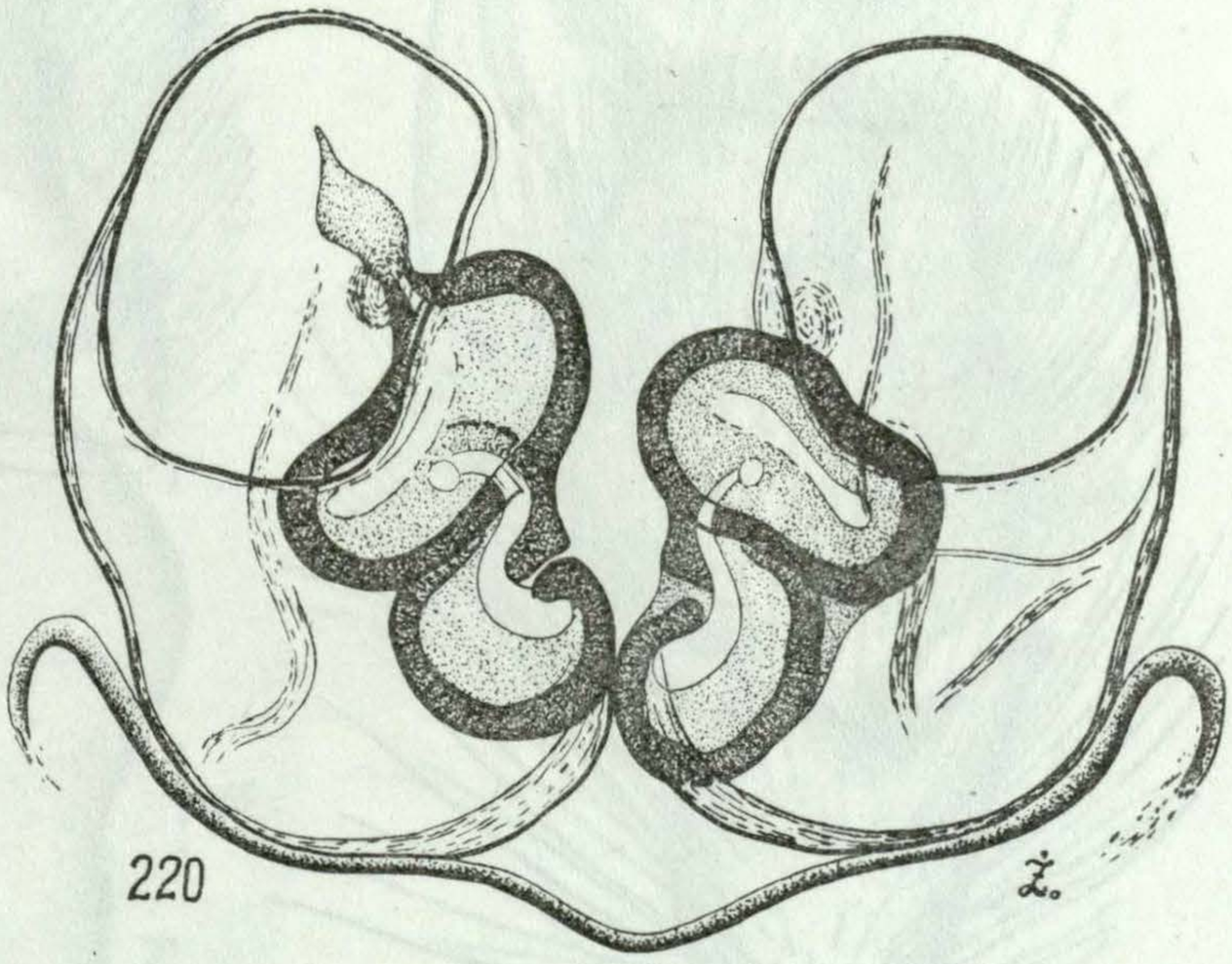


Figs. 214–216. ♀ *Habrocestum orientale* sp. n., allotype: epigyne (214), its internal structures (215) and cheliceral dentition (216).

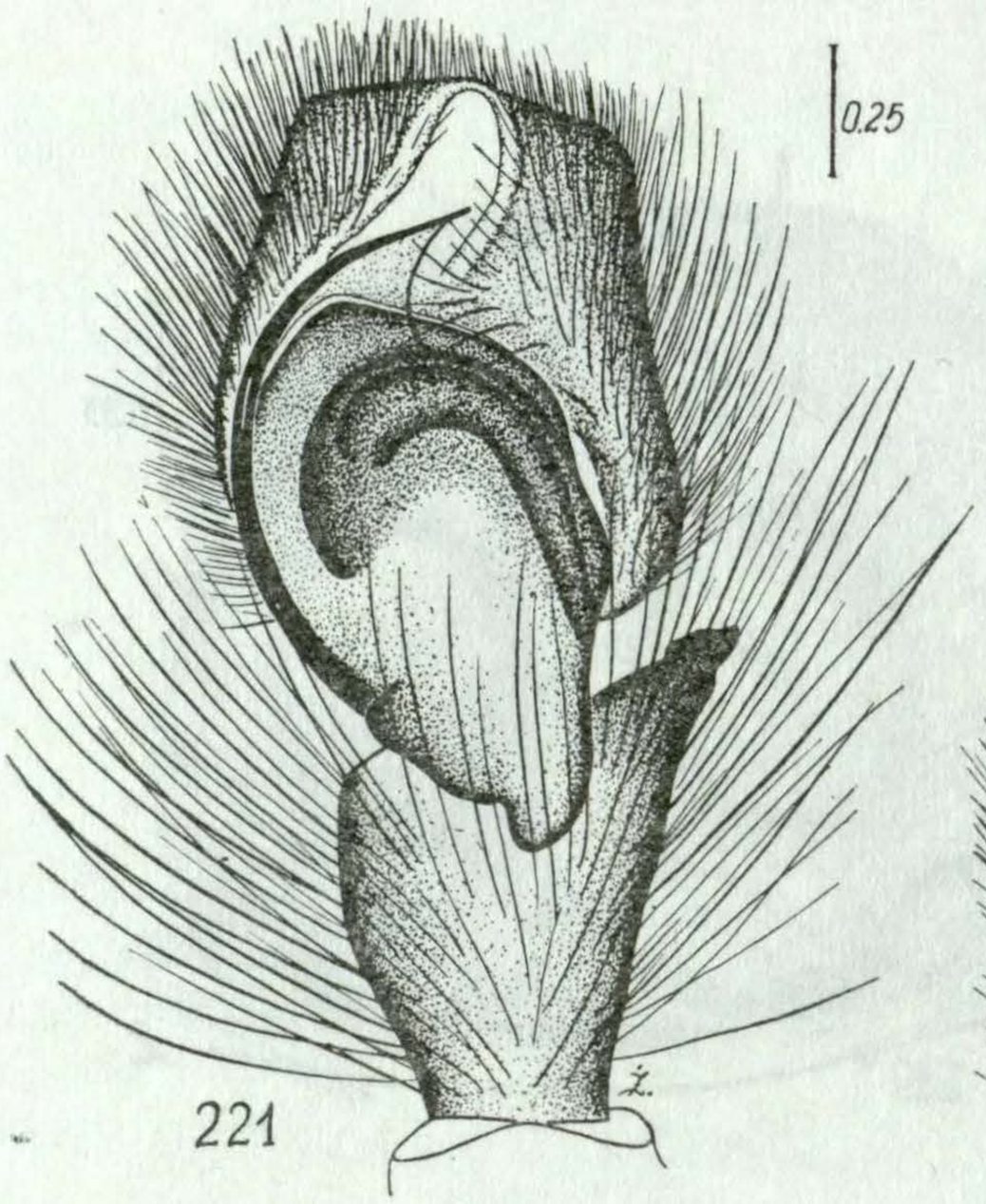


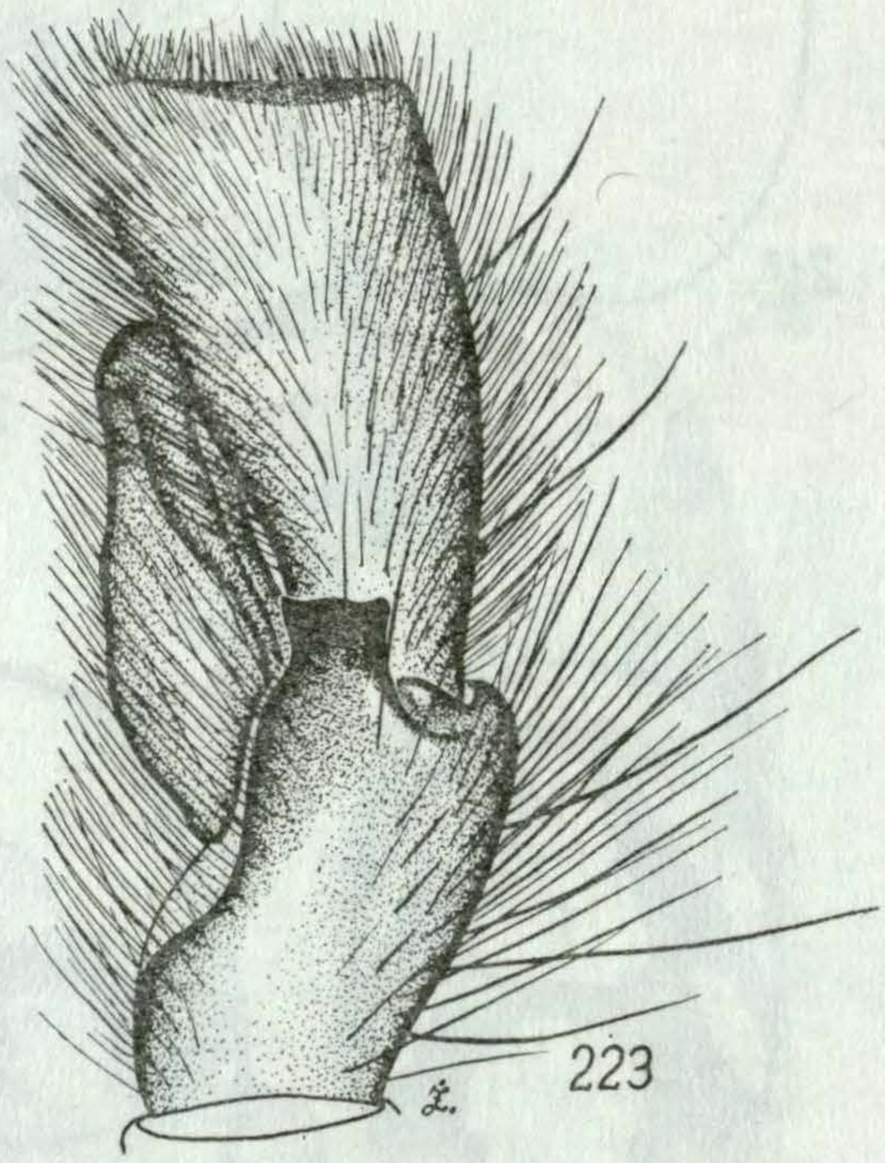


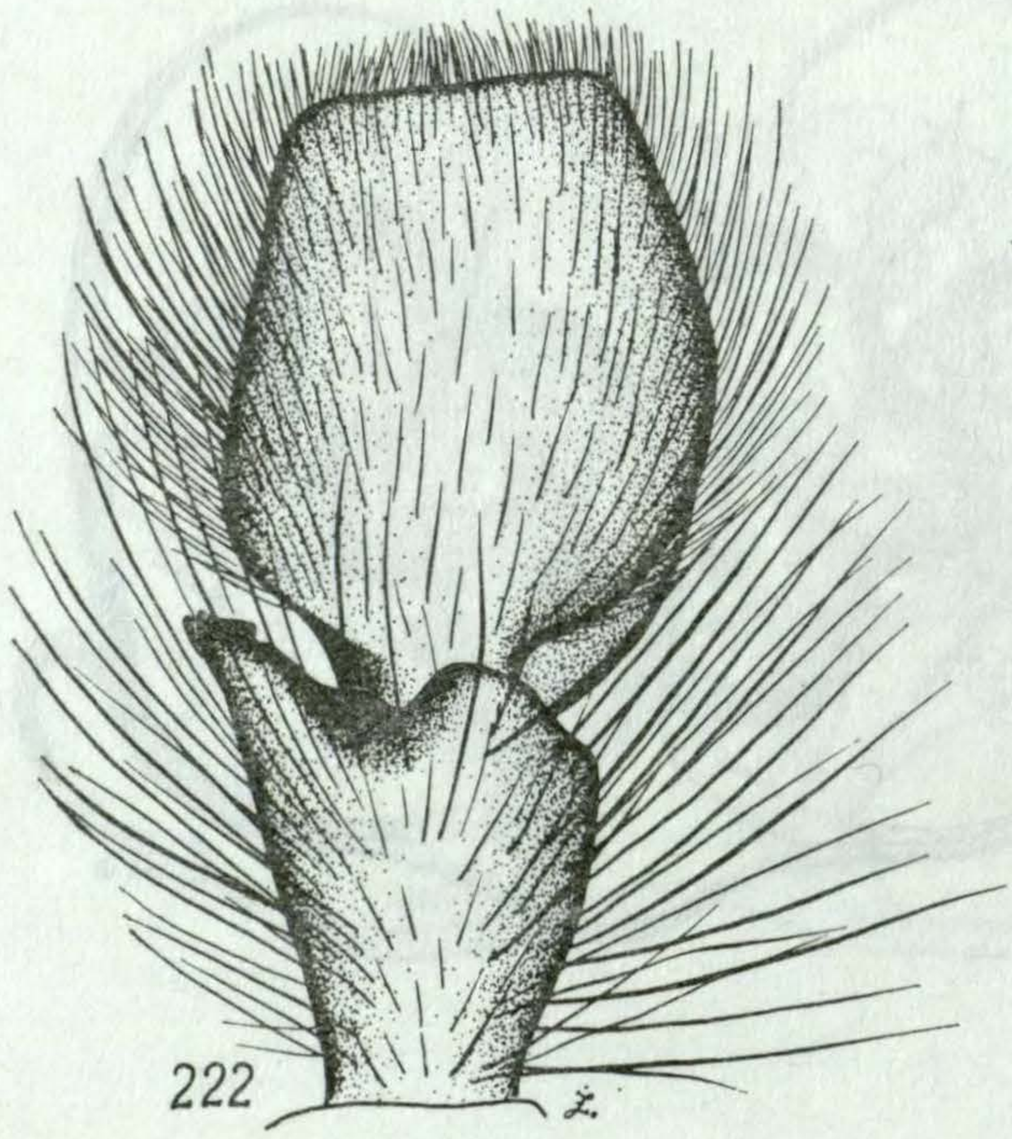




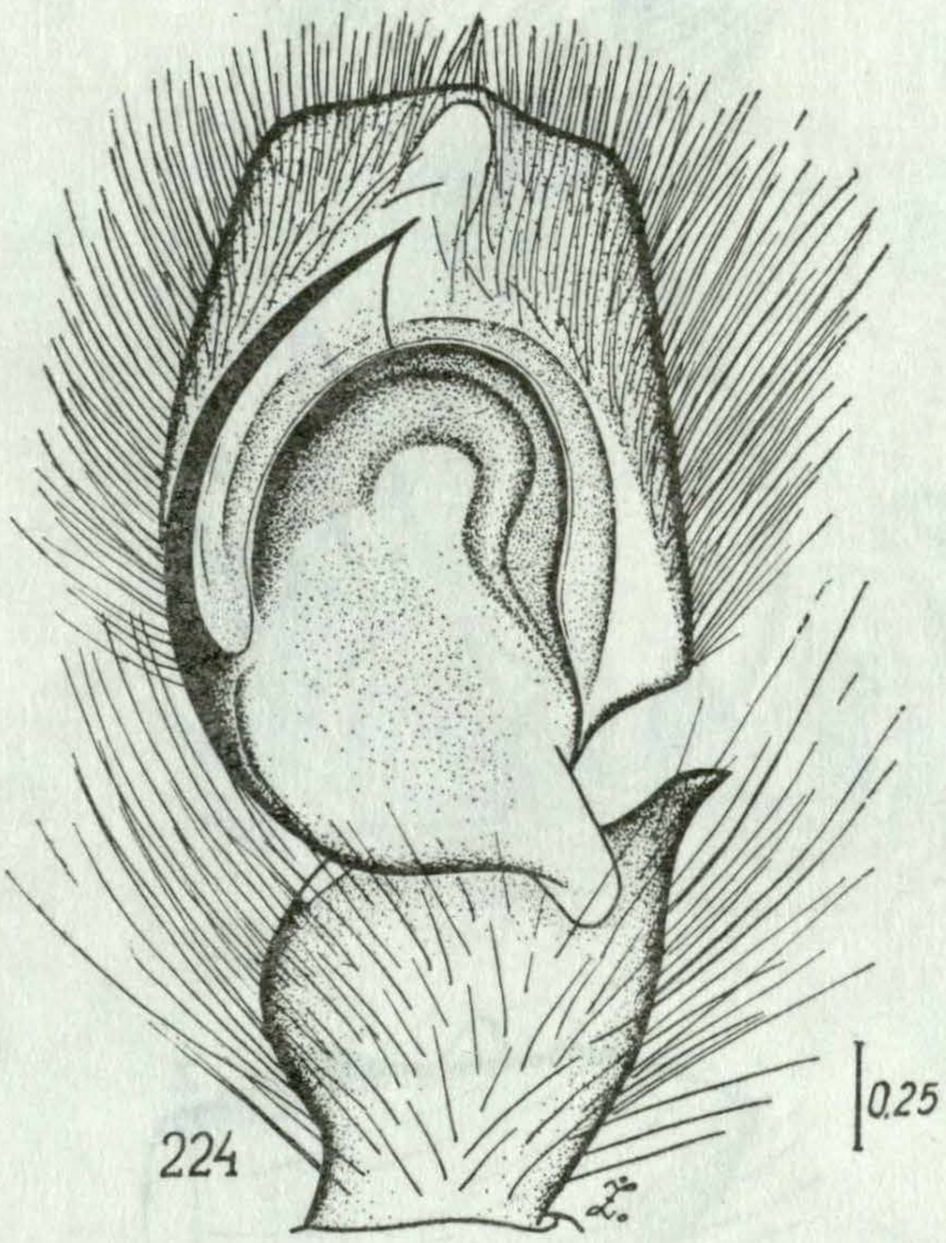
Figs. 217–220. ♀ *Hyllus diardi* (WALCKENAER, 1837) :eephalothorax (217), abdominal pattern (218), epigyne (219) and its intcɹnal structures (220).

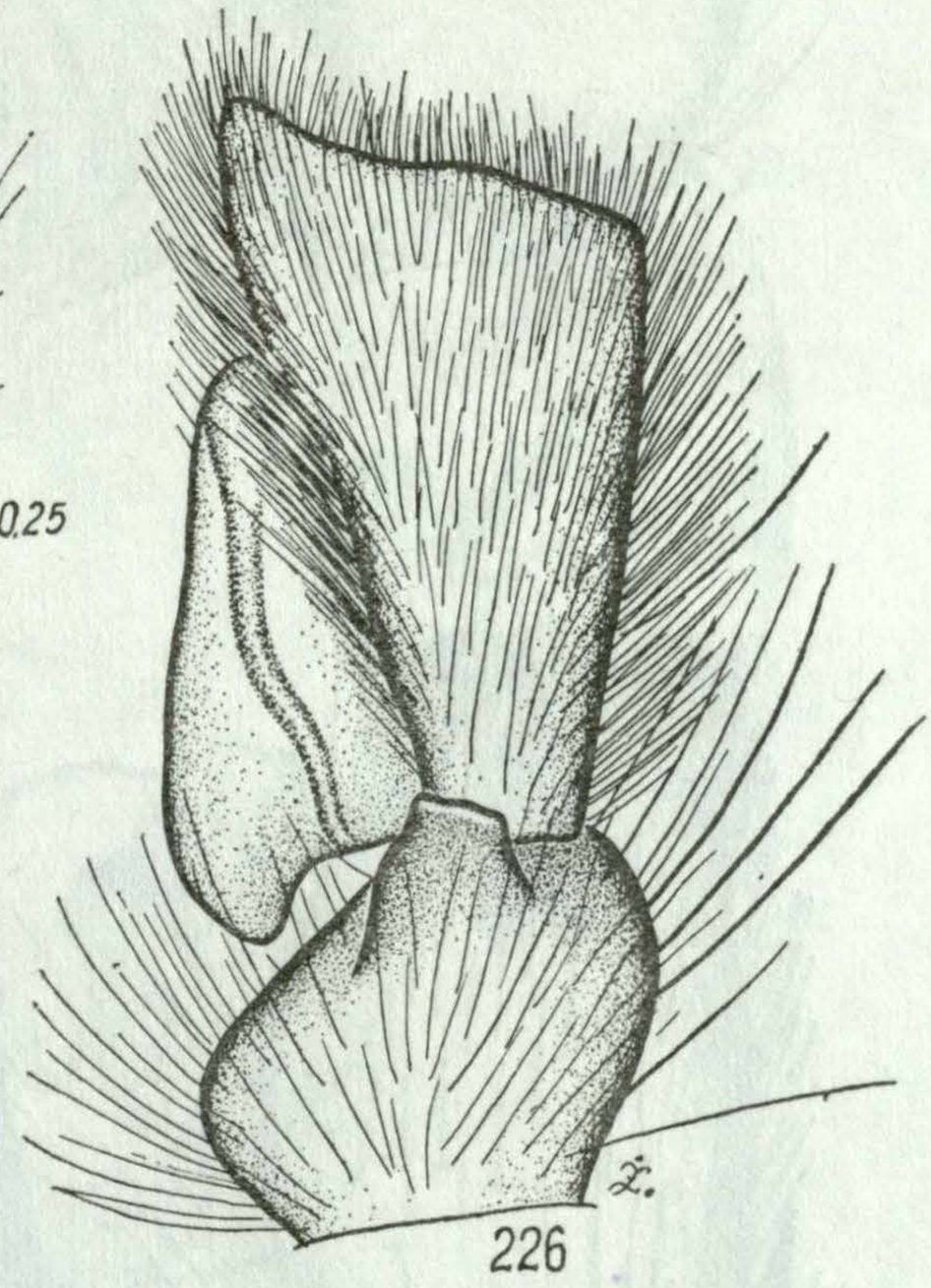


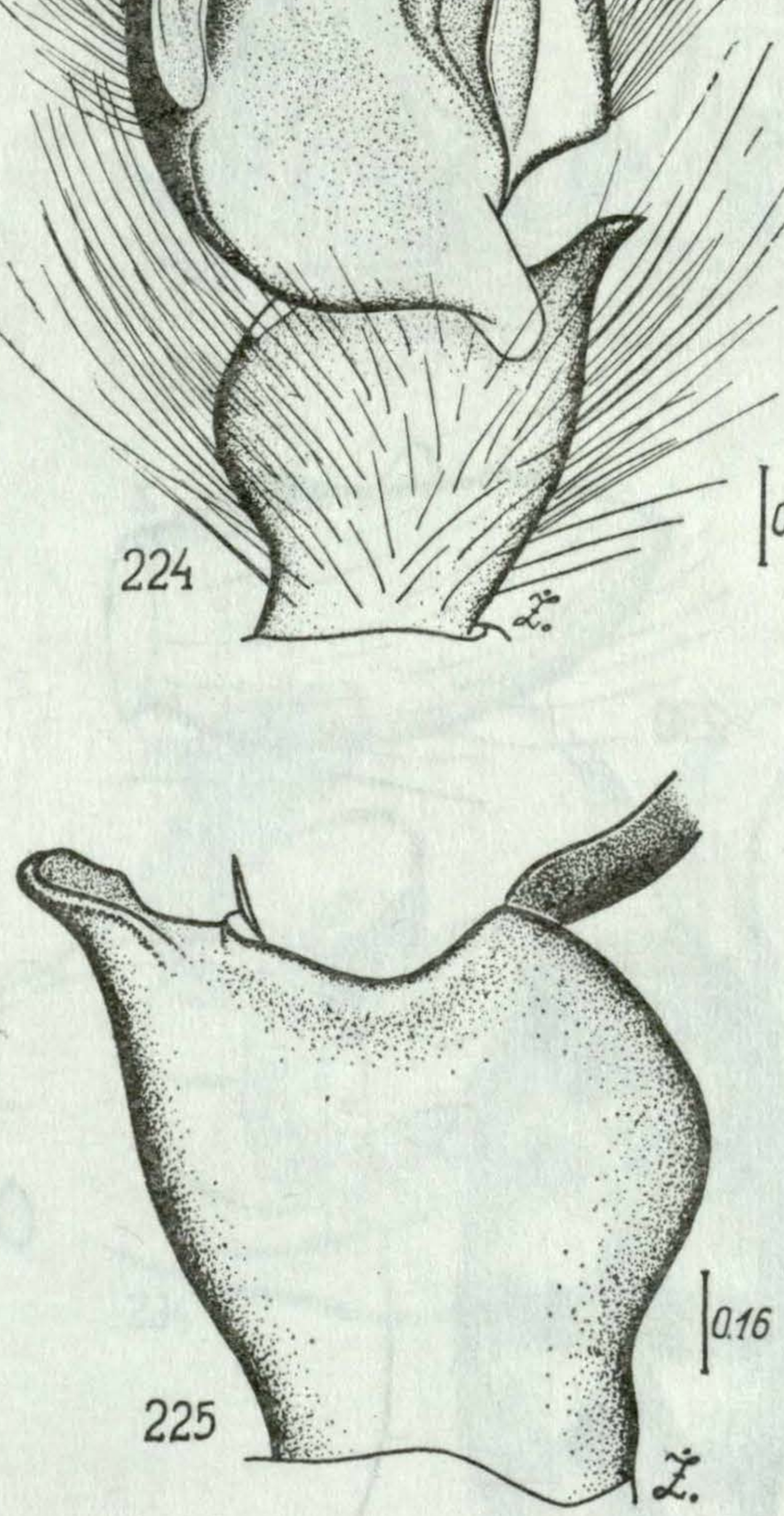




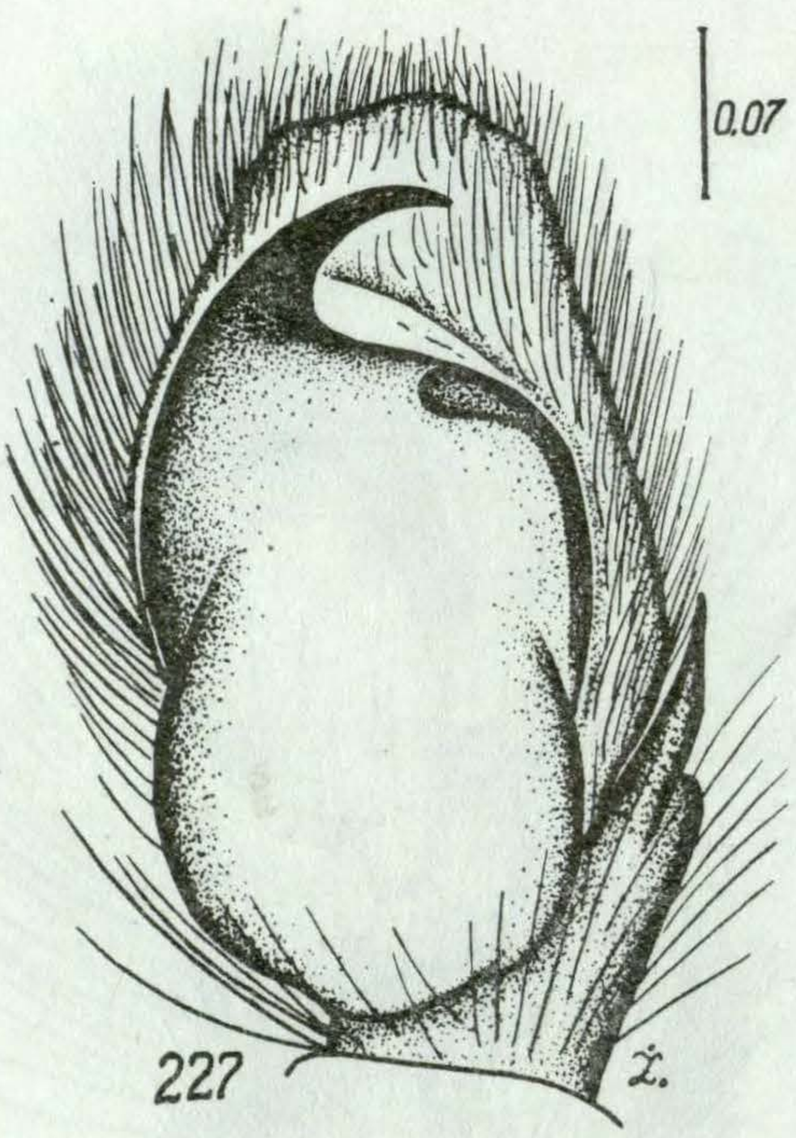
Figs. 221–223. ♂ *Hyllus lacertosus* (C. L. Koch, 1846): palpal organ.

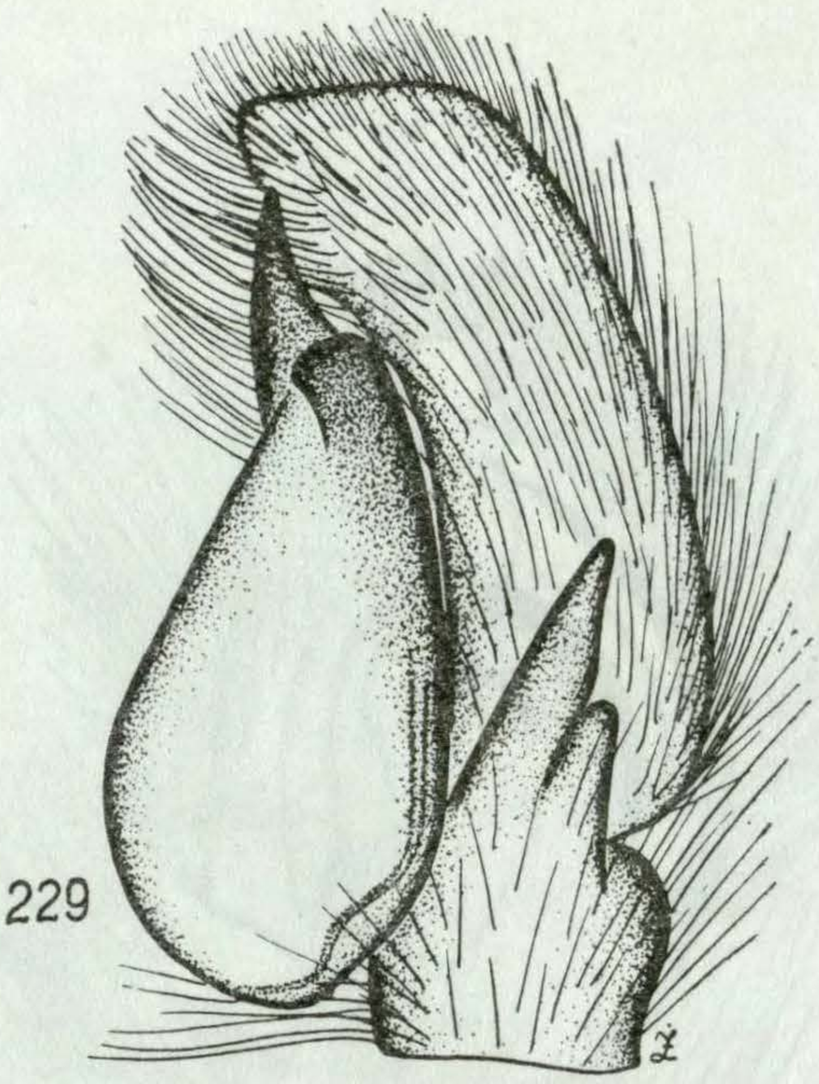


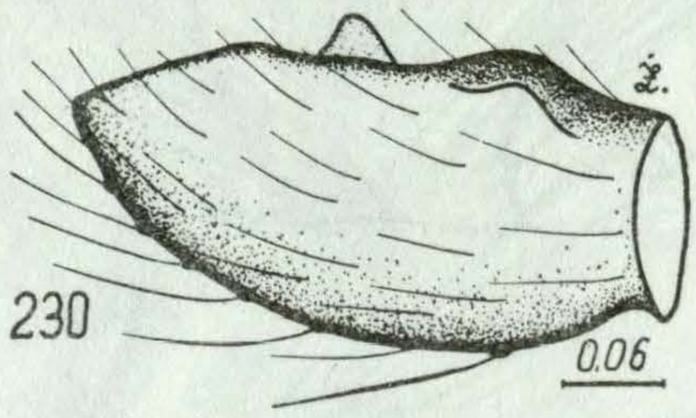


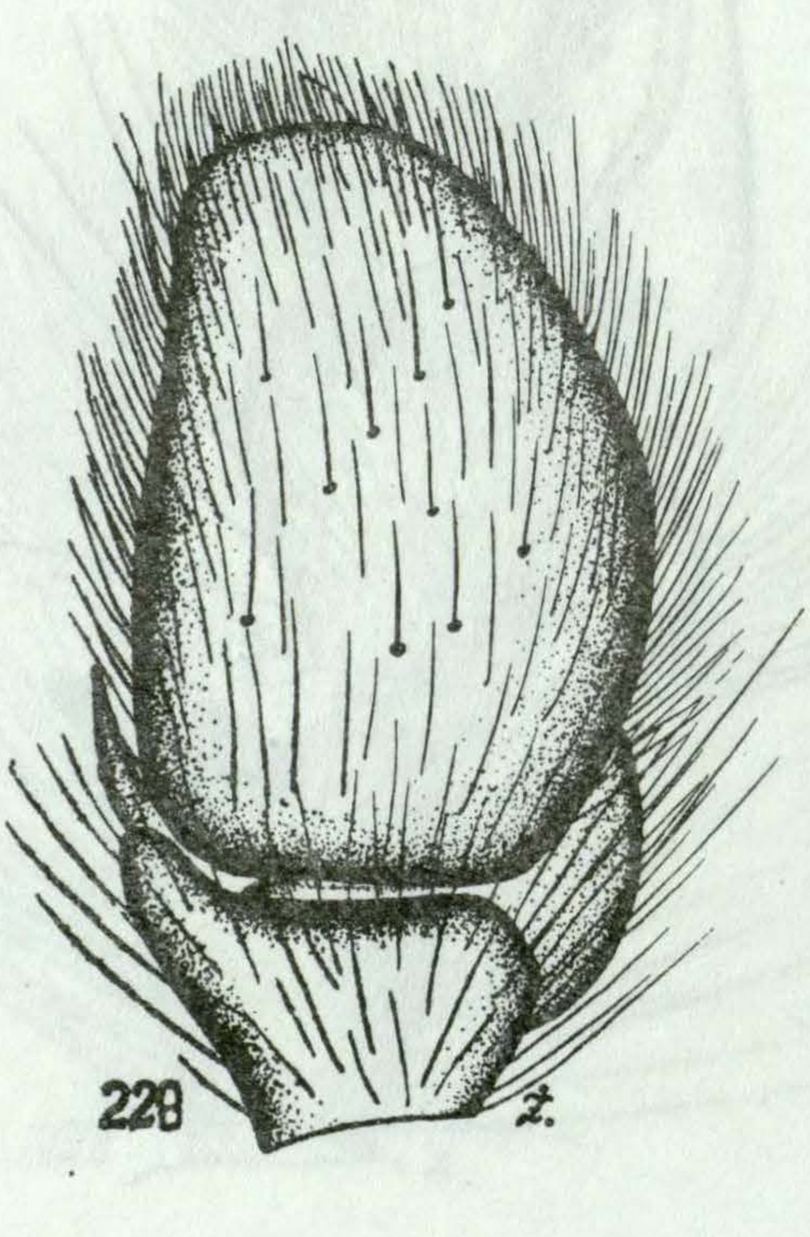


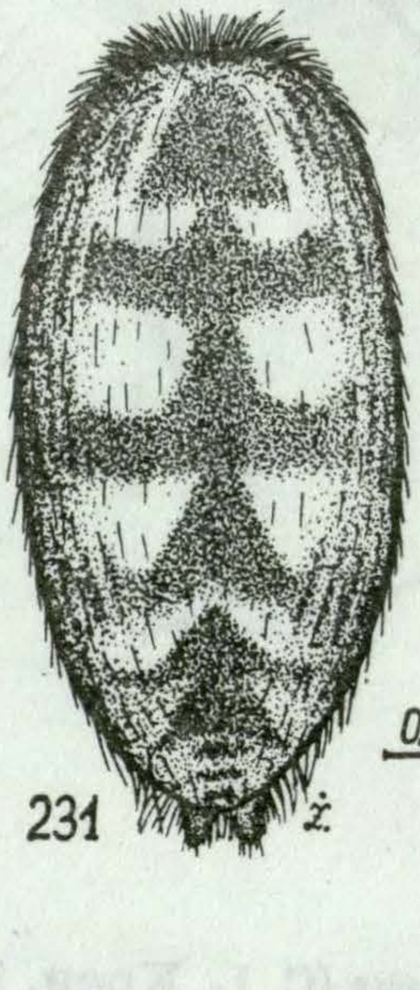
Figs. 224–226. ♂ *Hyllus lacertosus* (C. L. Koch, 1846): palpal organ. Type-specimen of *Plexippus lacertosus* Koch from Java.

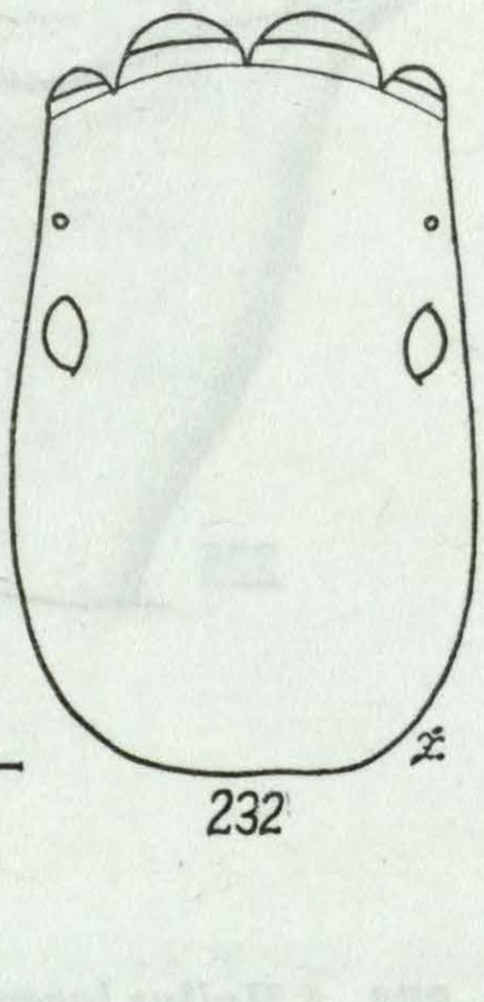




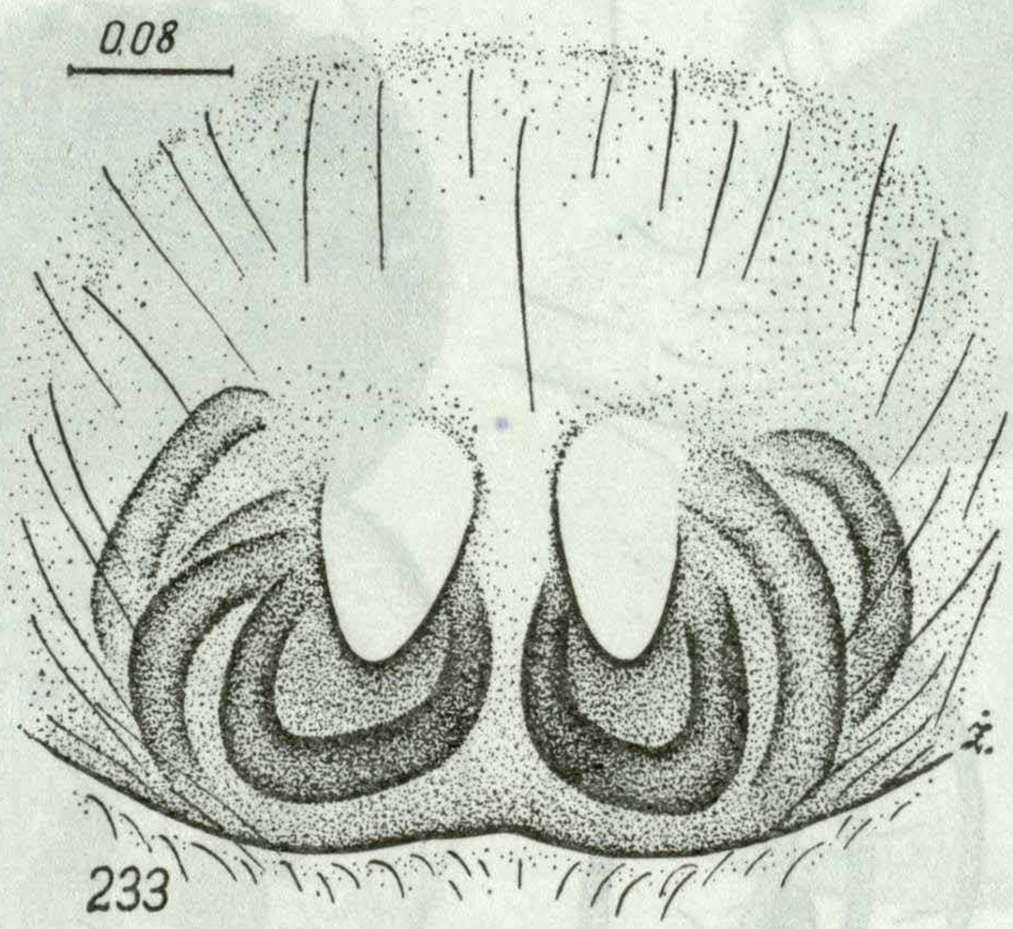


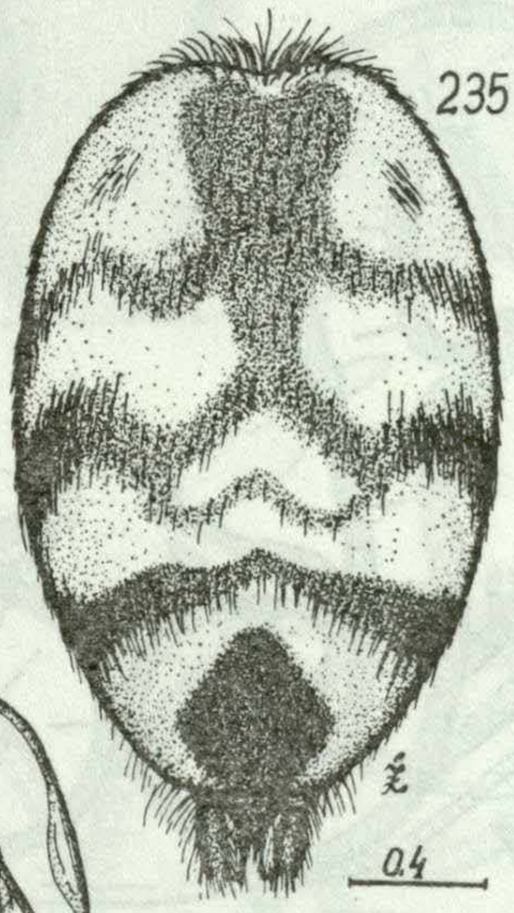


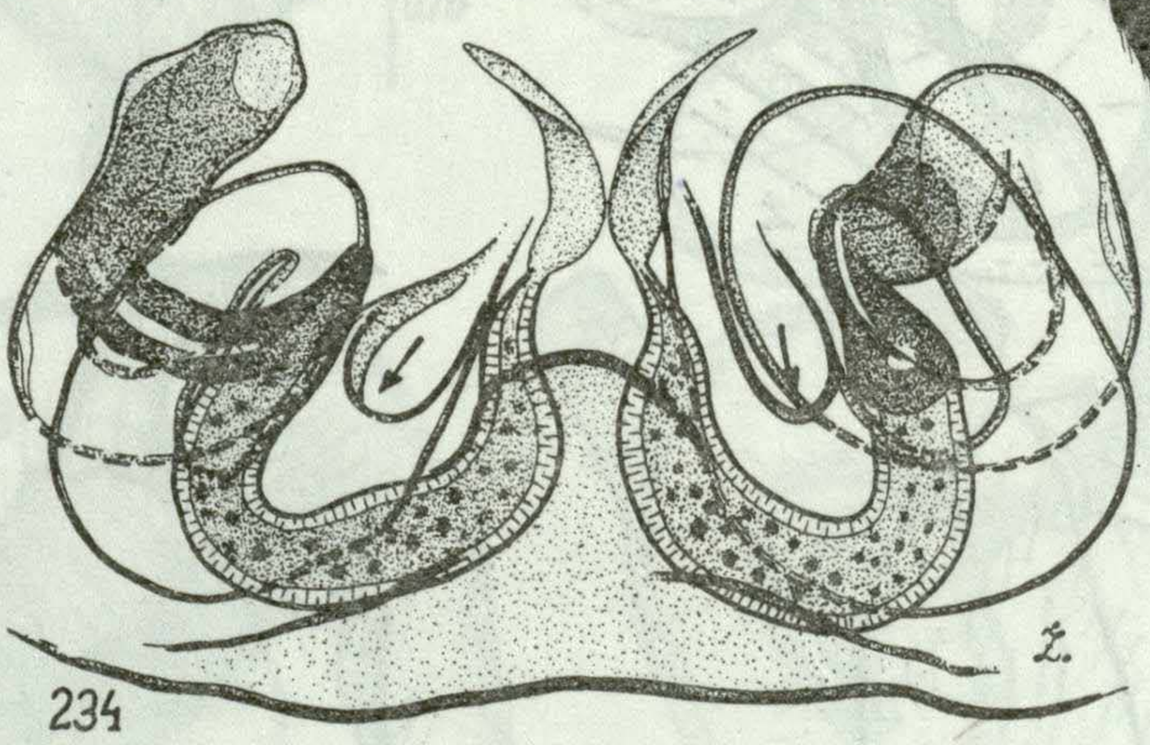




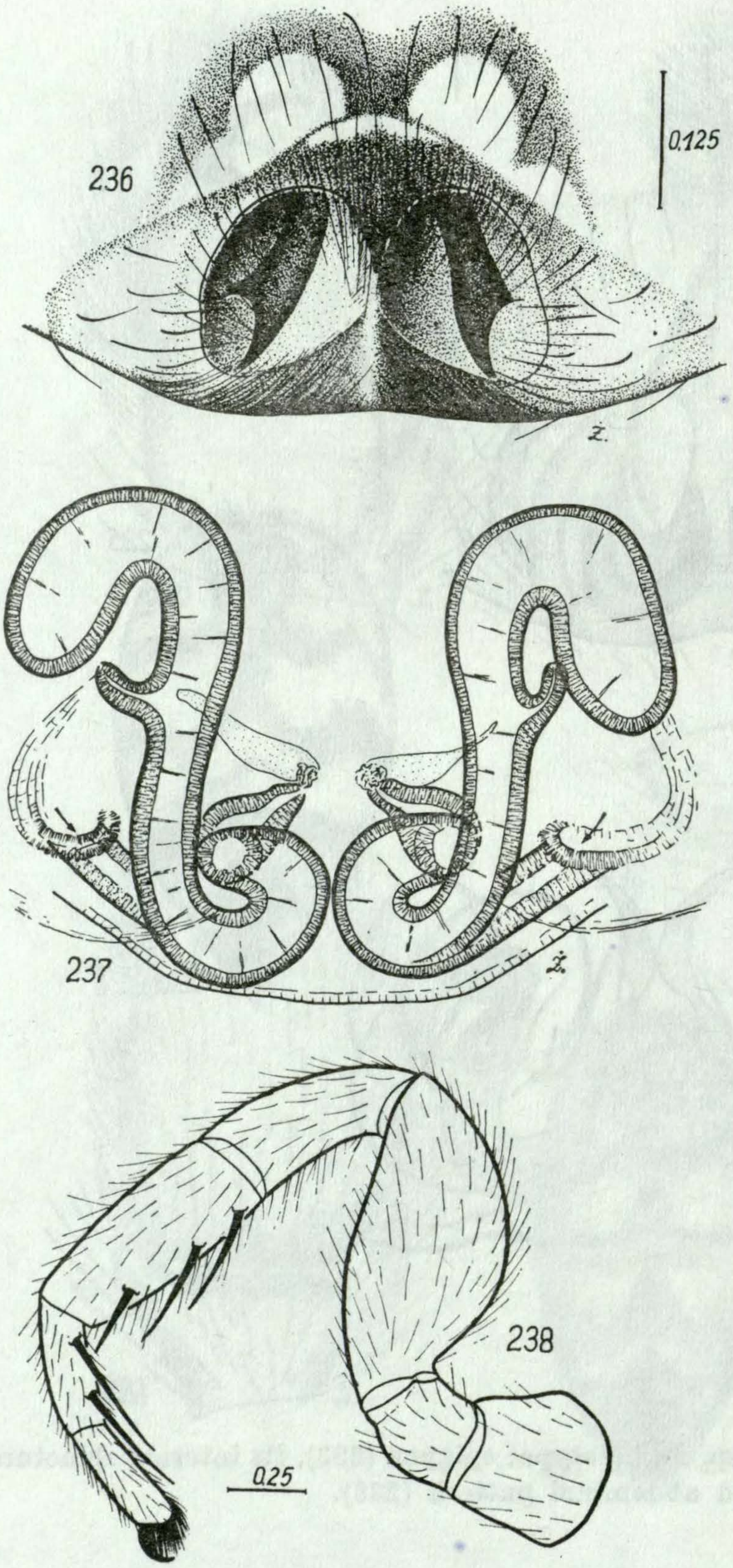
Figs. 227–232. ♂ *Icius kaszabi* sp. n., holotype: palpal organ (227–230), abdominal pattern (231) and cephalothorax (232).

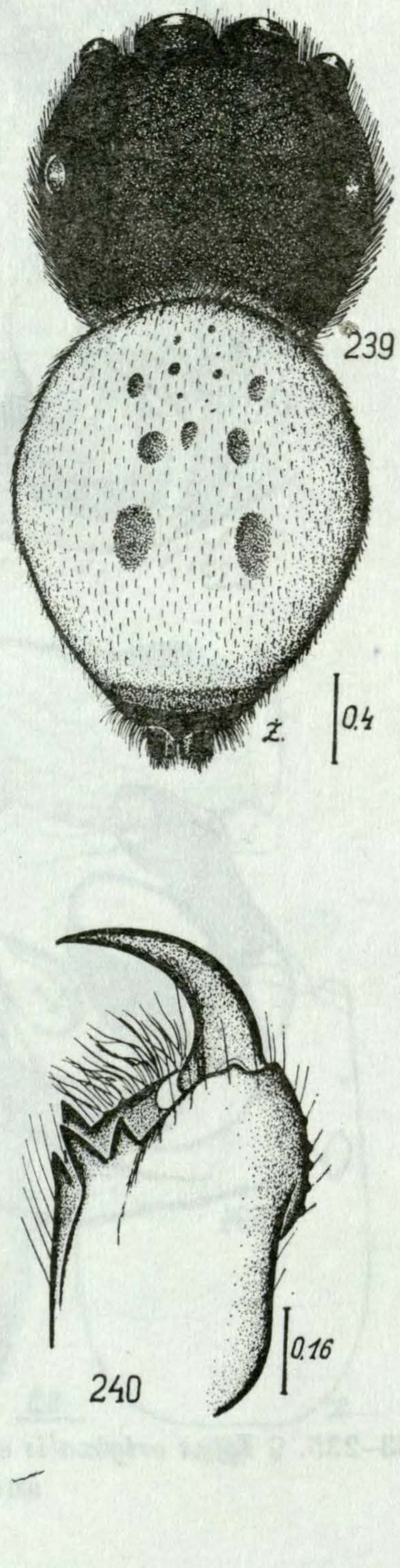




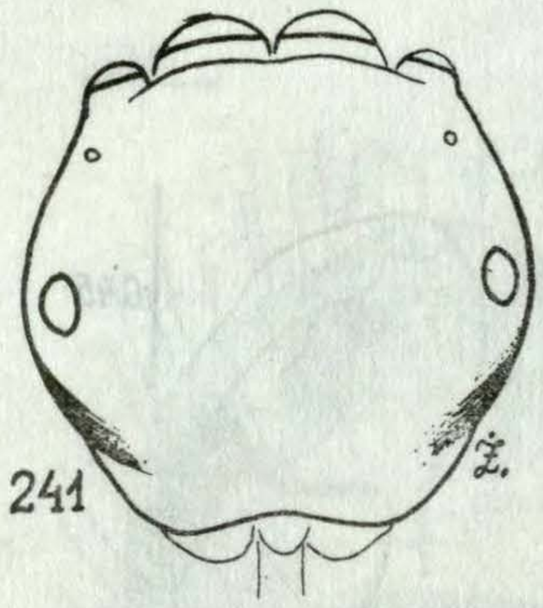


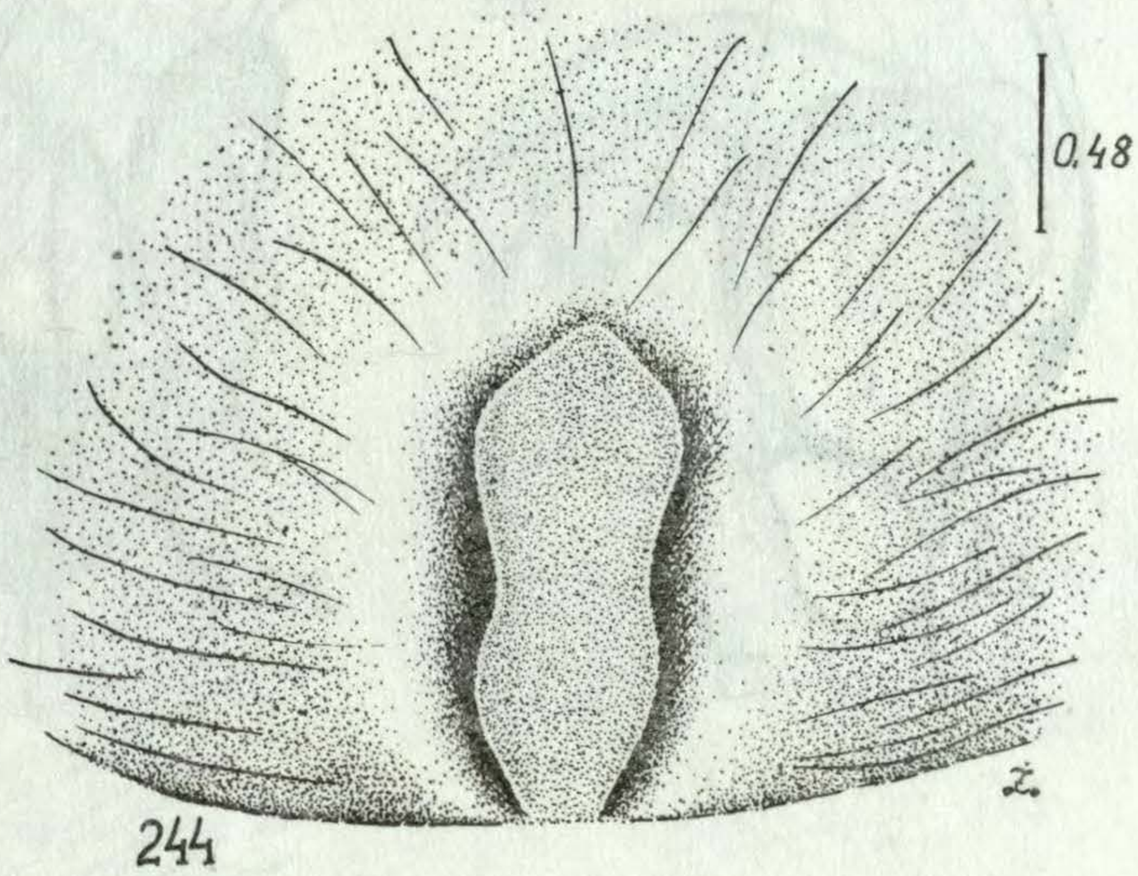
Figs. 233–235. ♀ *Icius originalis* sp. n., holotype: epigyne (233), its internal structures (234) and abdominal pattern (235).

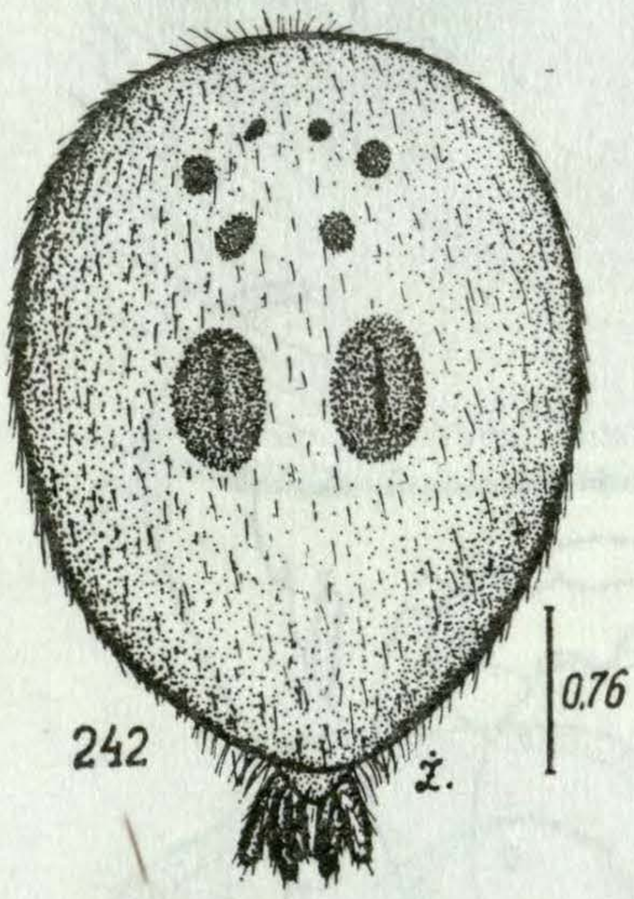


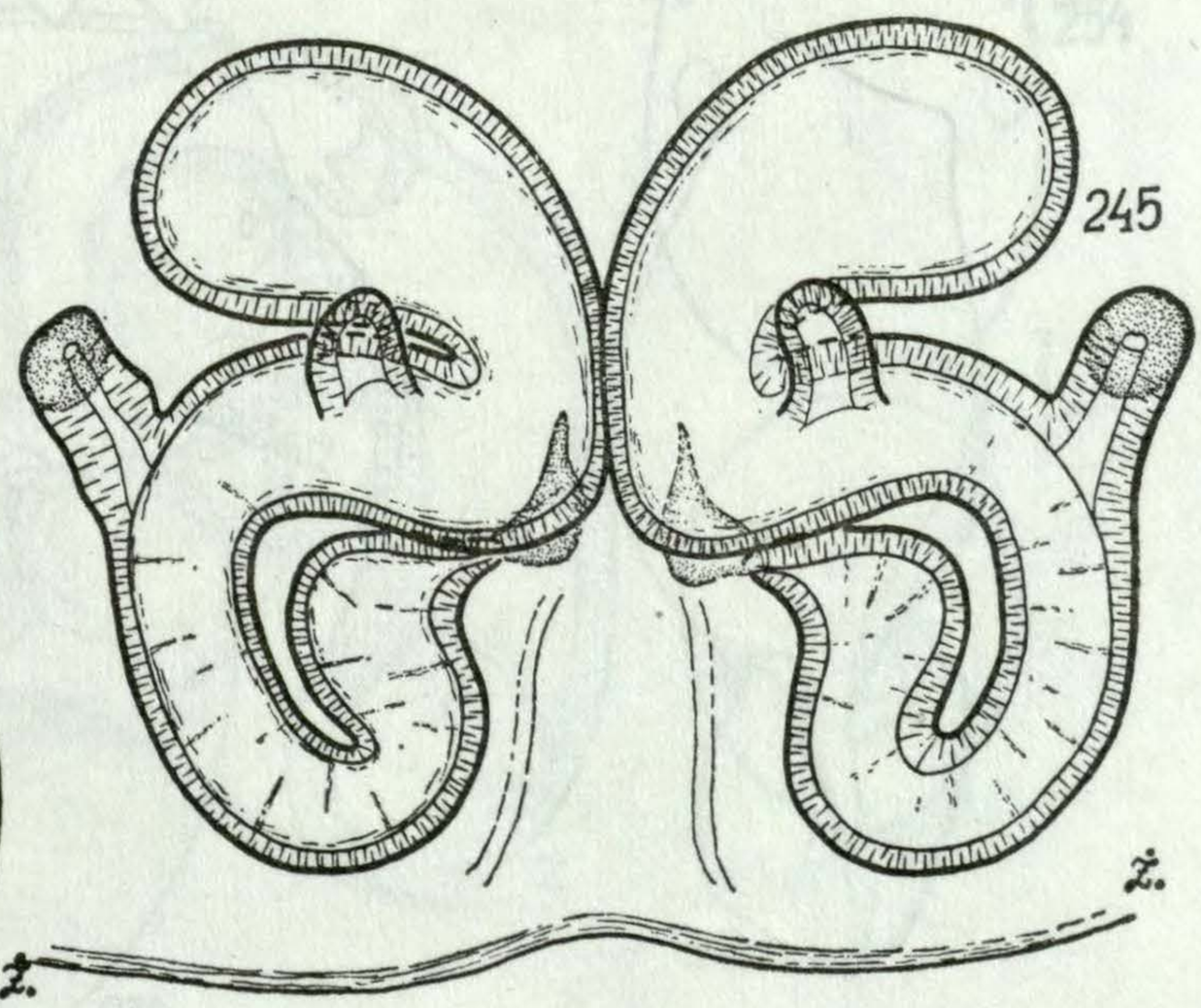


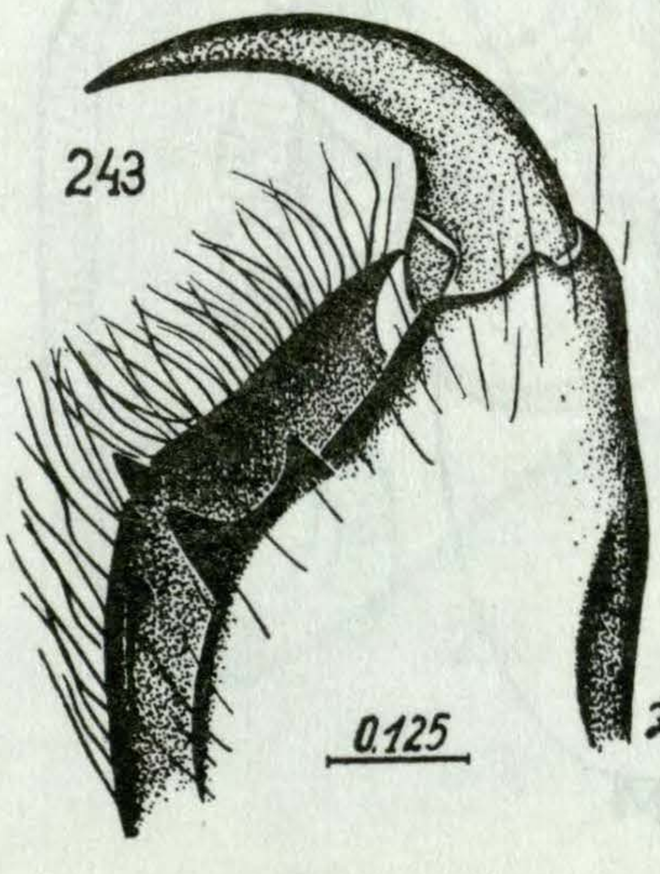
Figs. 236–240. ♀ *Irura bicolor* sp. n., holotype: epigyne (236), its internal structures (237), leg I (238), general appearance (239) and cheliceral dentition (240).



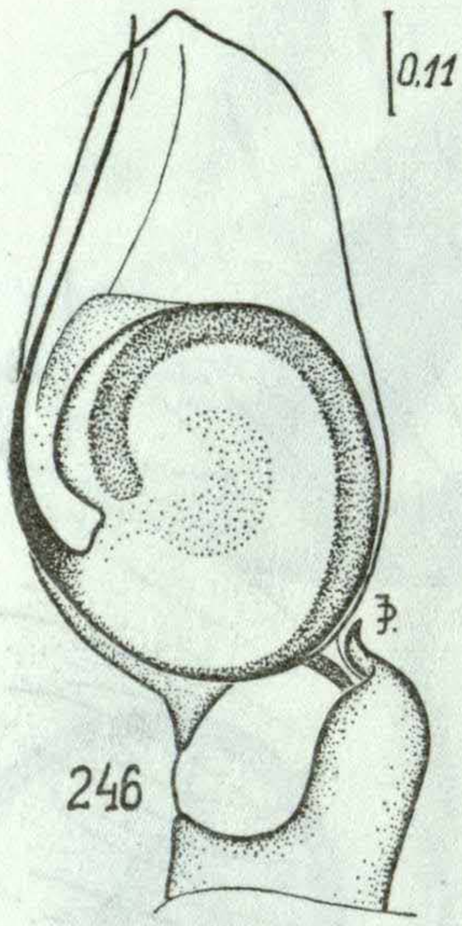


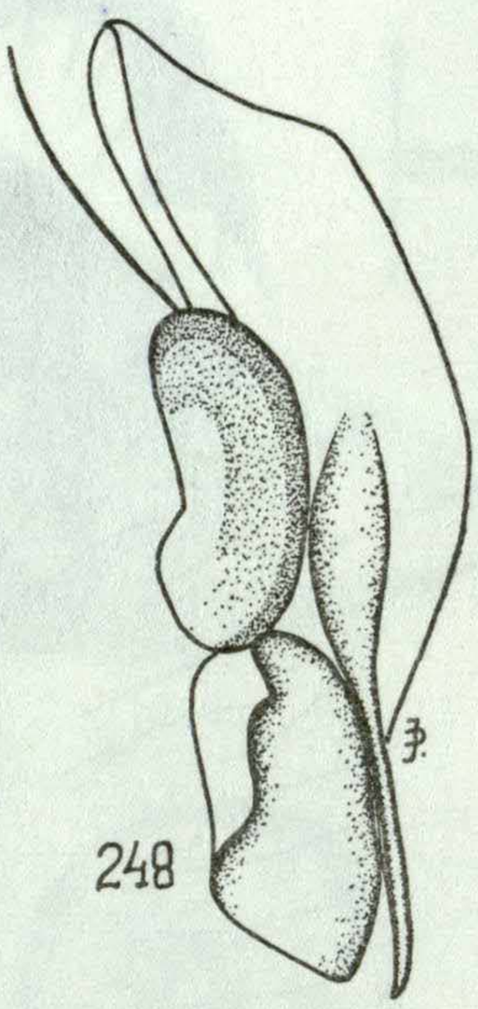


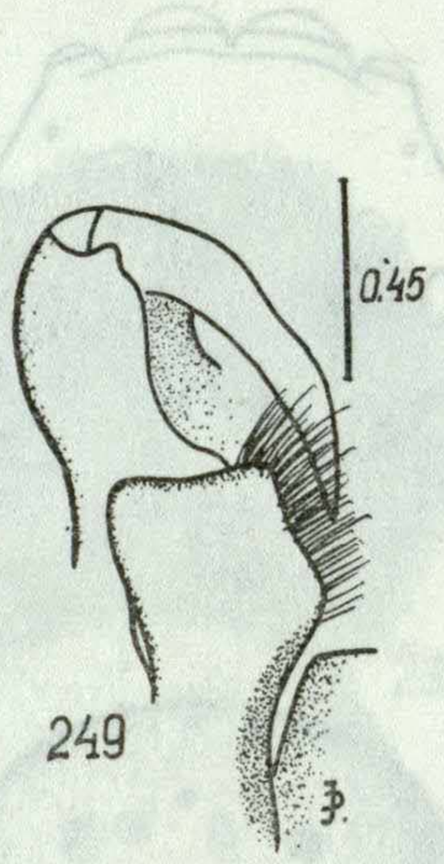


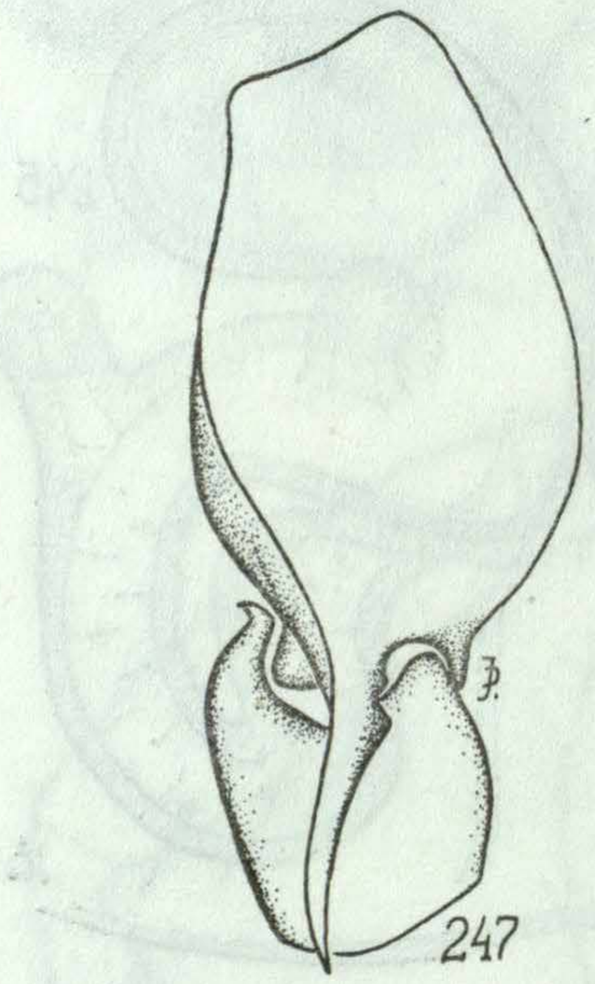


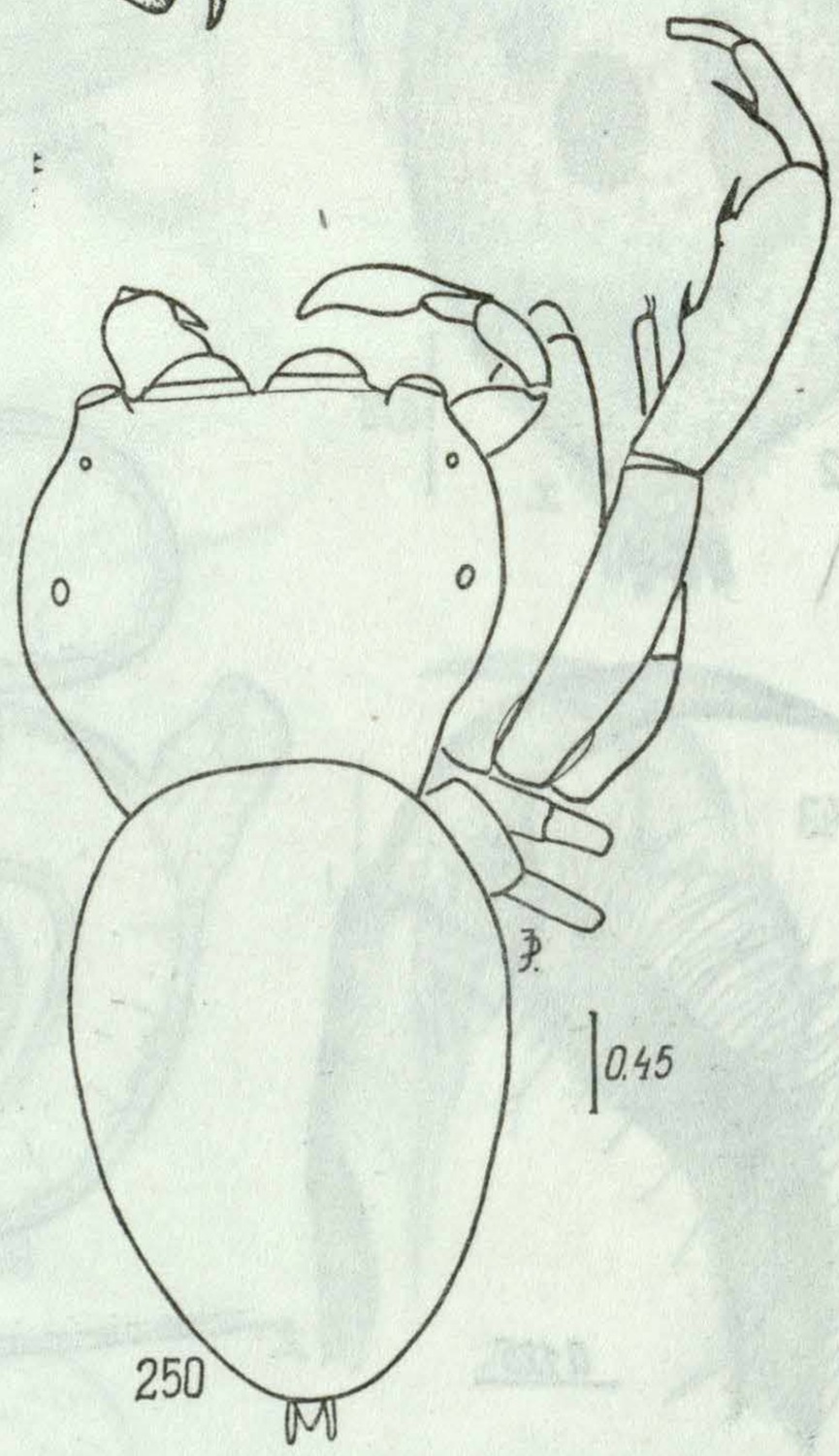
Figs. 241–245. ♀ *Irura mandarina* SIMON, 1903: cephalothorax (241), abdominal pattern (242), cheliceral dentition (243), epigyne (244) and its internal structures (245).



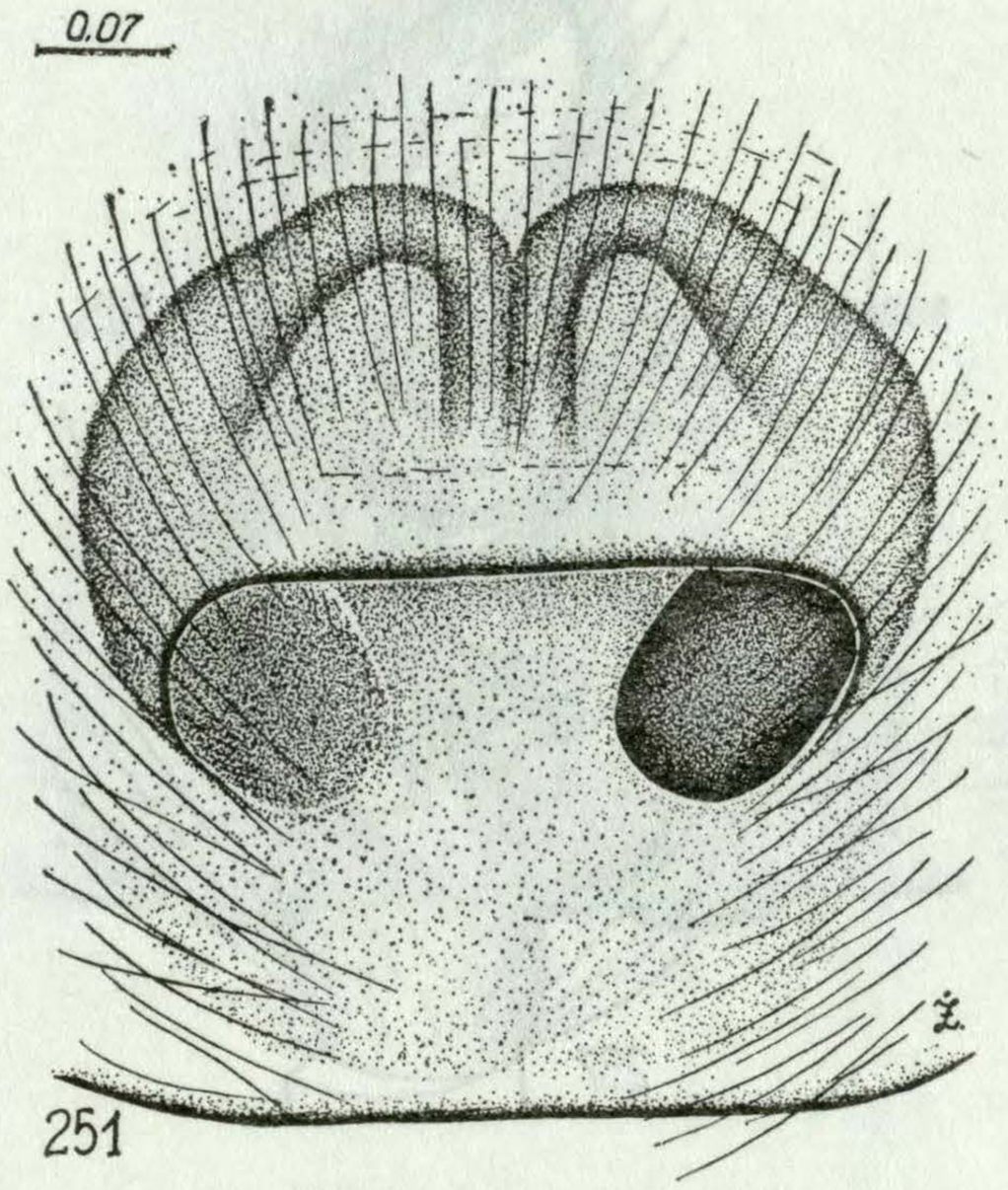


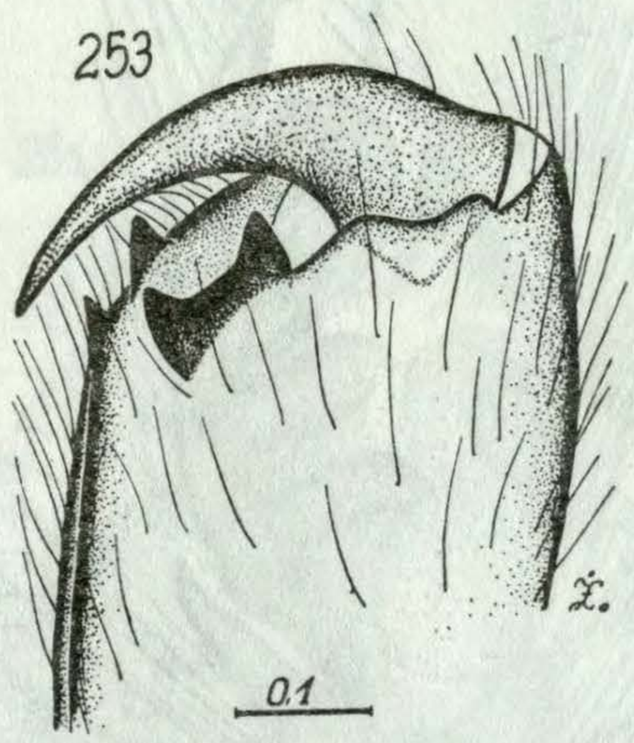


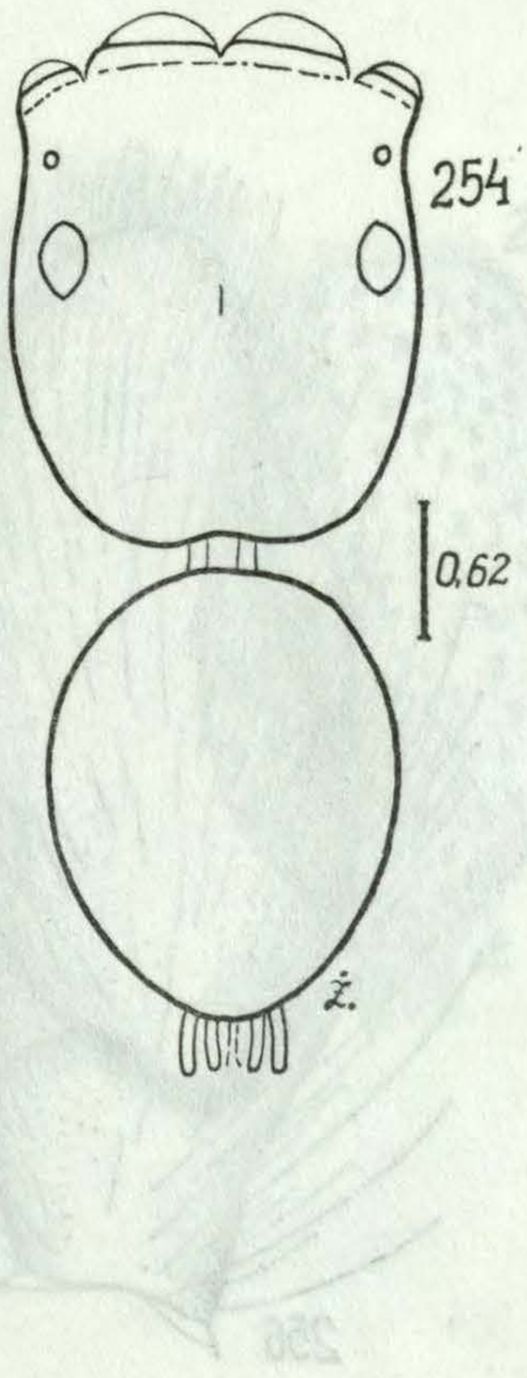


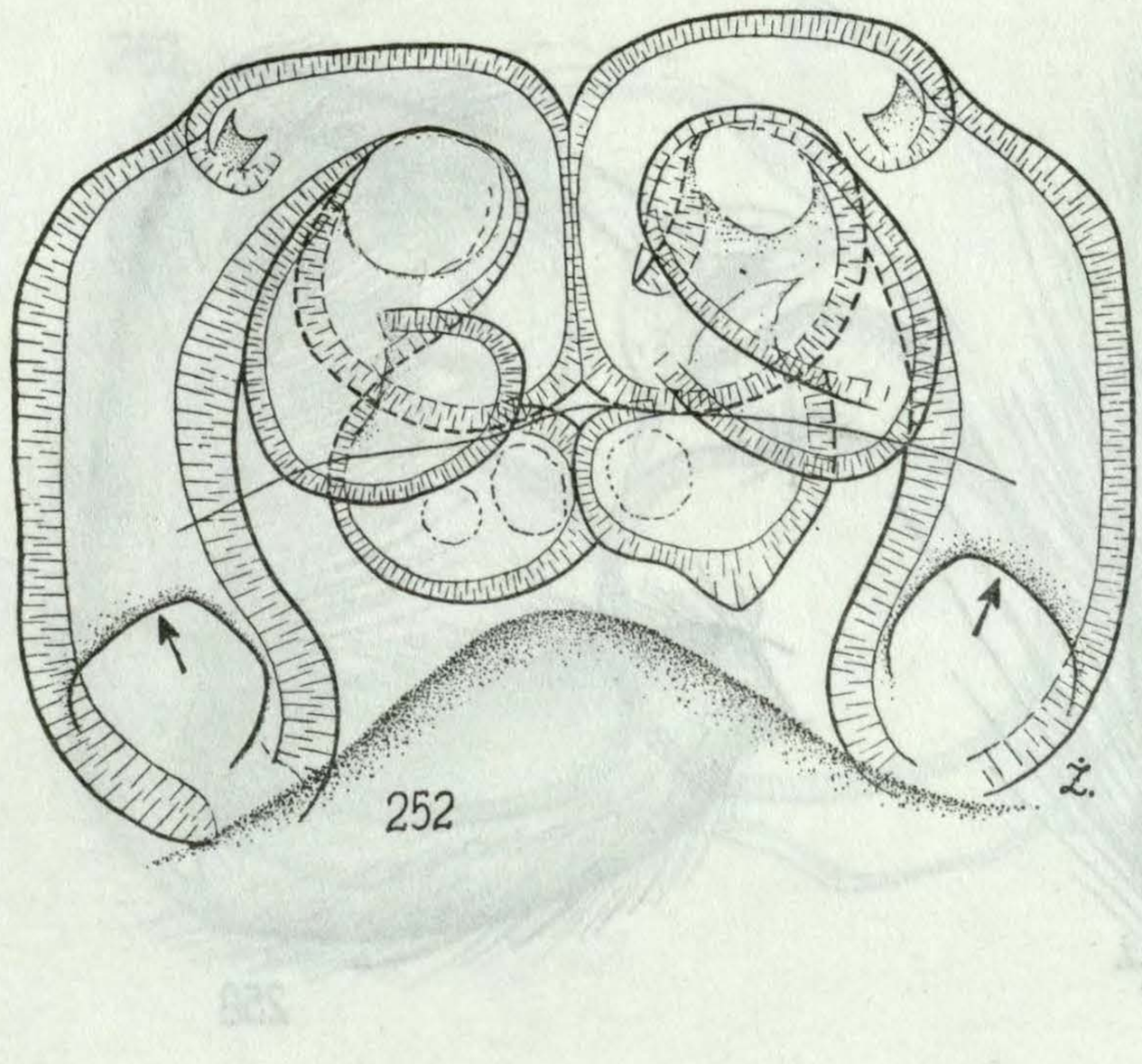


Figs. 246–250. ♂ *Kinhia prima* sp. n., holotype: palpal organ (246–248), cheliceral dentition (249) and general appearance (250). Drawn by J. Prószyński.

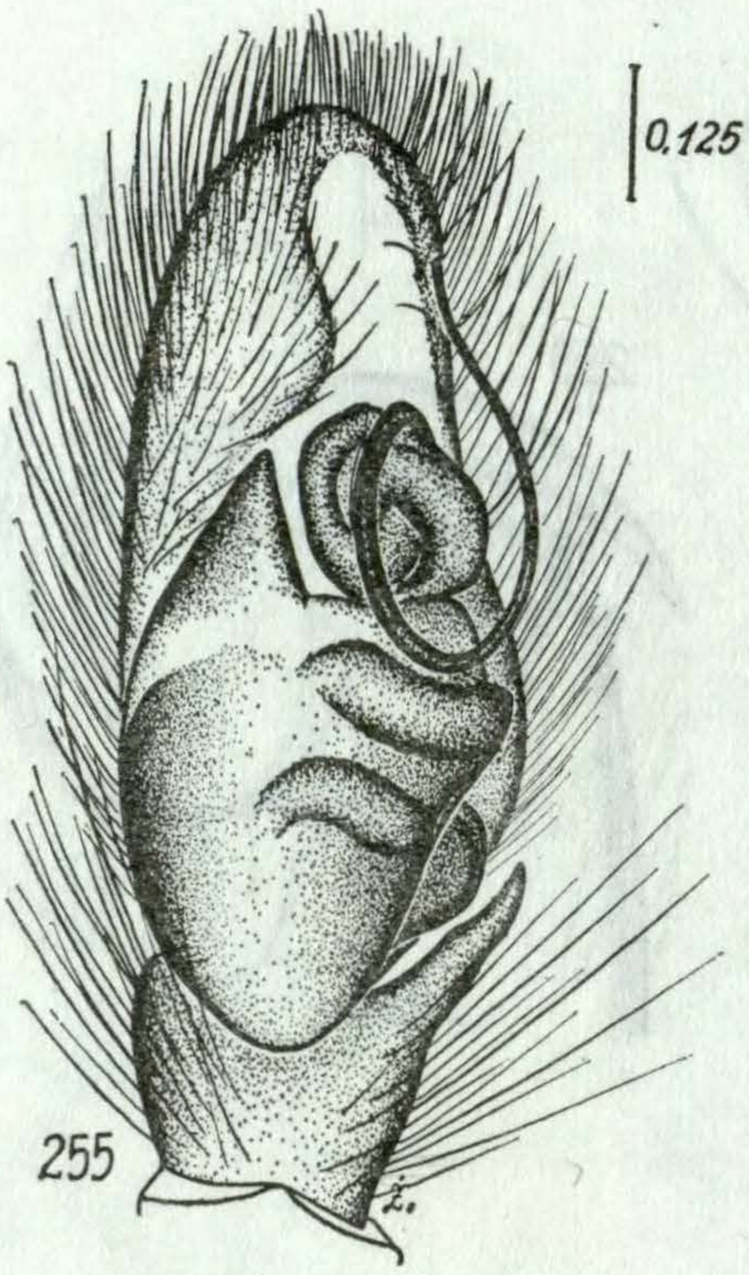


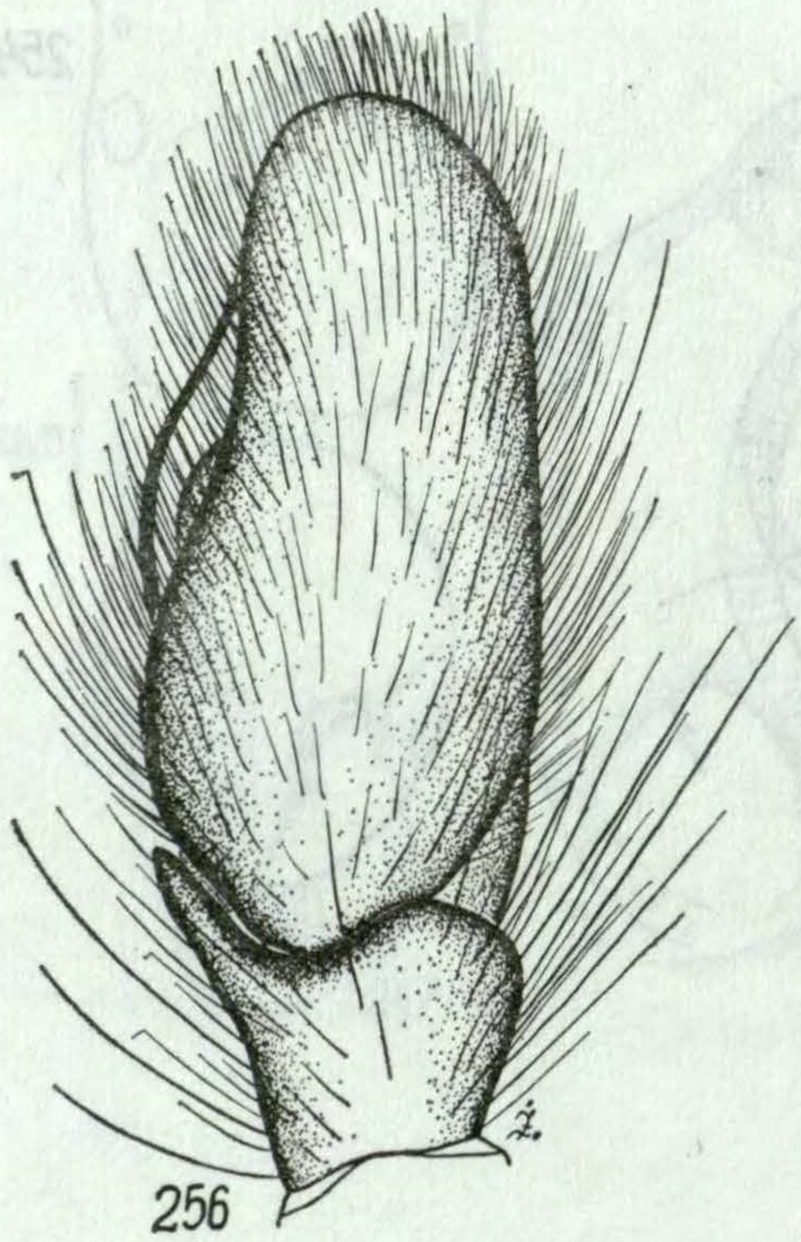


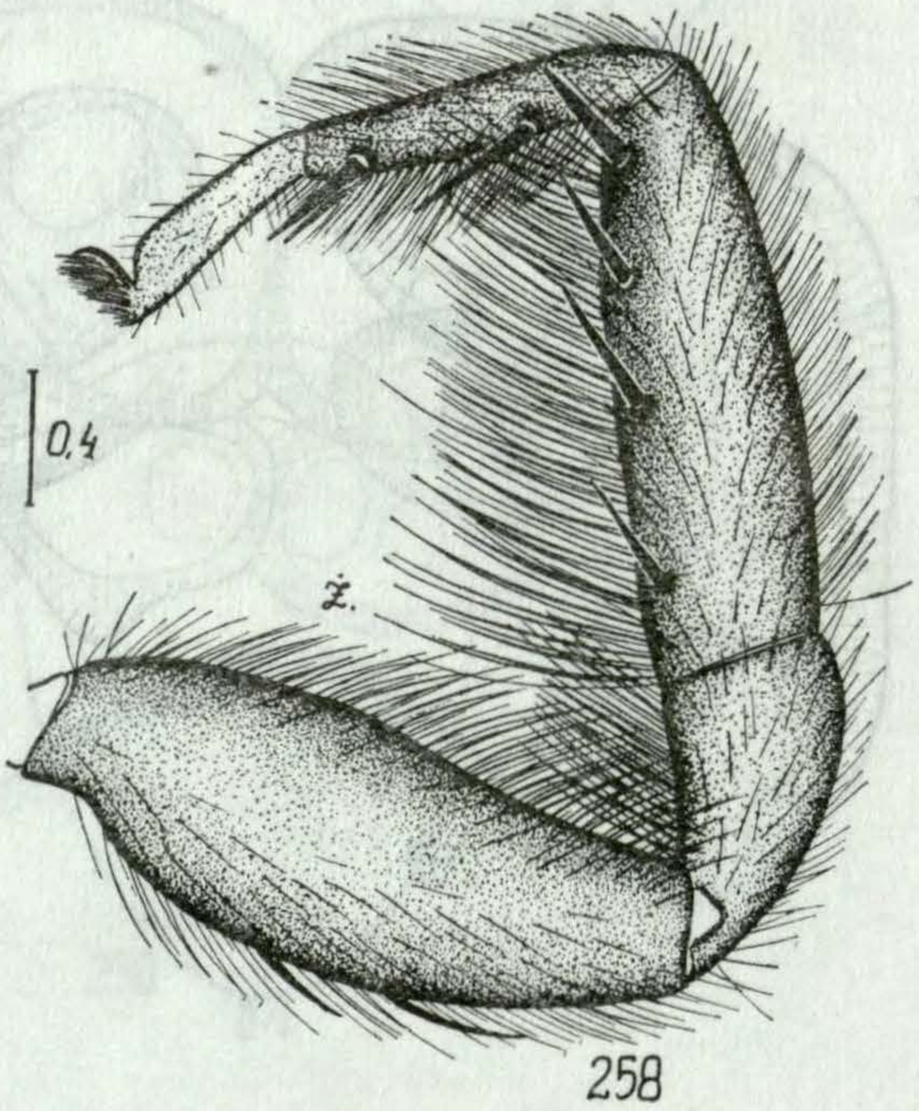




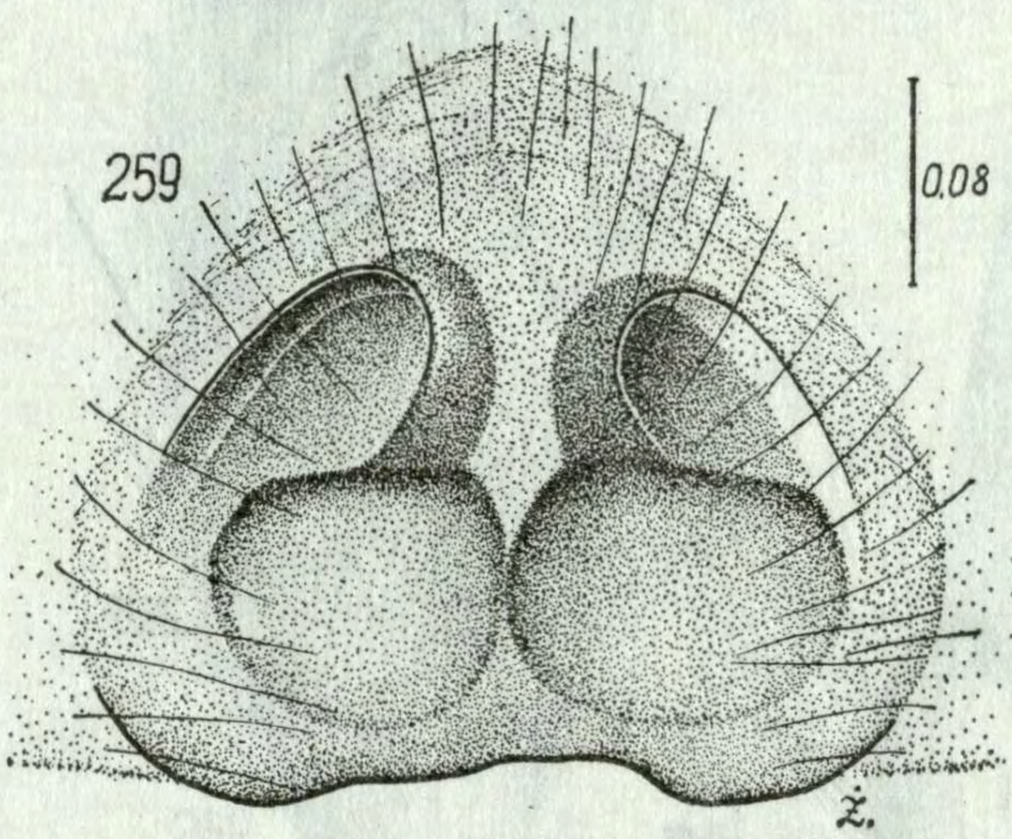
Figs. 251–254. ♀ *Langerra oculina* sp. n., holotype: epigyne (251), its internal structures (252), cheliceral dentition (253) and general appearance (254).

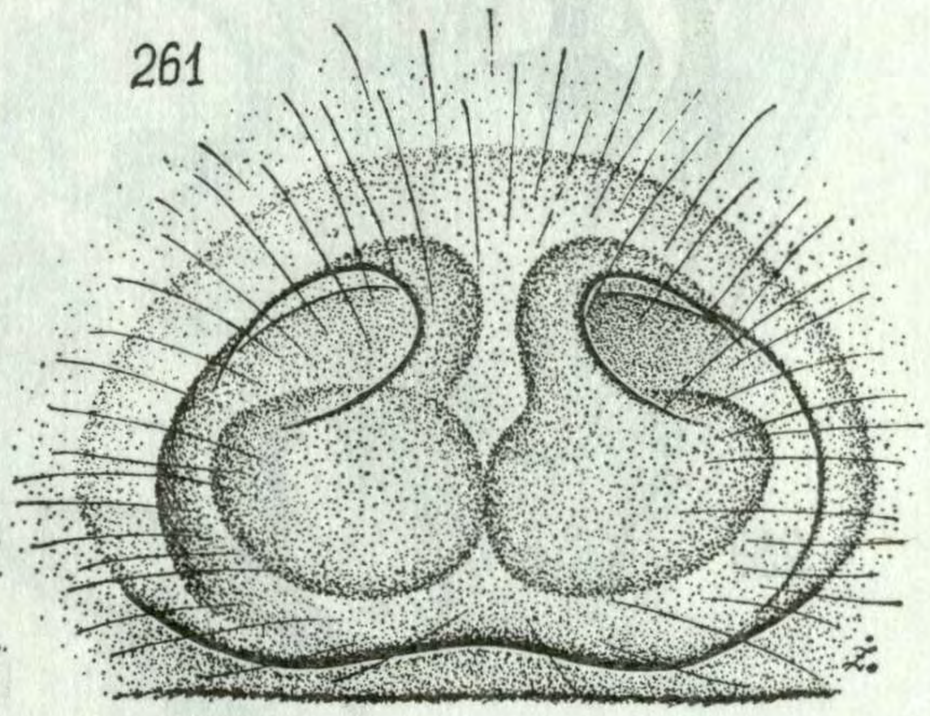


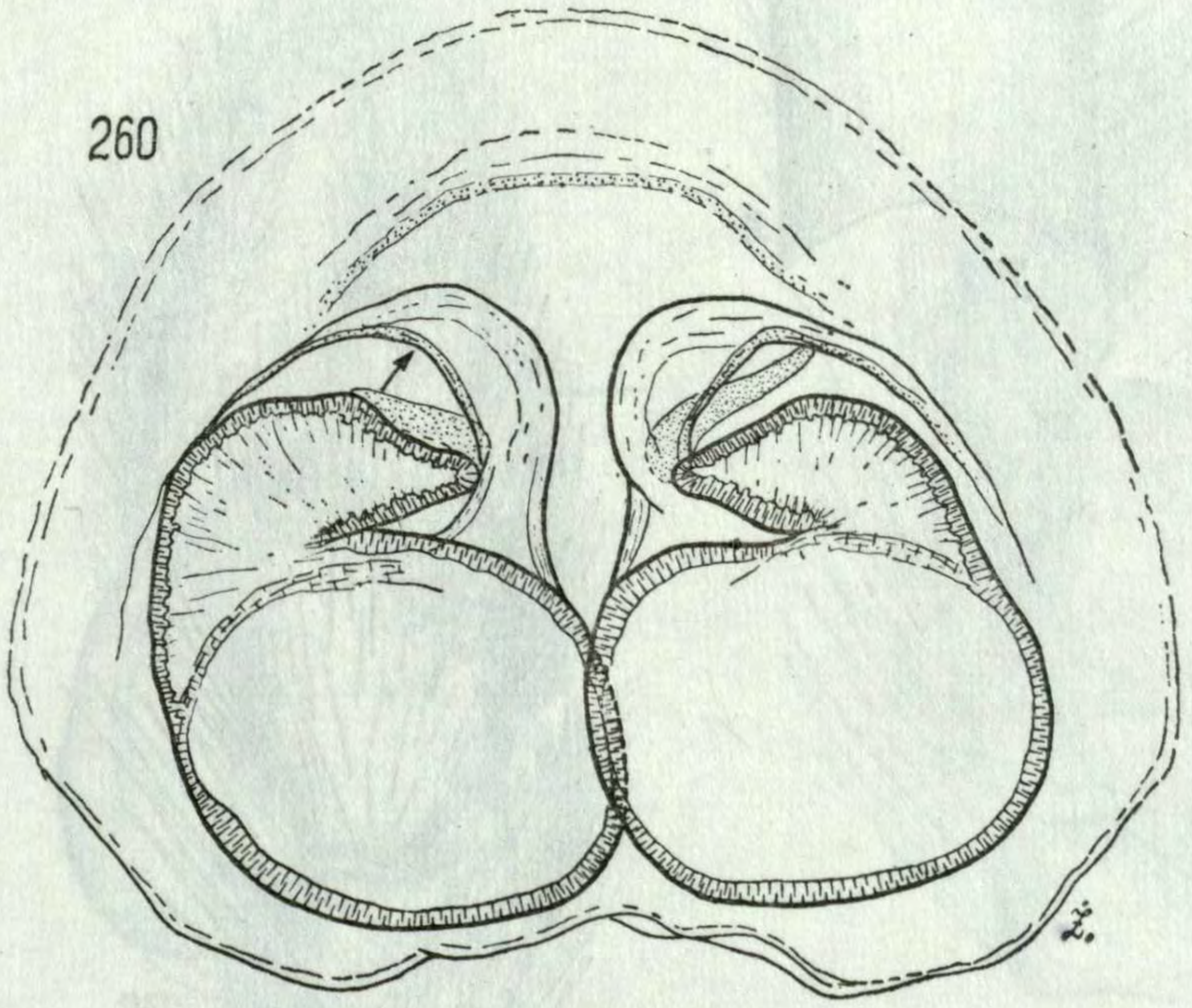


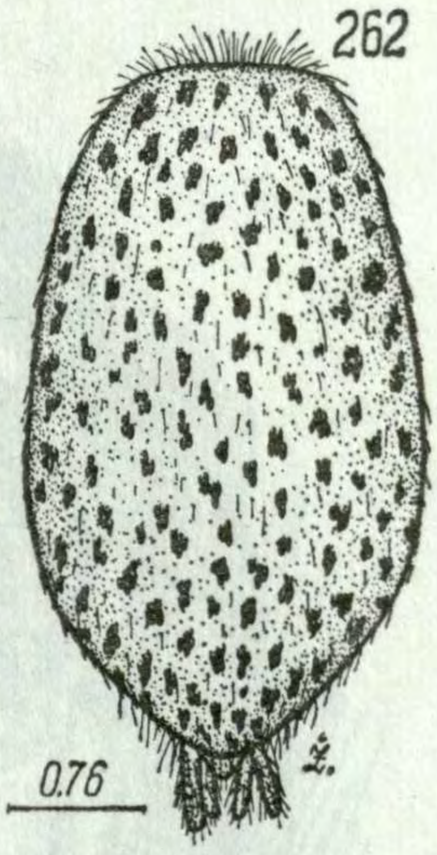


Figs. 255–258. ♂ *Laufeia scutigera* sp. n., holotype: palpal organ (255–257) and leg I (258).

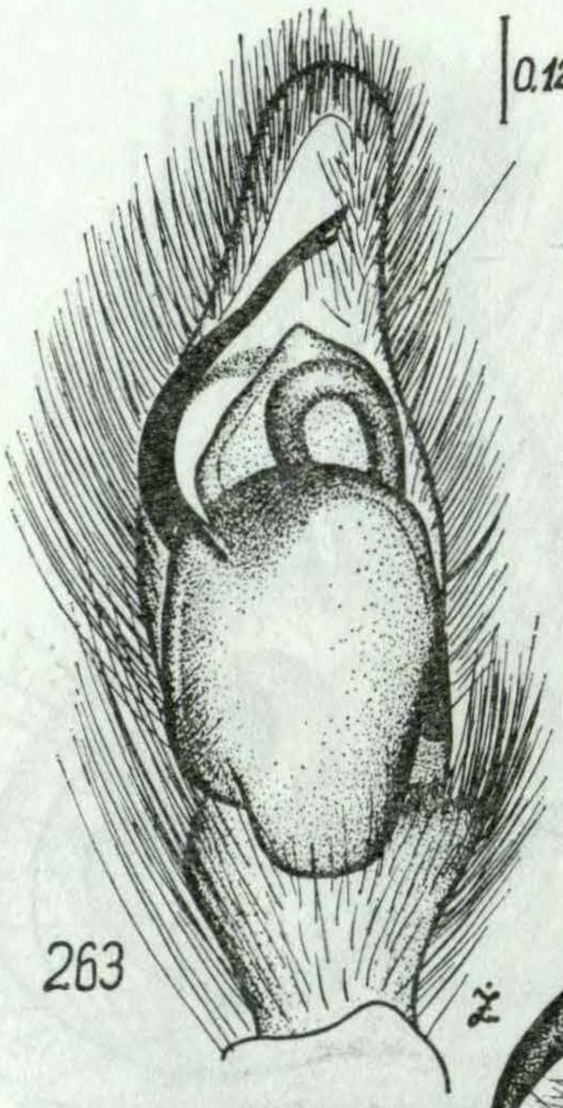


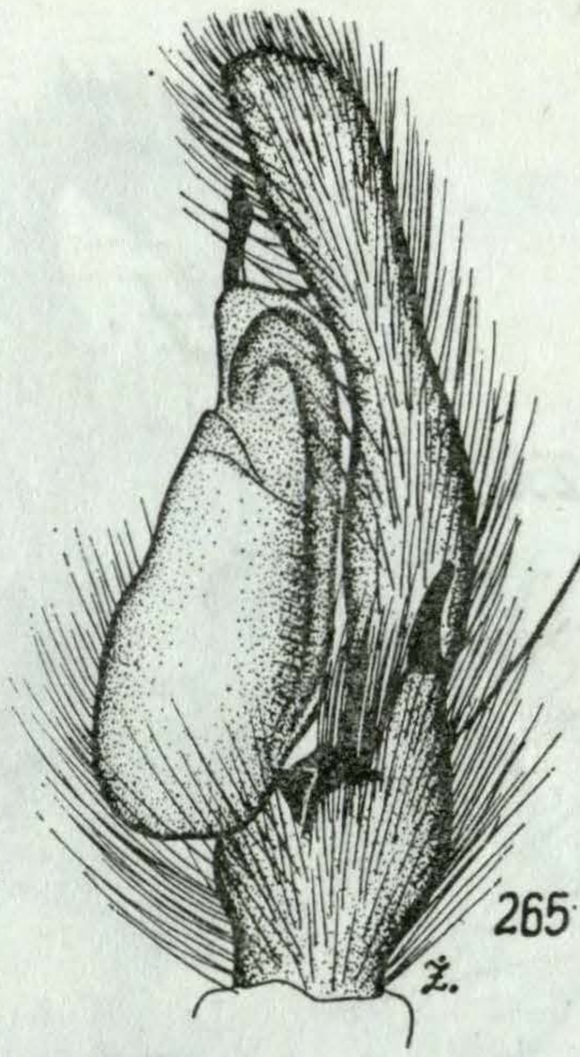


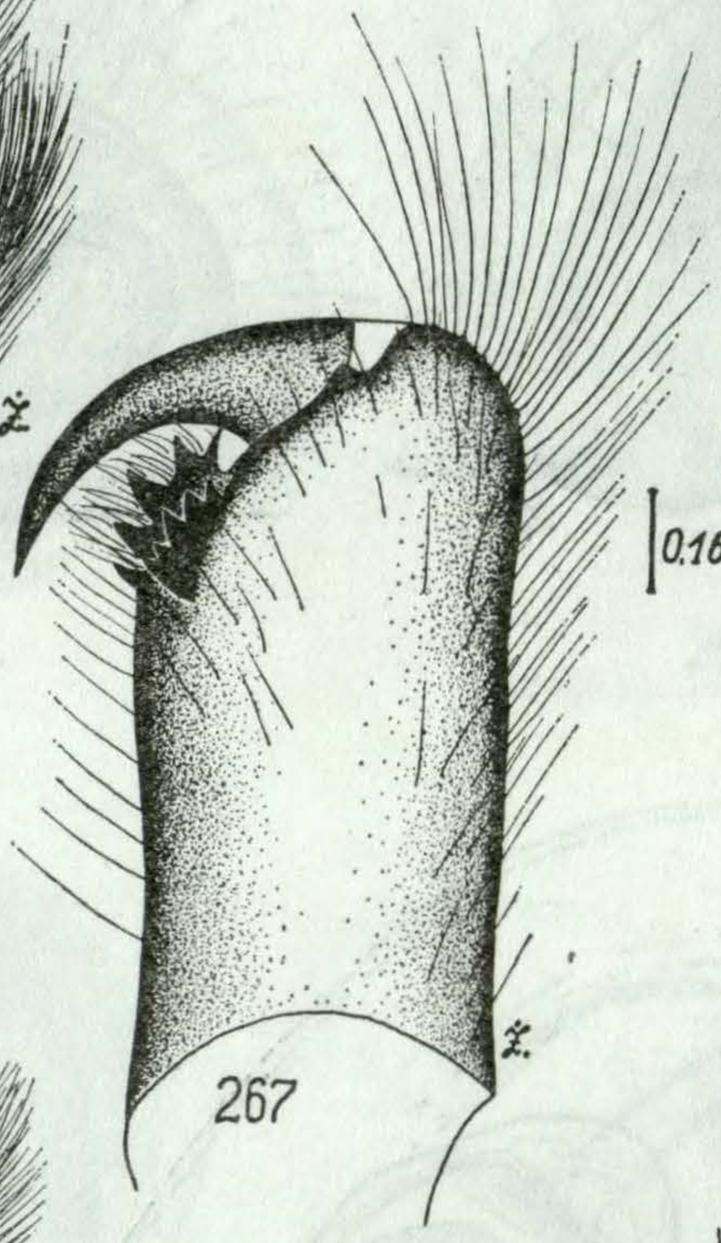


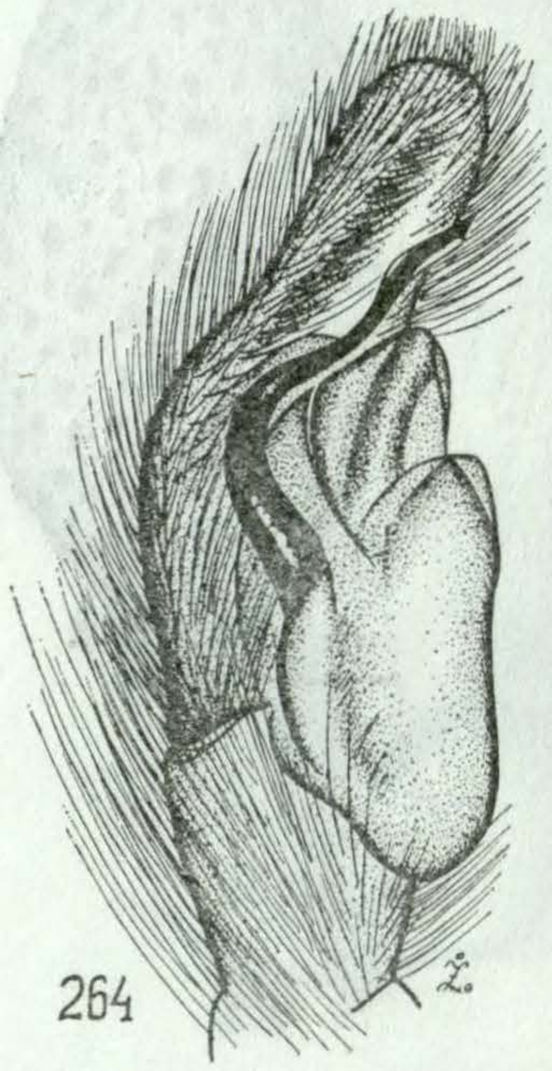


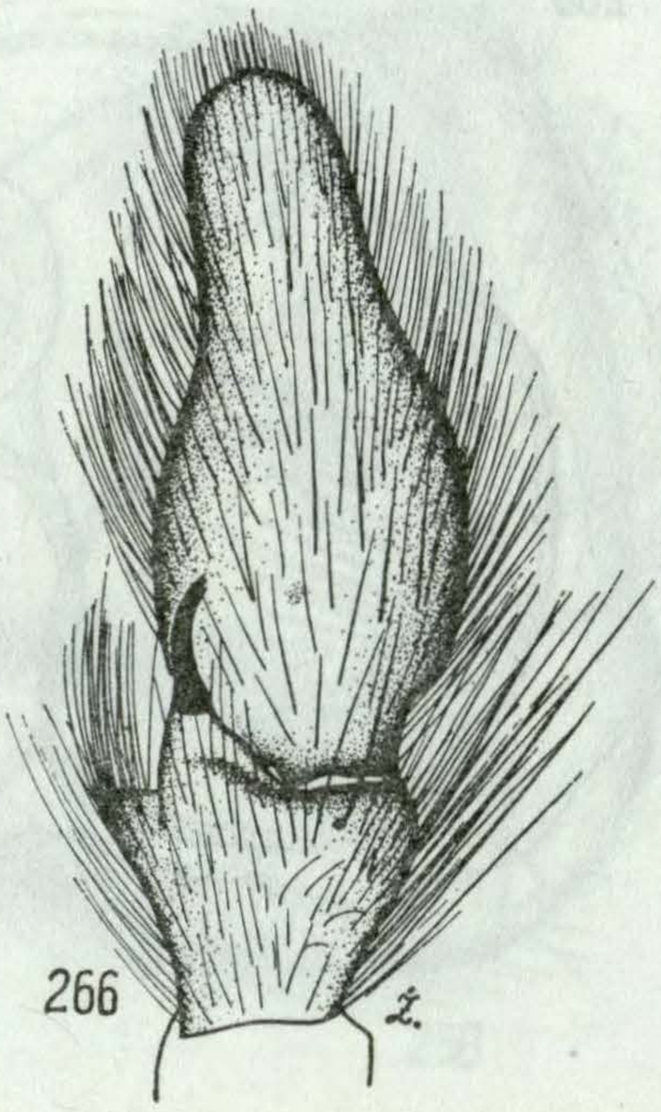
Figs. 259–262. ♀ *Lechia squamata* sp. n., holotype: epigyne (259), its internal structures (260) and abdominal pattern (262). Paratype: epigyne (261).



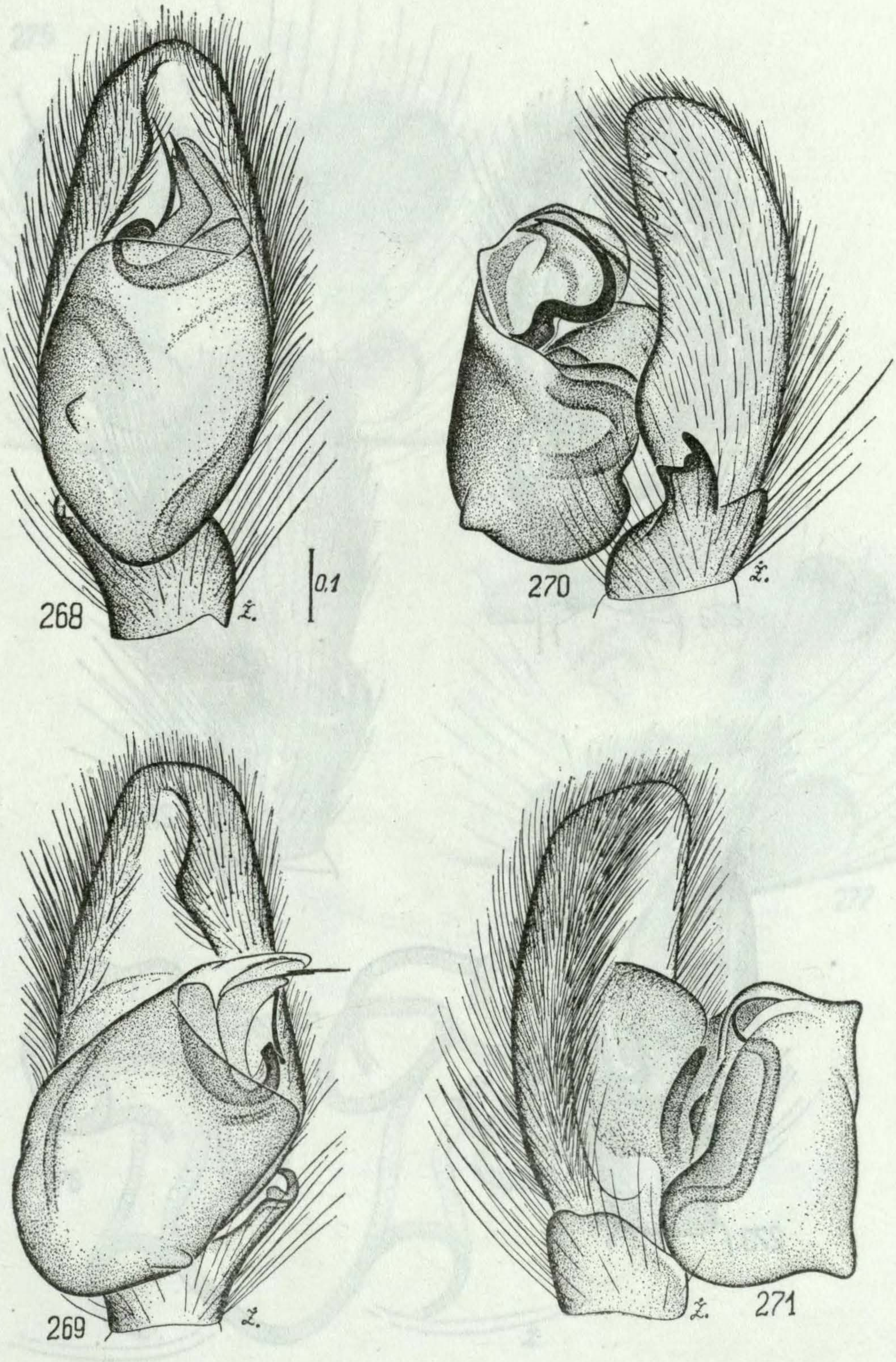




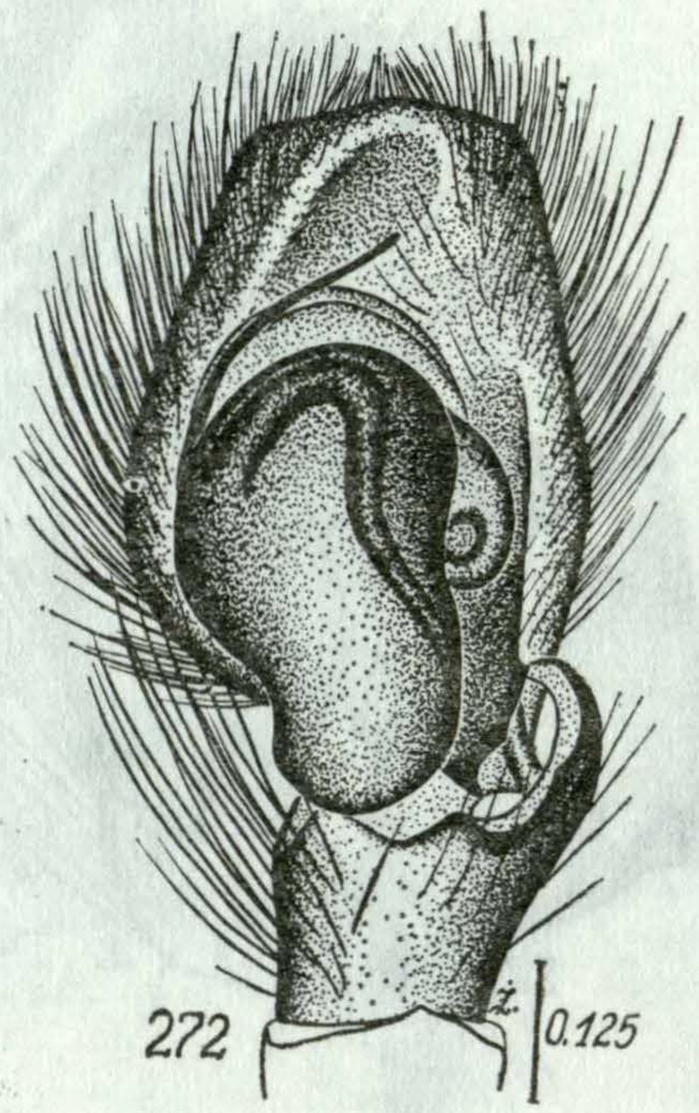


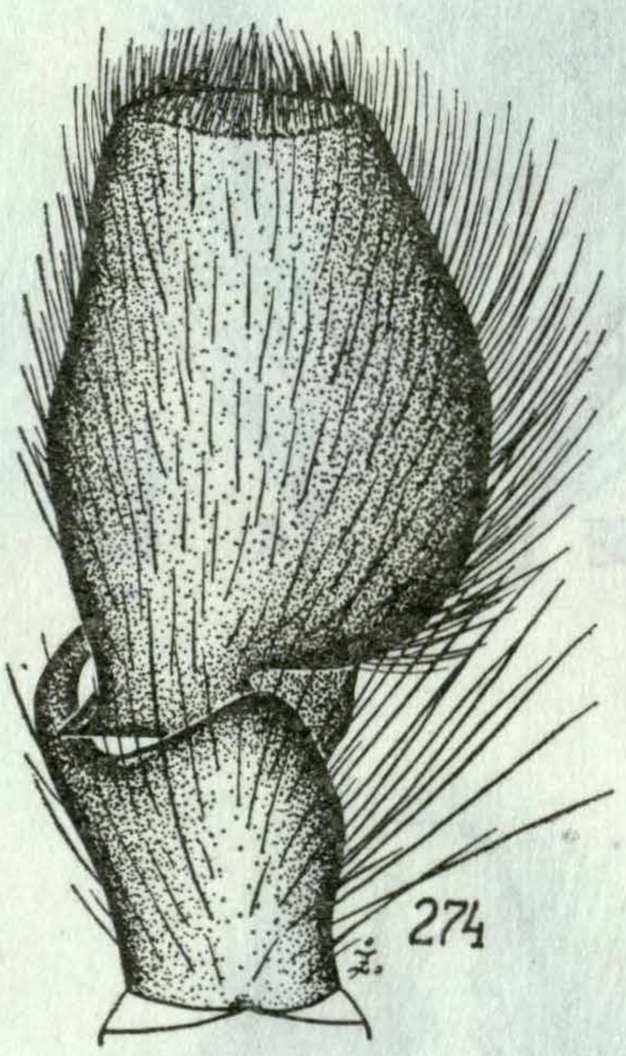


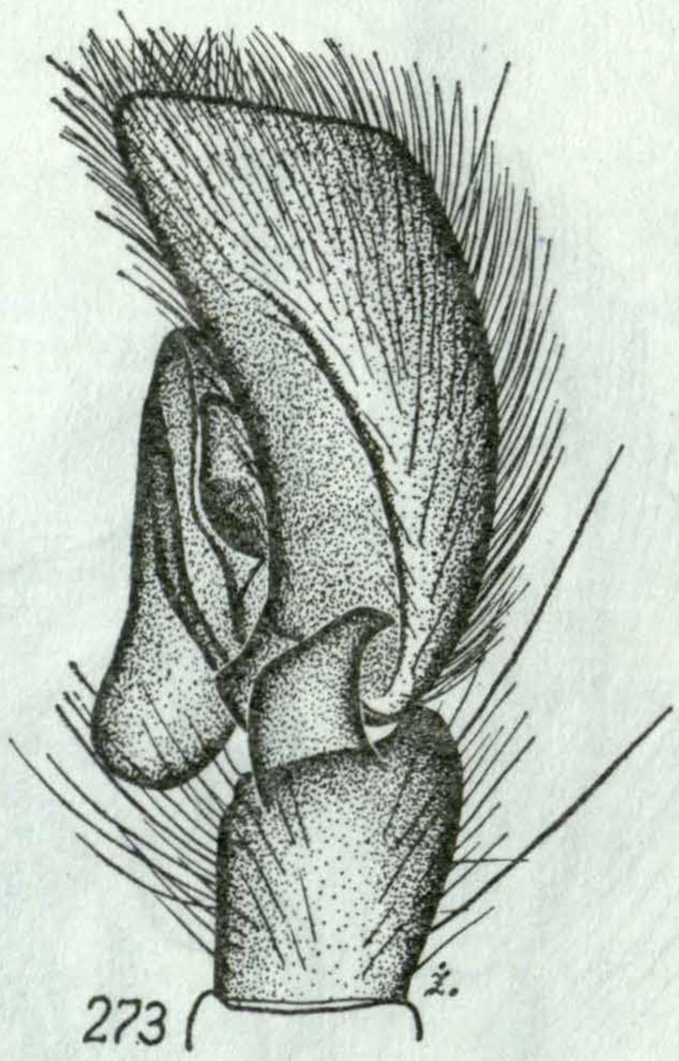
Figs. 263–267. ♂ *Gedea tibialis* sp. n., holotype: palpal organ (263–266), cheliceral dentition (267).



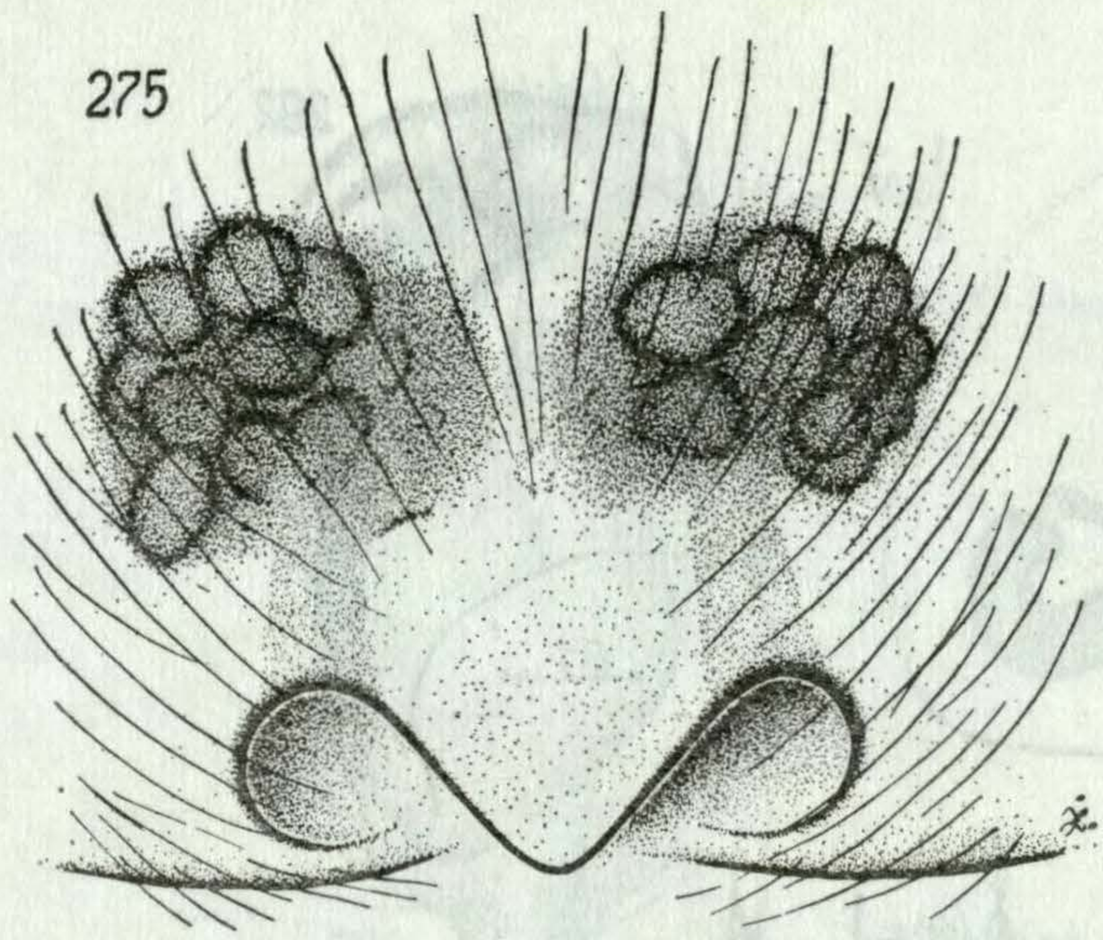
Figs. 268–271. ♂ *Magyarus typicus* sp. n., holotype: palpal organ.

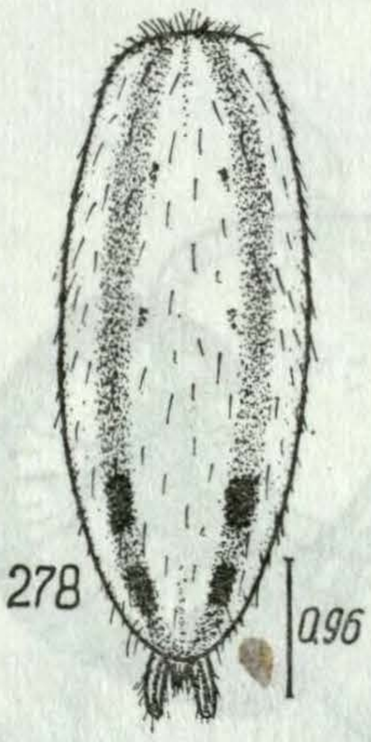


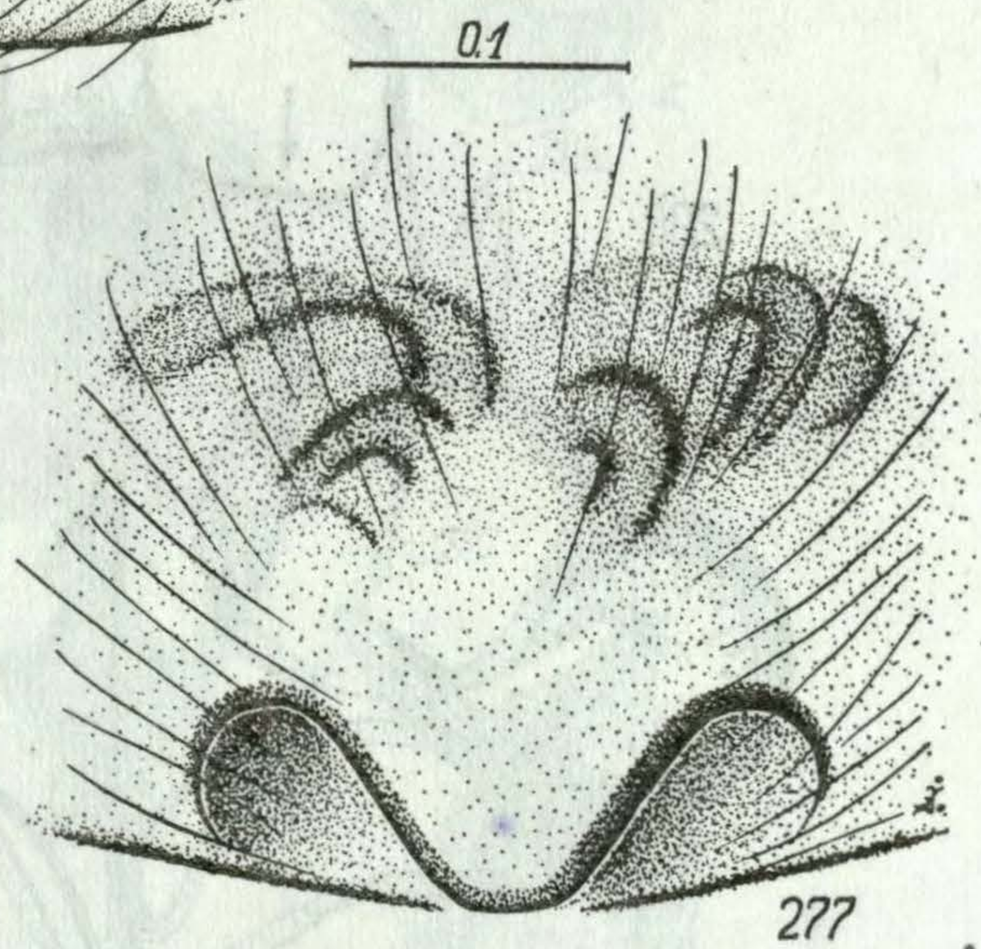


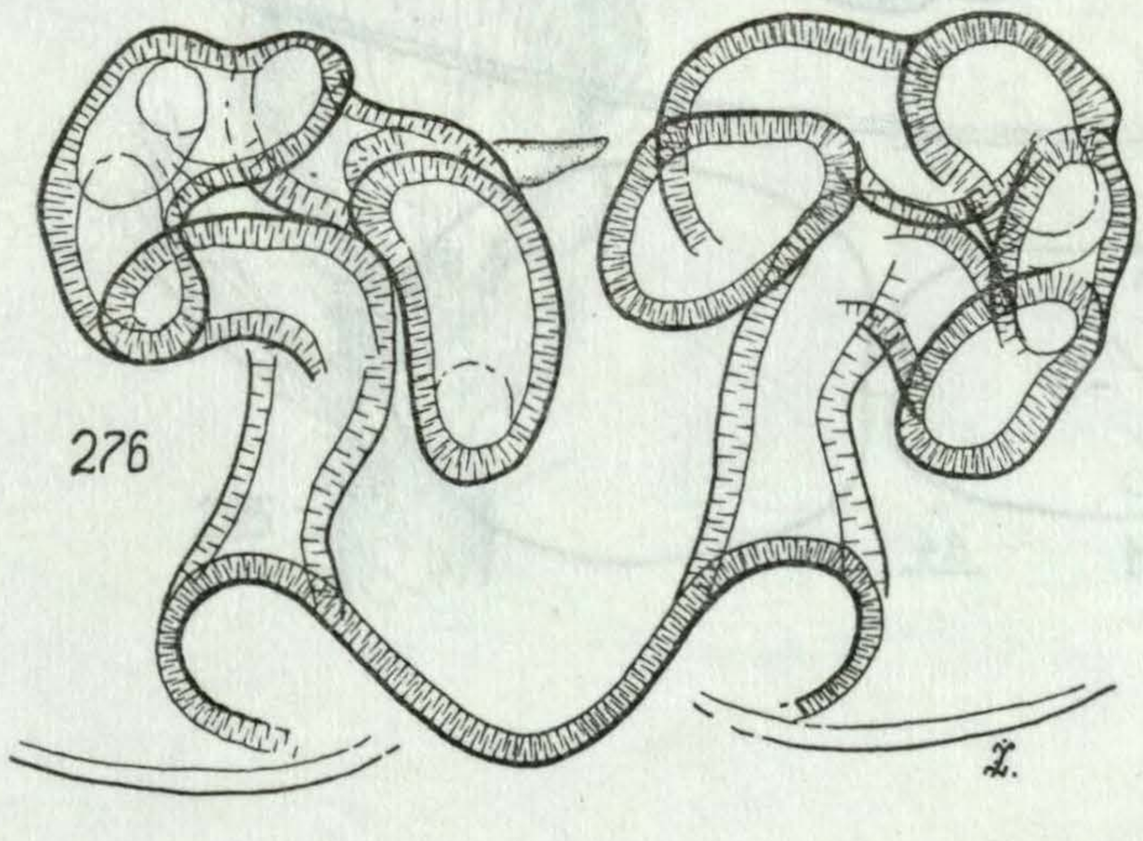


Figs. 272–274. ♂ *Marpissa magister* (KARSCH, 1879): palpal organ.

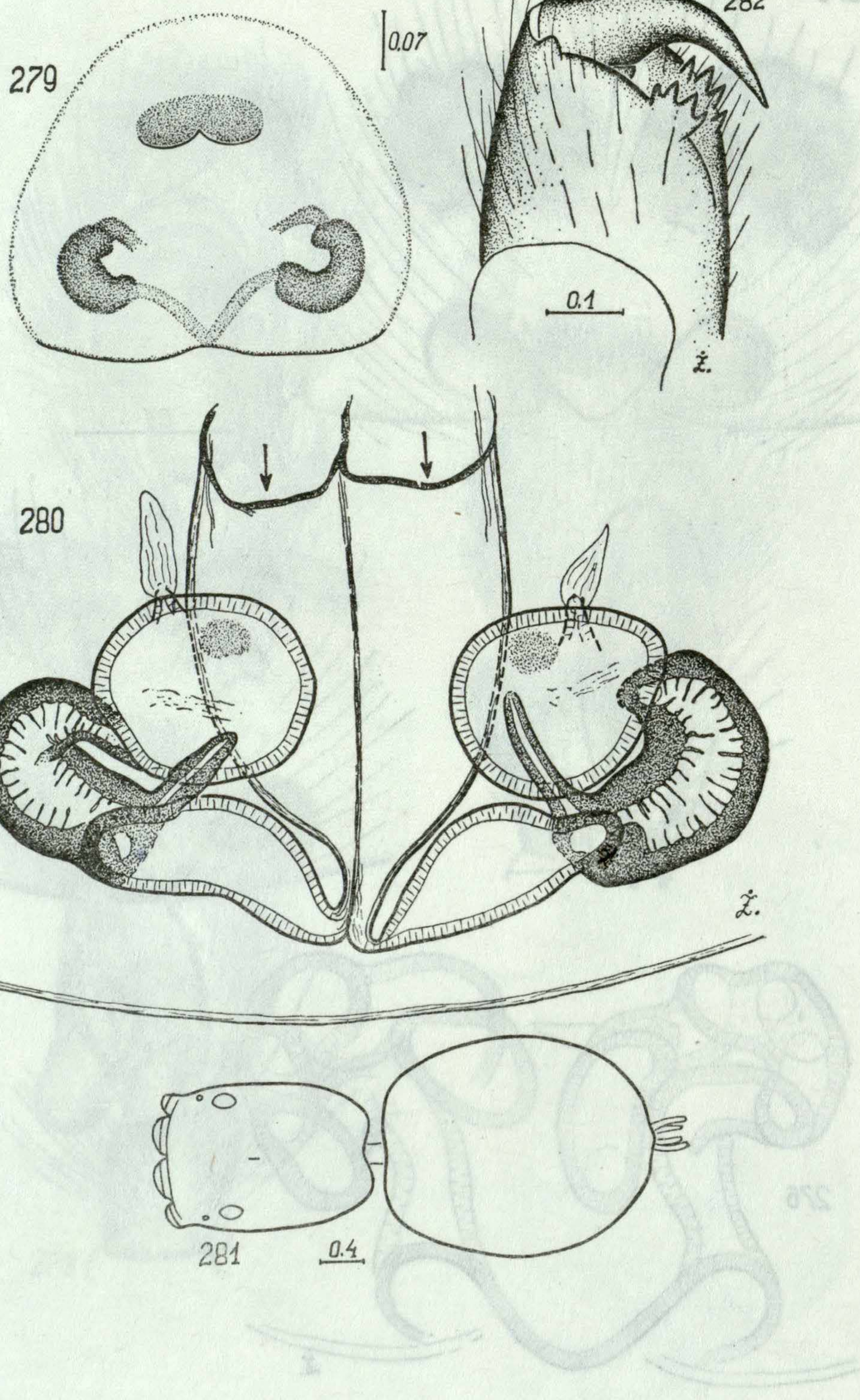




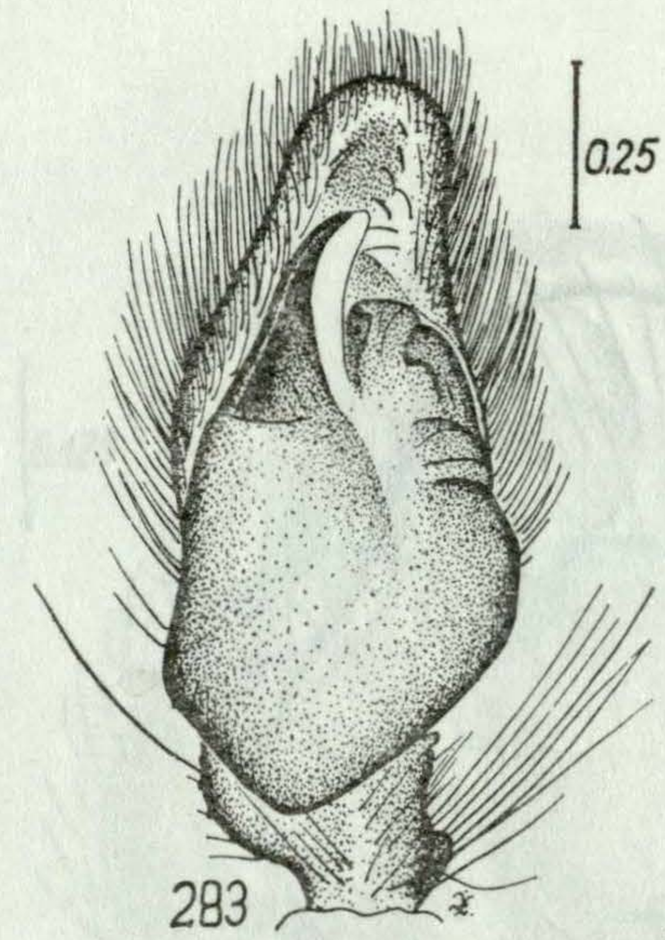




Figs. 275–278. ♀ *Marpissa magister* (KARSCH, 1879): epigyne (275, 277), its internal structures (276) and abdominal pattern (278).



Figs. 279–282. ♀ *Meata typica* sp. n., holotype: epigyne (279), its internal structures (280), general appearance (281) and cheliceral dentition (282).



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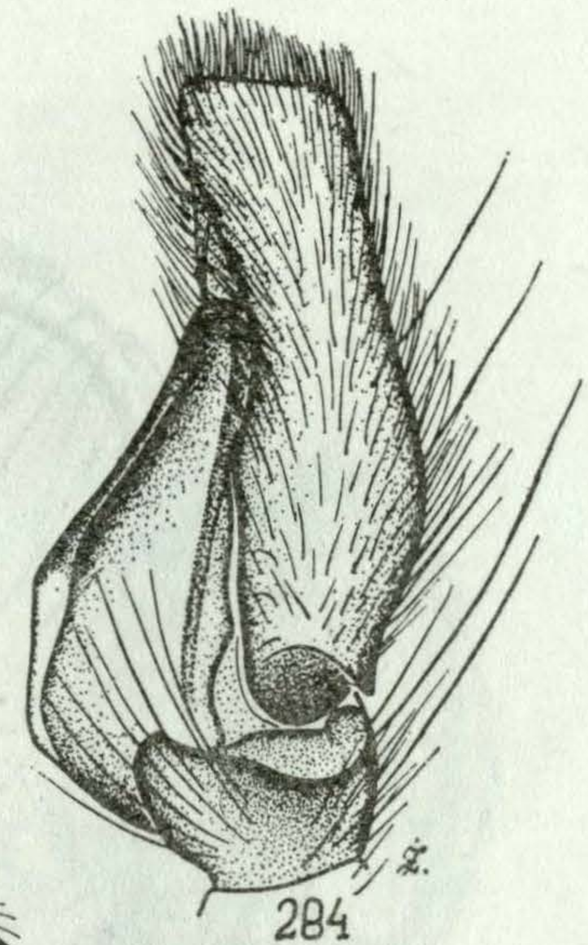

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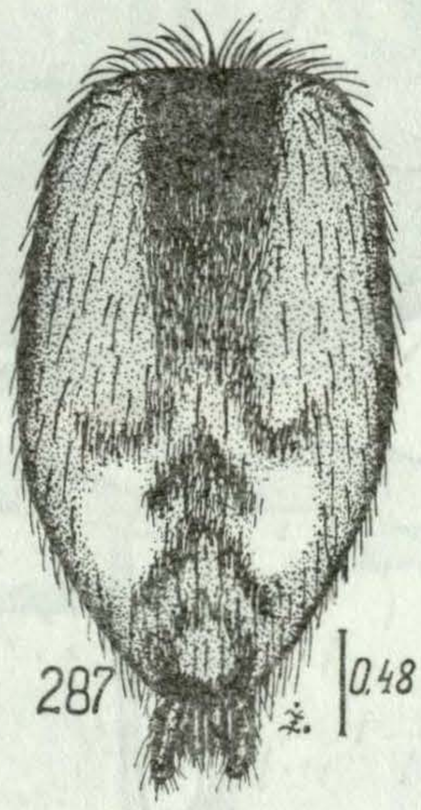
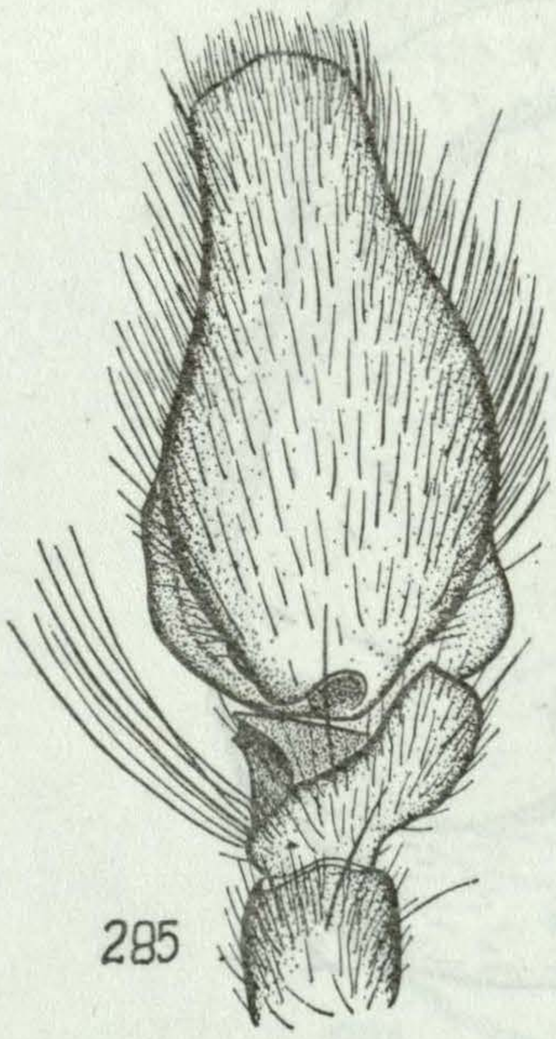
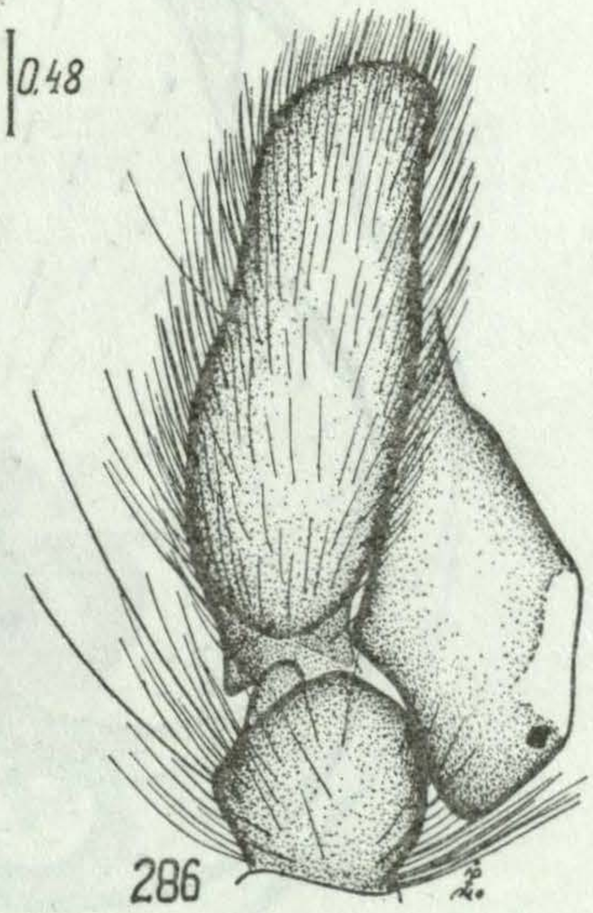


287



285



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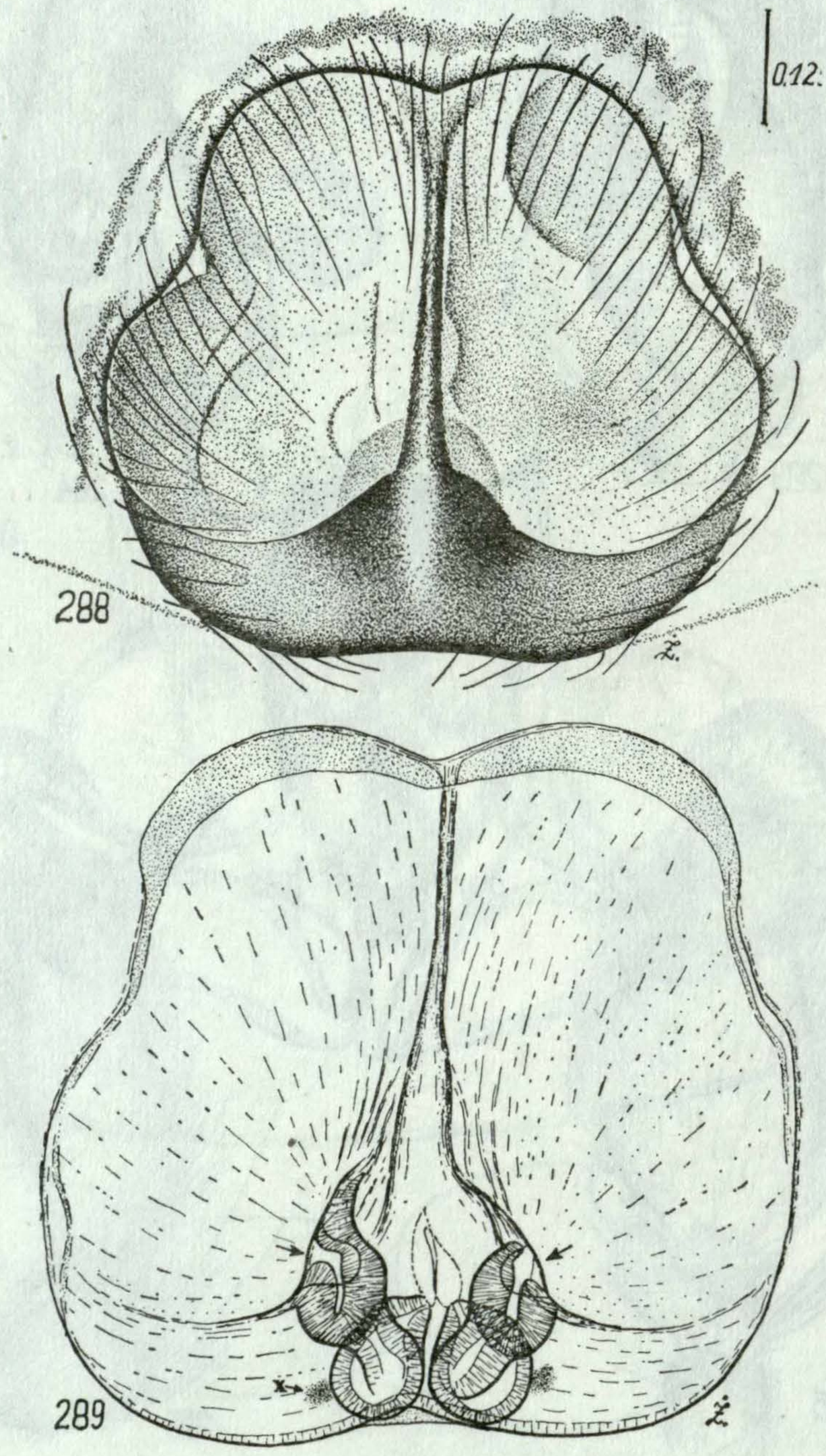
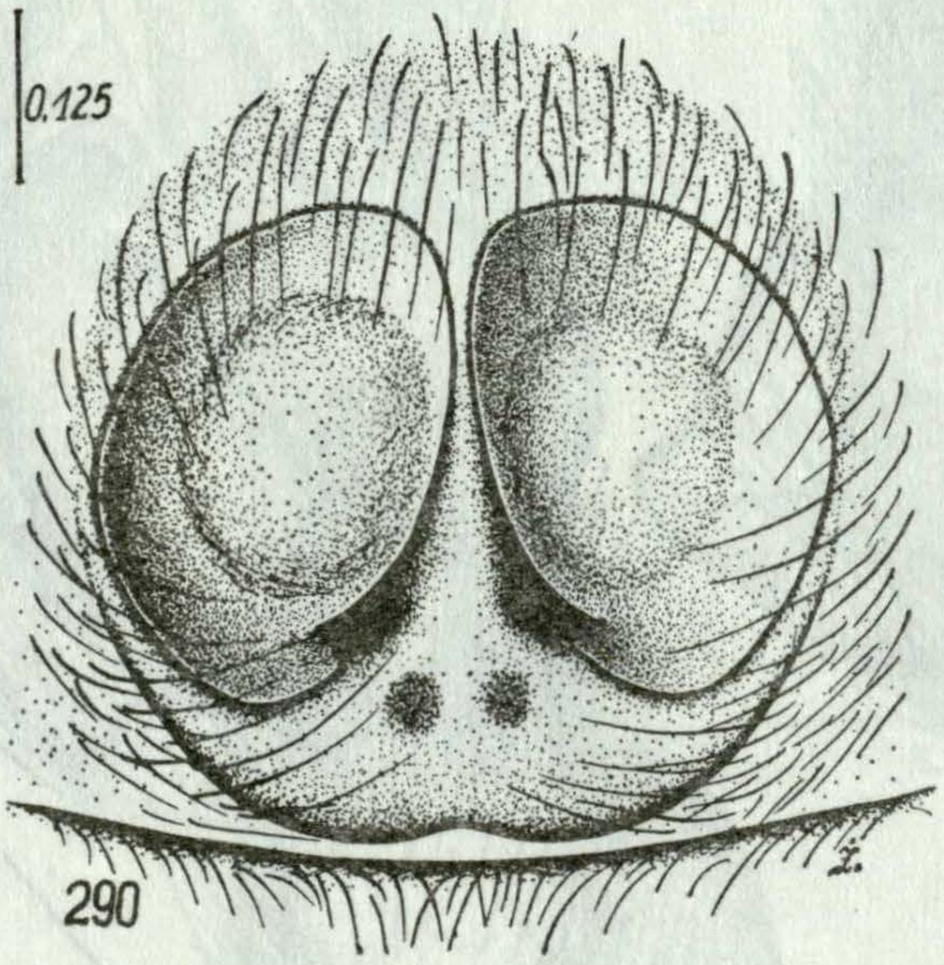
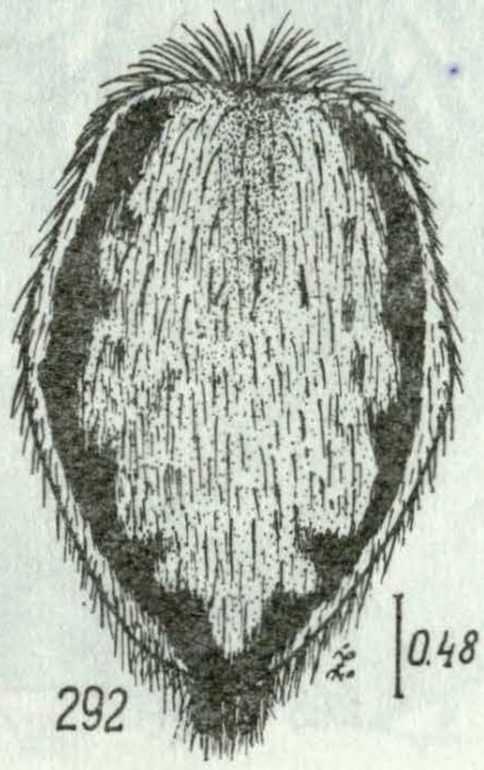
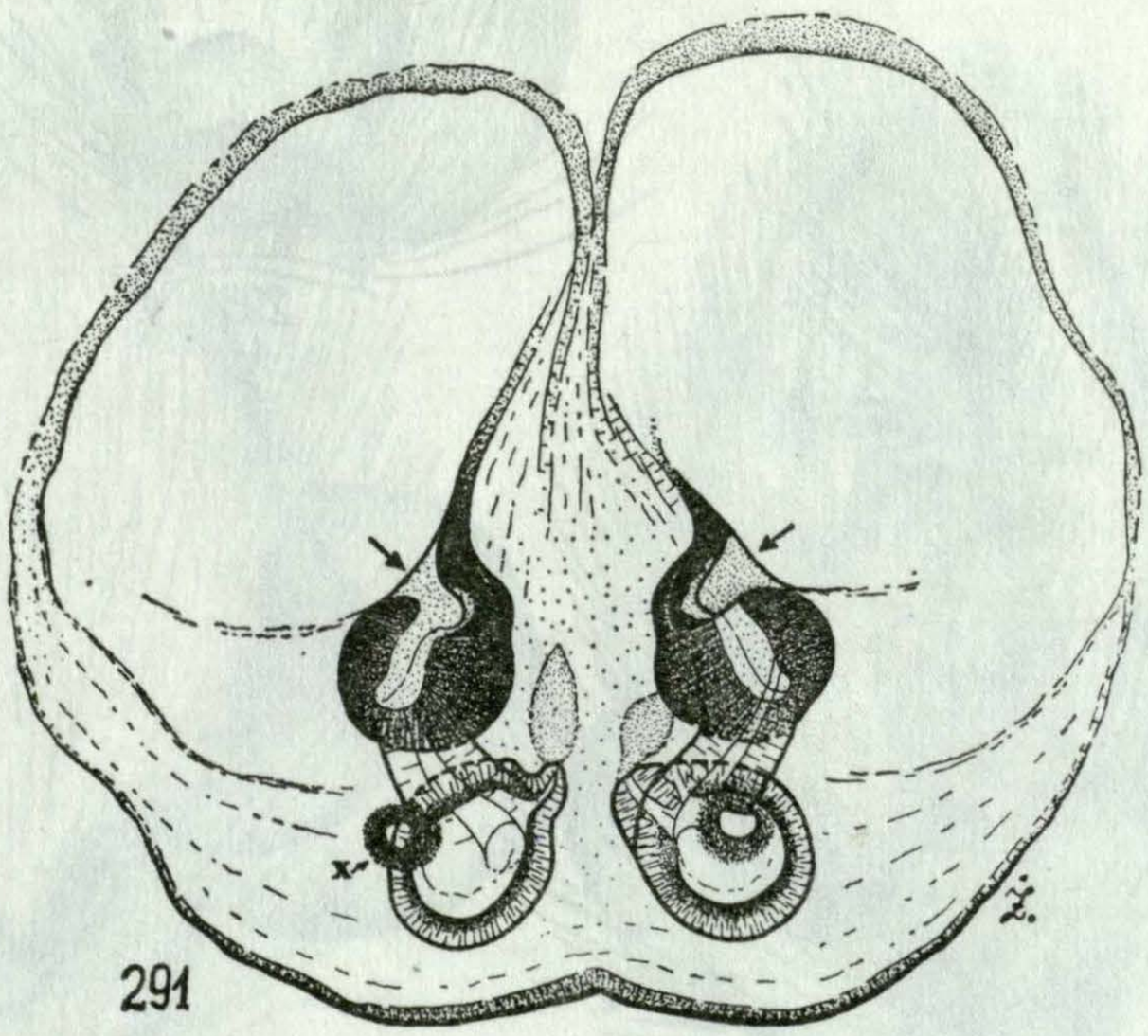
Figs. 283–287. ♂ *Menemerus bivittatus* (DUFOUR, 1831): palpal organ (283–286) and abdominal pattern (287).



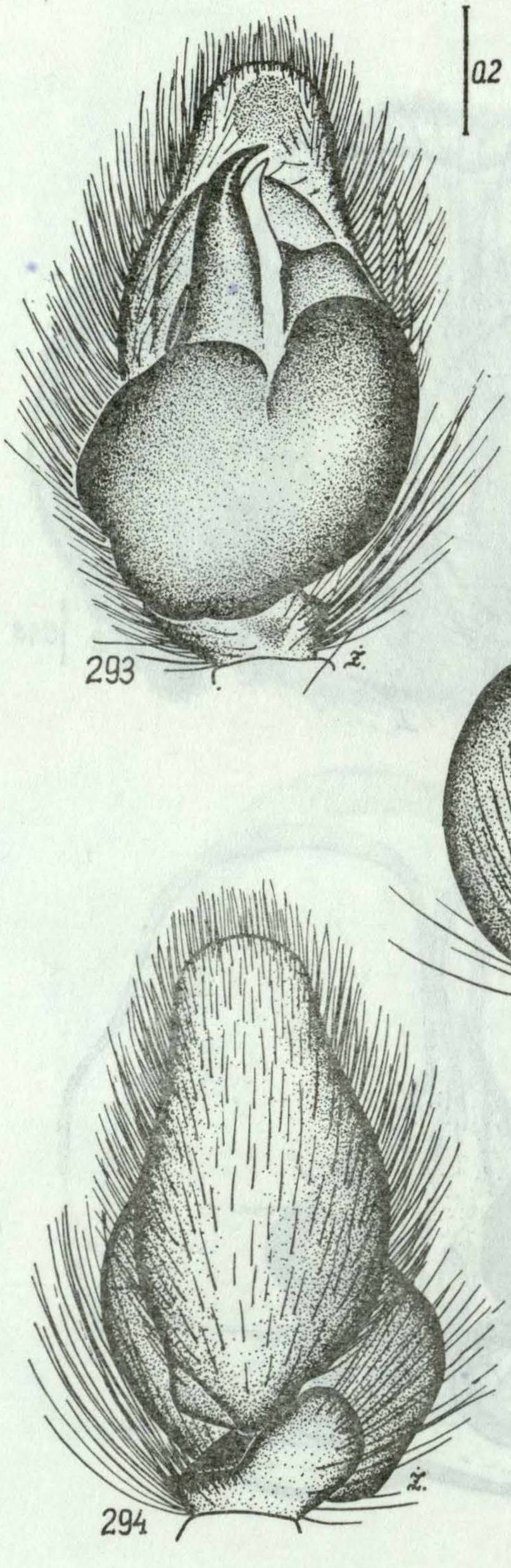
Figs. 288–289. ♀ *Menemerus bivittatus* (DUFOUR, 1831): epigyne (288) and its internal structures (289).



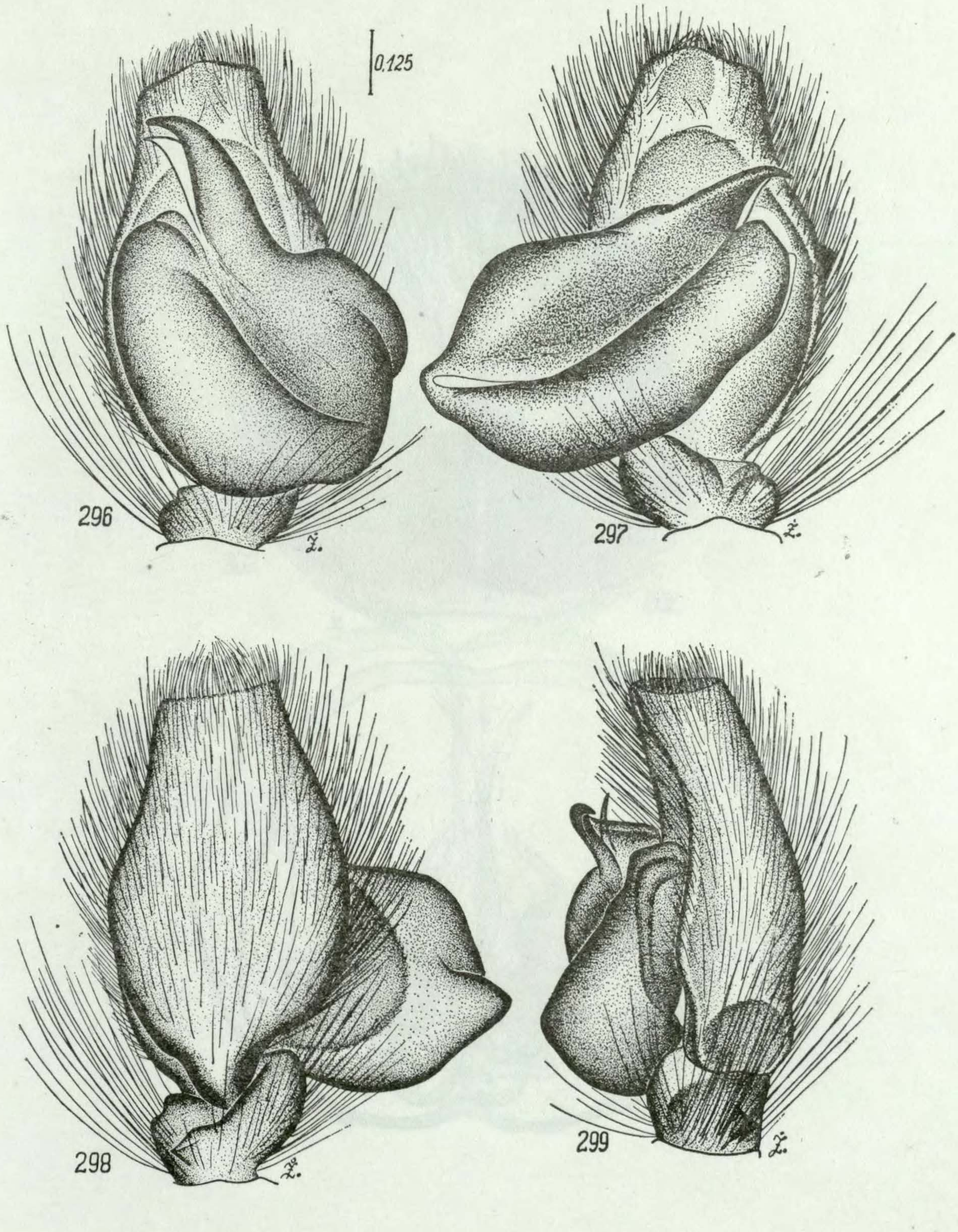




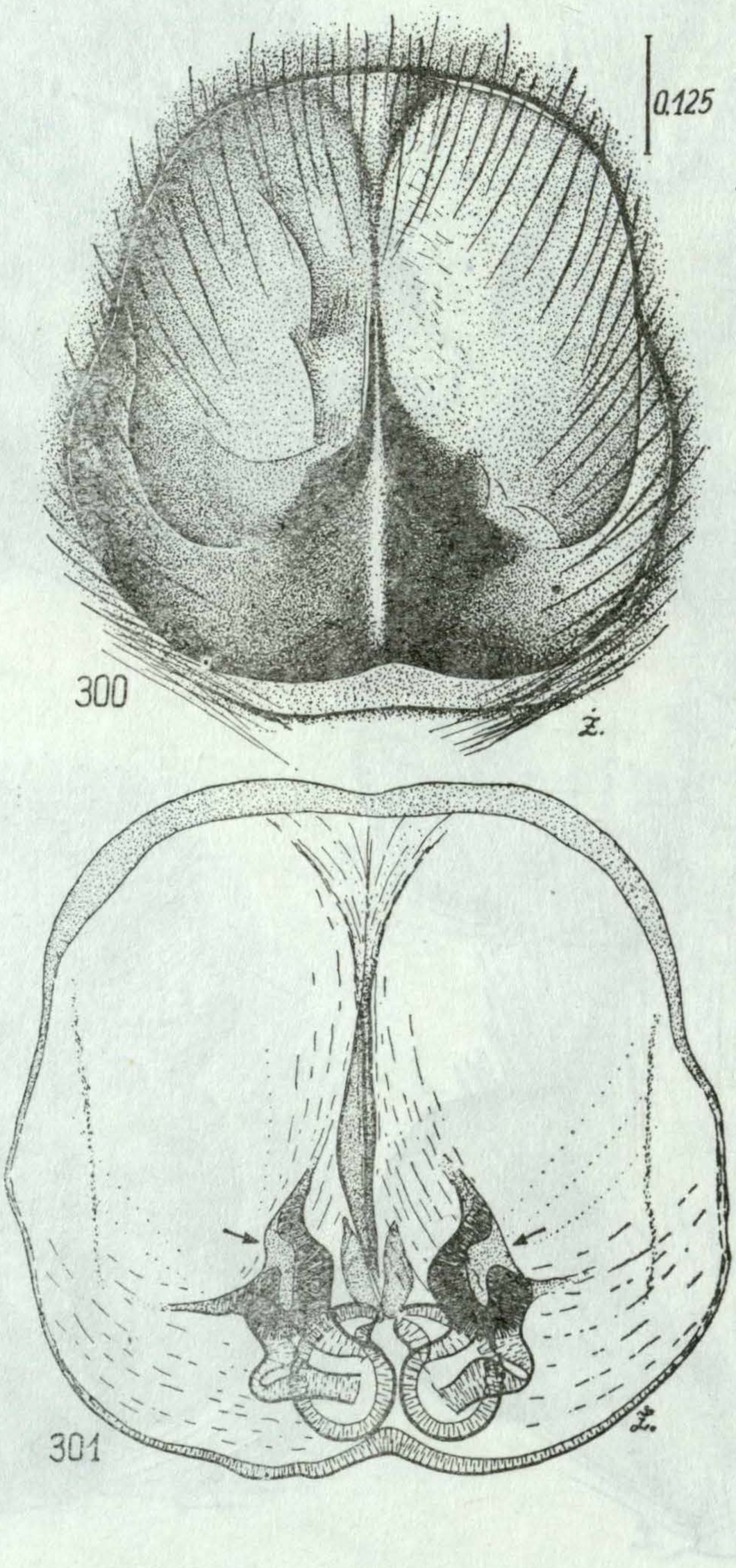
Figs. 290–292. ♀ *Menemerus bivittatus* (DUFOUR, 1831): epigyne (290), its internal structures (291) and abdominal pattern (292).



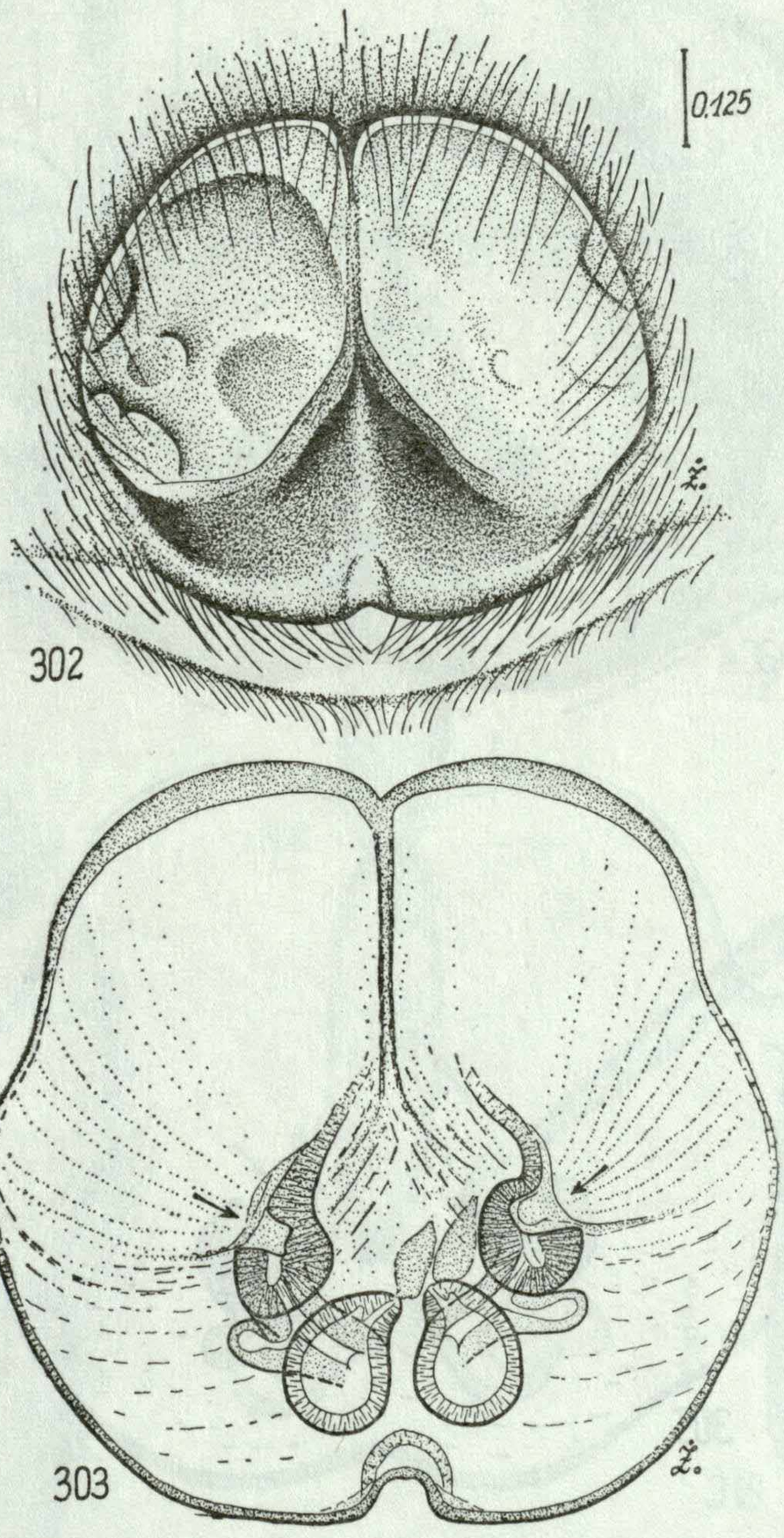
Figs. 293–295. ♂ *Menemerus brachygnathus* (THORELL, 1887): palpal organ.



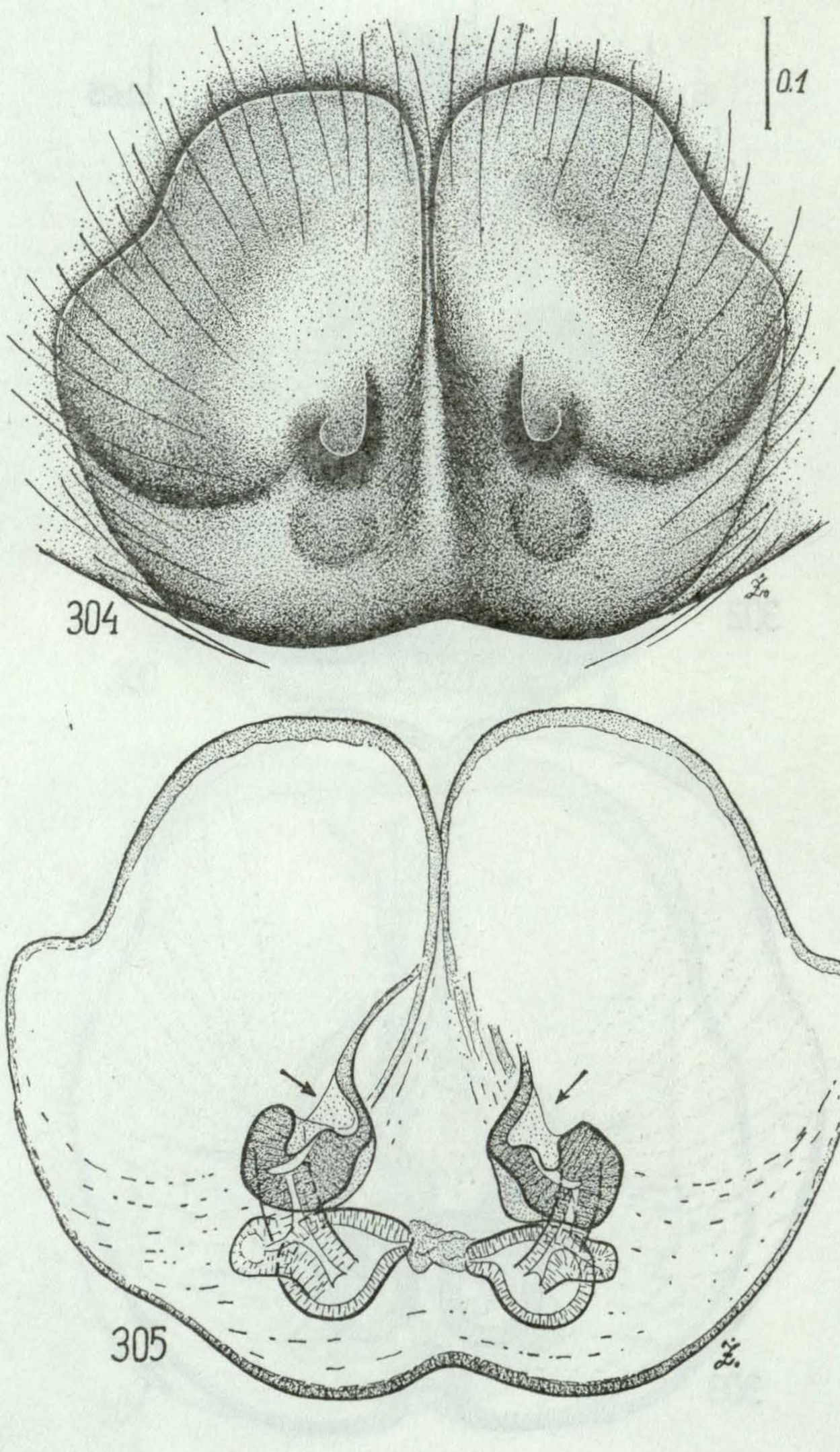
Figs. 296–299. ♂ *Menemerus brachygnathus* (THORELL, 1887): palpal organ.



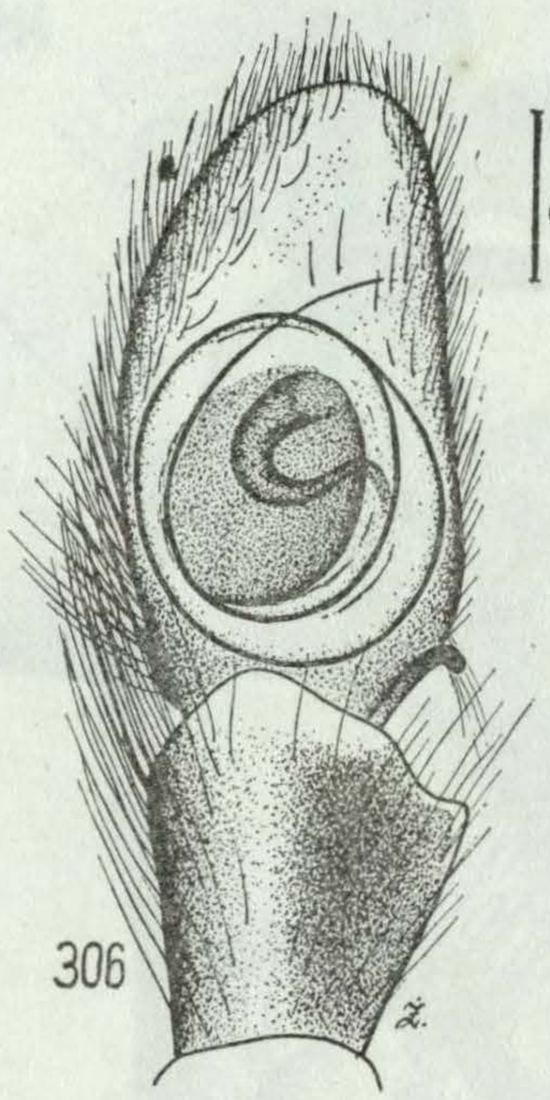
Figs. 300–301. ♀ *Menemerus brachygnathus* (THORELL, 1887): epigyne (300) and its internal structures (301).

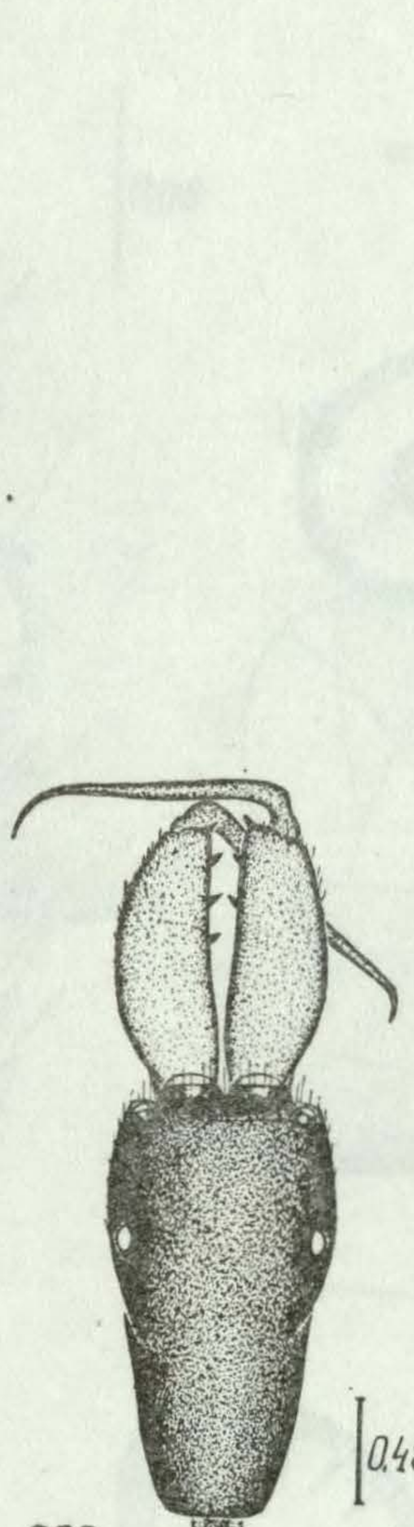


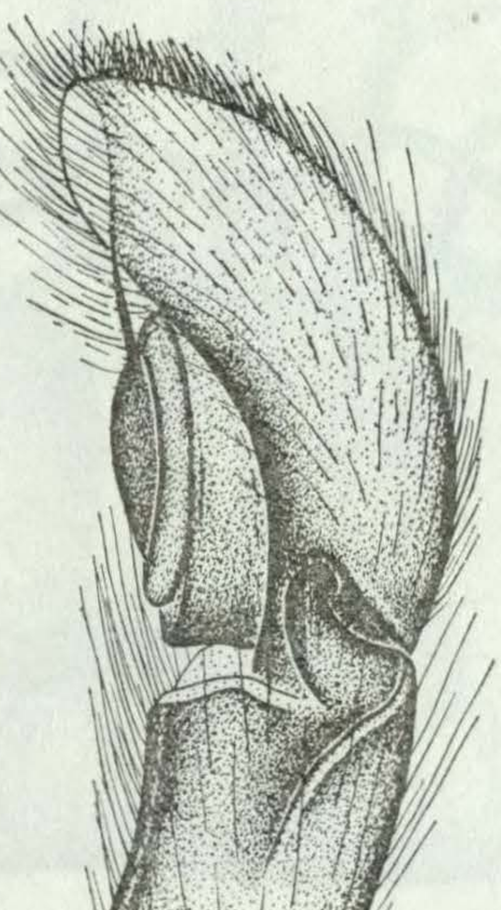
Figs. 302–303. ♀ *Menemerus brachygnathus* (THORELL, 1887): epigyne (302) and its internal structures (303).

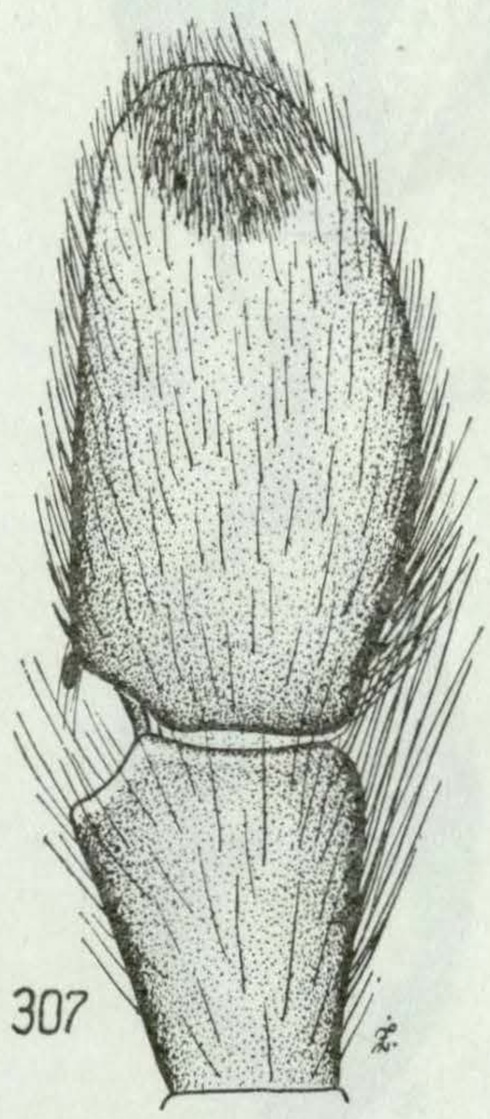


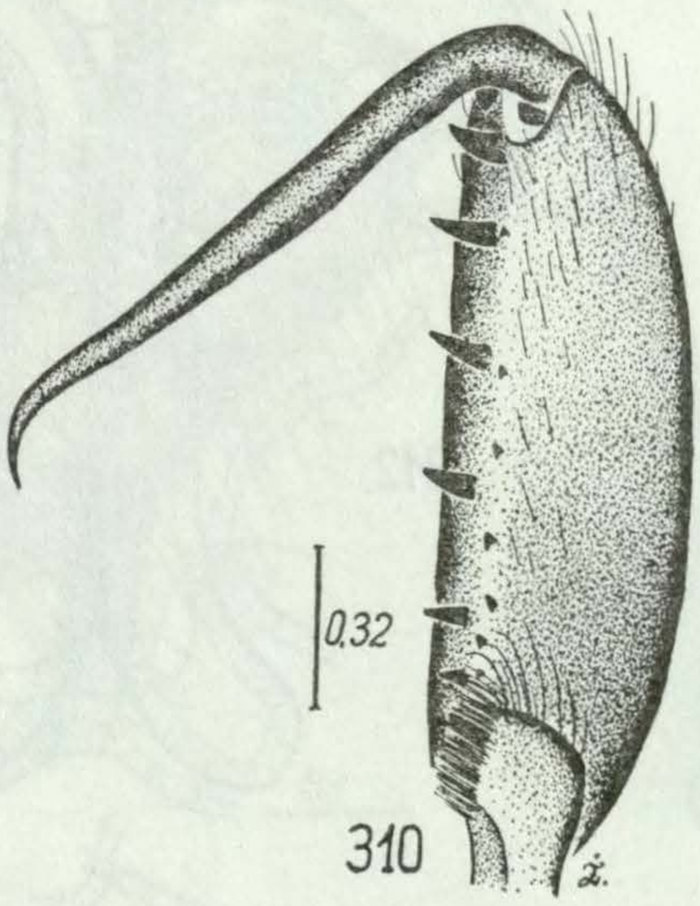
Figs. 304–305. ♀ *Menemerus brachygnathus* (THORELL, 1887): epigyne (304) and its internal structures (305).



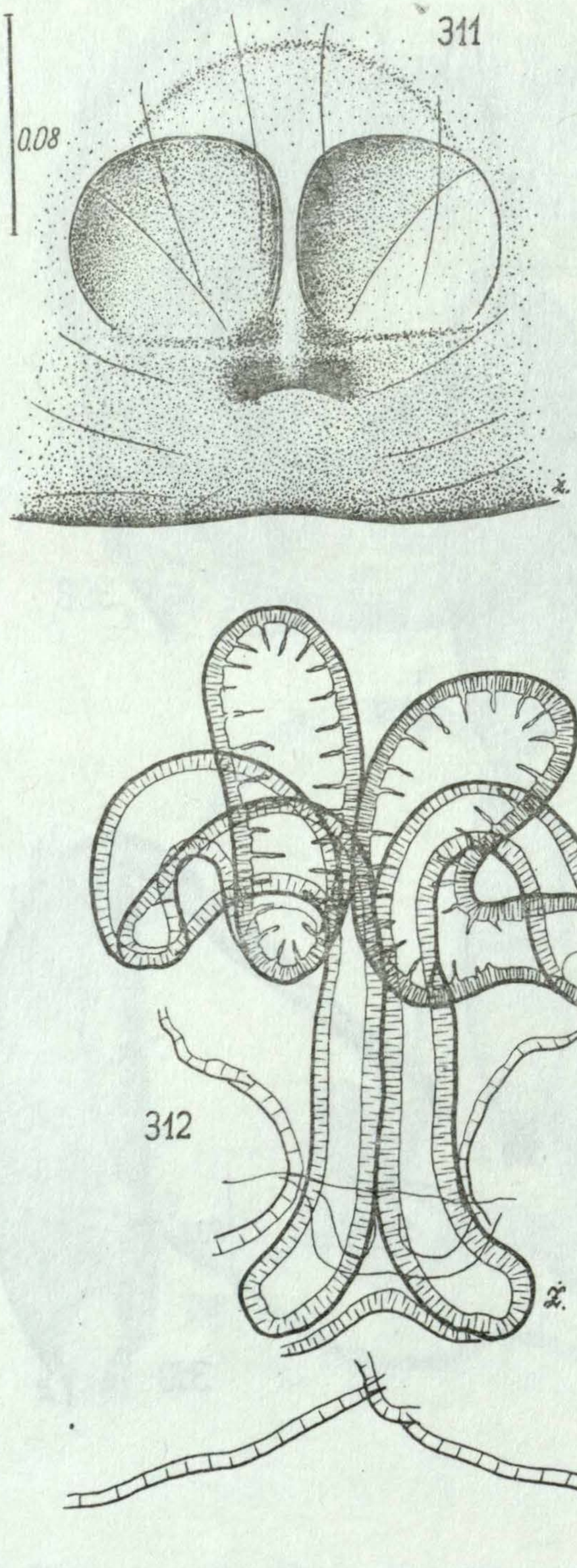




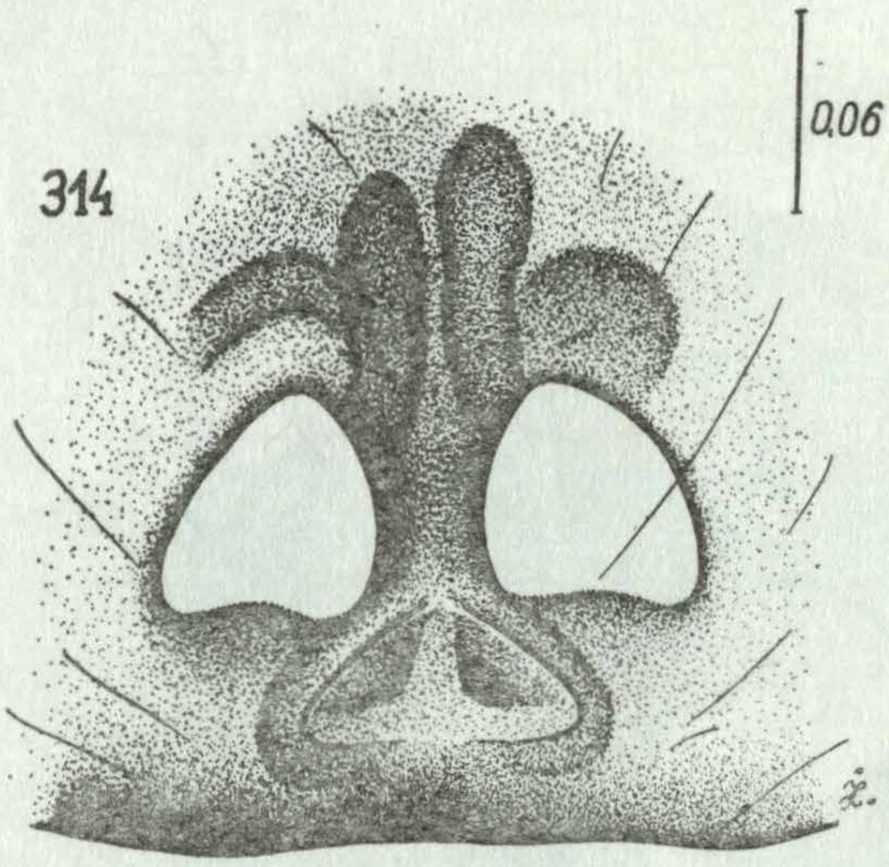


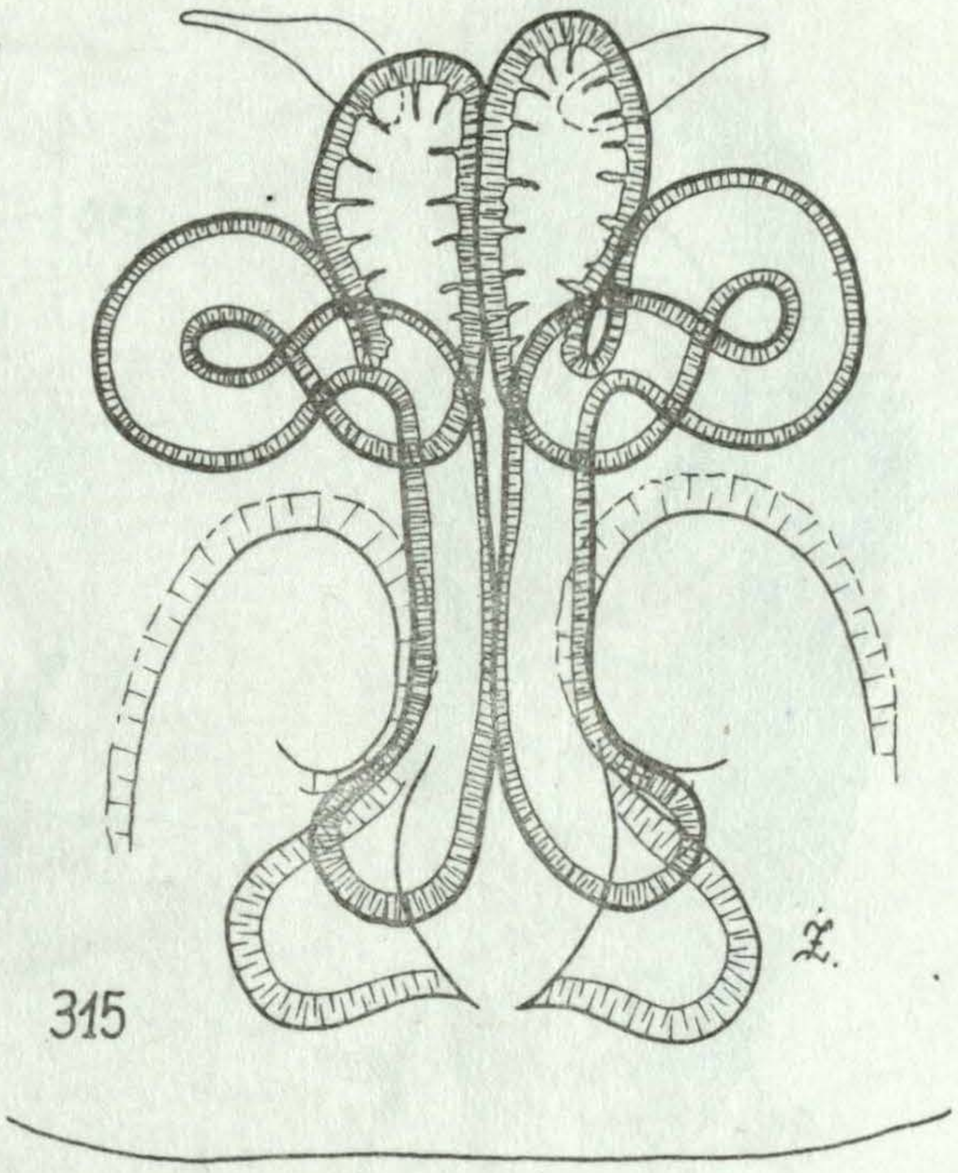


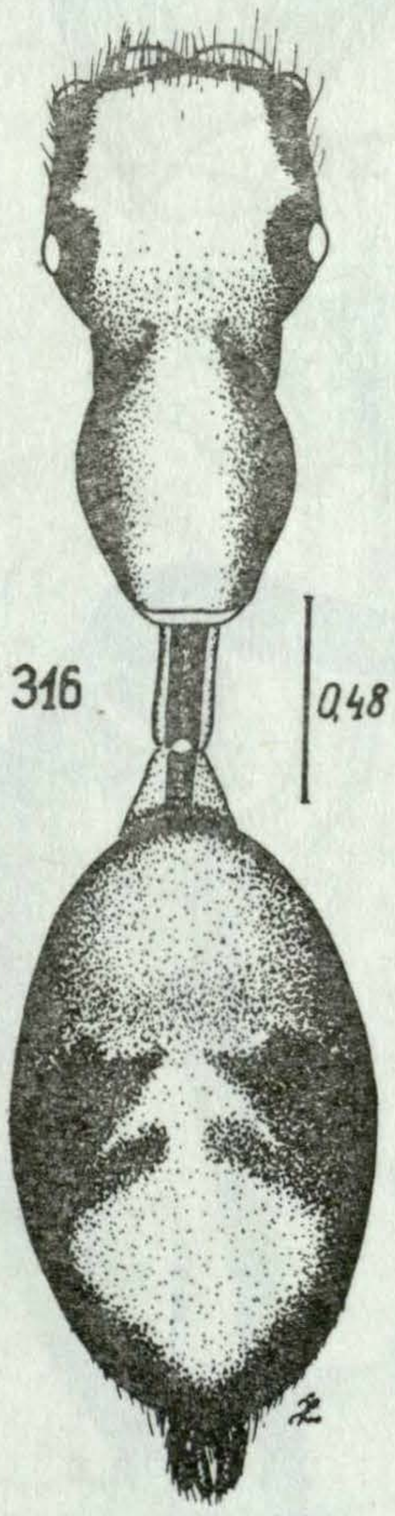
Figs. 306–310. ♂ *Myrmarachne annamita* sp. n., holotype: palpal organ (306–308), general appearance (309) and cheliceral dentition (310).

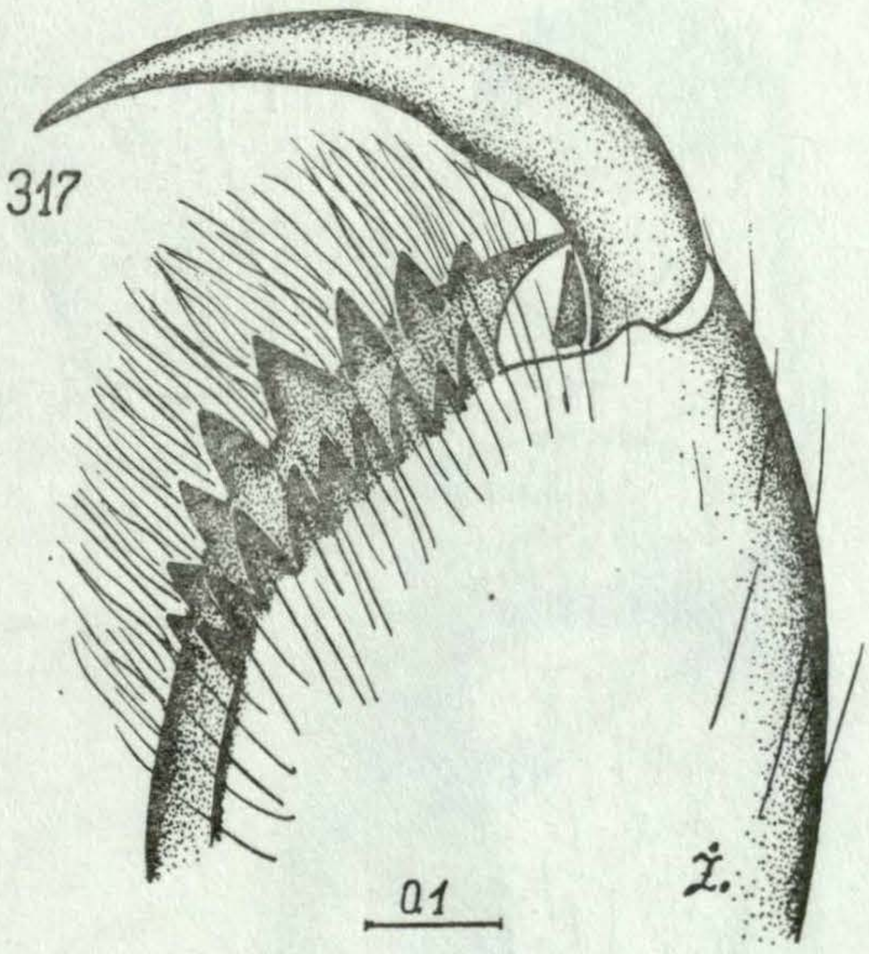


Figs. 311–313. ♀ *Myrmarachne annamita* sp. n., allotype: epigyne (311), its internal structures (312) and cheliceral dentition (313).

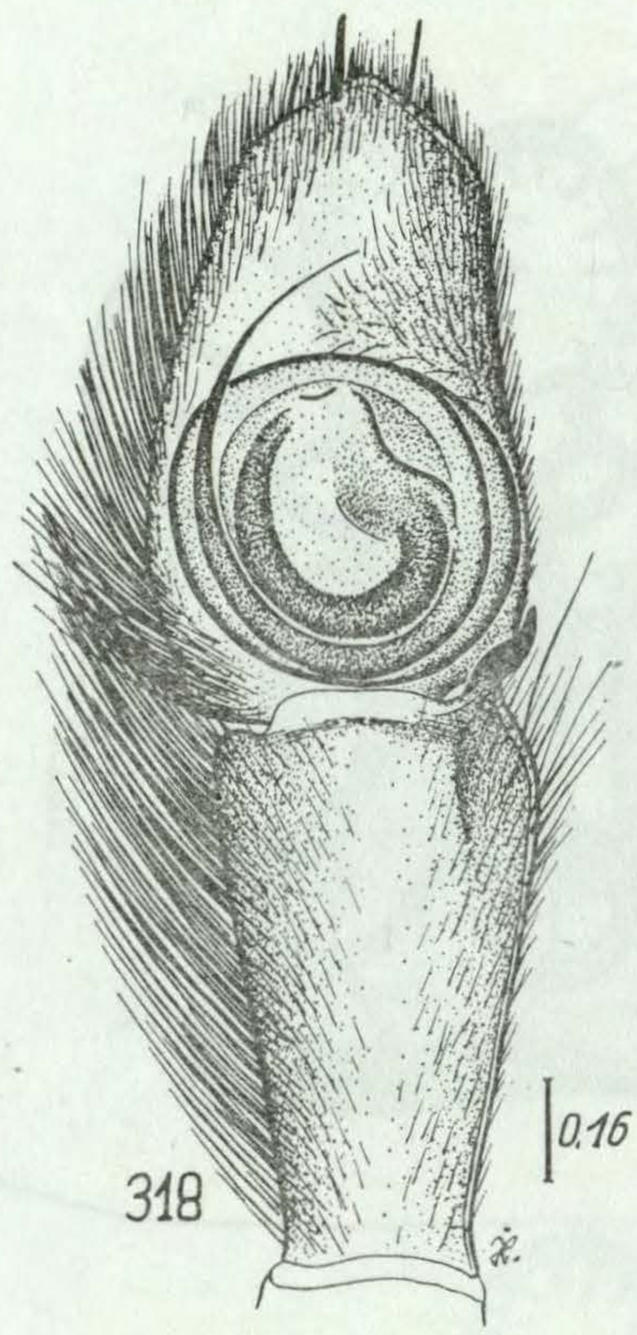


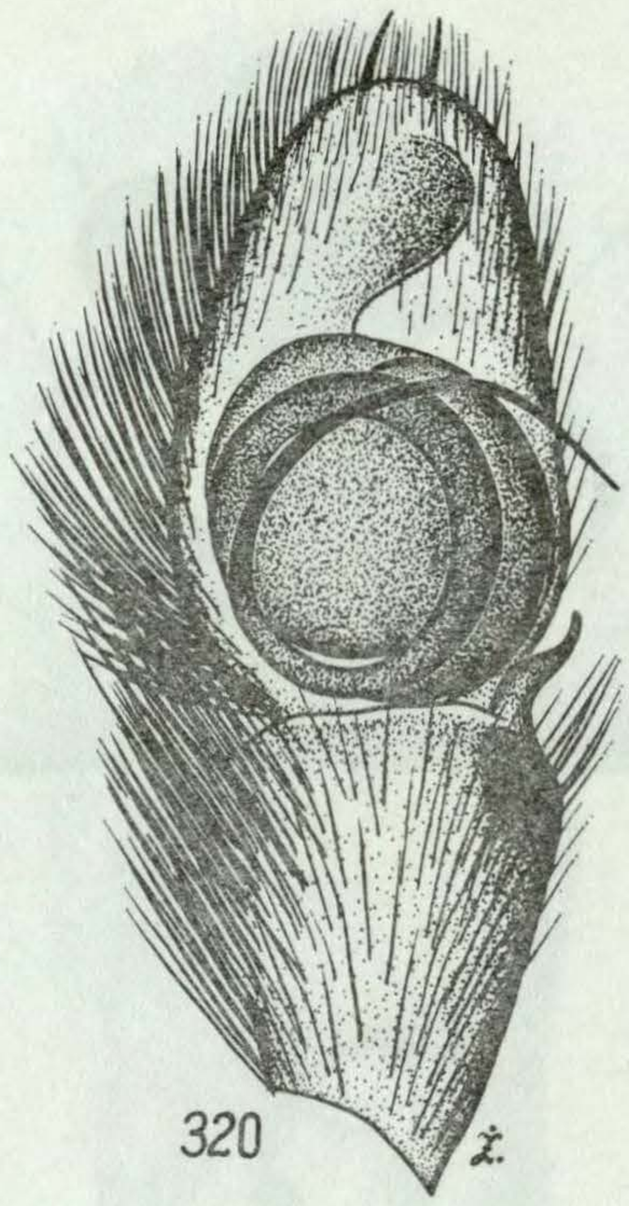


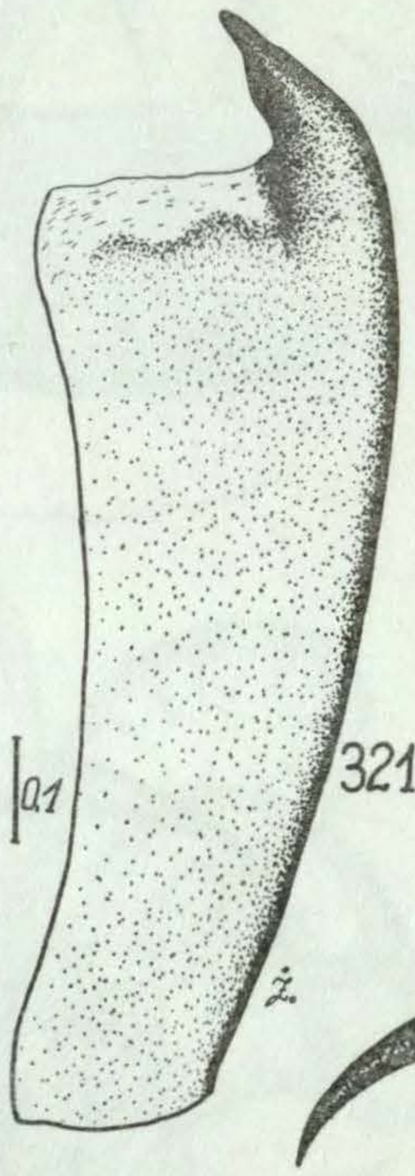


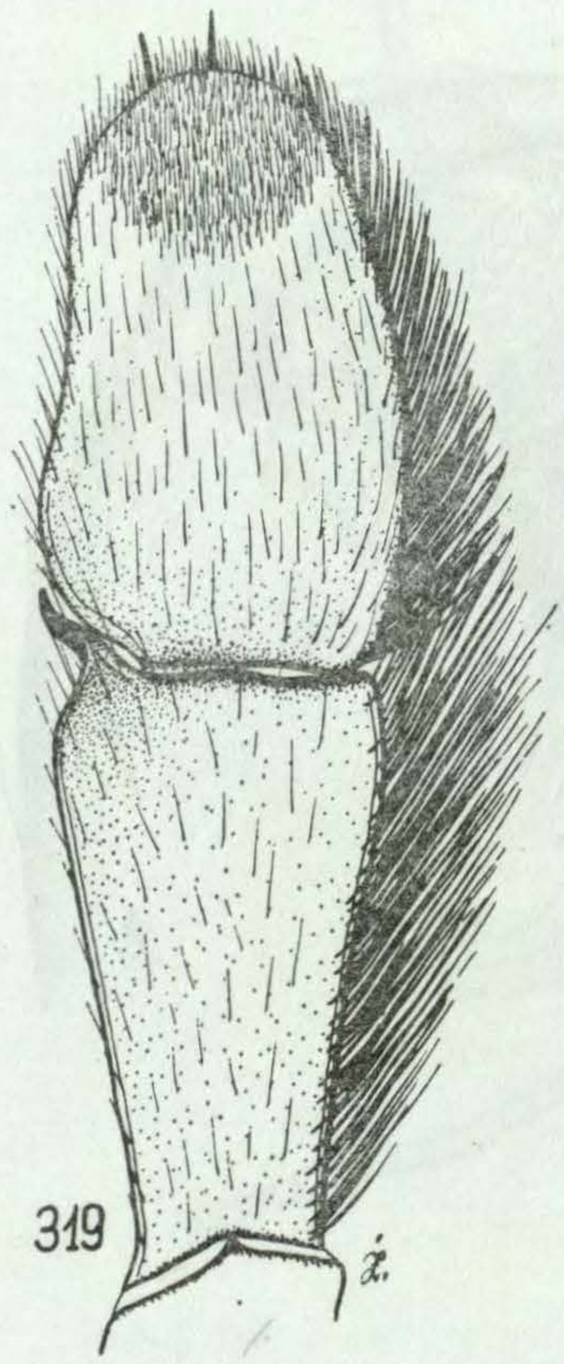


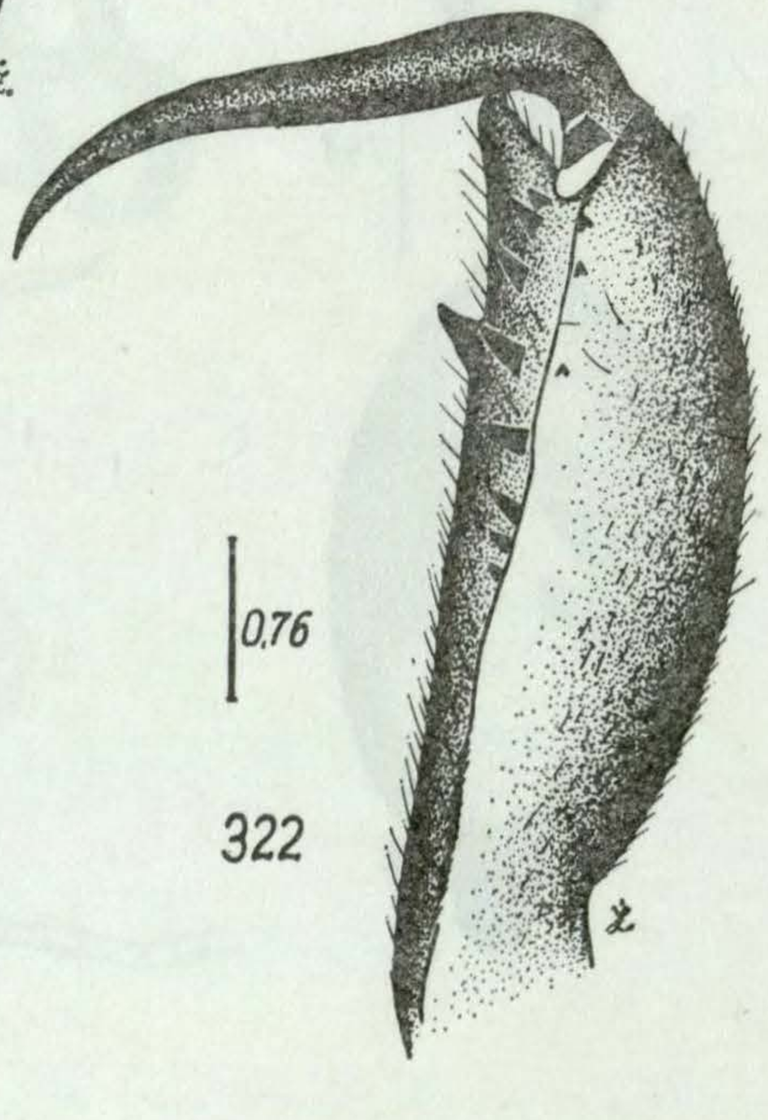
Figs. 314–317. ♀ *Myrmarachne elongata* SZOMBATHY, 1915: epigyne (314), its internal structures (315), general appearance (316) and cheliceral dentition (317).



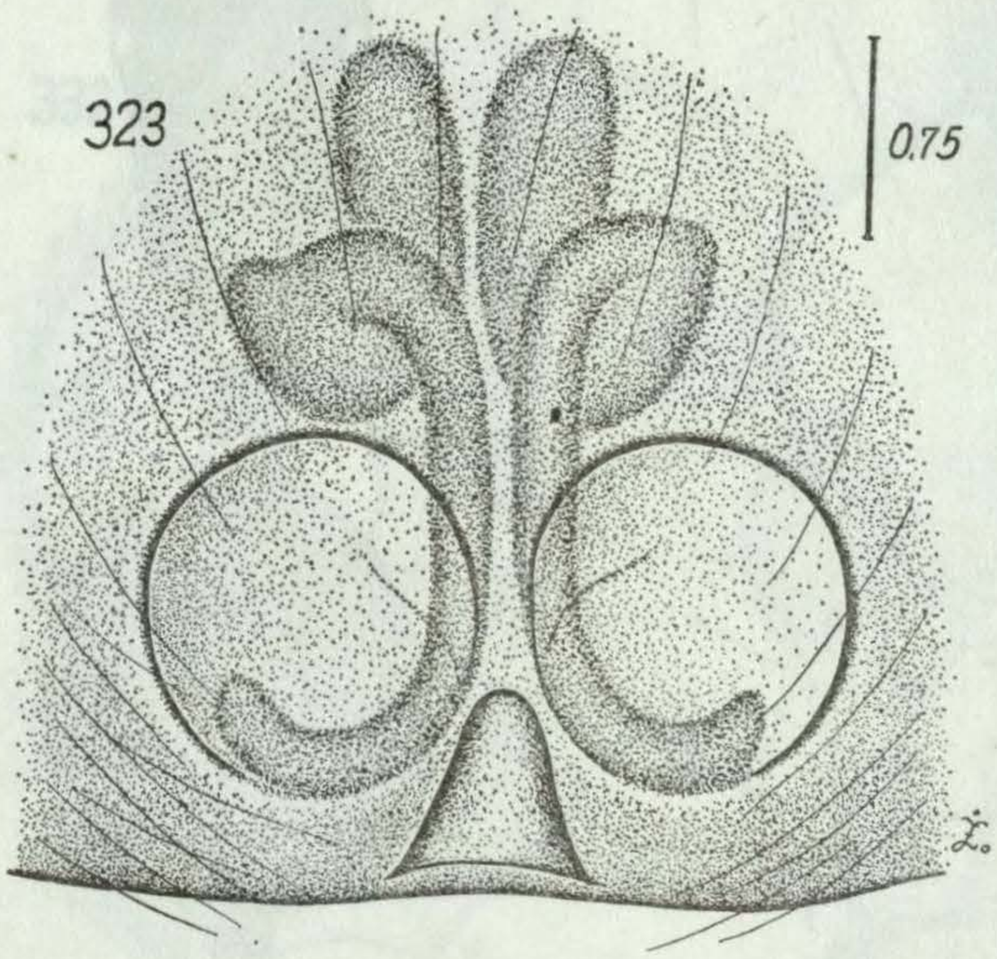


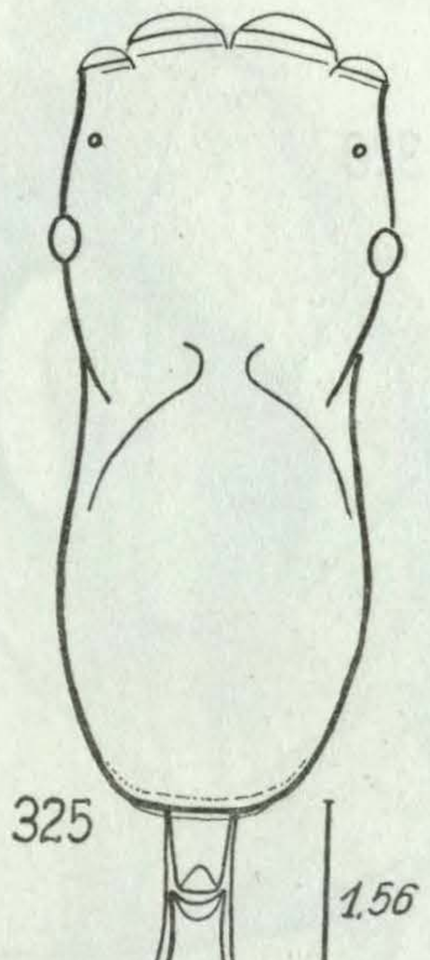


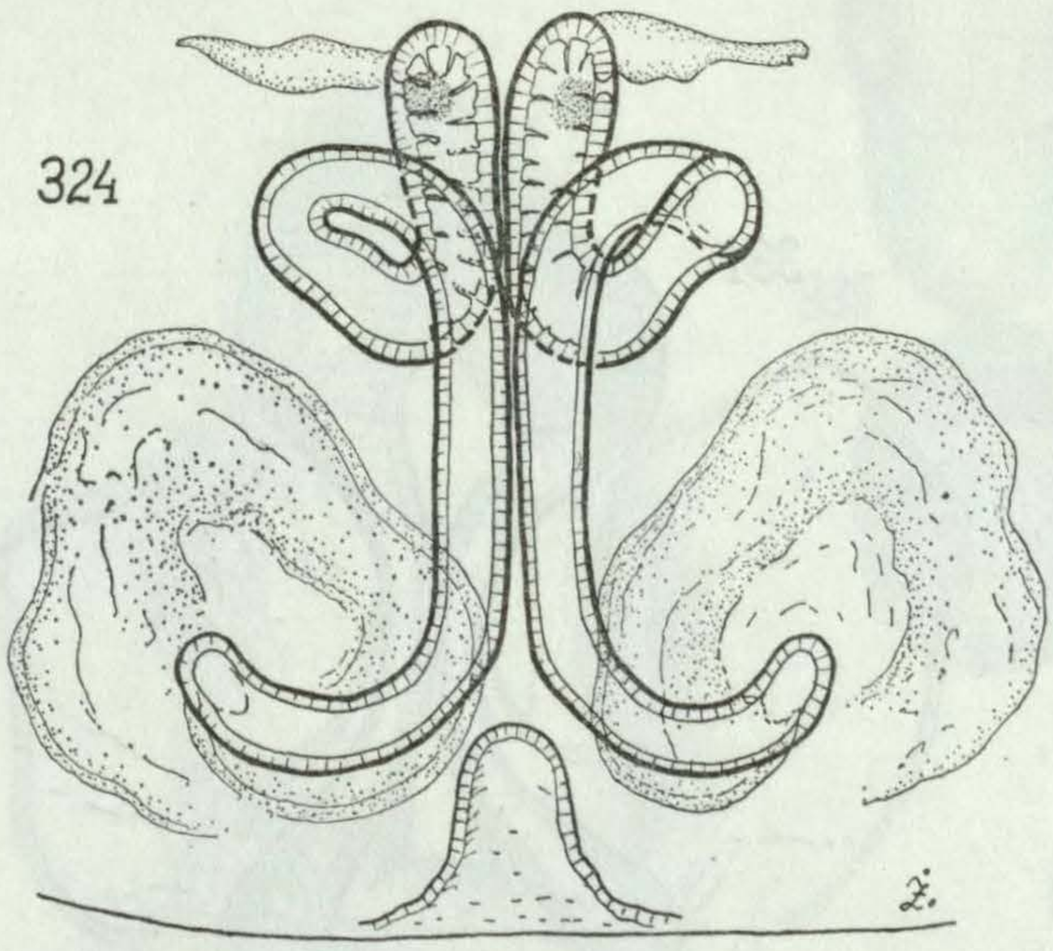


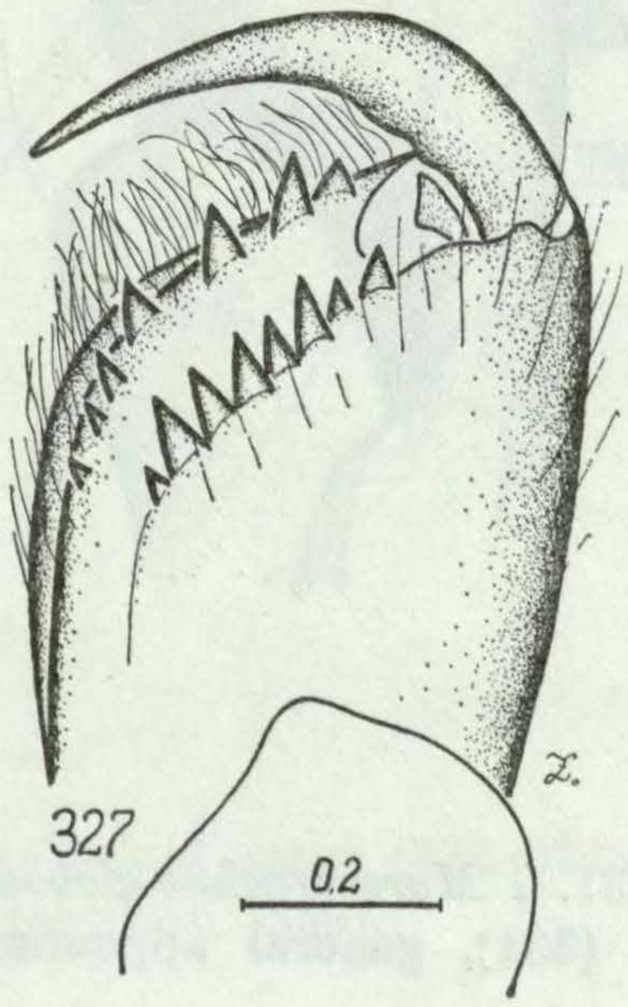


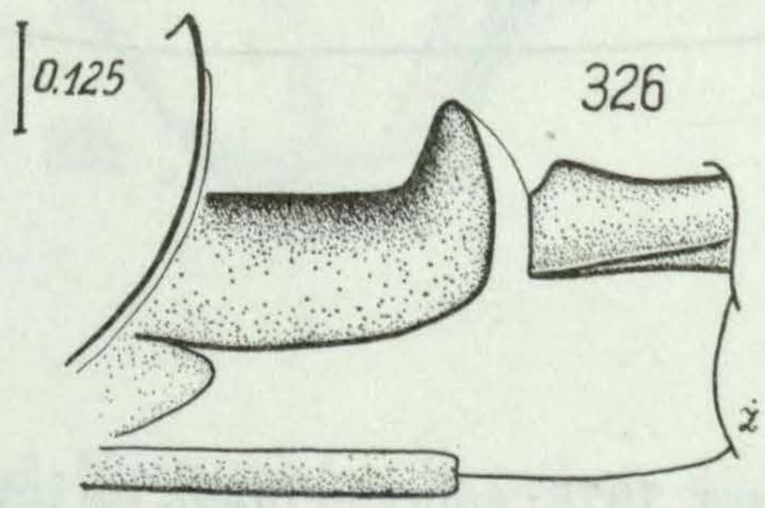
Figs. 318–322. ♂ *Myrmarachne gigantea* sp. n., holotype: palpal organ (318, 319, 321), chelicéral dentition (322). Paratype: palpal organ (320).



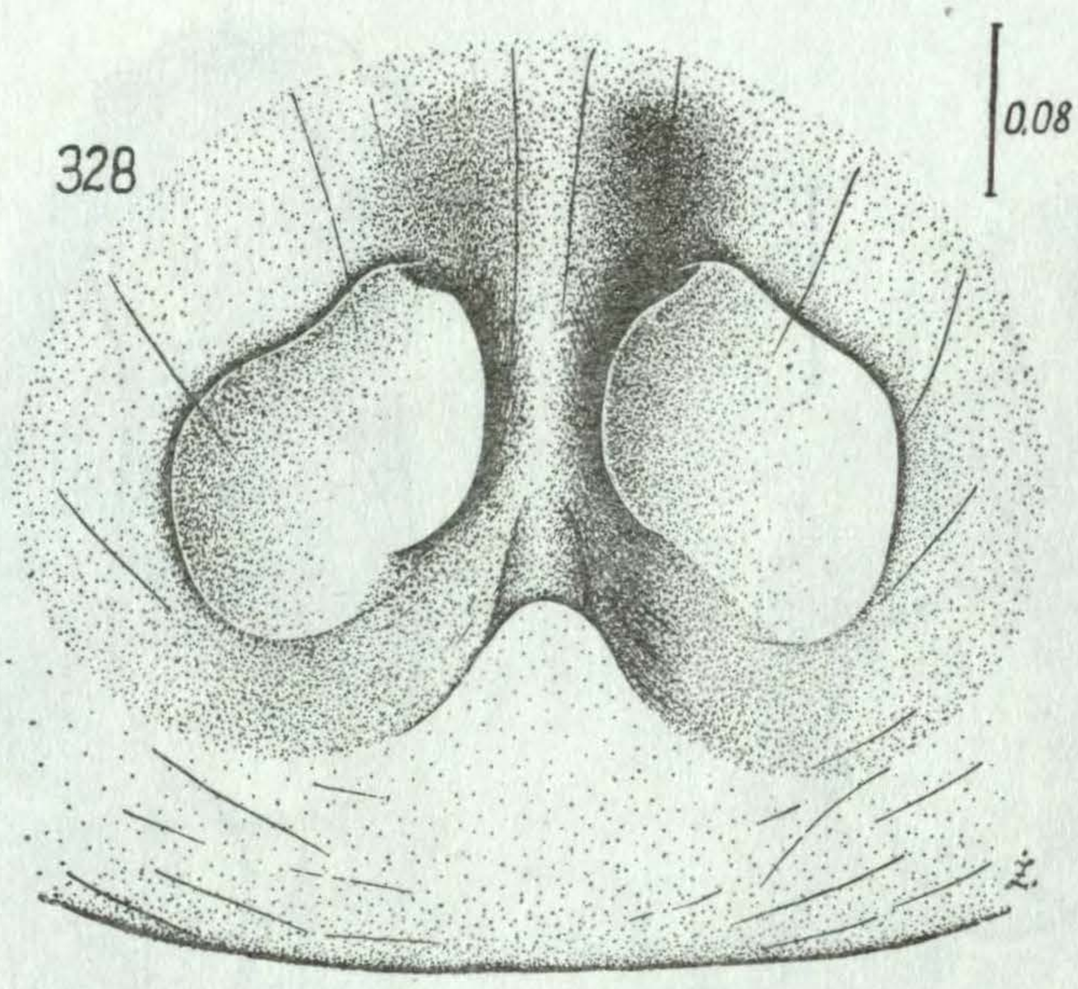


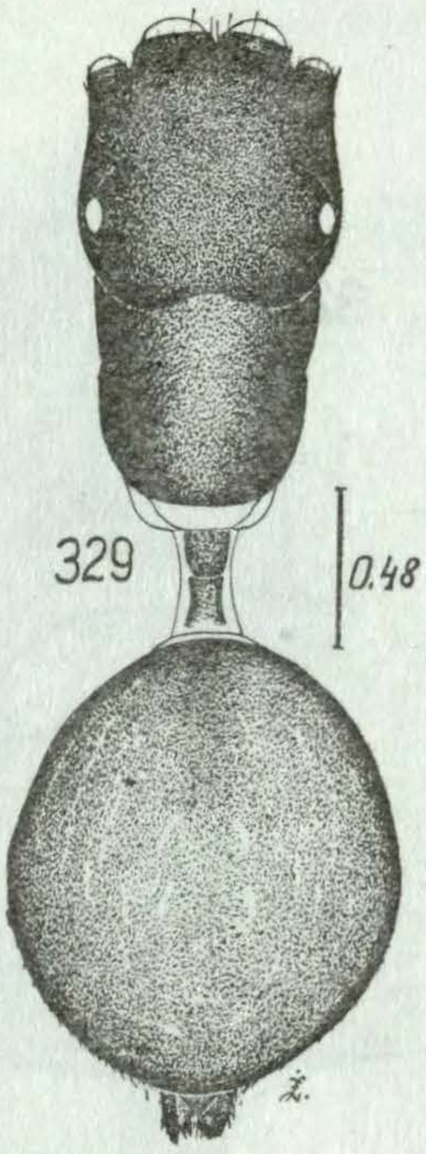


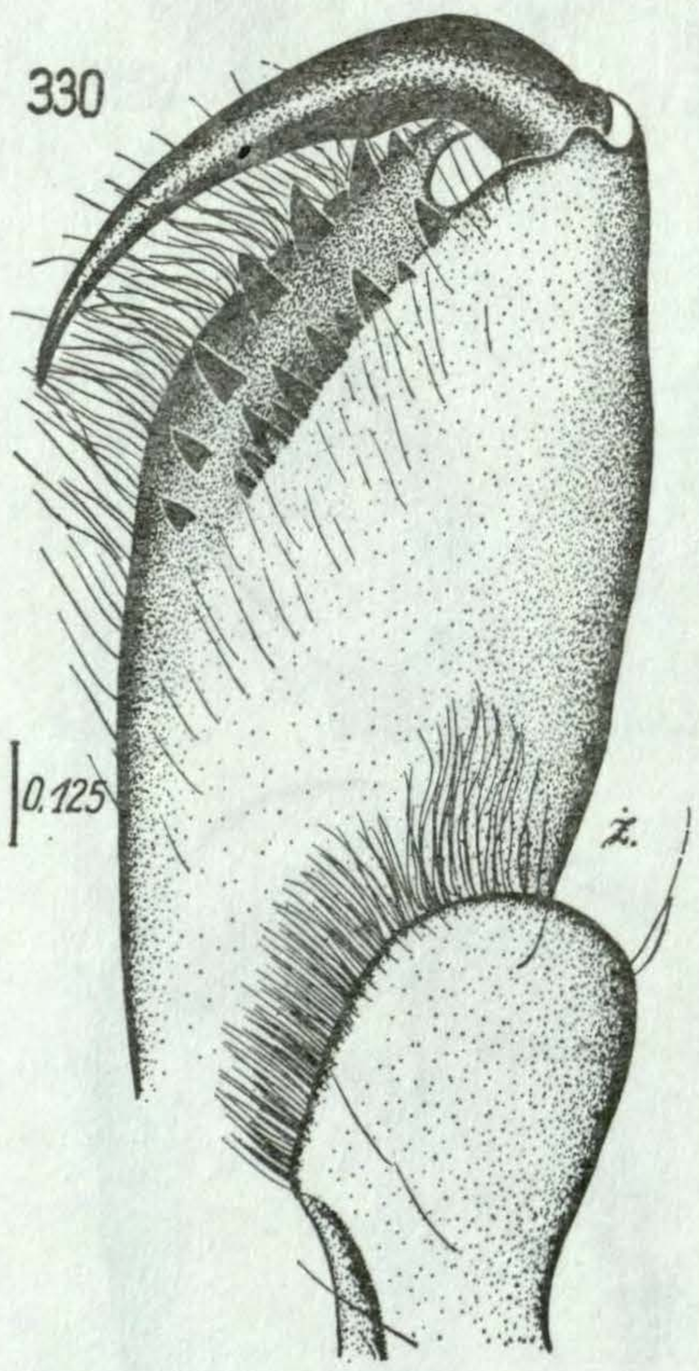


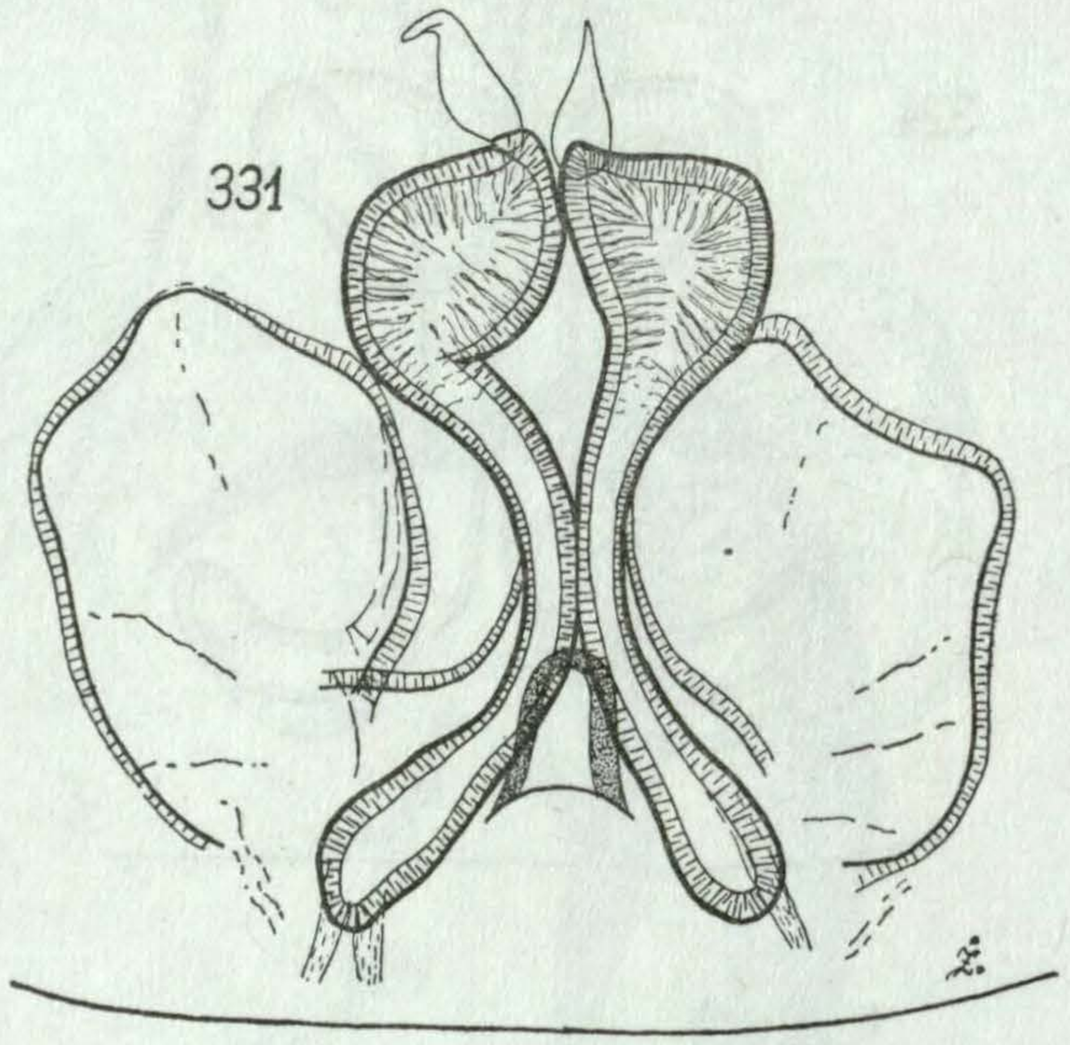


Figs. 323–327. ♀ *Myrmarachne gigantea* sp. n., allotype: epigyne (323), its internal structures (324), general appearance (325), pedicel (326) and cheliceral dentition (327).

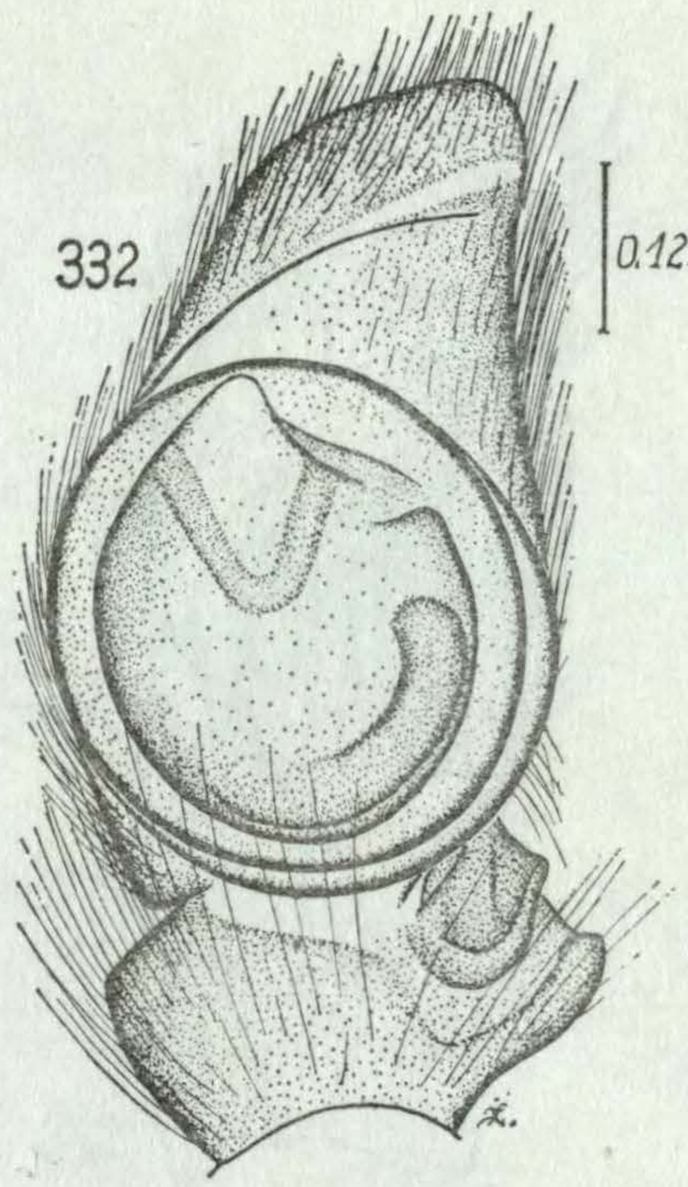


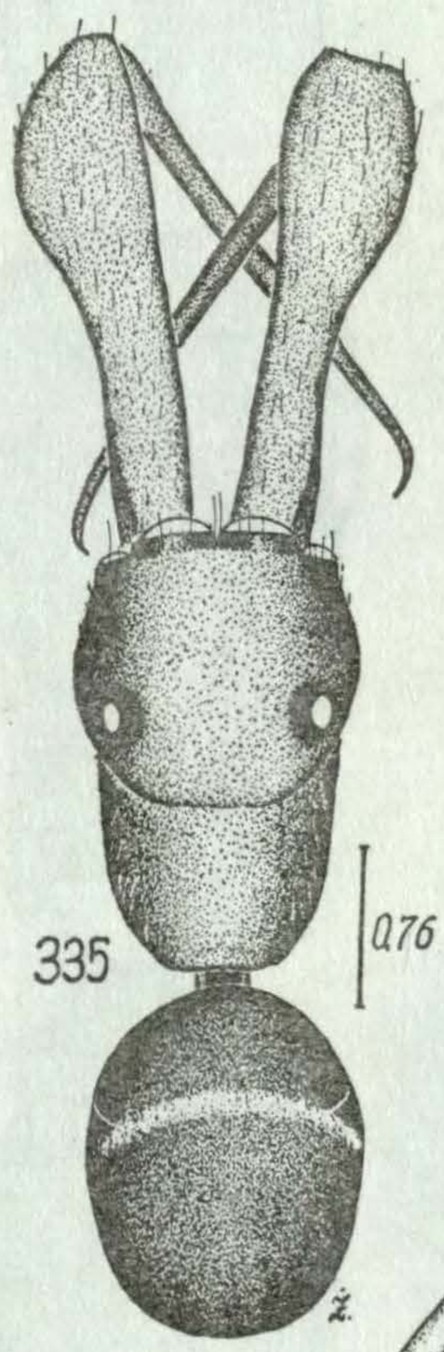


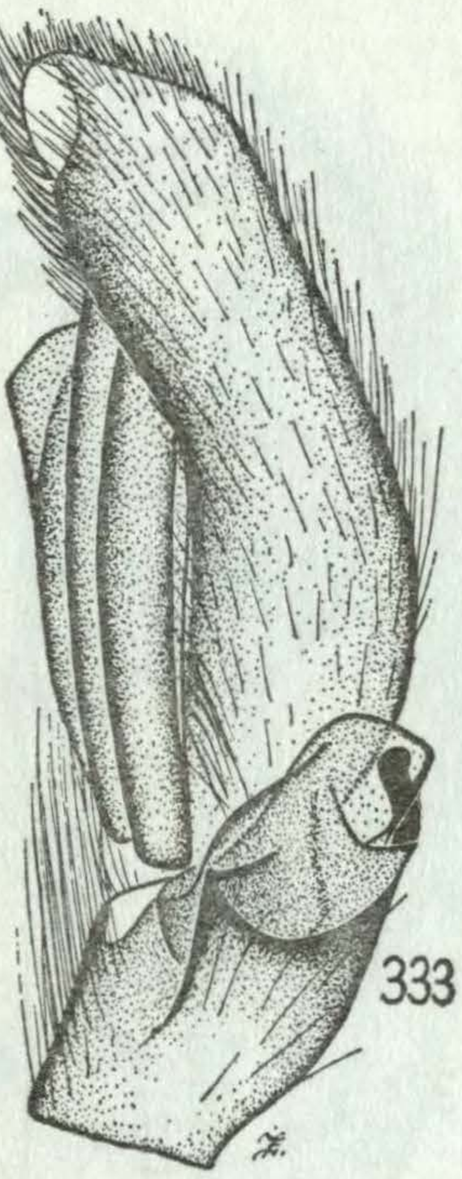


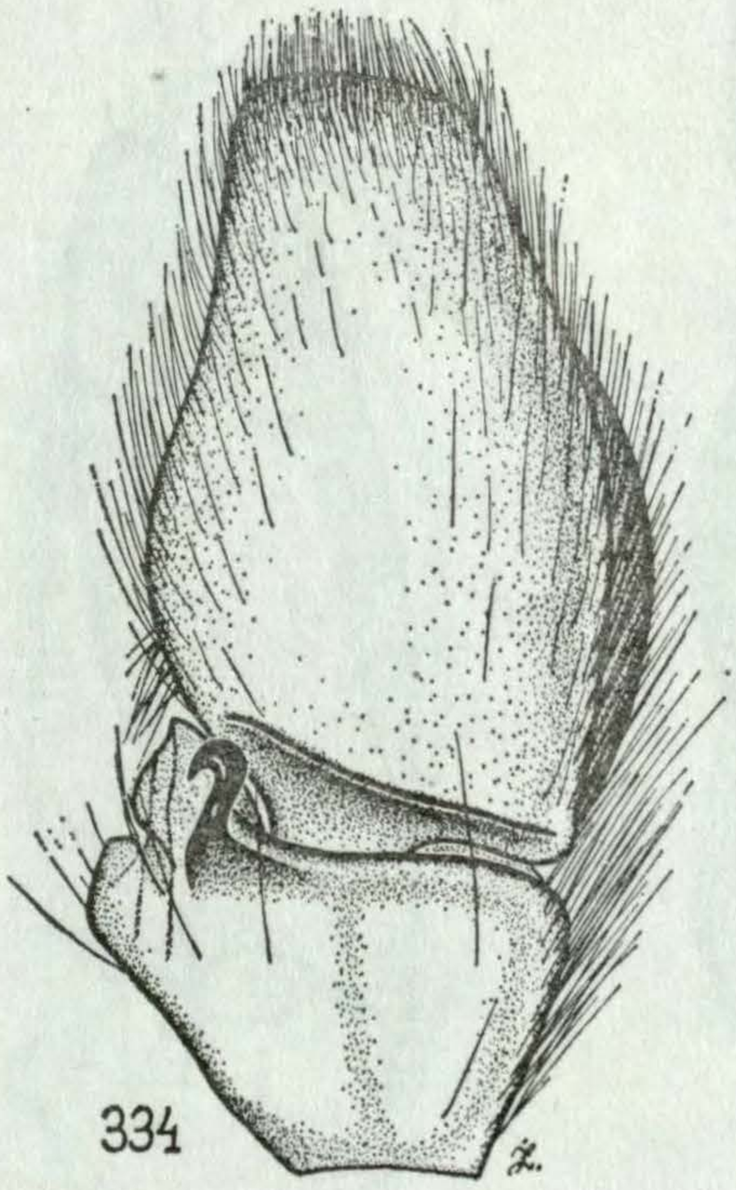


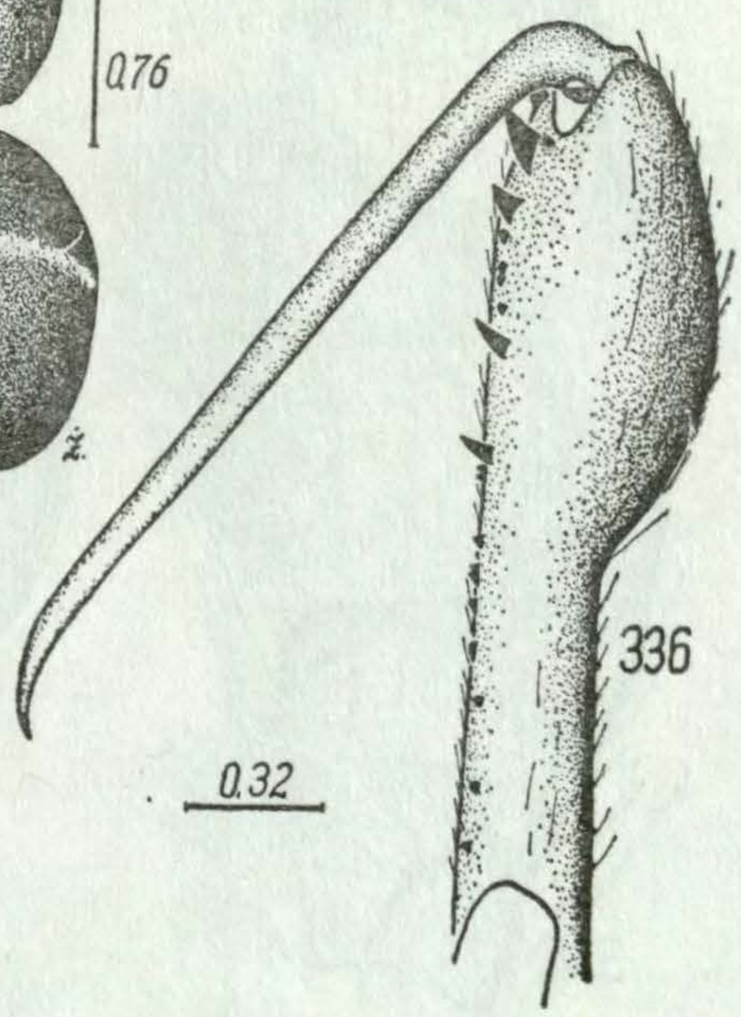
Figs. 328–331. ♀ *Myrmarachne globosa* WANLESS, 1978: epigyne (328), its internal structures (331), general appearance (329) and cheliceral dentition (330).



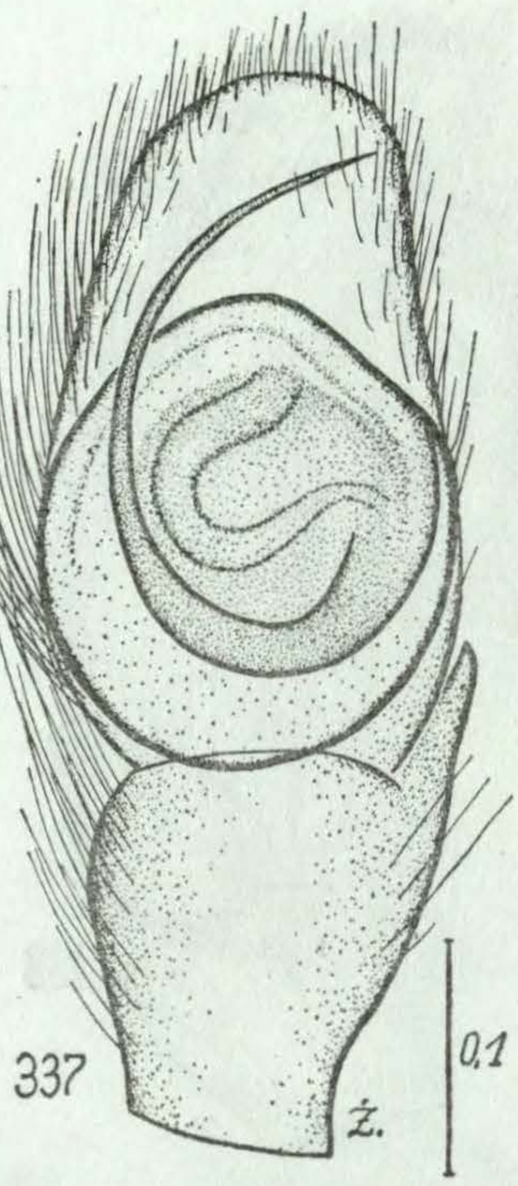


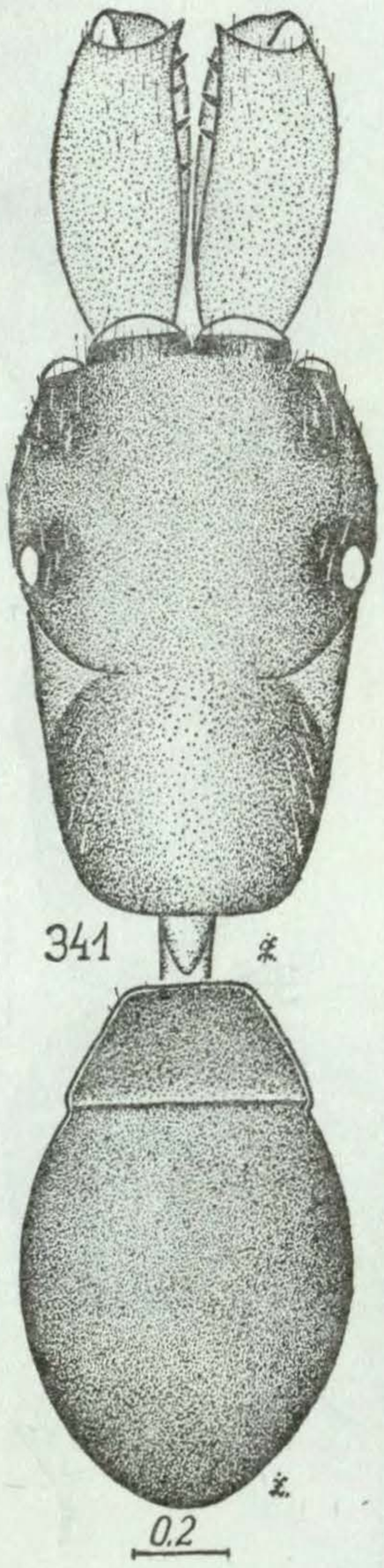


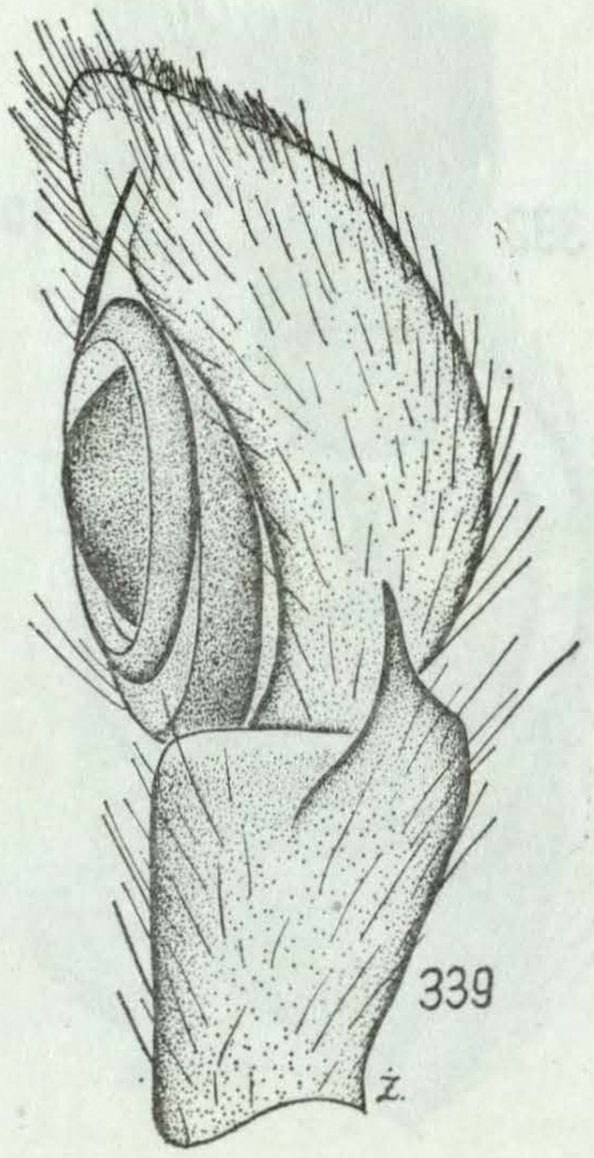


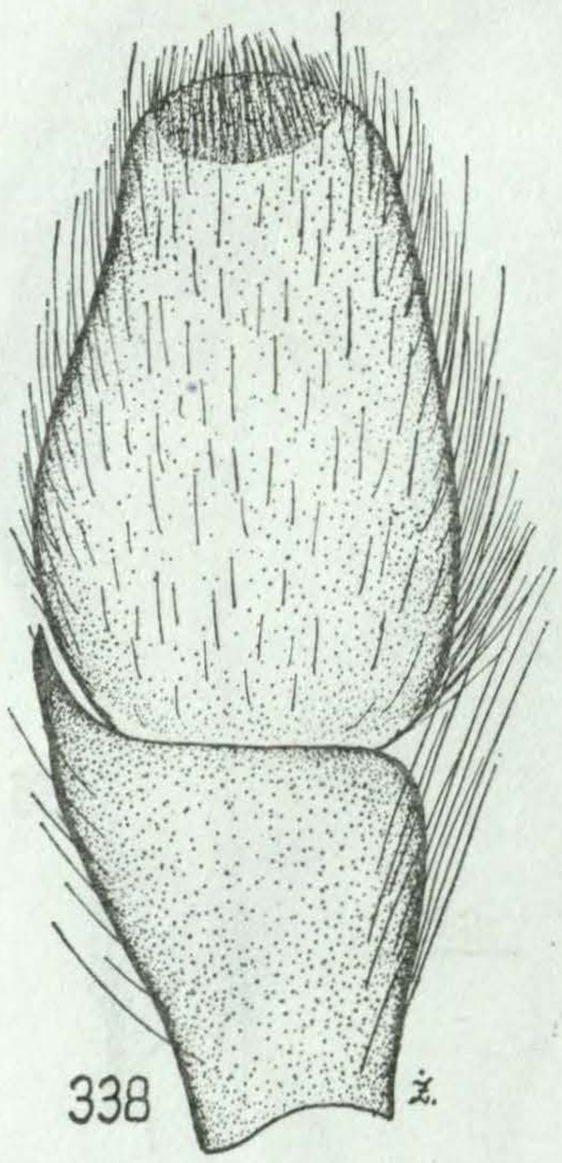


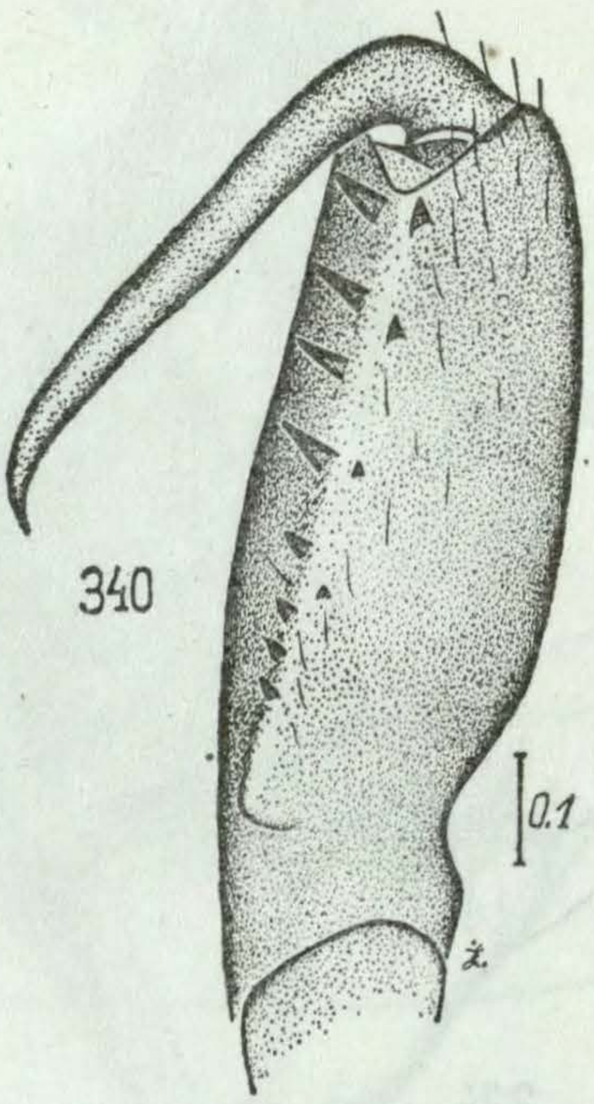
Figs. 332–336. ♂ *Myrmarachne hanoii* sp. n., holotype: palpal organ (332–334), general appearance (335) and cheliceral dentition (336).



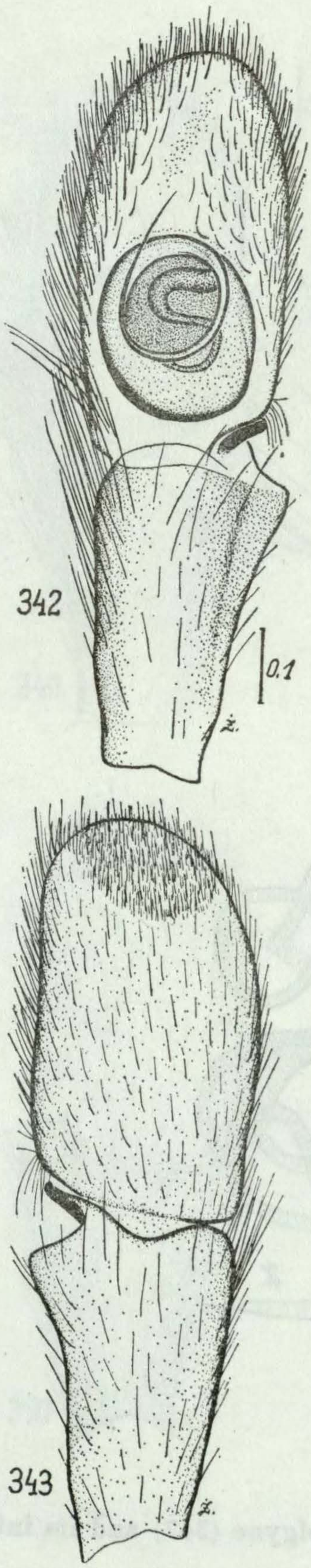


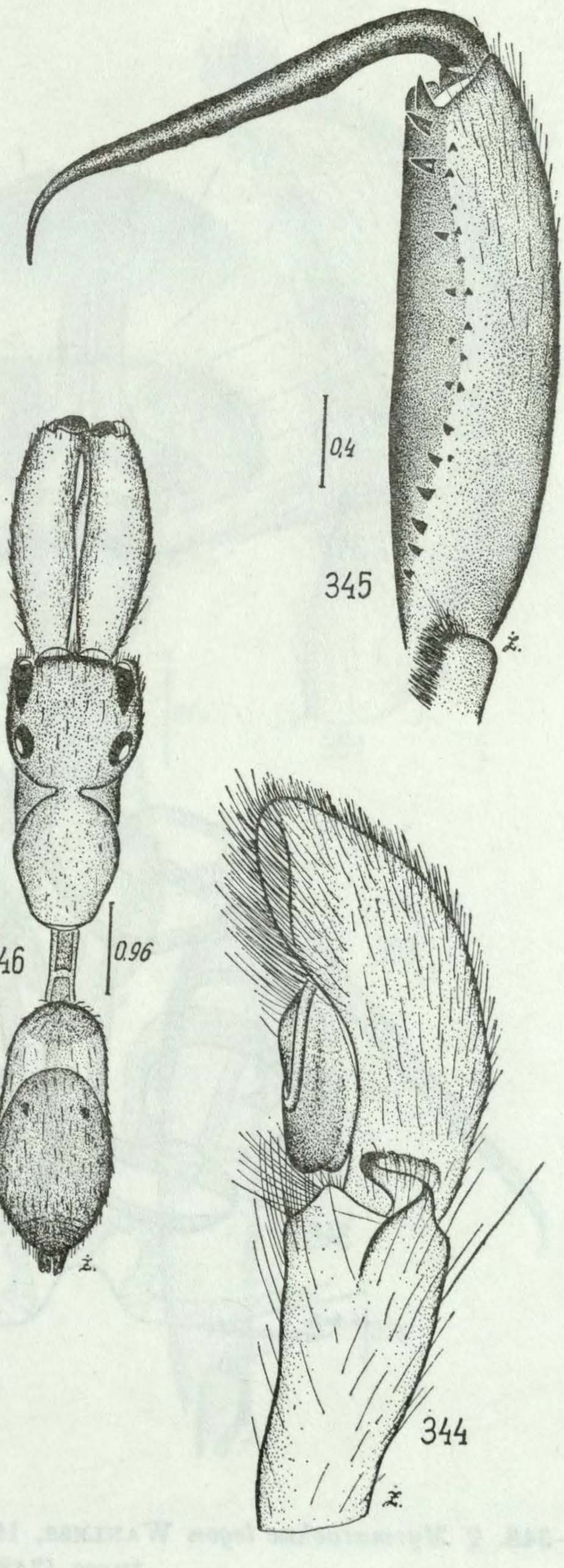


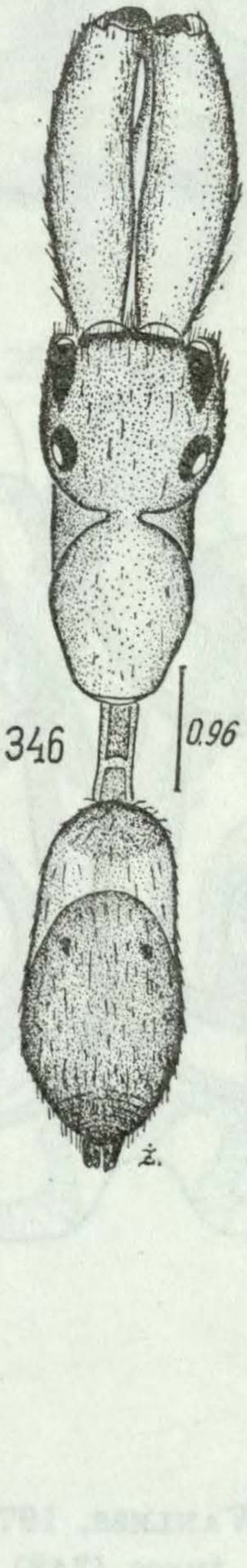




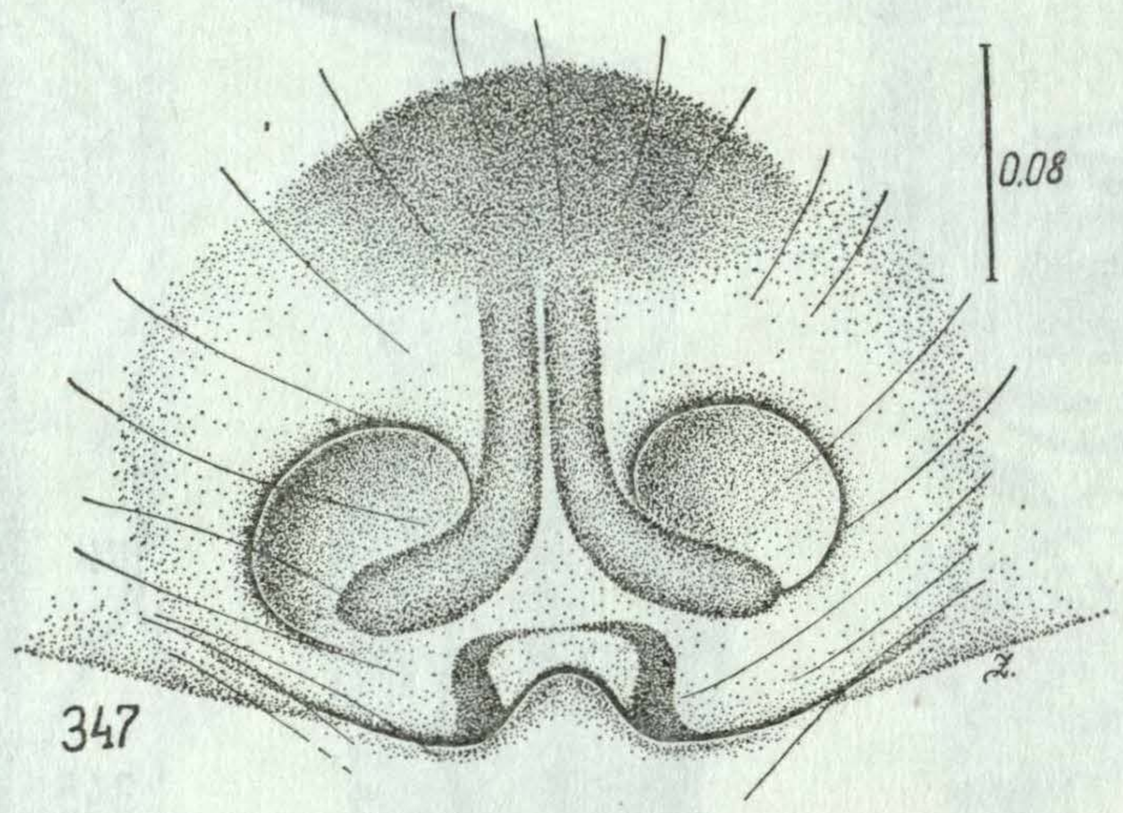
Figs. 337–341. ♂ *Myrmarachne kiboschensis* LESSERT, 1925: palpal organ (337–339), chelicerал dentition (340) and general appearance (341).



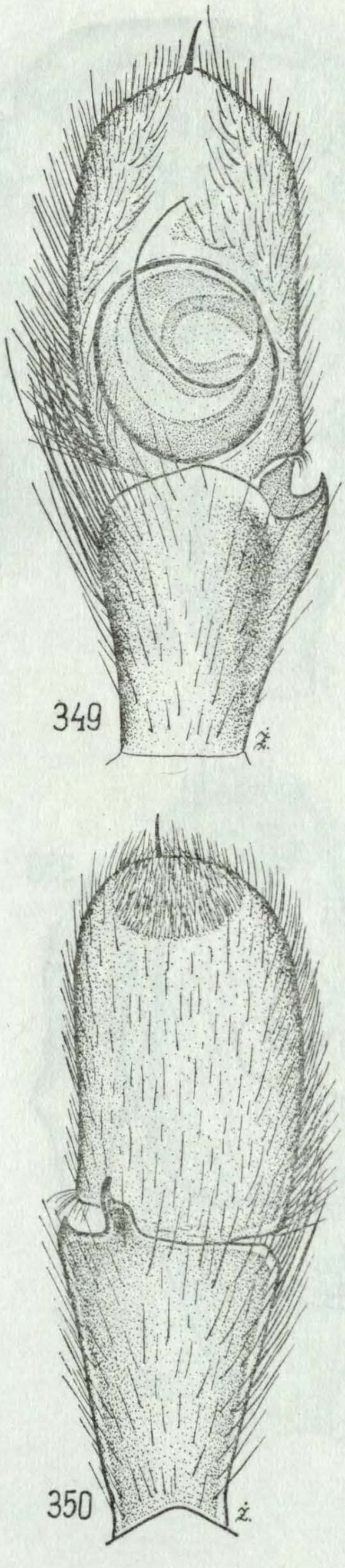


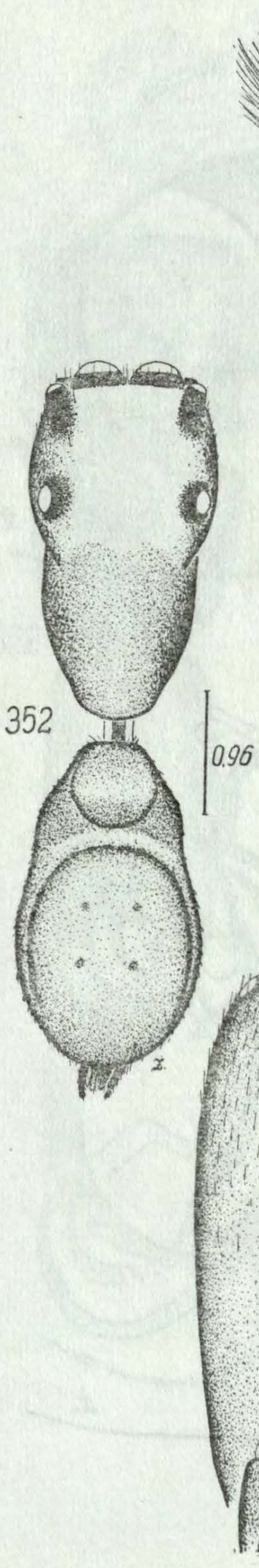


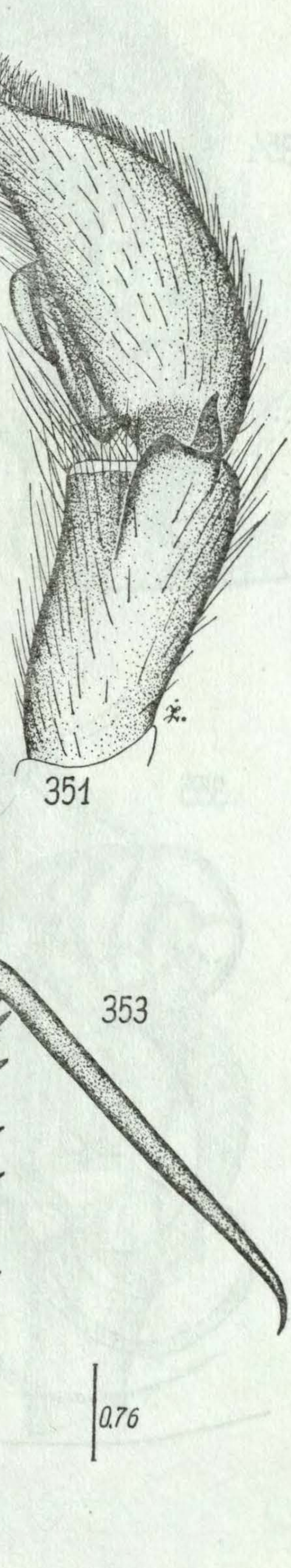
Figs. 342–346. ♂ *Myrmarachne legon* WANLESS, 1978: palpal organ (342–344), cheliceral dentition (345) and general appearance (346).

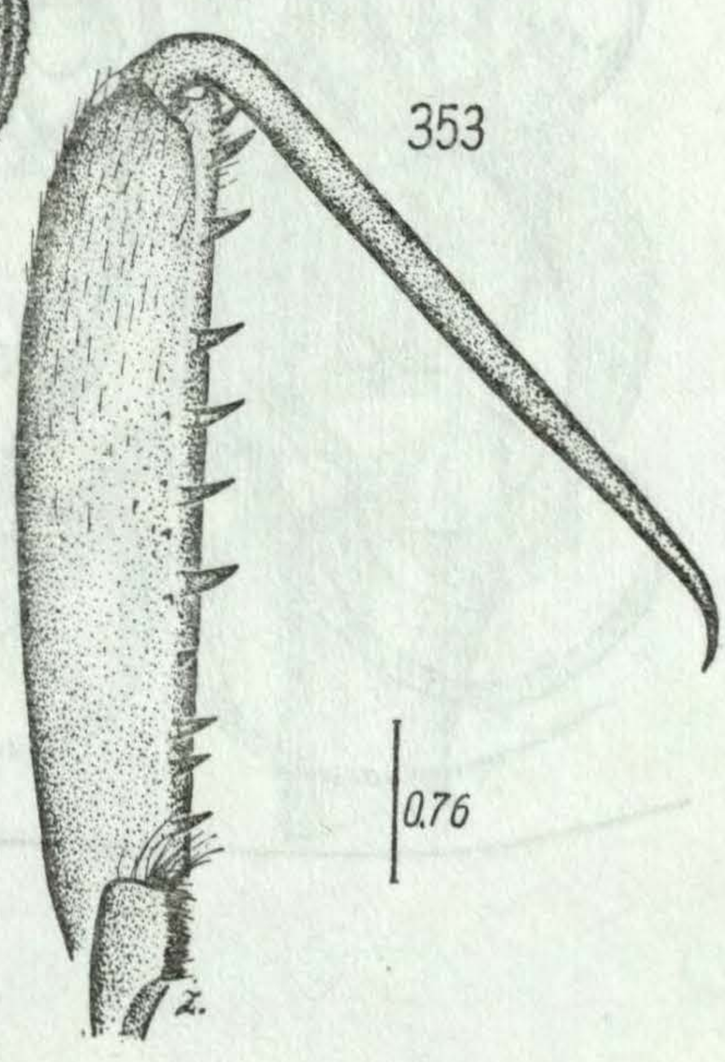


Figs. 347–348. ♀ *Myrmarachne legon* WANLESS, 1978: epigyne (347) and its internal structures (348).

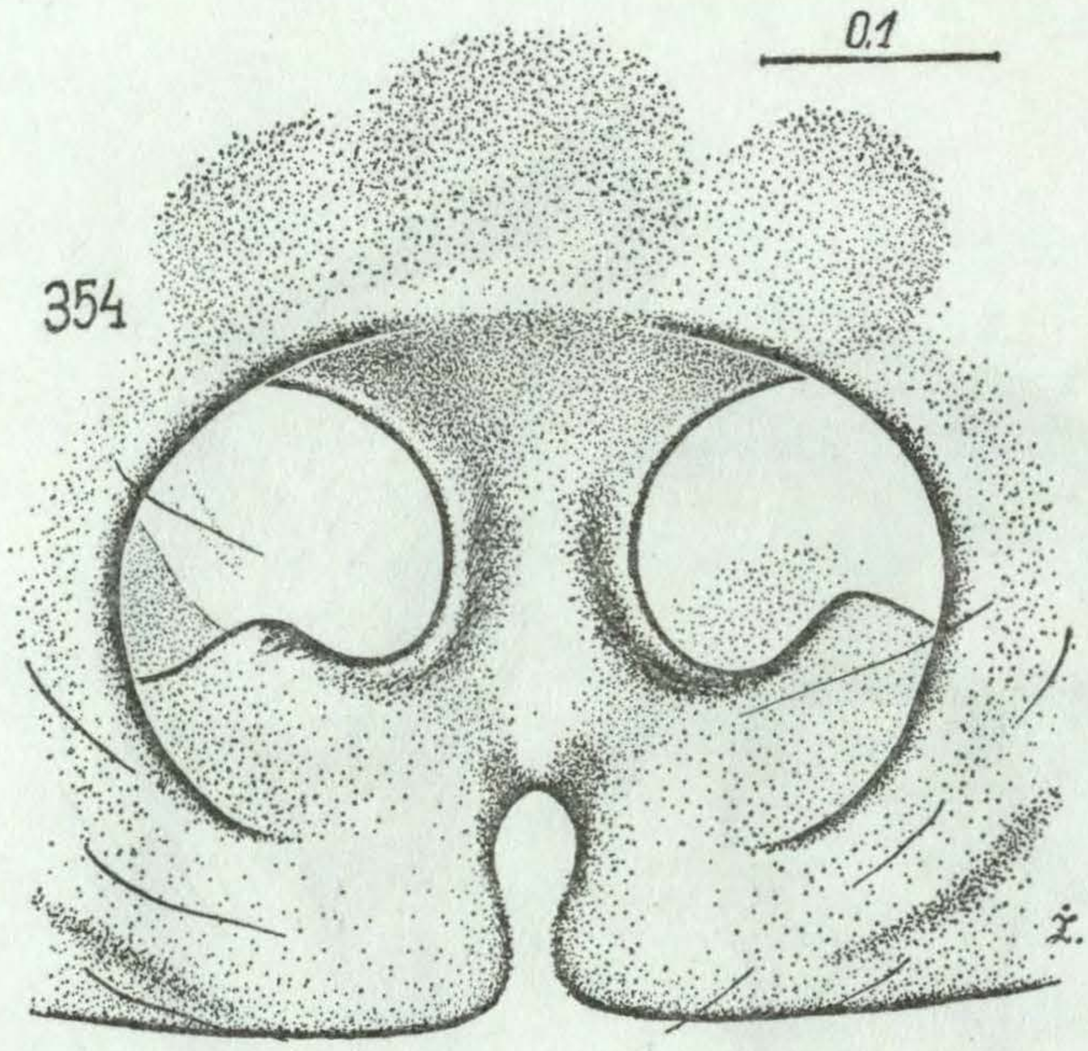


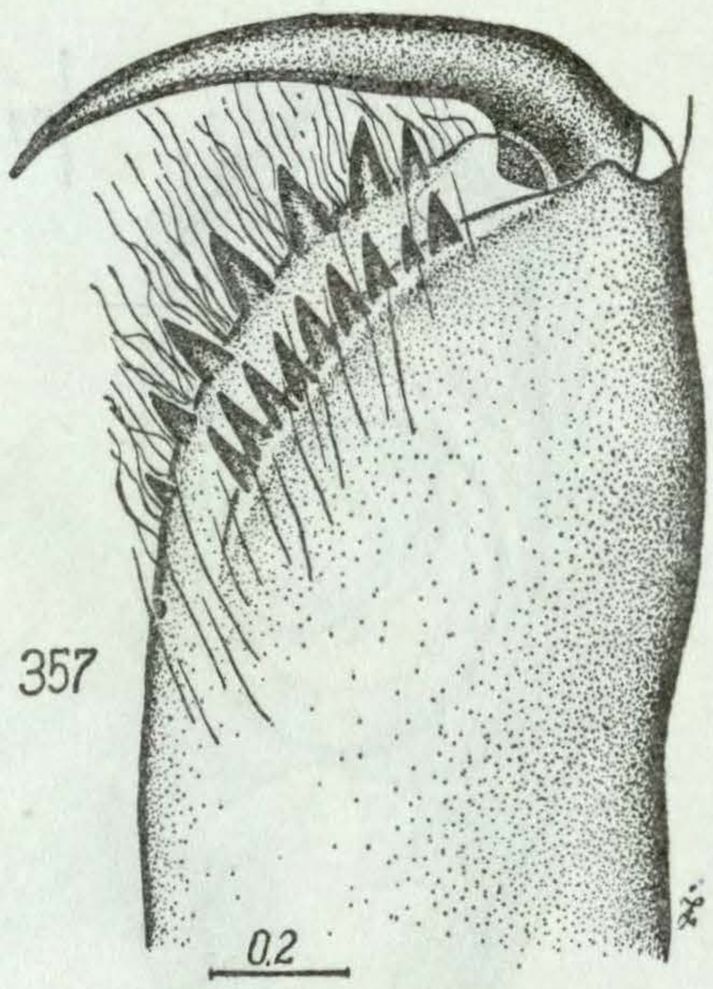


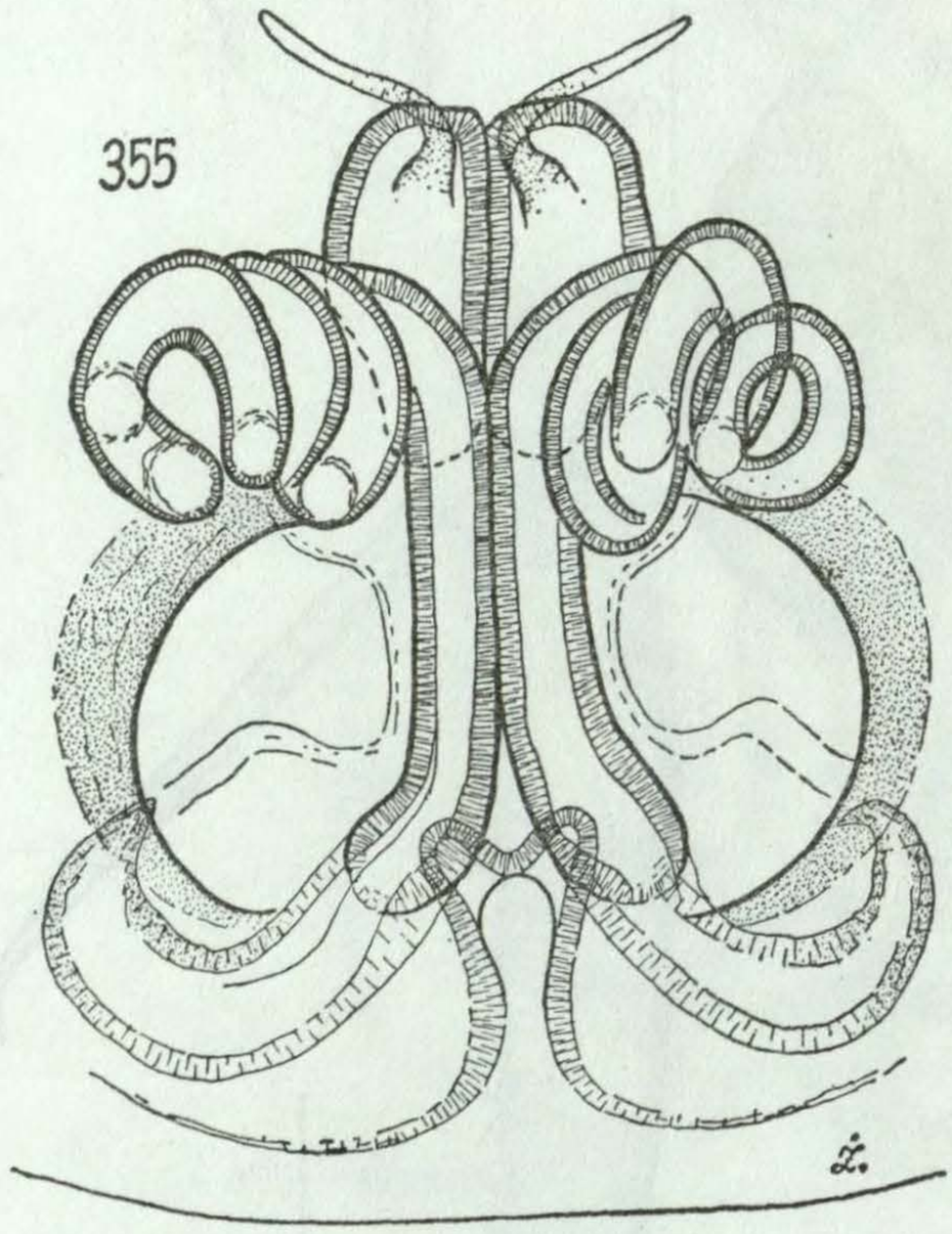


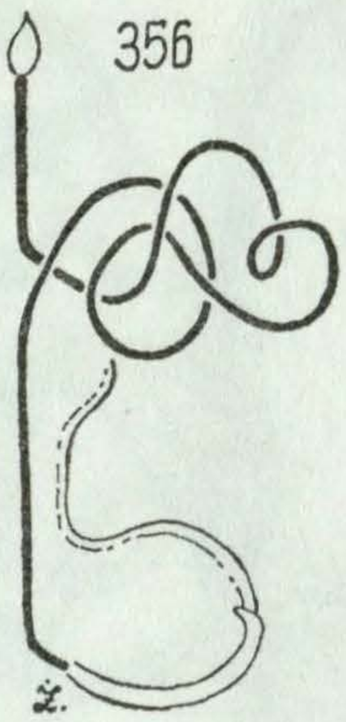


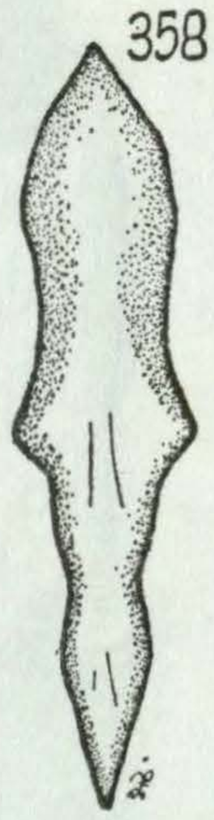
Figs. 349–353. ♂ *Myrmarachne lugubris* (KULCZYŃSKI, 1895): palpal organ (349–351), general appearance (352) and cheliceral dentition (353).



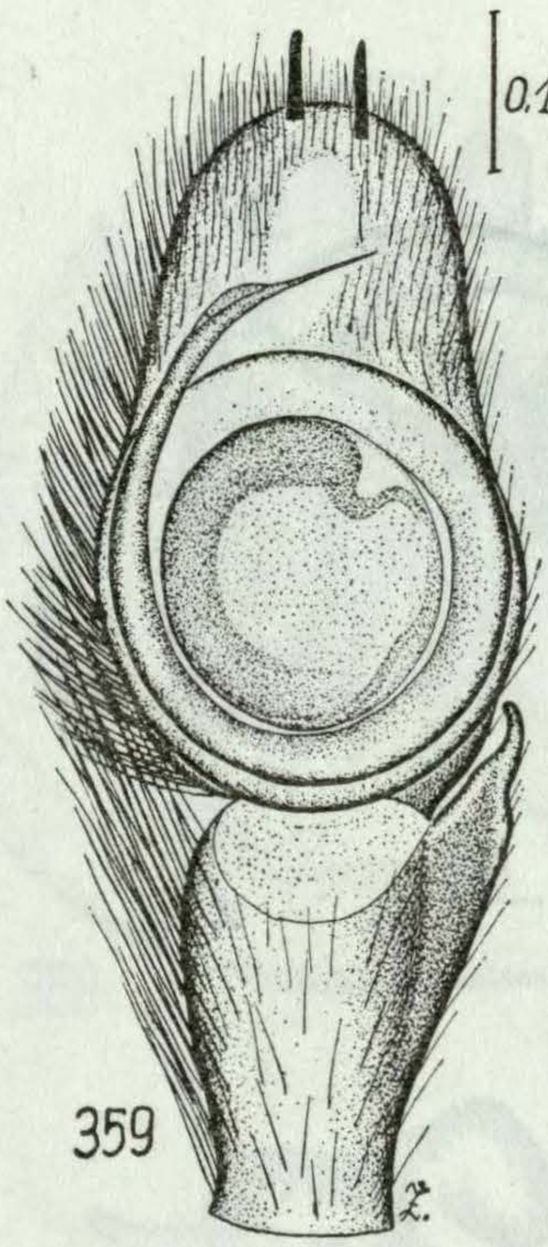


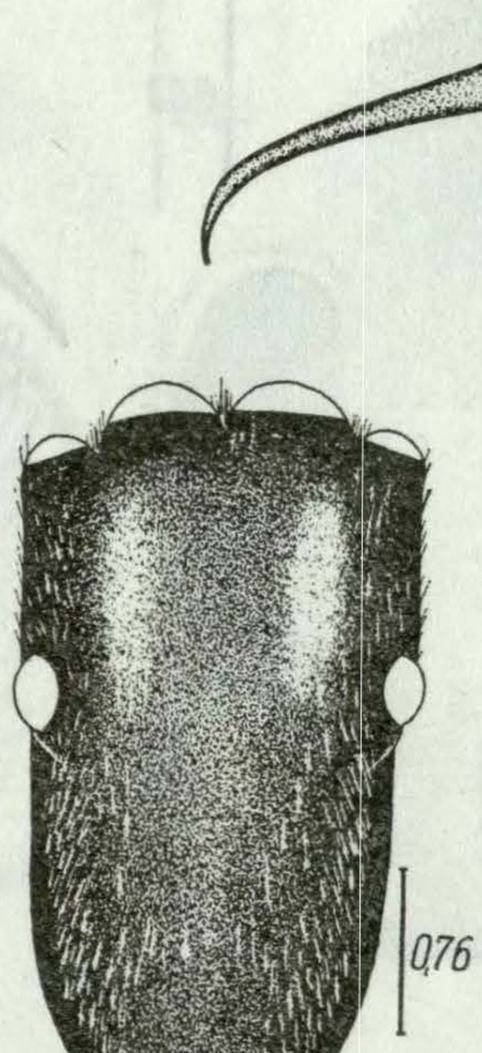


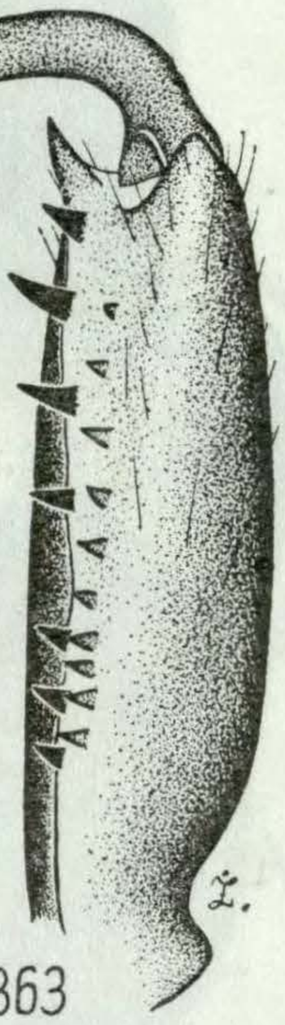


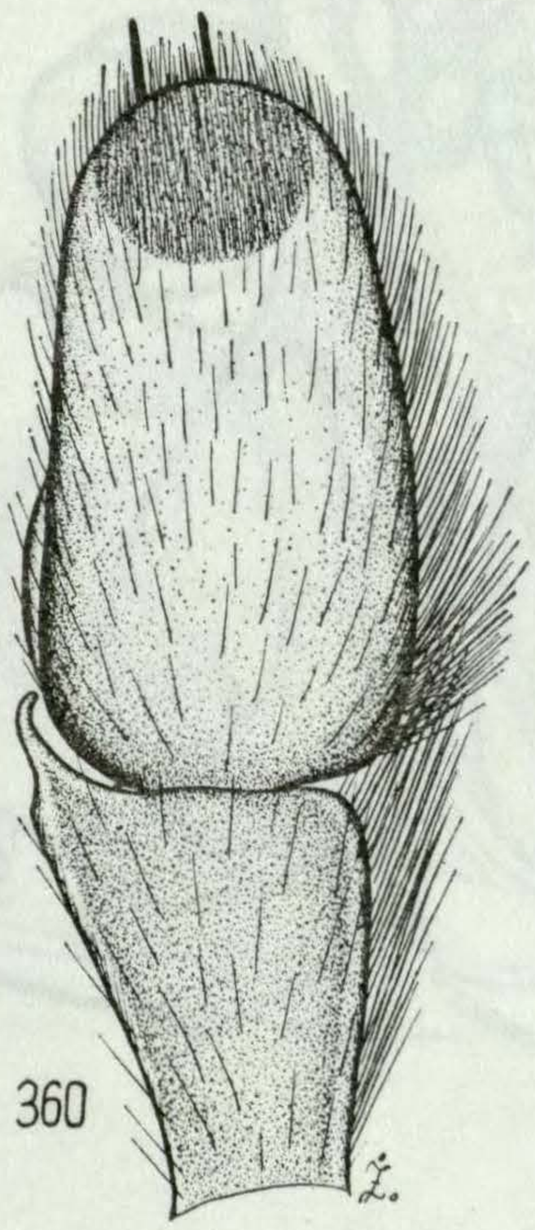


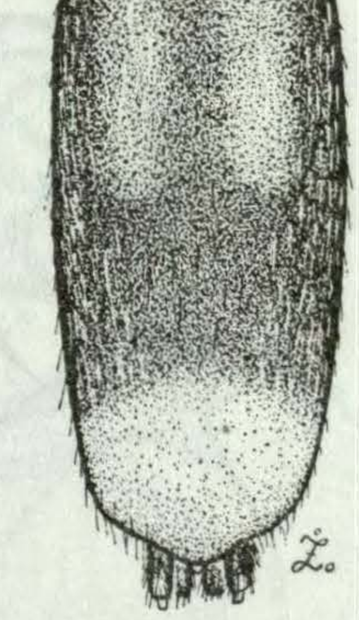
Figs. 354–358. ♀ *Myrmarachne lugubris* (KULCZYŃSKI, 1895): epigyne (354), internal structures (355), its diagrammatic course (356), cheliceral dentition (357) and sternum (358).

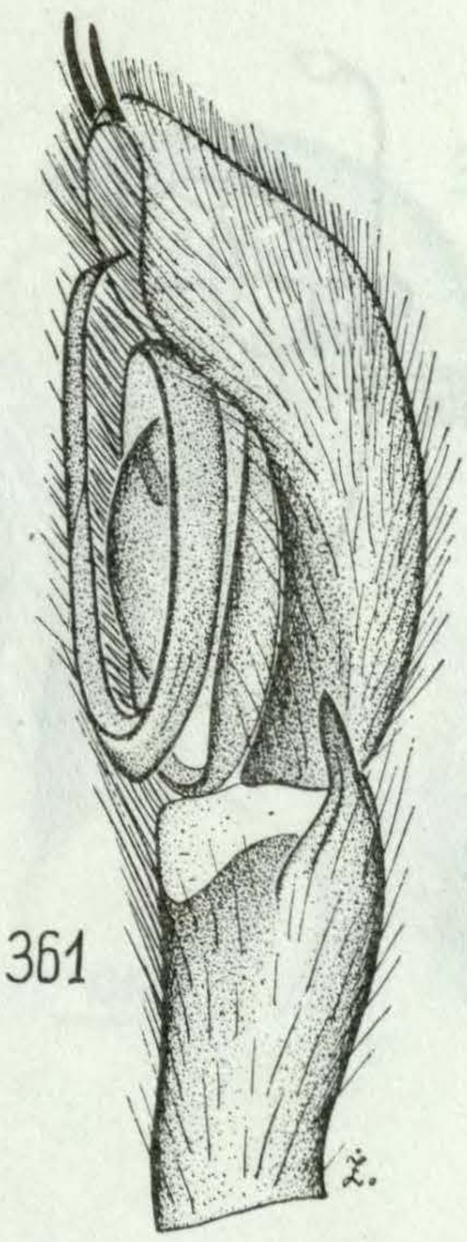




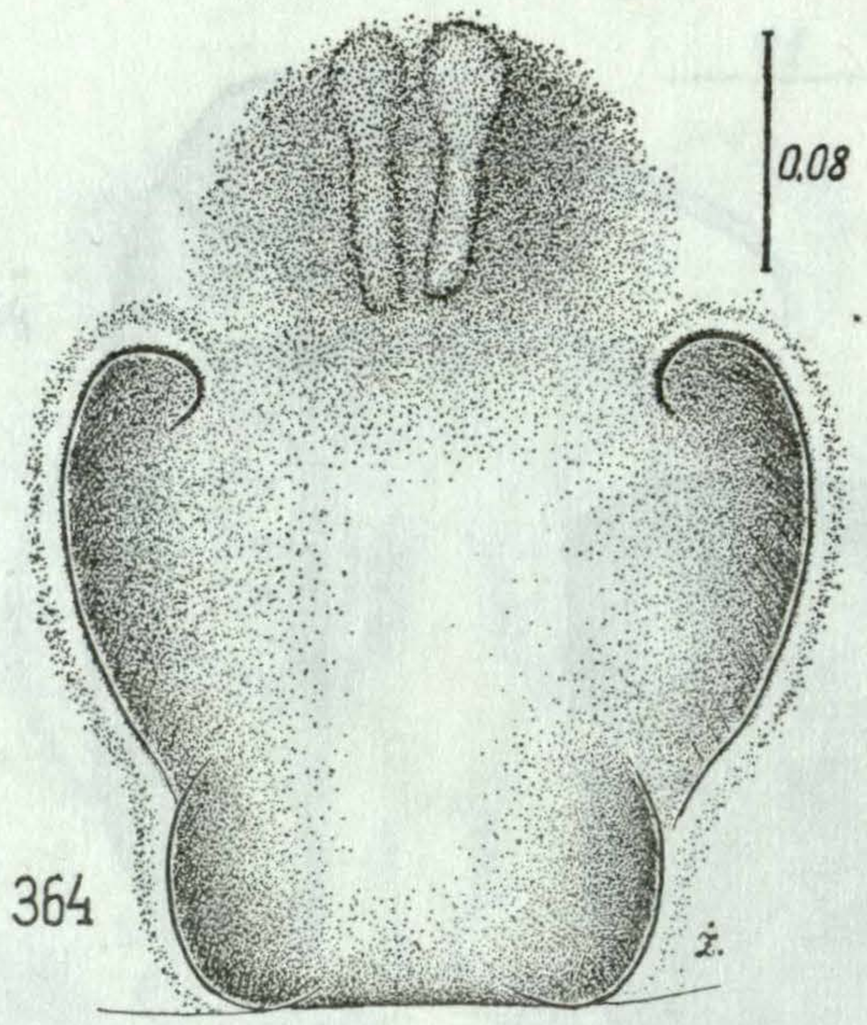


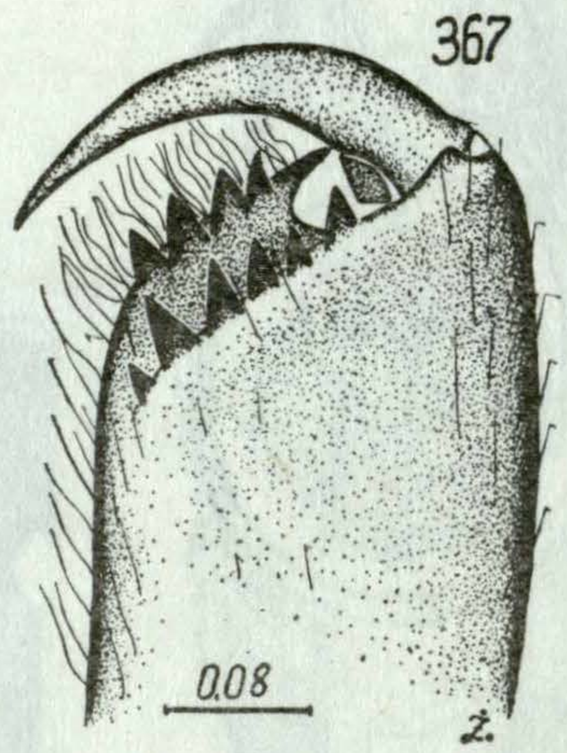


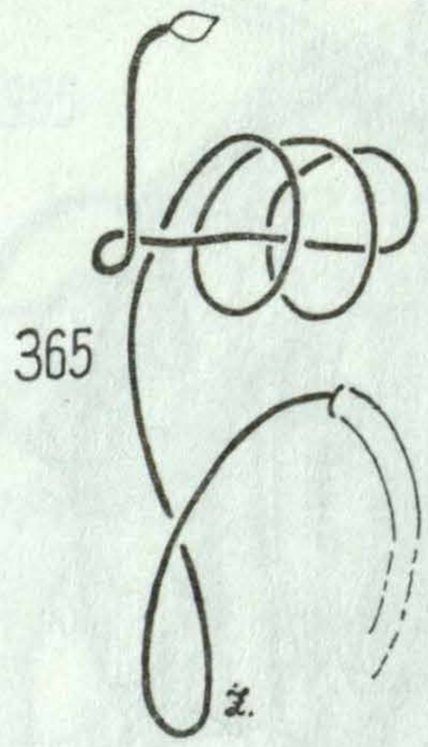


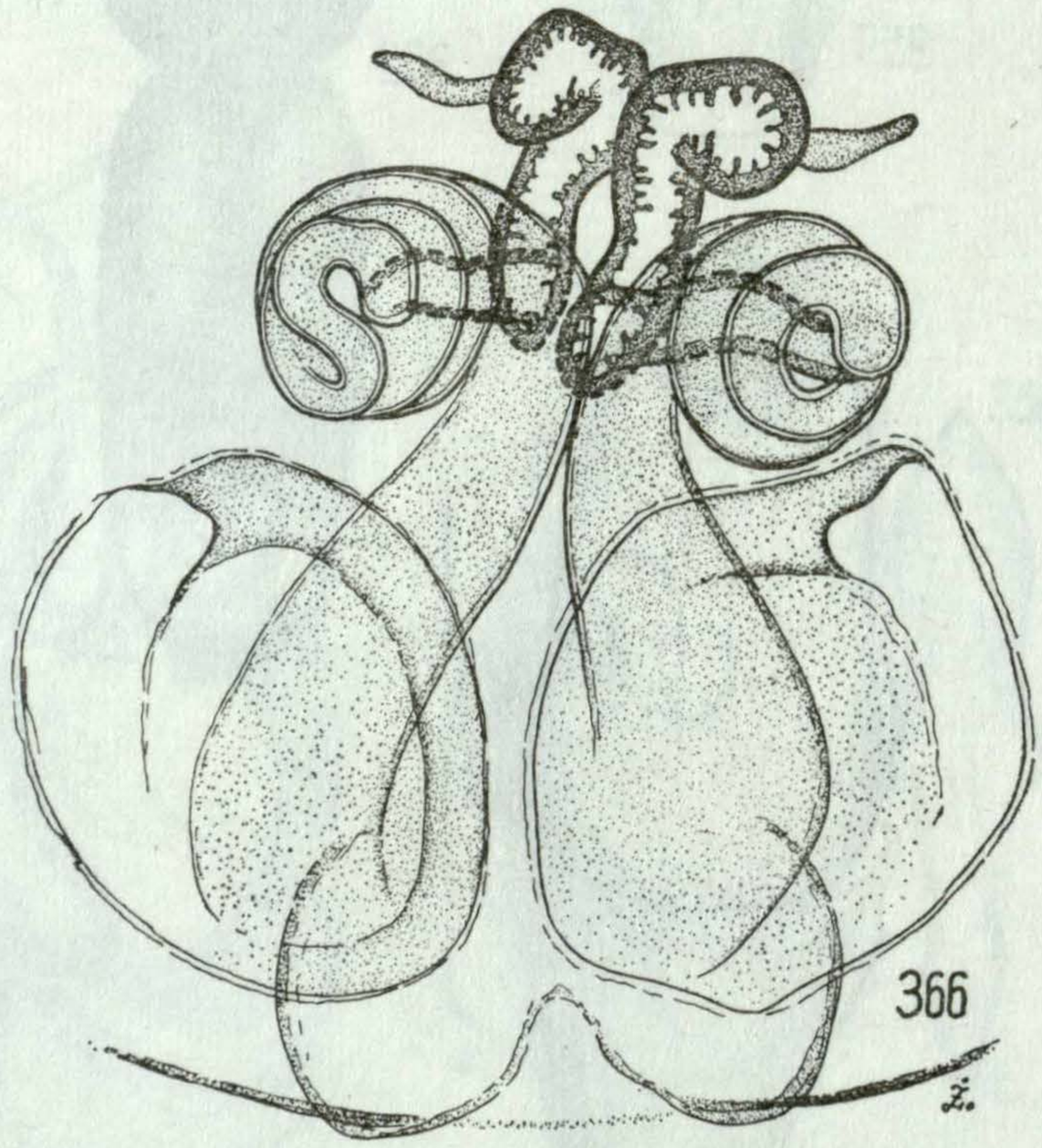


Figs. 359–363. ♂ *Myrmarachne thaii* sp. n., holotype: palpal organ (359–361), general appearance (362) and cheliceral dentition (363).

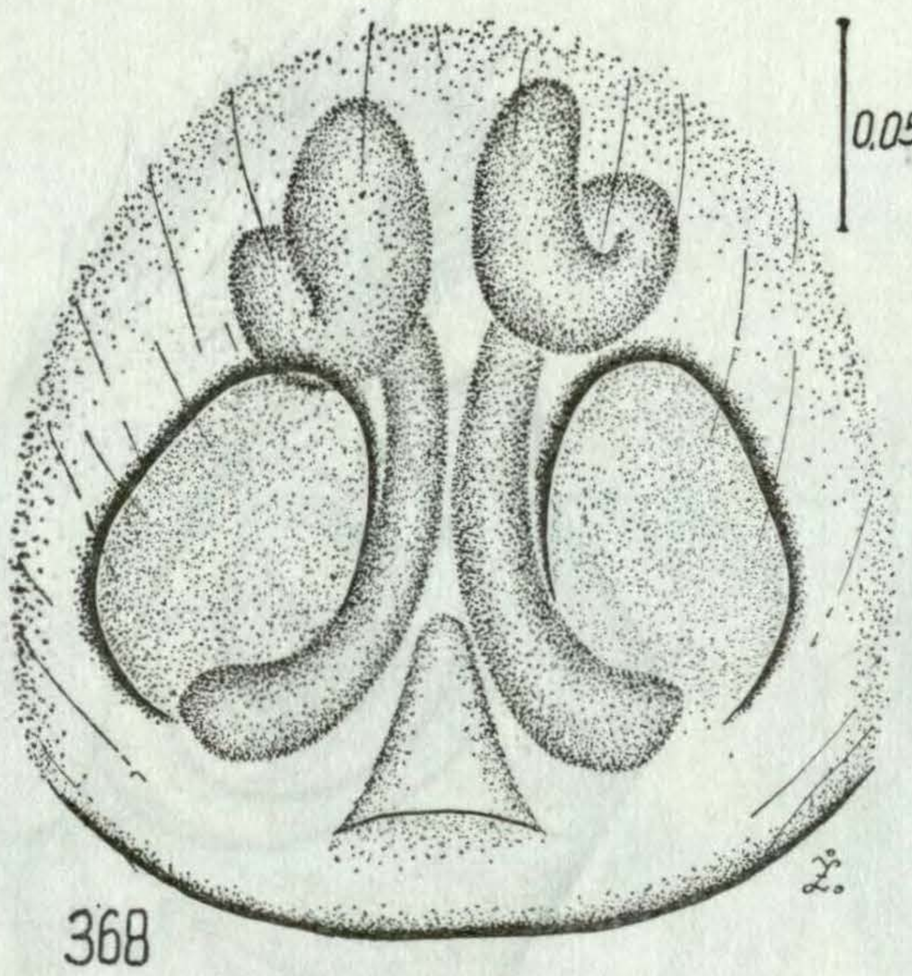


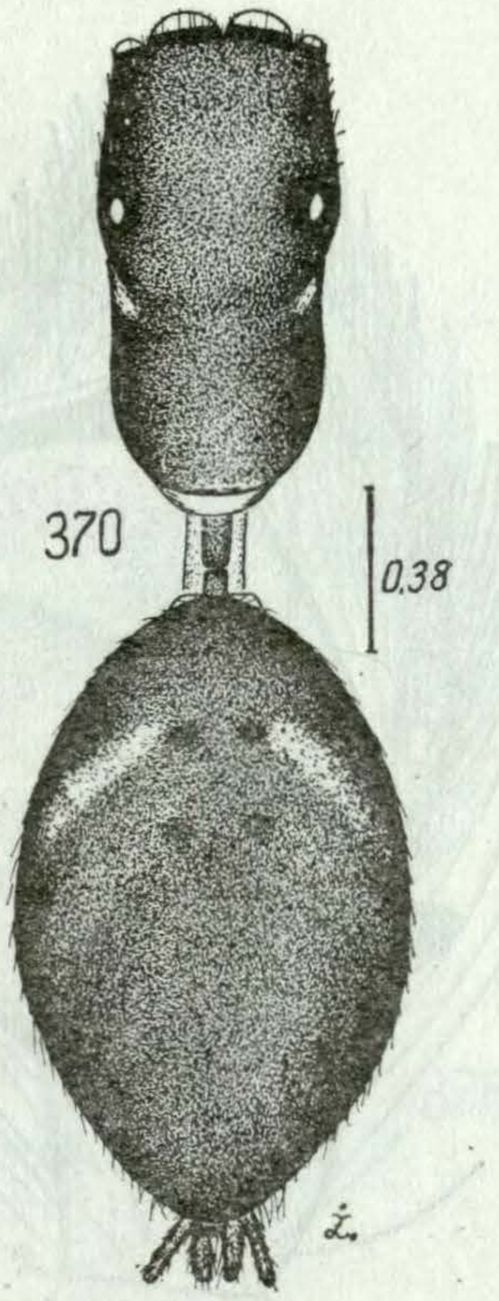


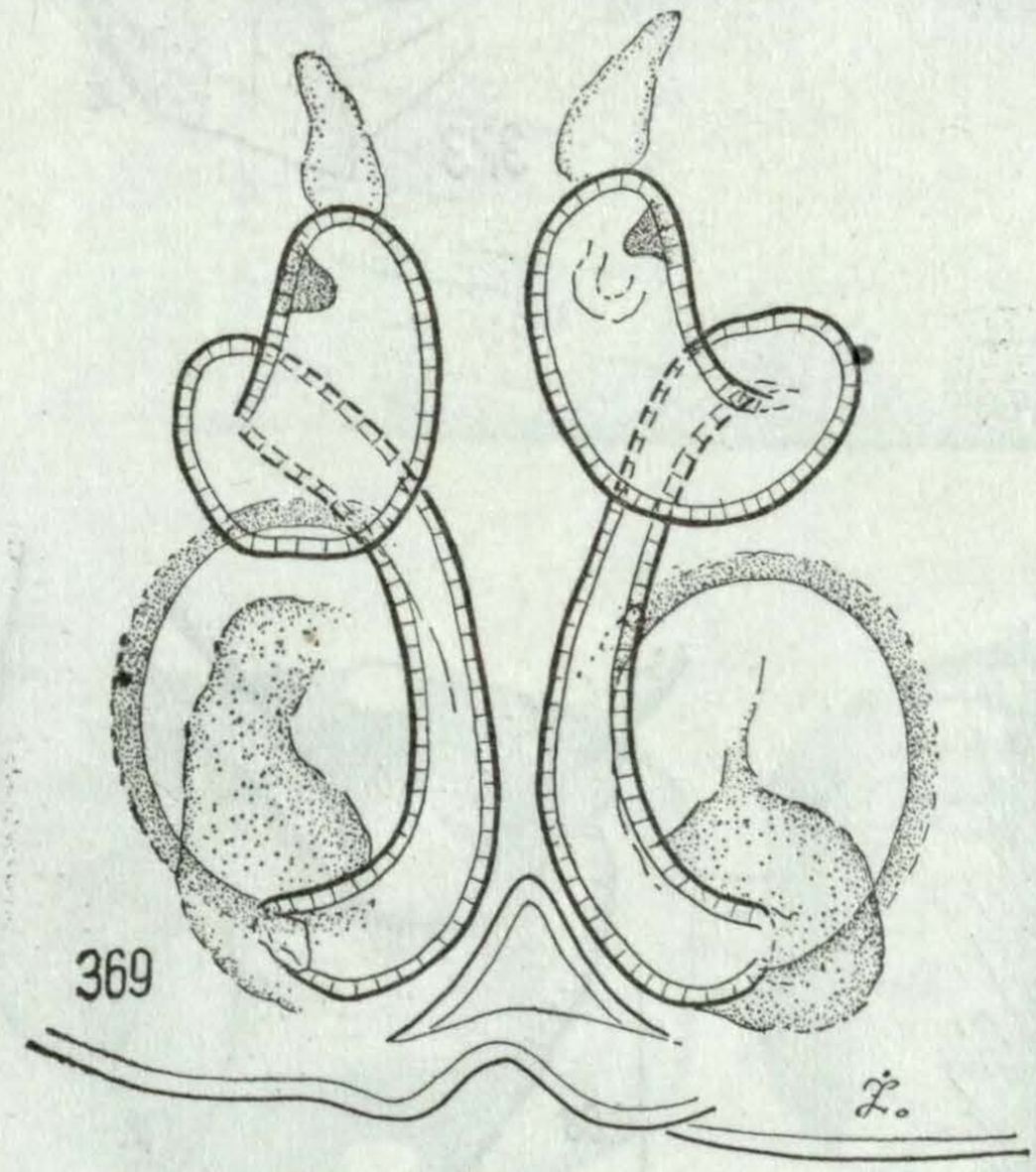


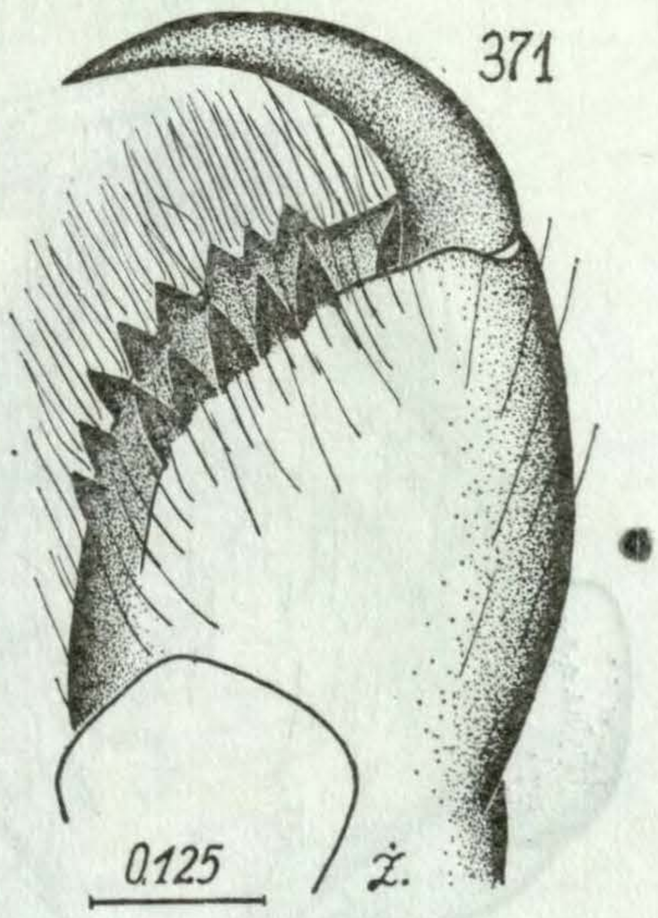


Figs. 364–367. ♀ *Myrmarachne topali* sp. n., holotype: epigyne (364), internal structures (366), its diagrammatic course (365) and cheliceral dentition (367).

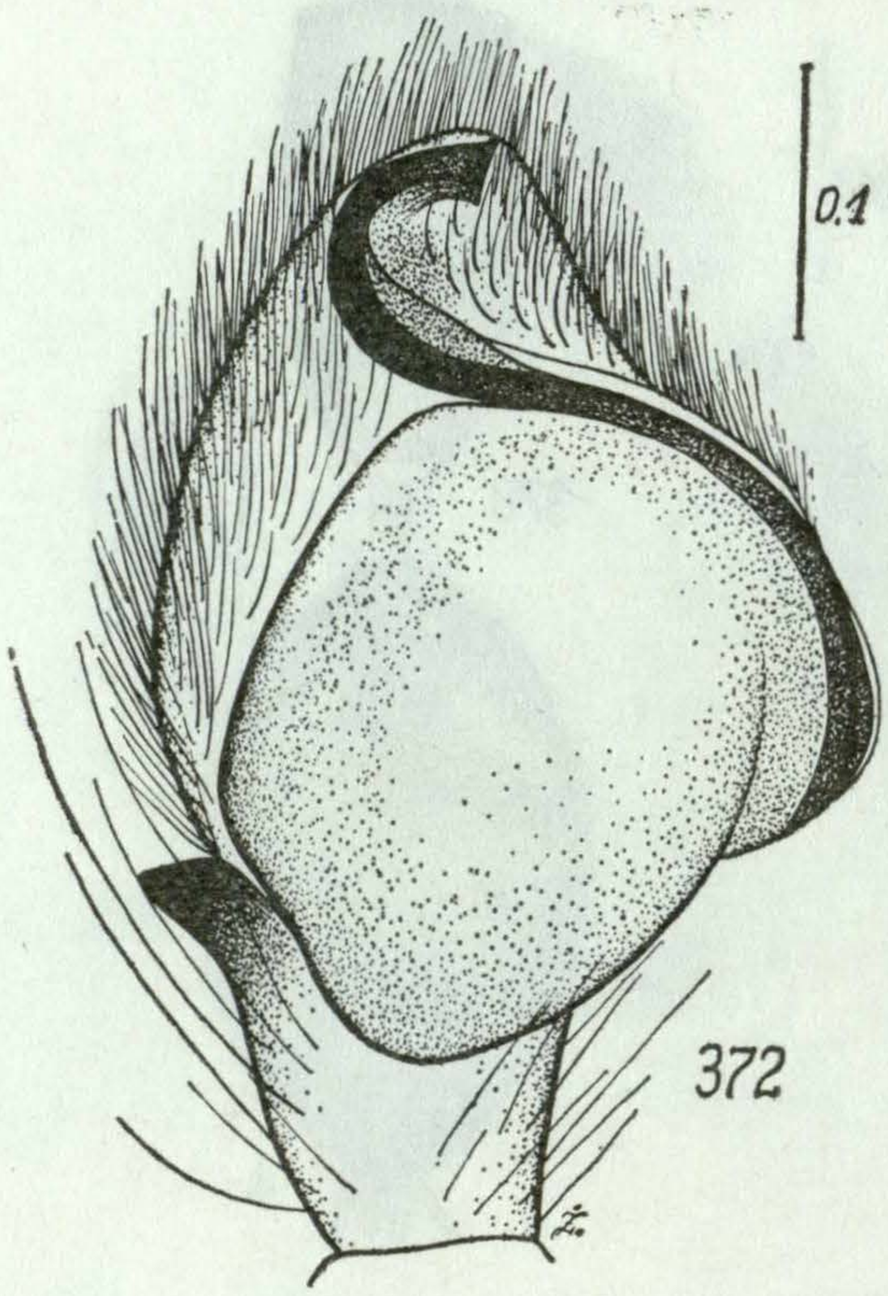




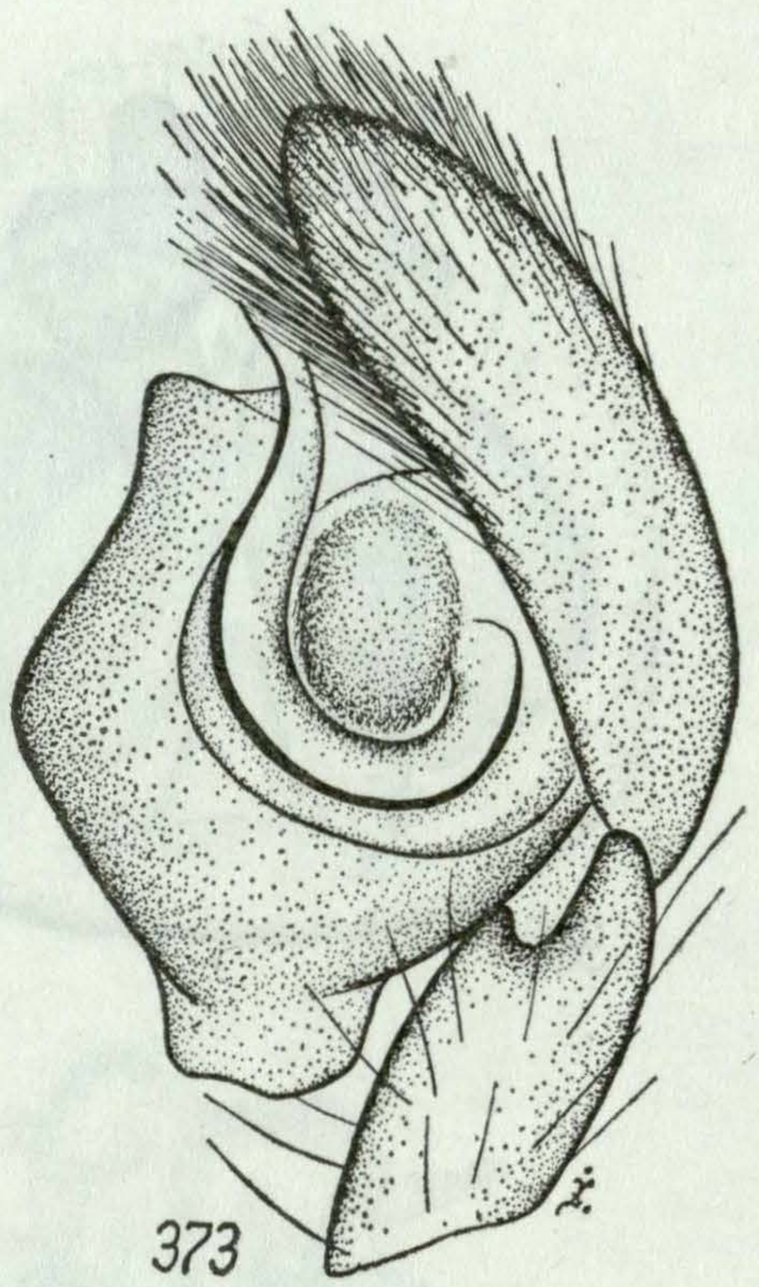




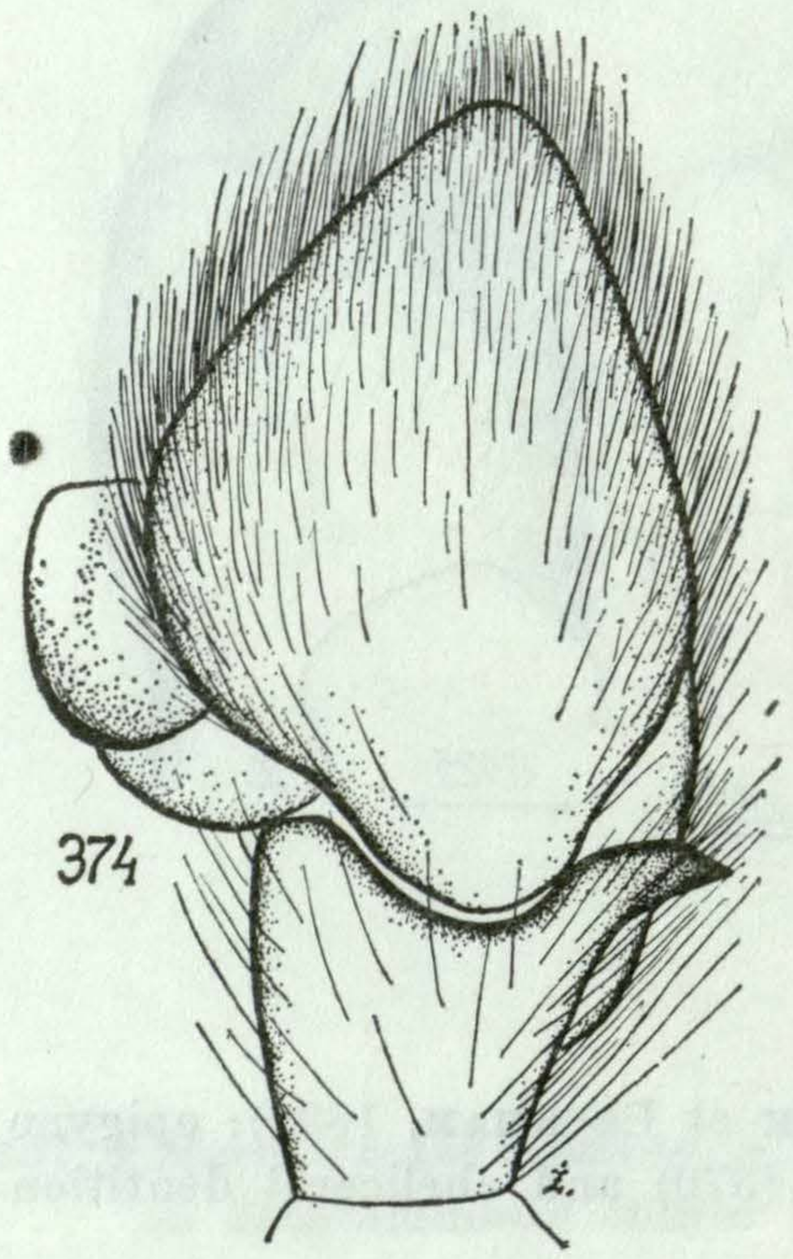
Figs. 368–371. ♀ *Myrmarachne voliatilis* (PECKHAM et PECKHAM, 1892): epigyne (368), its internal structures (369), general appearance (370) and cheliceral dentition (371).



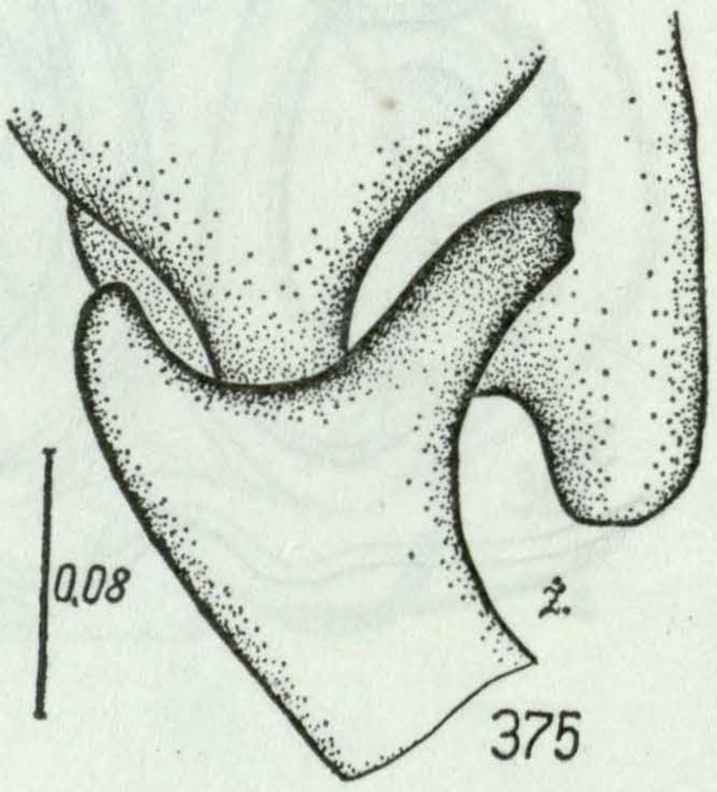
372



373

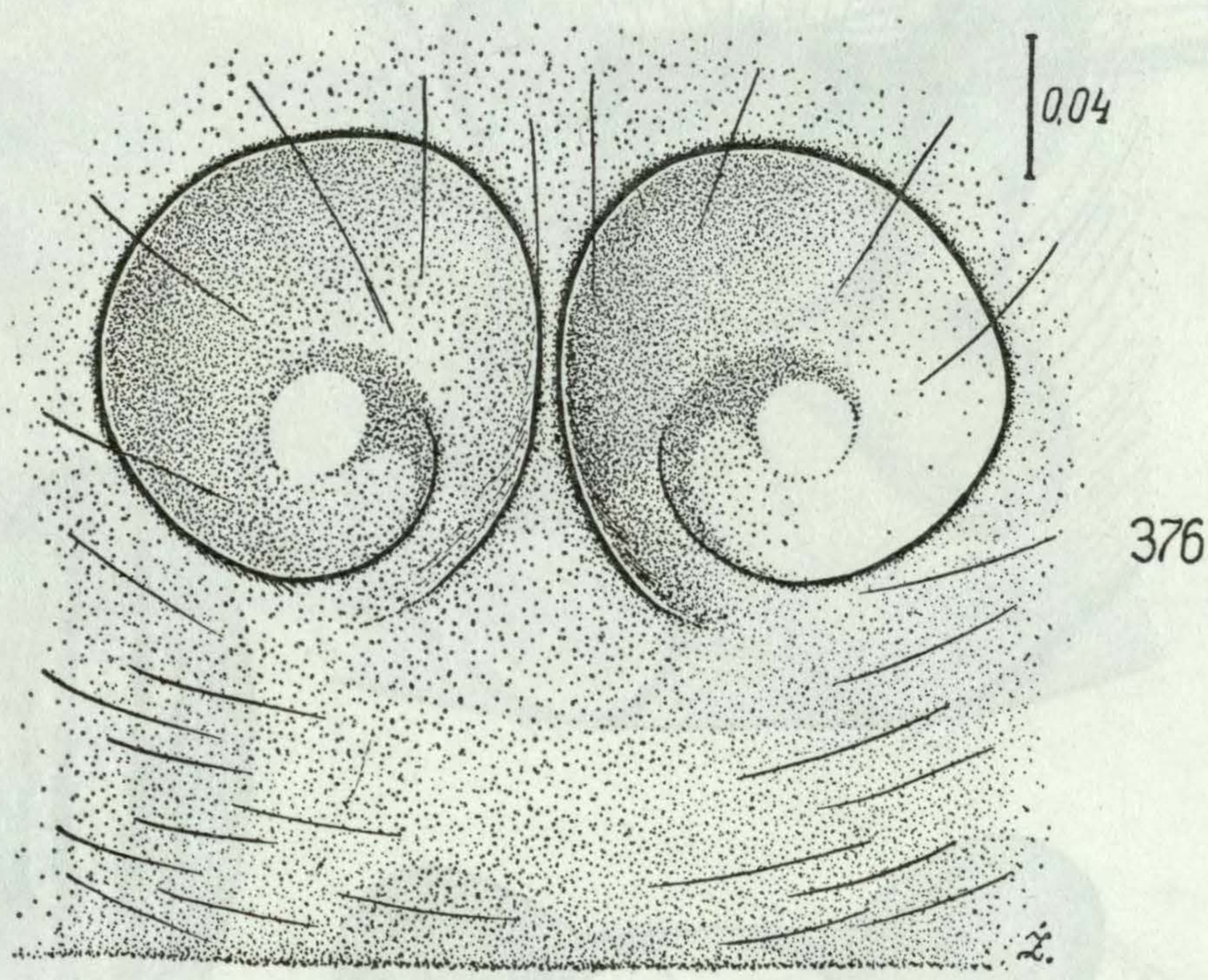


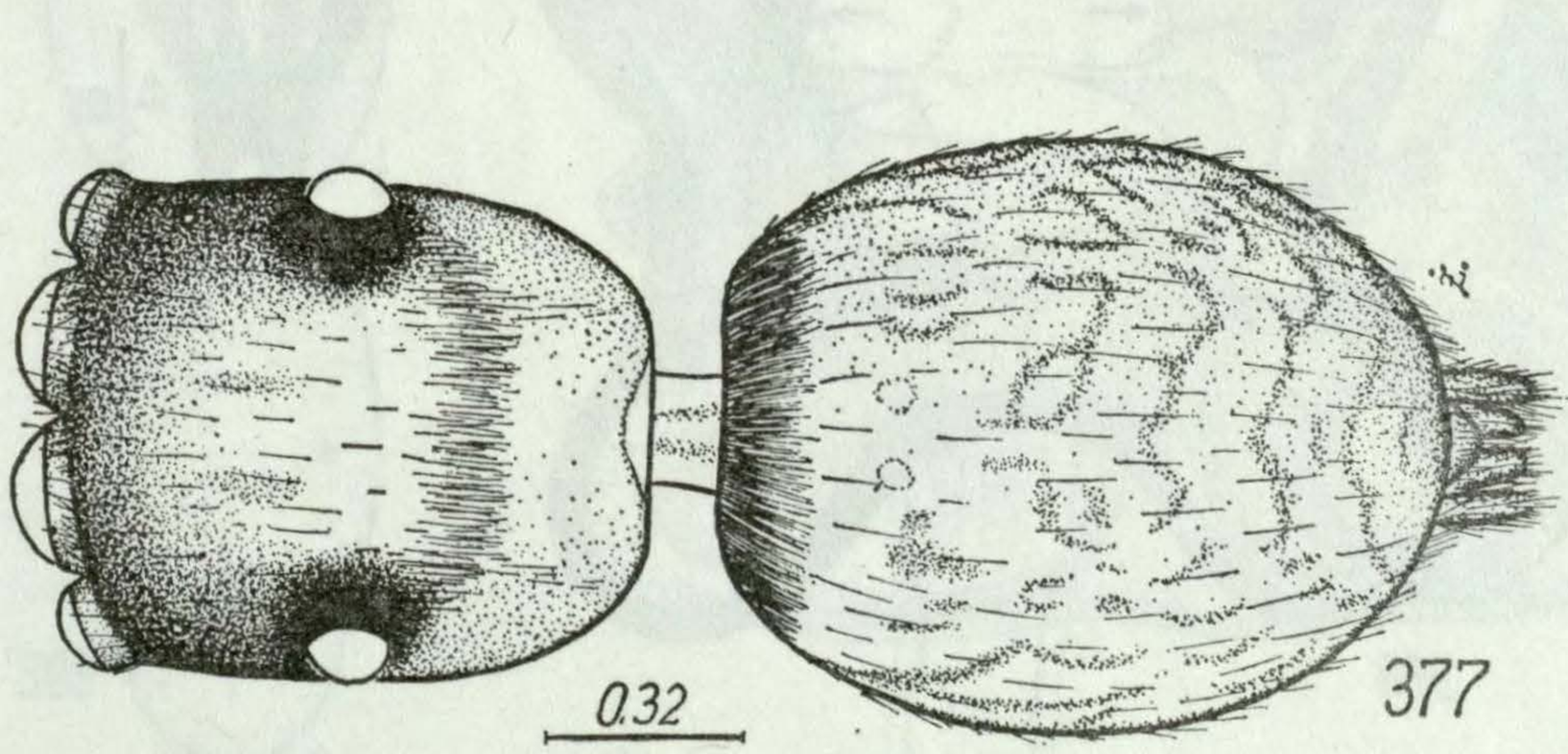
374



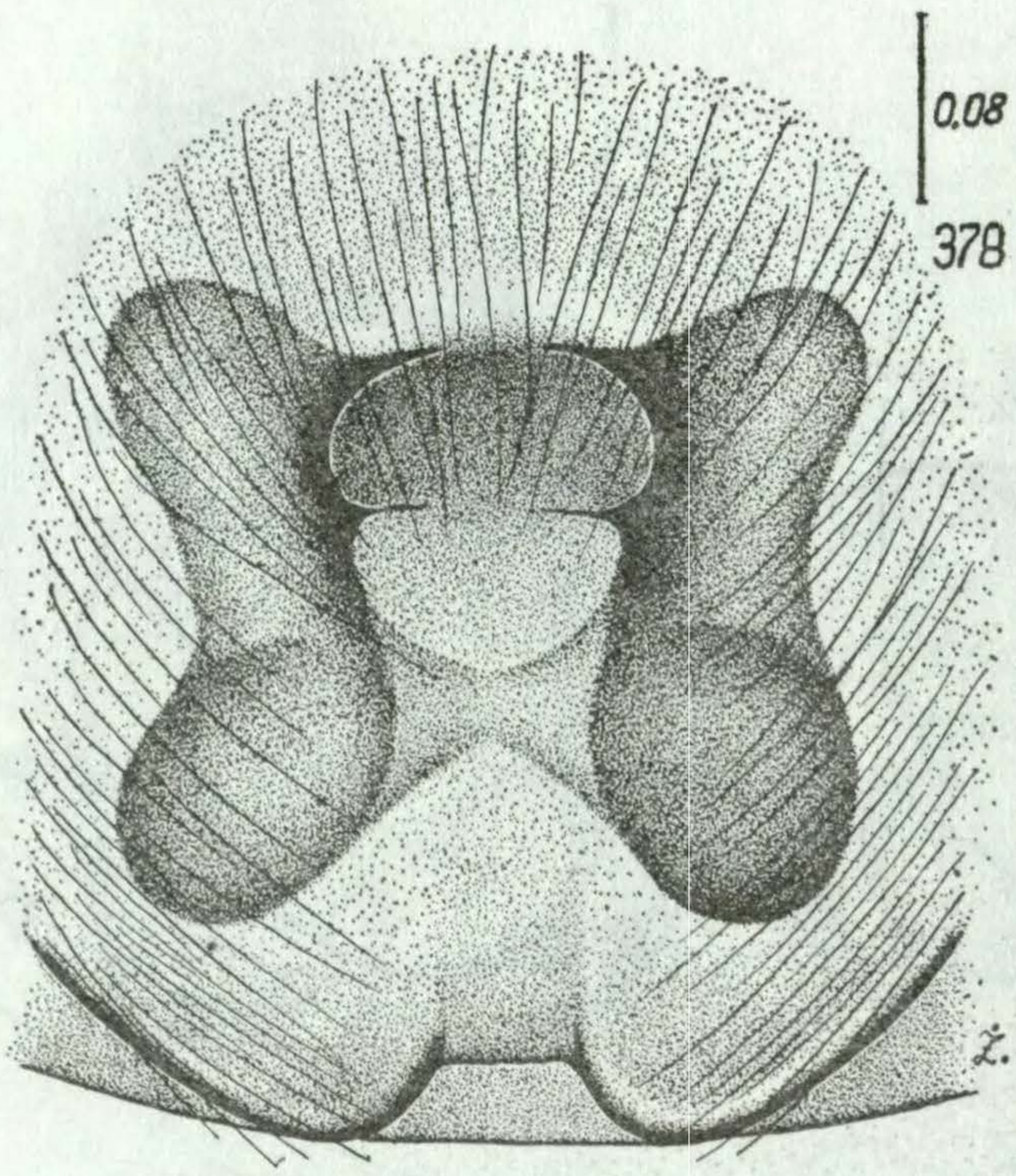
375

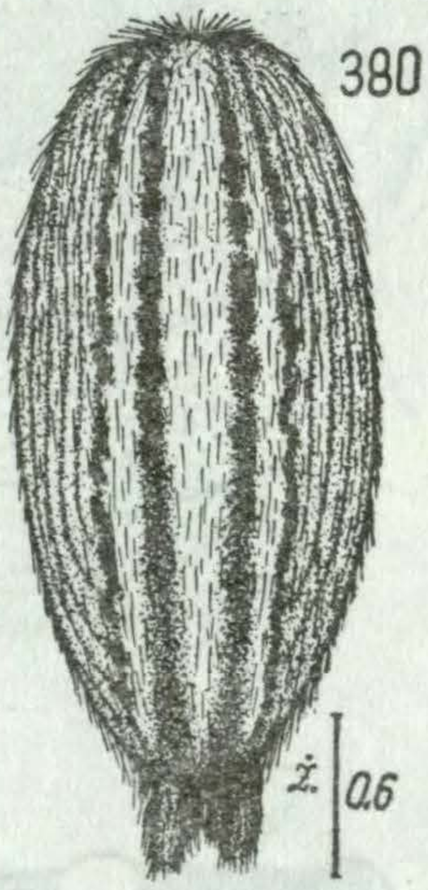
Figs. 372–375. ♂ *Neon minutus* sp. n., holotype: palpal organ.

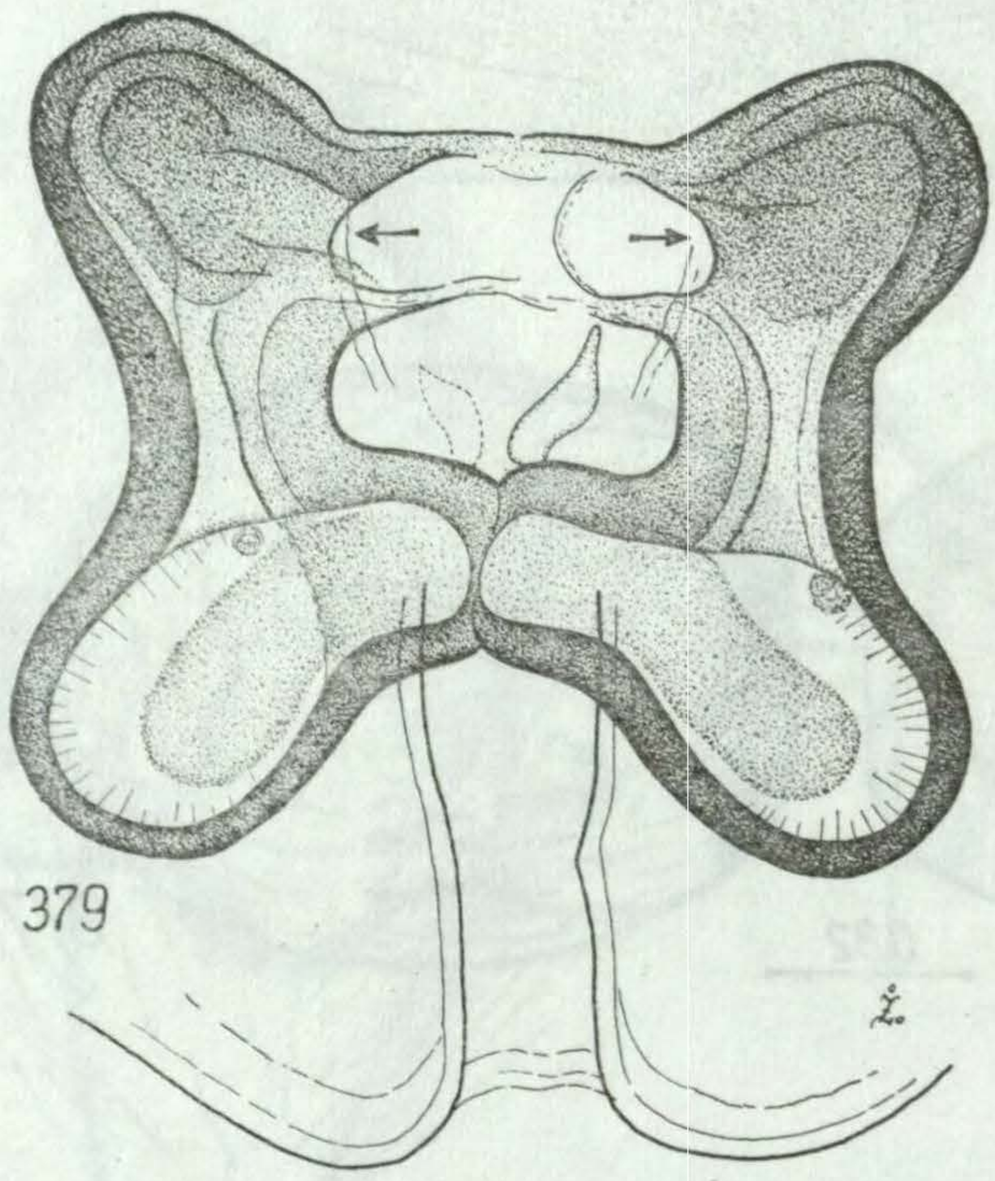




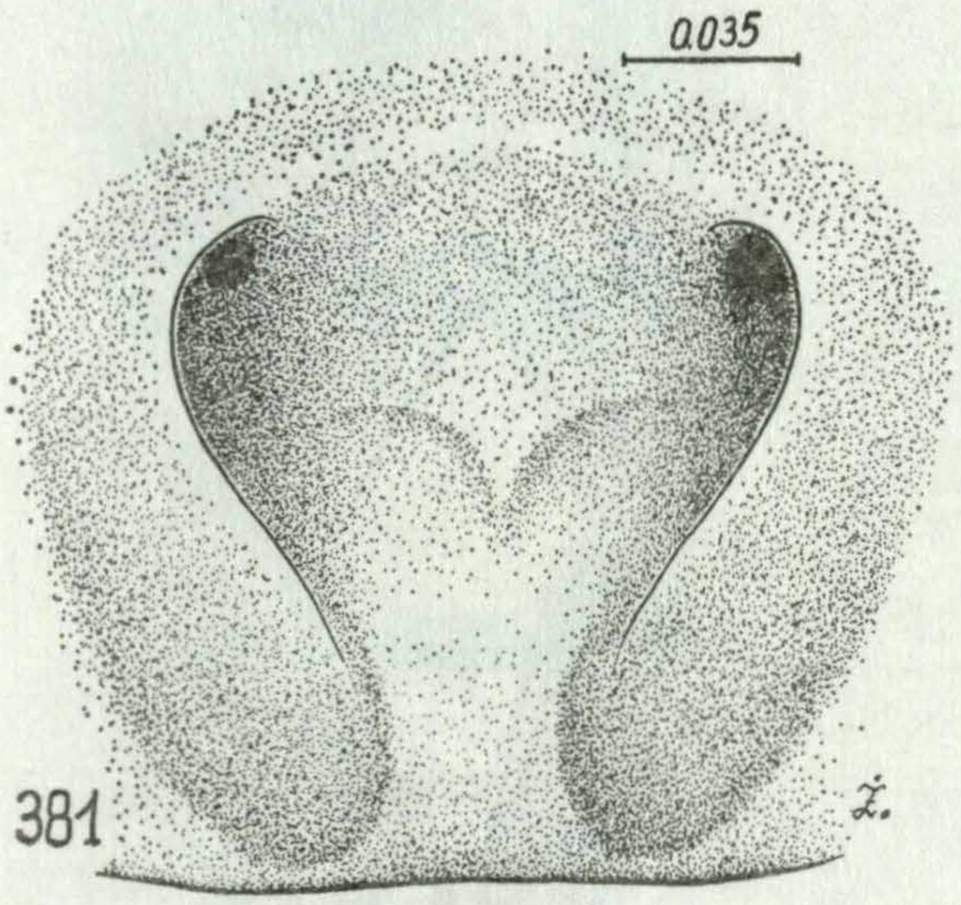
Figs. 376–377. ♀ *Neon minutus* sp. n., allotype: epigyne (376), general appearance (377).

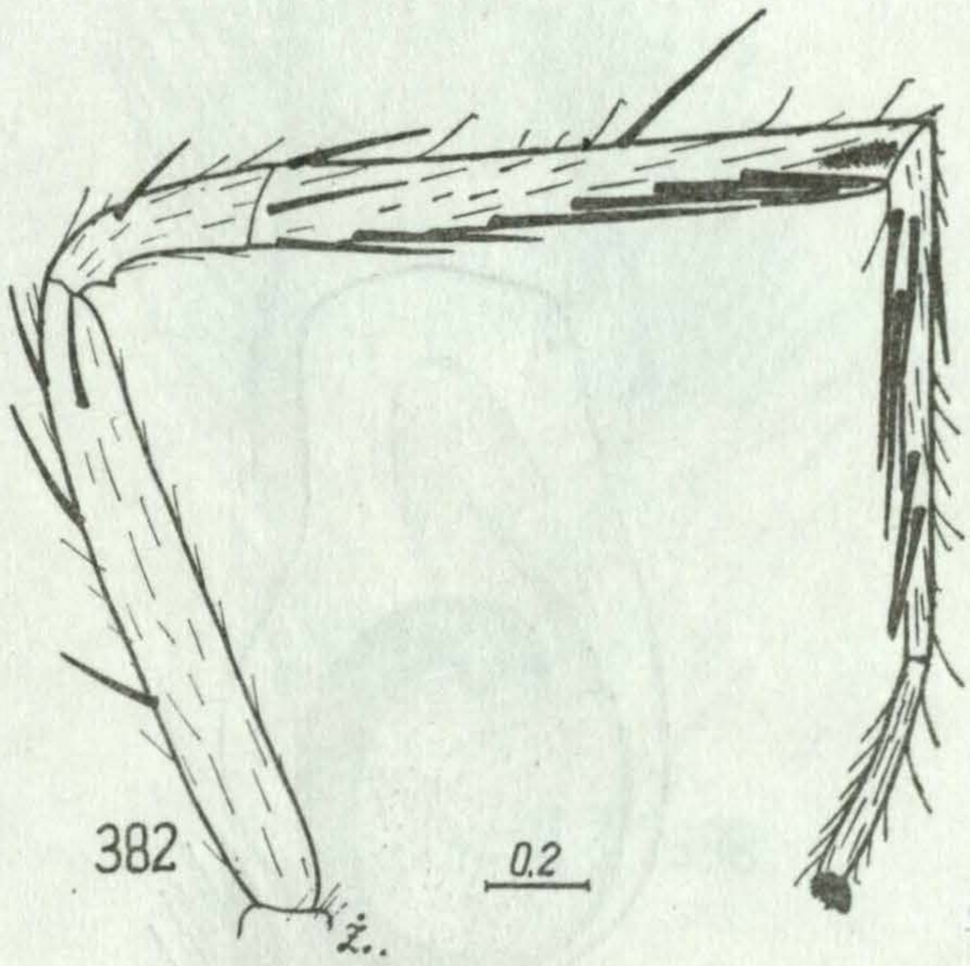


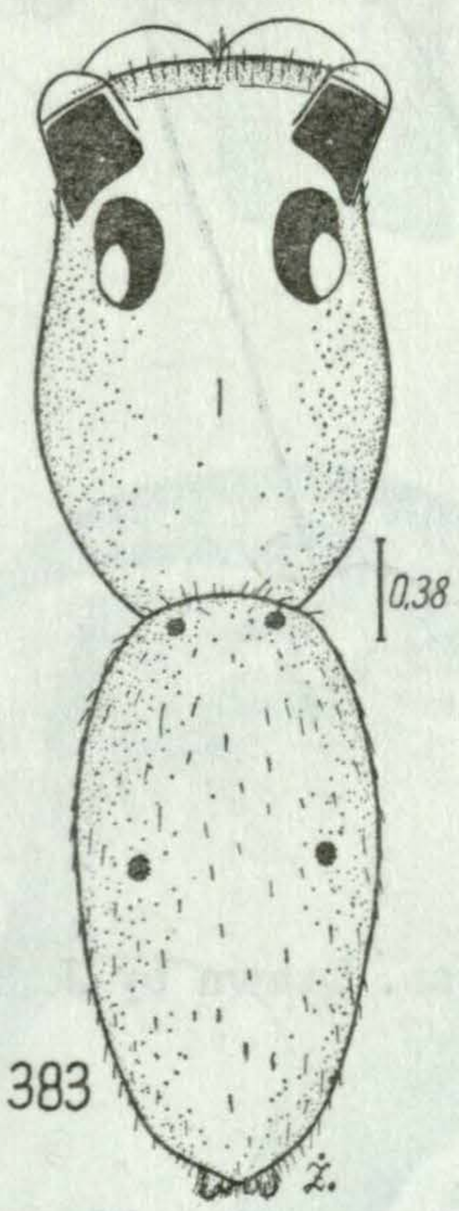


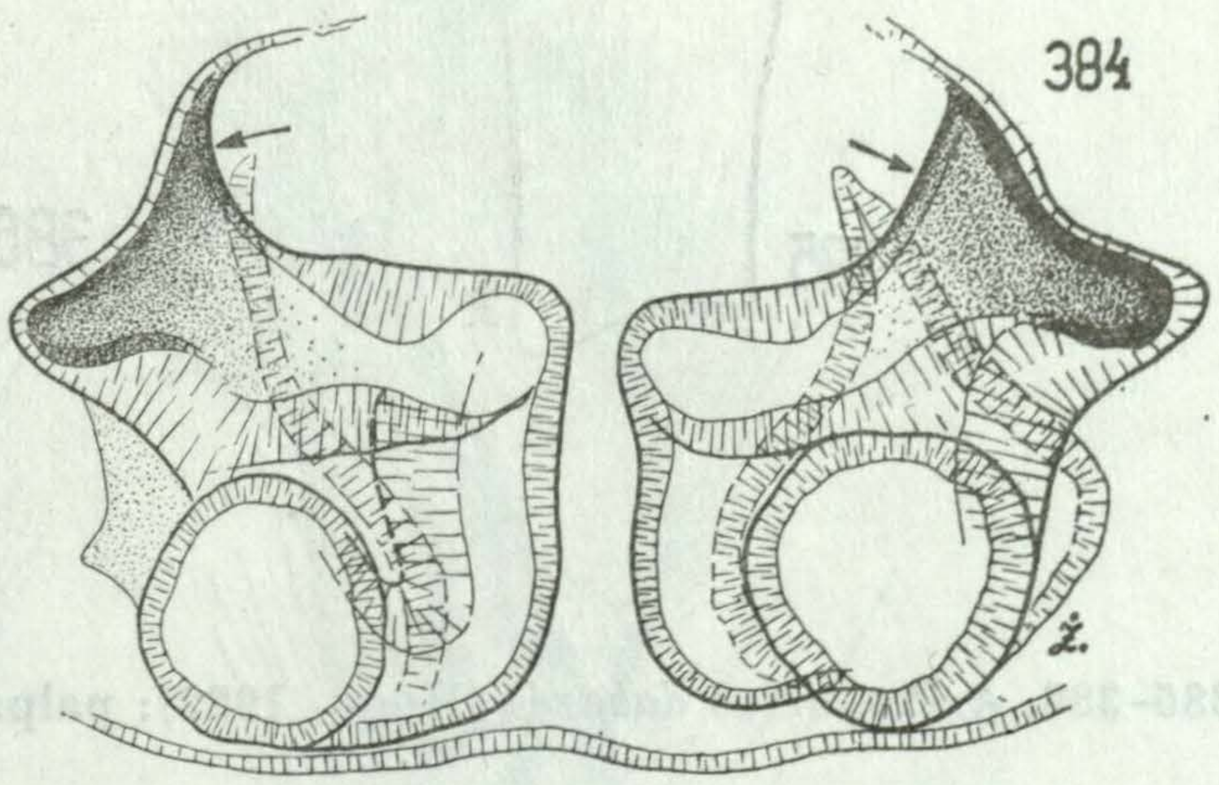


Figs. 378–380. ♀ *Nungia epigynalis* sp. n., holotype: epigyne (378), its internal structures (379) and abdominal pattern (380).

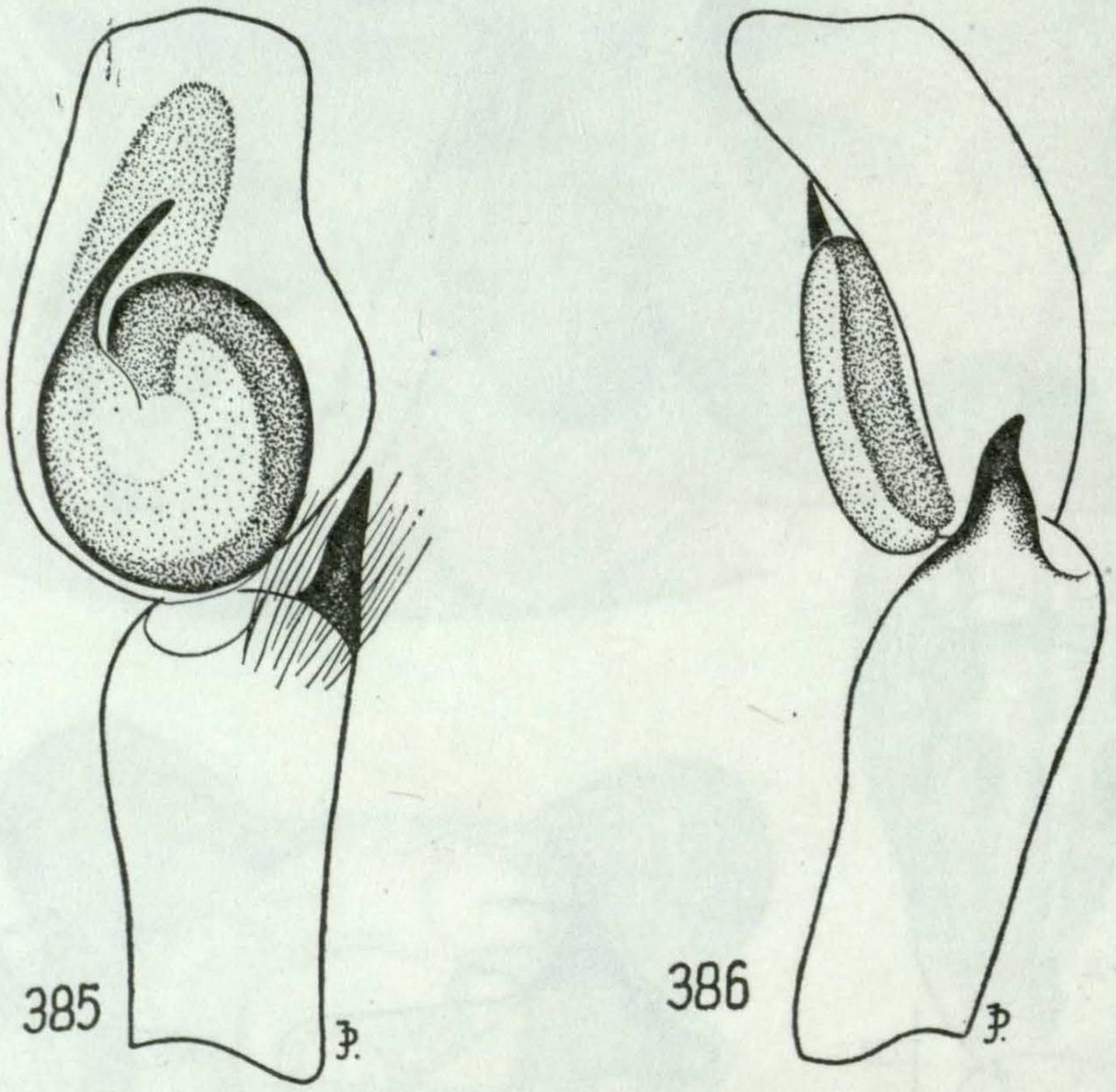




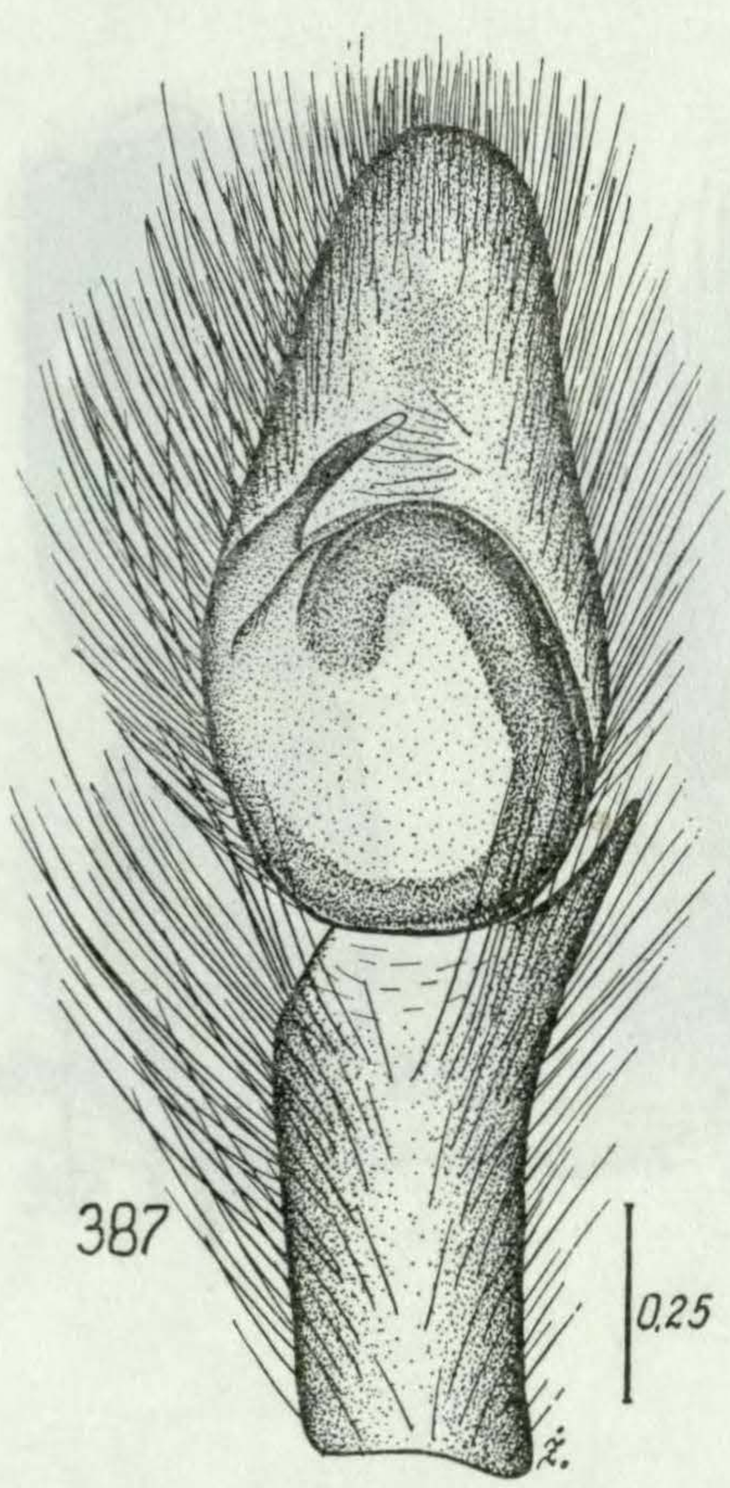


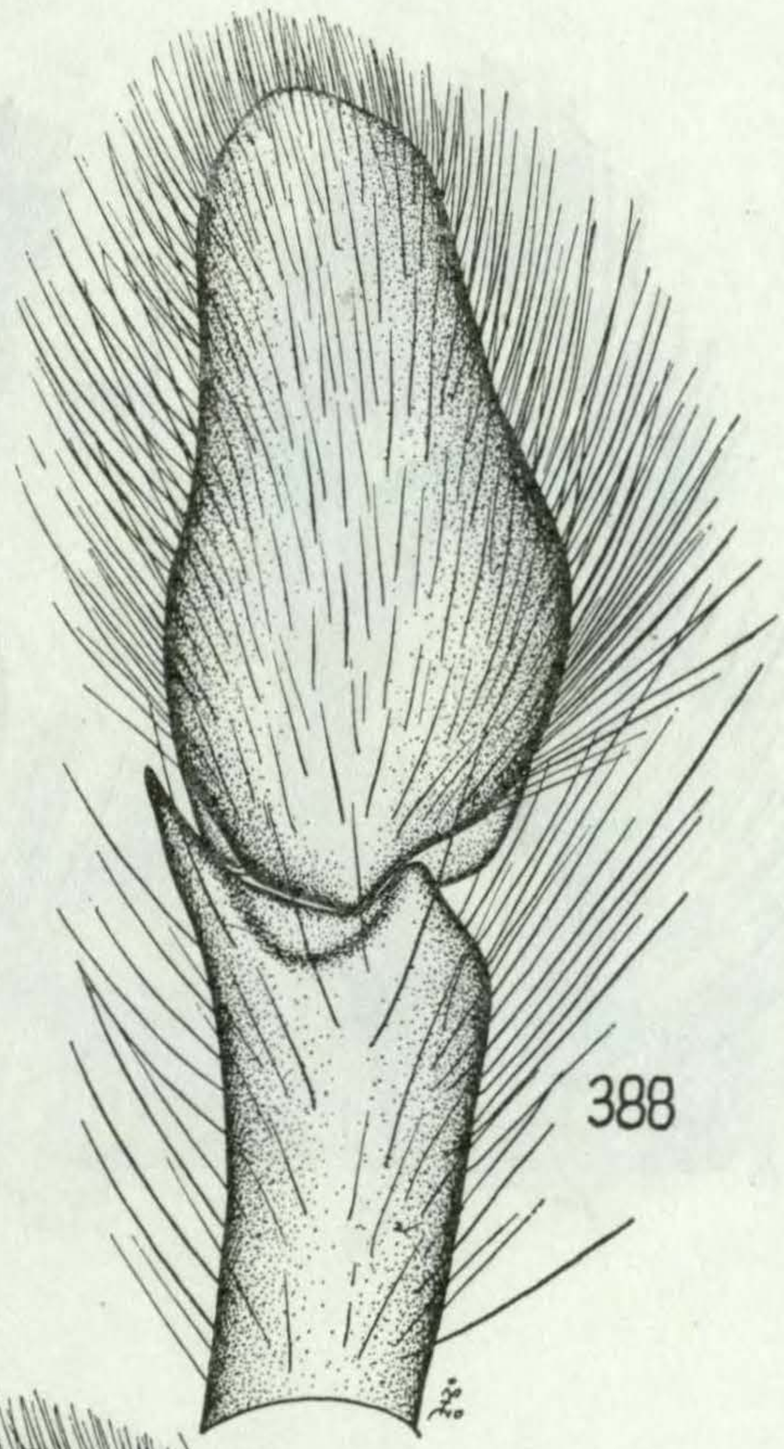


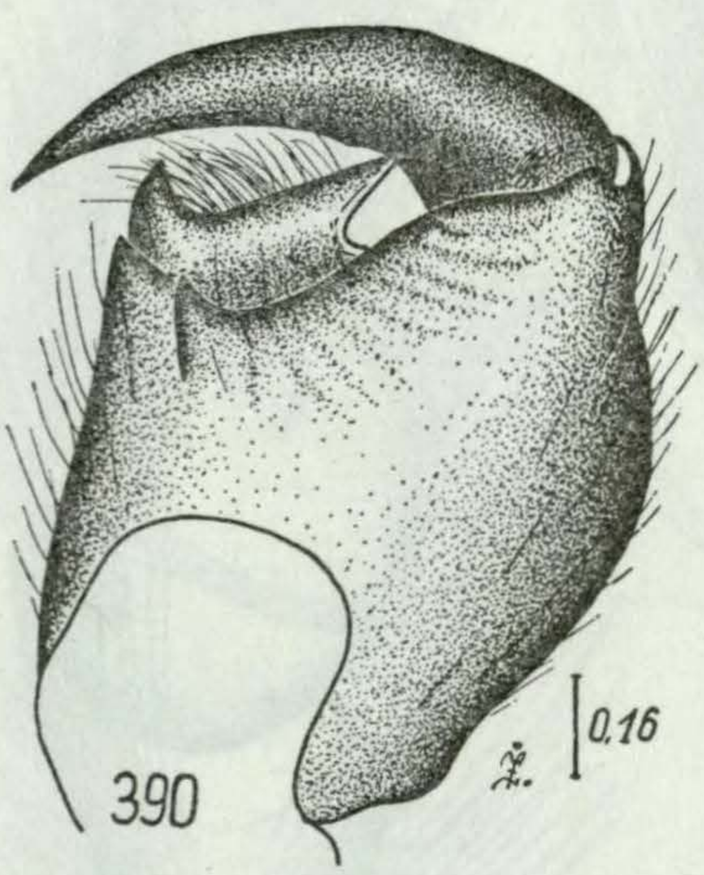
Figs. 381–384. ♀ *Onomastus simoni* sp. n., holotype: epigyne (381), its internal structures (384), leg I (382) and general appearance (383).

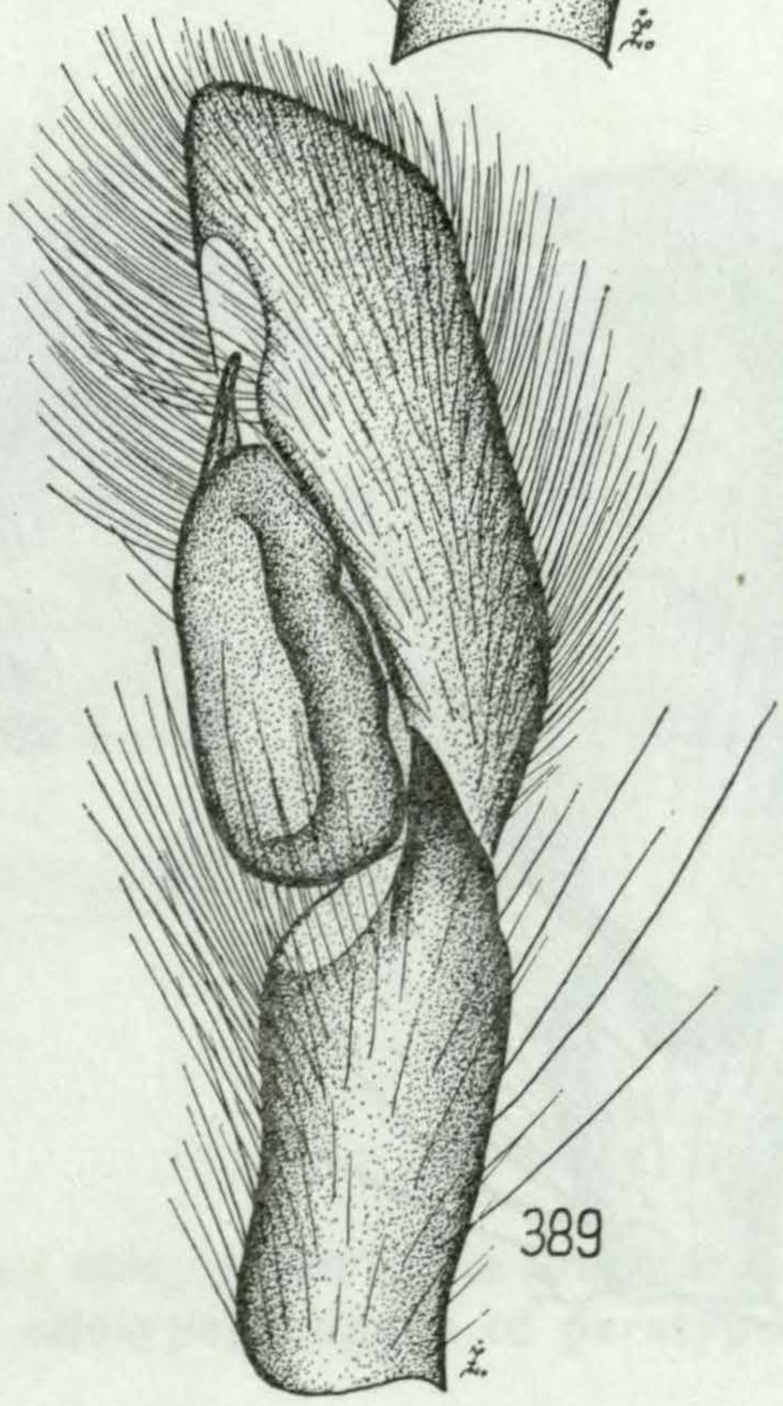


Figs. 385–386. ♂ *Pancorius dabanis* (Hogg, 1922): palpal organ. Drawn by J. Prószyński.

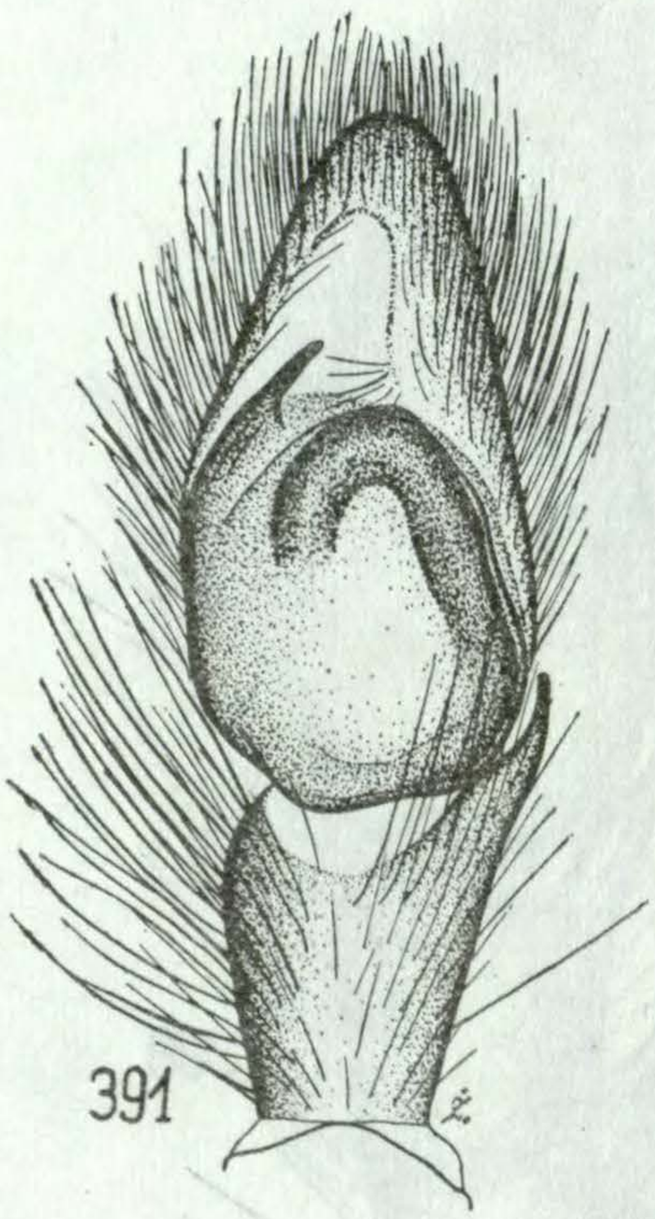


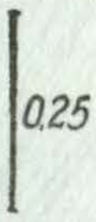


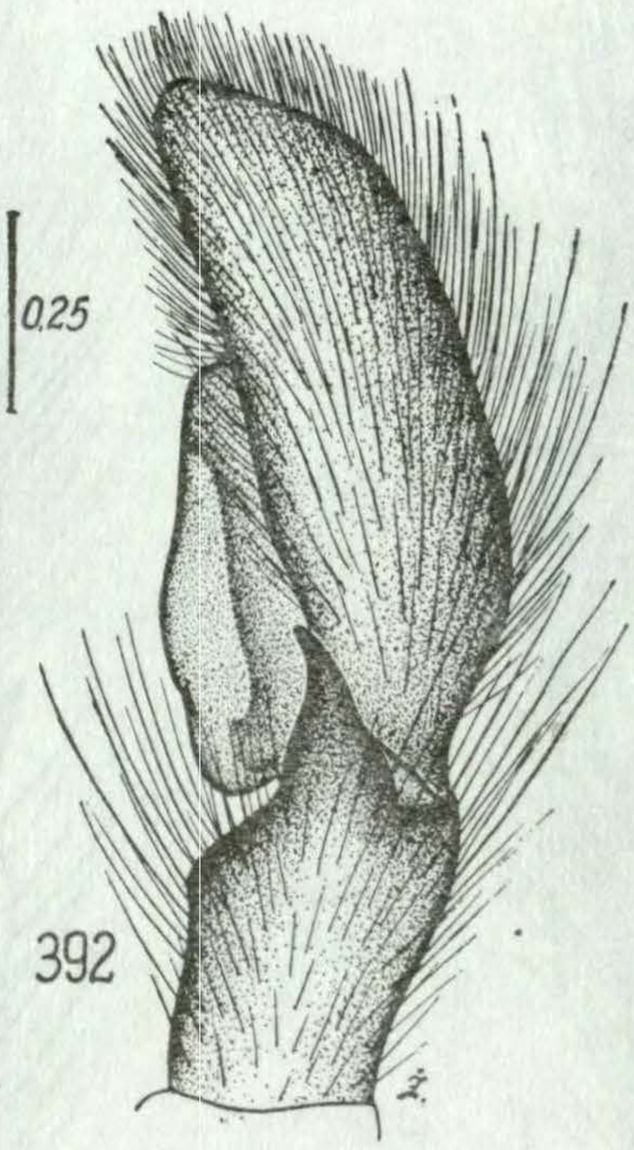


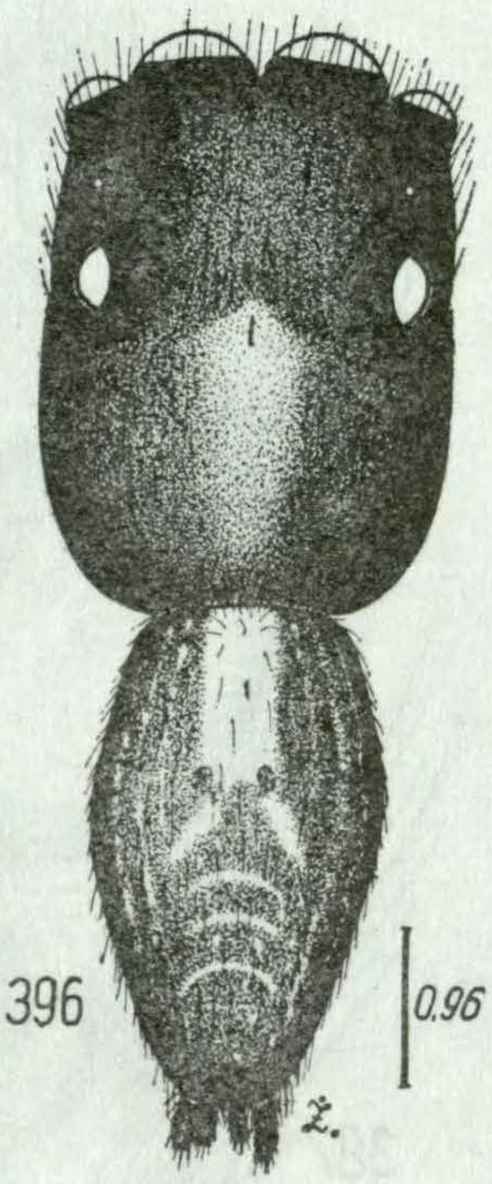


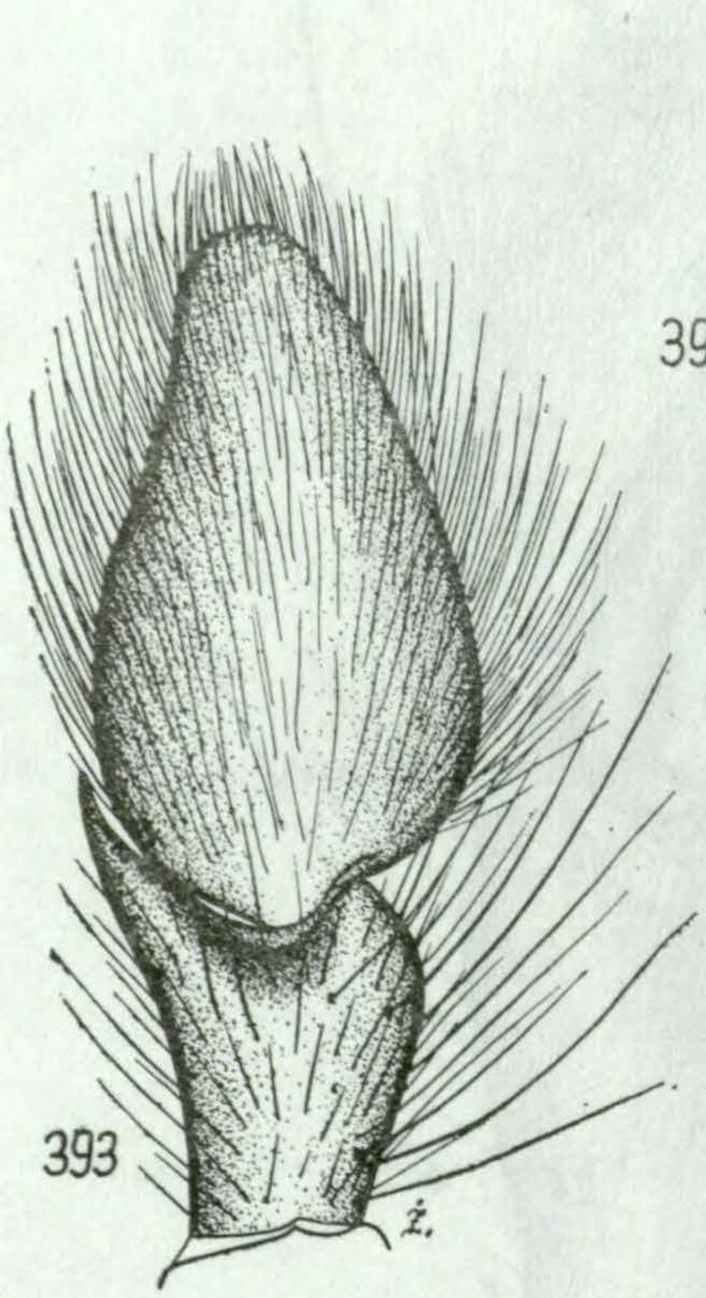
Figs. 387–390. ♂ *Pancorius magnus* sp. n., holotype: palpal organ (387–389), cheliceral dentition (390).

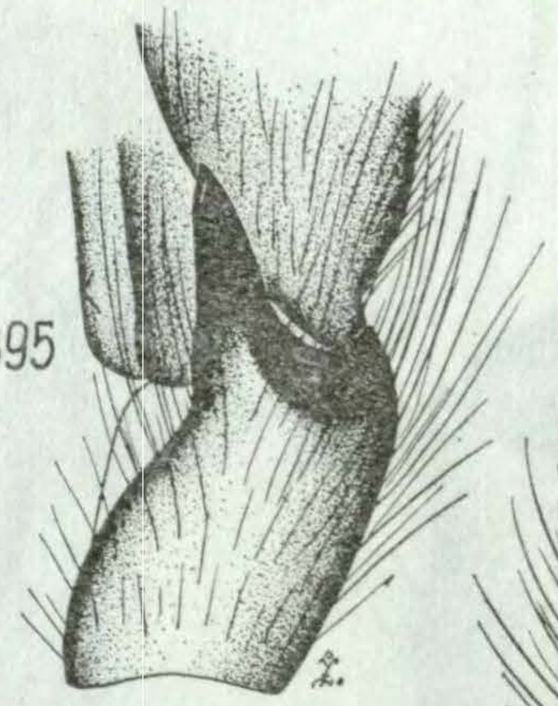


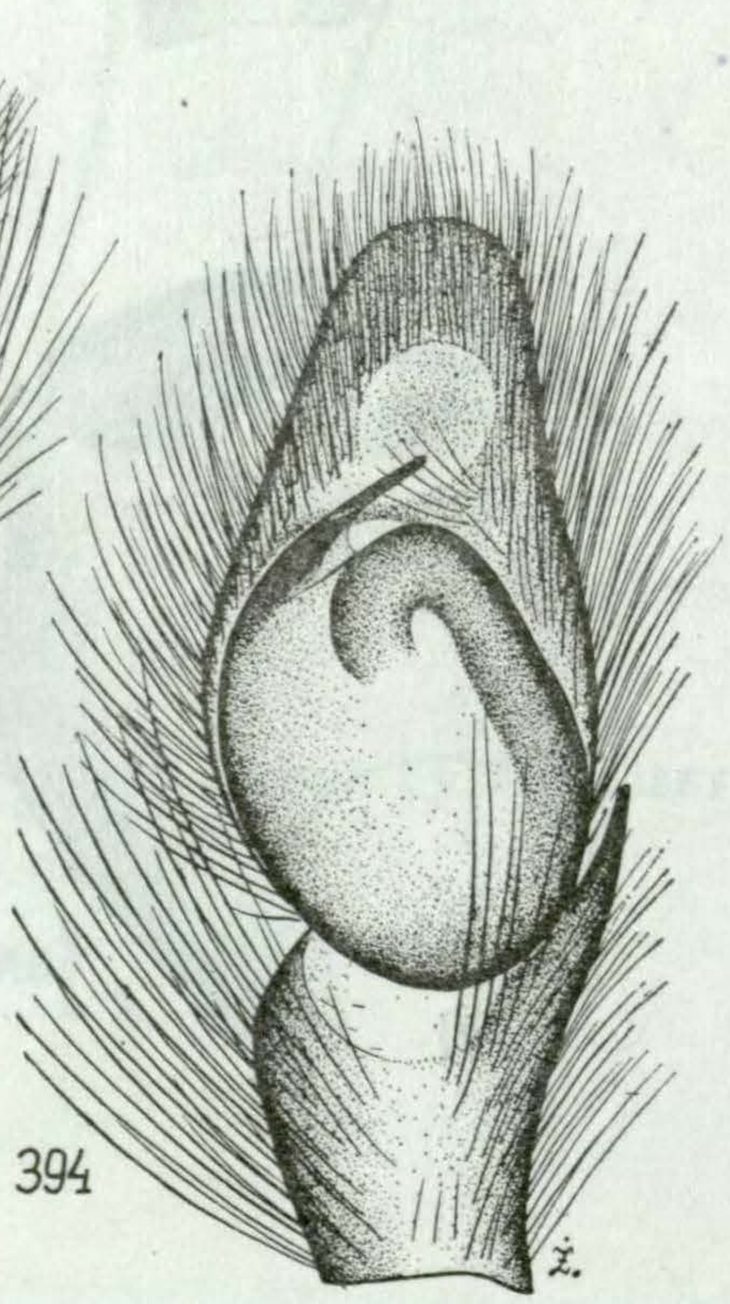




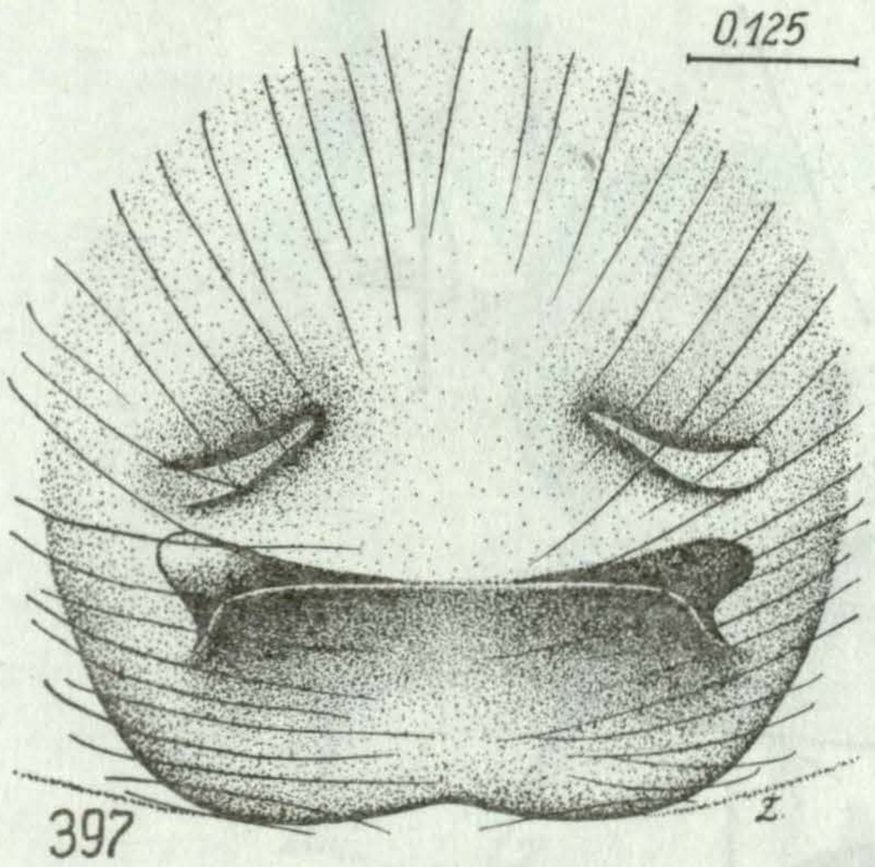


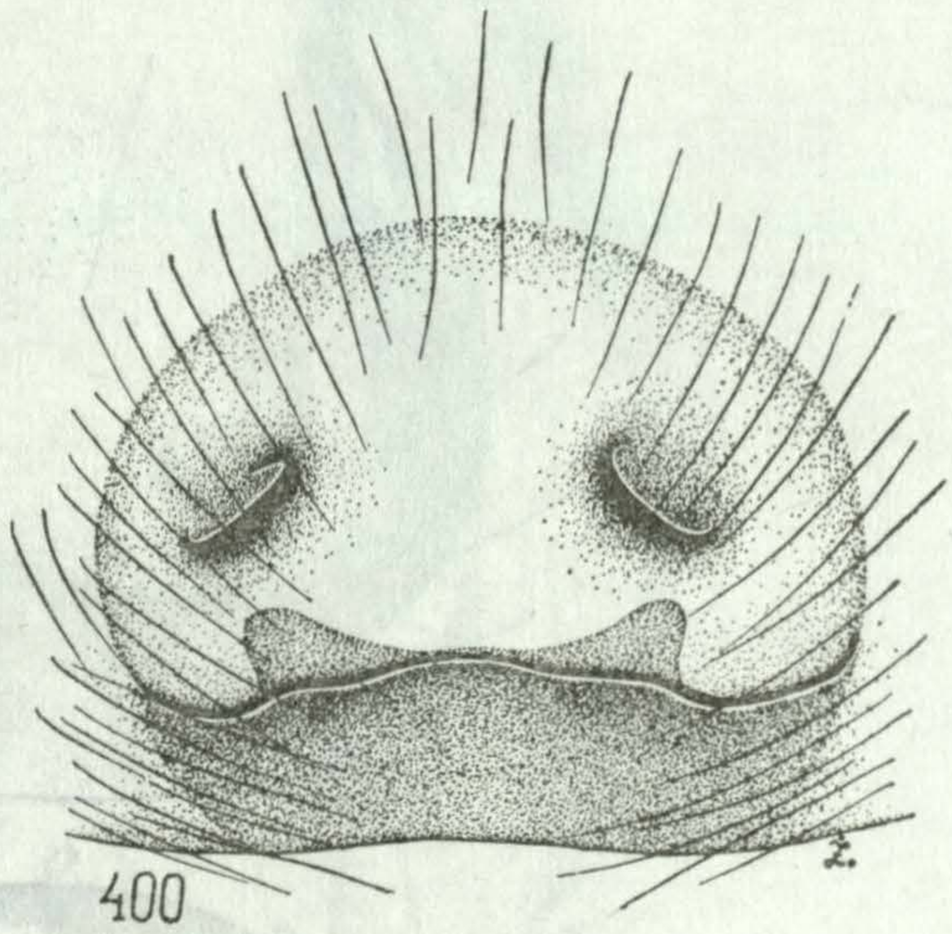


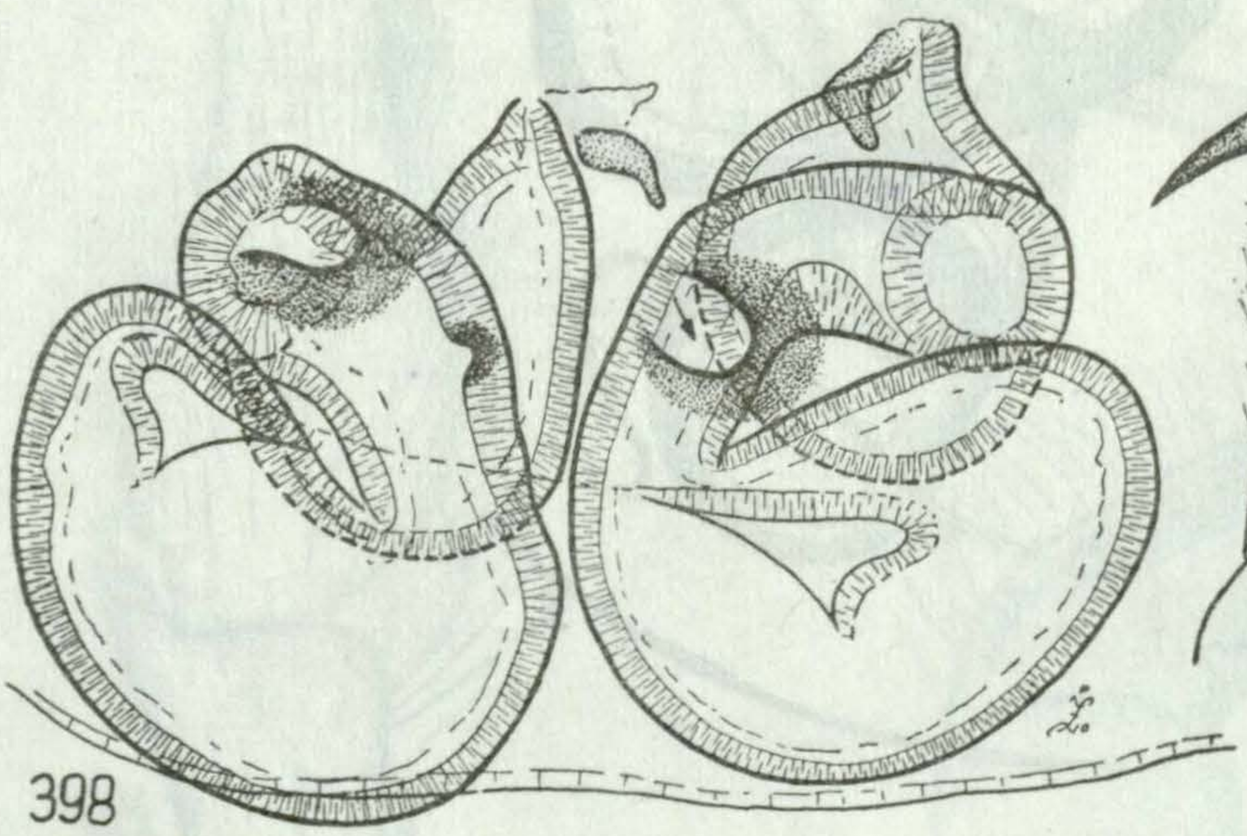


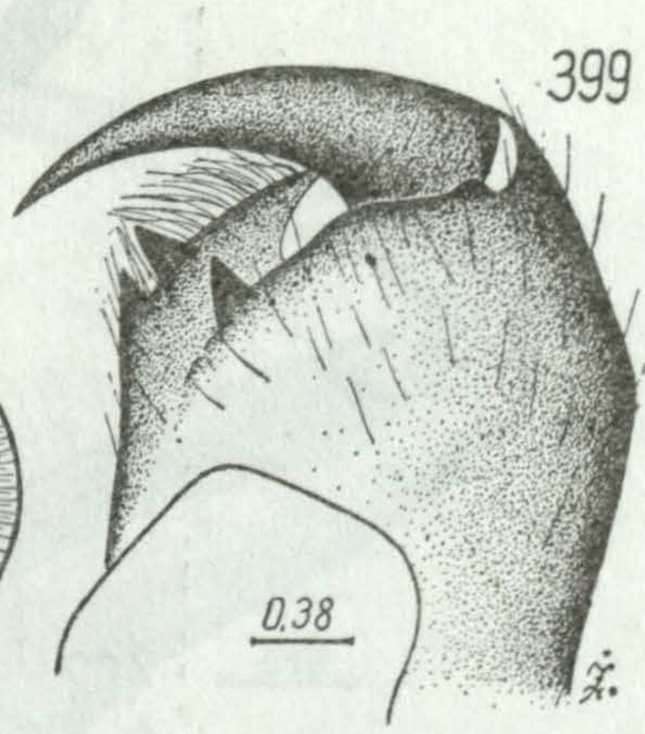


Figs. 391–396. ♂ *Pancorius magnus* sp. n., paratypes: palpal organs (391–395) and general appearance (396).

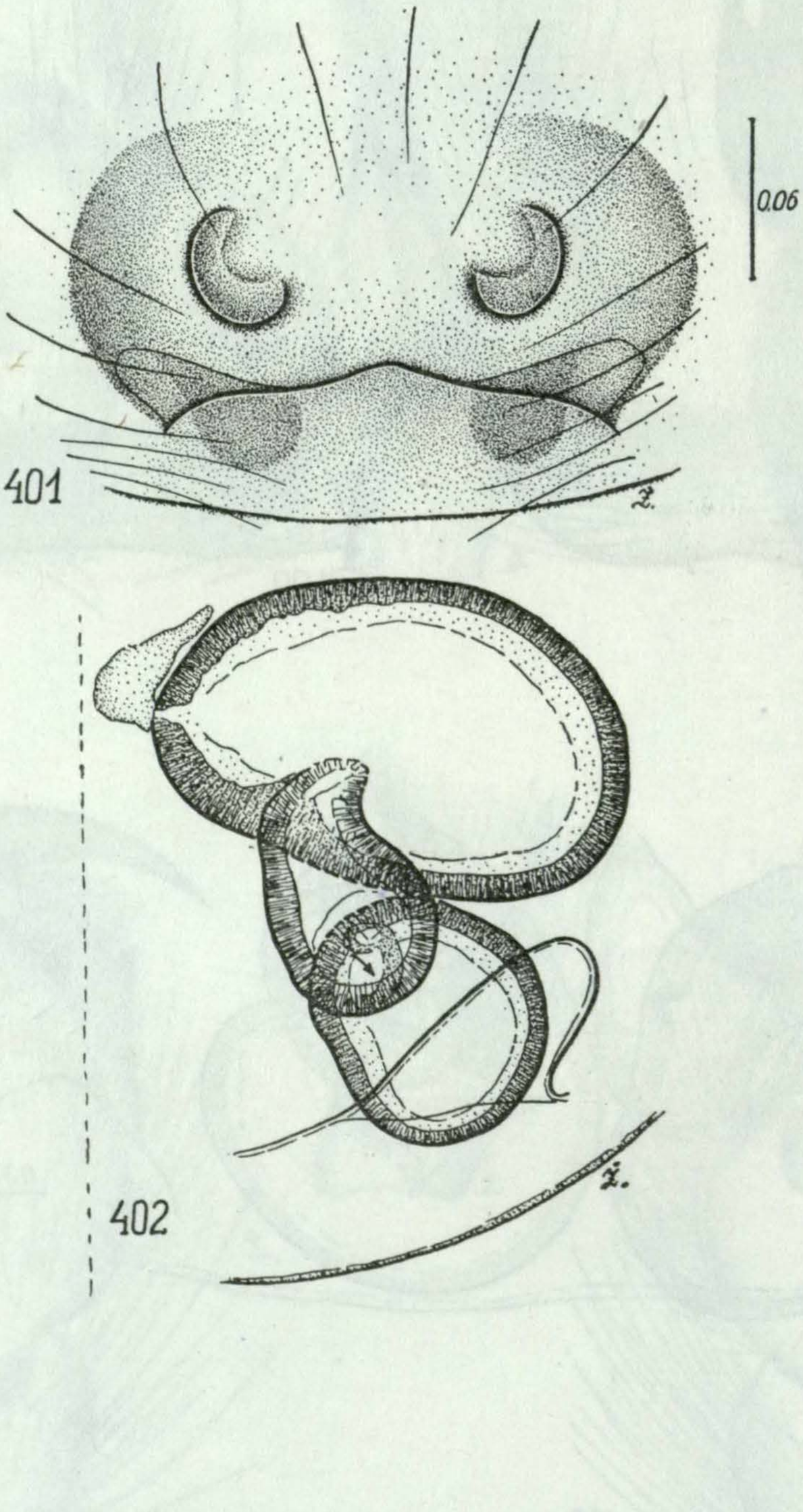




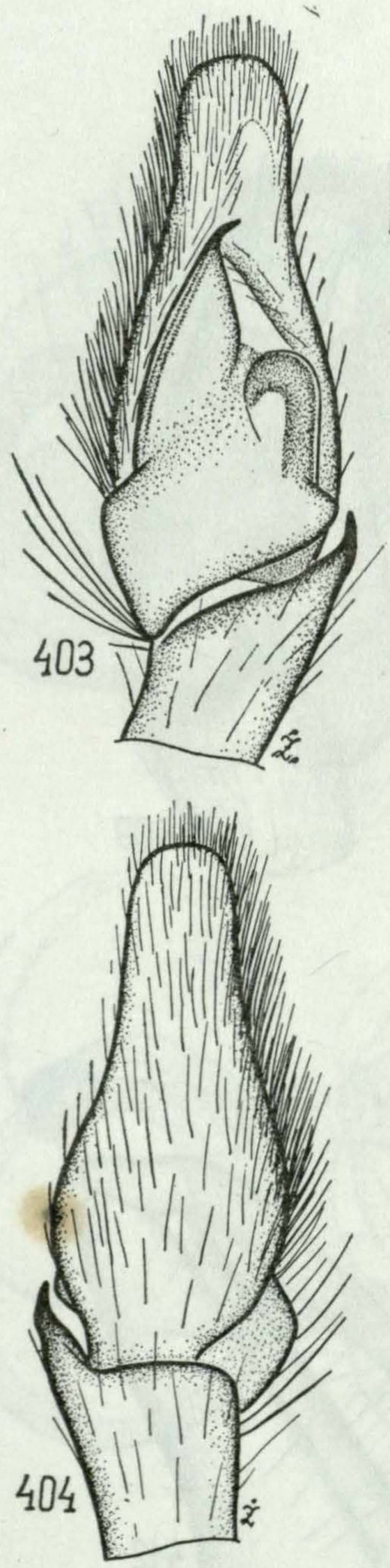


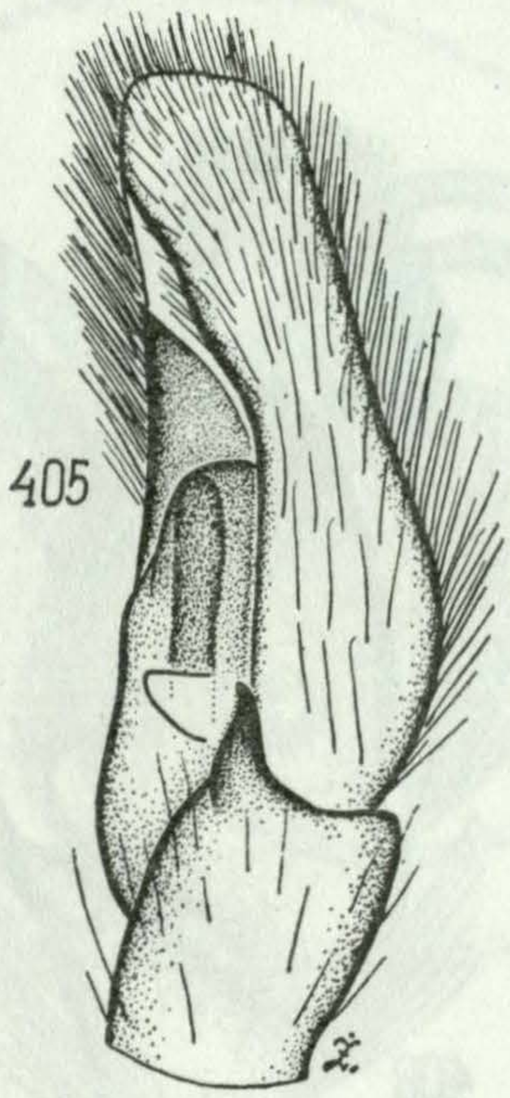


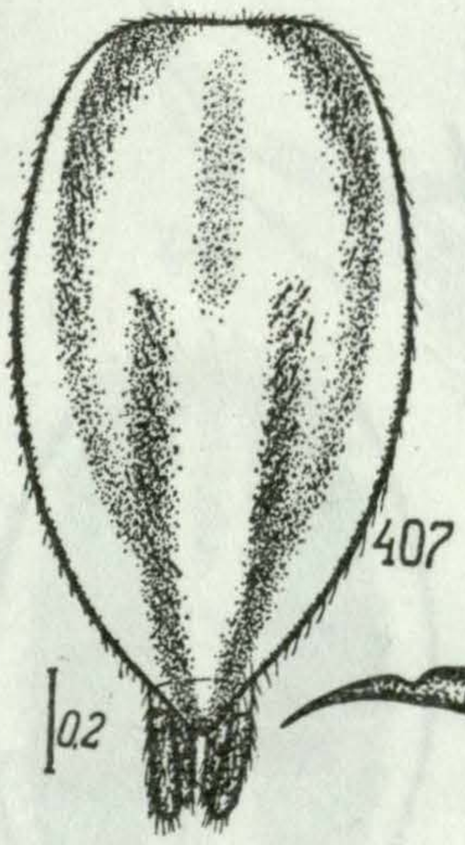
Figs. 397–400. ♀ *Pancorius magnus* sp. n.: epigyne (397), its internal structures 398) and cheliceral dentition (399) in allotype; epigyne of paratype (400).

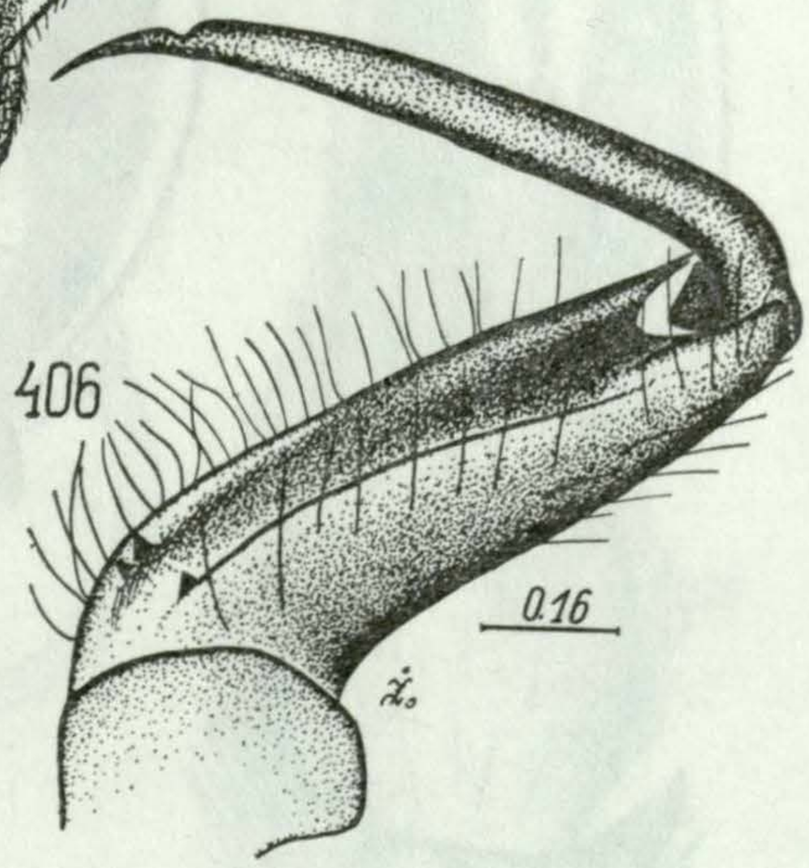


Figs. 401–402. ♀ *Pancorius minutus* sp. n., holotype: epigyne (401) and its internal structures (402).

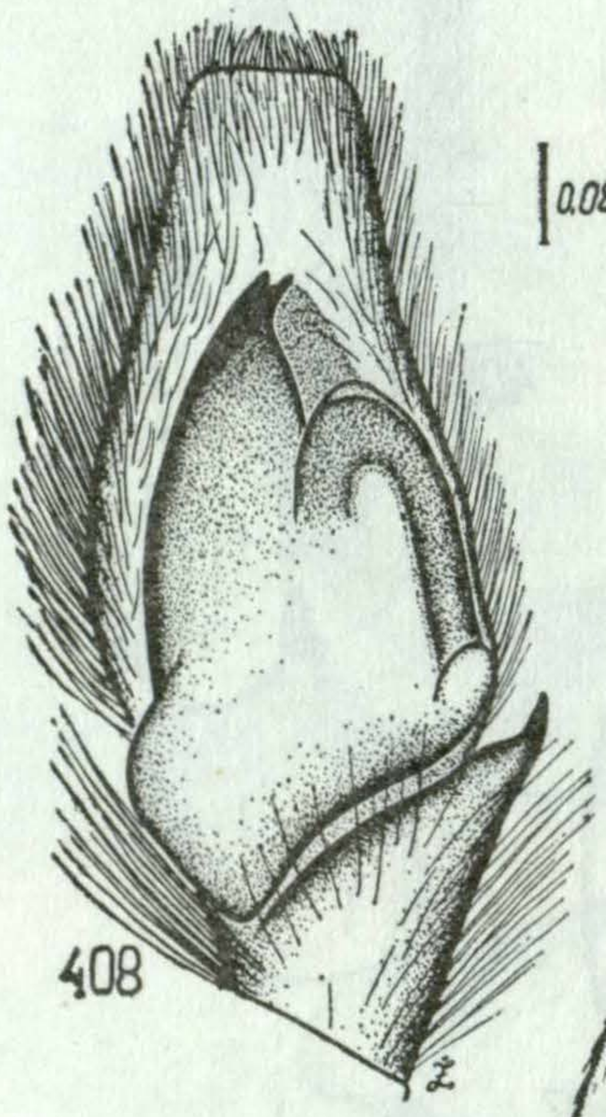




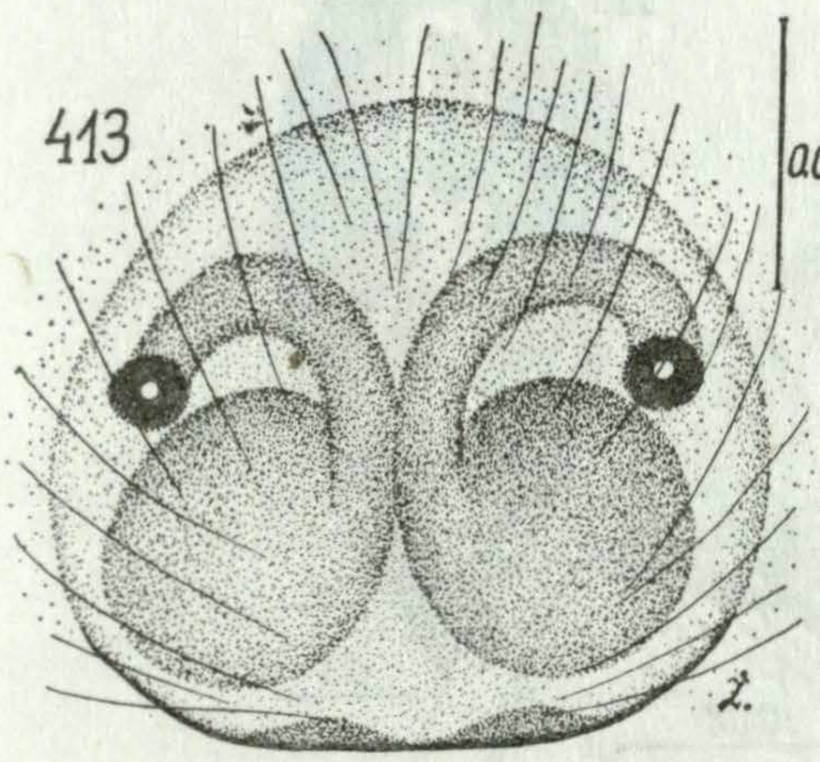


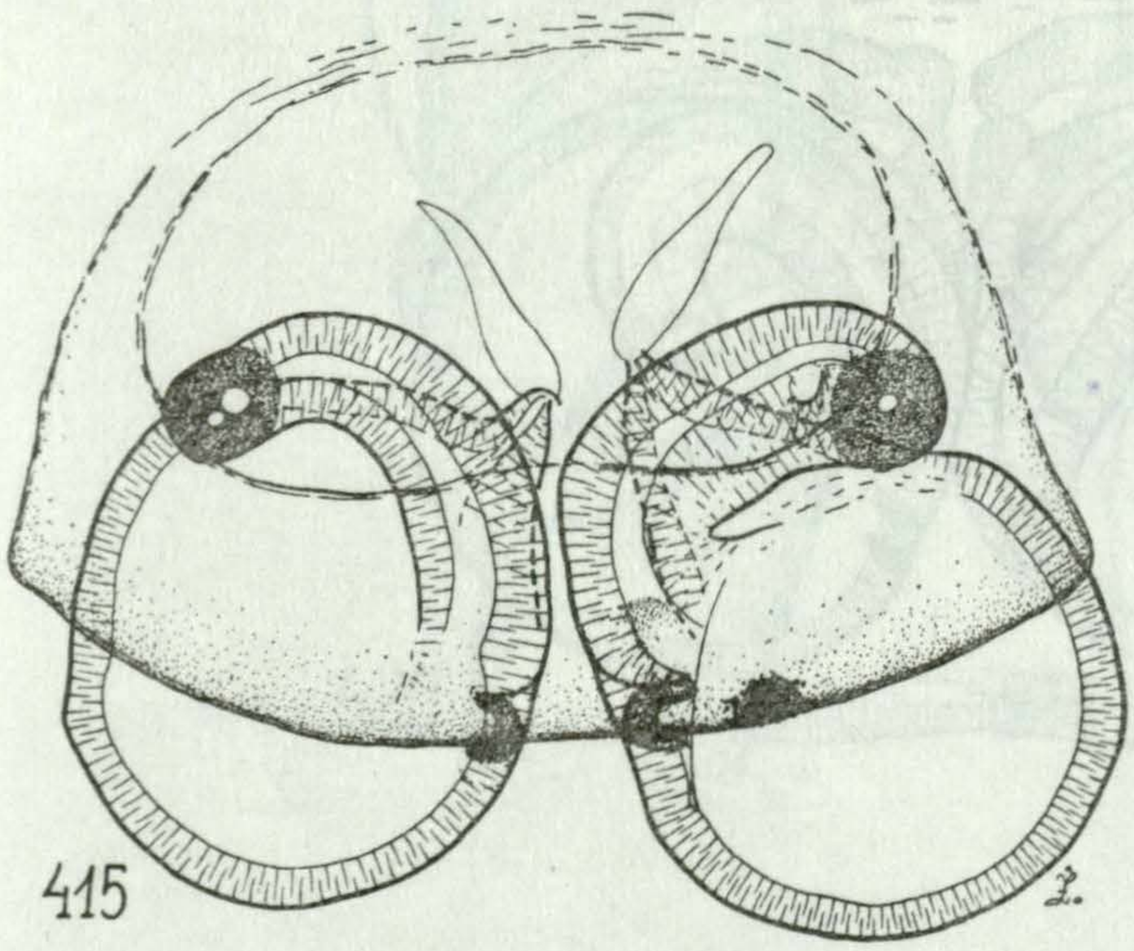


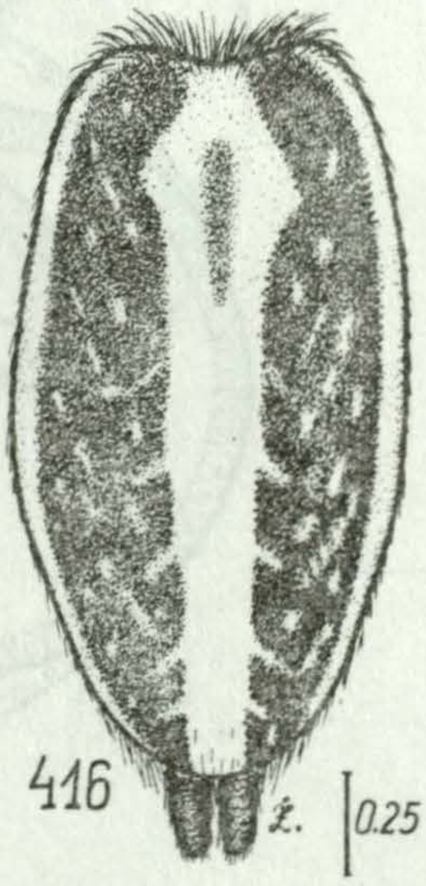
Figs. 403–407. ♂ *Phintella bifurcilinea* (Bösenberg et Strand, 1906): palpal organ (403–405), cheliceral dentition (406) and abdominal pattern (407).



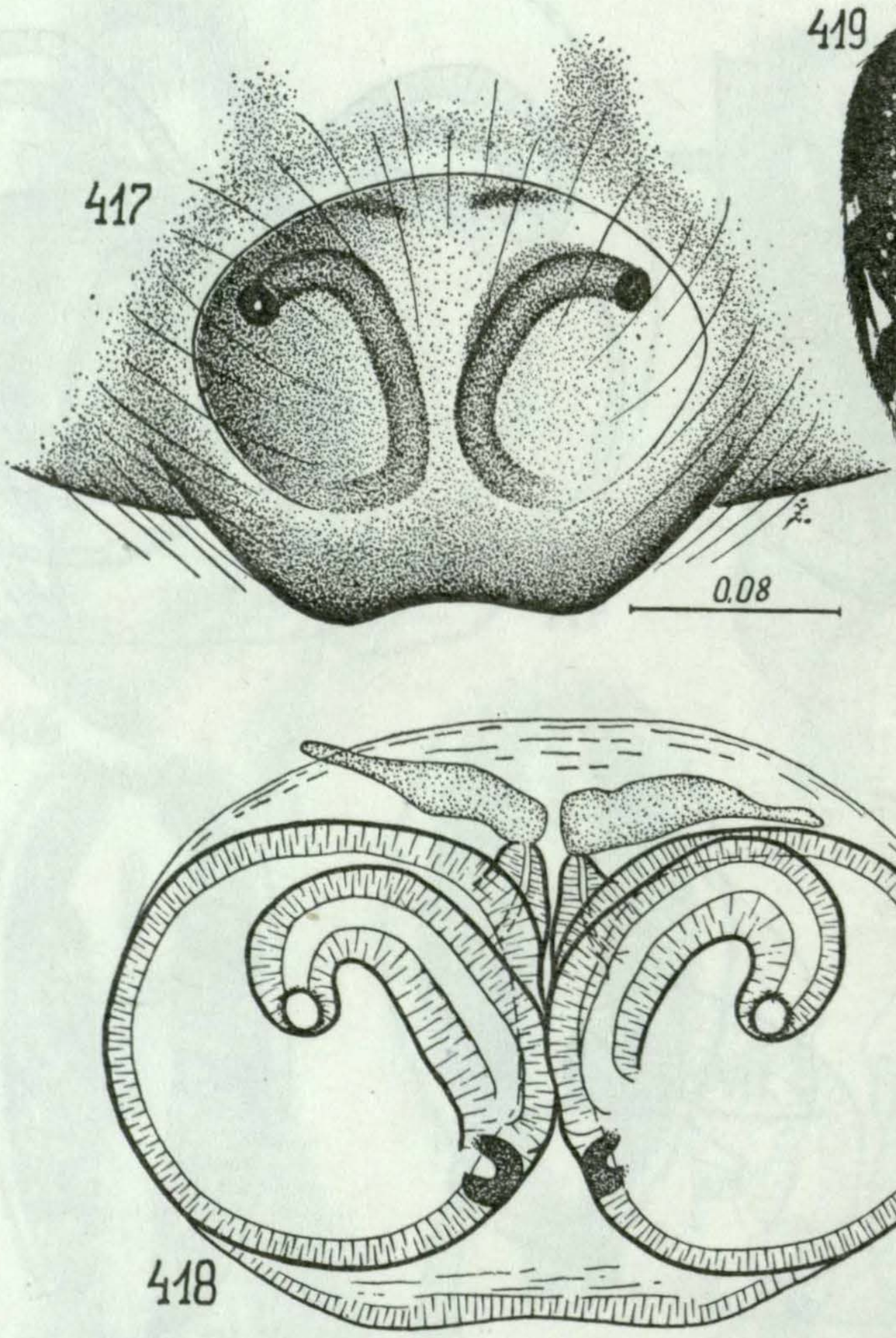
Figs. 408–412. ♂ *Phintella debilis* (THORELL, 1892): palpal organ (408–410), abdominal pattern (411) and cheliceral dentition (412).



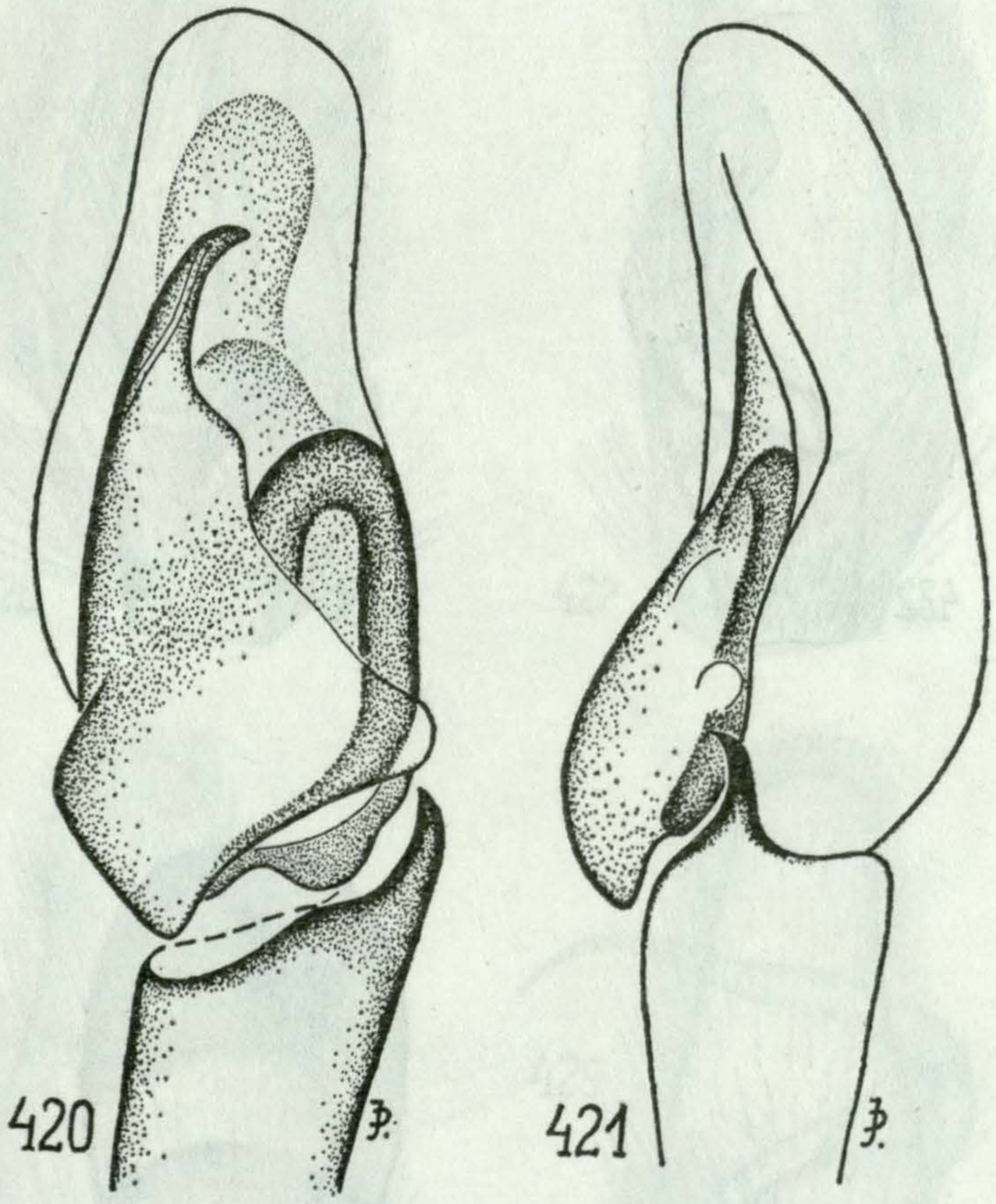




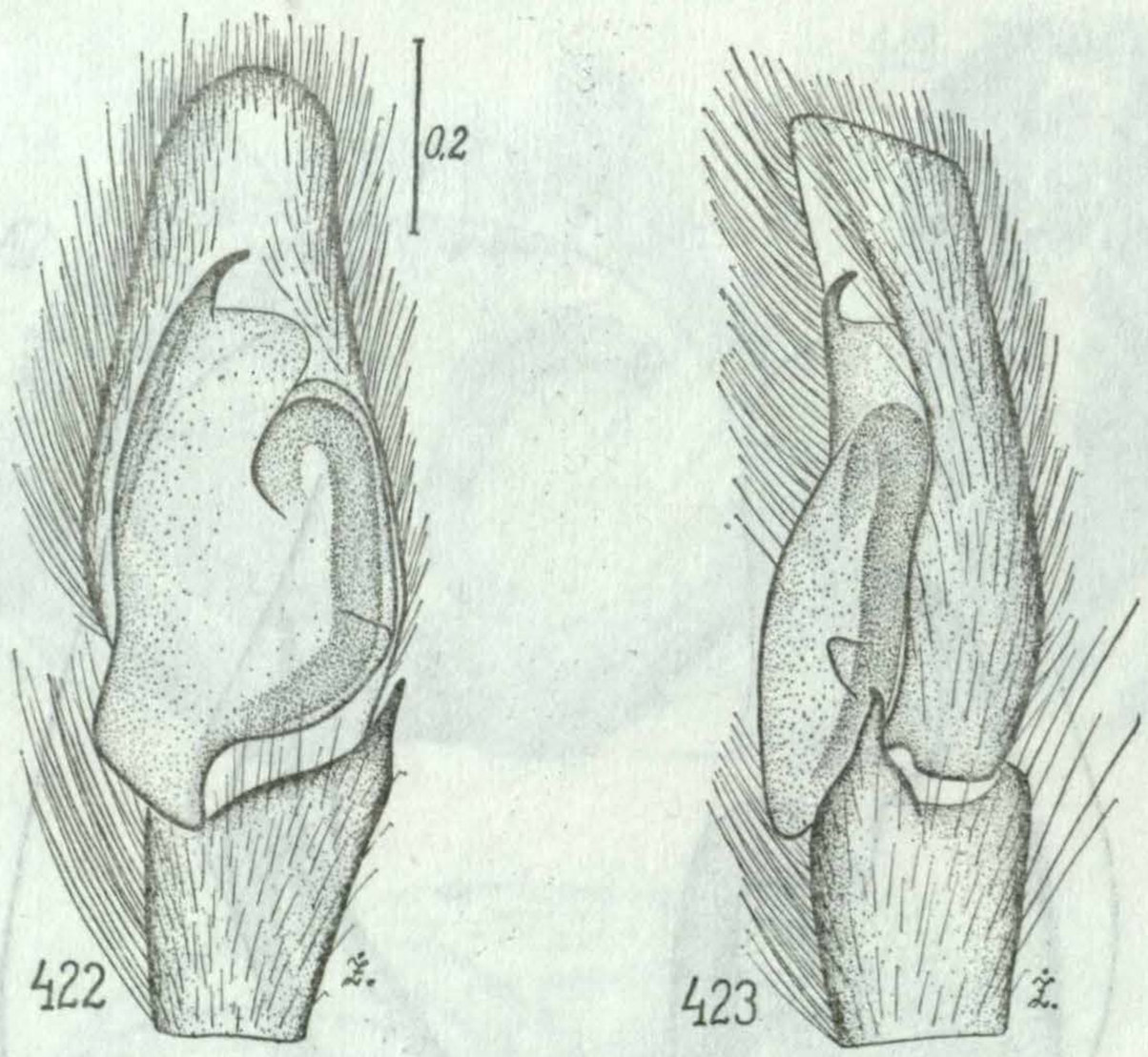
Figs. 413–416. ♀ *Phintella debilis* (THORELL, 1892): epigyne (413), its internal structures (414, 415) and abdominal pattern (416).

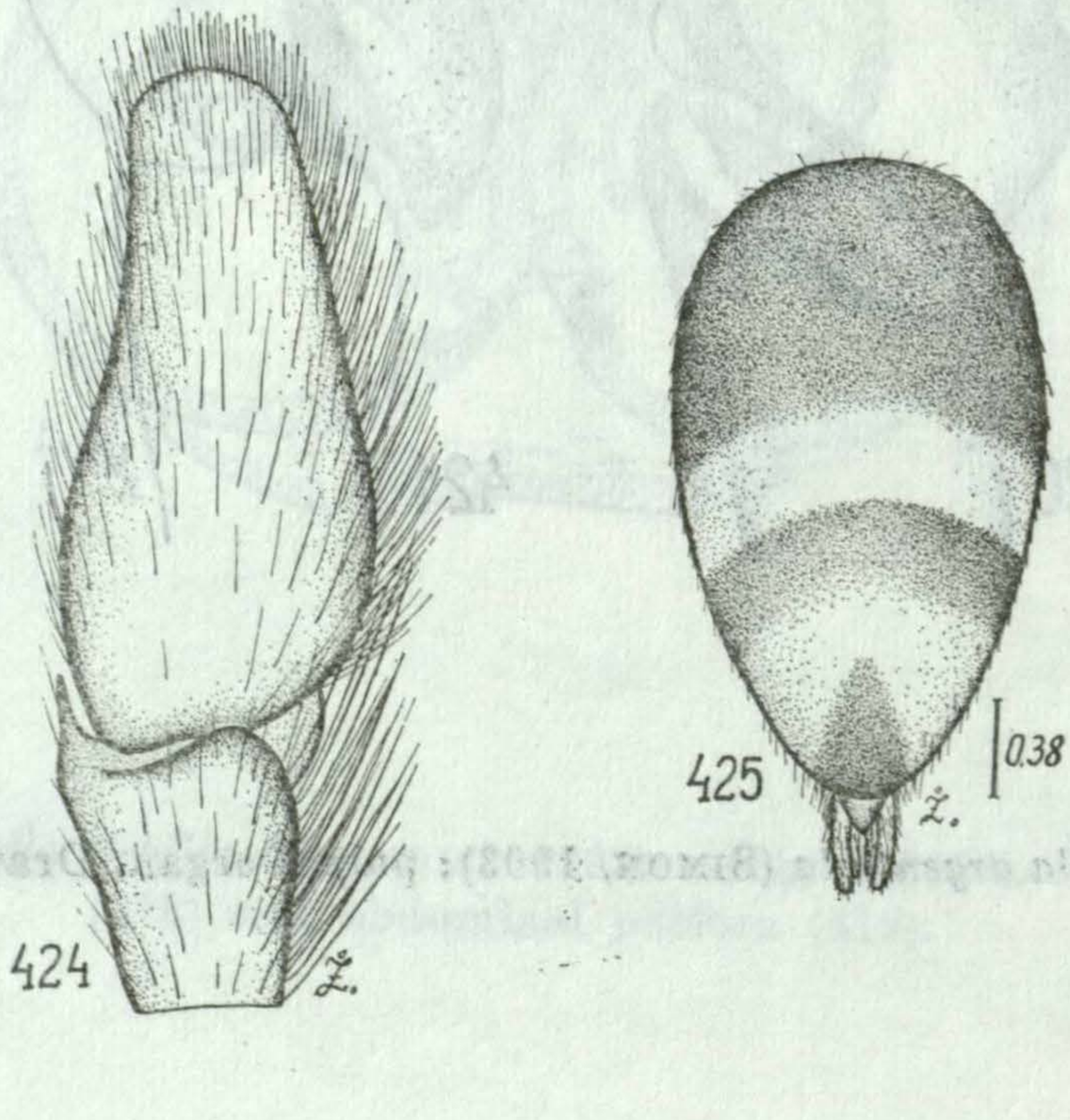


Figs. 417–419. ♀ *Phintella debilis* (THORELL, 1892): epigyne (417), its internal structures (418) and abdominal pattern (419).

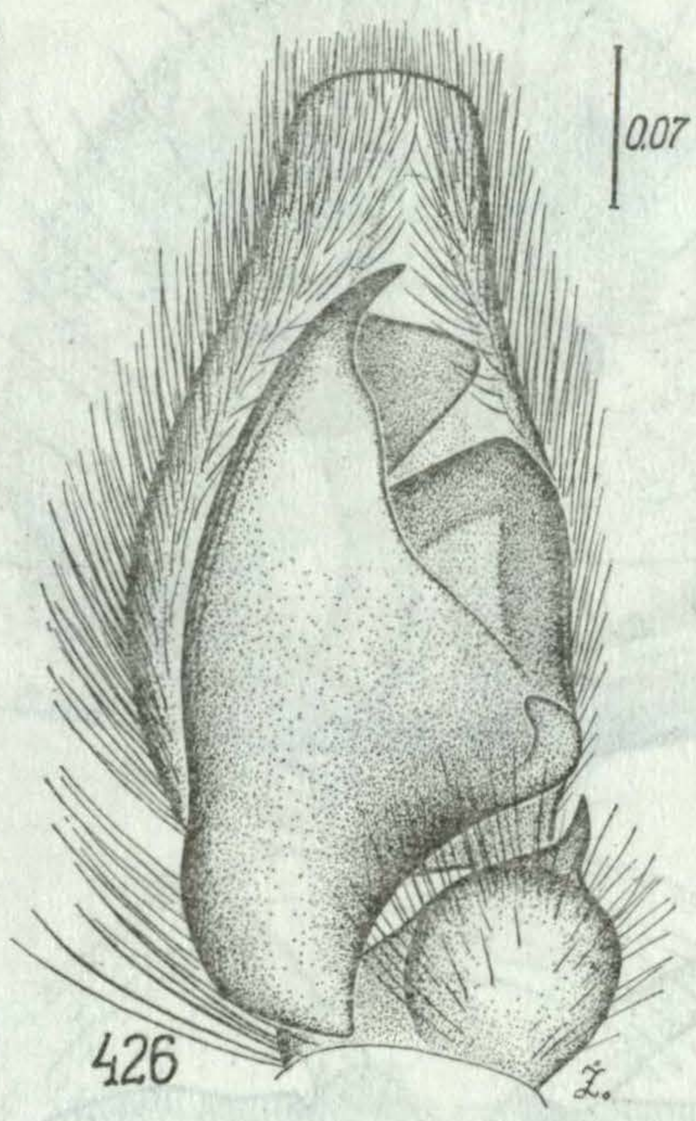


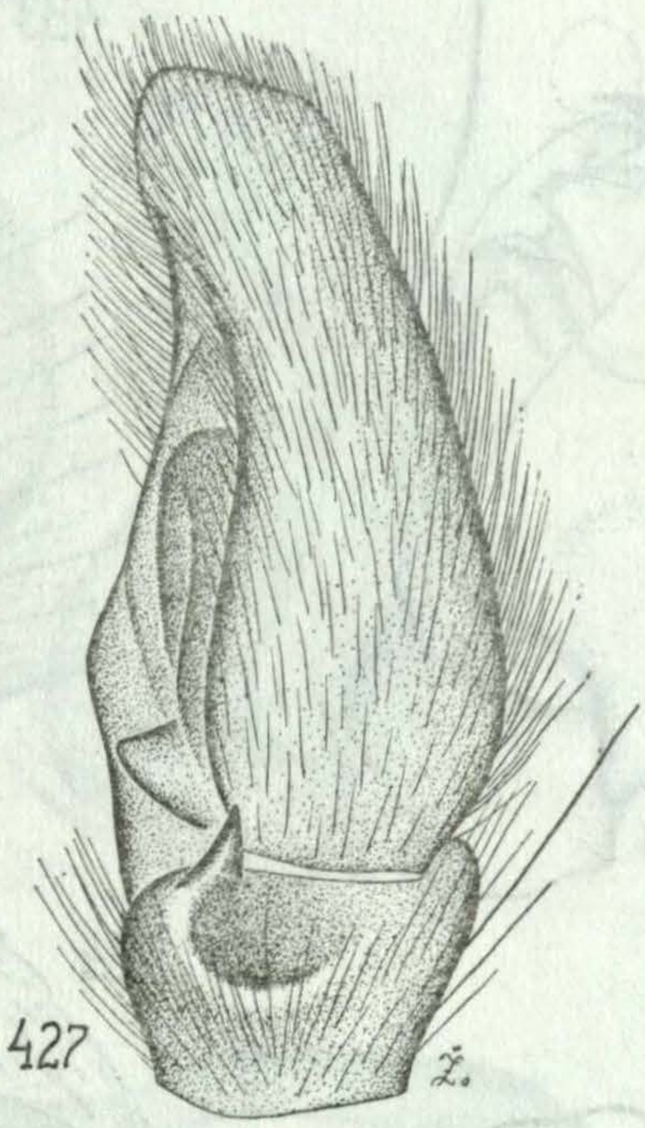
Figs. 420–421. ♂ *Phintella argenteola* (SIMON, 1903): palpal organ. Drawn by J. PRÓSZYŃSKI.

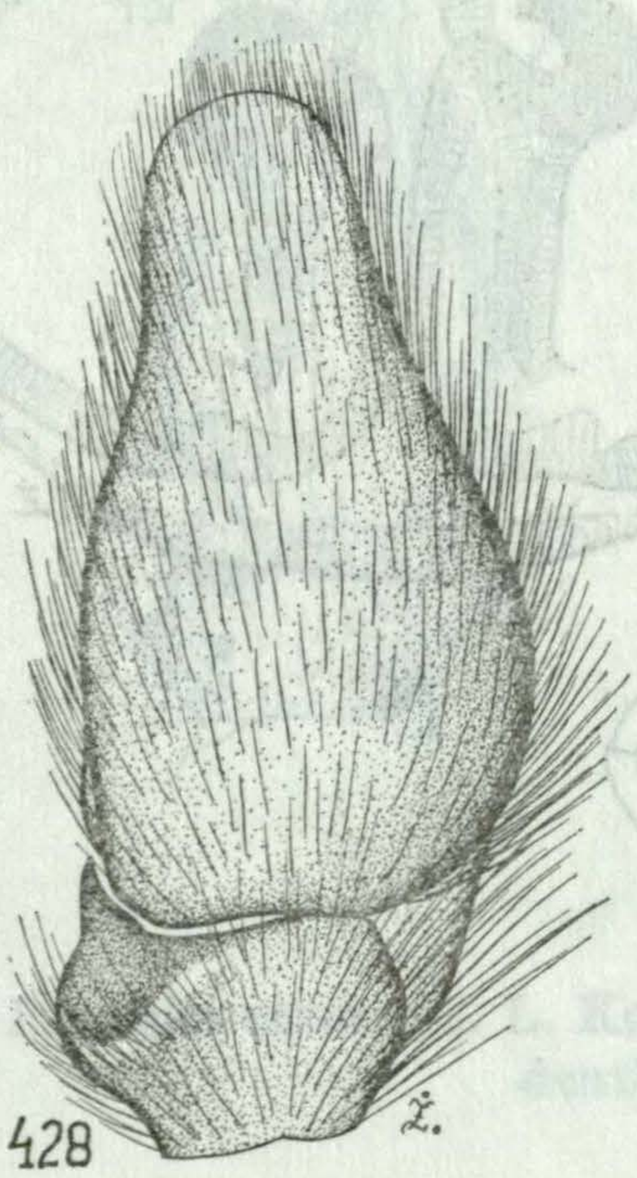


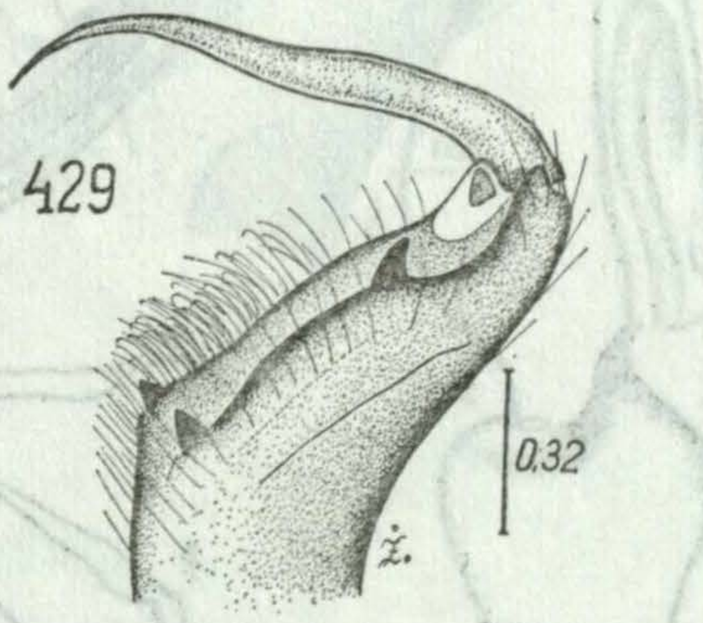


Figs. 422–425. ♂ *Phintella aequipeiformis* sp. n., holotype: palpal organ (422–424) and abdominal pattern (425).

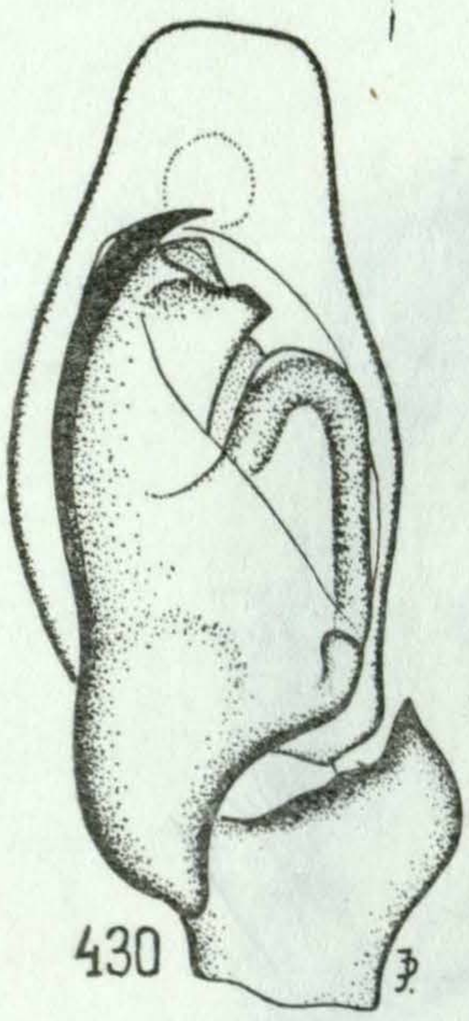


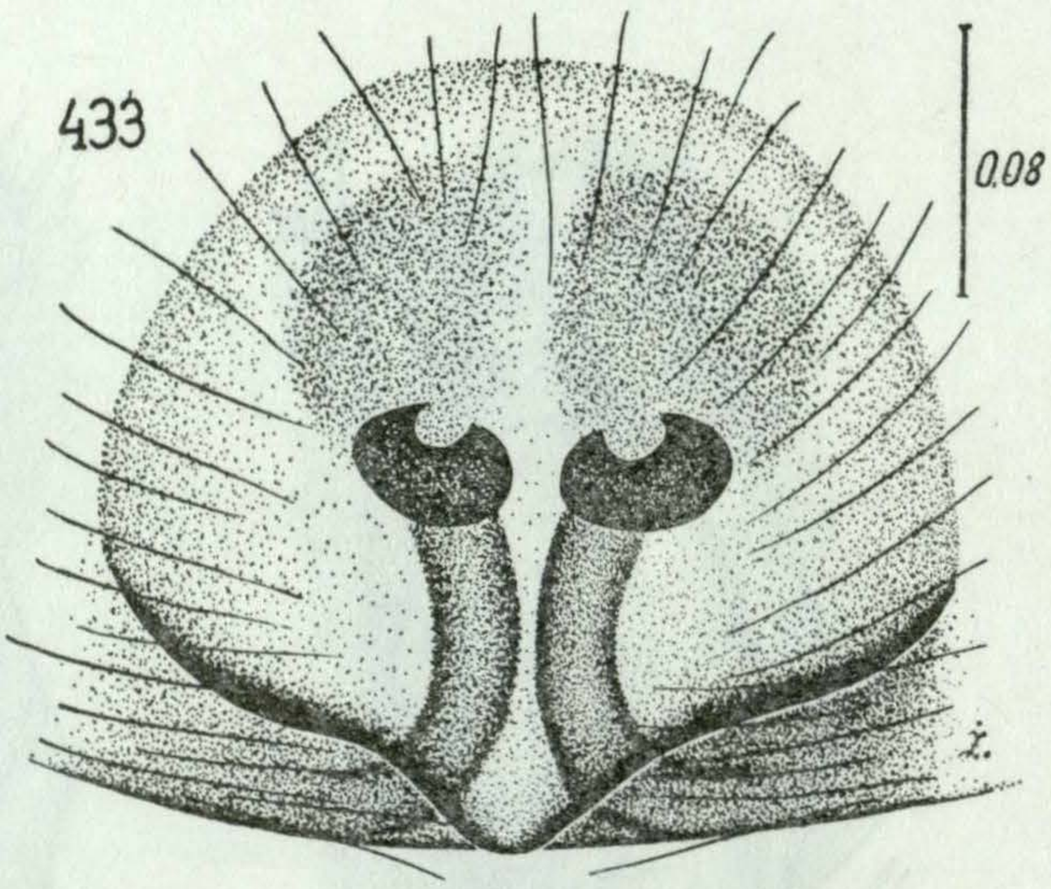


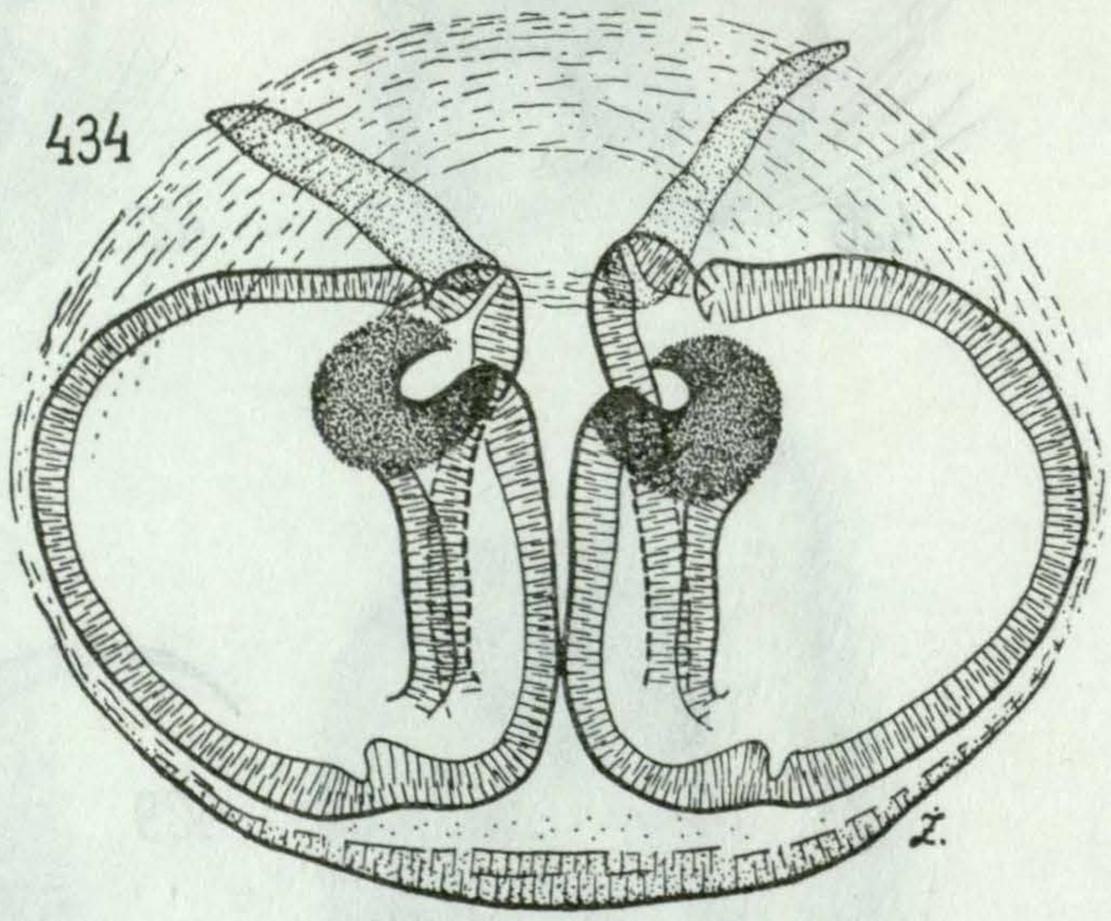


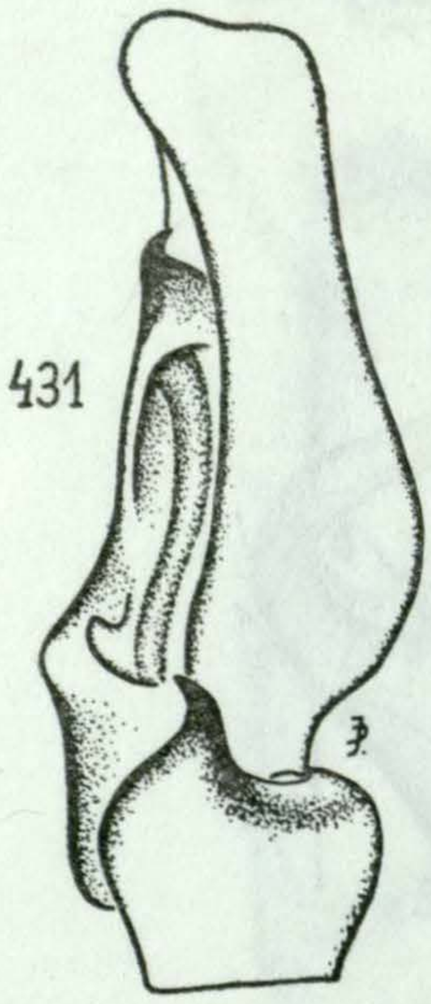


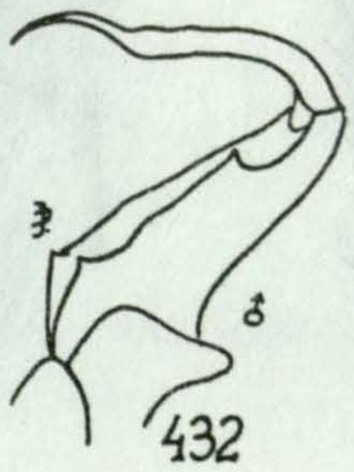
Figs. 426–429. ♂ *Phintella suavis* (Simon, 1885): palpal organ (426–428) and cheliceral dentition (429).



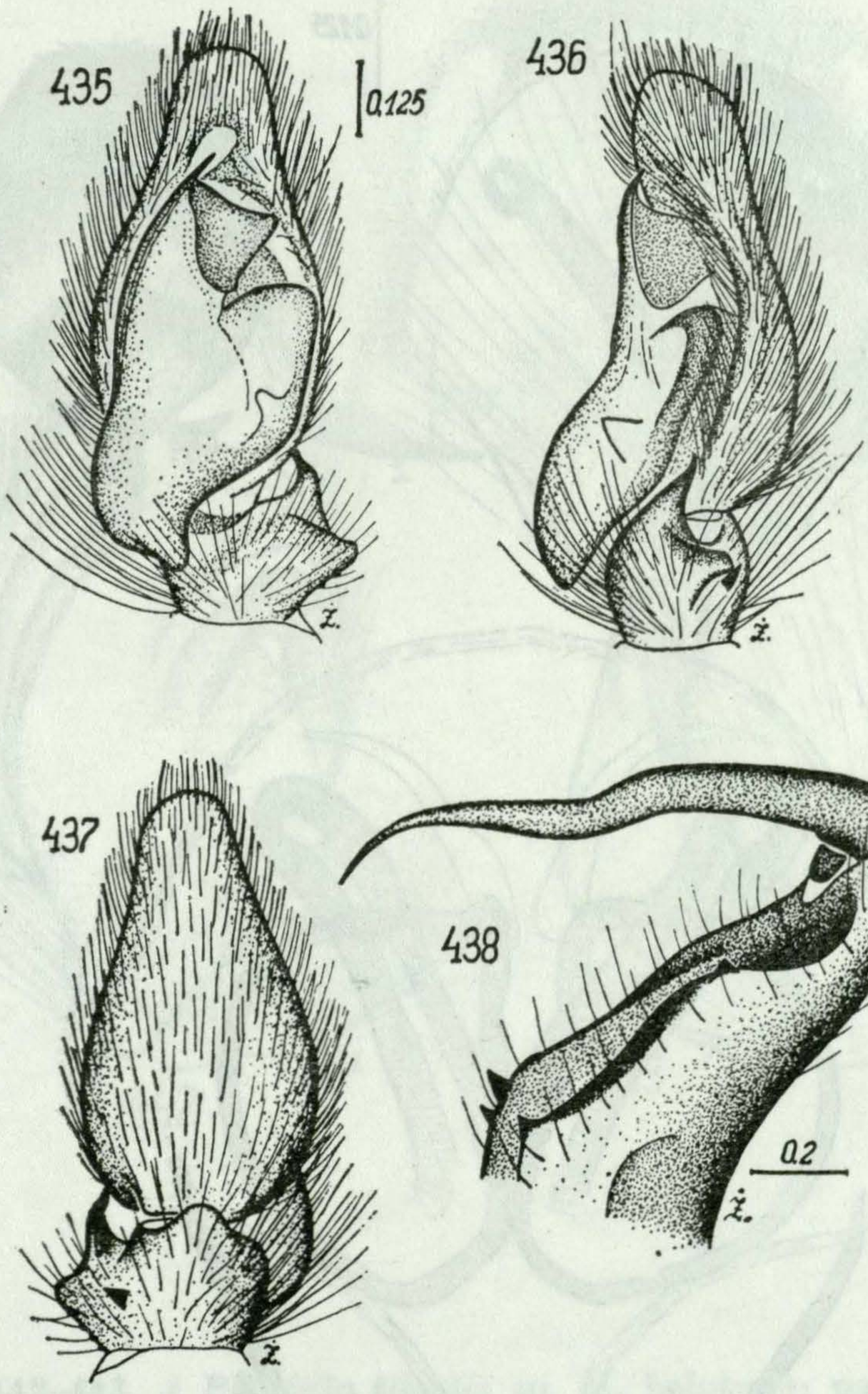




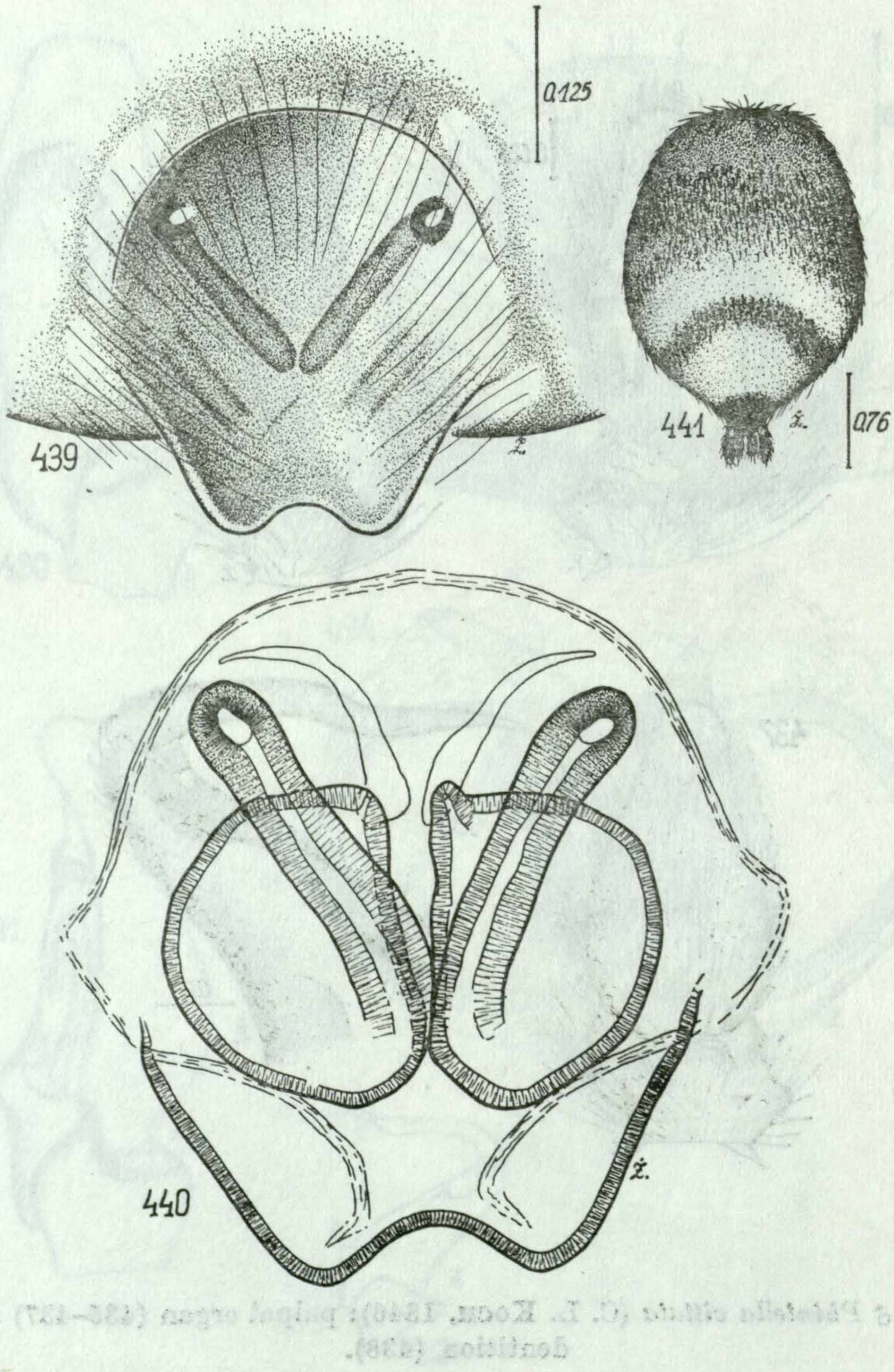




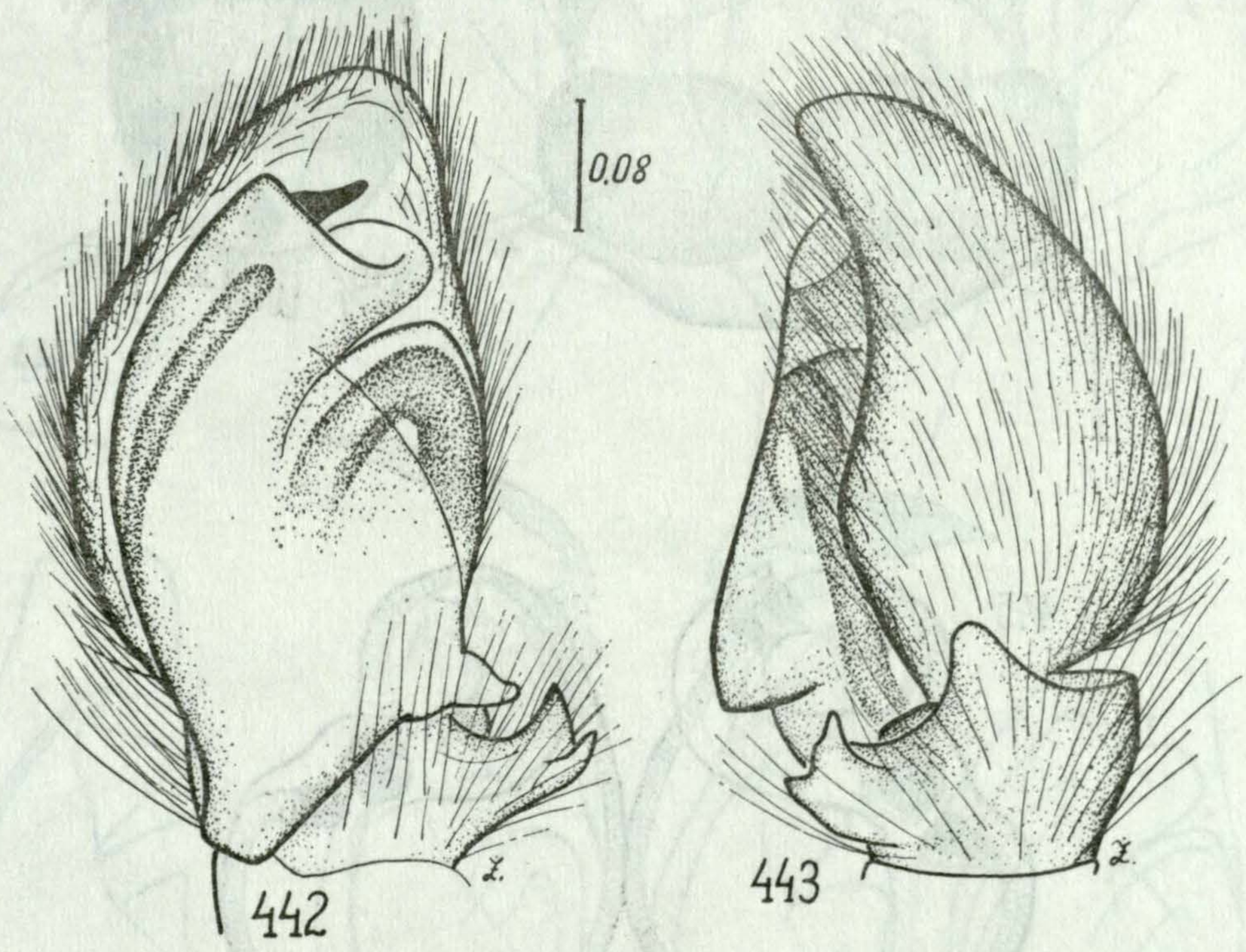
Figs. 430–434. ♂, ♀ *Phintella accentifera* (Simon, 1901): palpal organ (430, 431) and cheliceral dentition of male (432); epigyne (433) and its internal structures (434) in female. 430–432 — drawn by J. Prószyński.



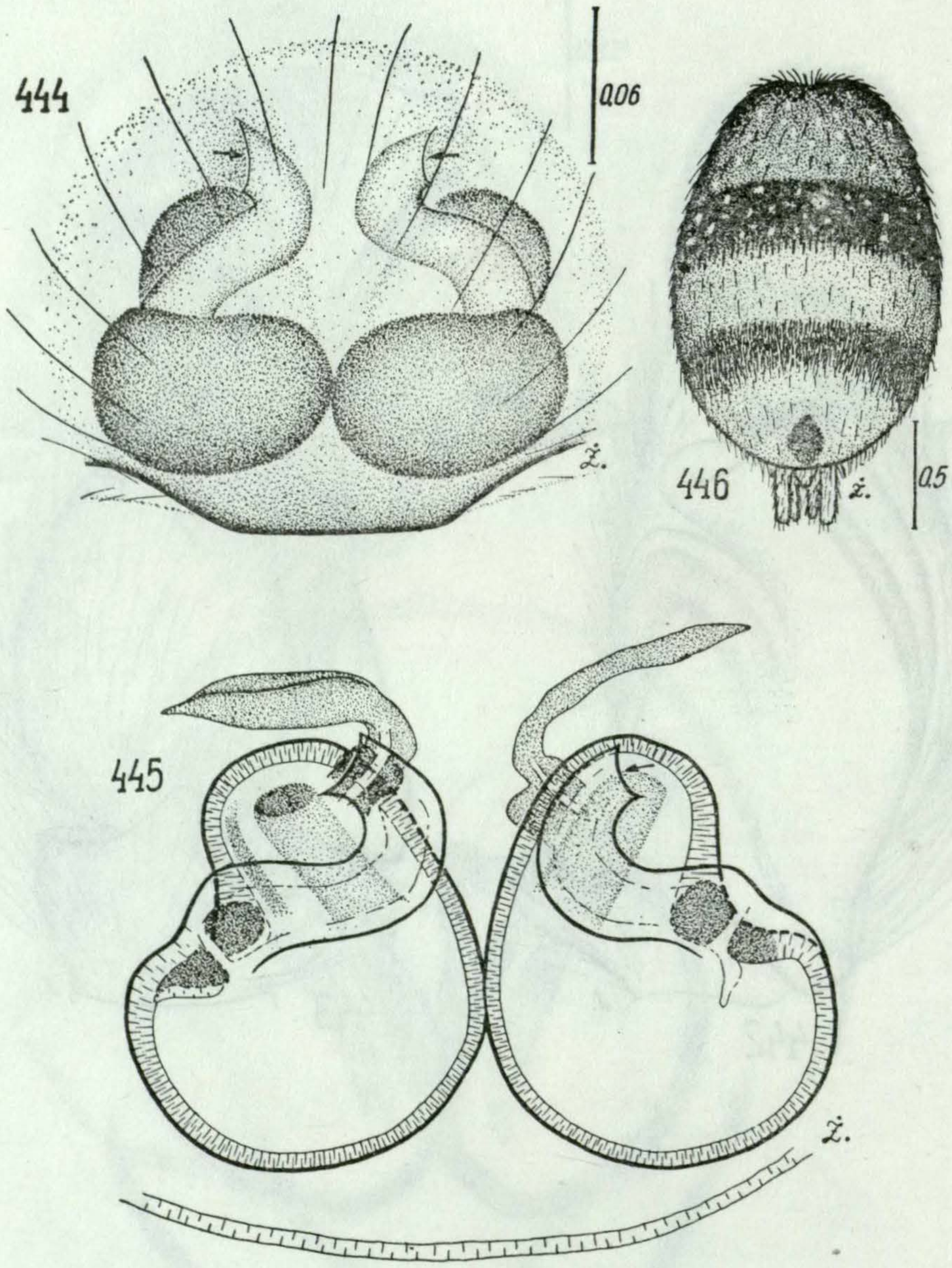
Figs. 435–438. ♂ ***Phintella vittata*** **(C. L. Koch, 1846): palpal organ (435–437) and cheliceral dentition (438).**



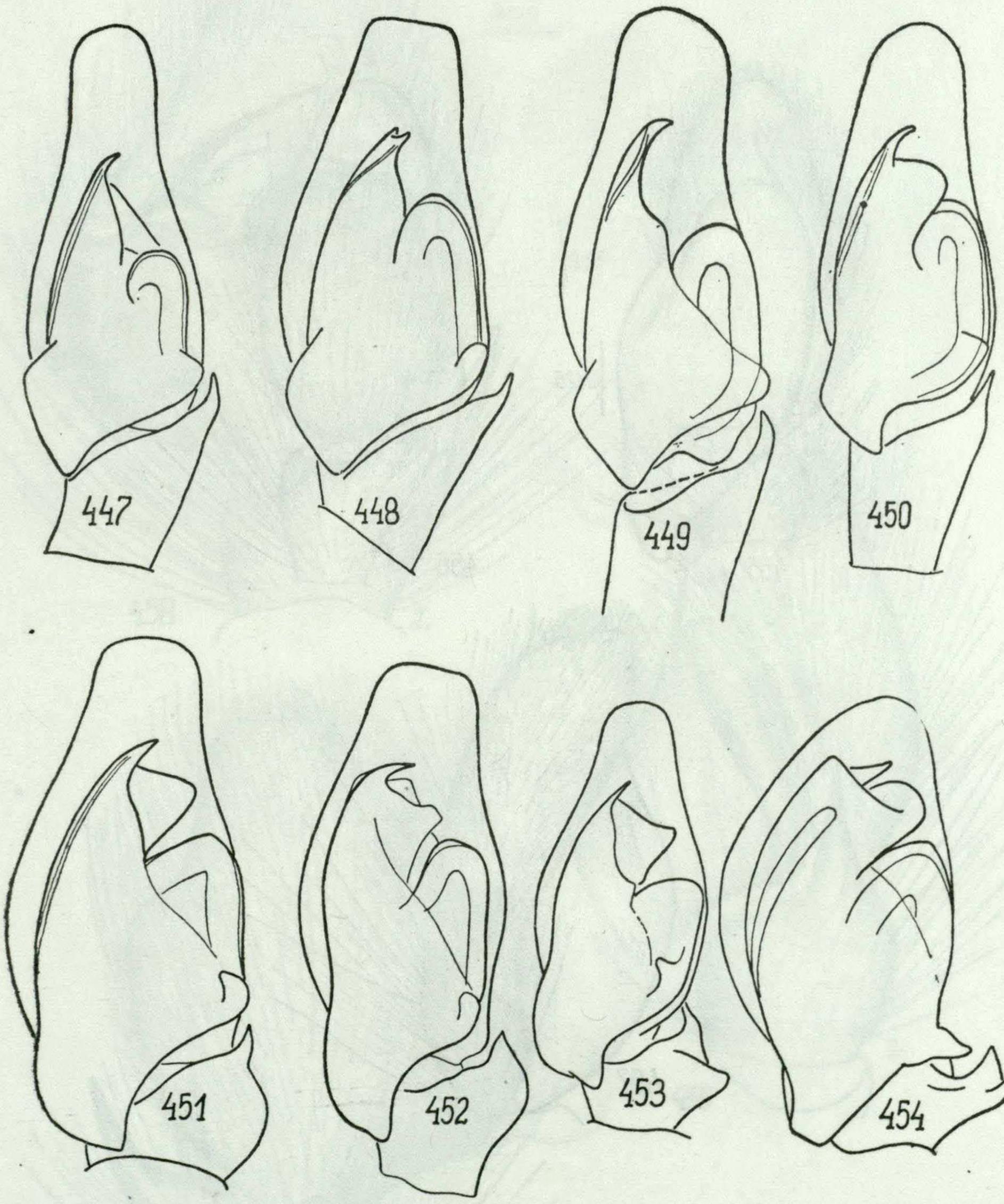
Figs. 439–441. ♀ *Phintella vittata* (C. L. Koch, 1846): epigyne (439), its internal structures (440) and abdominal pattern (441).



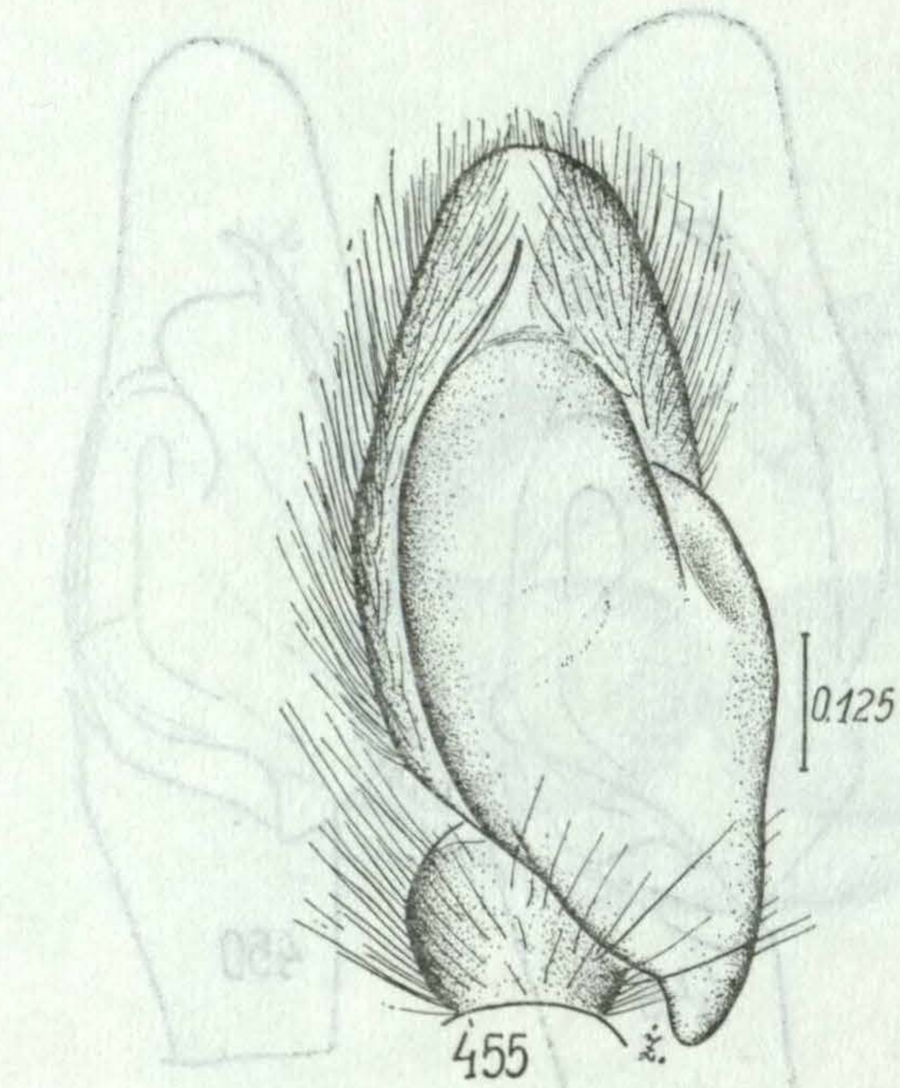
Figs. 442–443. ♂ *Phintella tibialis* sp. n., holotype: palpal organ.

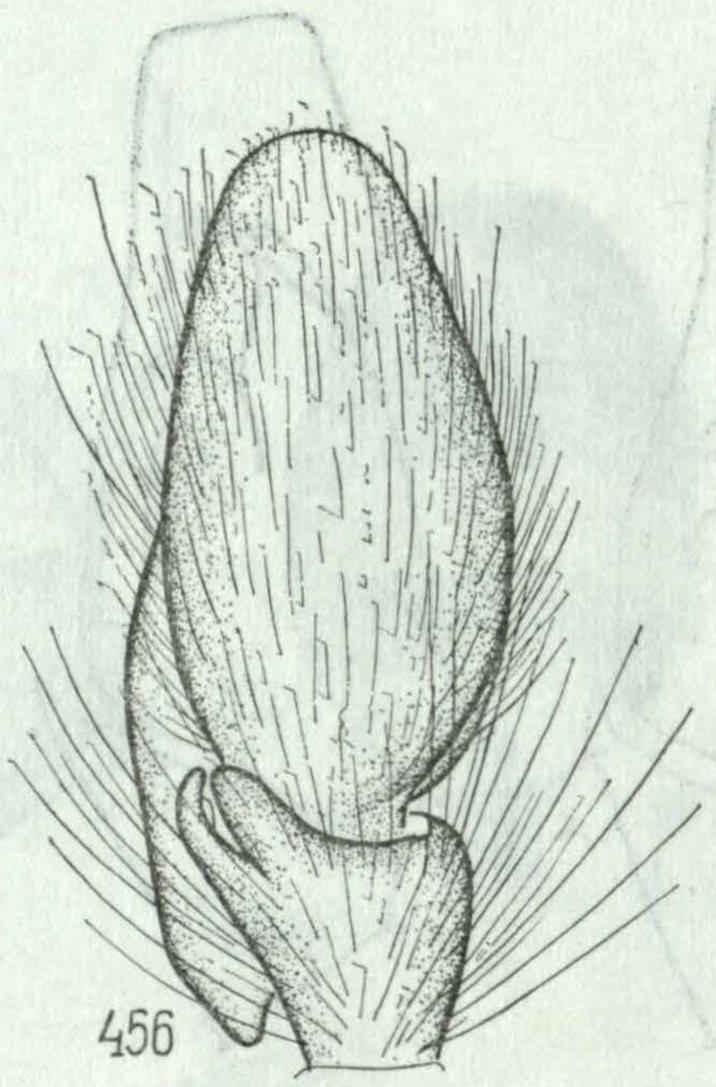


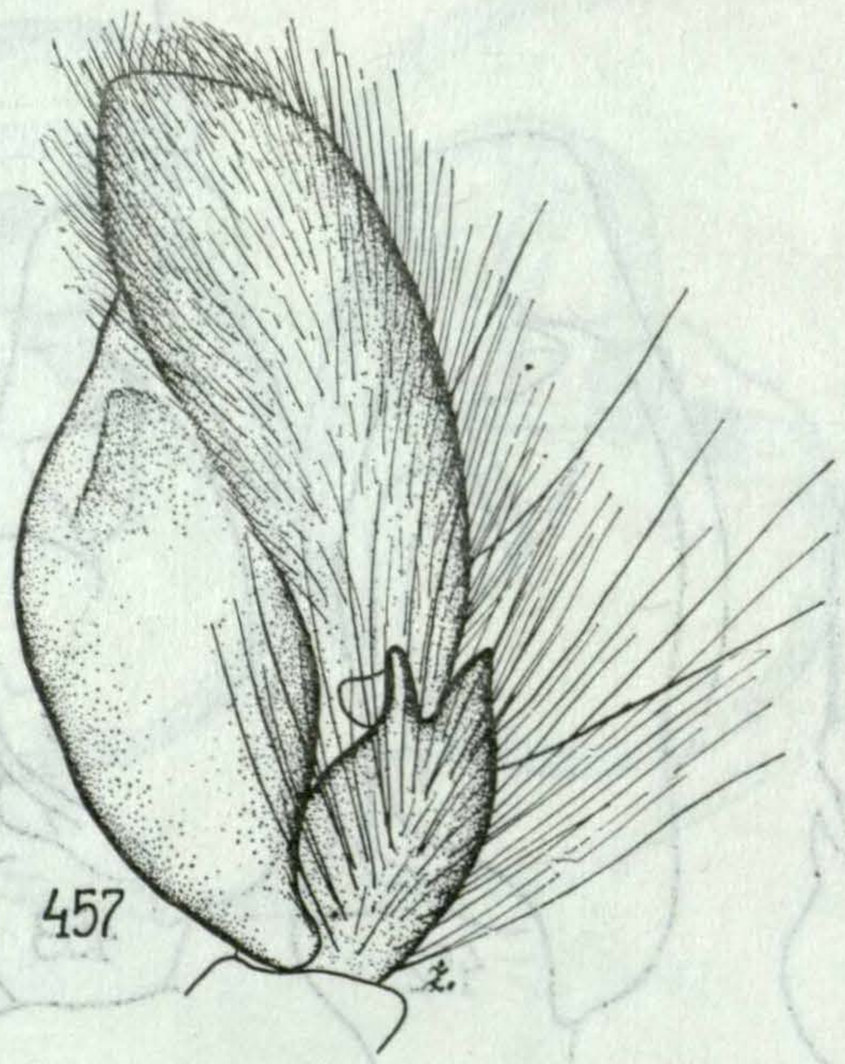
Figs. 444–446. ♀ *Phintella lucai* **sp. n., holotype: epigyne (444), its internal structures (445) and abdominal pattern (446).**



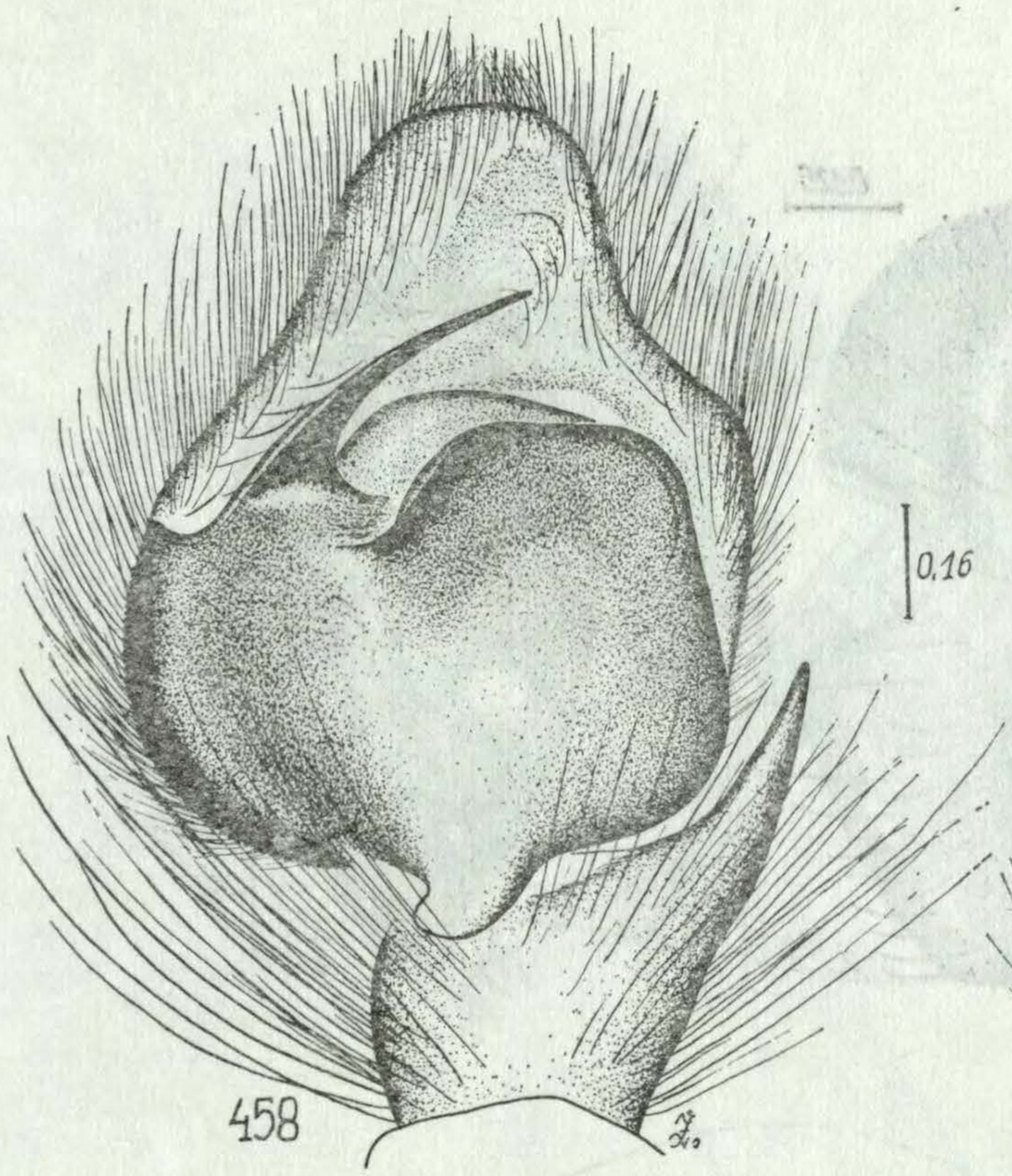
Figs. 447–454. Morphological series of palpal organs in the genus *Phintella*: 447 — *Ph. bifurcilinea*, 448 — *Ph. debilis*, 449 — *Ph. argenteola*, 450 — *Ph. aequipeiformis*, 451 — *Ph. suavis*, 452 — *Ph. accentifera*, 453 — *Ph. vittata*, 454 — *Ph. tibialis*.

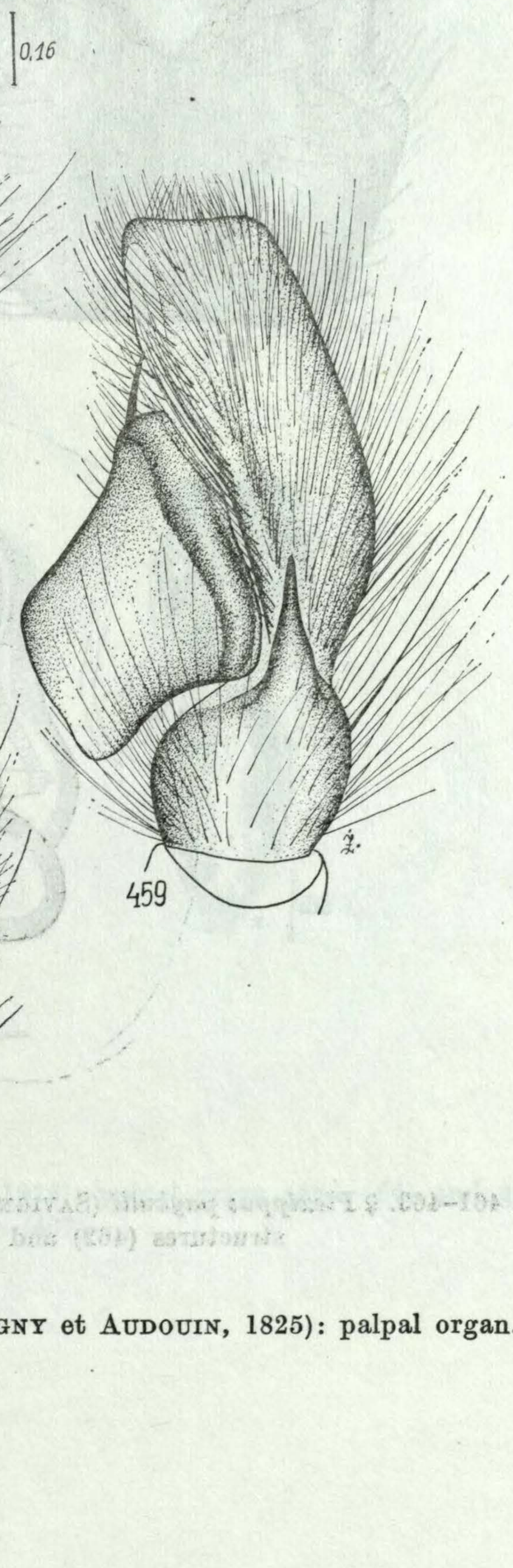


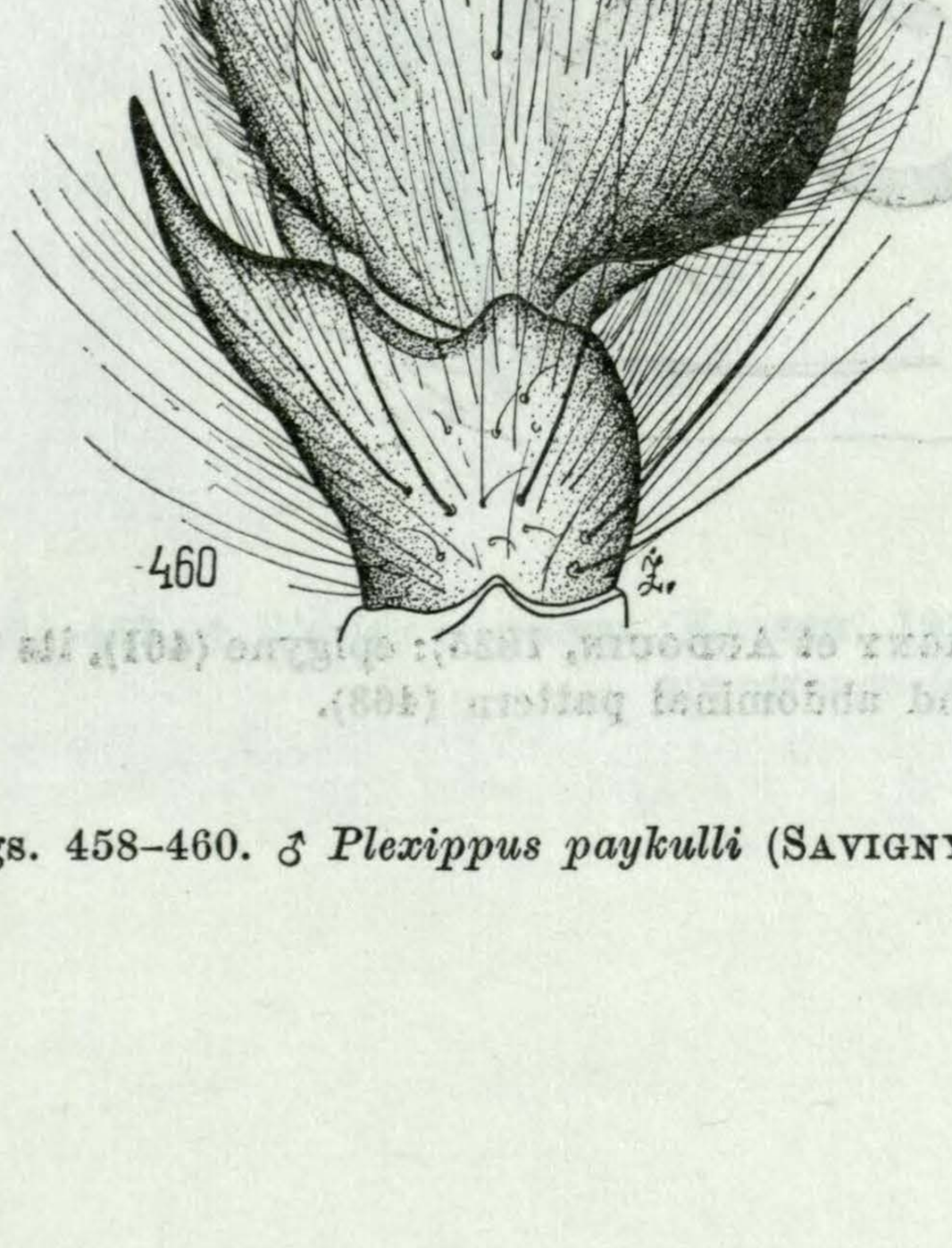




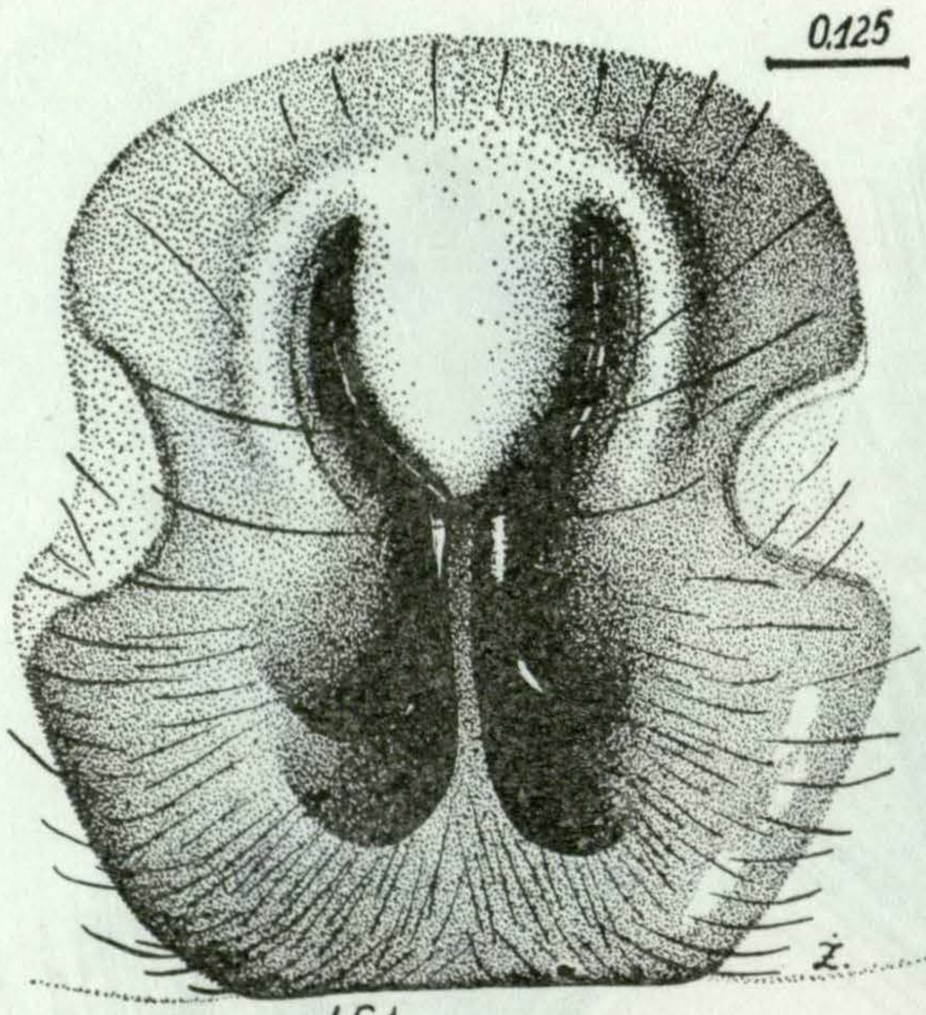
Figs. 455–457. ♂ ***Phlegra pisarskii*** **sp. n., holotype: palpal organ.**







Figs. 458–460. ♂ ***Plexippus paykulli*** **(Savigny et Audouin, 1825): palpal organ.**



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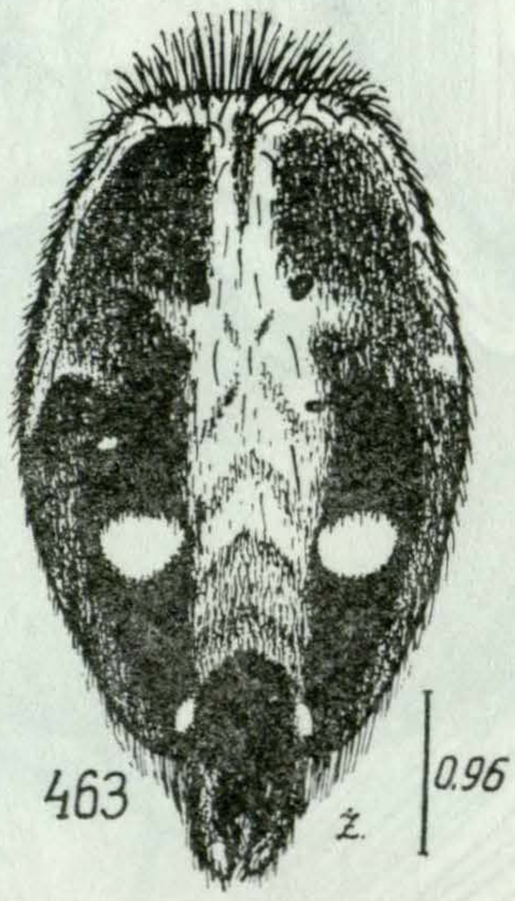
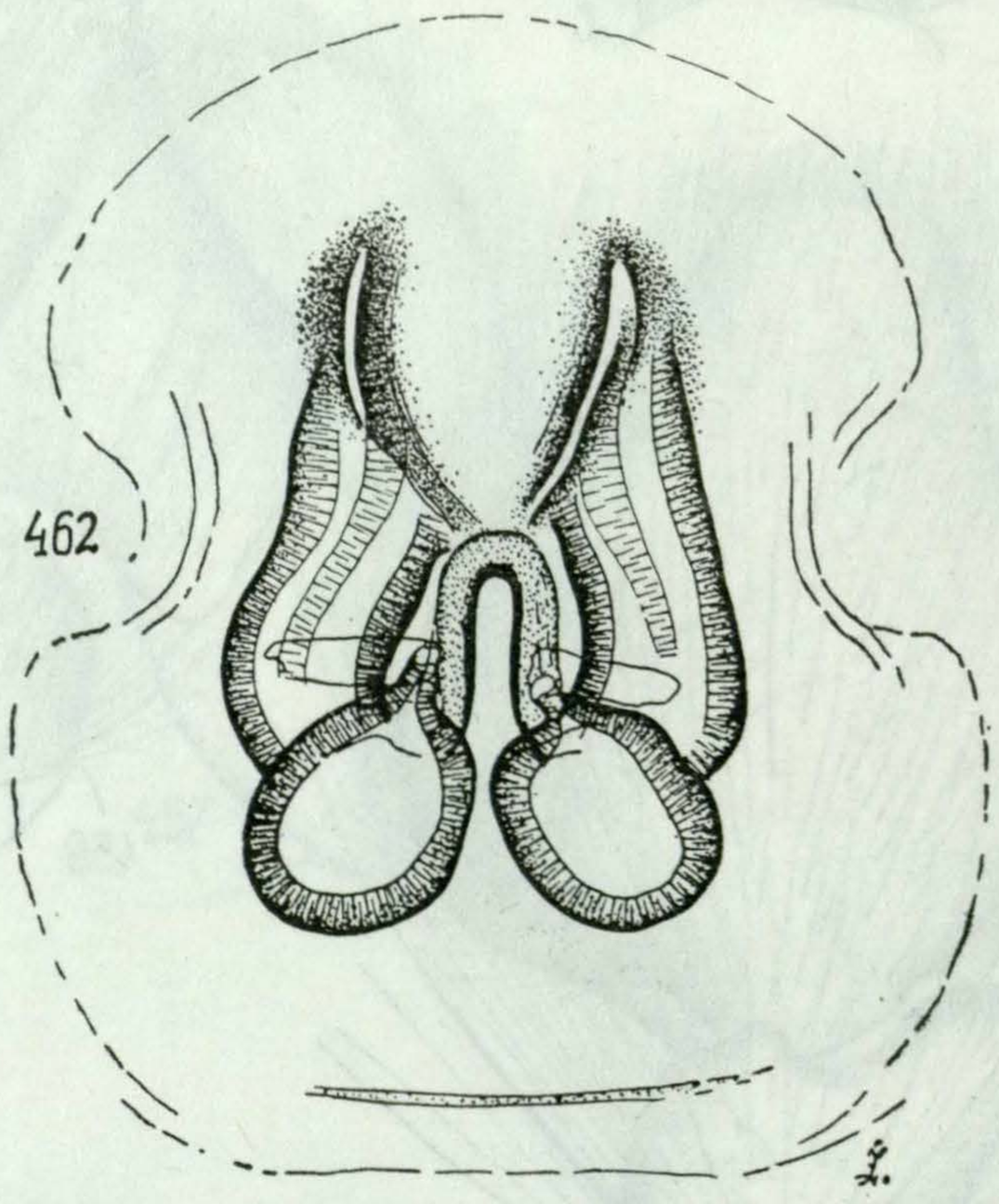
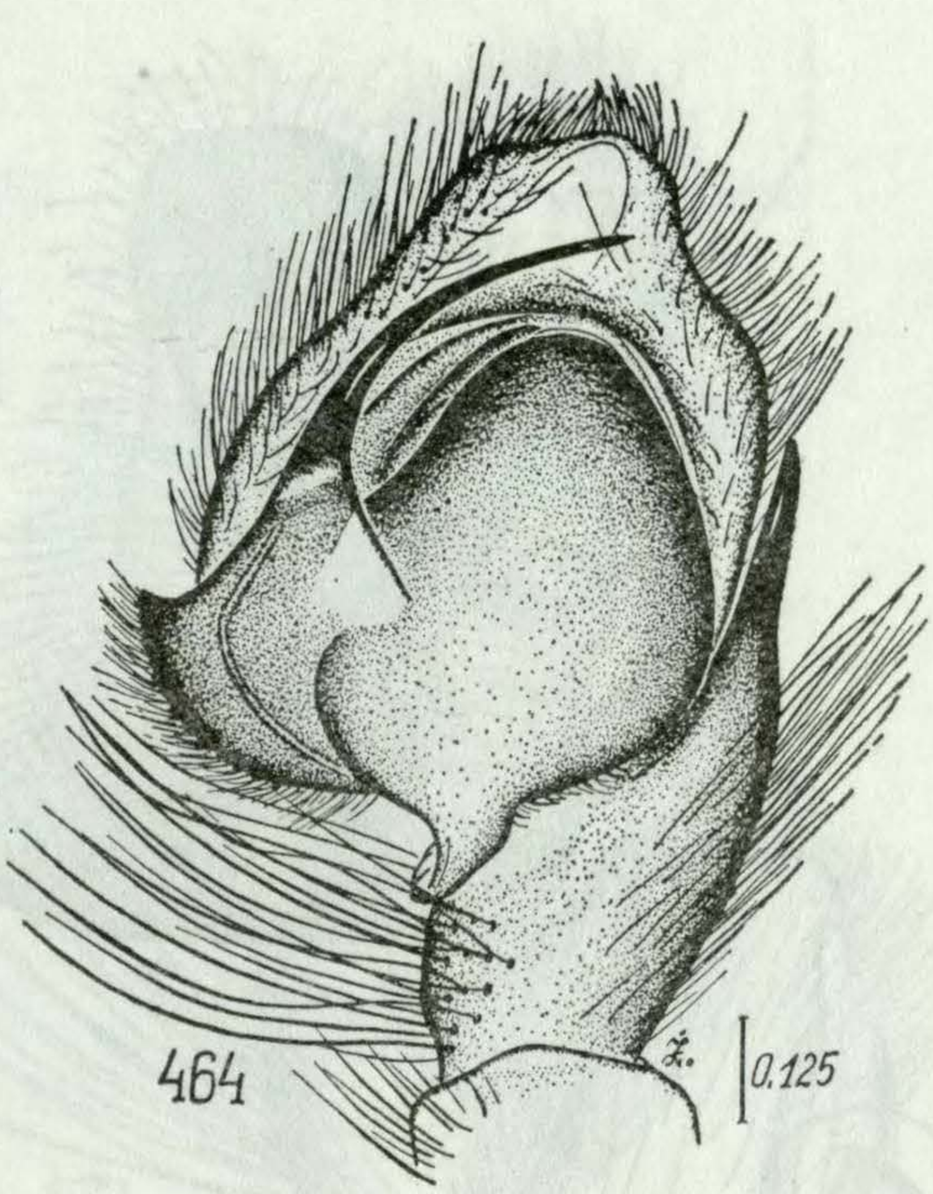
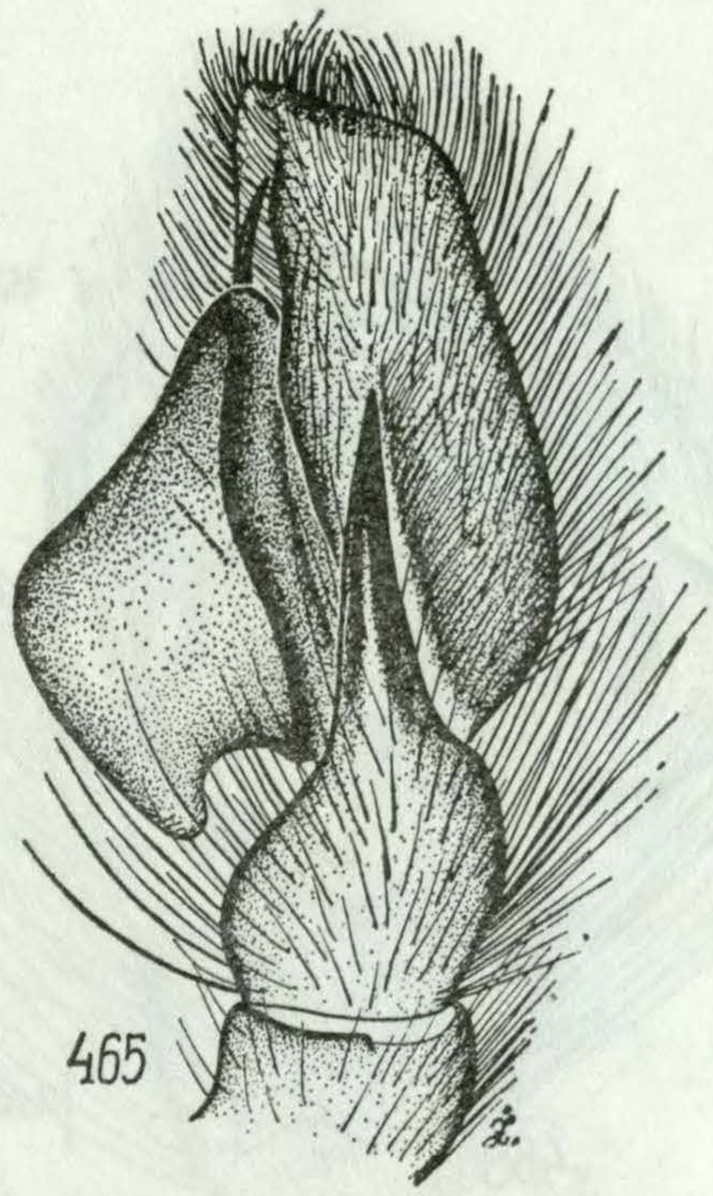
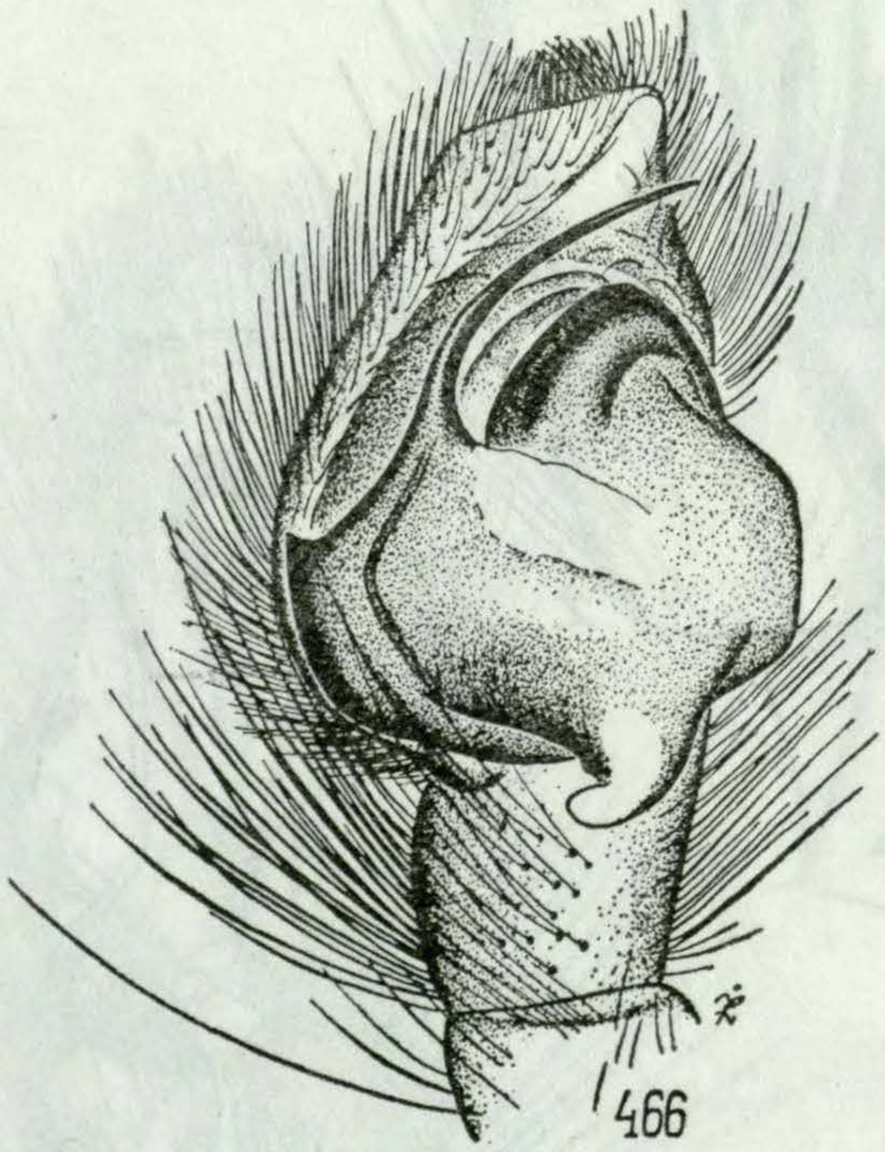


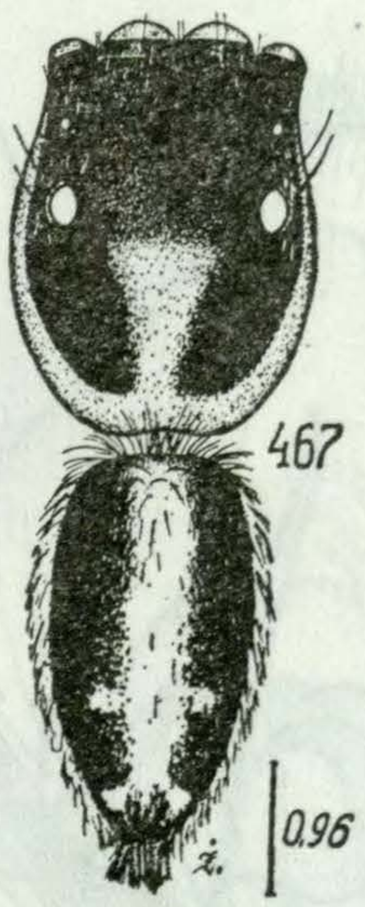


Figs. 461–463. ♀ *Plexippus paykulli* (Savigny et Audouin, 1825): epigyne (461), its internal structures (462) and abdominal pattern (463).

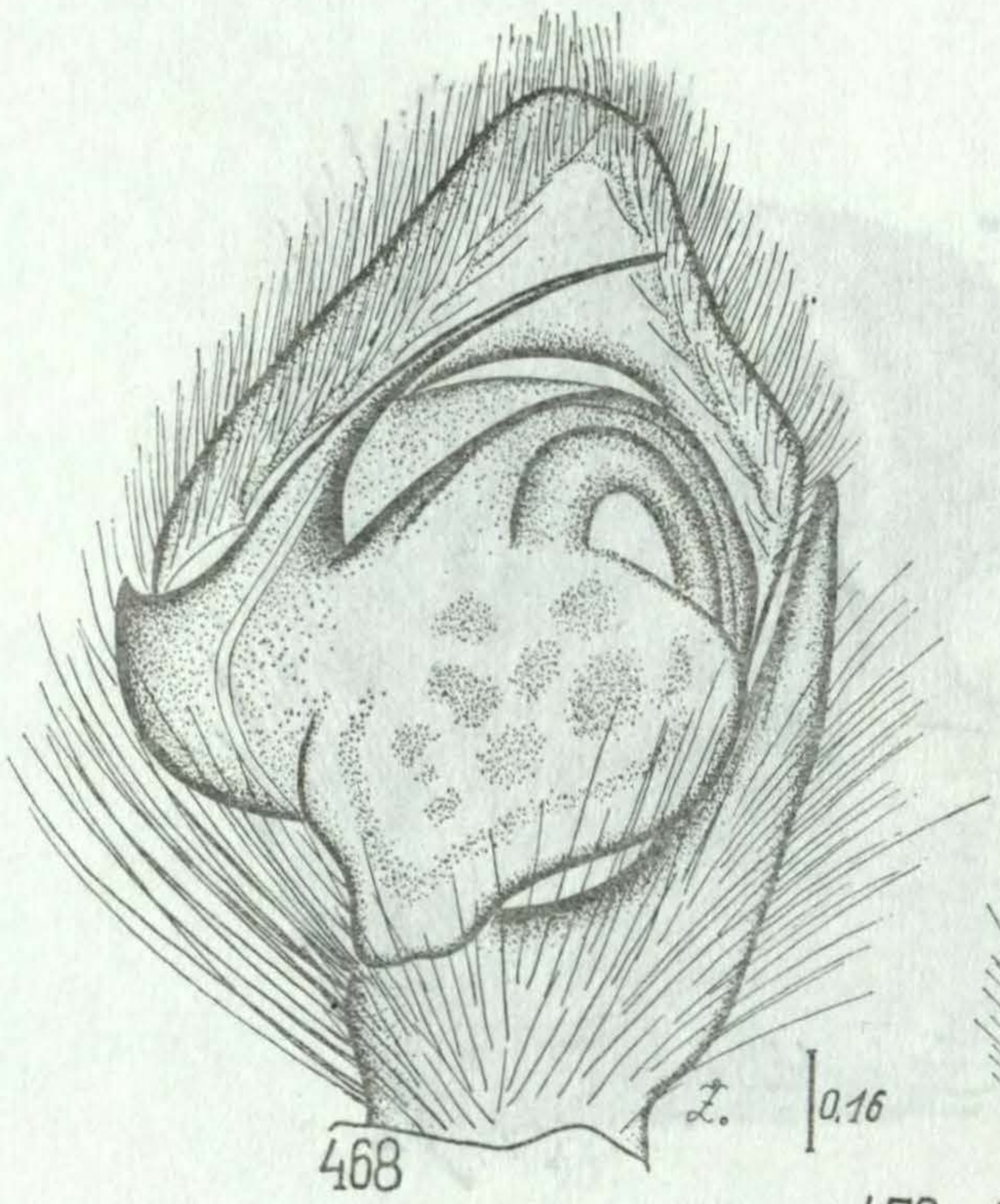


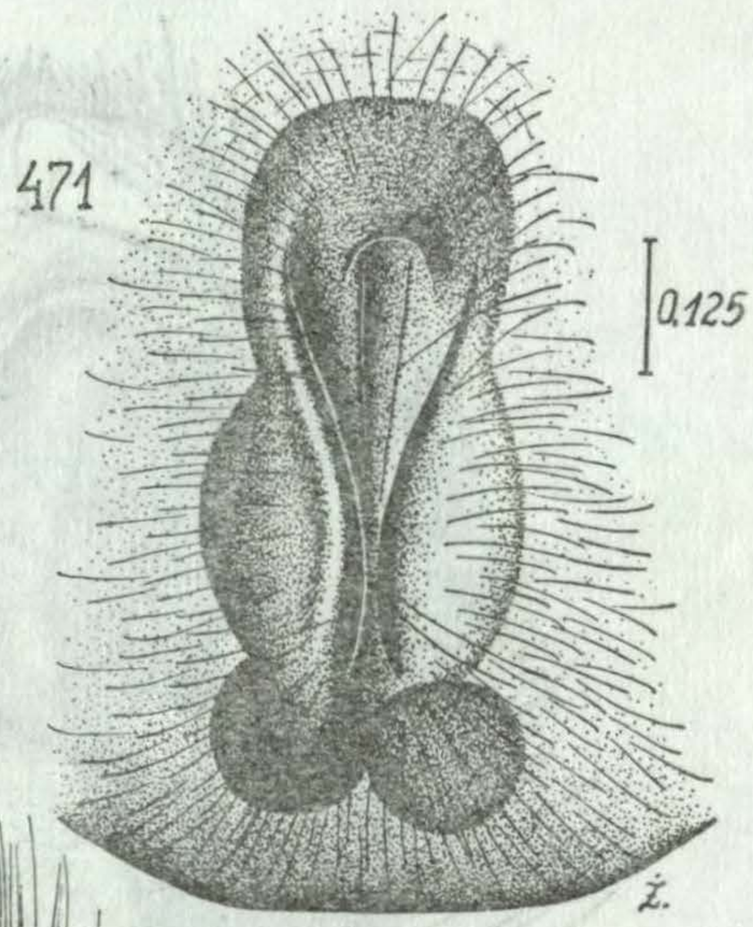


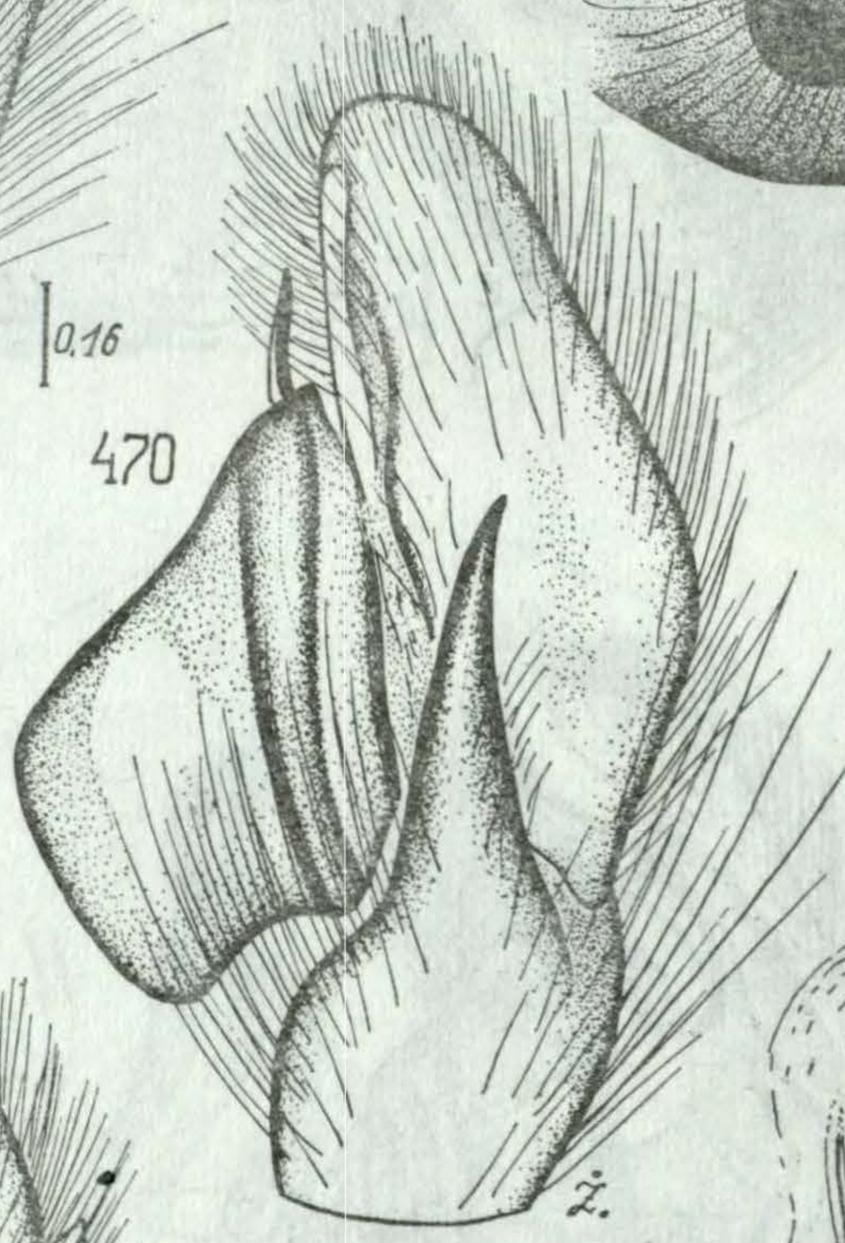


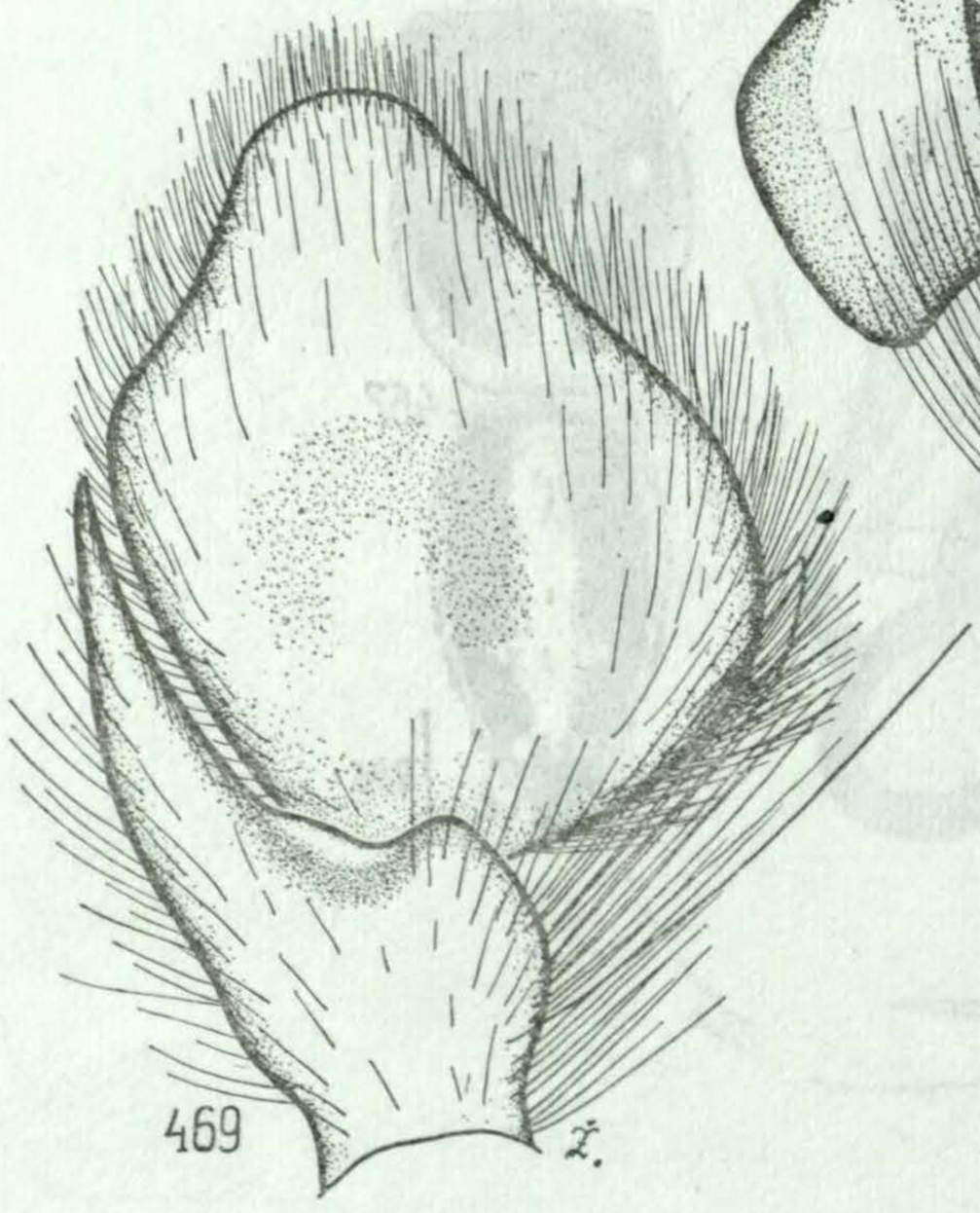


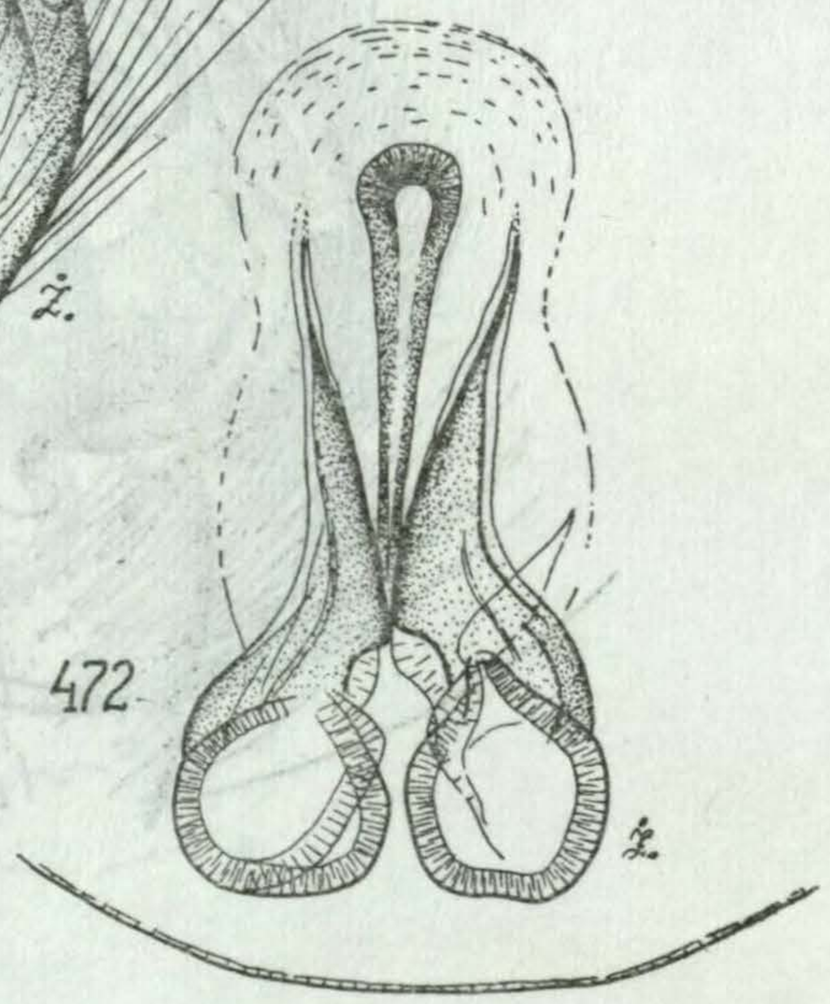
Figs. 464–467. ♂ *Plexippus petersi* (KARSCH, 1878): palpal organ (464–466) and genera appearance (467).



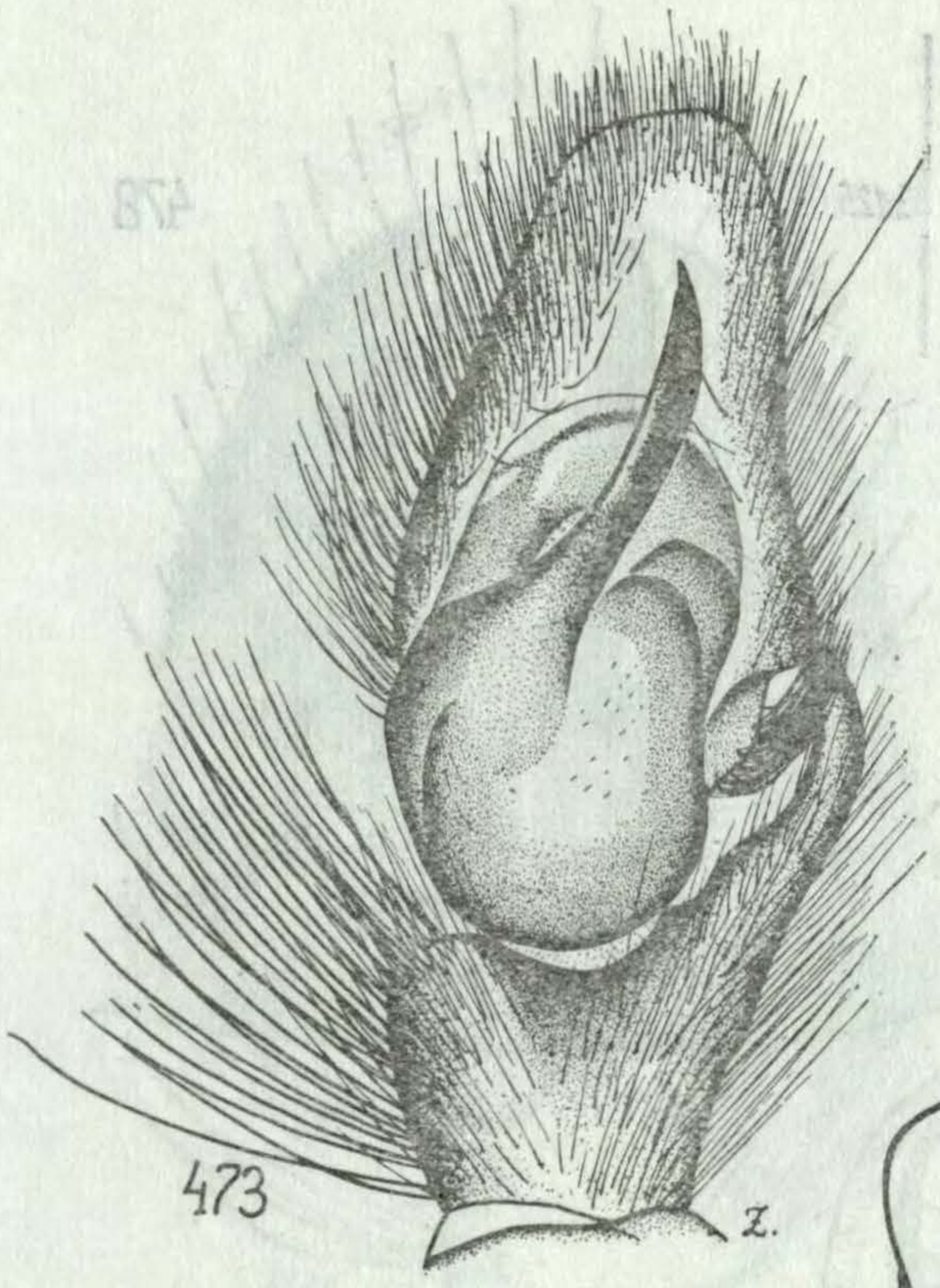


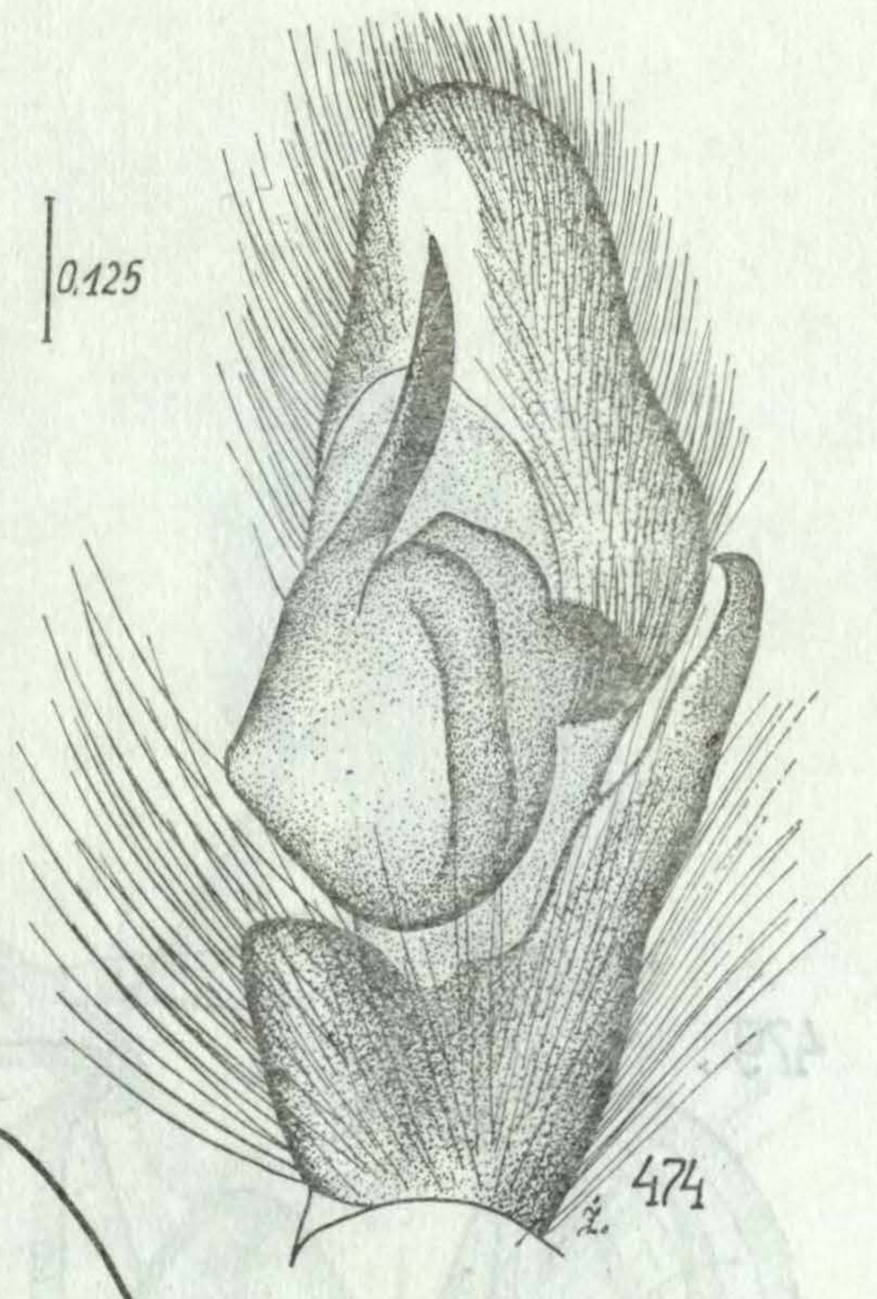


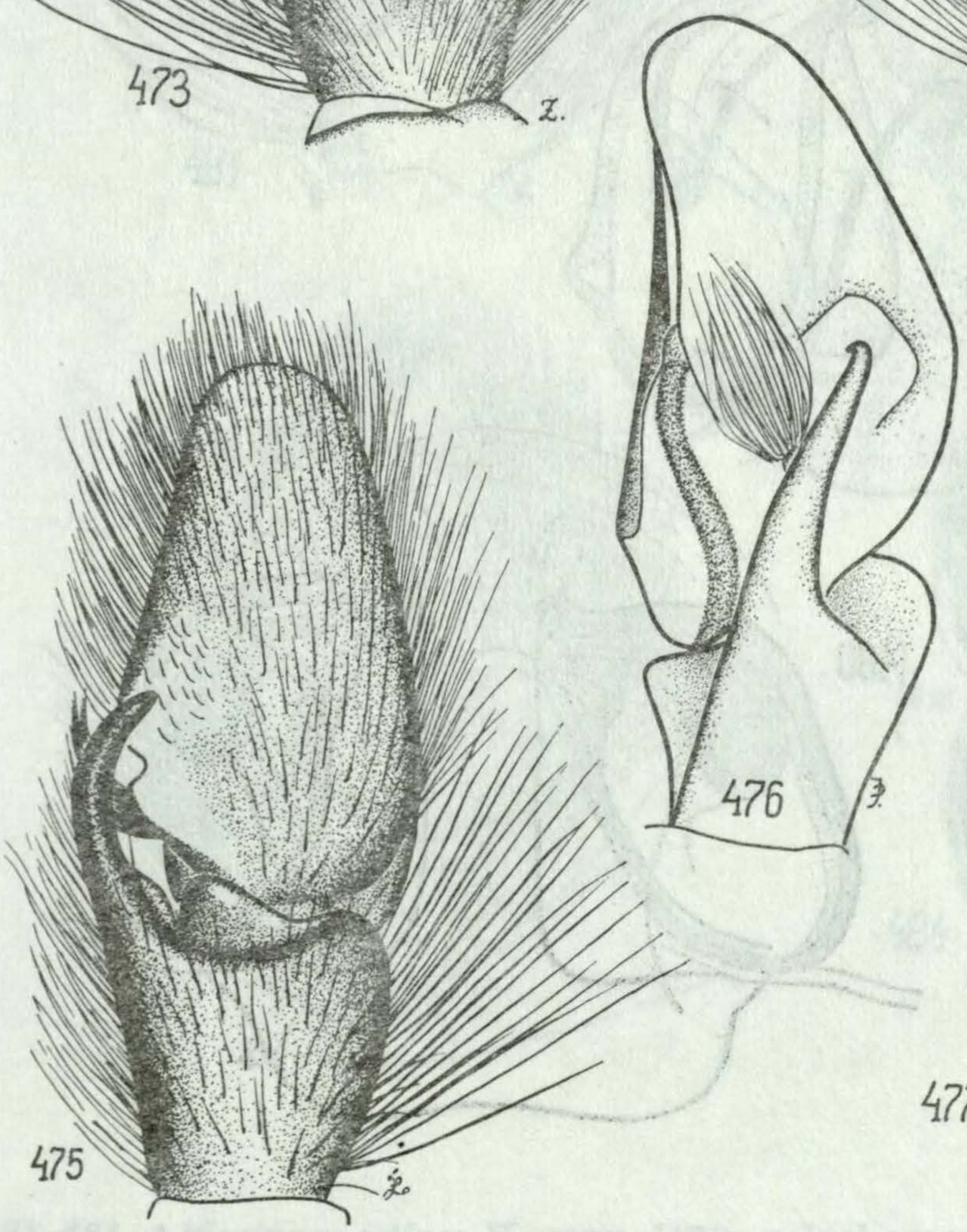




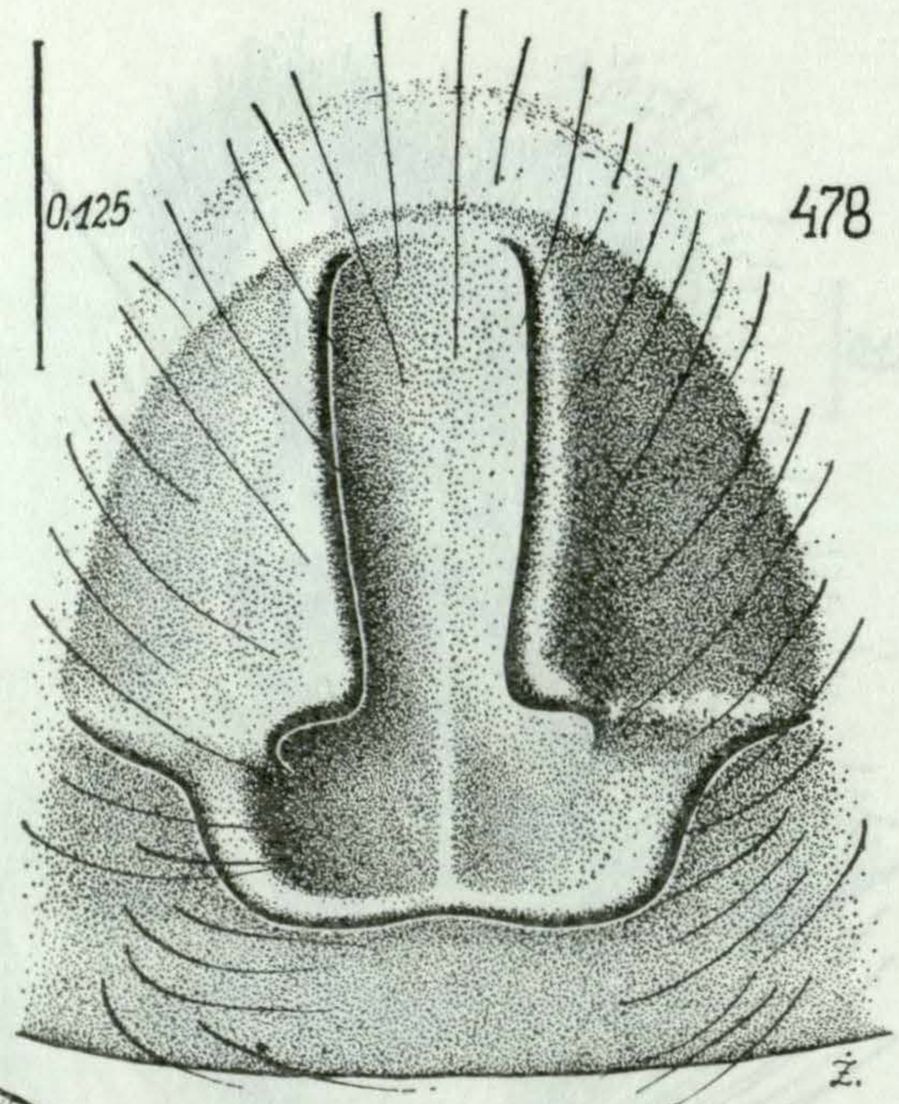
Figs. 468–472. ♂, ♀ *Plexippus petersi* (KARSCH, 1878): palpal organ (468–470), epigyne (471) and its internal structures (472). 468–470 – type-specimen of *Euophrys petersi* KARSCH from Inhambane.

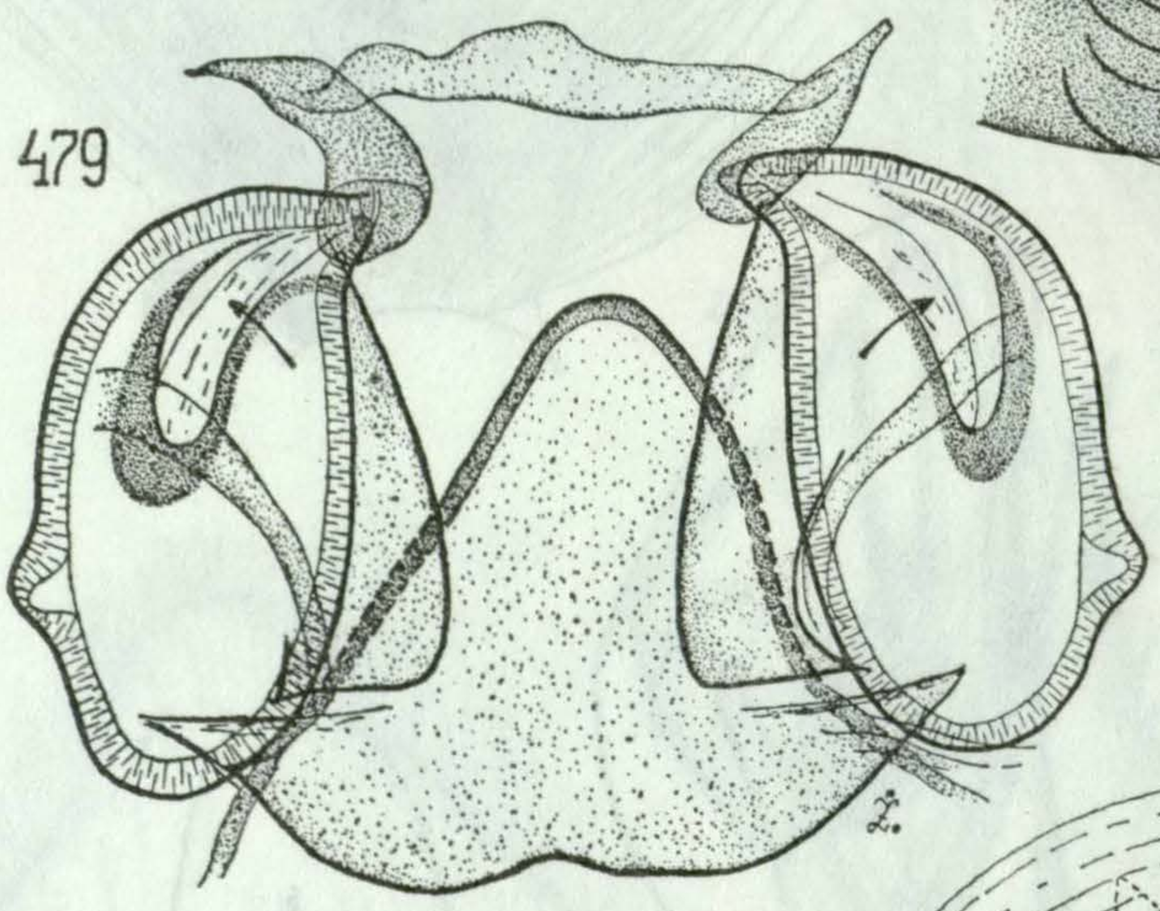


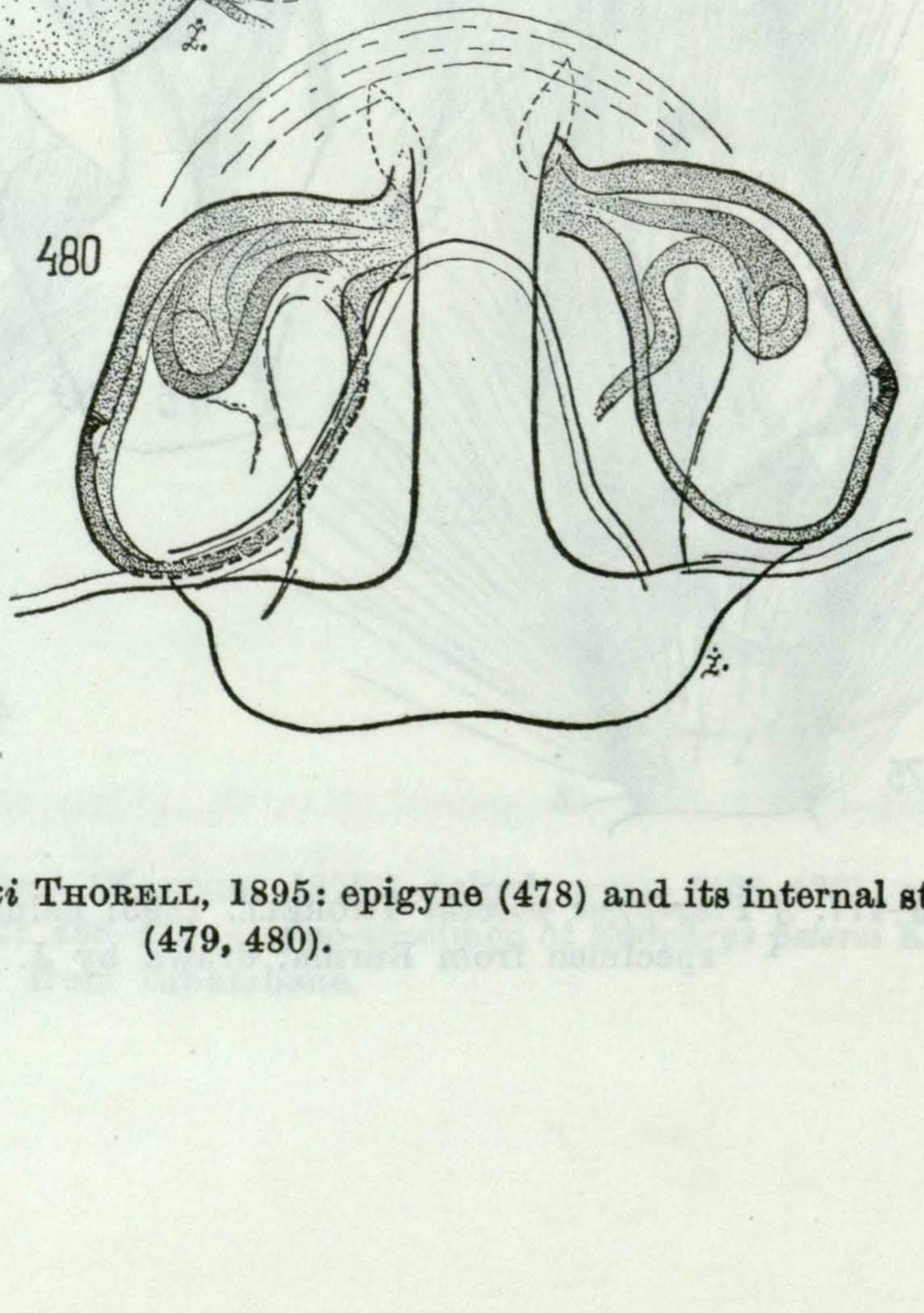




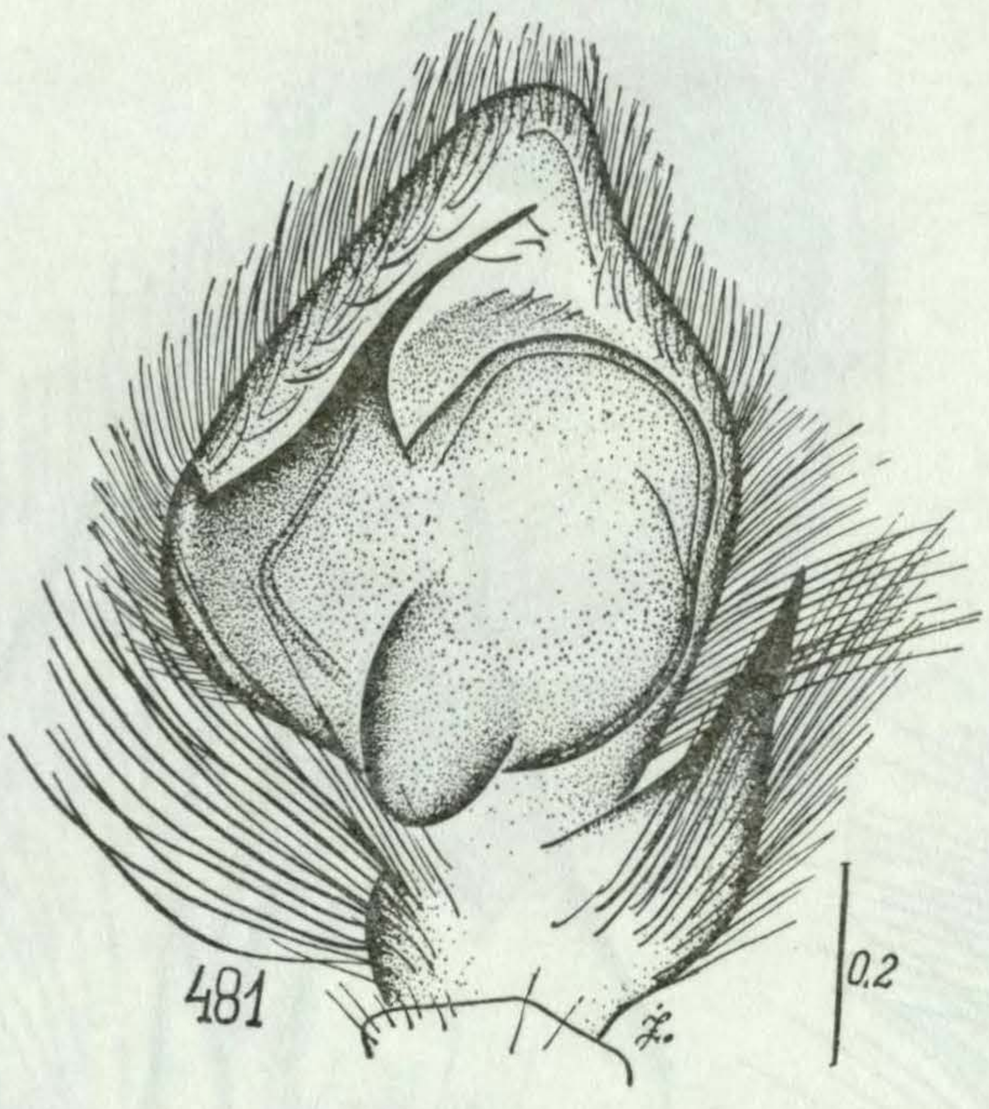
Figs. 473–477. ♂ *Plexippus pococki* THORELL, 1895: palpal organs (473–477). 476, 477 — specimen from Burma, drawn by J. PRÓSZYŃSKI.

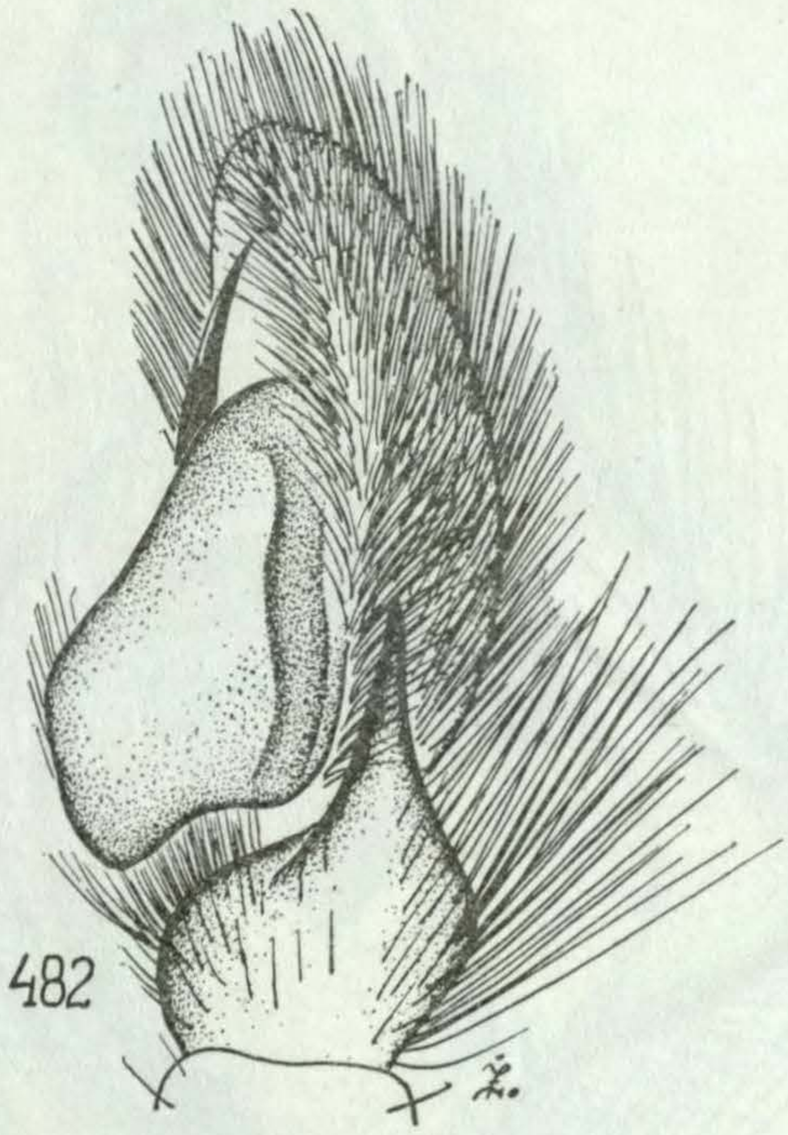


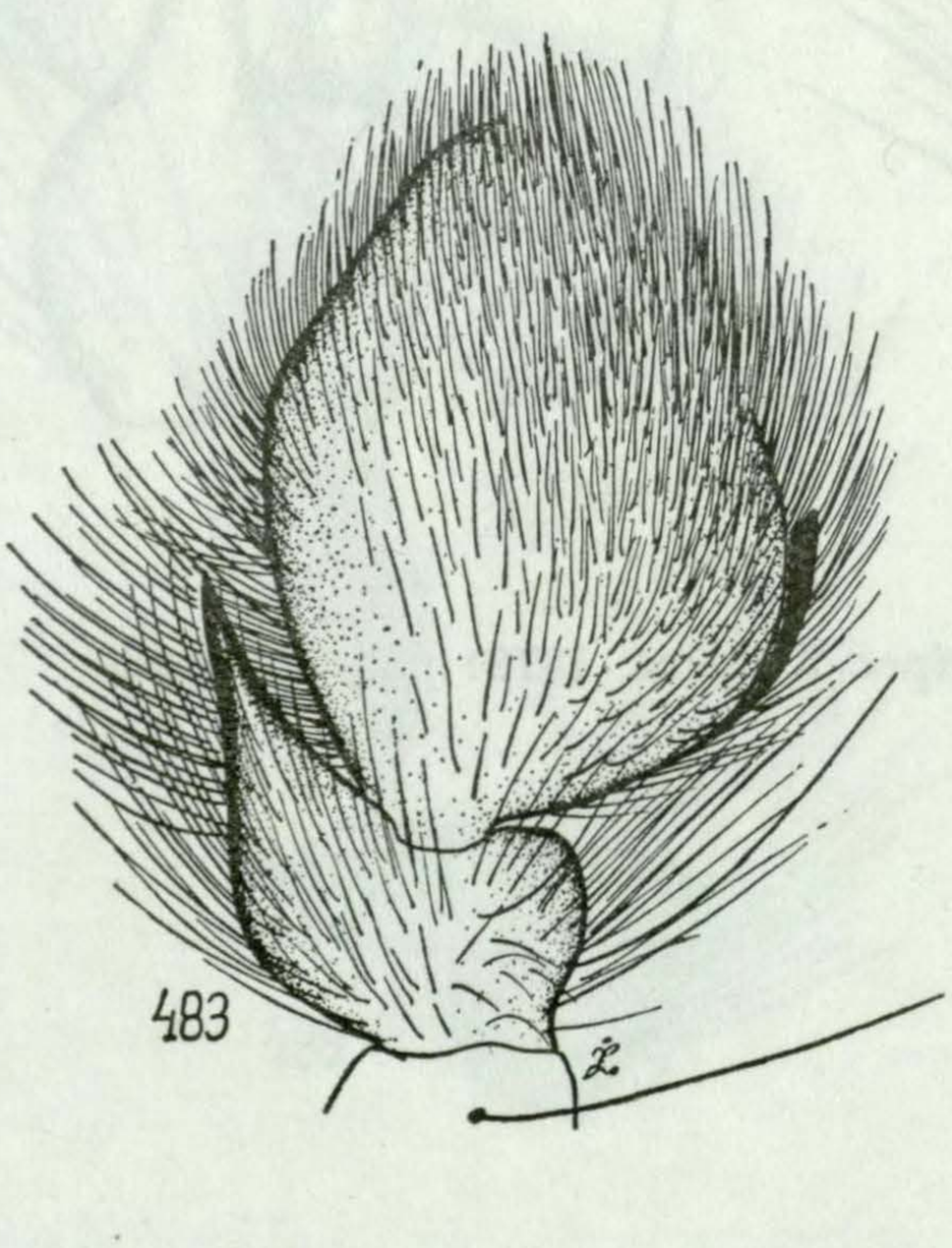


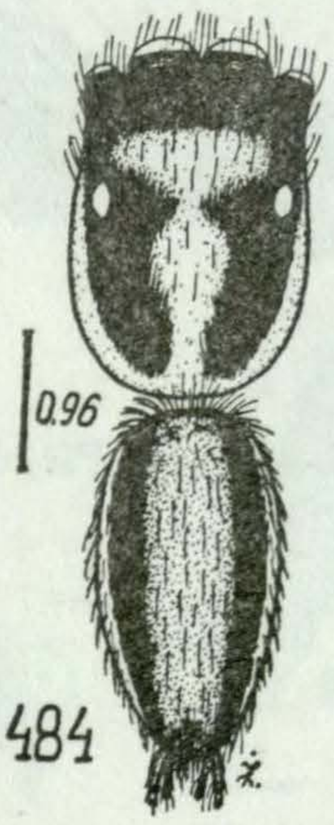


Figs. 478–480. ♀ *Plexippus pococki* THORELL, 1895: epigyne (478) and its internal structures (479, 480).

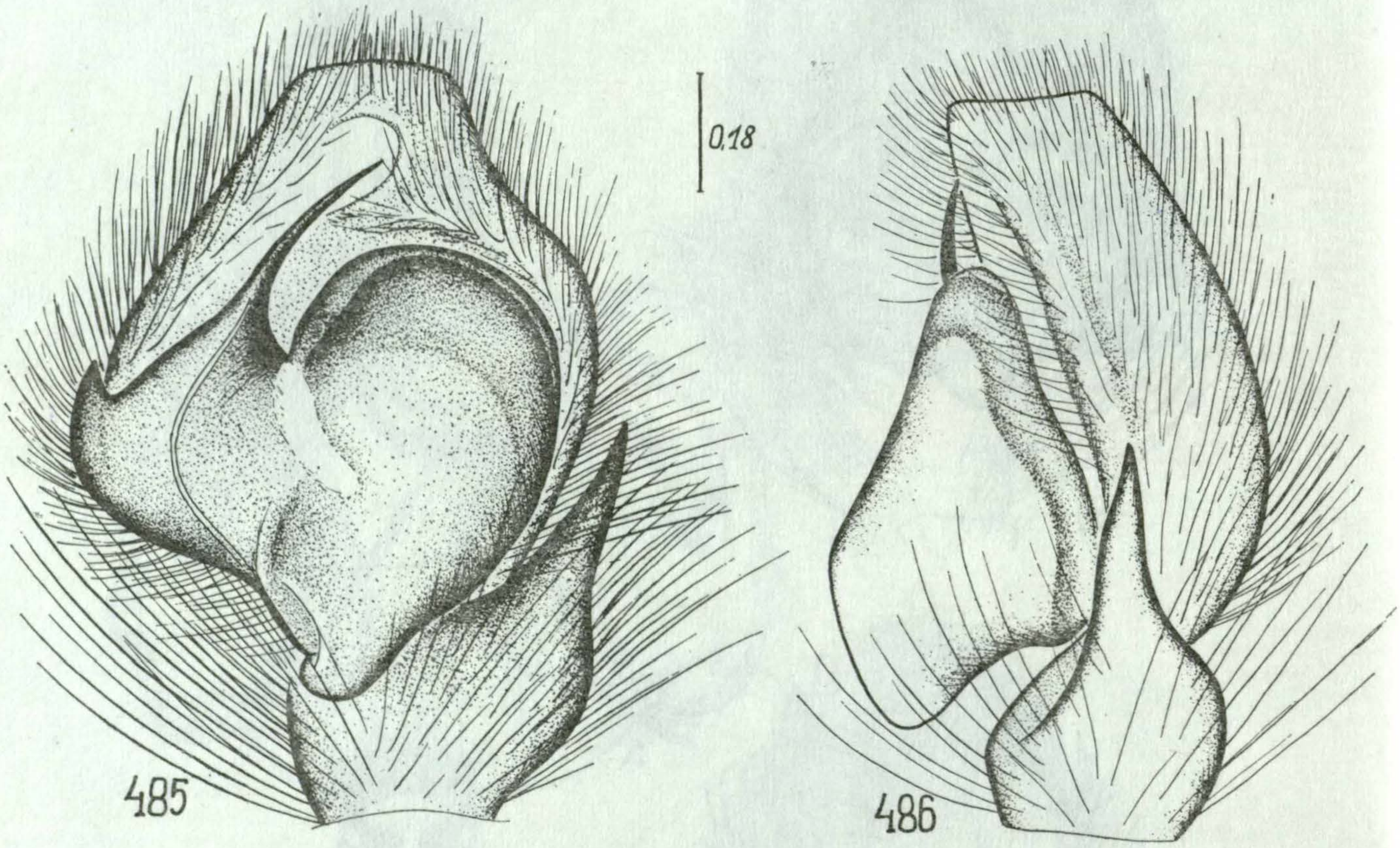




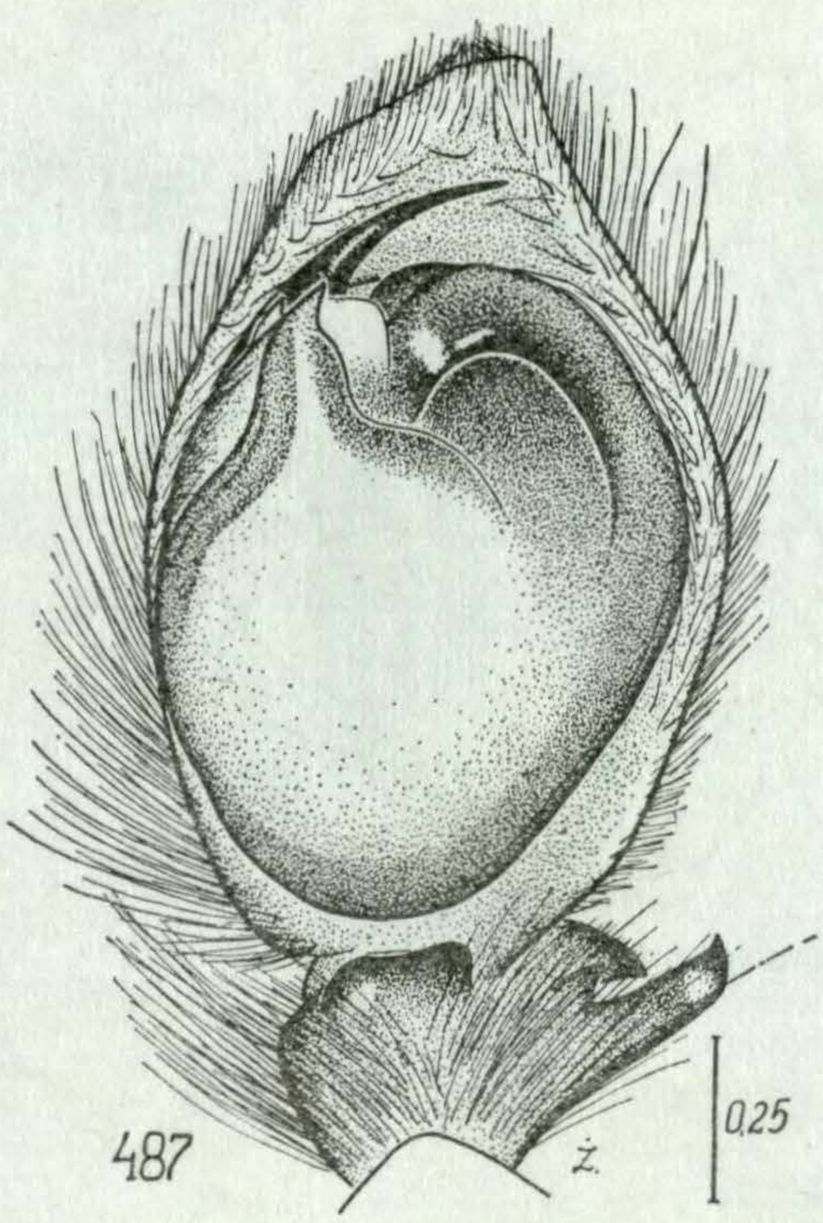


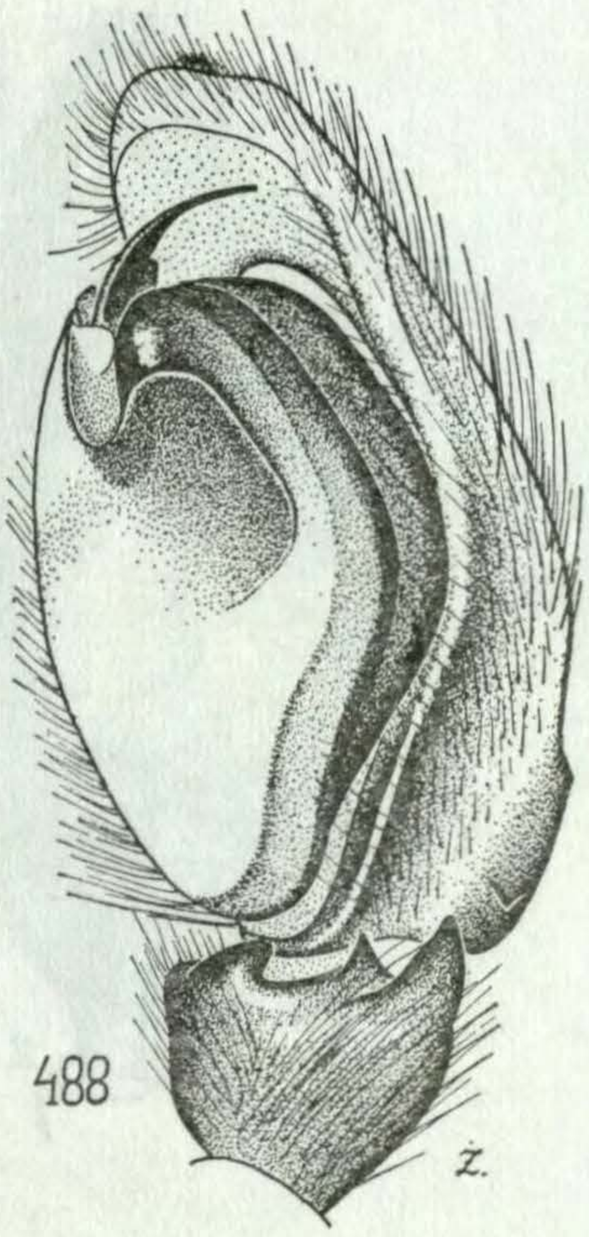


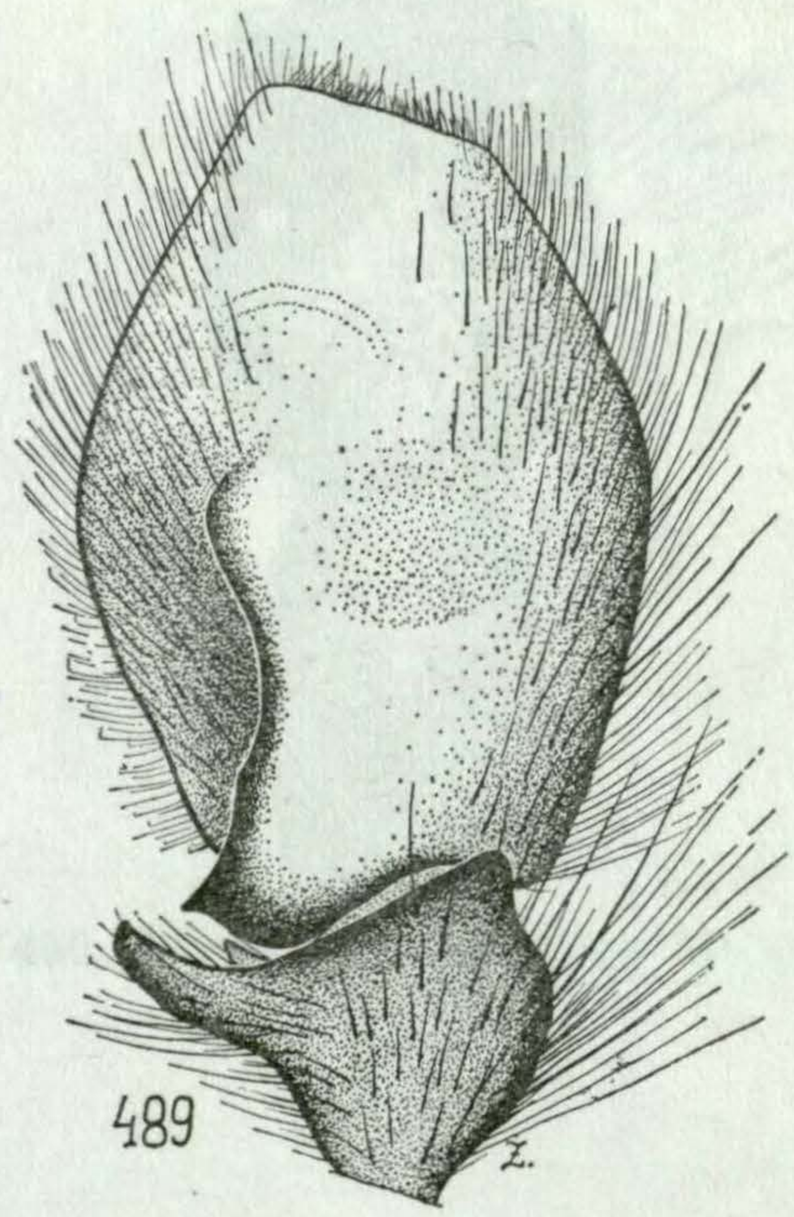
Figs. 481–484. ♂ *Plexippus setipes* KARSCH, 1879: palpal organ (481–483) and general appearance (484).

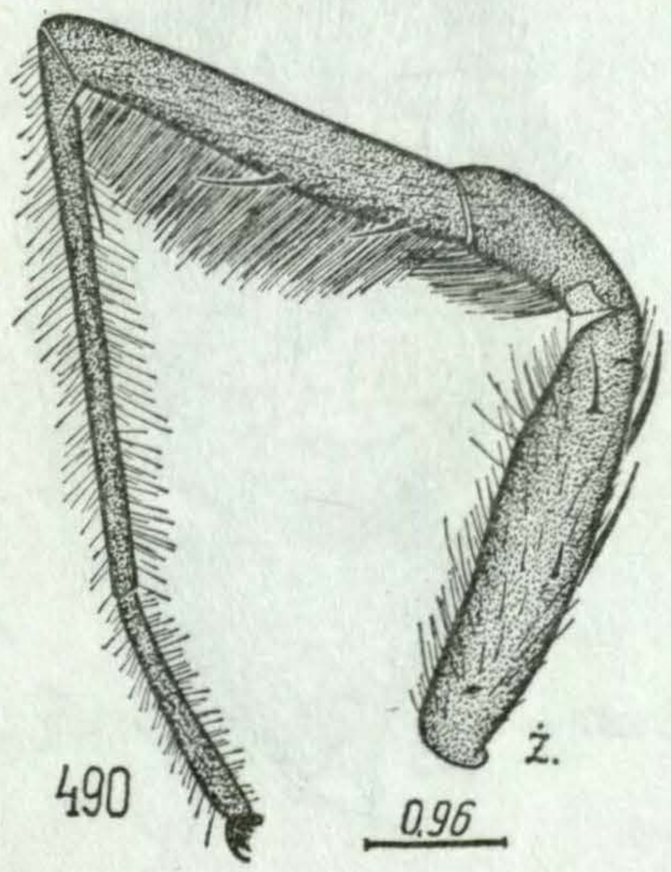


Figs. 485–486. ♂ *Plexippus setipes* KARSCH, 1879: palpal organ.

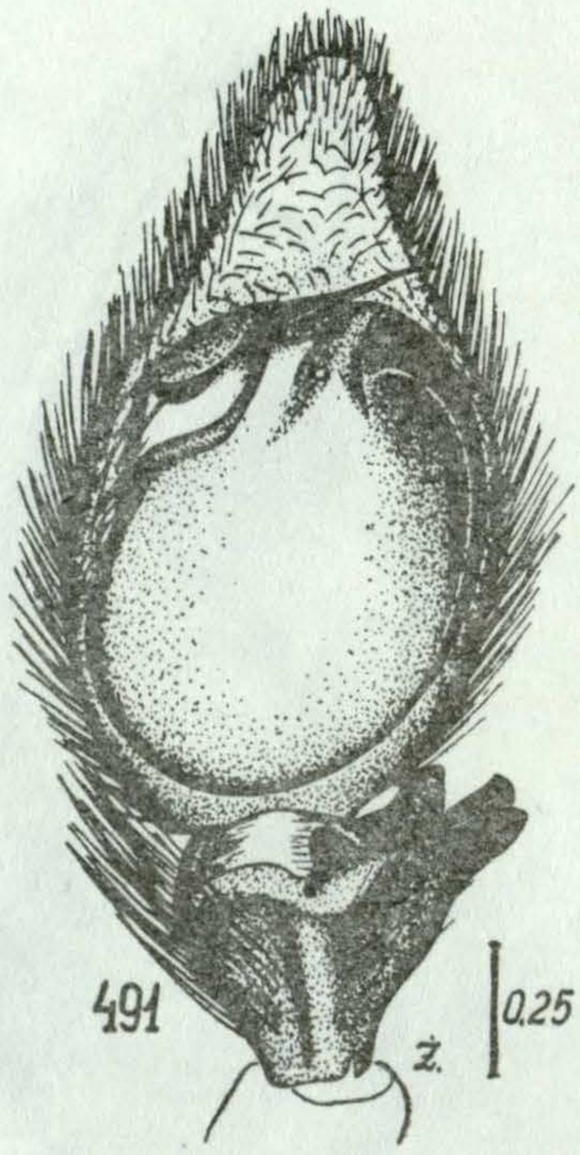


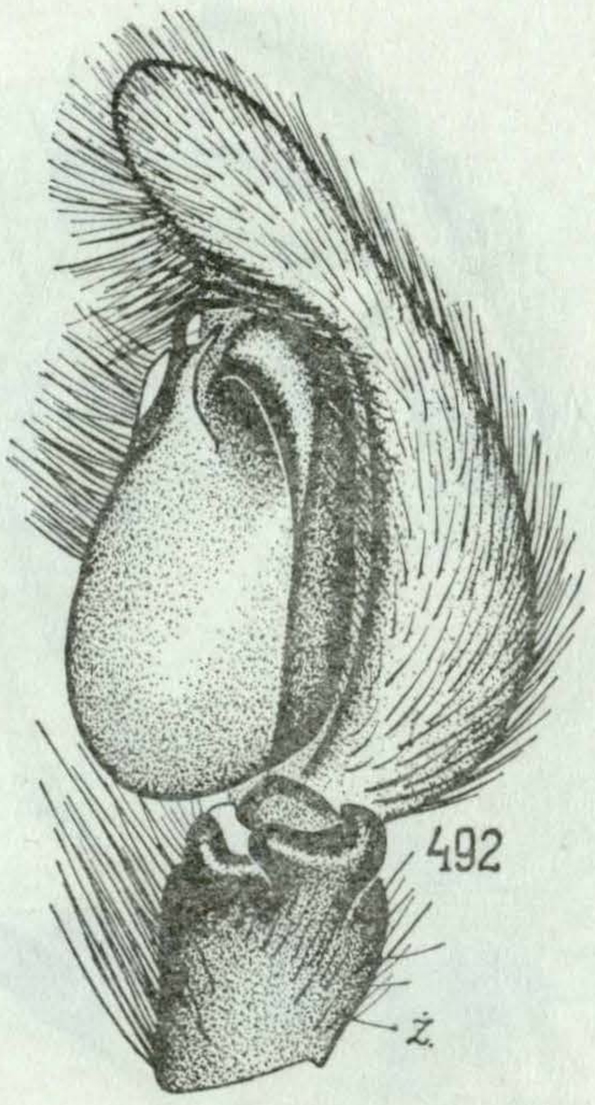


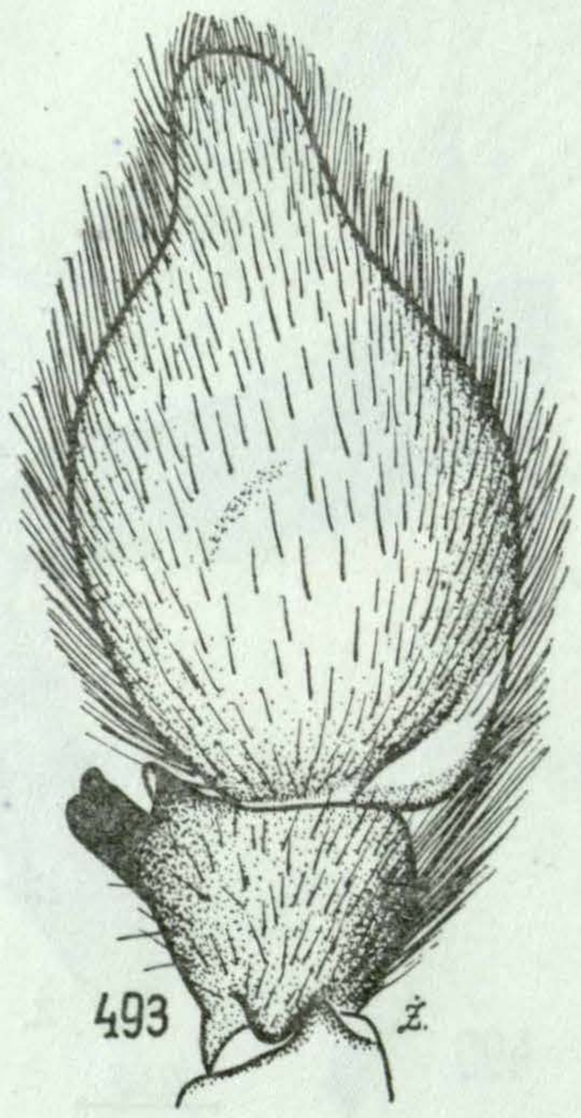


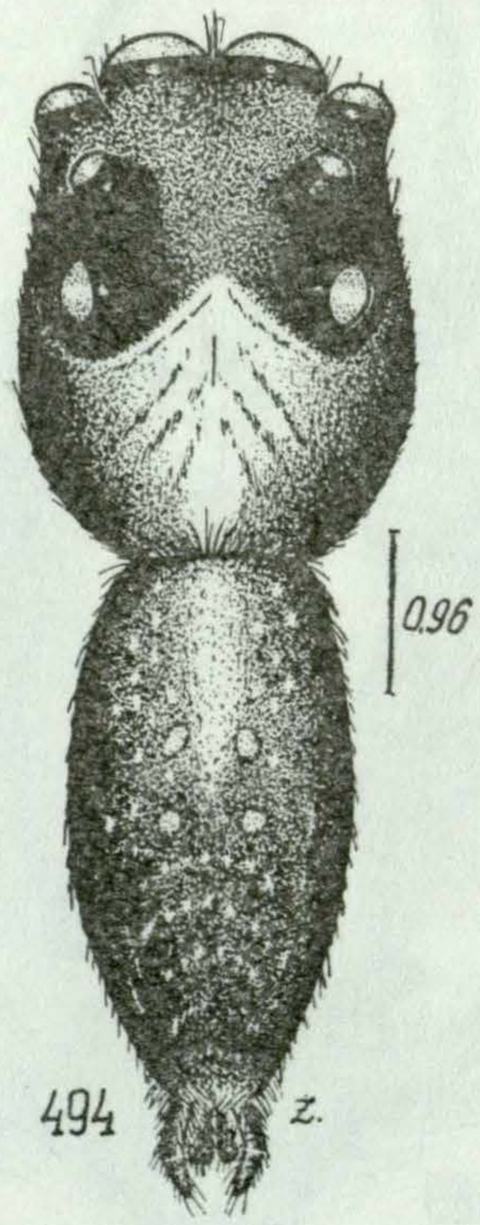


Figs. 487–490. ♂ *Portia albimana* (Simon, 1900): palpal organ (487–489) and leg I (490).

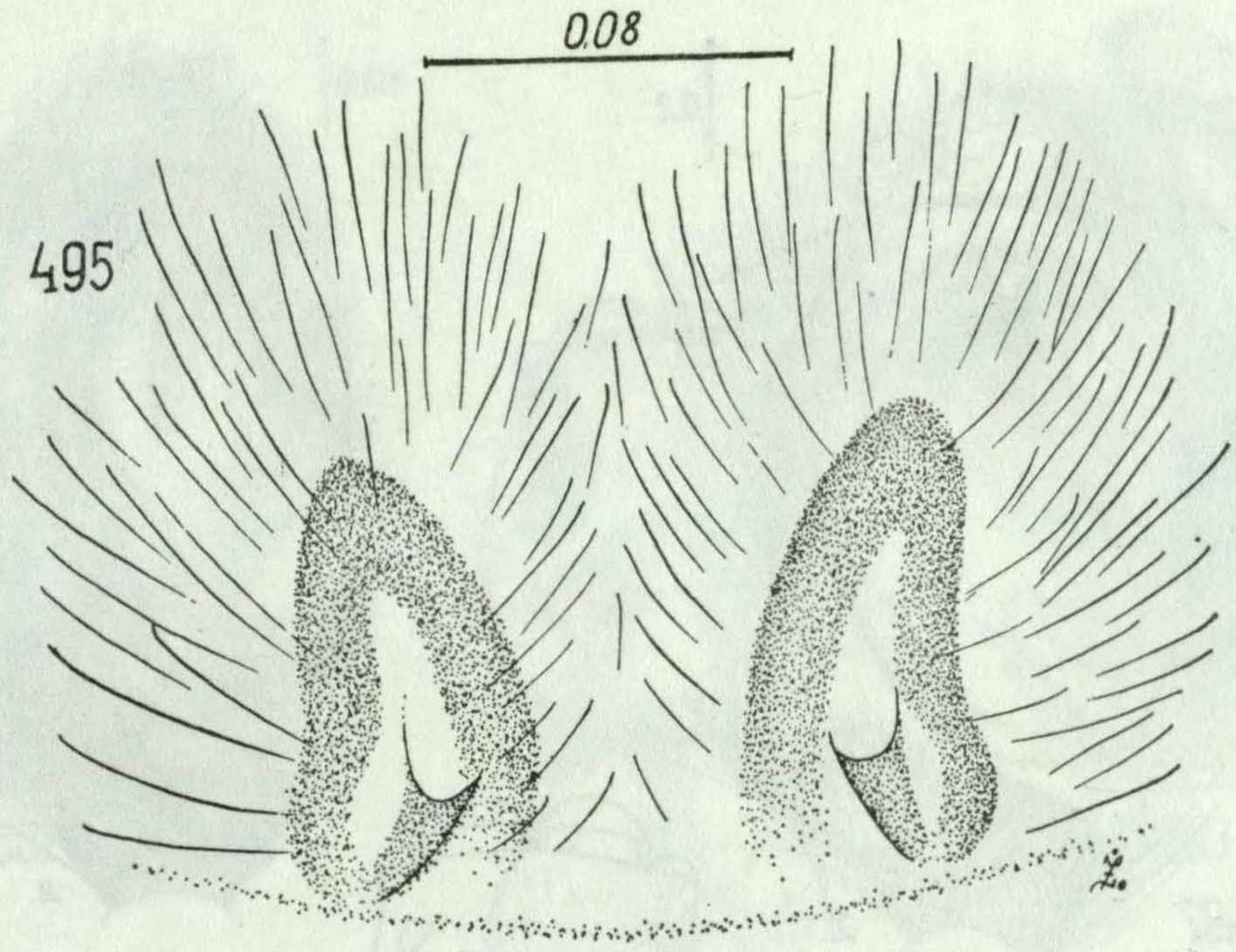


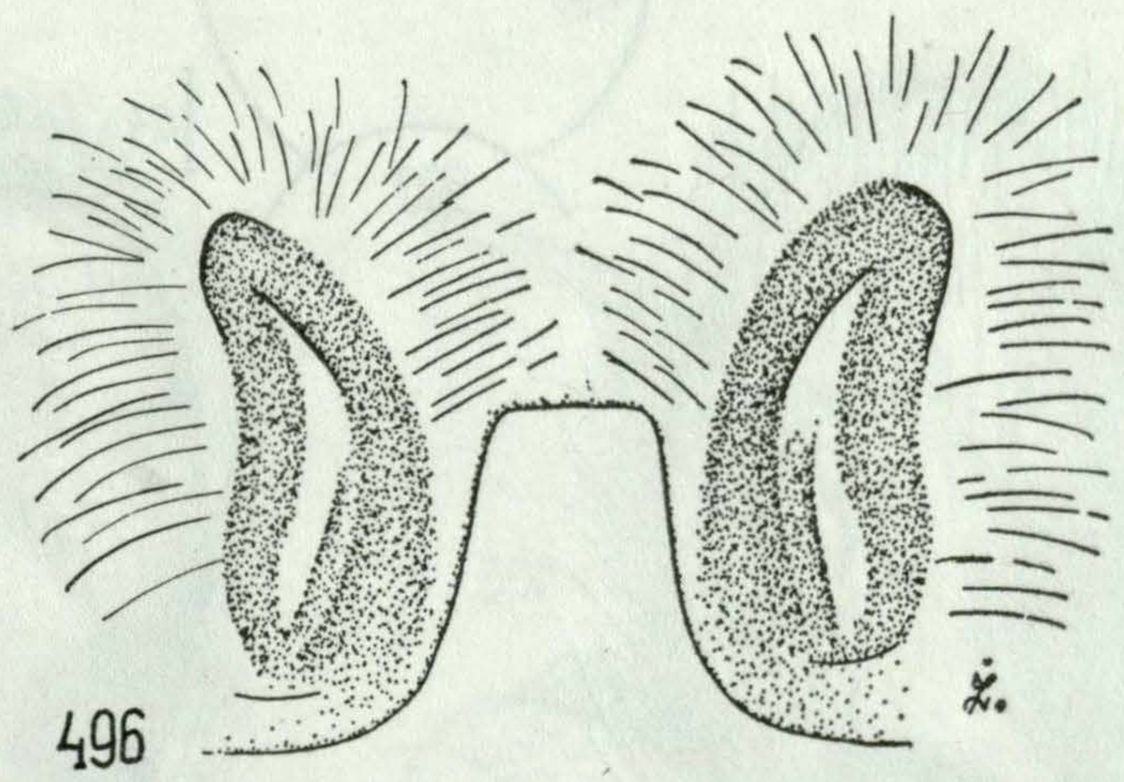




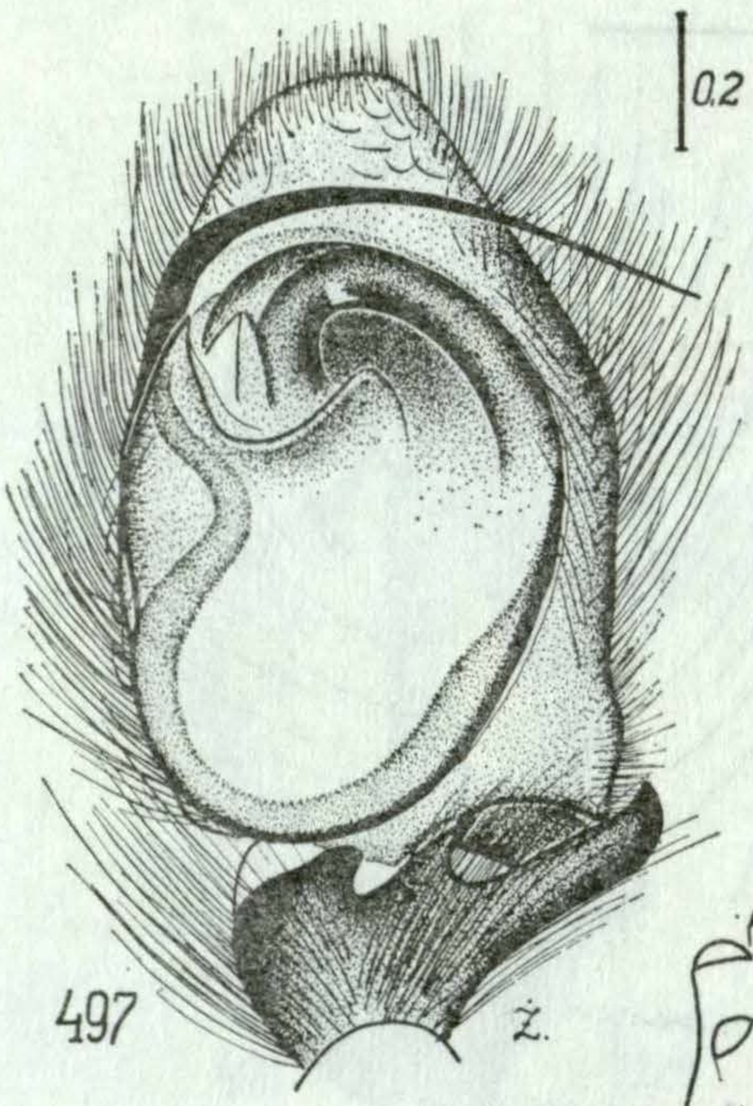


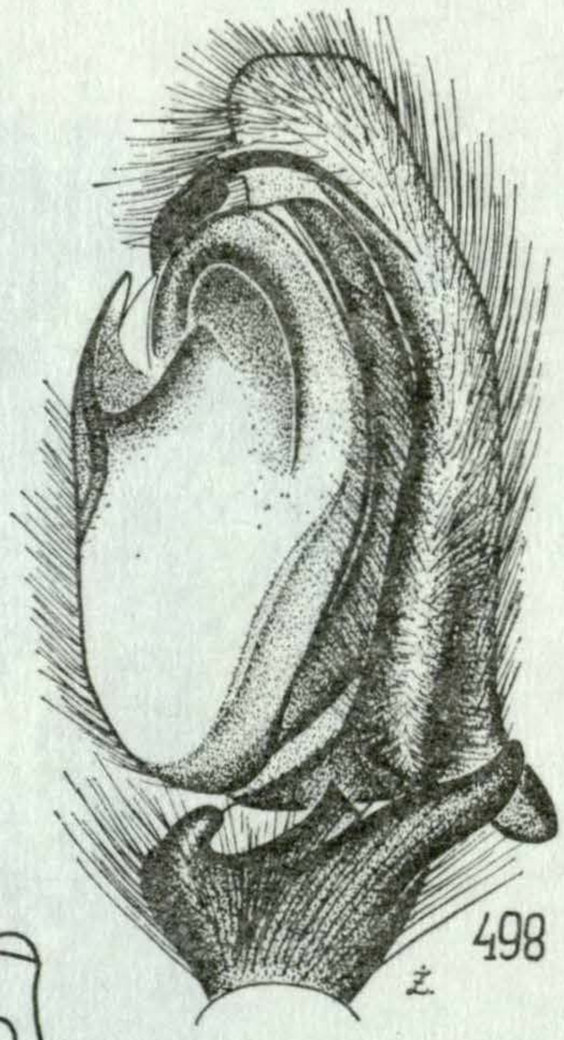
Figs. 491–494. ♂ *Portia hoggi* sp. n., holotype: palpal organ (491–493) and general appearance (494).

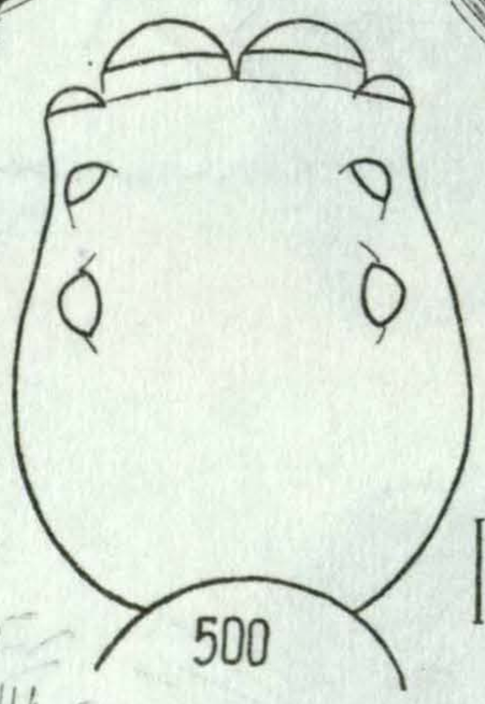


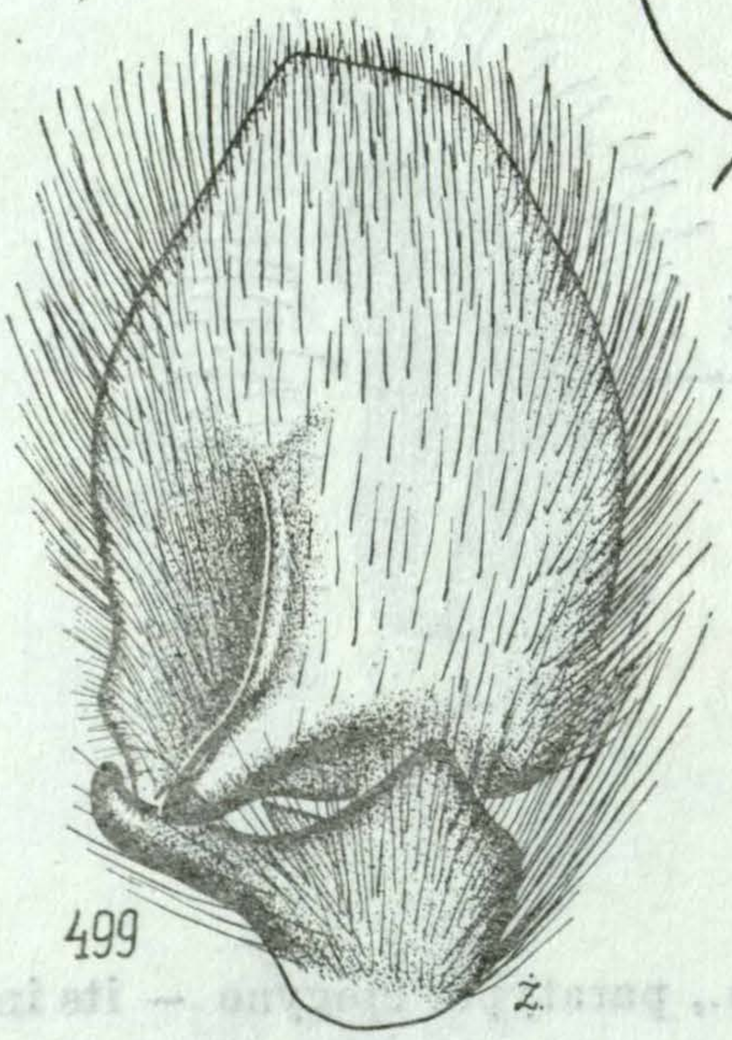


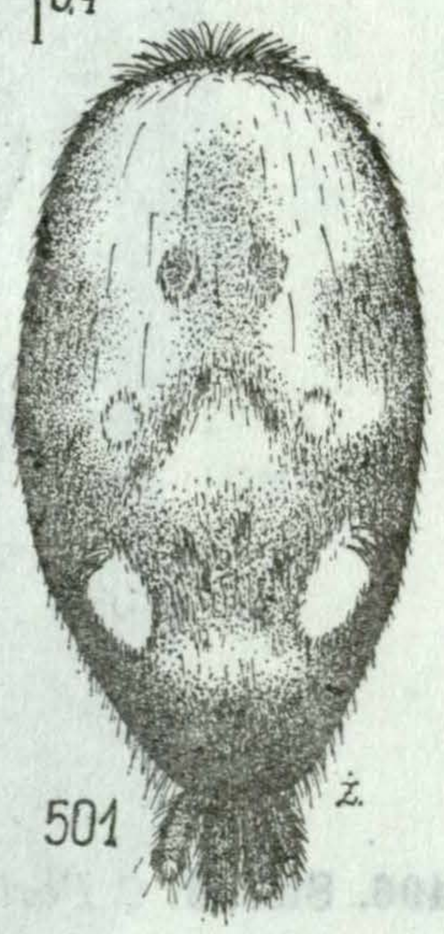
Figs. 495–496. Subad. ♀ *Portia hoggi* **sp. n., paratype: epigyne — its initial phase.**



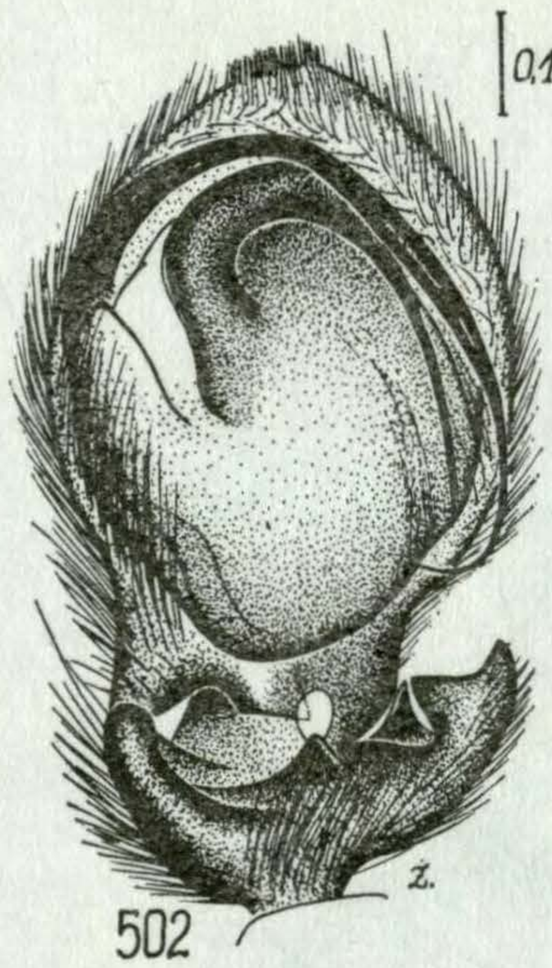








Figs. 497–501. ♂ *Portia quei* sp. n., holotype: palpal organ (497–499), cephalothorax (500) and abdominal pattern (501).



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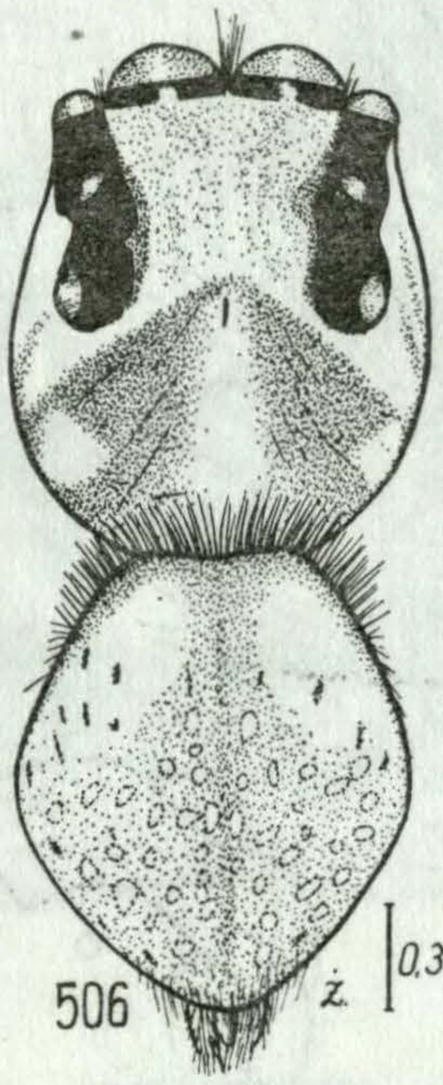

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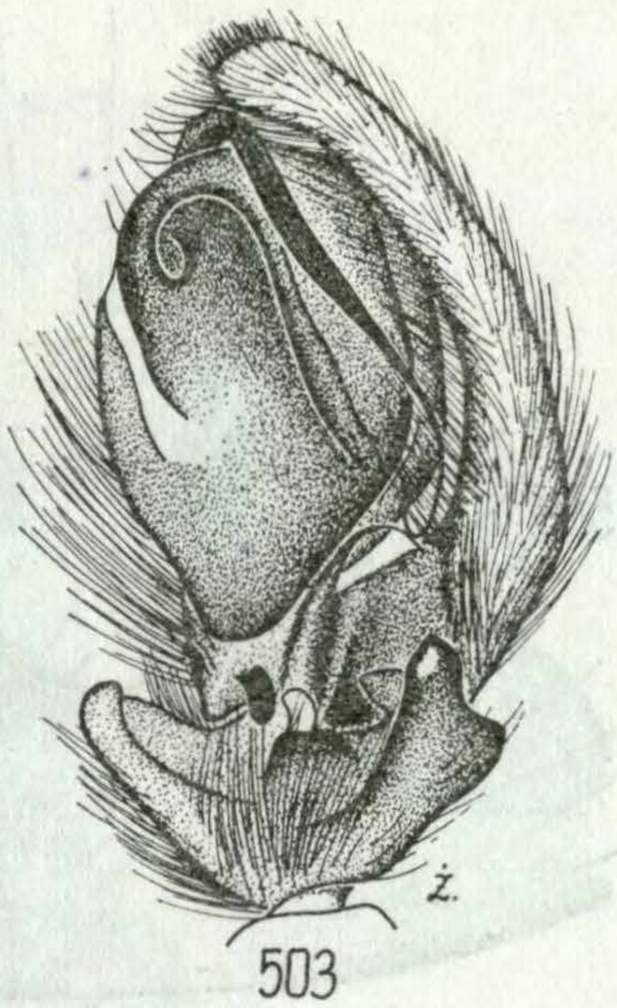

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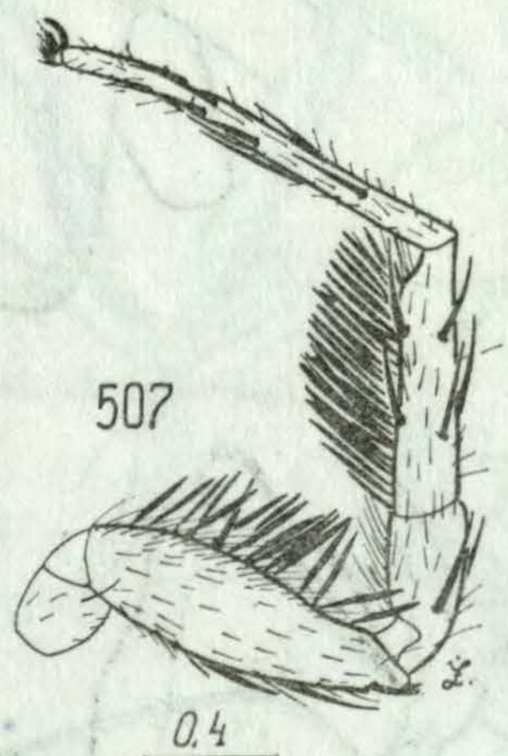

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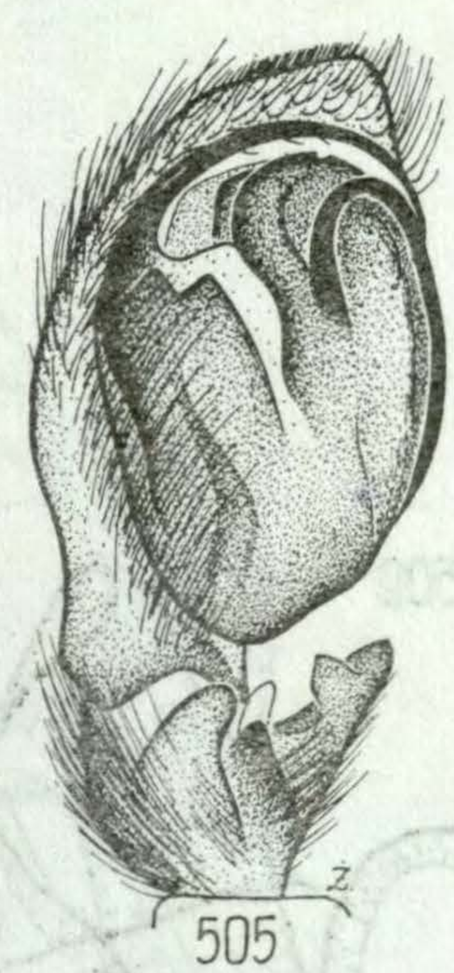

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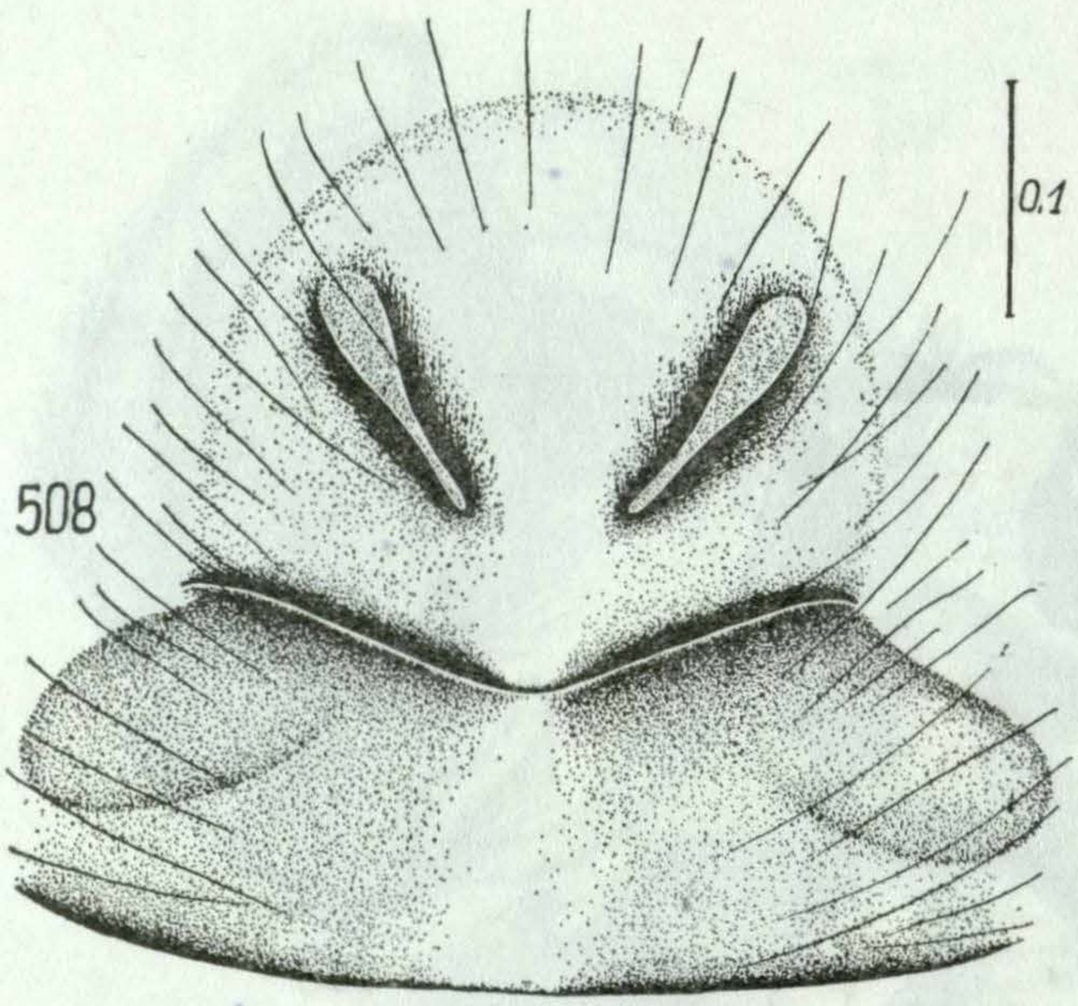
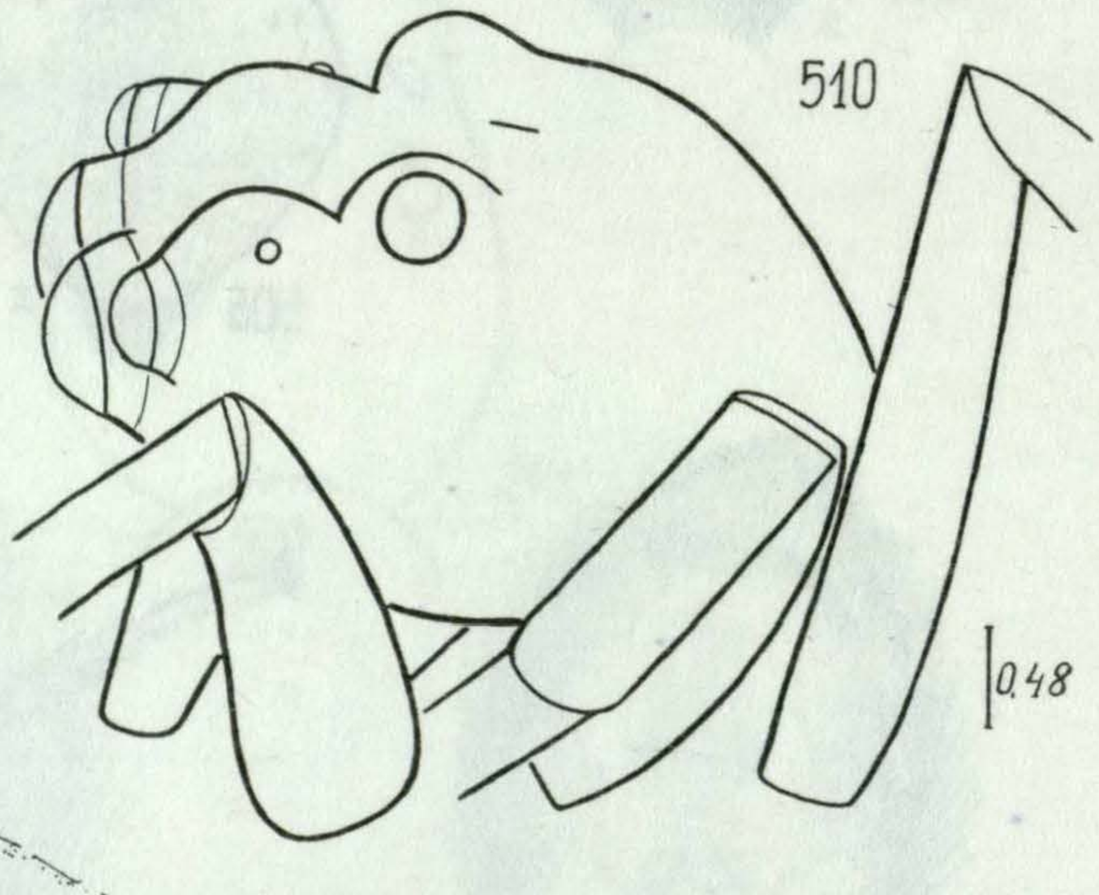
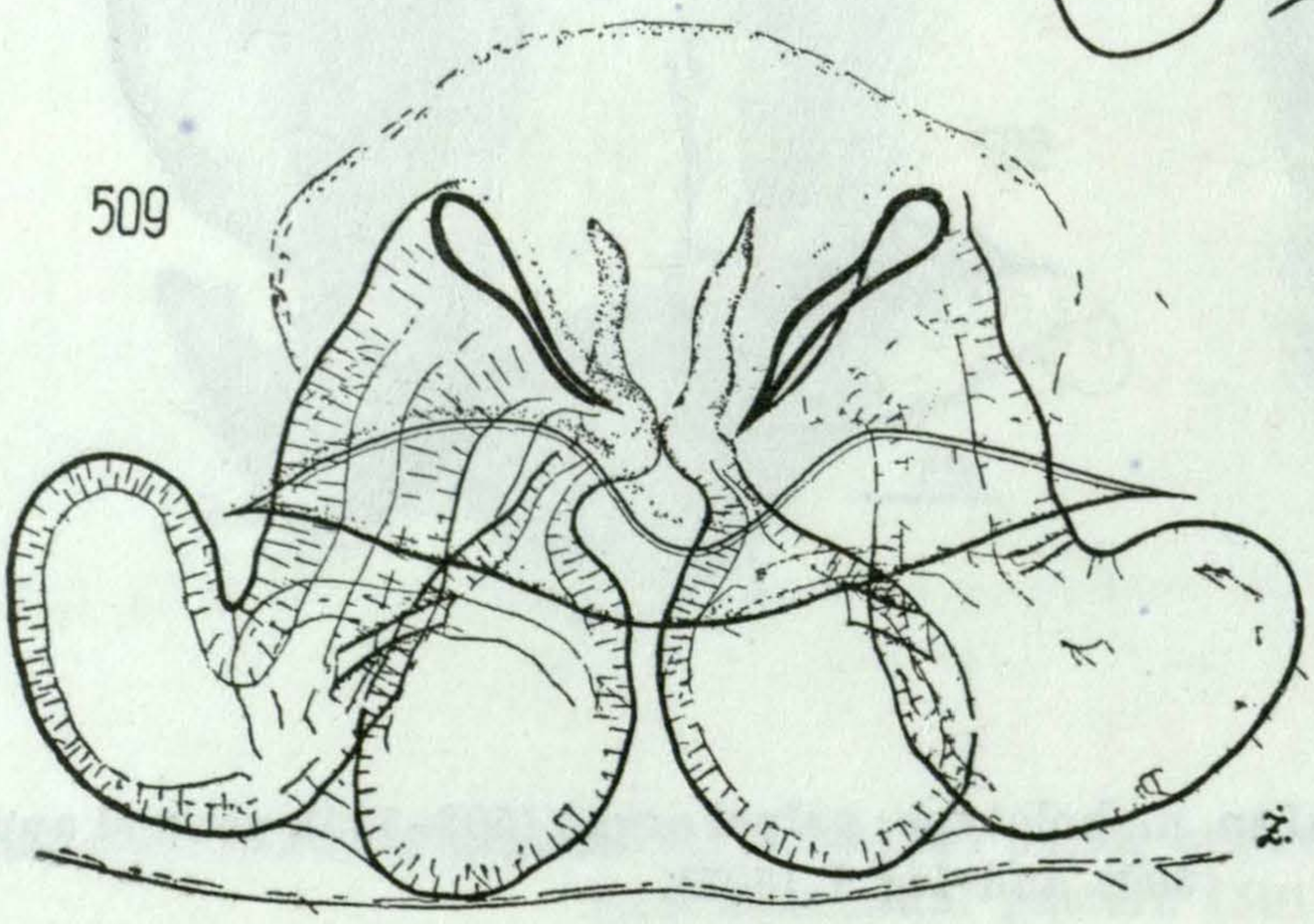
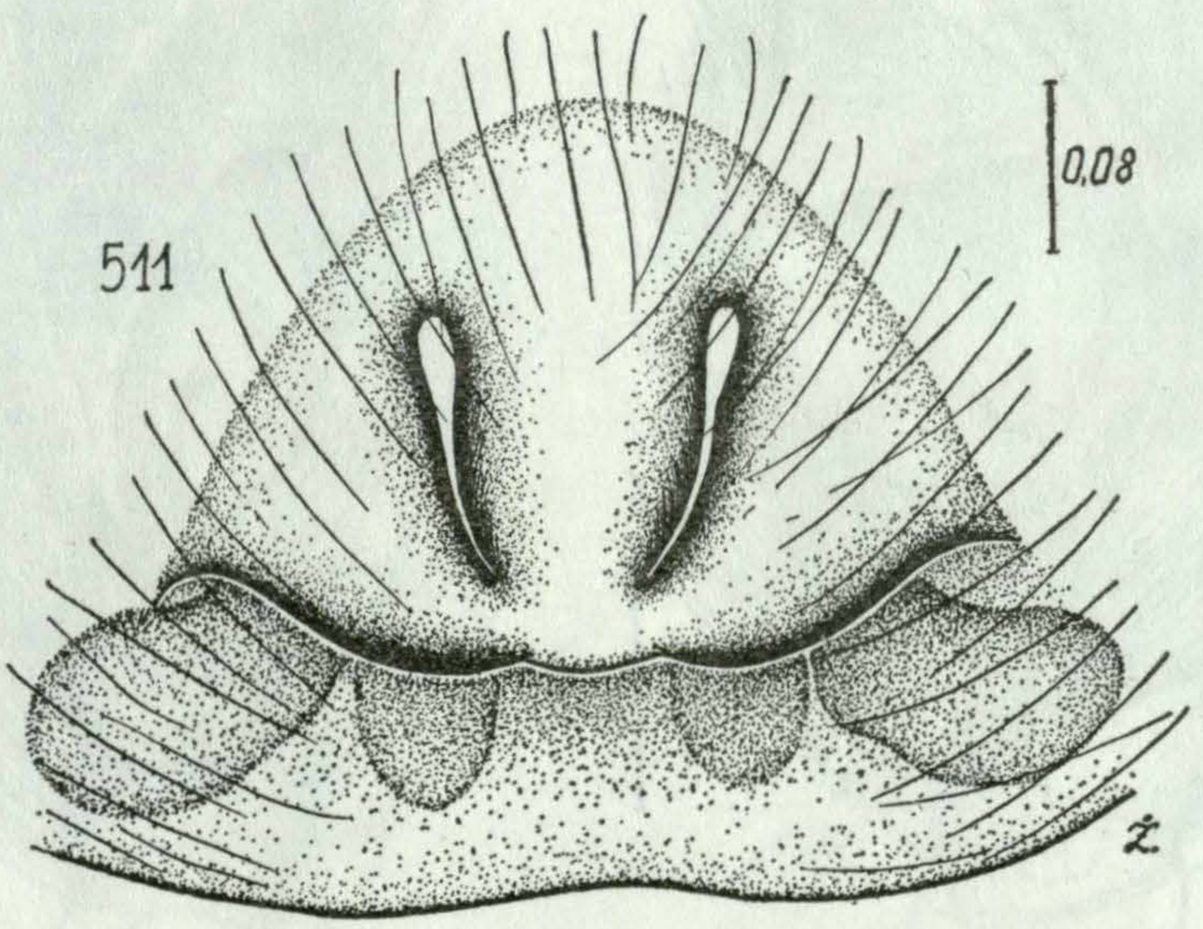
Figs. 502–507. ♂ *Neobrettus phui* sp. n., holotype: palpal organ (502–505), general appearance (506) and leg I (507).



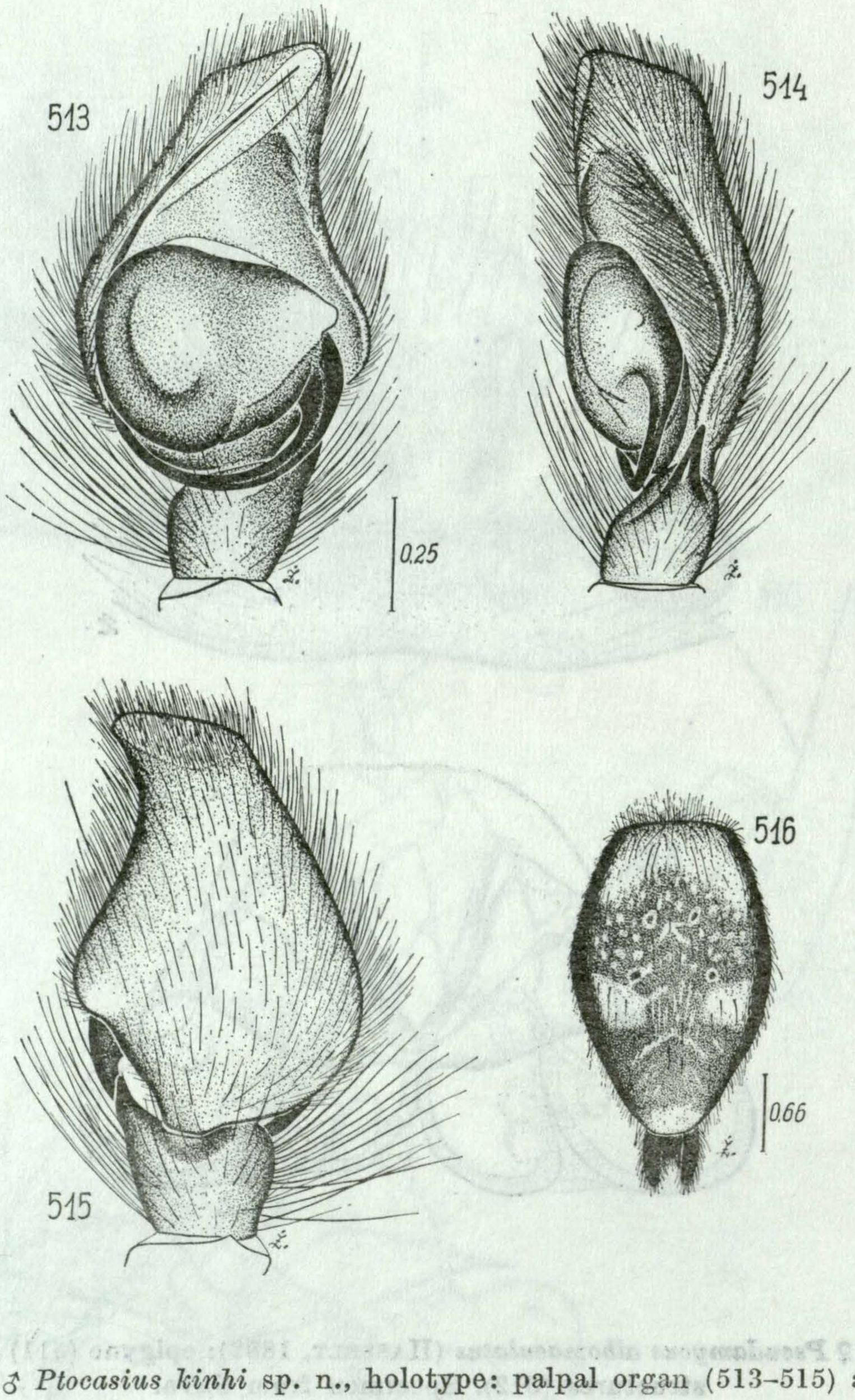




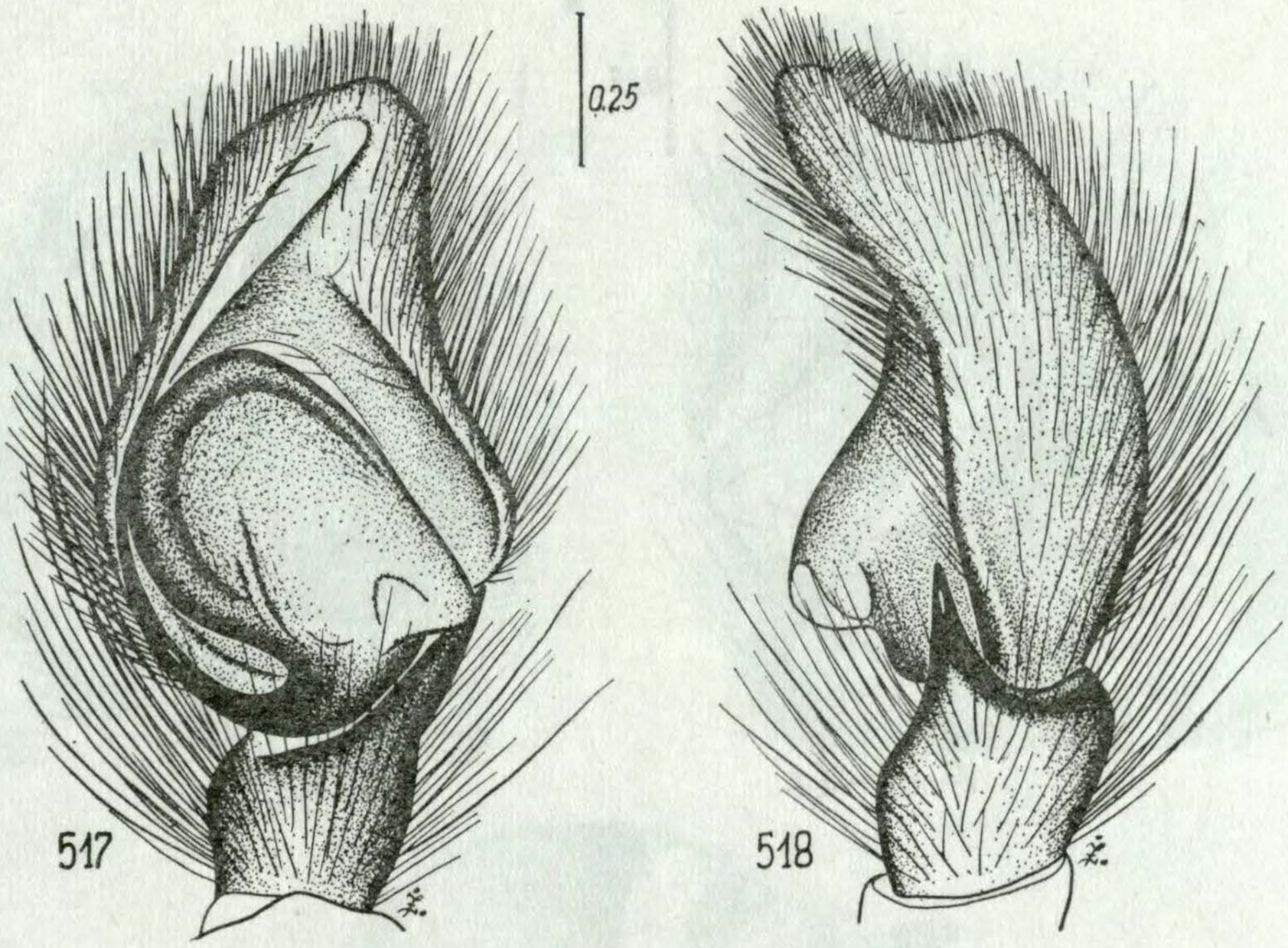
Figs. 508–510. ♀ ***Pseudamycus hasselti*** **sp. n., holotype: epigyne (508), its internal structures (509) and cephalothorax (510).**

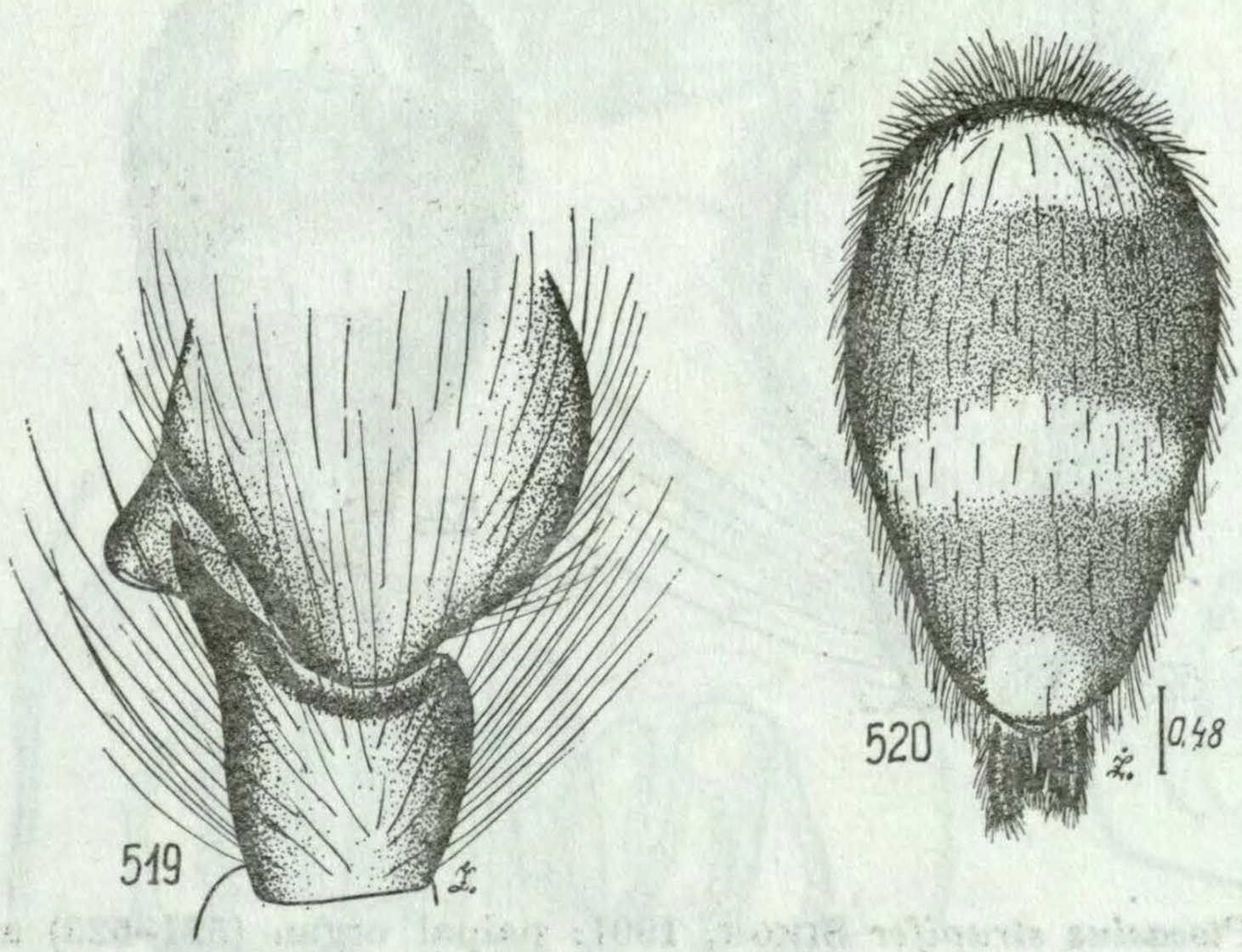


Figs. 511–512. ♀ *Pseudamycus albomaculatus* (HASSELT, 1882): epigyne (511) and its internal structures (512). Specimen from Java.

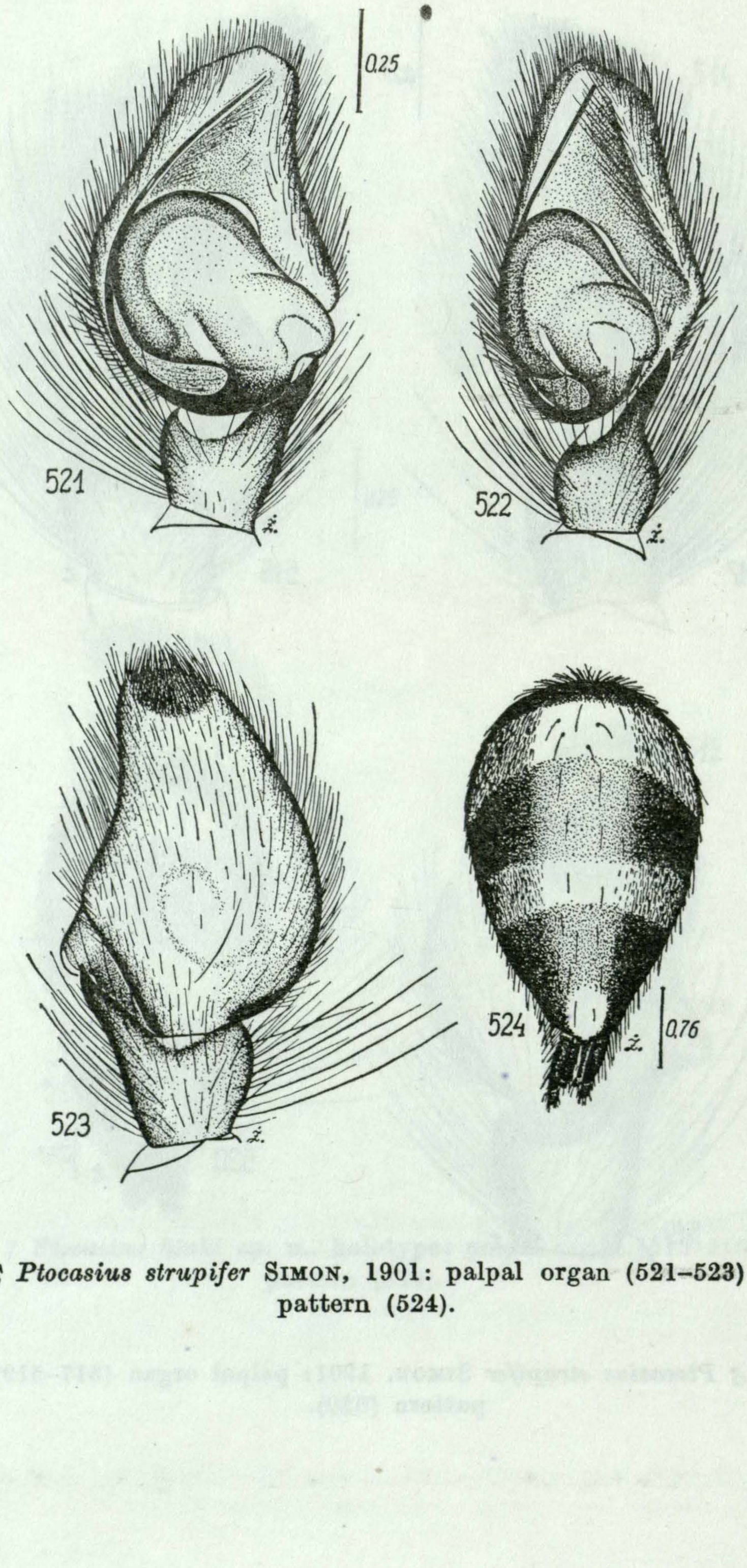


Figs. 513–516. ♂ *Ptocasius kinhi* sp. n., holotype: palpal organ (513–515) and abdominal pattern (516).

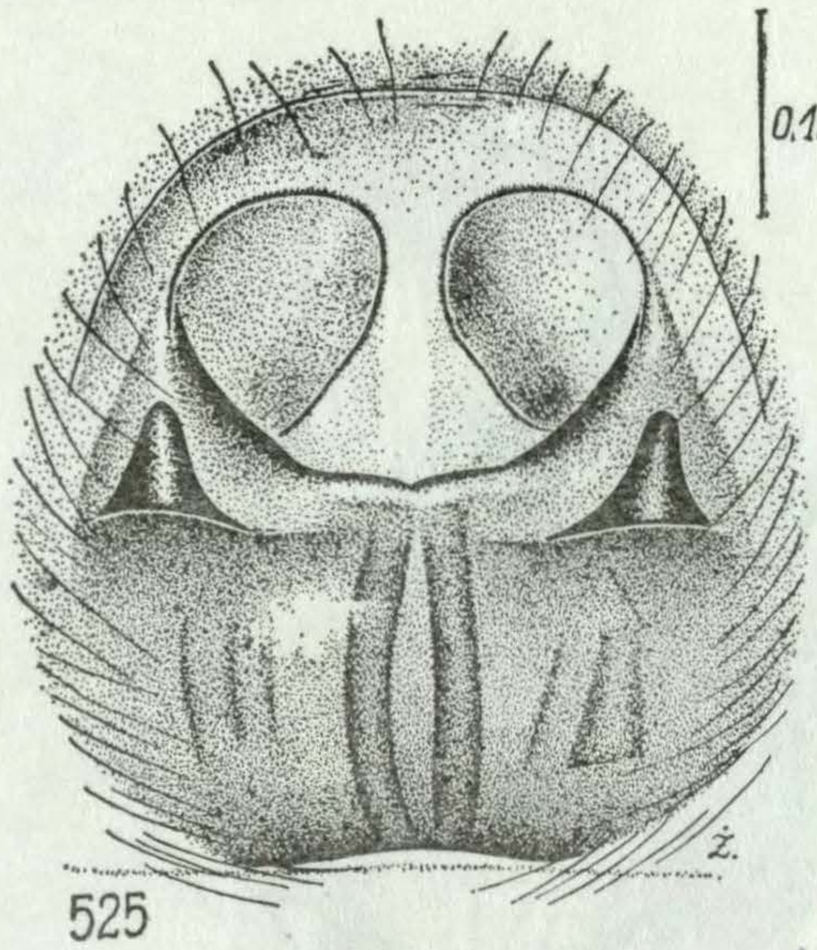




Figs. 517–520. ♂ *Ptocasius strupifer* SIMON, 1901: palpal organ (517–519) and abdominal pattern (520).



Figs. 521–524. ♂ *Ptocasius strupifer* SIMON, 1901: palpal organ (521–523) and abdominal pattern (524).



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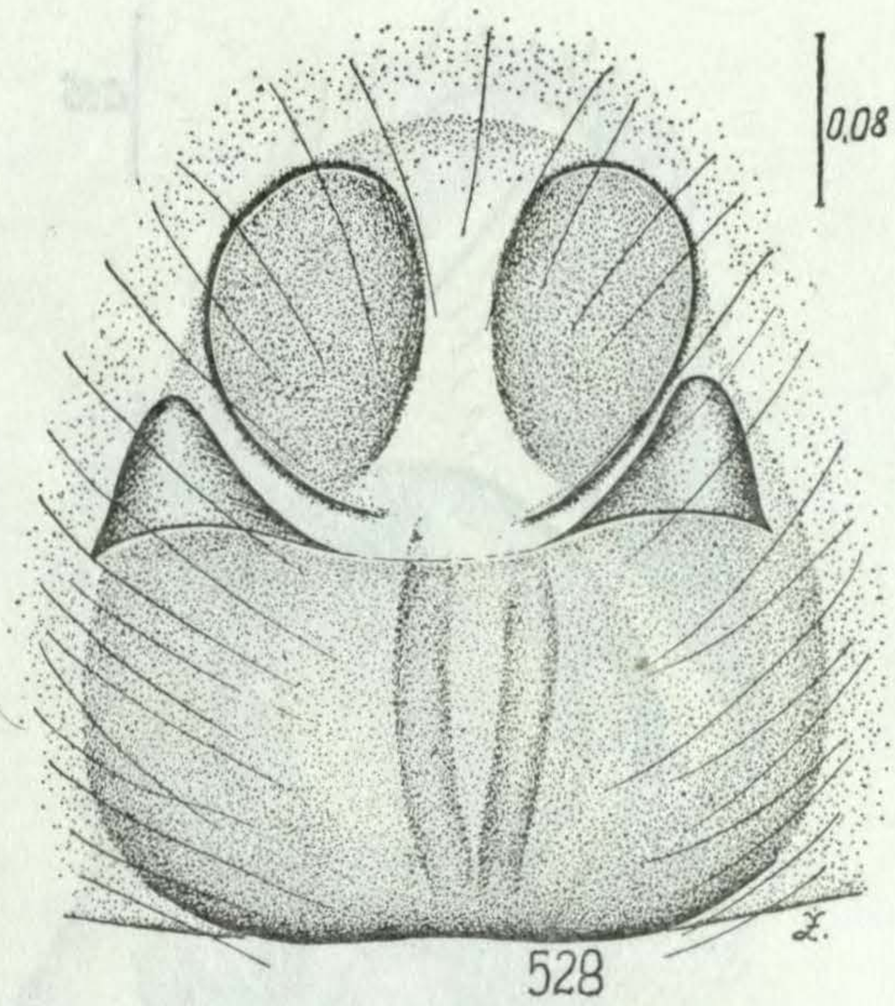

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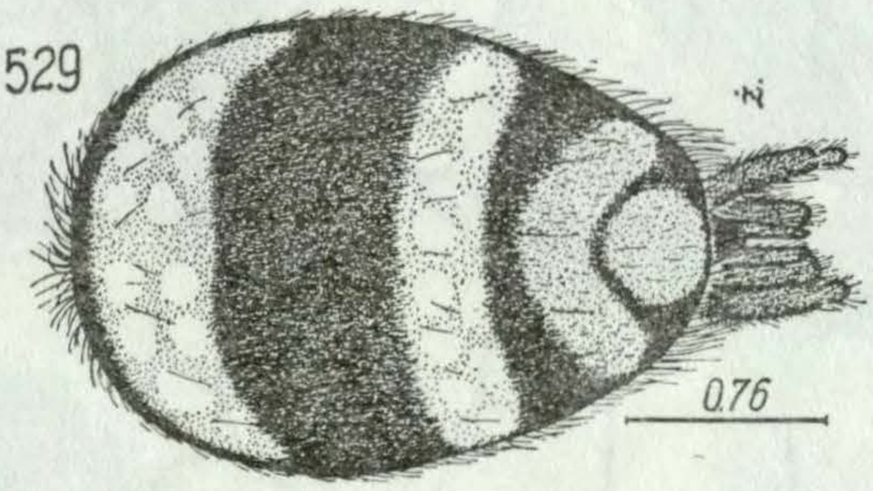

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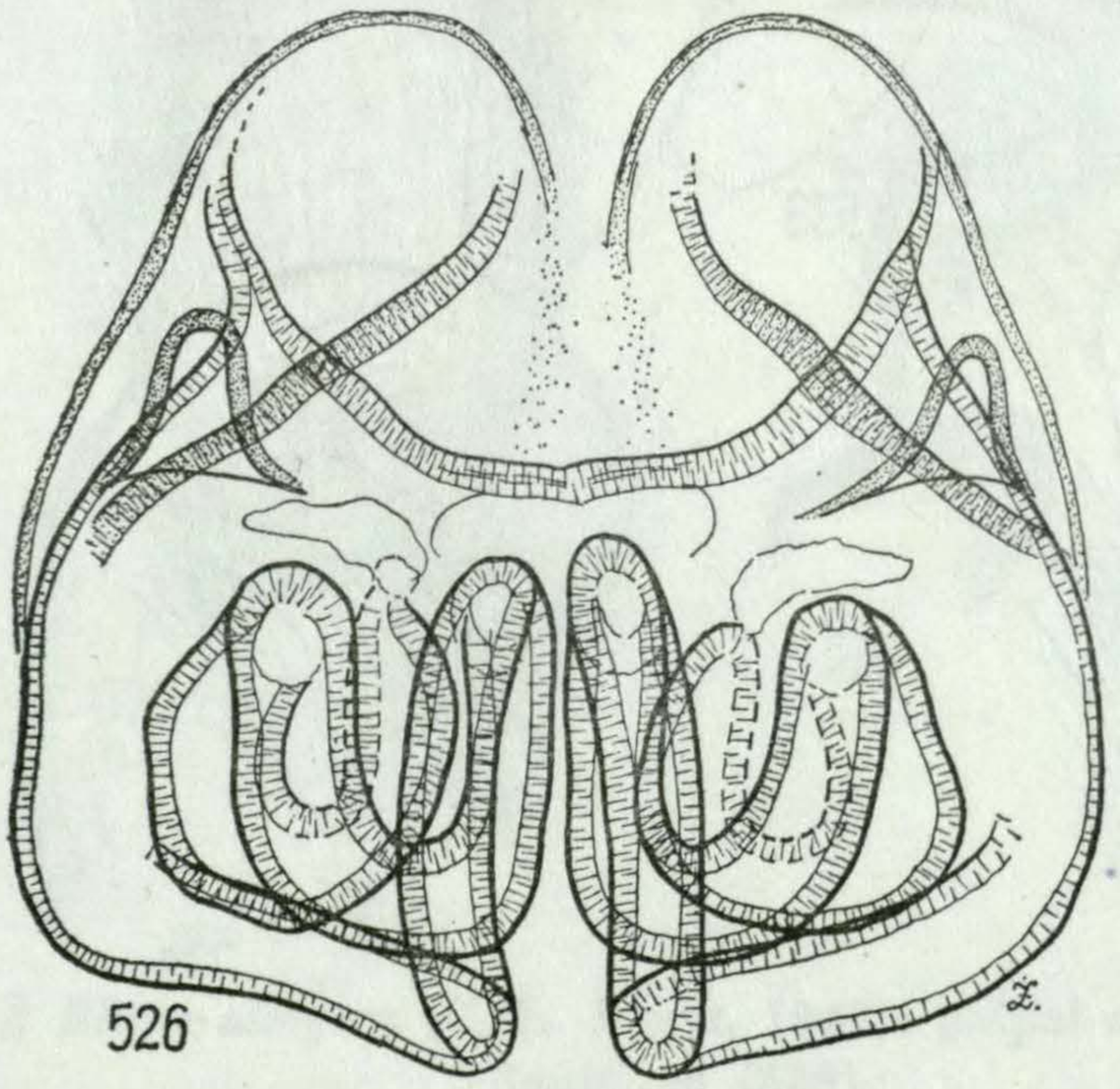

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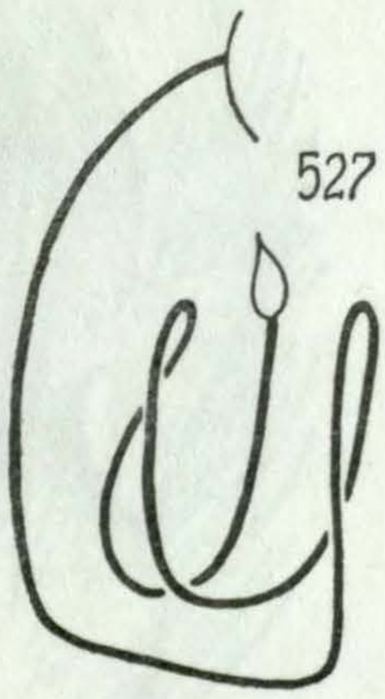

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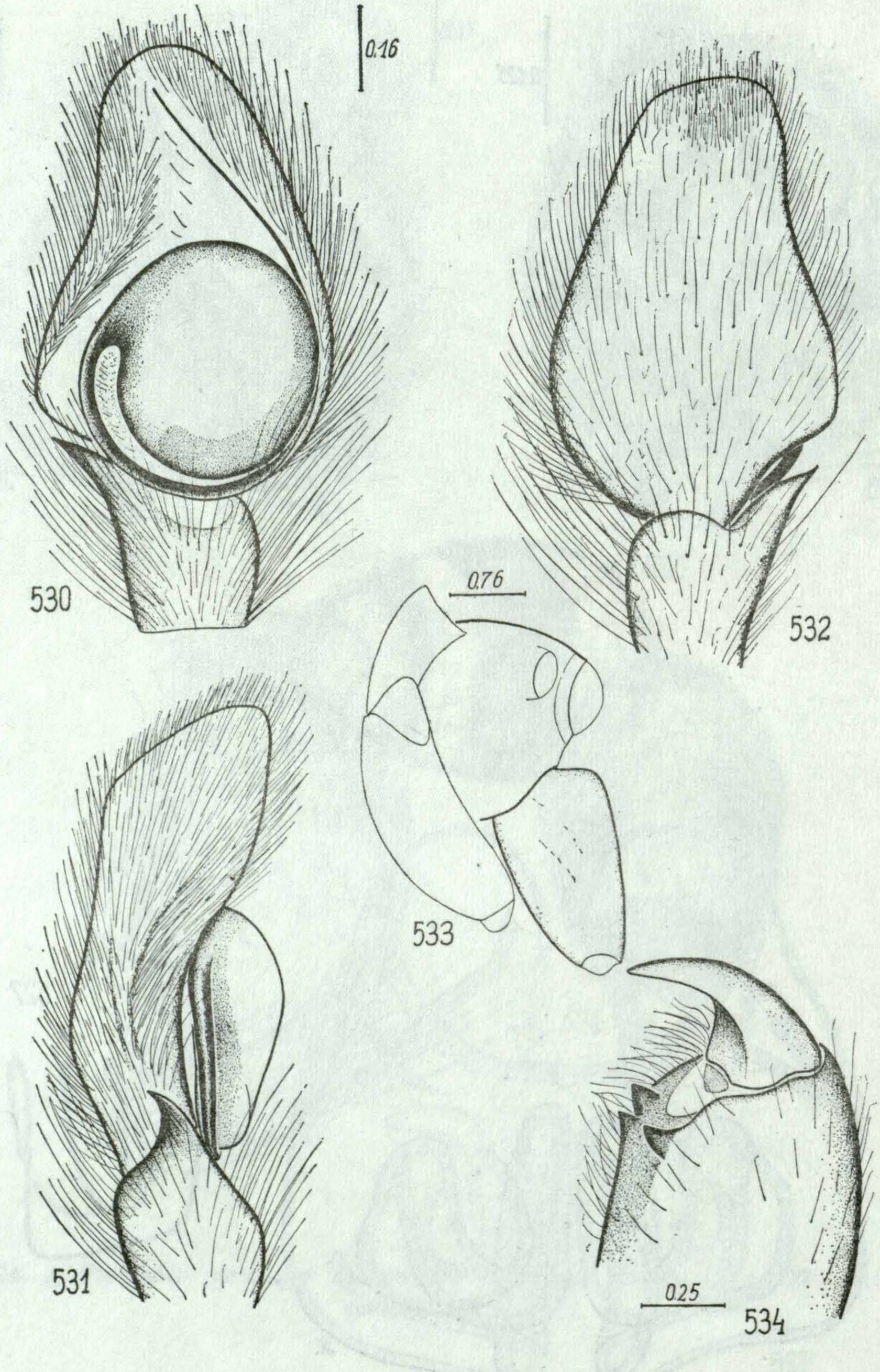
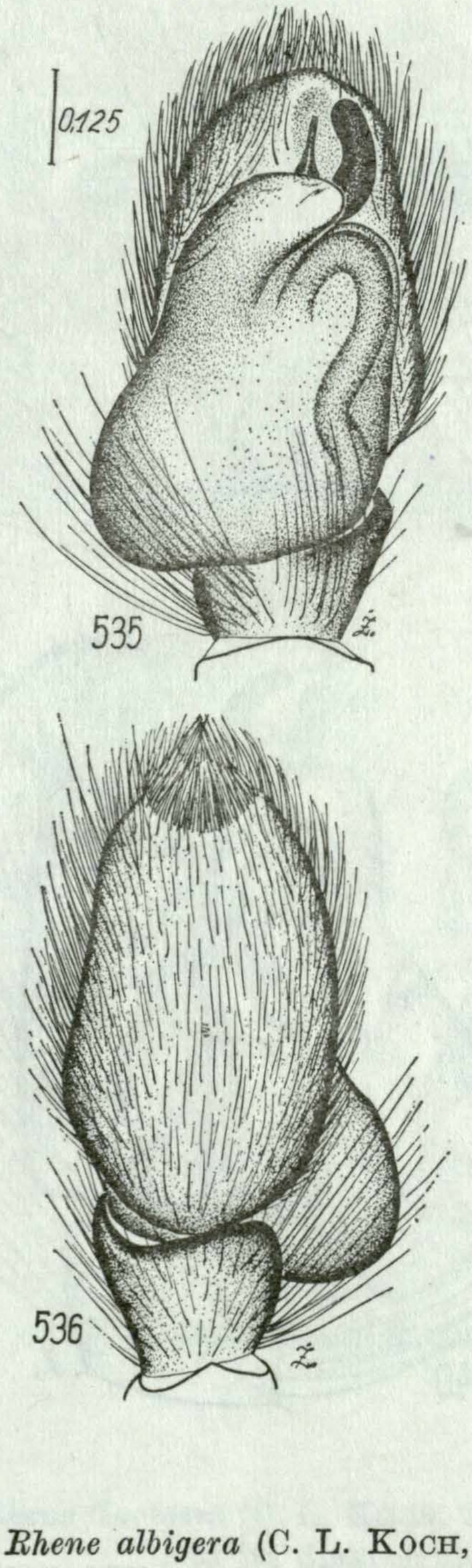
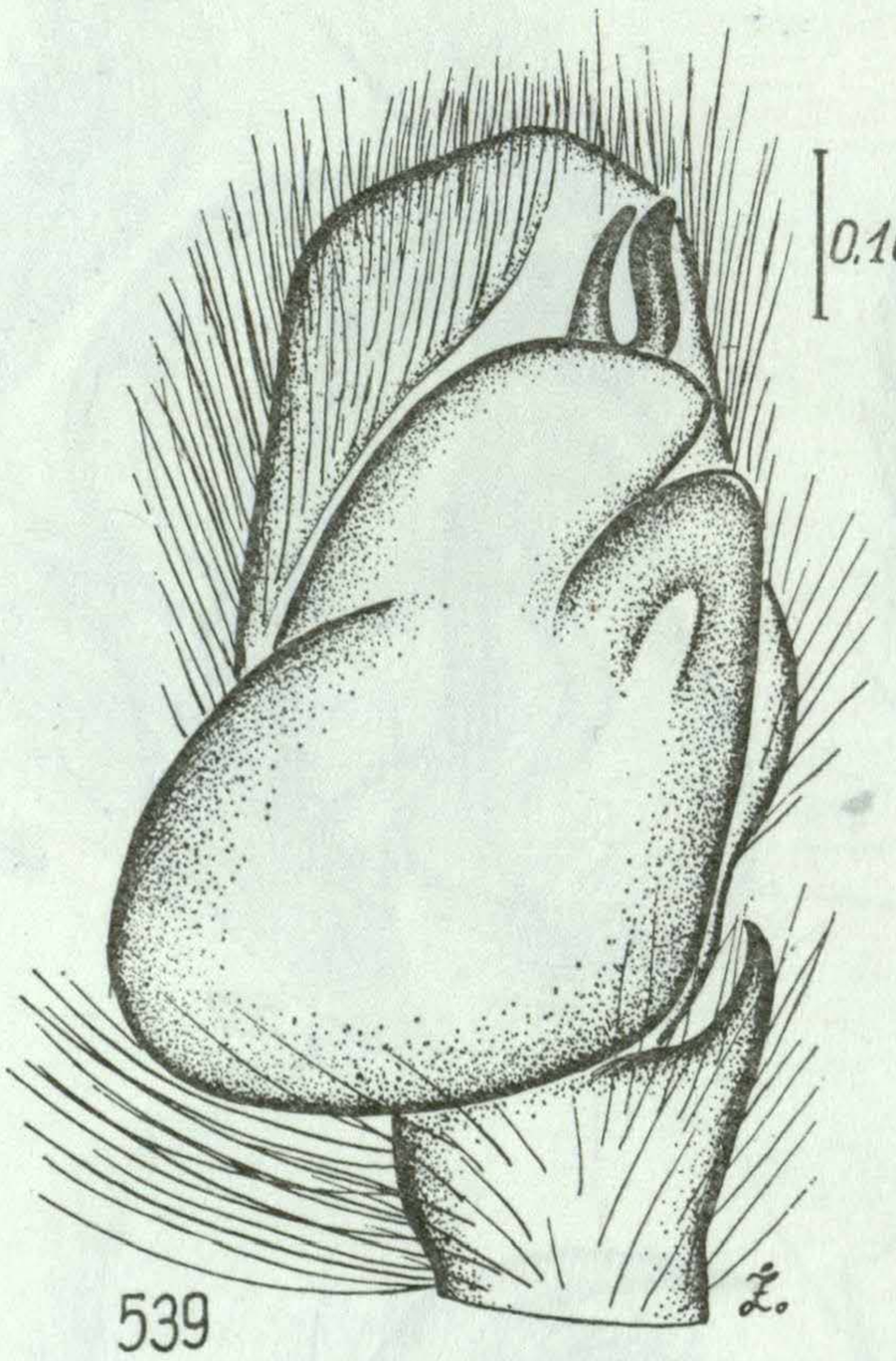
Figs. 525–529. ♀ *Ptocasius strupifer* SIMON, 1901: epigyne (525, 528), internal structures (526), its diagrammatic course (527) and abdominal pattern (529).

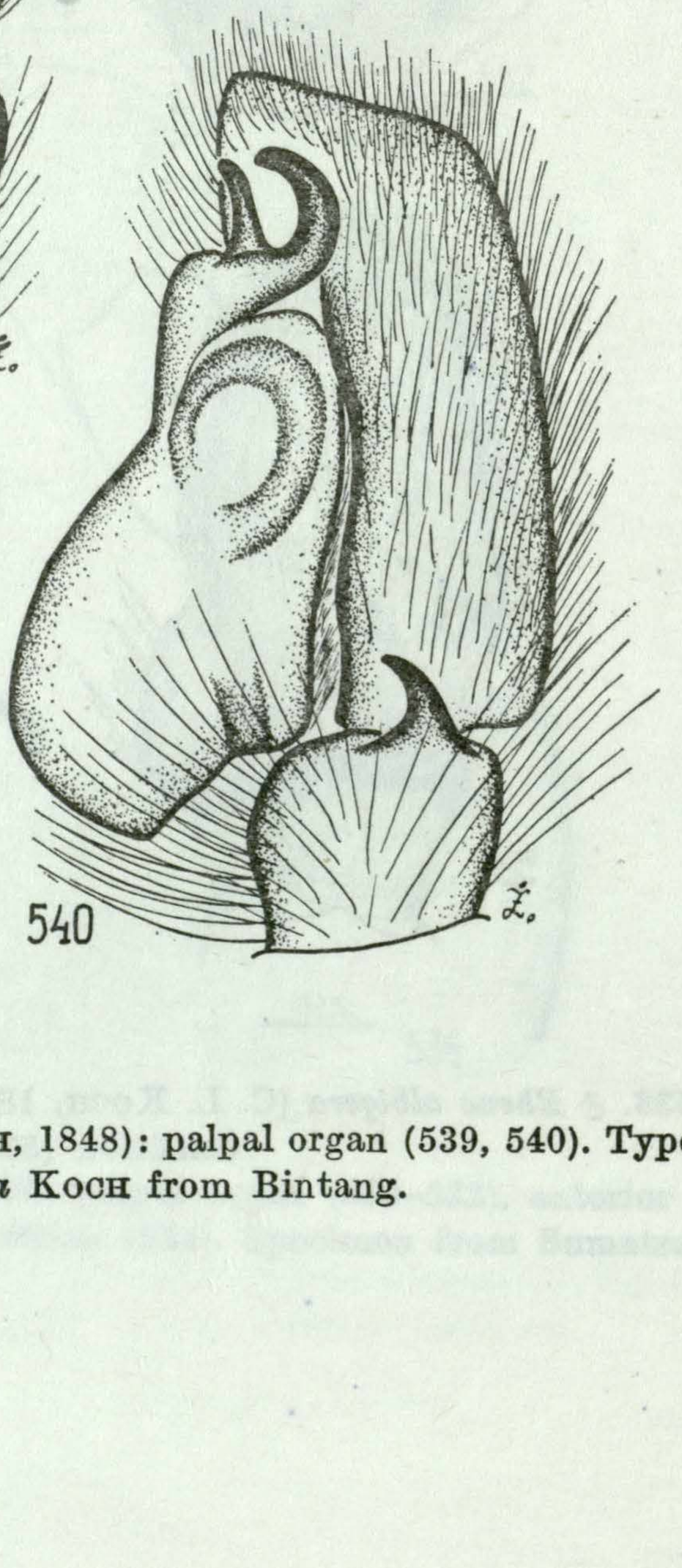


Figs. 530–534. ♂ *Ptocasius weyersi* SIMON, 1885: palpal organ (530–532), anterior part of cephalothorax (533) and cheliceral dentition (534). Specimen from Sumatra.

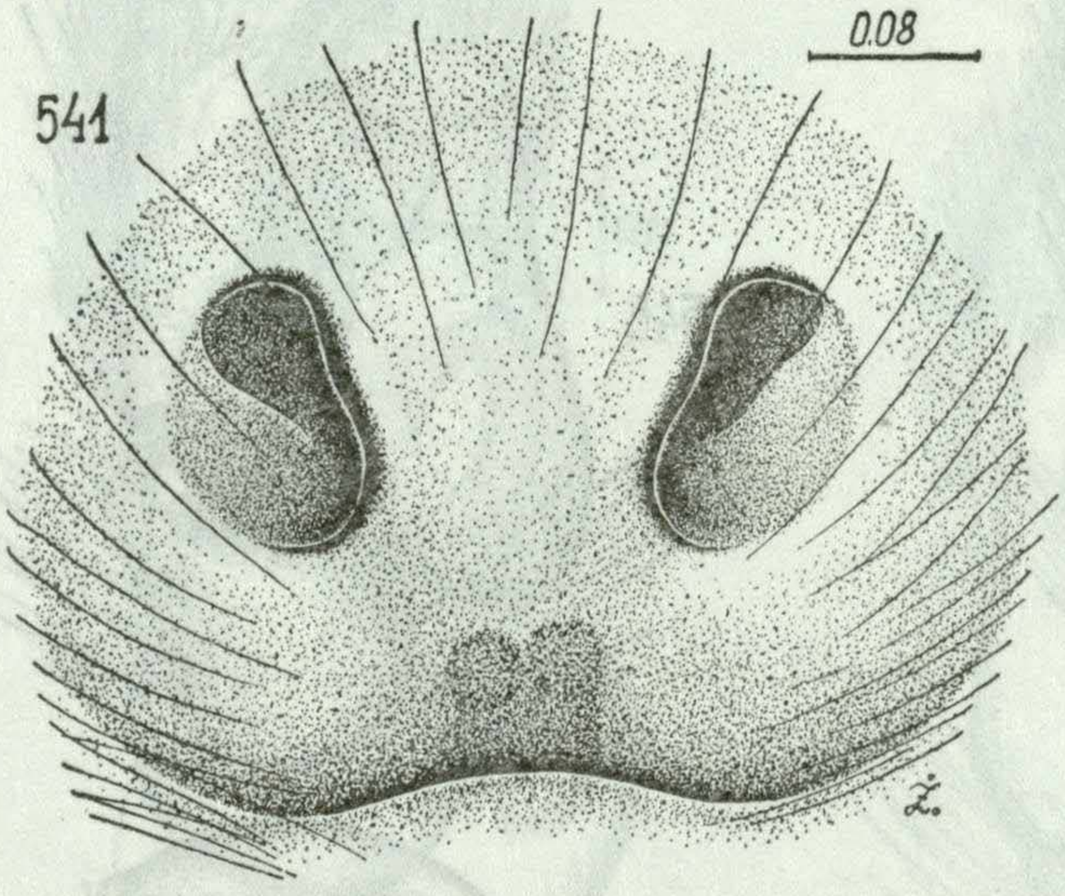


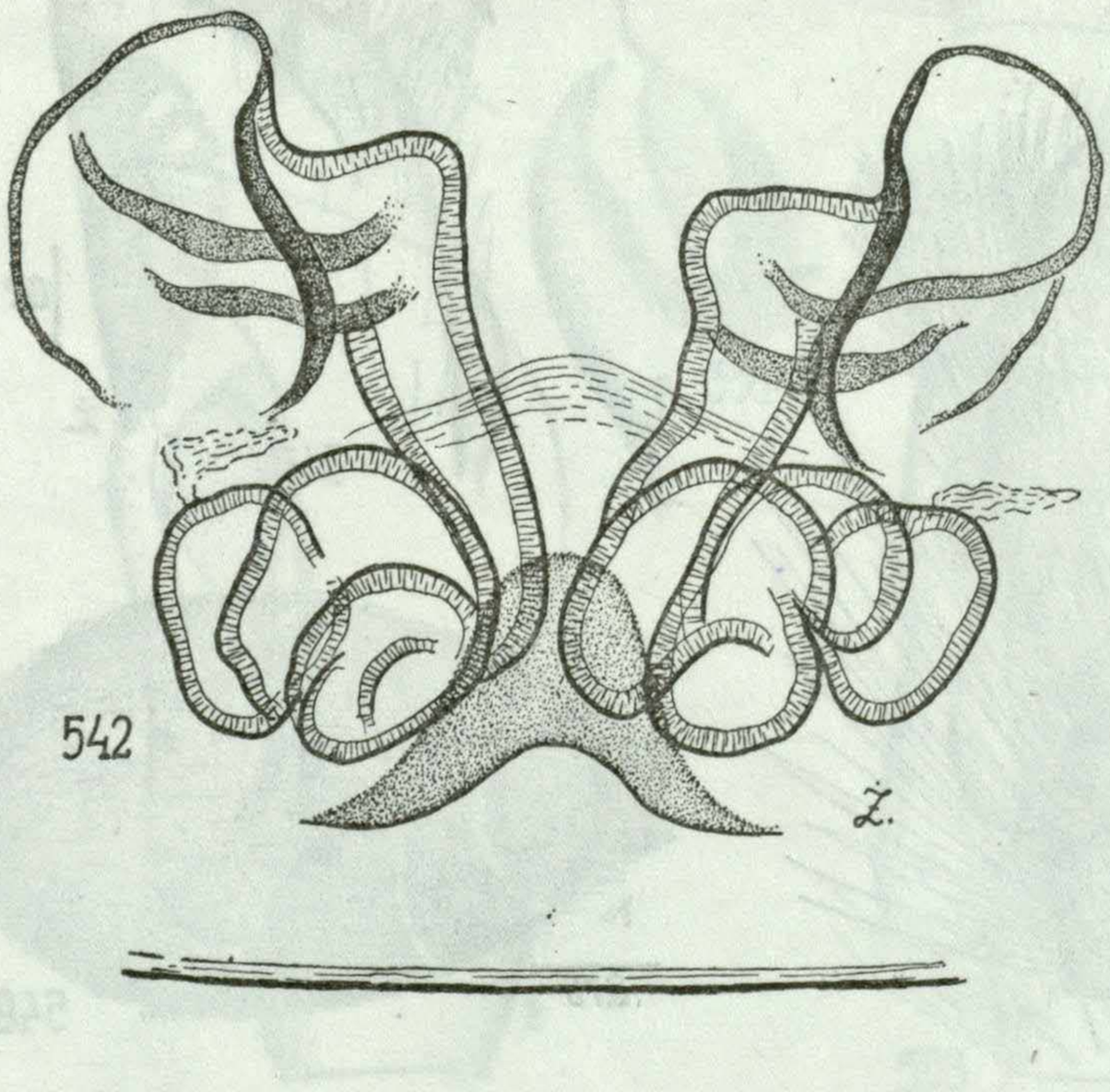
Figs. 535–538. ♂ *Rhene albigera* (C. L. Koch, 1848): palpal organ (535–537) and cheliceral dentition (538).



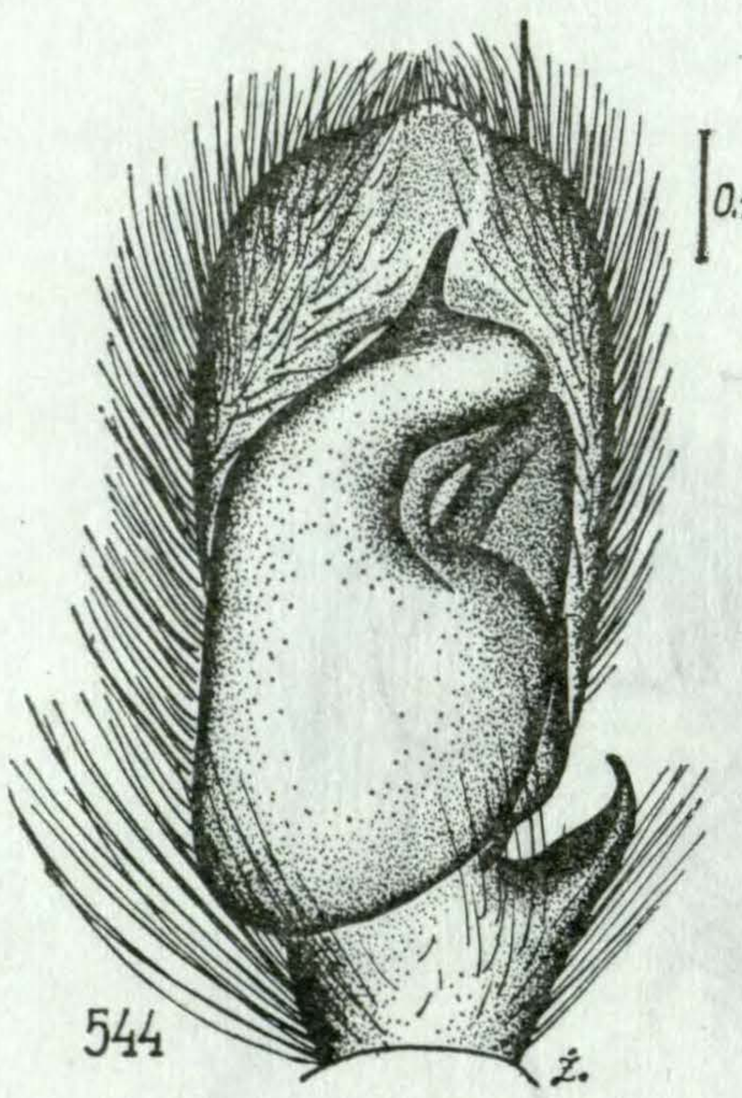


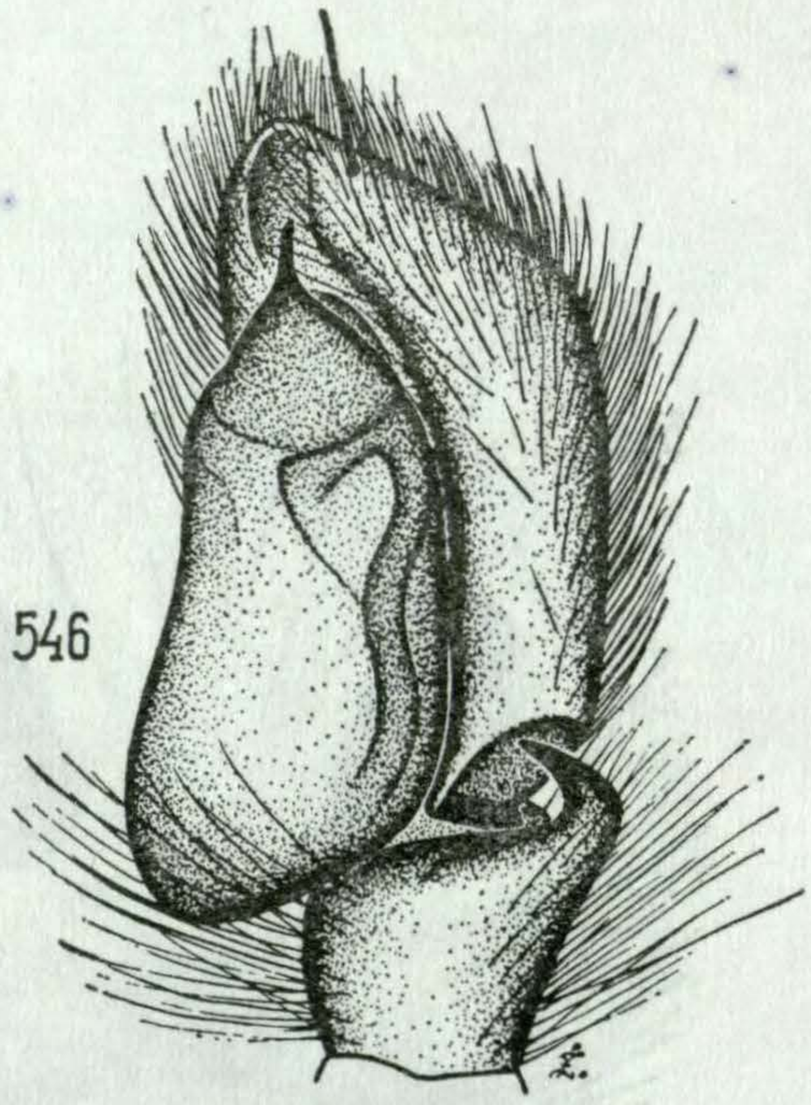
Figs. 539–540. ♂ *Rhene albigera* (C. L. Koch, 1848): palpal organ (539, 540). Type-specimen of *Rhanis albigera* Koch from Bintang.

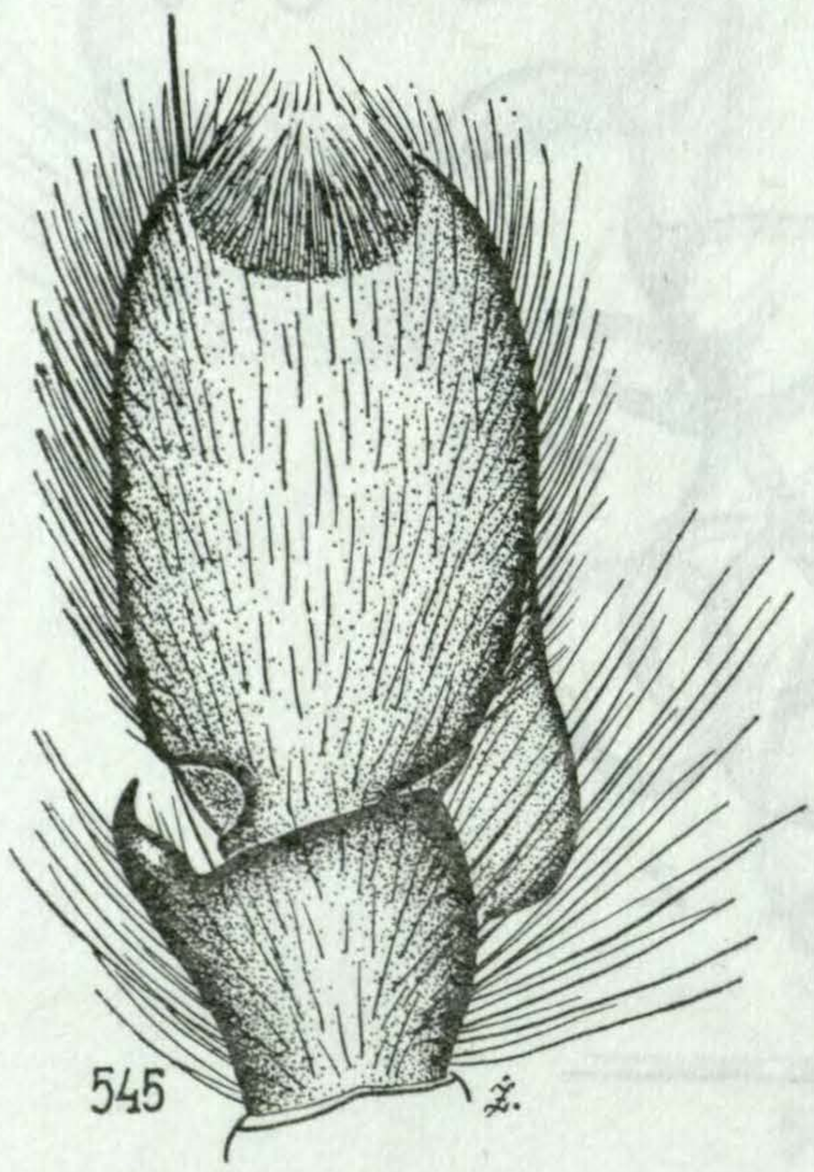


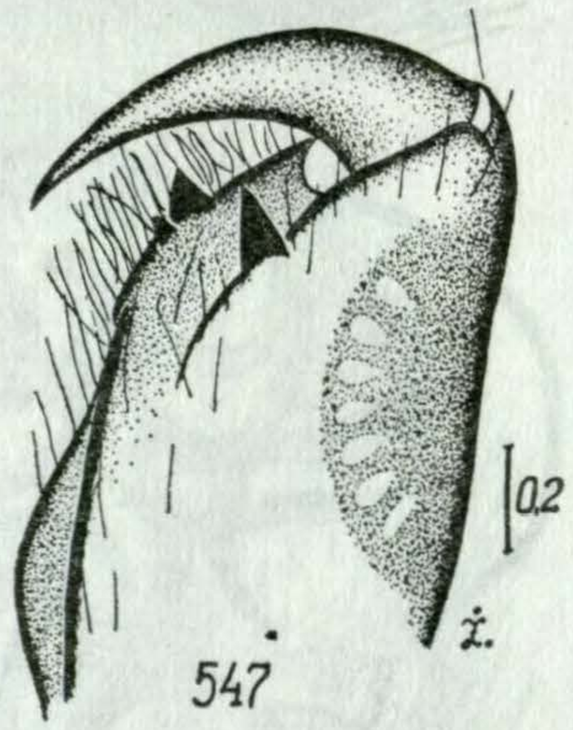


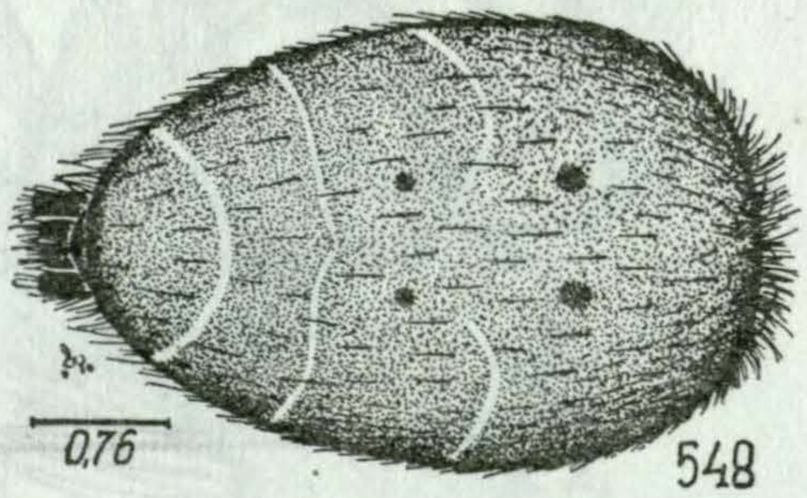
Figs. 541–543. ♀ *Rhene flavigera* (C. L. Koch, 1848): epigyne (541), internal structures (542) and its diagrammatic course (543).



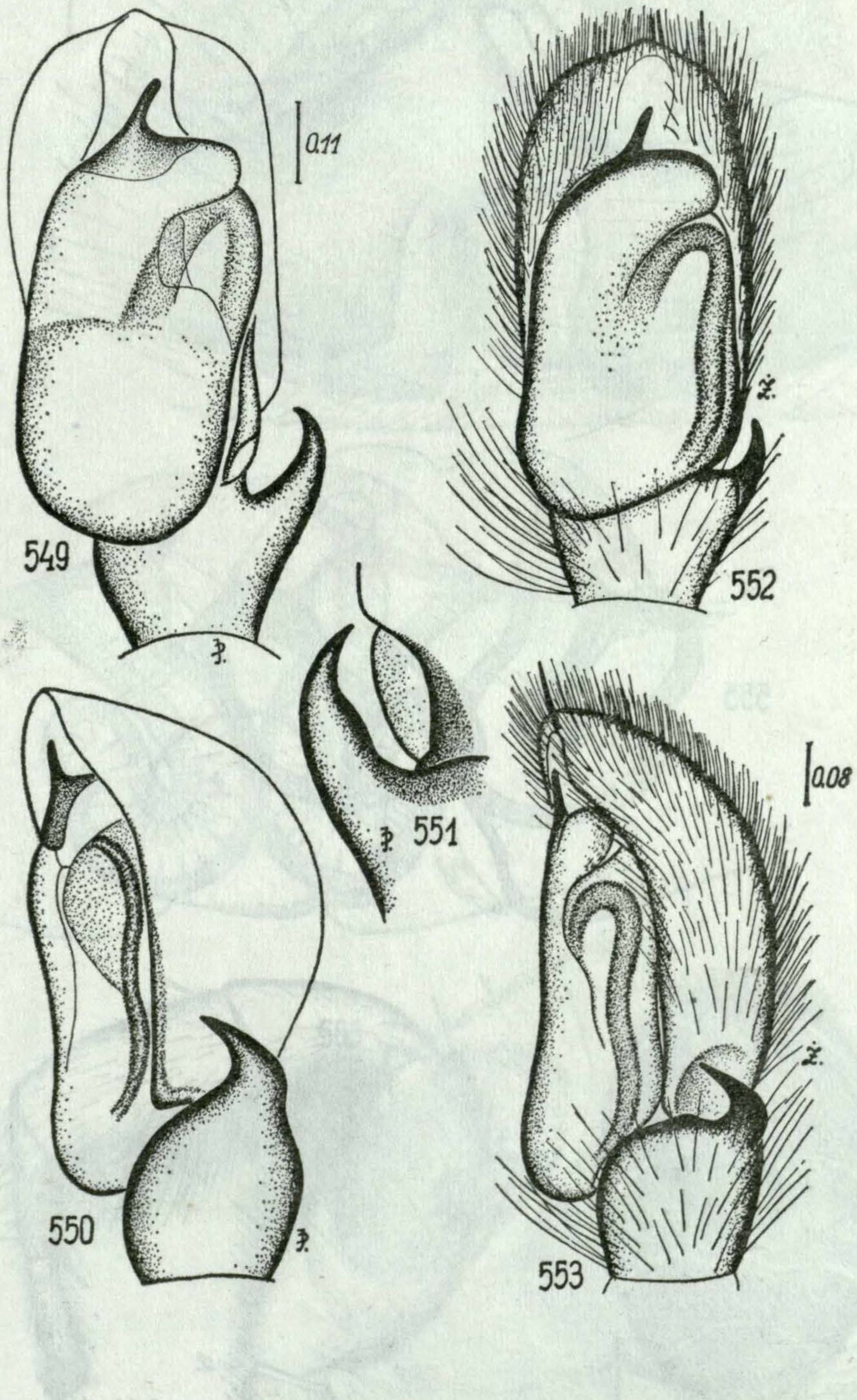




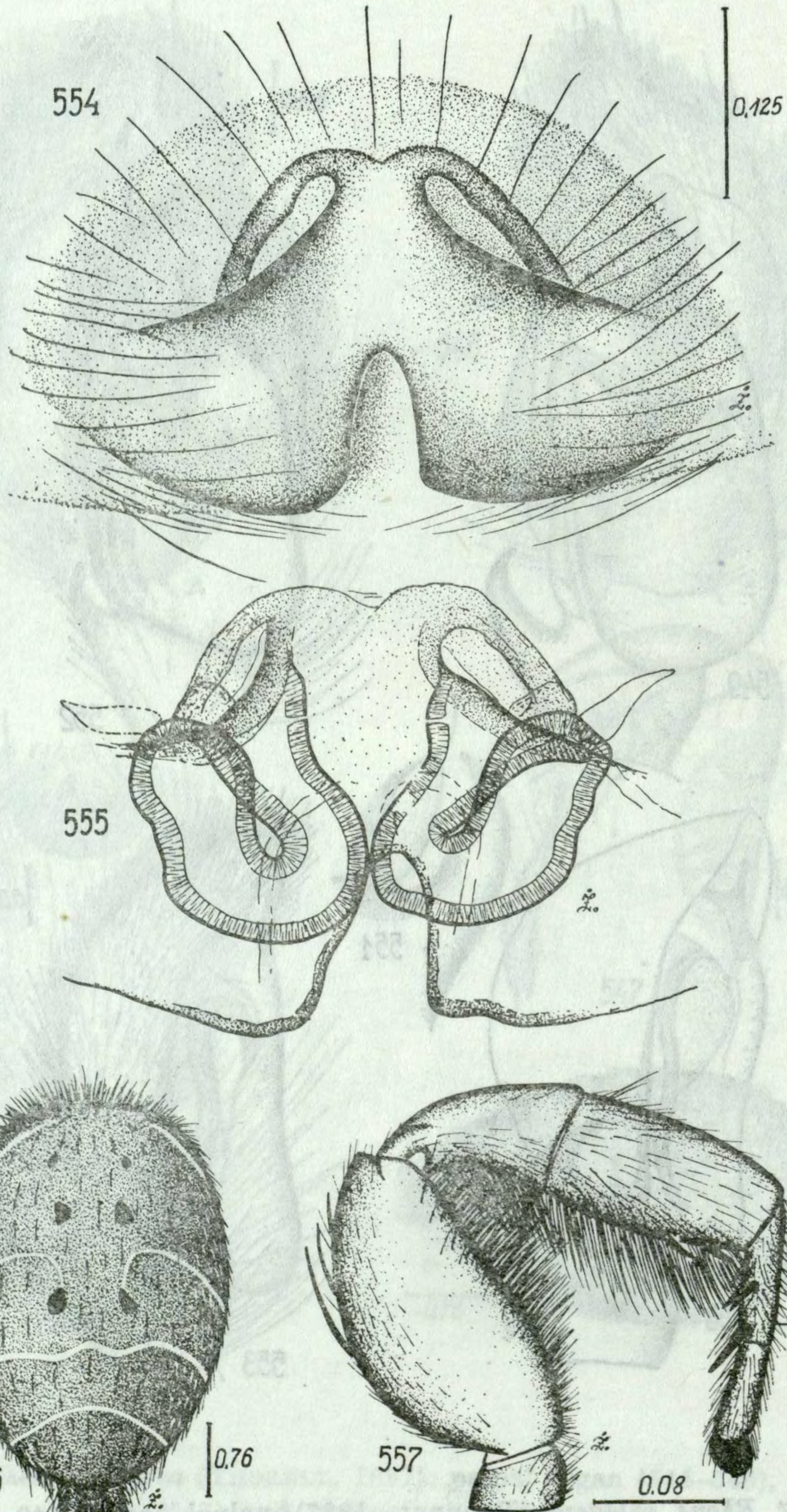




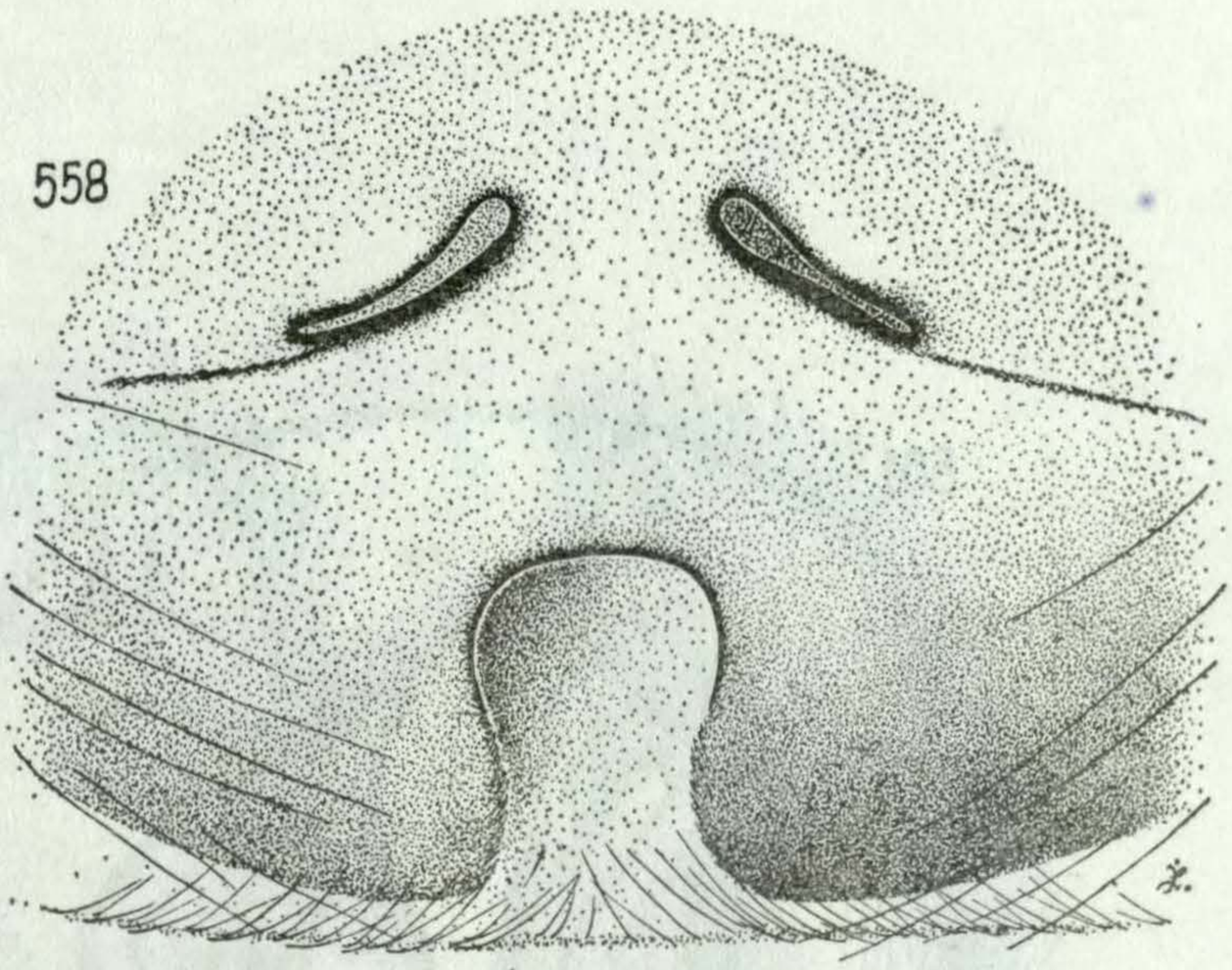
Figs. 544–548. ♂ *Rhene rubigera* (THORELL, 1887): palpal organ (544–546), cheliceral dentition (547) and abdominal pattern (548).

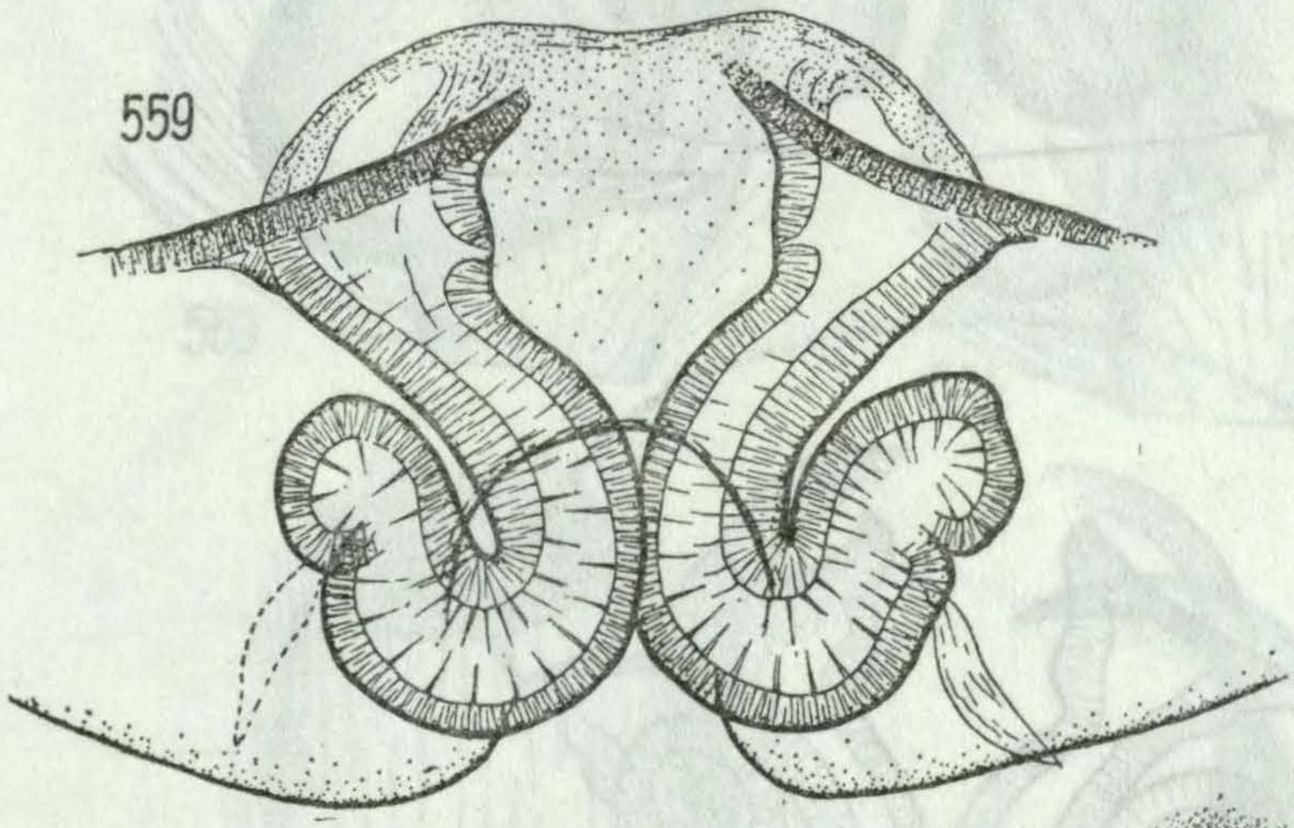


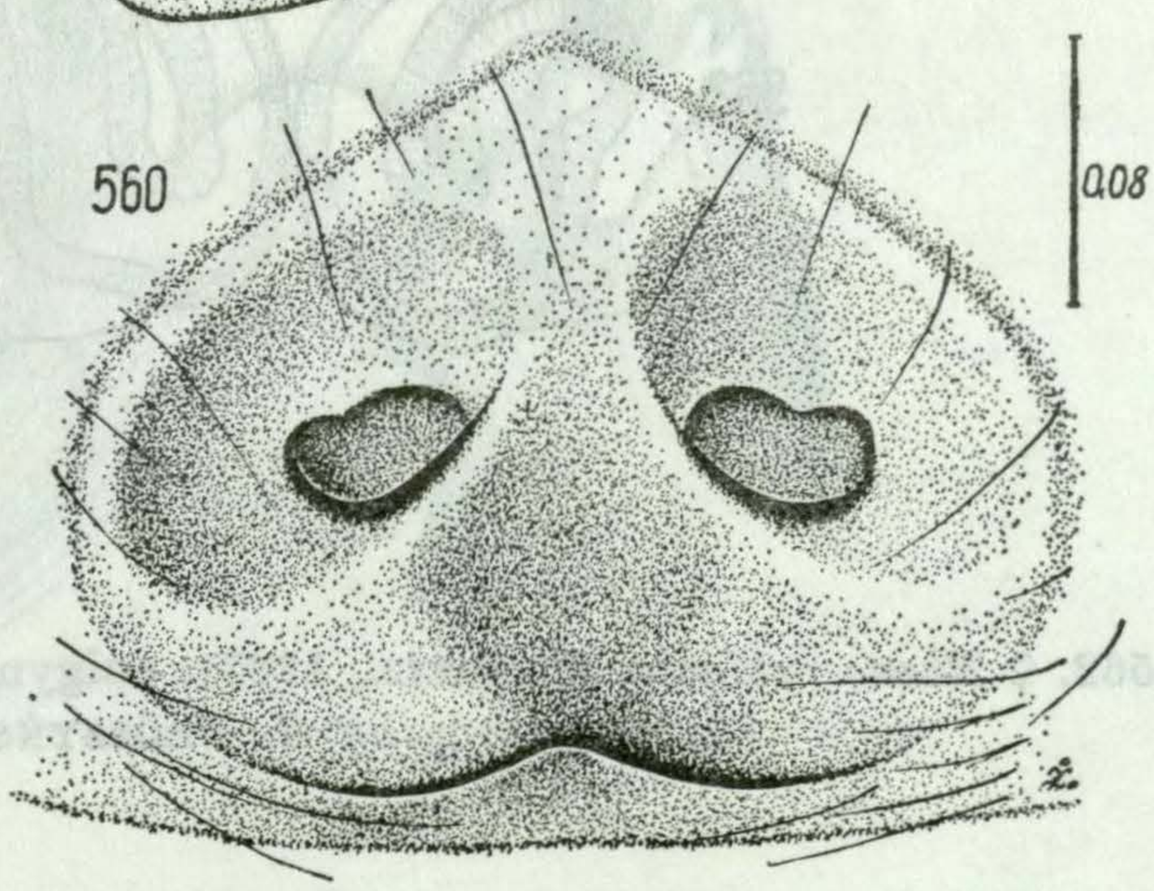
Figs. 549–553. ♂ *Rhene rubigera* (THORELL, 1887): palpal organ. 549–551 – drawn by J. PRÓSZYŃSKI. 552, 553 – type-specimen of *Homalattus albostriatus* THORELL from Nicobar Isl.



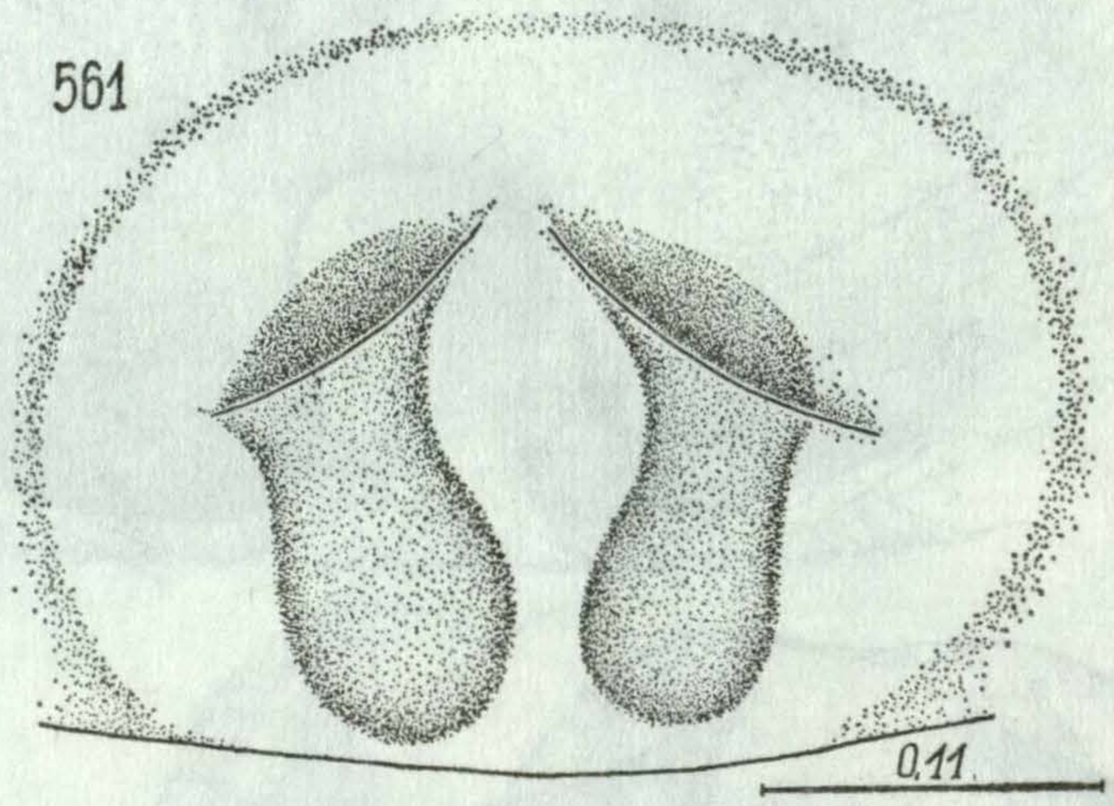
Figs. 554–557. ♀ *Rhene rubigera* (THORELL, 1887): epigyne (554), its internal structures (555) abdominal pattern (556) and leg I (557).

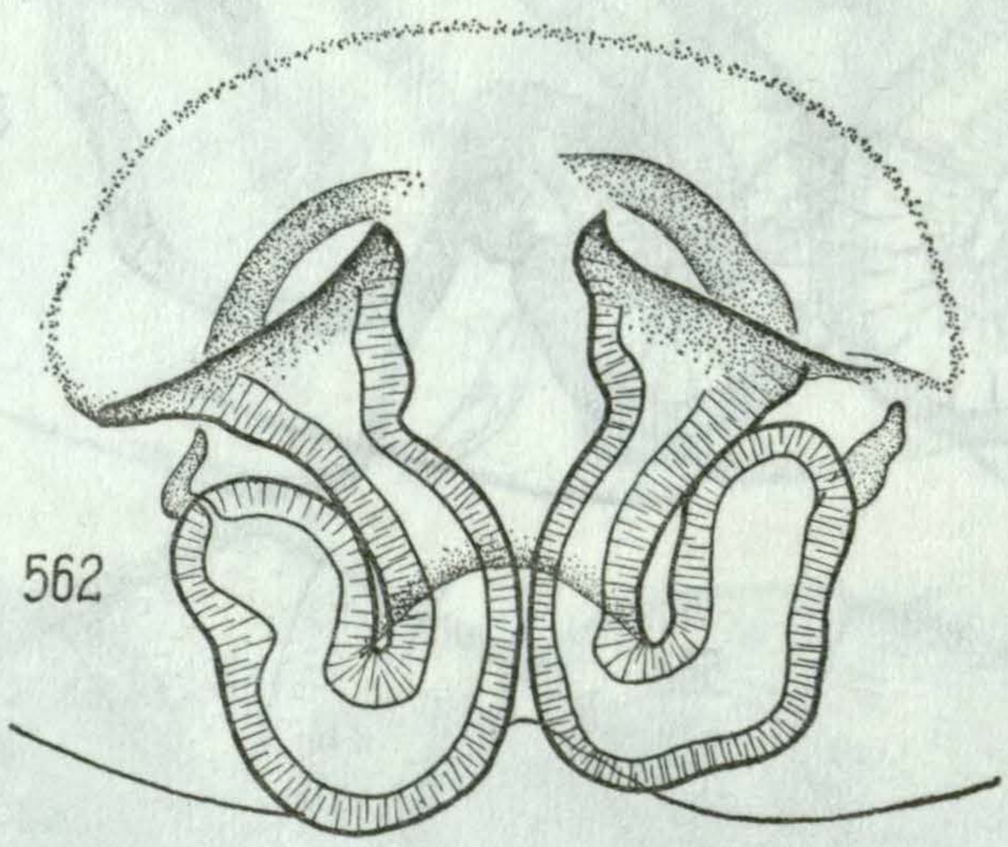




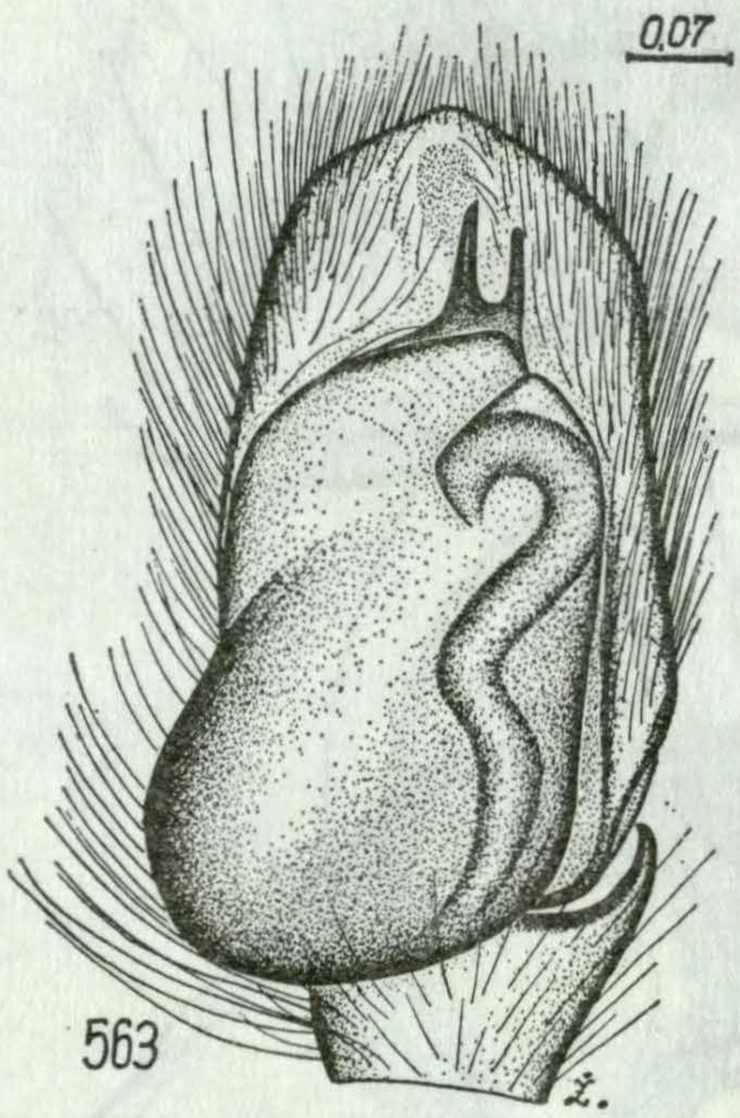


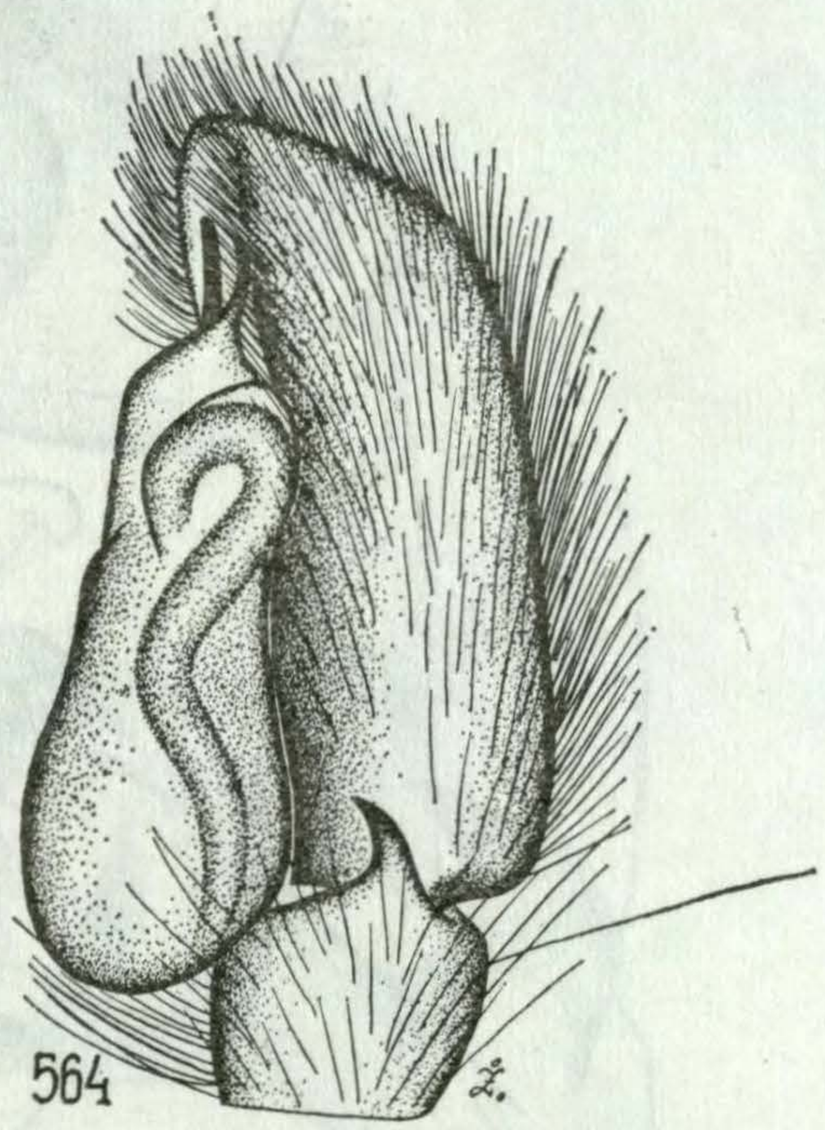
Figs. 558–560. ♀ *Rhene rubigera* (THORELL, 1887): variability of epigyne (558, 560) and its internal structures (559).

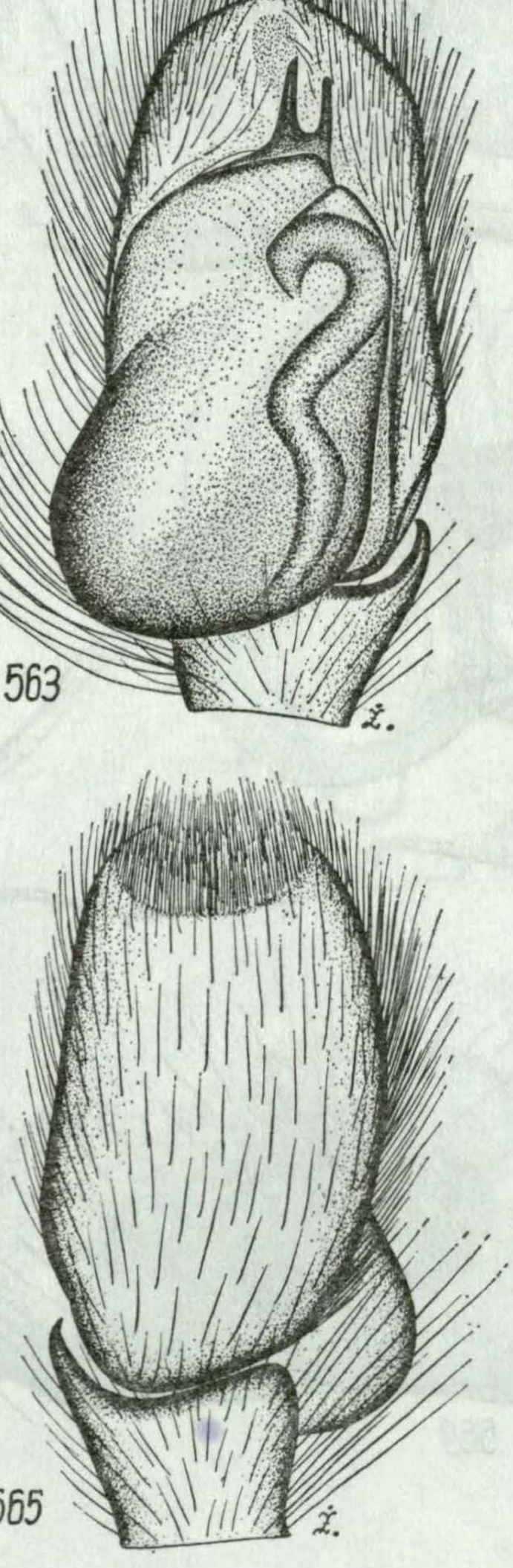


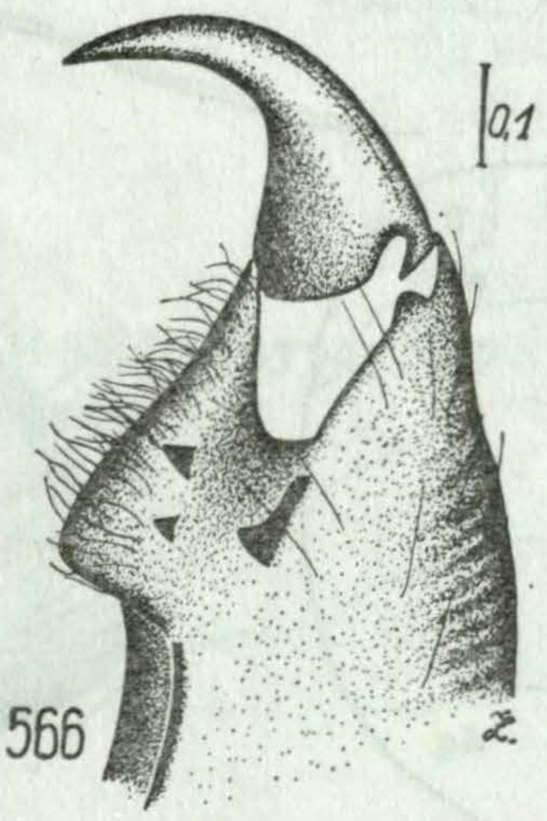


Figs. 561–562. ♀ *Rhene rubigera* (Thorell, 1887): epigyne (561) and its internal structures (562). Drawn by J. Prószyński.

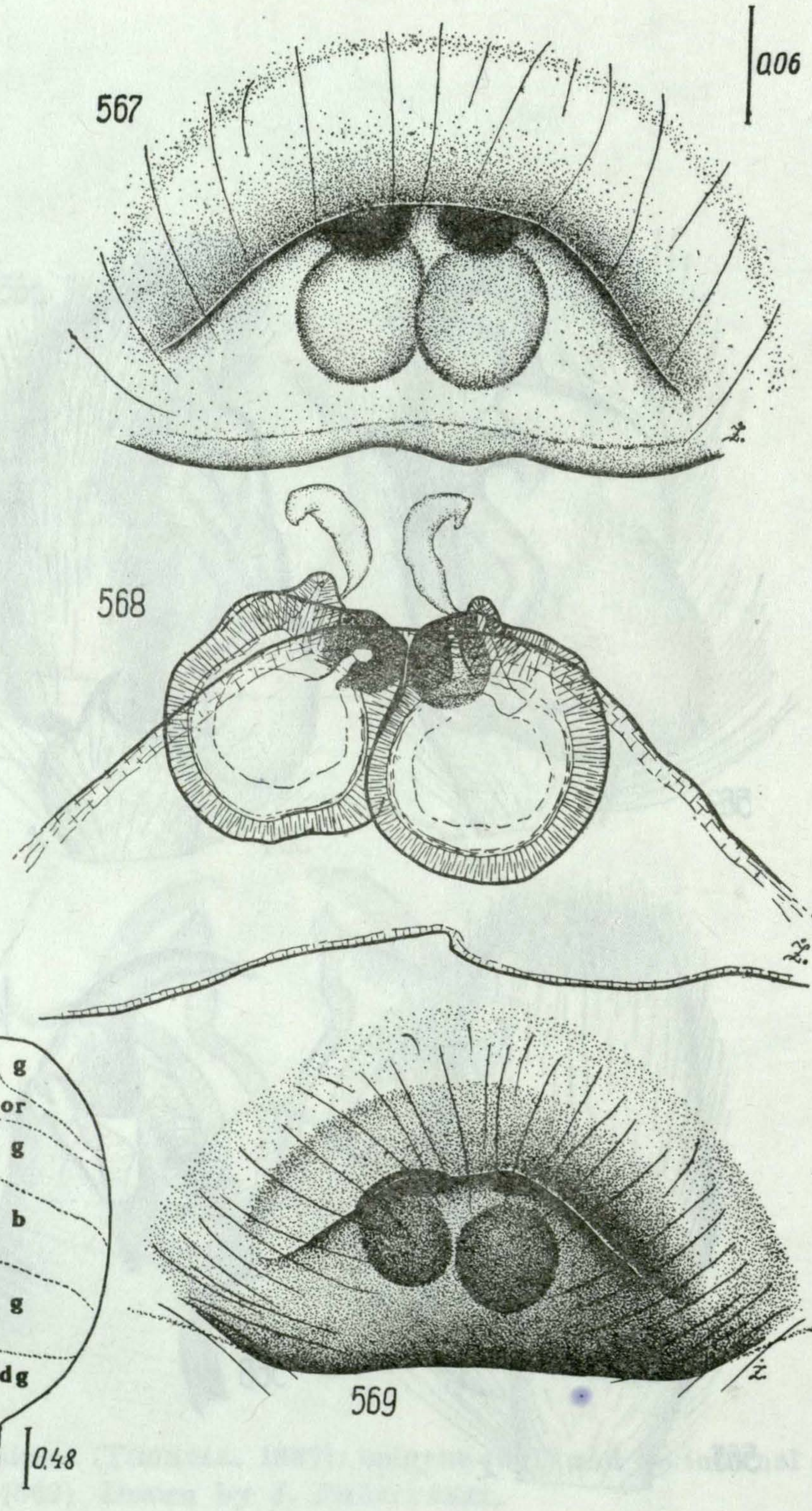




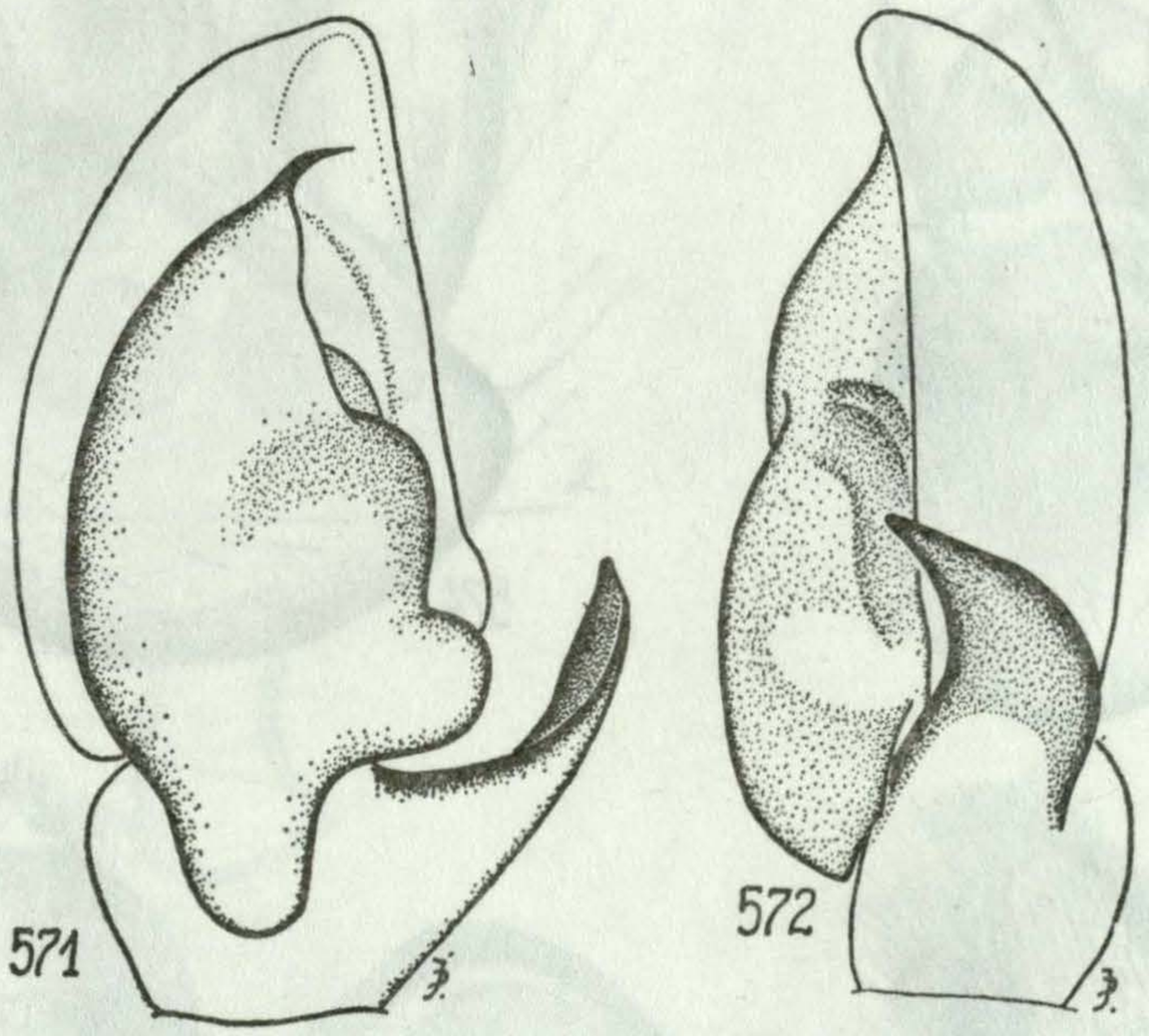




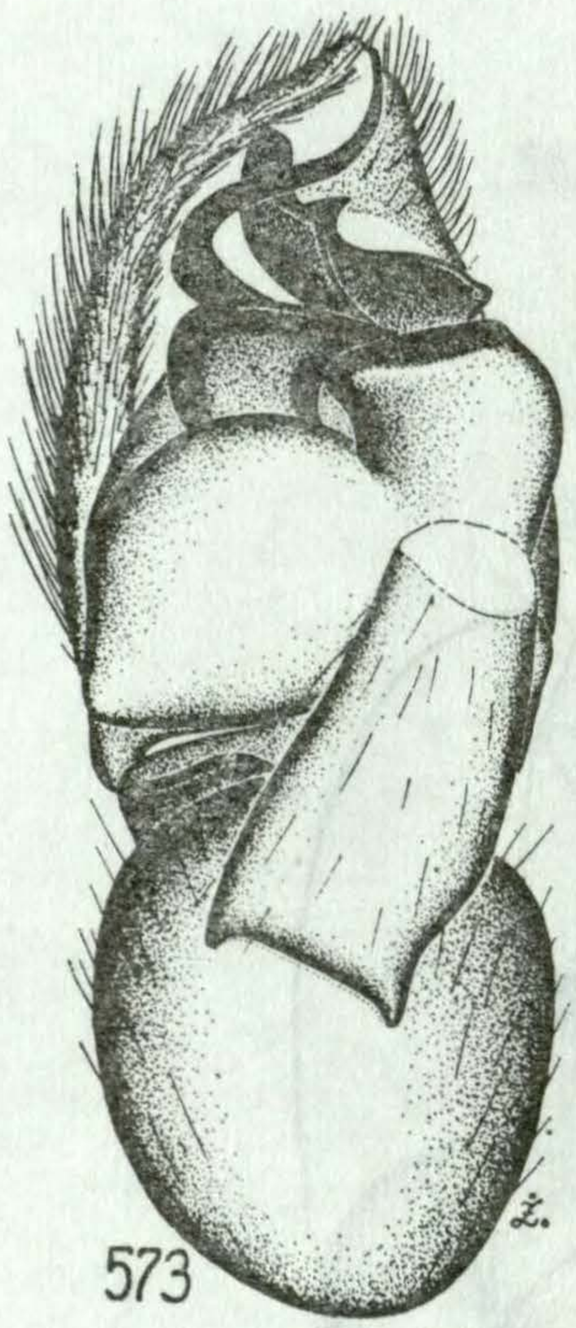
Figs. 563–566. ♂ *Rhene setipes* sp. n., holotype: palpal organ (563–565) and cheliceral dentition (566).

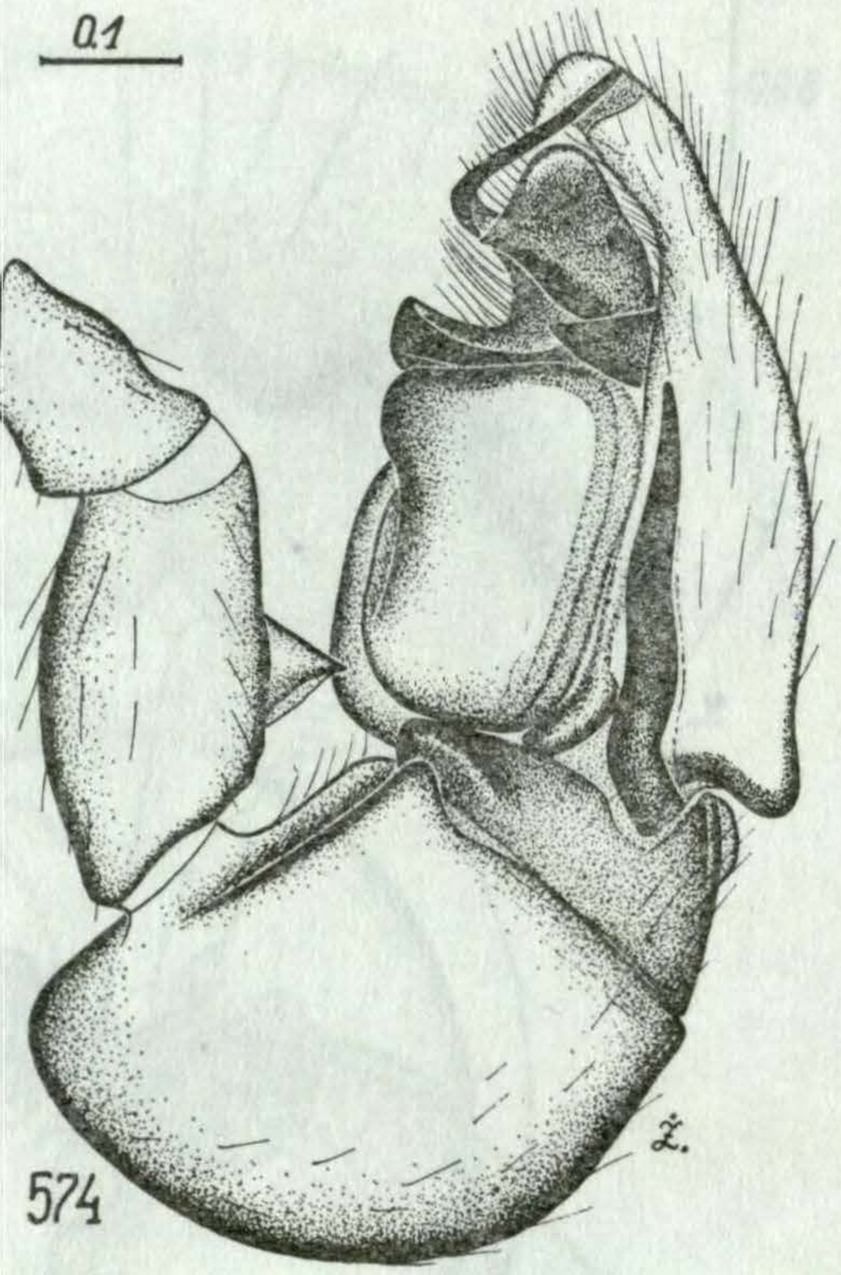


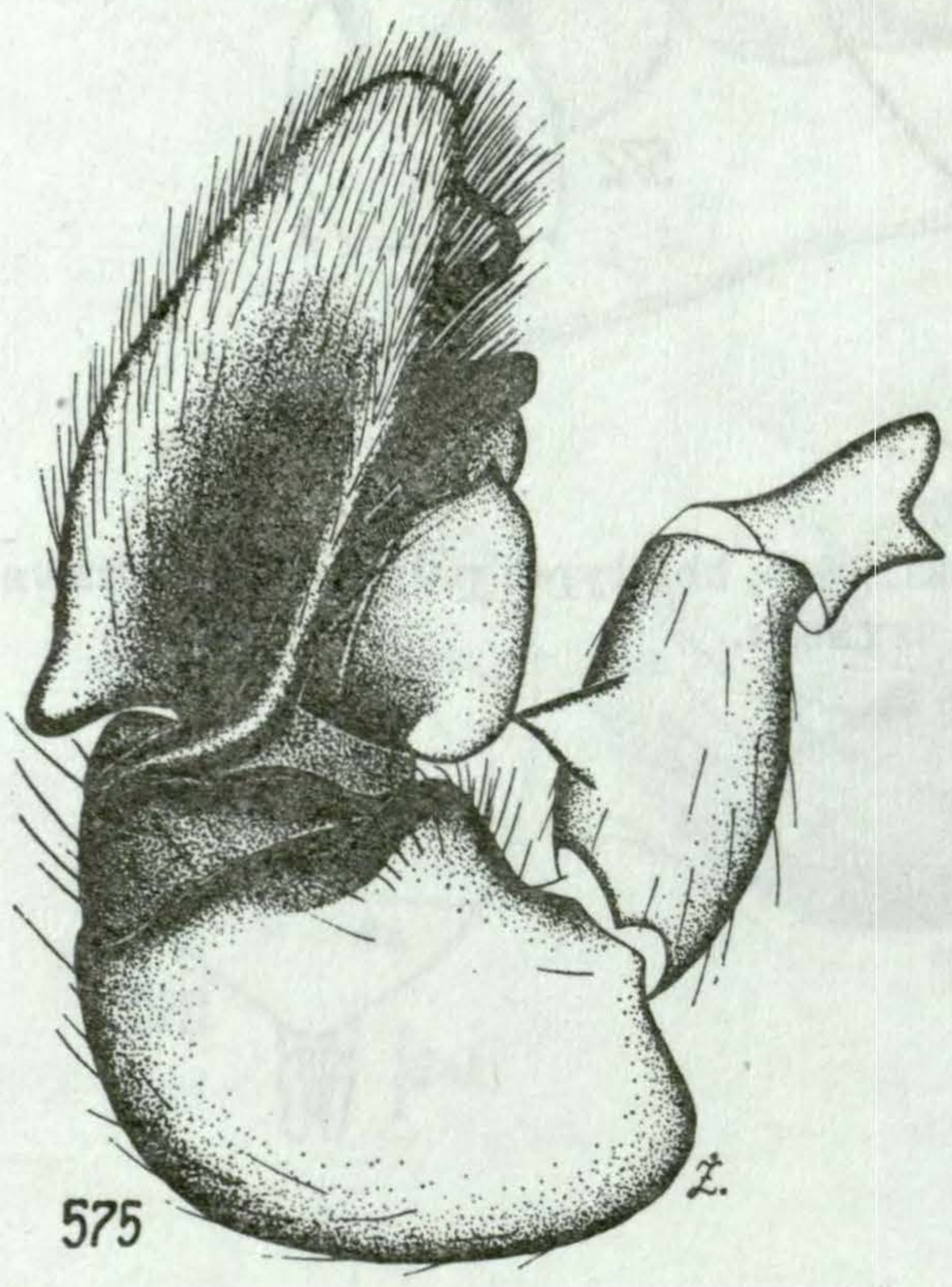
Figs. 567–570. ♀ *Siler bielawskii* sp. n., holotype: epigyne (567), its internal structures (568) schematic diagram of colouration of abdomen (570): g — grey, or — orange, b — brown, dg — dark grey. Paratype: epigyne (569).

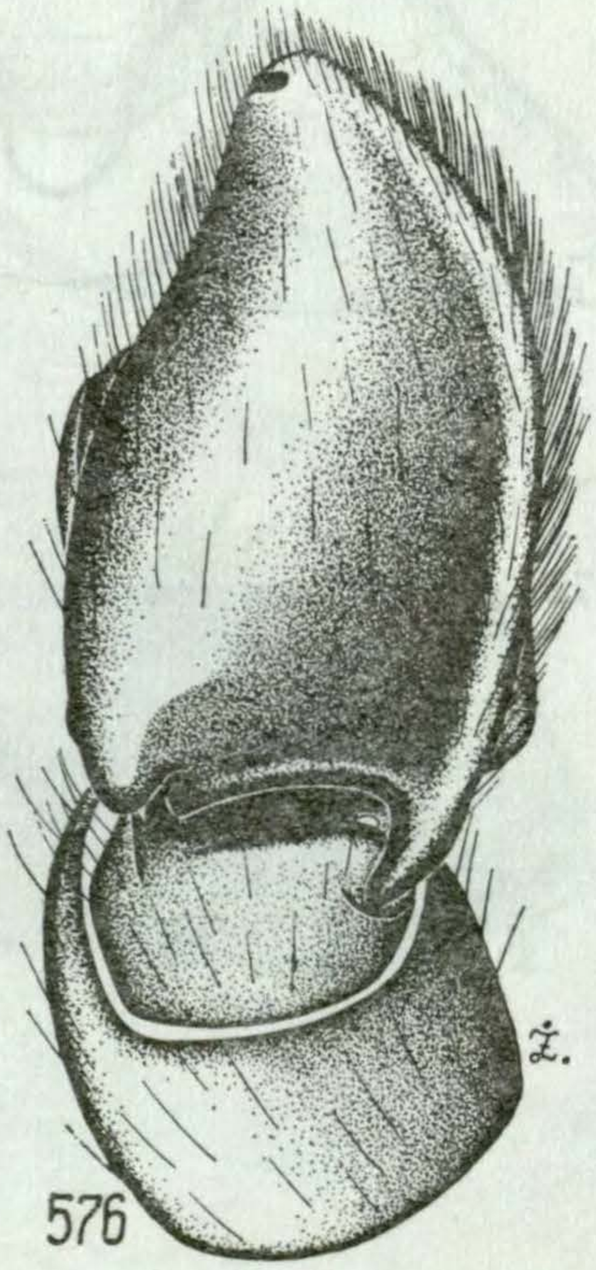


Figs. 571–572. ♂ *Siler hanoicus* PRÓSZYŃSKI, 1985, holotype: palpal organ. Drawn by J. PRÓSZYŃSKI.

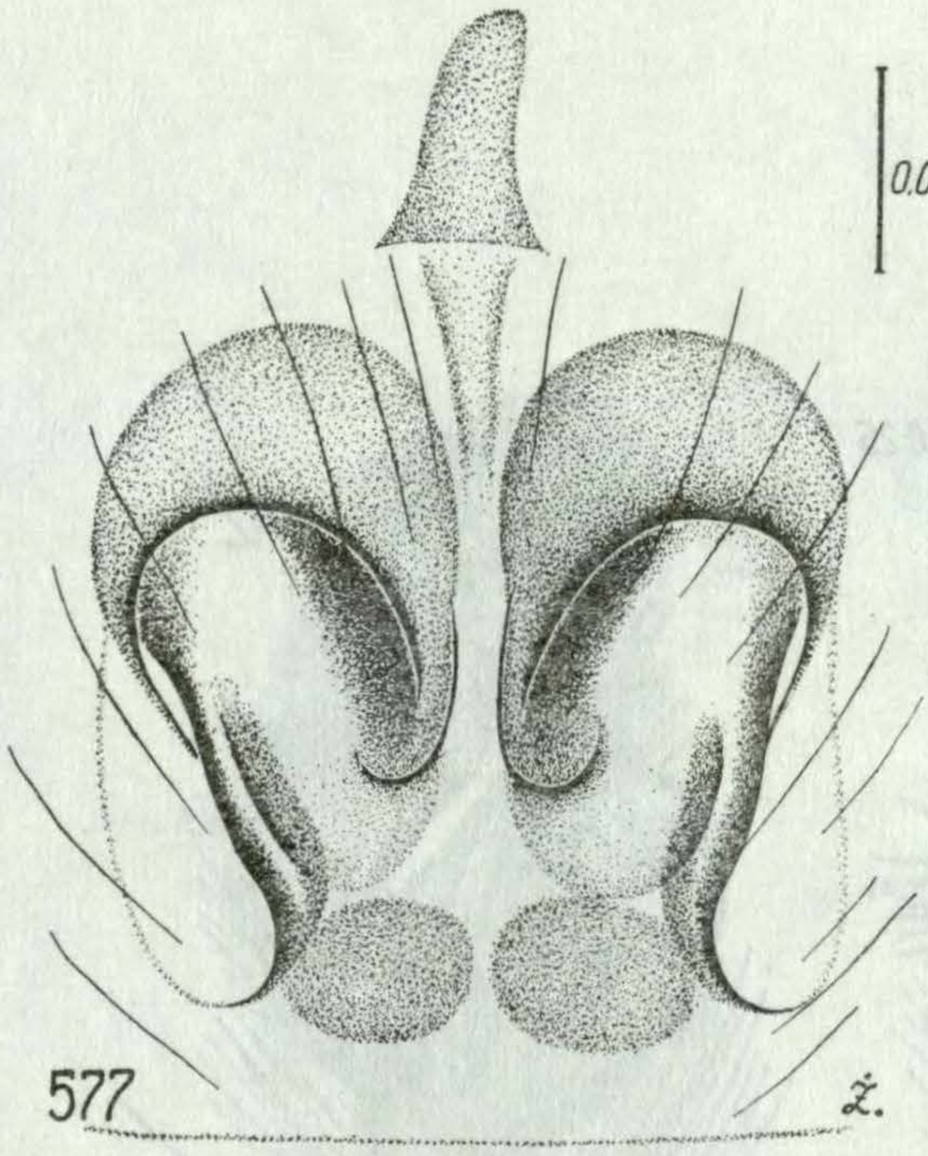


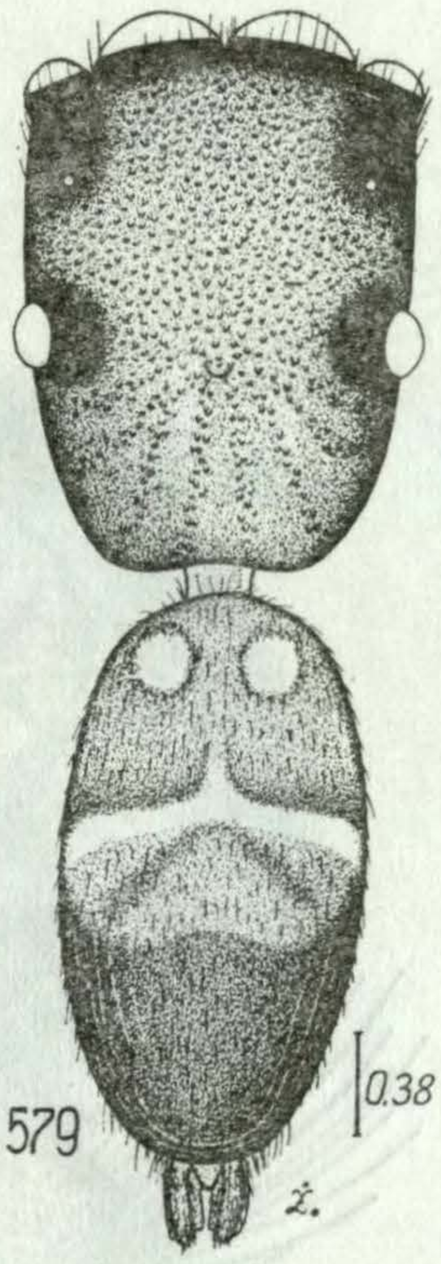


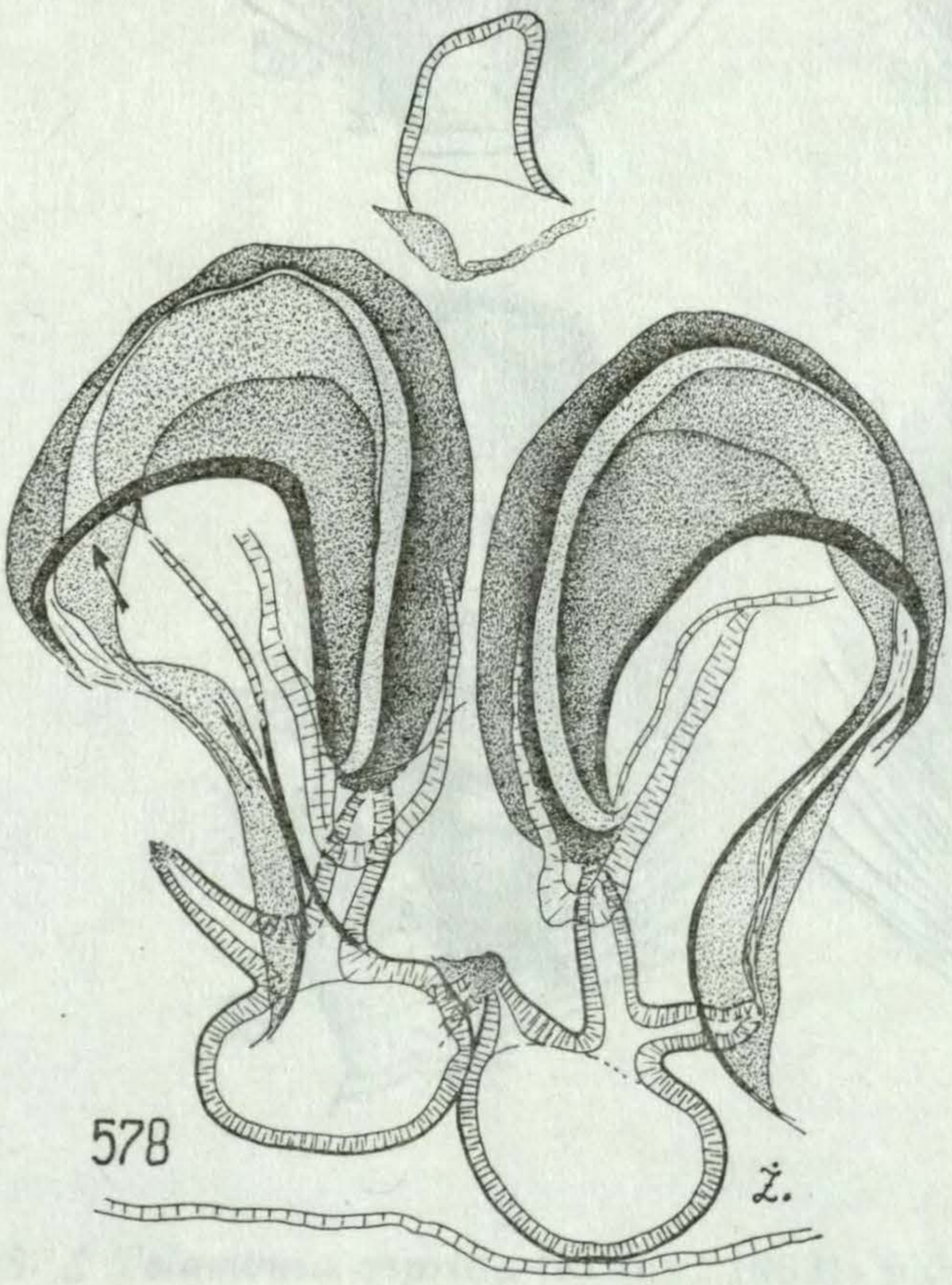


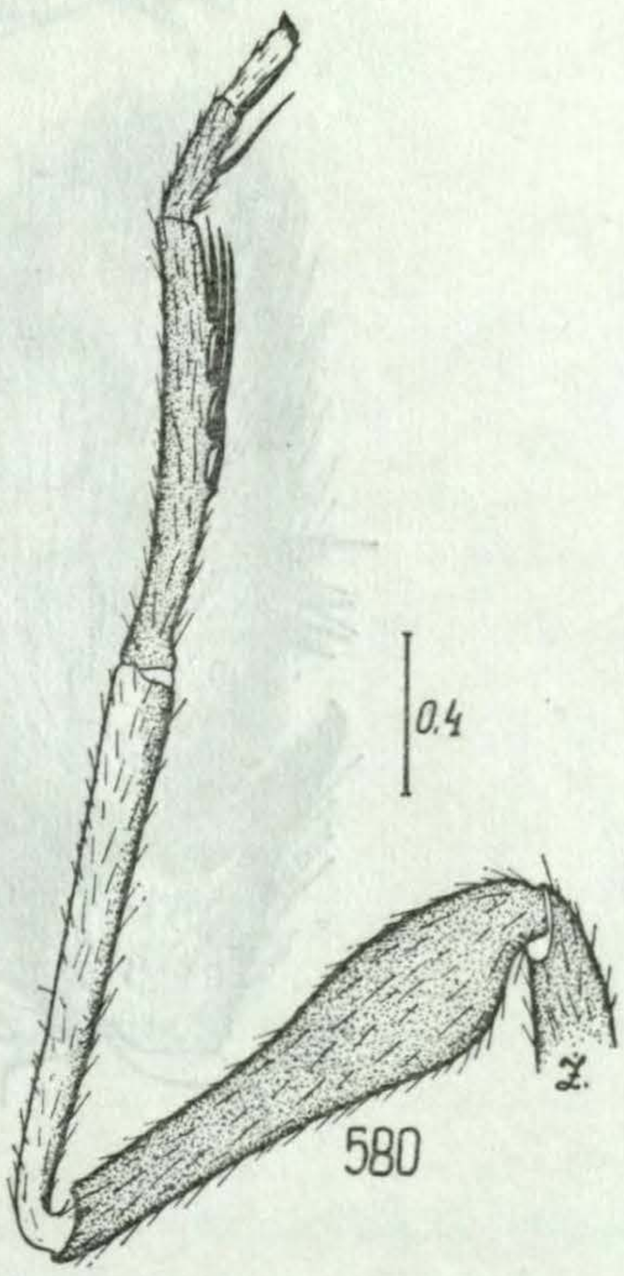


Figs. 573–576. ♂ *Synagelides palpalis* sp. n., holotype: palpal organ.

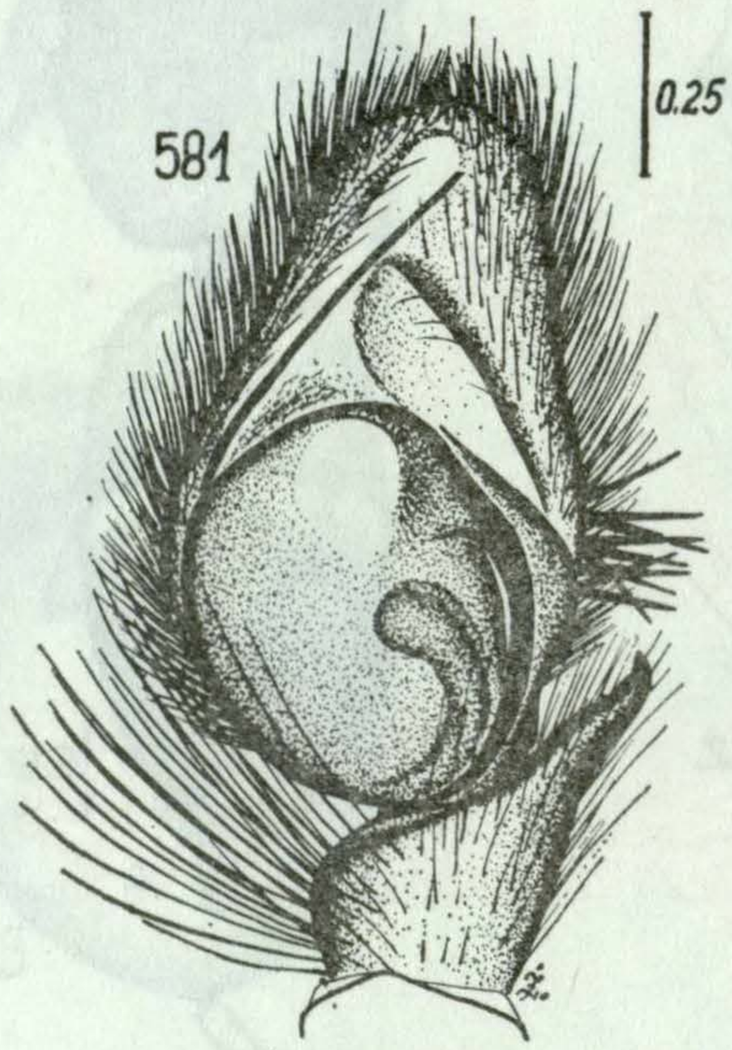


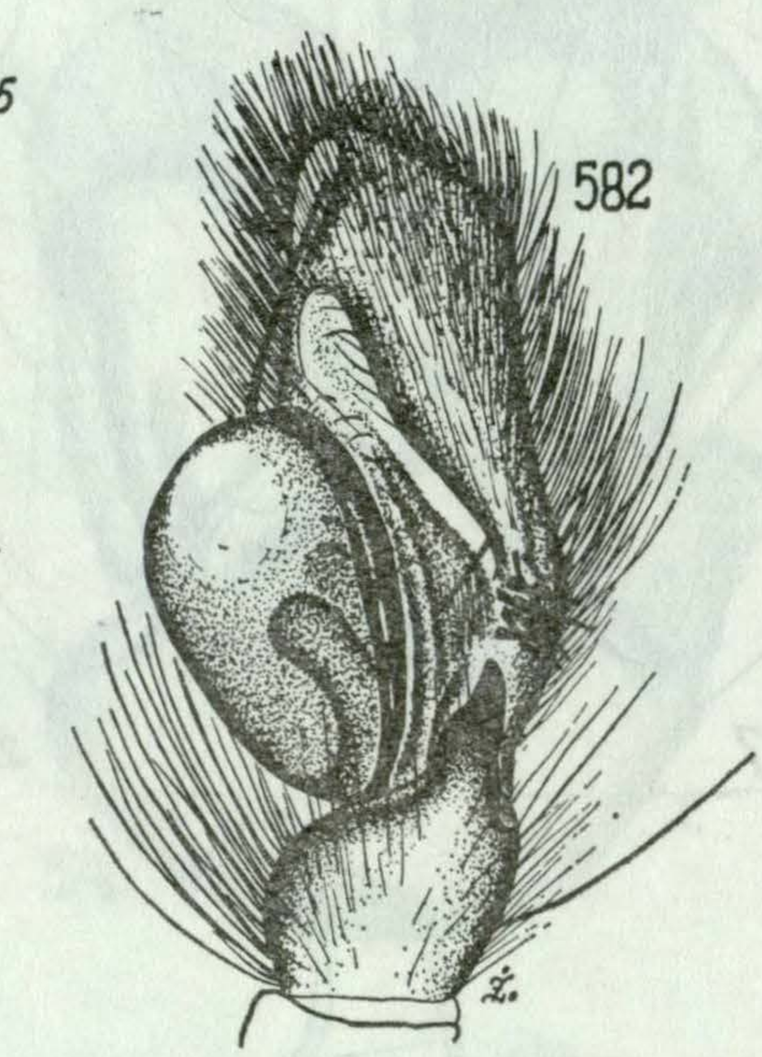


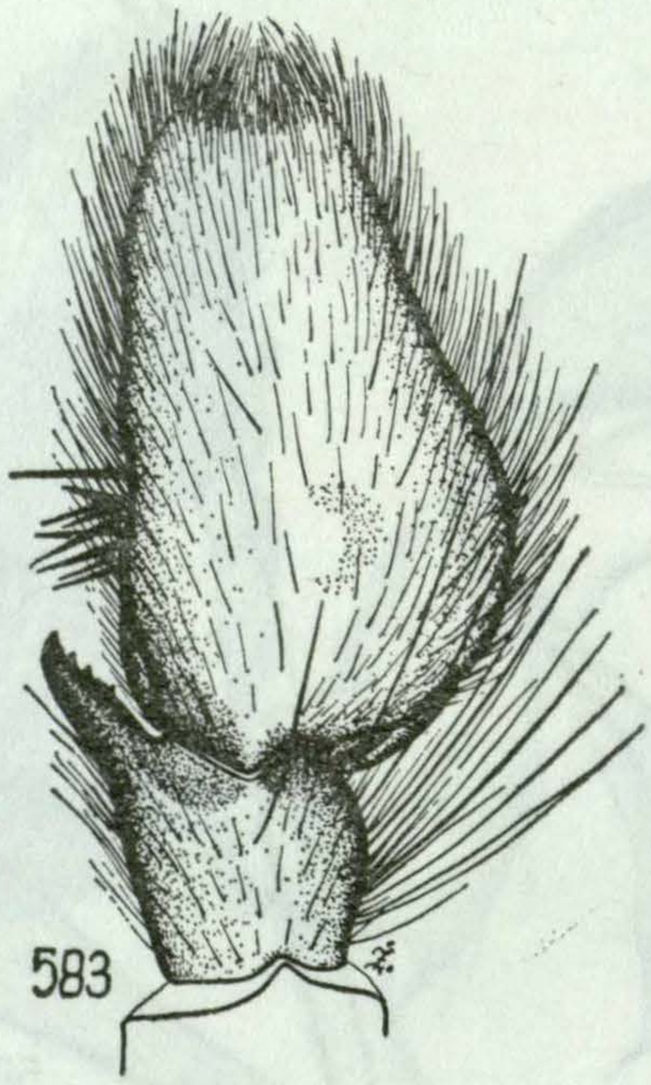


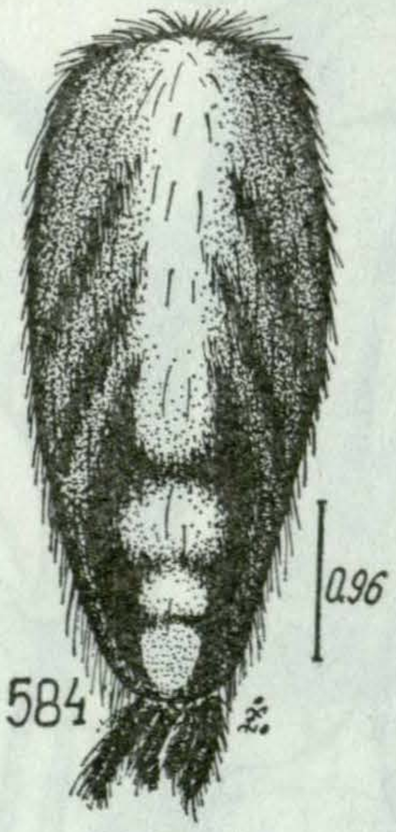


Figs. 577–580. ♀ *Synagelides palpalis* sp. n., allotype: epigyne (577), its internal structures (578), general appearance (579) and leg I (580).

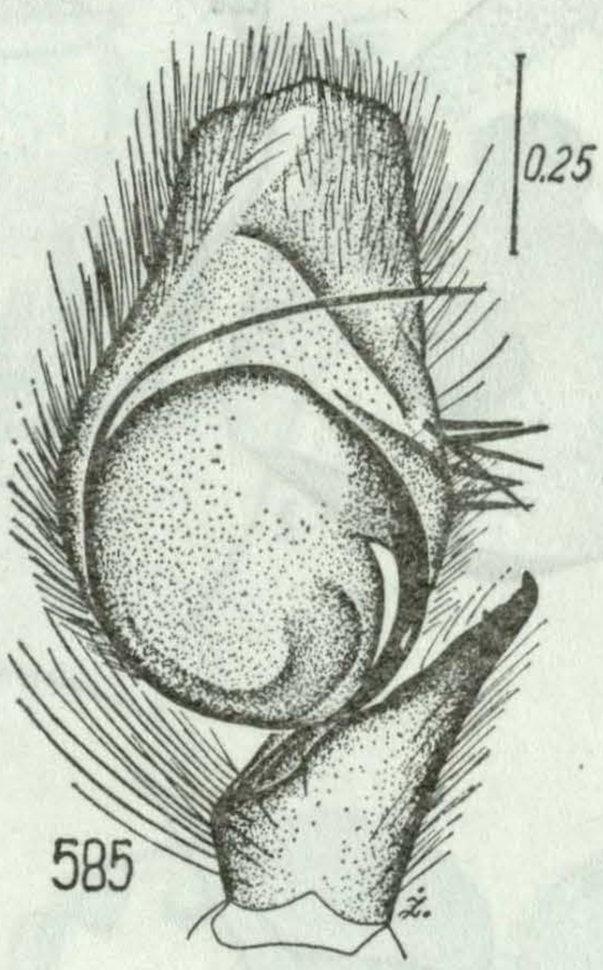


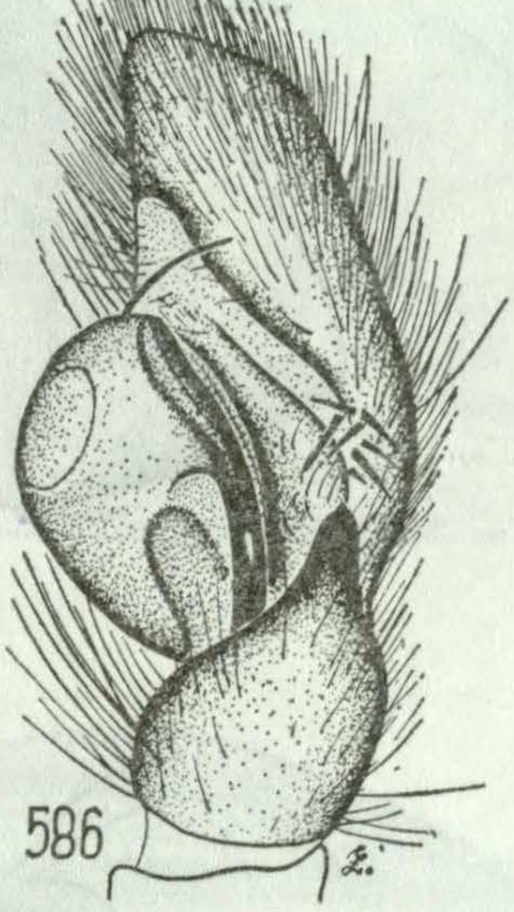


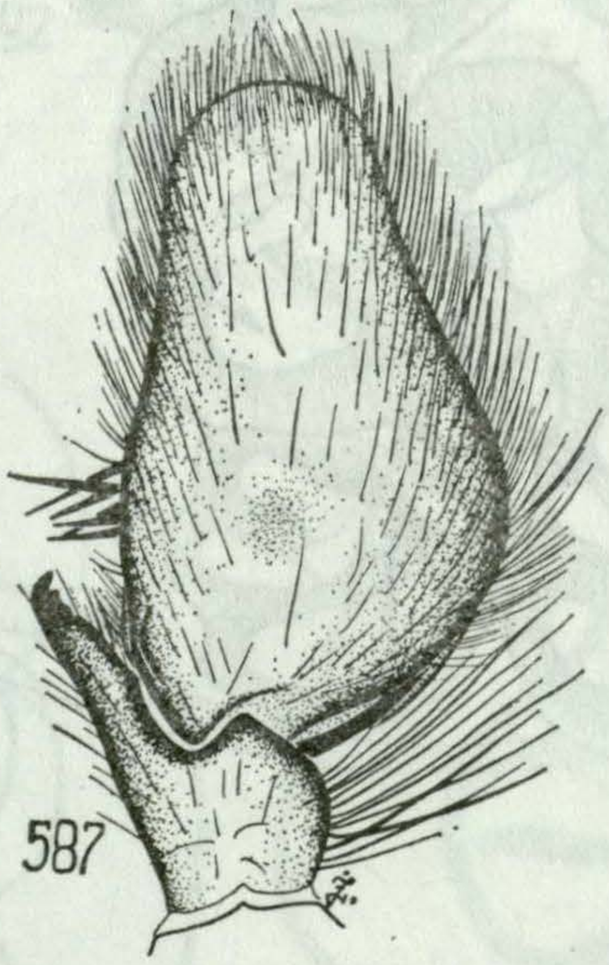


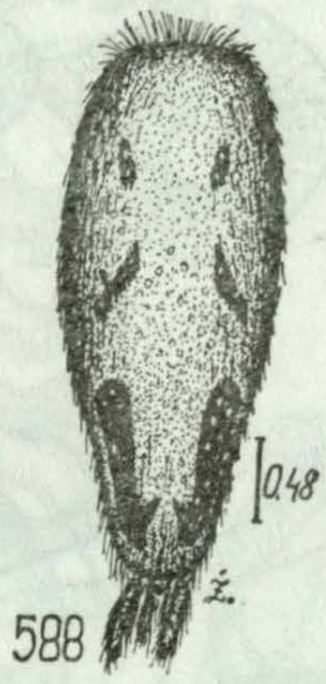


Figs. 581–584. ♂ *Telamonia caprina* (Simon, 1903): palpal organ (581–583) and abdominal pattern (584).

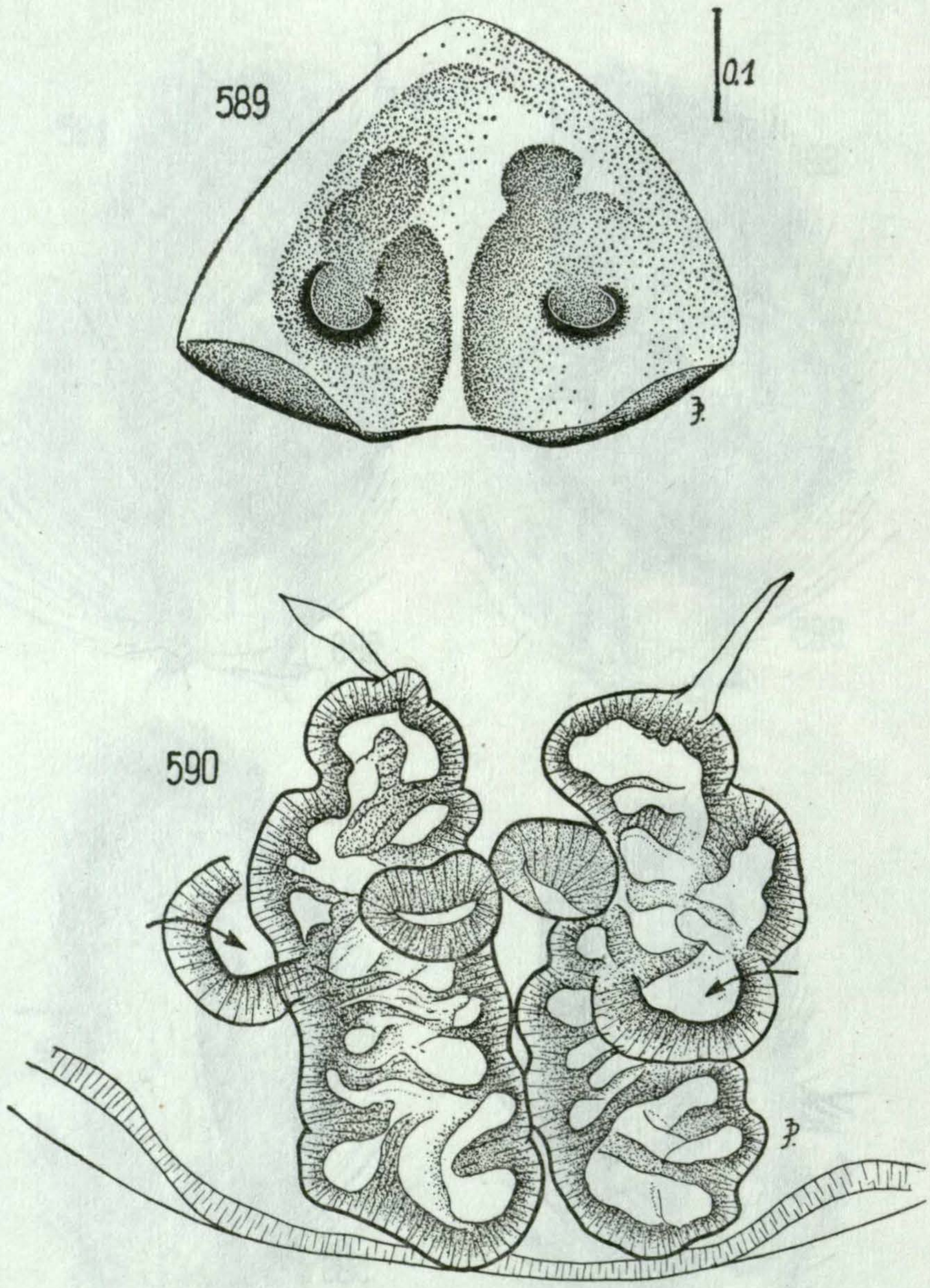




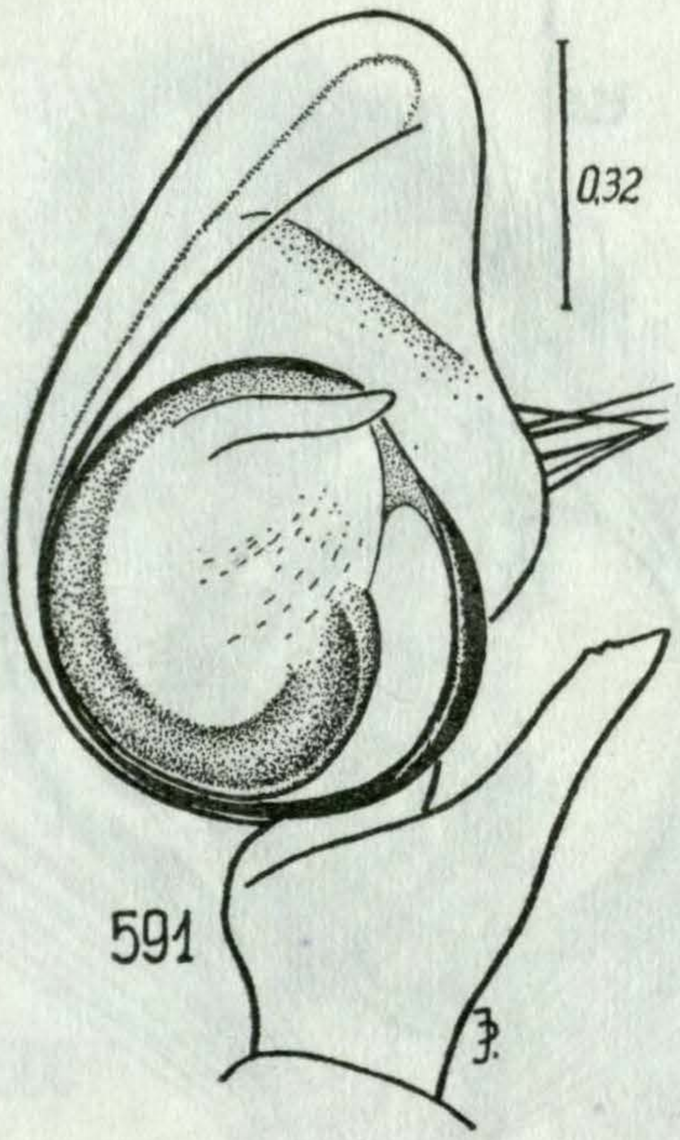


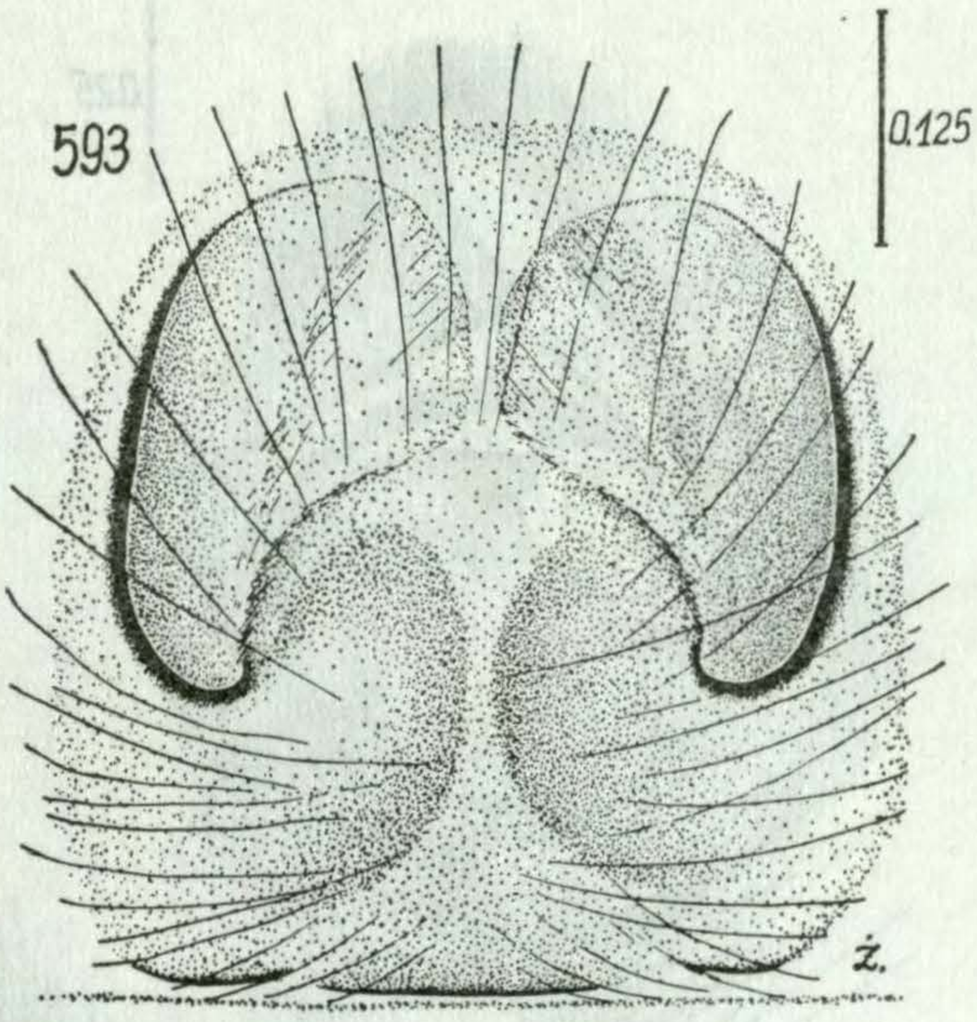


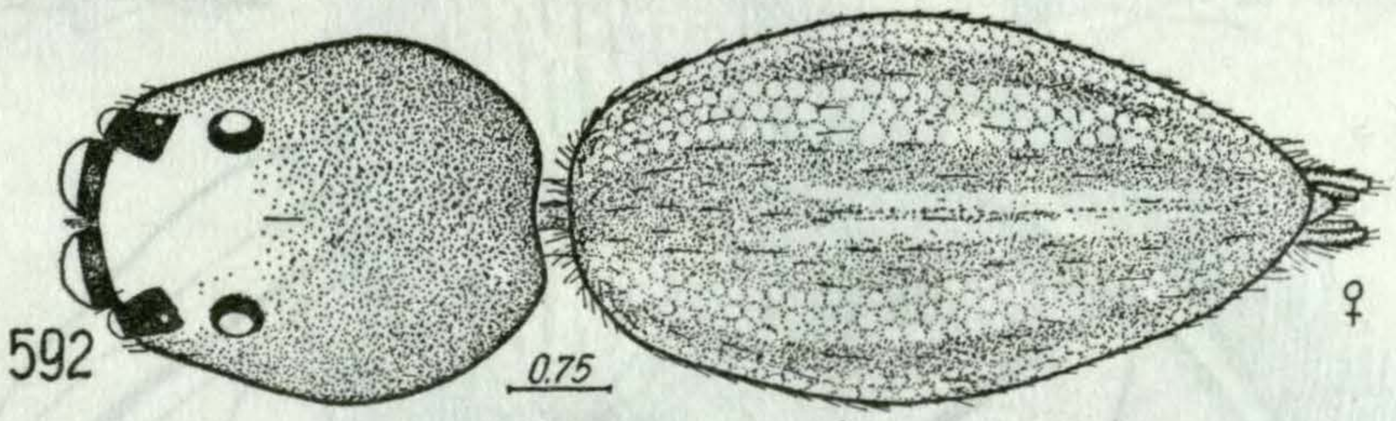
Figs. 585–588. ♂ *Telamonia caprina* (SIMON, 1903): palpal organ (585–587) and abdominal pattern (588).

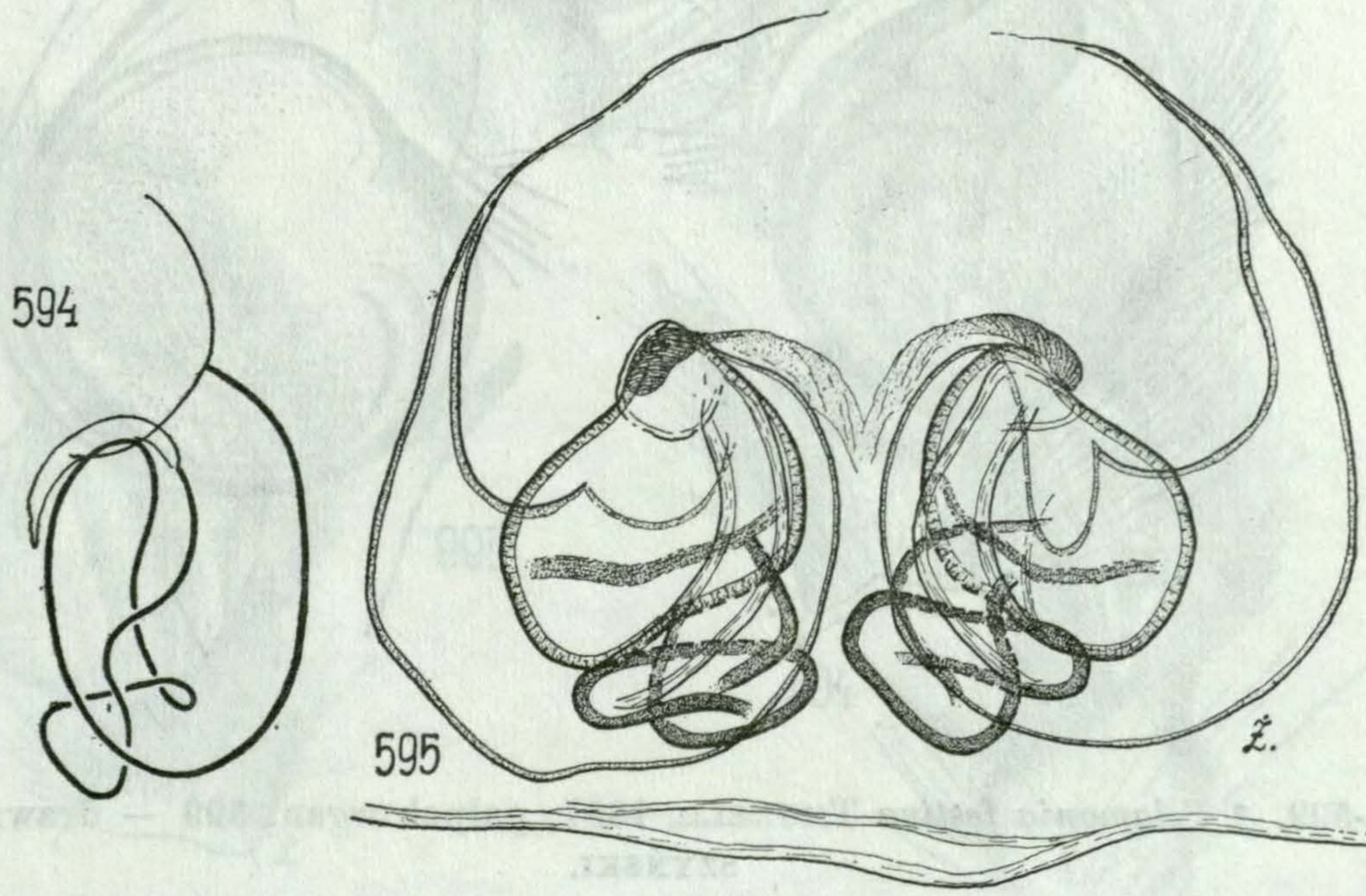


Figs. 589–590. ♀ *Telamonia caprina* (Simon, 1903): epigyne (589) and its internal structures (590). Drawn by J. Prószyński.

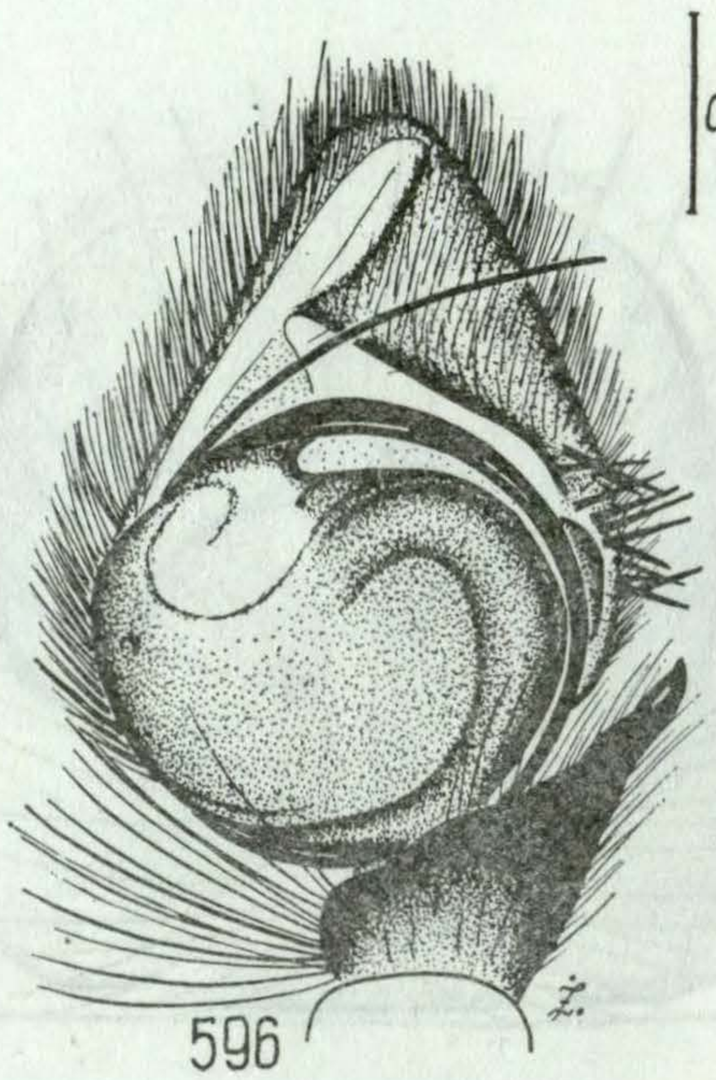


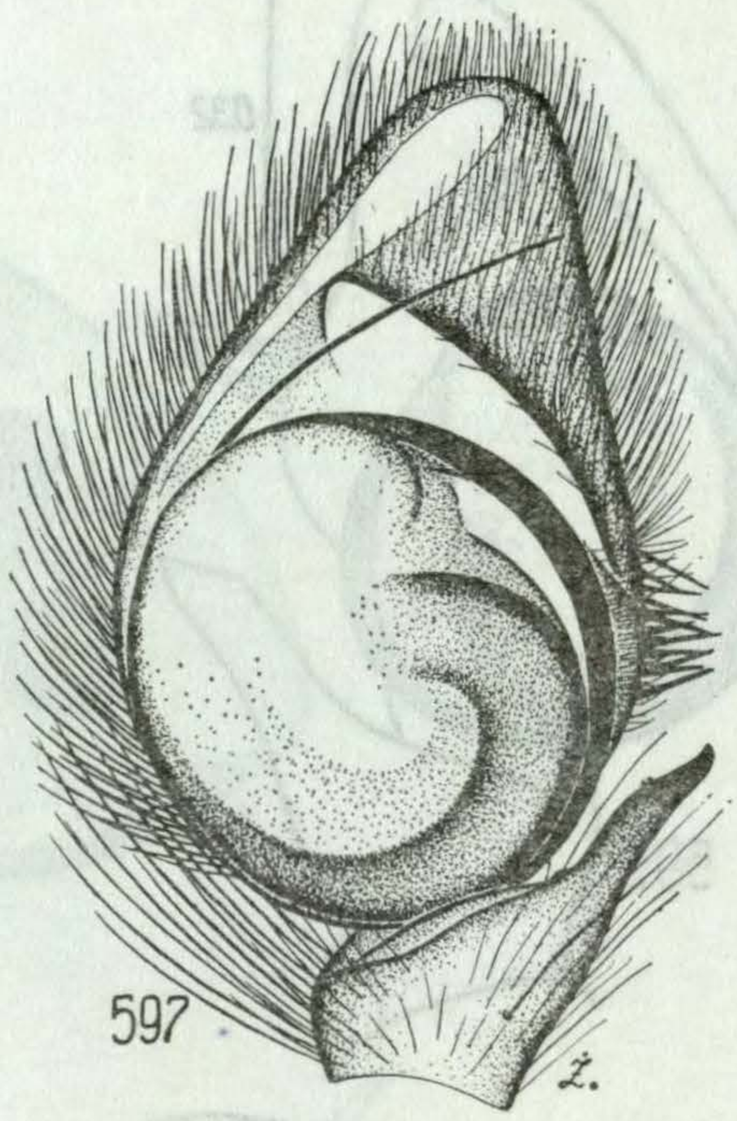


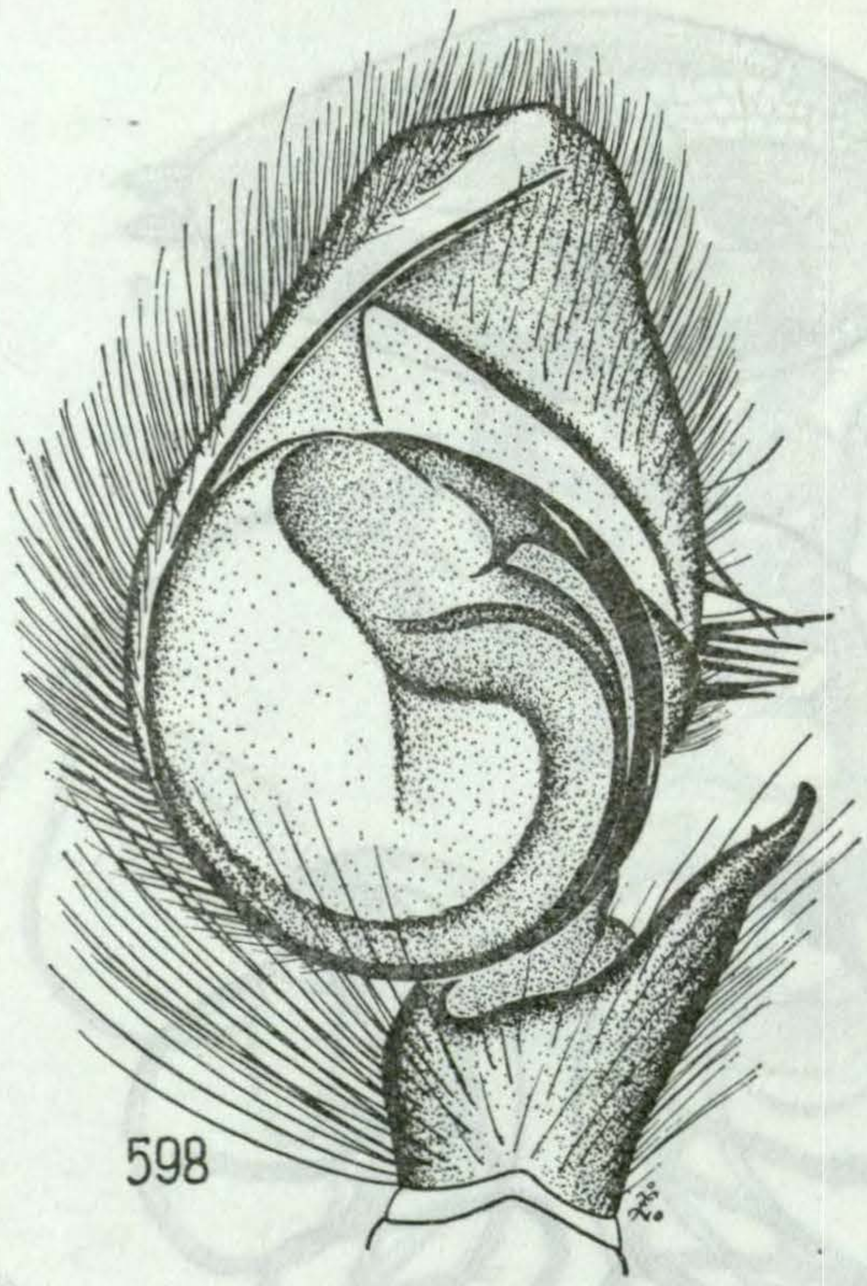


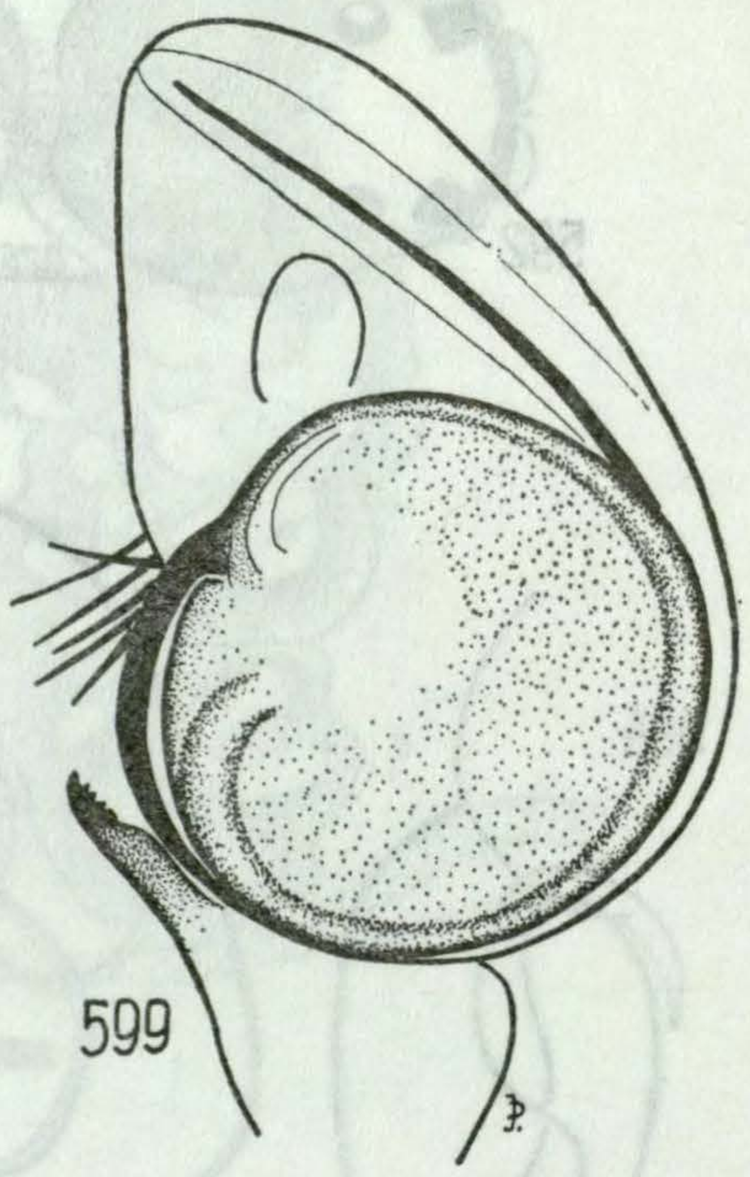


Figs. 591–595. ♂, ♀ *Telamonia elegans* (THORELL, 1887): palpal organ (591), epigyne (593), internal structures (595), its diagrammatic course (594) and general appearance of female (592). 591 — specimen from India, drawn by J. PRÓSZYŃSKI.

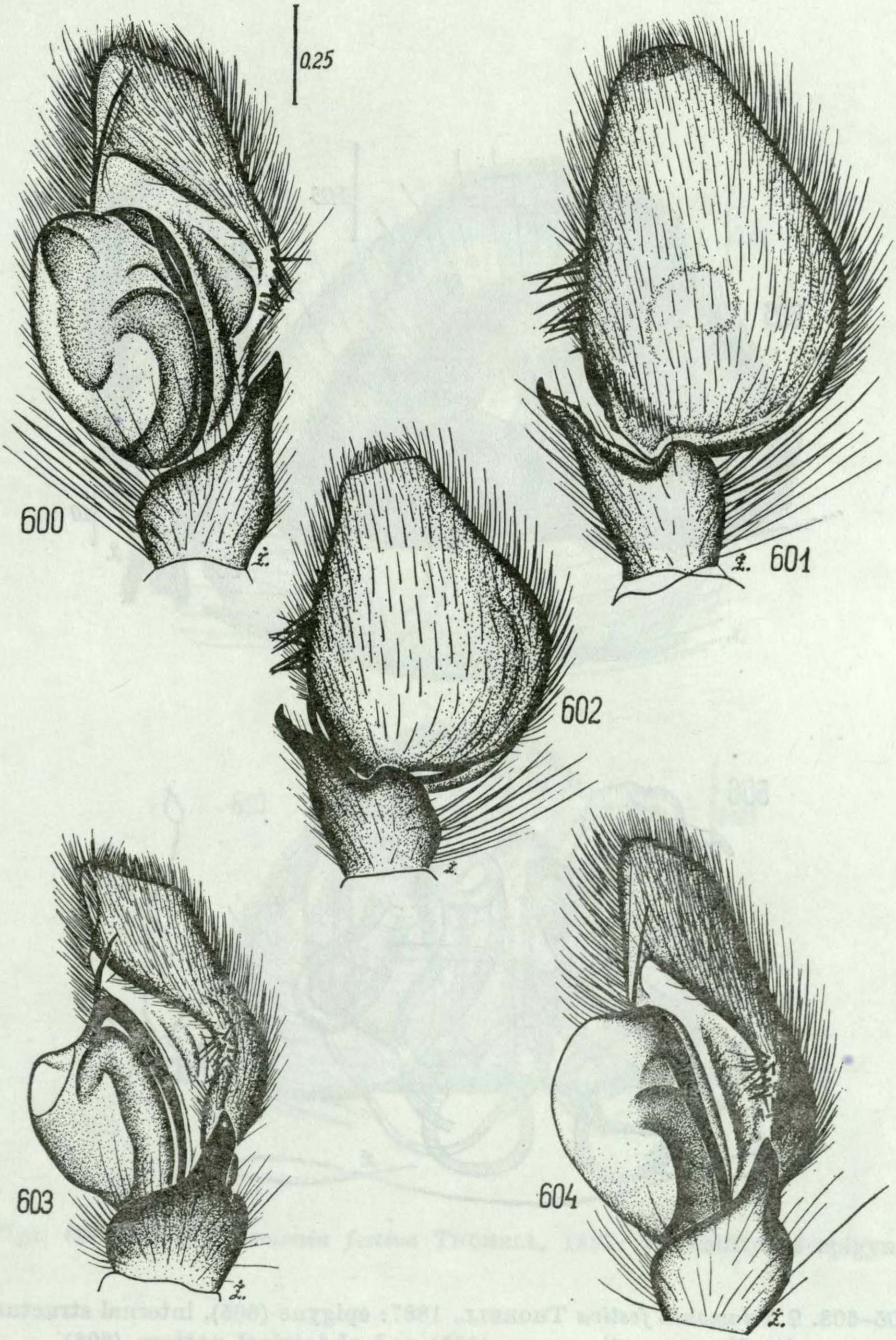




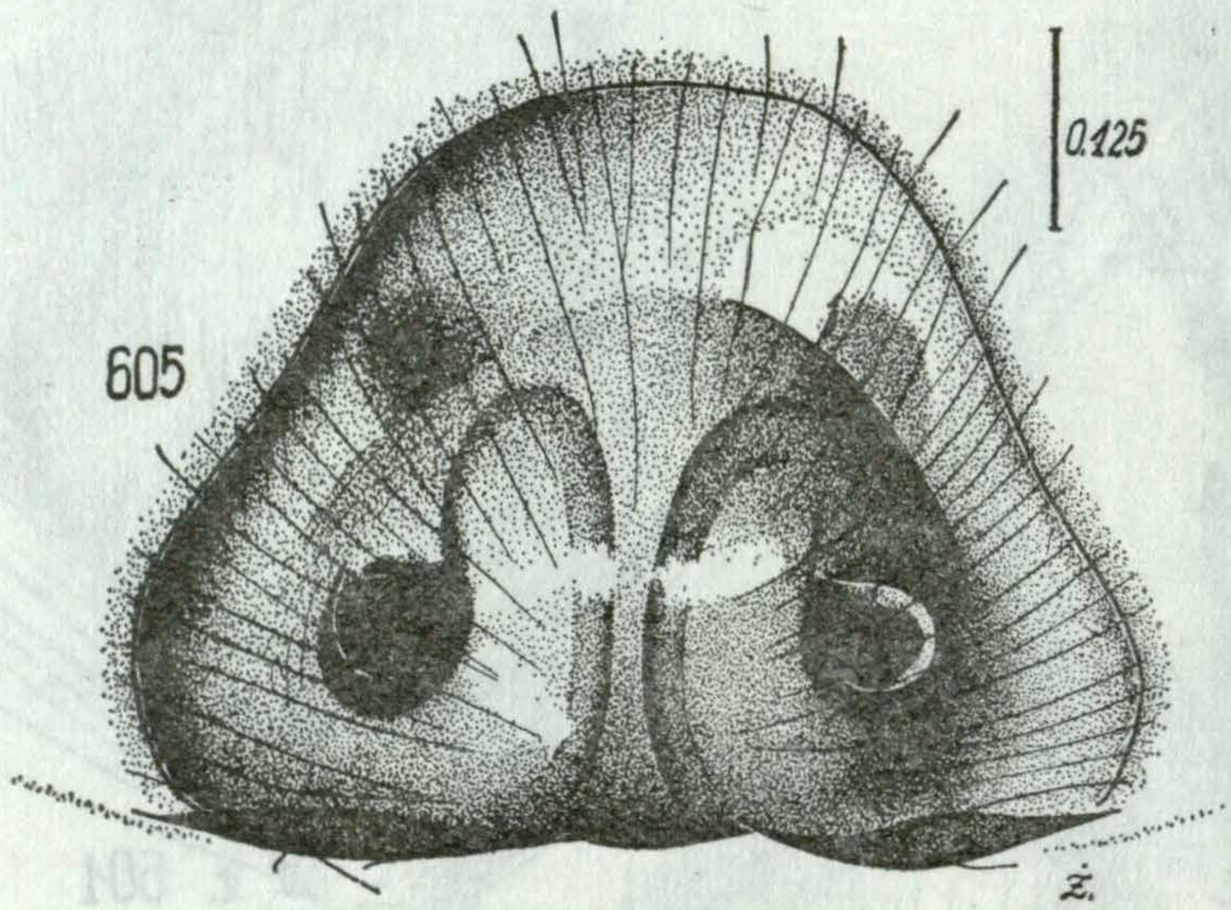


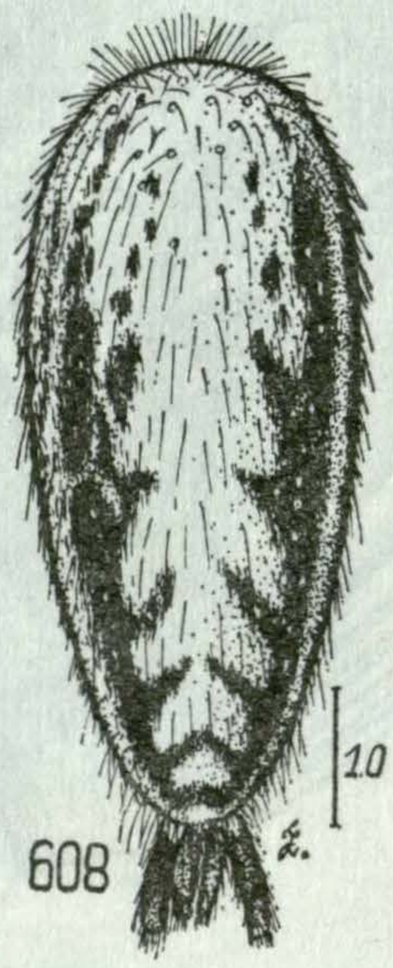


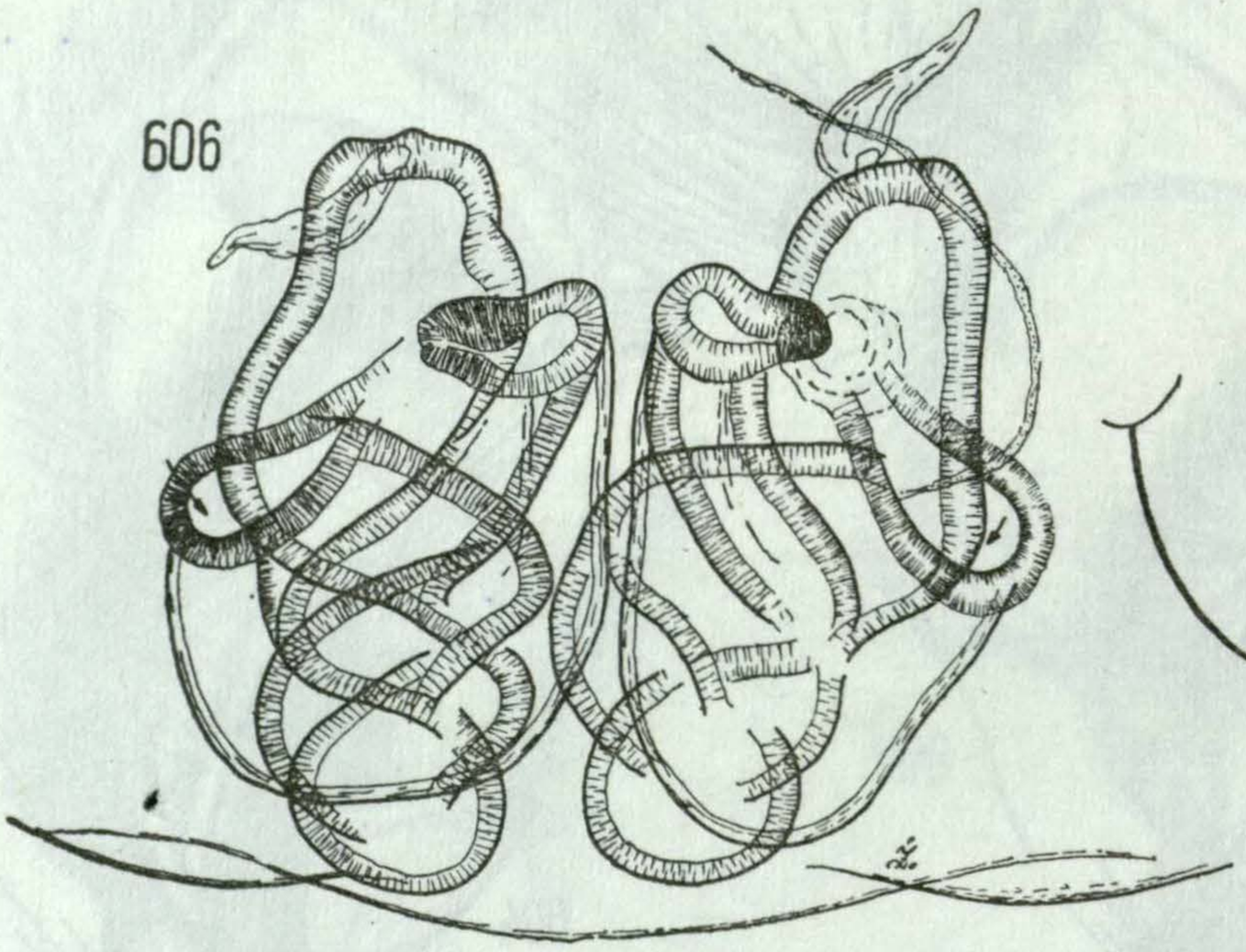
Figs. 596–599. ♂ *Telamonia festiva* THORELL, 1887: palpal organ. 599 — drawn by J. PRÓSZYŃSKI.

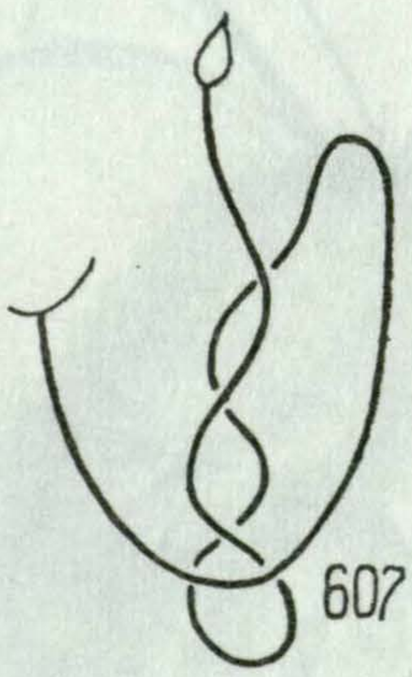


Figs. 600–604. ♂ *Telamonia festiva* THORELL, 1887: palpal organ.

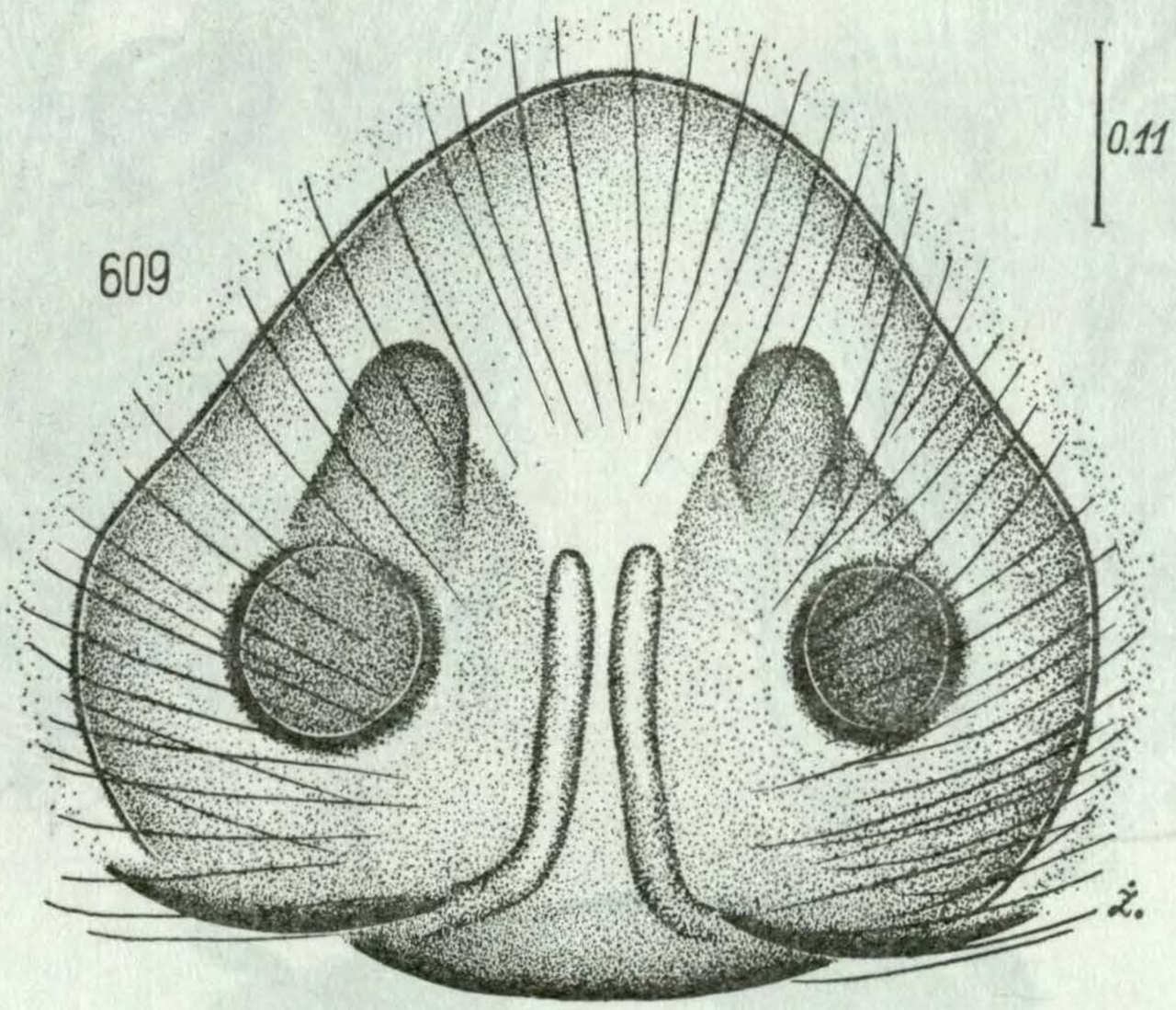




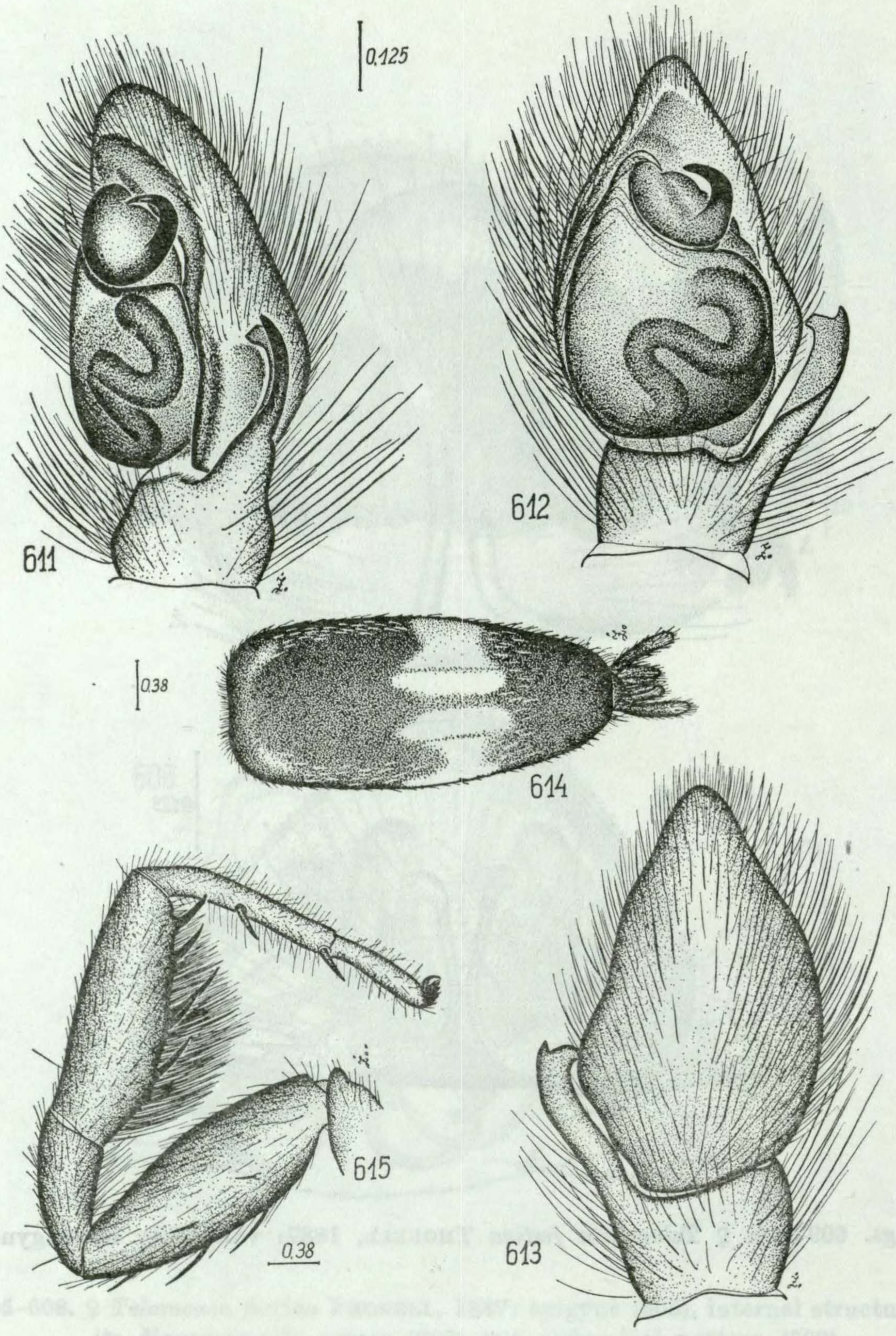




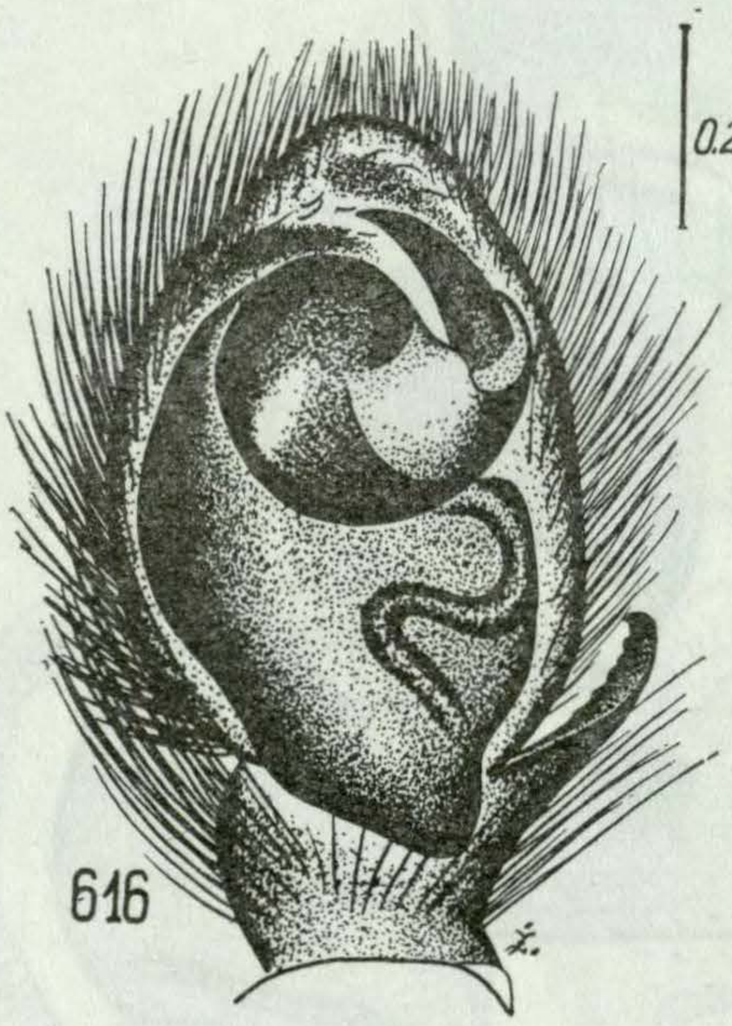
Figs. 605–608. ♀ *Telamonia festiva* THORELL, 1887: epigyne (605), internal structures (606), its diagrammatic course (607) and abdominal pattern (608).

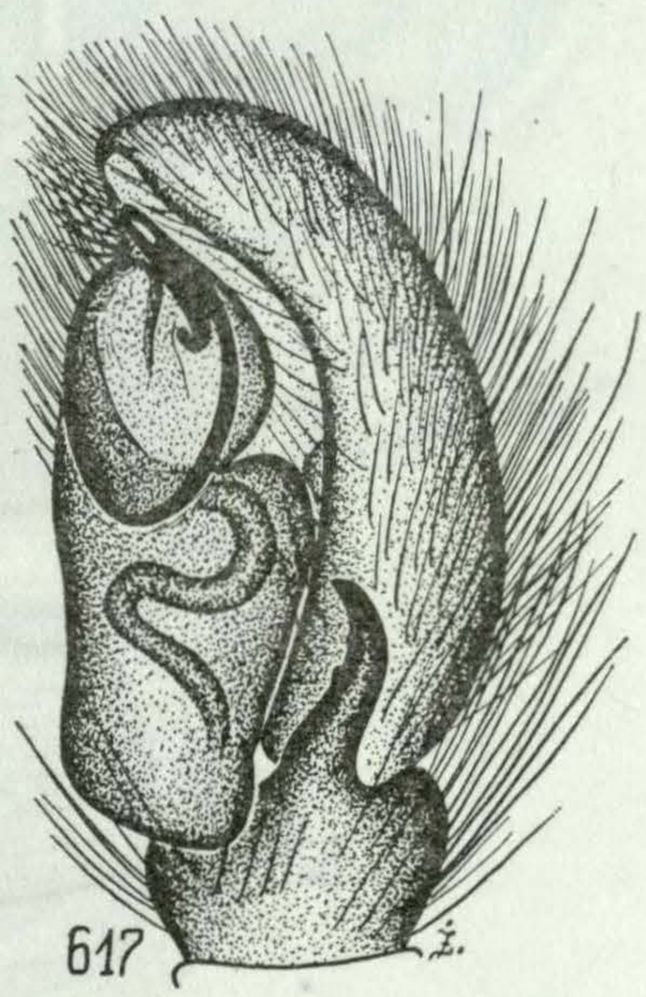


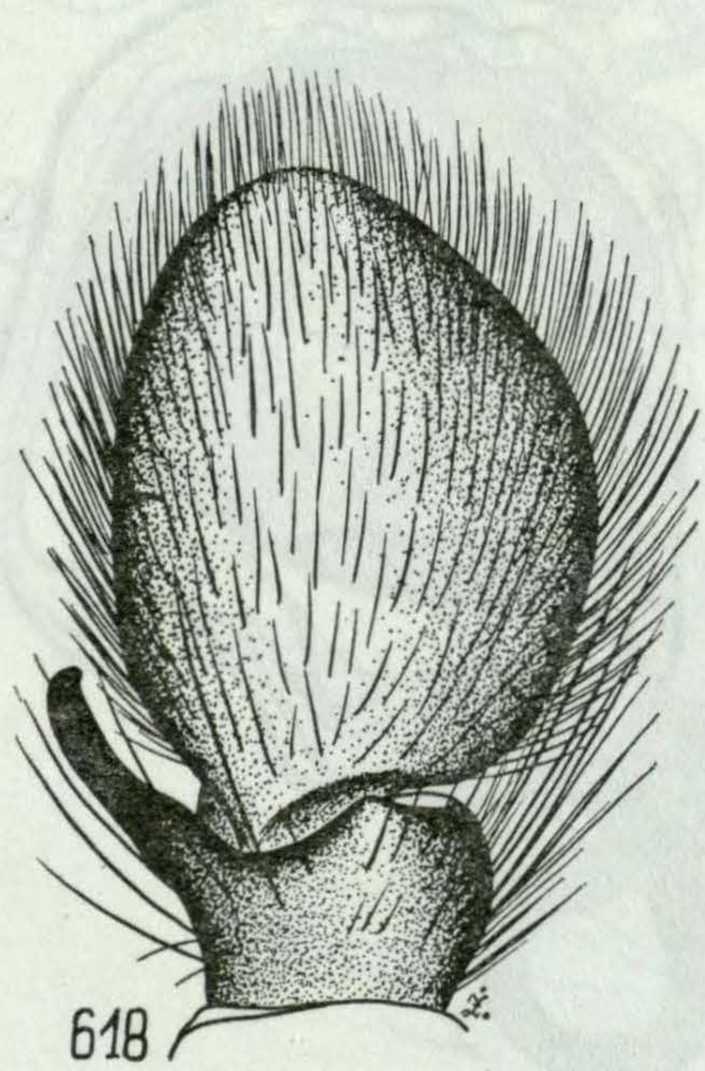
Figs. 609-610. ♀ *Telamonia festiva* THORELL, 1887: variability of epigyne.

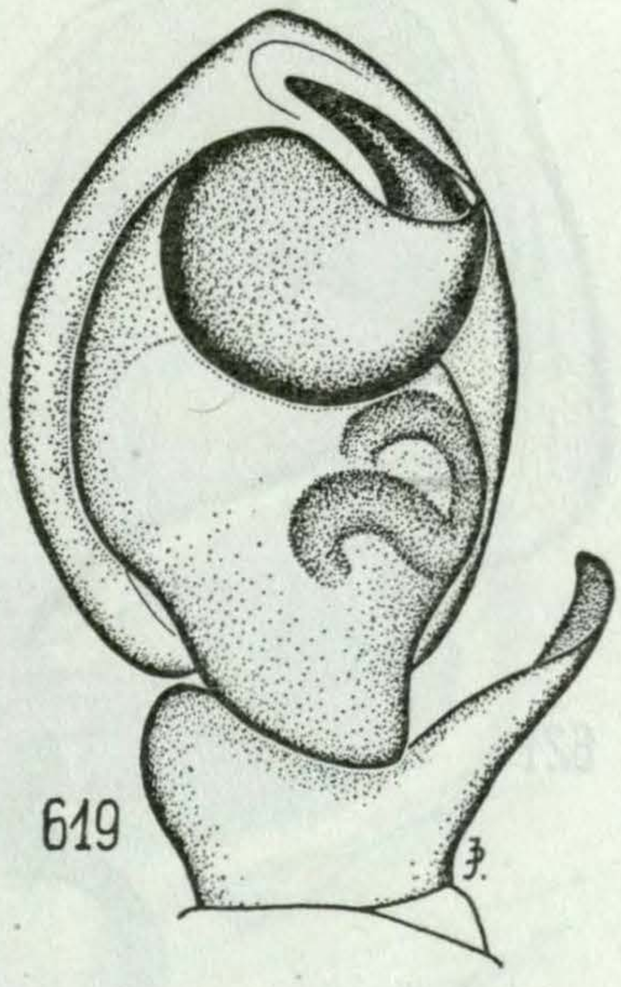


Figs. 611–615. ♂ *Thiania abdominalis* sp. n., holotype: palpal organ (611–613), abdominal pattern (614) and leg I (615).

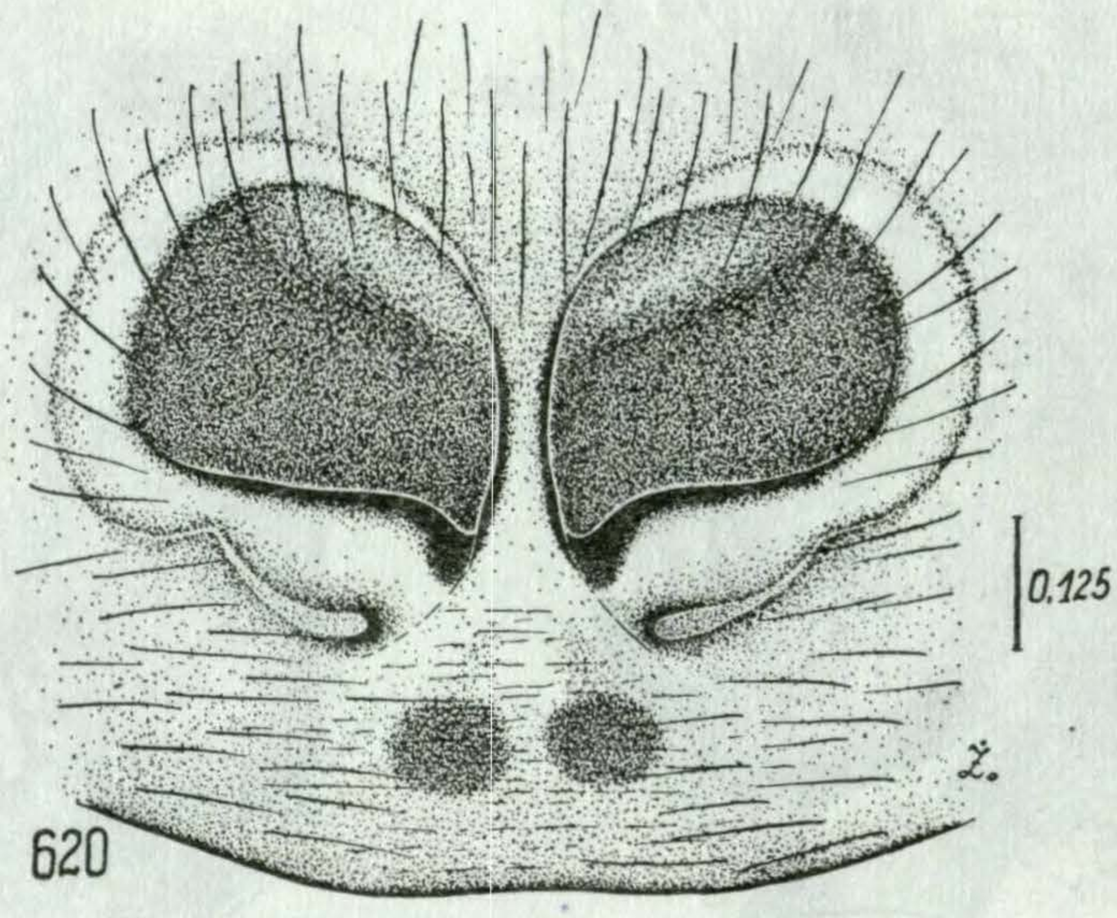


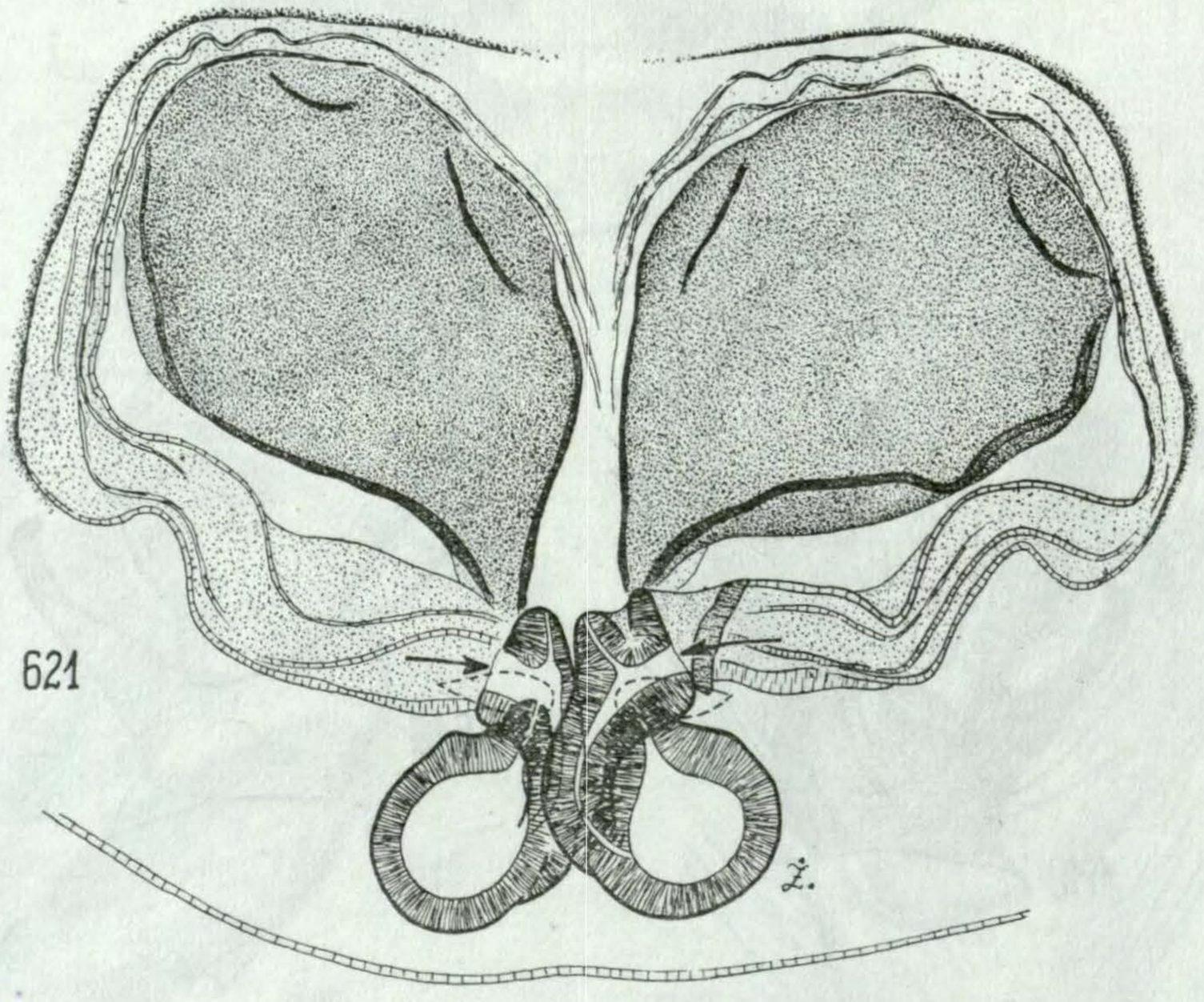




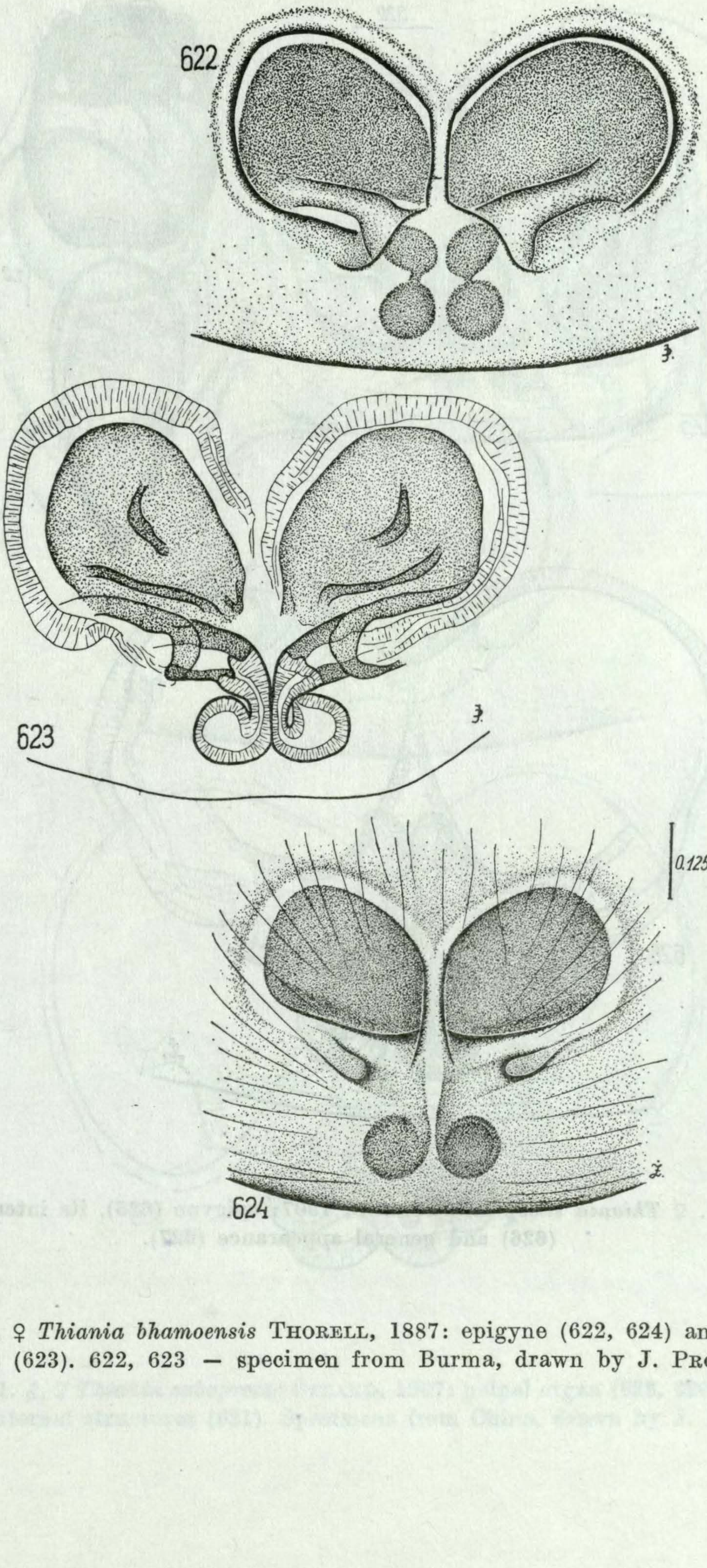


Figs. 616–619. ♂ *Thiania bhamoensis* THORELL, 1887: palpal organ. 619 – specimen from Burma, drawn by J. PRÓSZYŃSKI.

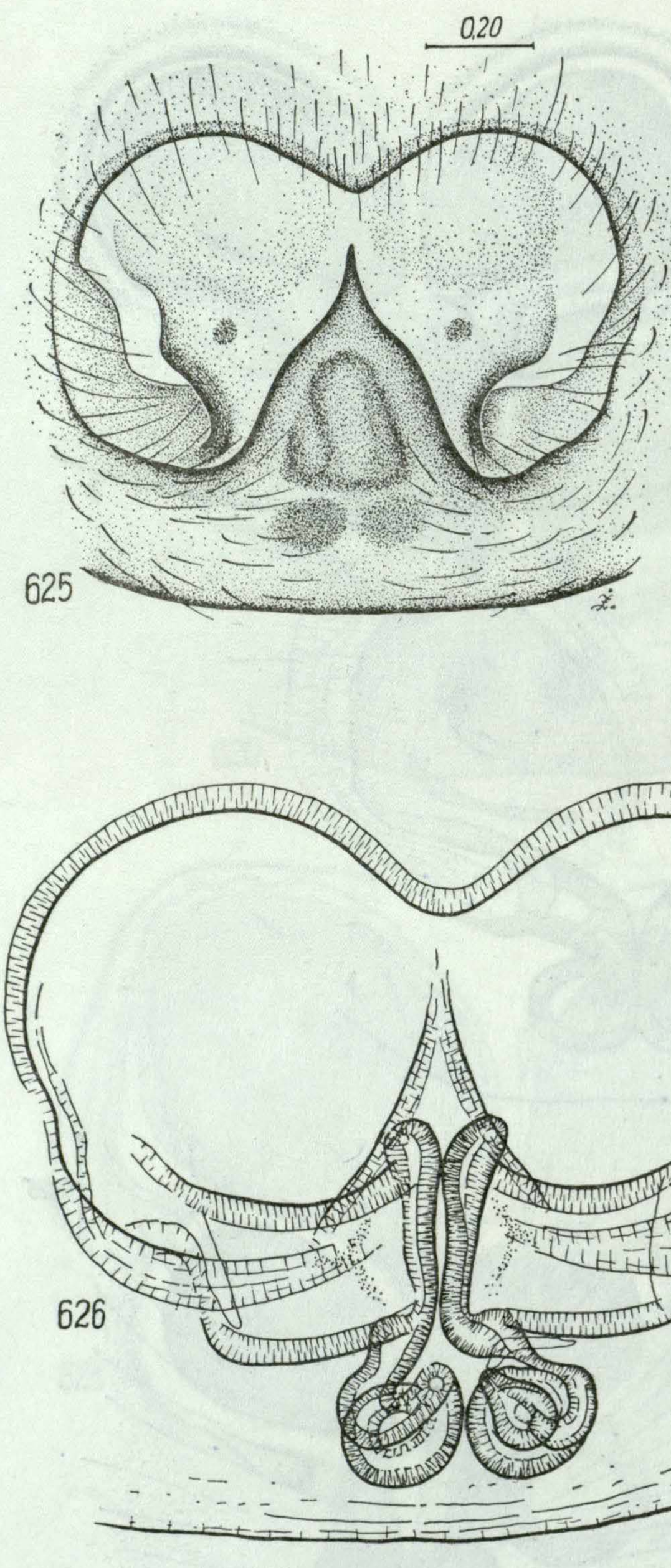


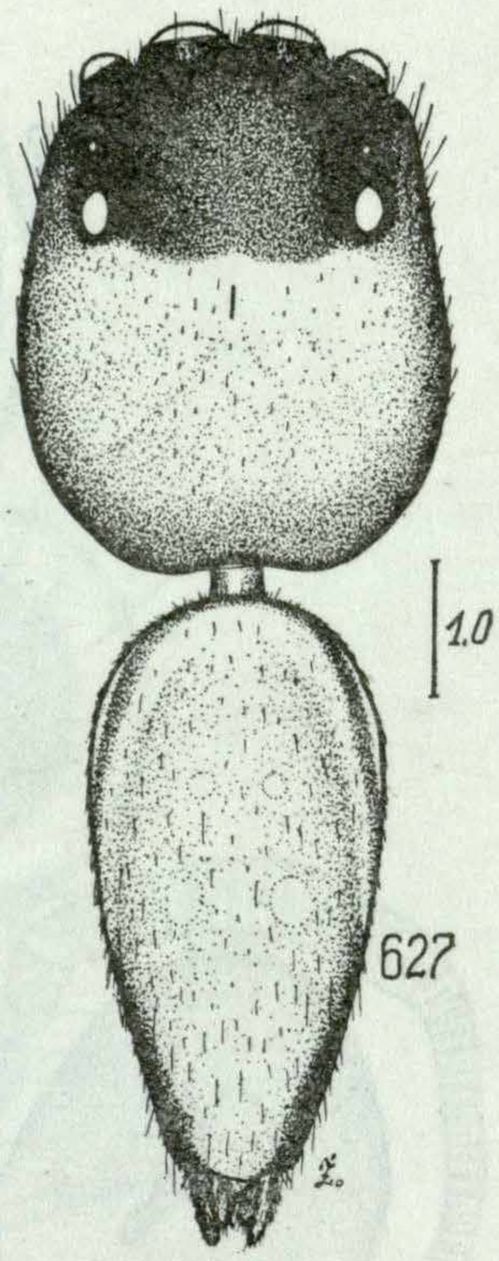


Figs. 620–621. ♀ *Thiania bhamoensis* THORELL, 1887: epigyne (620) and its internal structures (621).

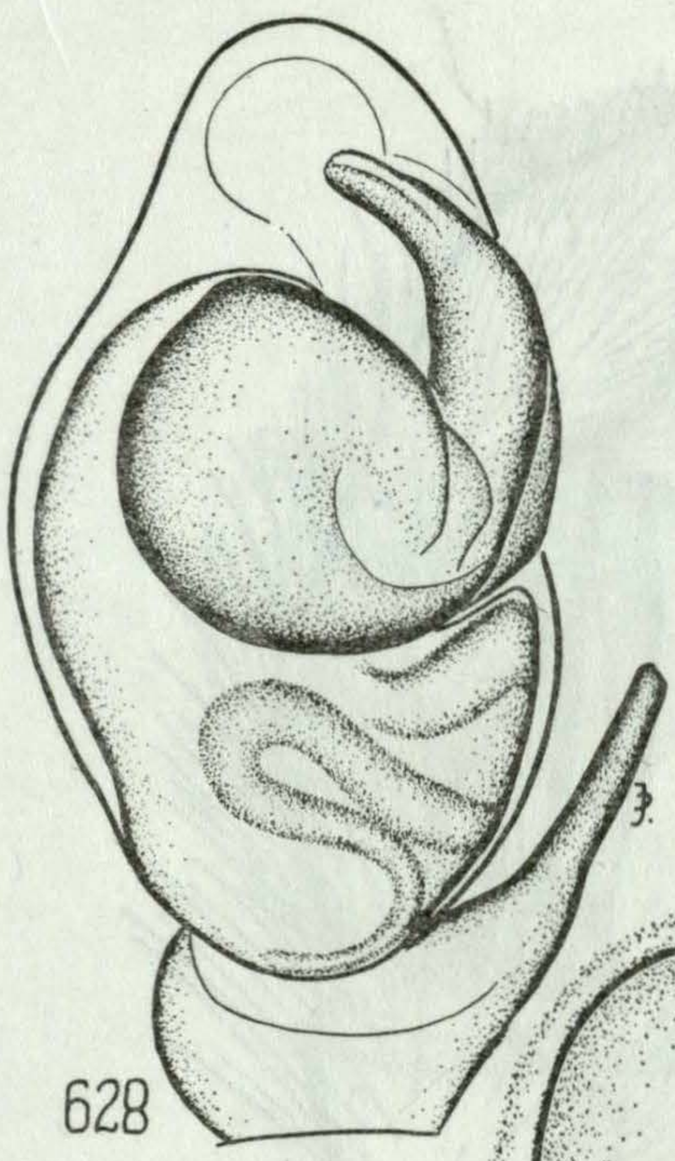


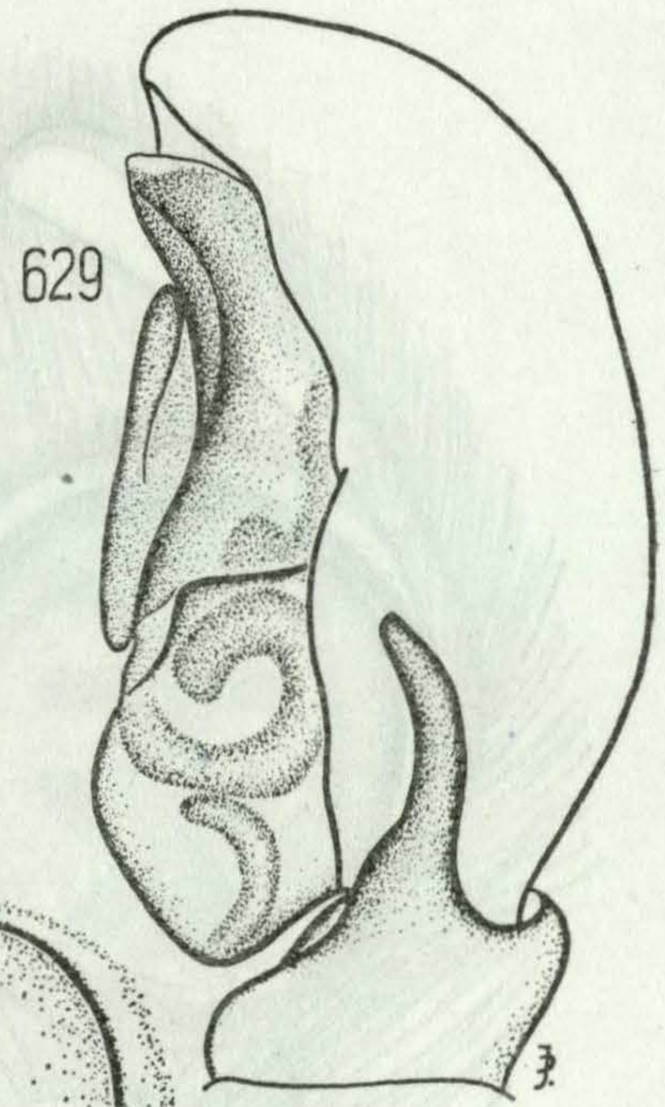
Figs. 622–624. ♀ *Thiania bhamoensis* THORELL, 1887: epigyne (622, 624) and its internal structures (623). 622, 623 — specimen from Burma, drawn by J. PRÓSZYŃSKI.

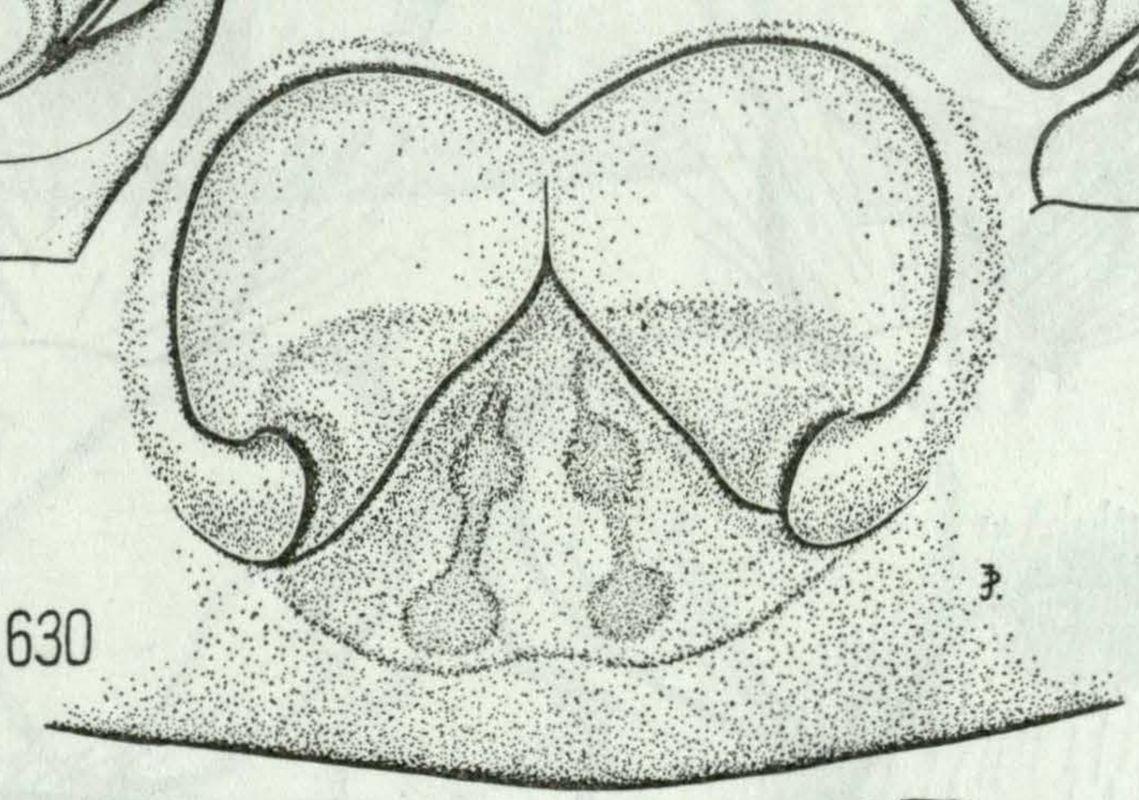


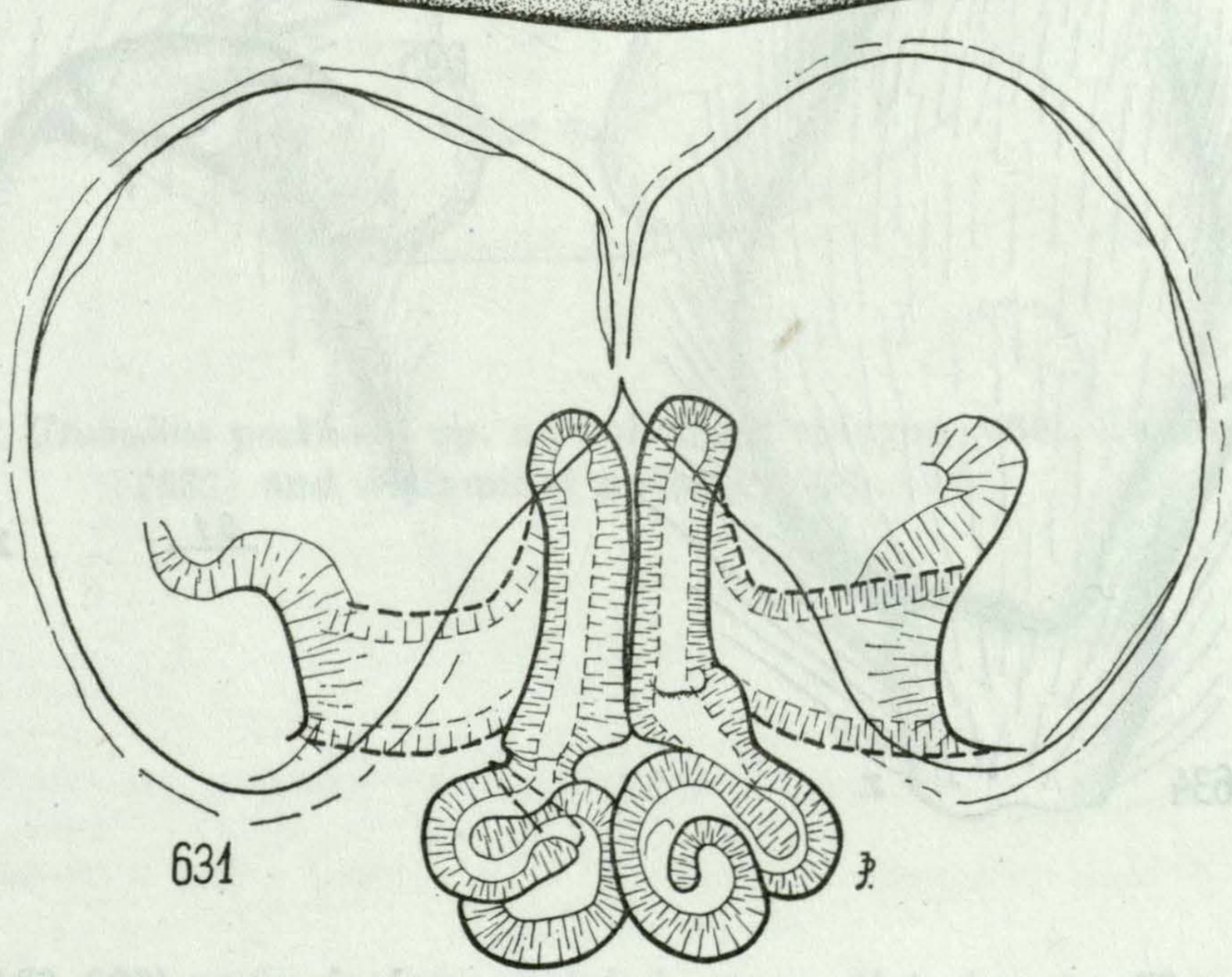


Figs. 625–627. ♀ *Thiania subopressa* Strand, 1907: epigyne (625), its internal structures (626) and general appearance (627).

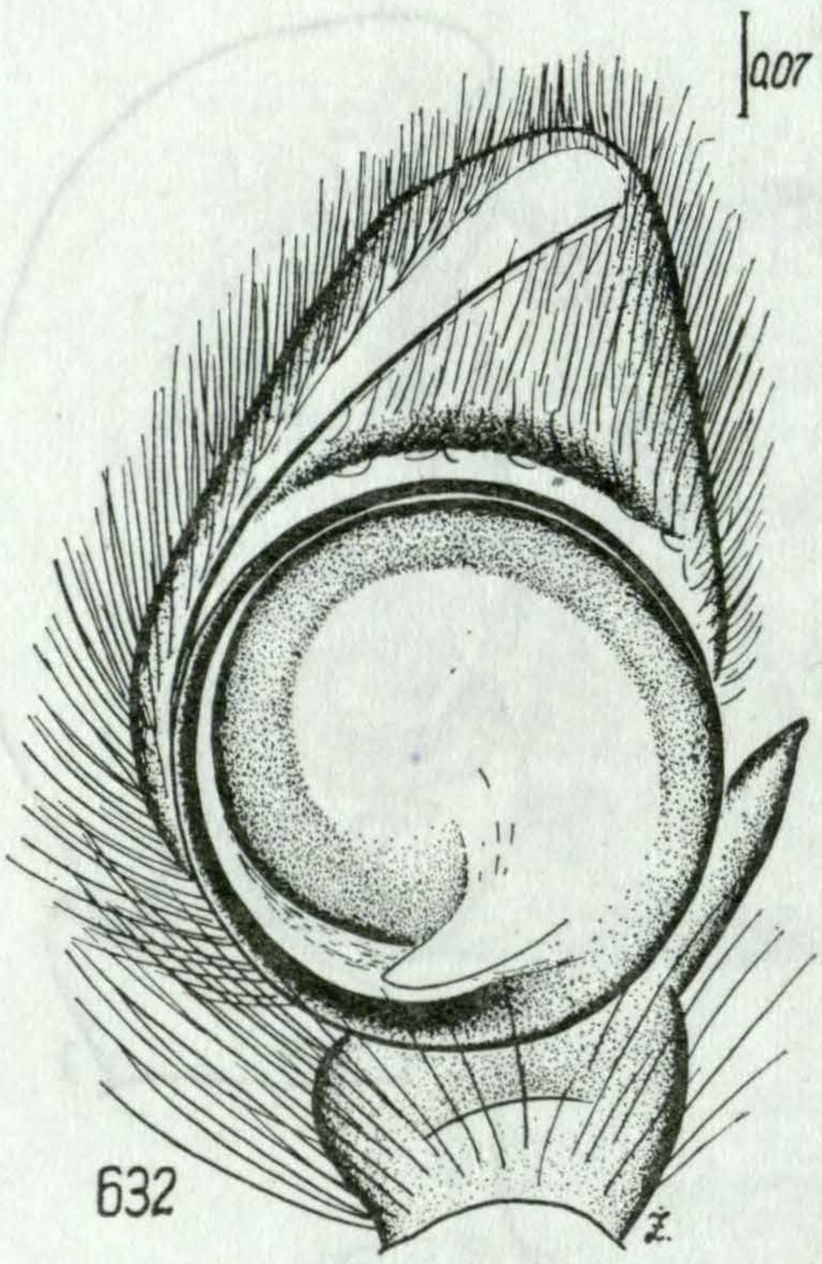


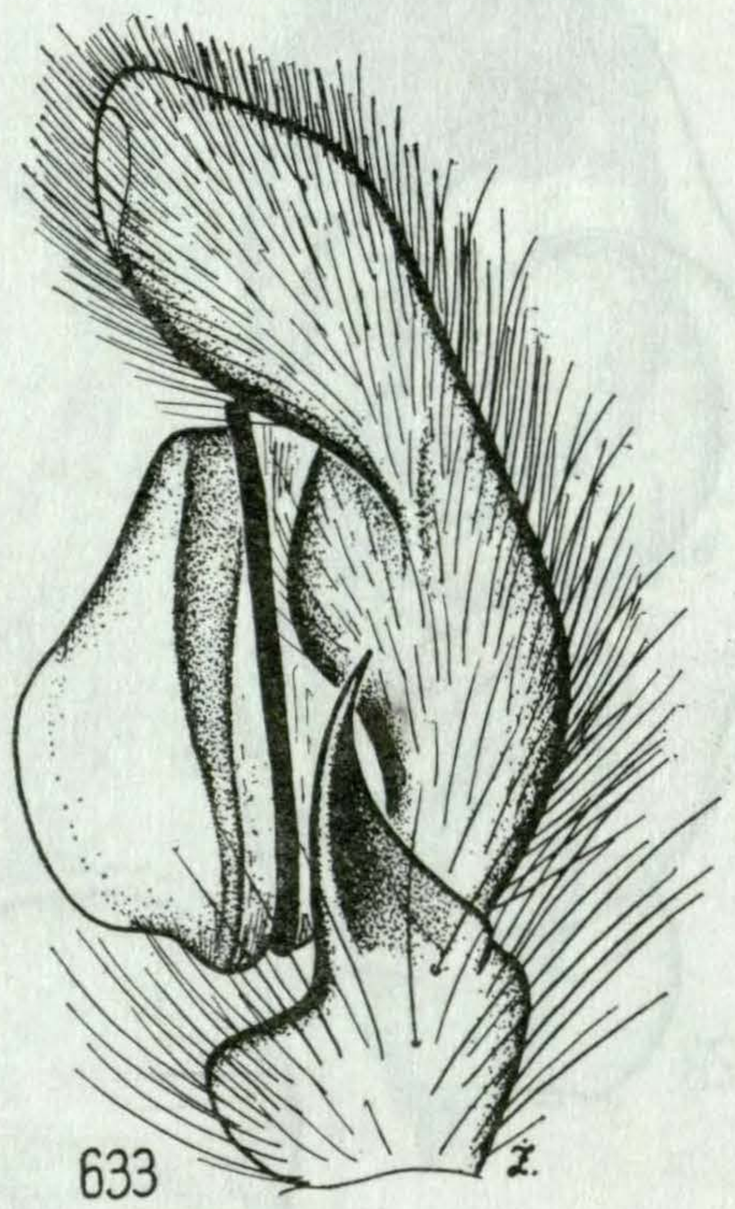


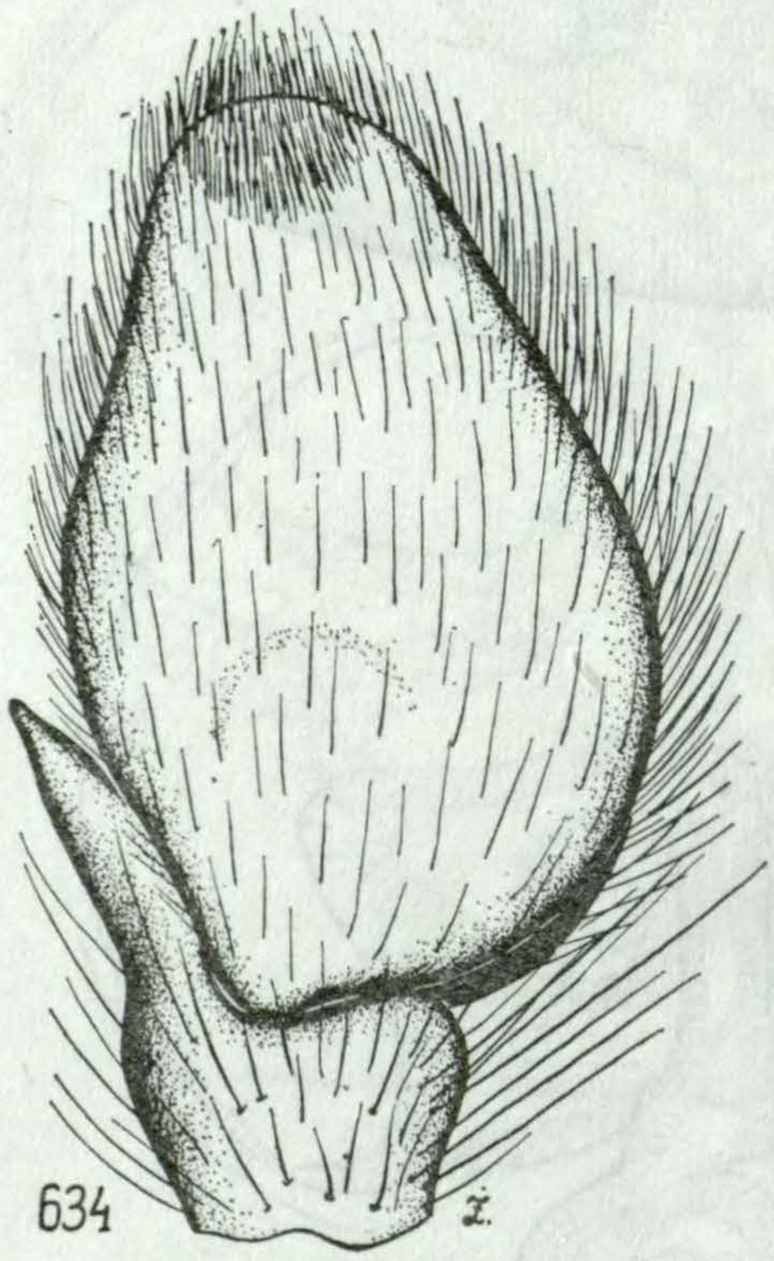


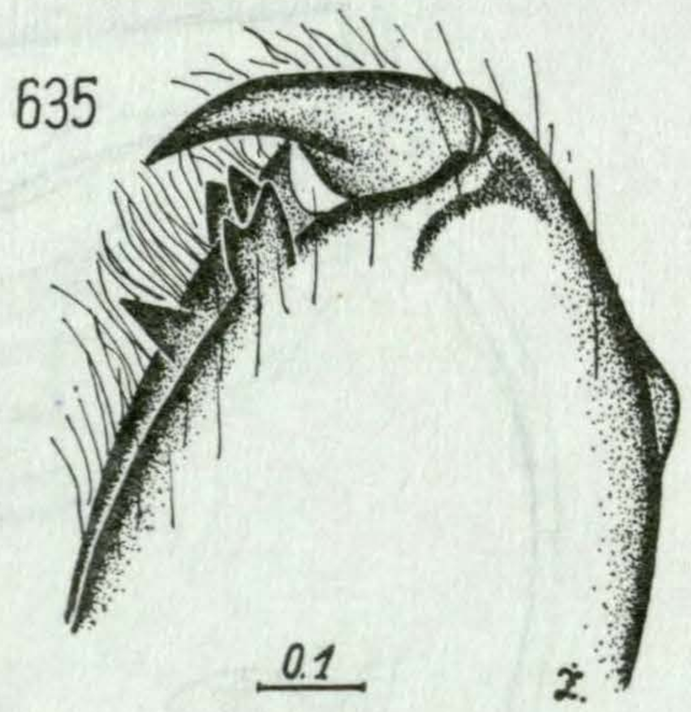


Figs. 628–631. ♂, ♀ *Thiania subopressa* STRAND, 1907: palpal organ (628, 629), epigyne (630) and its internal structures (631). Specimens from China, drawn by J. PRÓSZYŃSKI.

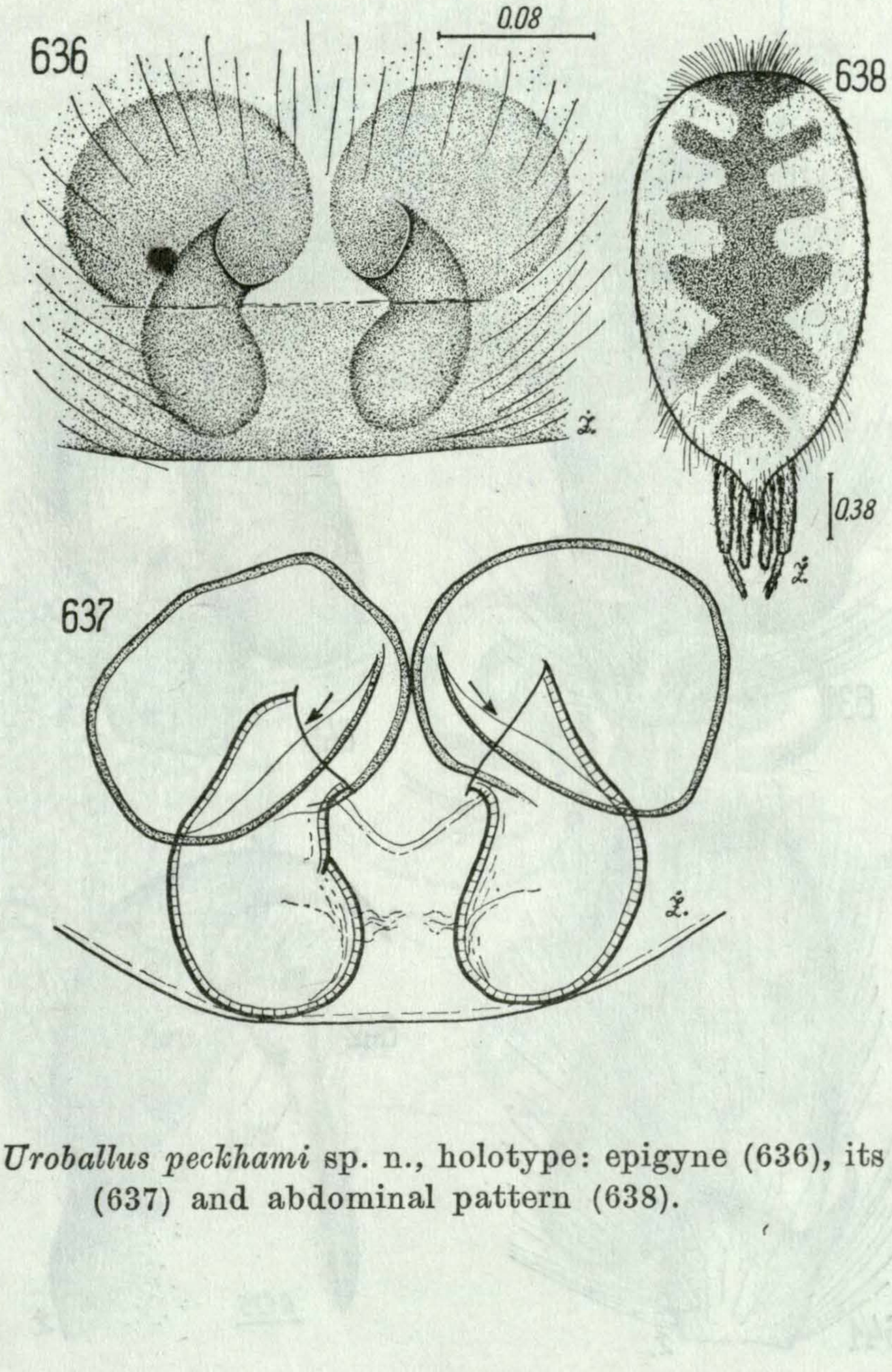




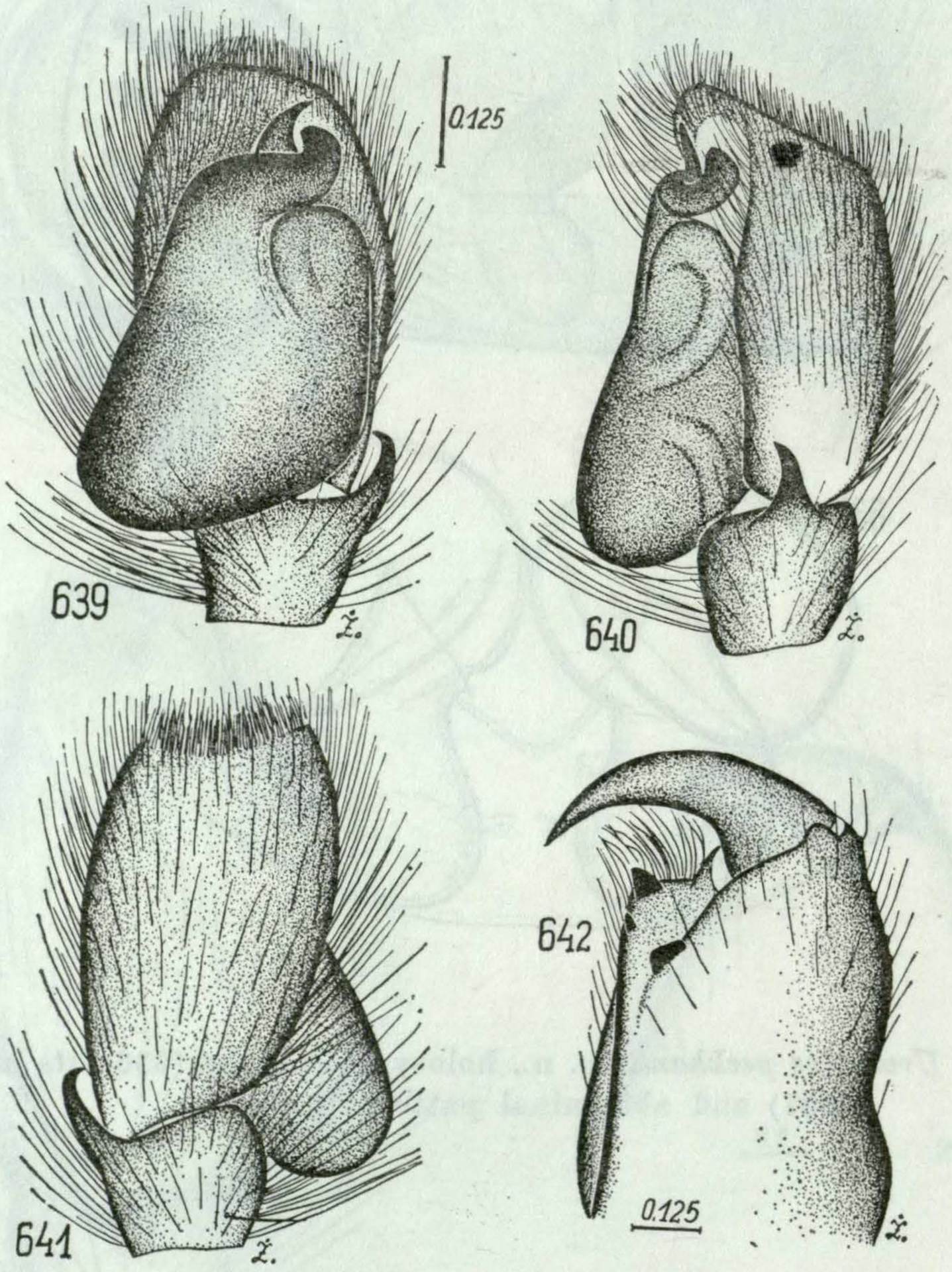




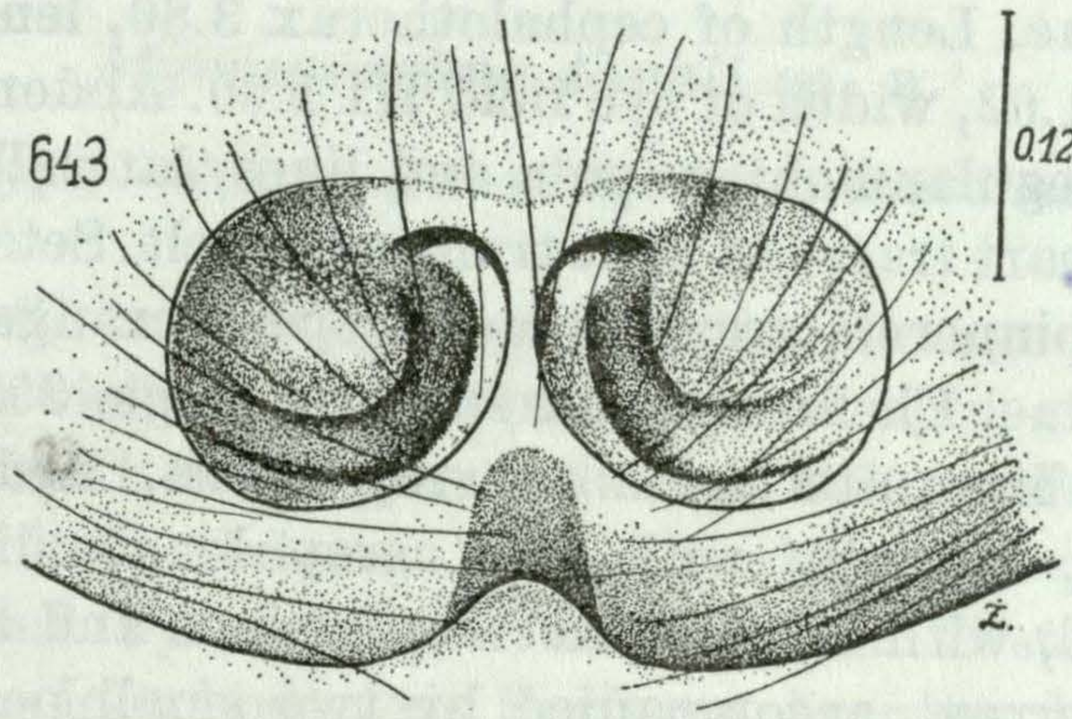
Figs. 632–635. ♂ *Thyene orientalis* sp. n., holotype: palpal organ (632–634) and cheliceral dentition (635).

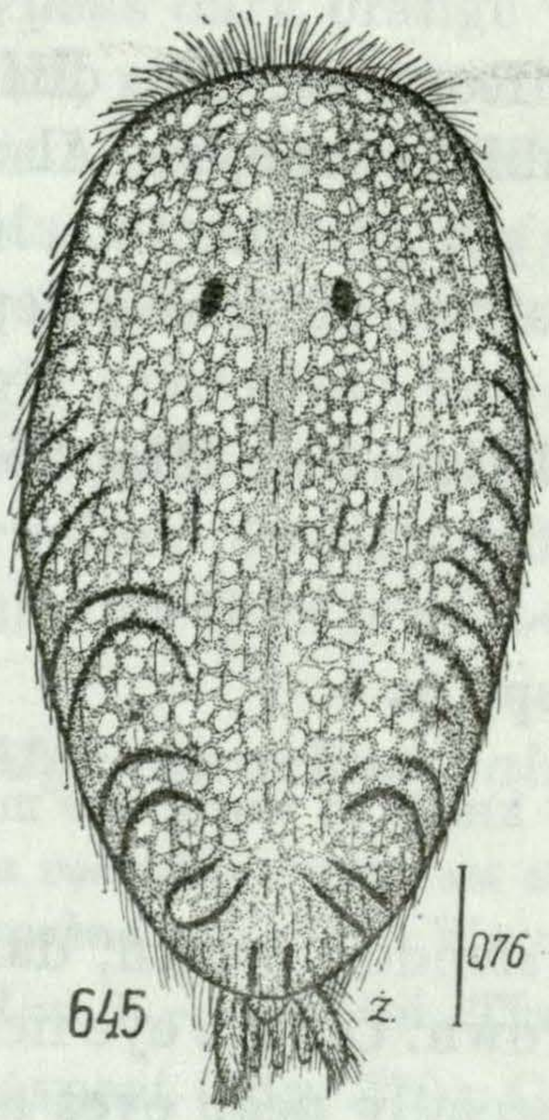


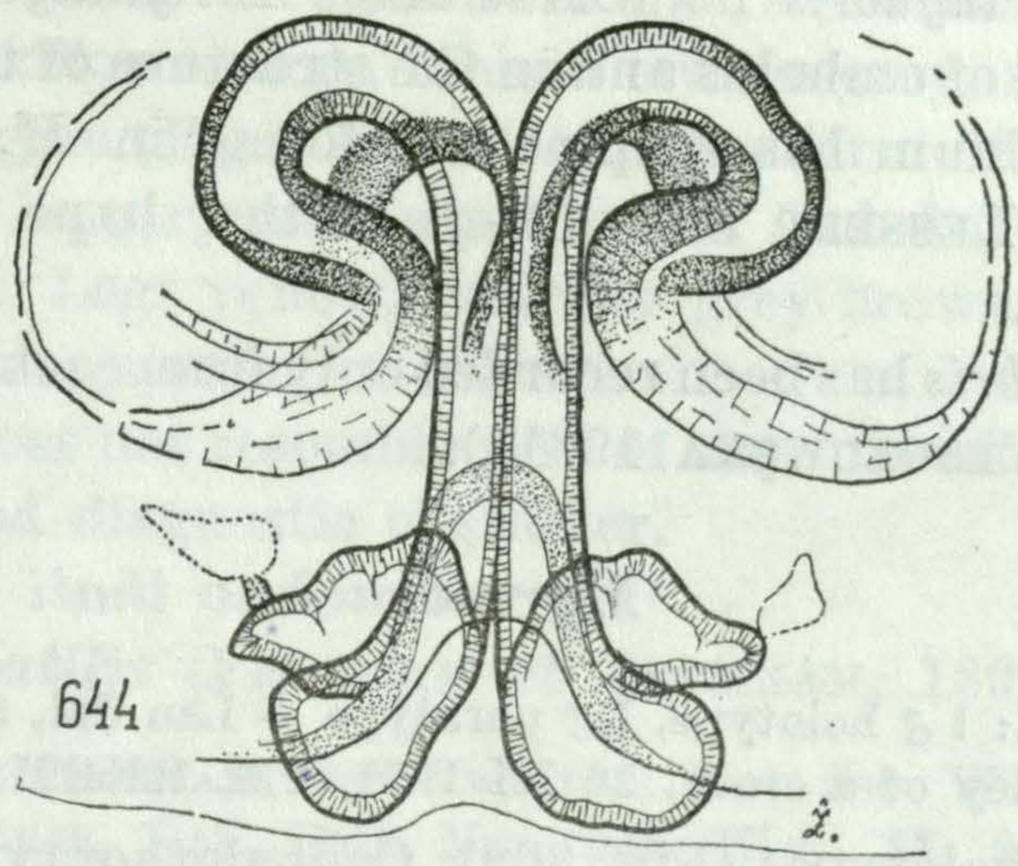
Figs. 636–638. ♀ *Uroballus peckhami* sp. n., holotype: epigyne (636), its internal structures (637) and abdominal pattern (638).



Figs. 639–642. ♂ *Zeuxippus pallidus* THORELL, 1895: palpal organ (639–641) and cheliceral dentition (642).







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Figs. 643–645. ♀ *Zeuxippus pallidus* THORELL, 1895: epigyne (643), its internal structures (644) and abdominal pattern (645).

the apical part of cymbium. Legs grey, their distal segments lighter. Setae sparse, grey, spines delicate light brown.

Female. Cephalothorax long and slender, with median constriction, brown. Surroundings of eyes black. On the constriction white setae, also around eyes small light grey setae. Length of cephalothorax 3.80, length of eye field 1.21, width of eye field I 1.62, width of eye field III 1.90. Abdomen grey, prolaterally grey-brown with irregular lighter spots and lines, laterally with rows of small dots. In the middle part traces of light transverse belt. Setae single, grey. Length of abdomen 3.70. Spinnerets grey-orange. Clypeus orange-brown, covered with small white-grey setae. Chelicerae and sternum (Figs. 357, 358) orange-brown, pedipalps brown, labium and maxillae grey-brown. Median surface of venter yellowish-light-grey, laterally with dark grey longitudinal streaks. Epigyne (Figs. 354–356) oval, with two distinct depressions and a deep incision on the side of epigastric furrow, accompanied by two small pockets. Internal canals form distally loops recurring several times, copulatory openings with crescent--shaped membraneous structures.

The *M. lugubris* male resembles *M. giltayi* Roewer. The differences are in the length of embolus and in the structure of tibial apophysis. Also the apical part of cymbium has a spine not found in *M. giltayi*. The female resembles *M. natalica* Lessert and differs in the shape of sternum and depressions of the epigyne.

M. lugubris has been recorded only from east Palaearctic (Map 25) (Prószyński 1979, Wesołowska 1981a).

Myrmarachne thaii sp. n.

Material: 1 ♂ holotype, 1 ♂ paratype – Lao Cai, 5 km E of town, 200 m, beaten from bushes in valley of a creek, 26 XI 1971, TM, HNHM.

Male (holotype) (Fig. 362). Cephalothorax slender, brown, darker around the ventral margin, surroundings of eyes black-brown. On the eye field two orange longitudinal streaks. Whole surface, and especially near eyes and laterally white adpressed hairs and grey and brown ones. Length of cephalothorax 2.46, length of eye field 1.08, width of eye field I 1.50, width of eye field III 1.56. Abdomen light brown, posteriorly light grey, with two indistinct yellow-brown streaks. Setae white and brown. Length of abdomen 2.46. Spinnerets brown. Clypeus orange-brown, covered with quite numerous long hairs similar in colour. Chelicerae (Fig. 363) big, brown, having a blue metallic lustre. Maxillae, labium and sternum orange. Venter with a longitudinal dark grey narrow streak on yellowish-grey background. Pedipalps (Figs. 359–361) brown-grey with an oval bulbus and broad embolus, distally with a flaky small outgrowth. On the apical part of cymbium two spines. Whole pedipalps covered densely with hairs. Femur and tibia of legs I brown, other segments yellow-orange – similarly as legs II–IV, only femora of legs IV slightly darker. All legs with orange-grey and brown hairs. On legs I and II orange-brown spines.

The species is related to *M. gigantea*. Differences are in the body size and shape, also the scutum present in *M. gigantea* — does not occur in *M. thaii*. Also the embolus with a flaky broadening, the seminal reservoir different in shape.

Myrmarachne topali sp. n.[1]

Material: 1 ♀ holotype — Yen So, SW of Ha Noi, beaten from trees in village, 22 IV 1966, T, HNHM.

Cephalothorax with a postocular constriction, orange-brown, surroundings of eyes black, in their vicinity and laterally sparse light grey and white setae. Length of cephalothorax 1.40, length of eye field 0.60, width of eye field I 0.80, width of eye field III 0.85. Abdomen with a weakly developed anterior and posterior scutum, divided by a delicate constriction. Distal edge of posterior scutum square with the long body axis. Surfaces of scutum brown, the remaining area black-grey. Setae sparse grey. Length of abdomen 1.50. Spinnerets grey--brown. Clypeus dark orange with single grey hairs. Chelicerae (Fig. 367) dark orange, small, not many teeth on both edges. Proximal segments of pedipalps orange, distal ones darker. Maxillae orange, labium orange-grey, sternum light brown, venter dark grey. Epigyne (Figs. 364–366) in the form of vast shallow depression. Copulatory canals long, proximally broader and delicate, distally form strongly sclerotized loops. Legs yellow, laterally grey-brown longitudinal streaks. Hairs grey-yellow, spines similar in colour.

The structure of epigyne does not resemble that of any other known species of the genus and thus is a good diagnostic character.

Myrmarachne voliatilis (Peckham et Peckham, 1892)

1892 *Hermosa voliatilis* Peckham et Peckham, Occ. Pap. nat. Hist. Soc. Wisc., **2**: 53.
1978 *Myrmarachne voliatilis*: Wanless, Bull. Brit. Mus. nat. Hist., **33**: 97–99.

Material: 1 ♀ — Ha Noi, Thu Le, park, 10 X 1978, PTL.

Dorsal aspect (Fig. 370). Cephalothorax with a median constriction, brown, surroundings of eyes black with sparse grey and grey-brown setae. Posteriorly also white setae. Length of cephalothorax 1.74, length of eye field 0.66, width of eye field I 0.84, width of eye field III 0.96. Abdomen egg-shaped, anteriorly brown-grey, posteriorly darkening — almost black with four brown apodemes. Also visible traces of light transverse streaks. All surface with sparse grey setae. Length of abdomen 2.28. Spinnerets grey-orange. Clypeus greyish-brown with sparse setae similar in colour. Chelicerae (Fig. 371) small, grey-brown, with teeth on both edges, maxillae, labium and sternum similar in colour. Venter dark grey. Epigyne (Figs. 368–369) in the form of two depressions, with a pocket near the epigastric furrow. Internal canals form a single loop — similar as in *M. gigantea* — but are much shorter. Legs slender, proximal and distal seg-

[1] Named in honour of Dr Topál, who collected the material from Viet-Nam.

ments yellow-orange, other legs orange-brown with darker lateral surfaces. Hairs sparse, short, grey, spines grey-orange.

The species is known only from Madagascar (Map 26) (WANLESS 1978a) and is related to *M. gigantea* and *M. andrewi* WANLESS. There are small differences in the position and reciprocal proportions of epigynal elements. In the case of *M. voliatilis* and *M. andrewi* these difference are so small that they allow to doubt about their distinct character.

Neon SIMON, 1876

1876 *Neon* SIMON, Les Arachnides de France, **3**: 208.

A Holarctic genus with a single species also in South America (?) (BONNET 1958). The locality in Viet-Nam is the first one in the Oriental Region.

A morphological definition of the genus has been given by SIMON (1876), whereas its modified version — by GERTSCH and IVIE (1955). The latter contains good drawing documentation of several species. The type-species is *N. reticulatus* (BLACKWALL).

Neon minutus sp. n.

Material: 1 ♂ holotype, 1 ♀ allotype — Quang Ninh, Ha Long, brook valley in jungle slope, 30 m, 11 X 1978, PTL.

Male (holotype). Eye field white-grey, surroundings of median eyes I black-brown, of other — black. The remaining part of the cephalothorax white--grey slightly yellowish. On the whole surface single white-grey setae. Length of cephalothorax 0.87, length of eye field 0.46, with of eye field I and III 0.74. Abdomen white-grey with irregular grey spots and sparse light grey setae. Length 0.93. Spinnerets light grey. Clypeus light grey with single hairs similar in colour. Ventral aspect white-grey. Palpal organ (Figs. 372–375) thick, bulbus big, embolus set laterally, long, band-like. Legs I light grey, darker along frontal surfaces, legs IV similar, darker around the joints. Sparse light grey setae, spines yellow-grey. A damaged specimen — without legs II and III.

Female (allotype) (Fig. 377). Cephalothorax light grey, anteriorly darker. Surroundings of eyes I grey-brown, of other — black-grey. Hairs light and dark grey. Length of cephalothorax 0.93, length of eye field 0.49, width of eye field I 0.77, width of eye field III 0.80. Abdomen similar as in the male, on the anterior margin numerous dark grey adpressed hairs. Length 1.12. Spinnerets light grey. Clypeus as in the male. Chelicerae, maxillae and labium yellowish-grey, pedipalps and sternum light grey. Venter white-grey, laterally spots as on the dorsal aspect. Epigyne (Fig. 376) in the form of two oval delicate depressions, distant from the epigastric furrow. Its internal structures are long delicate canals twisted into several loops (much deformed during the preparation). Legs light grey, darker around joints and laterally. Hairs light grey and grey-brown, spines grey-orange.

The species is distinguished by the structure of copulatory organs and darker hairs on the anterior margin of abdomen in females. Other characters resemble those of other representatives of the genus.

Nungia gen. n.[1]

The type-species — *N. epigynalis* sp. n. is the only representatives of the genus known at present. Its cephalothorax is strongly flattened, abdomen elongate with longitudinal pigment streaks. Internal structures of epigyne (Figs. 378, 379) are thick-walled, simple in structure and arrangement, similar in shape to a butterfly. This is a characteristic feature of the genus.

Nungia epigynalis sp. n.

Material: 1 ♀ holotype — Lao Cai, 17 km SE of town, Dang Khao valley, 29 XI 1971, TM, HNHM.

Eye field brown, surroundings of eyes darker with delicate grey-brown hairs. Posterior part of cephalothorax light brown, with single hairs similar in colour. Length of cephalothorax 2.40, length of eye field 1.40, width of eye field I 1.68, width of eye field III 1.86. Abdomen (Fig. 380) slender, greyish-yellow with longitudinal rows of small grey spots. All surface covered with quite dense grey and grey-brown hairs. Length of abdomen 2.88. Spinnerets grey-orange. Clypeus light brown with sparse grey hairs. Chelicerae, pedipalps, maxillae, labium and sternum orange-brown. Venter grey with indistinct rows of lighter spots. Epigyne (Figs. 378, 379) strongly sclerotized, its internal structures thick-walled, similar in the shape to butterfly. Two distal segments of legs I yellow, other light brown. Other legs yellow, more delicate. Hairs and spines light brown, the latter very short.

Onomastus Simon, 1900

1900 *Onomastus* Simon, Ann. Soc. ent. Fr., **69**: 29.

The genus *Onomastus* and some related genera (e.g. *Asemonea* O. P.-C., *Pandisus* Sim.) are characterized by the specific appearance of whole body and by the complex structure of male copulatory organs. Because of the distinct character of the group many arachnologists (Crane 1943, Roewer 1965, Lehtinen 1967) consider it as a family *Lyssomanidae*, while others (Galiano 1980, Wanless 1980a–d) — as a subfamily of *Salticidae*. Although in most recent works the latter is more frequent, nevertheless the problem is still being discussed (Galiano 1976). The genus *Onomastus* (revised by Wanless 1980c) is known on the basis of four species from India, Ceylon and Borneo.

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[1] Named after the Nung nationality living in Viet-Nam.

Onomastus simoni sp. n.

Material: 1 ♀ holotype, 2 juv. paratypes – Cuc Phuong, prov. Ninh Binh, netted in grasses, 12 V 1966, T, HNHM.

Female (holotype) (Fig. 383). Cephalothorax slender, white-yellow, urroundings of lateral eyes I, eyes II and III – black, with sparse white setae. Median eyes I large, above them lateral eyes I. Length of cephalothorax 1.70, length of eye field 0.61, width of eye field I 1.10, width of eye field III 0.80. Abdomen yellow with four small grey spots. Setae sparse, yellow. Length 1.85. Spinnerets yellow. Other body elements, visible frontally and dorsally – white-yellow, only venter and legs more yellow. Legs (Fig. 382) delicate, long, with yellow spines. In the distal part of tibiae I and II – laterally – dark grey spots. Epigyne (Figs. 381, 384) weakly sclerotized, in the form of a shallow depression, slit-like copulatory openings leading to several-chamber internal structures. Such structure of the epigyne does not resemble any of the known species of the genus.

Pancorius Simon, 1902

1902 *Pancorius* Simon, Ann. Soc. ent. Fr., **71**: 410.

A small, very little known genus (Bonnet 1958 mentions 9 species), mainly recorded from Great Sunda Islands. Its Vietnamese representatives are distinguished by a simple structure of palpal organ, epigyne with two pockets, their internal structures in the form of 2–3 vast chambers. Body rather big, thickset, densely haired. These characters may prove their relationship with genus *Hyllus*. The type-species is *P. dentichelis* (Simon).

Pancorius dabanis (Hogg, 1922), comb. n.

1922 *Menemerus dabanis* Hogg, Proc. zool. Soc. Lond., **1922**: 307.

Material: 1 ♂ "*Menemerus dabanis* Hogg, Type, Daban, Pharang prov., 650′, S Annam, Boden, Hogg det.", BMNH.

Comparative material: ♂, ♀ "*Pancorius dentichelis* Sim., Padang, W. Sumatra", MNHN 20485.

The drawings of palpal organ (Figs. 385, 386) – made by J. Prószyński – are the only documentation of the species. Its full description is given by Hogg (1922), who classifies the species wrongly as being within the genus *Menemerus*.

Copulatory organ simple in structure: bulbus oval, embolus short dagger-like, tibial apophysis small. In comparison with the next species the bulbus rounder and embolus proportionally longer.

Pancorius magnus sp. n.

Material: 1 ♂ holotype, 1 ♀ allotype, 1 ♂, 1 ♀ paratypes – Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 2–5 VI 1966, BP, IZPAN. 1 ♂, 1 ♀ paratypes – beaten from bushes in forest and near creek, 11–12 V 1966, T, HNHM. 1 ♂, 1 ♀ paratypes – Vinh

Phu, Tam Dao, 1400 m, roadside wall with dense vegetation and stony jungle slope, 19 X 1978, PTL. 1 ♂ paratype — India, Kurseong, Darjeeling Distr., W Bengal, 1000 m, beaten from bushes in forest, 18 X 1967, T, HNHM.

Male (holotype). Cephalothorax thickset, chestnut-brown, with sparse brown hairs, only surroundings of eyes darker with grey and brown hairs and bristles. Length of cephalothorax 4.20, length of eye field 1.60, width of eye field I 2.79, width of eye field III 2.60. Abdomen dark brown-grey with a mosaic of yellowish spots forming in the middle an indistinct herring-bone pattern, laterally — longitudinal rows. On the whole surface sparse grey hairs and grey and brown bristles. Length of abdomen 4.10. Spinnerets grey-brown. Clypeus chestnut-brown with sparse grey-brown hairs. Chelicerae thick (Fig. 390), the colour of clypeus. Maxillae and labium similar in colour, only their tips lighter. Sternum orange with a brown margin, venter dark grey with traces of grey-yellow spots, laterally forming longitudinal rows. Palpal organ (Figs. 387-389) orange-brown, bulbus oval with a translucent seminal reservoir, embolus short, tibial apophysis about one third of the bulbus. Legs I dark brown, their tarsi dark orange. Other legs grey, gradually lighter, legs IV dark orange. Hairs dense — dark brown and orange — especially on the ventral side of legs I and II, where they form a dense brush. Spines brown.

Paratypes vary in body size, intensity of hairs, also small differences in the details of structure of palpal organs (Figs. 391–396).

Female (allotype). Cephalothorax similar as in the male, thickset, chestnut-brown, surroundings of lateral eyes I and eyes II and III — black. From the fovea media to the posterior margin an orange belt covered with white hairs. On the whole surface also grey and brown hairs, in the surroundings of eyes grey- and dark brown bristles. Length of cephalothorax 5.01, length of eye field 2.12, width of eye field I 3.34, width of eye field III 3.04. Abdomen grey-brown, anteriorly a yellow median belt, posteriorly changing into small spots forming an indistinct herring-bone pattern. Laterally light spots forming longitudinal rows. Length of abdomen 6.08. Spinnerets brown. Clypeus dark brown slightly turning grey, with sparse grey and brown bristles. Chelicerae (Fig. 399) chestnut-brown, structure as in male. Pedipalps orange-brown, maxillae and labium the colour of chelicerae. Sternum yellow-orange with a darker edge. The middle part of venter with two yellow streaks divided by a grey-brown field. Laterally rows of light spots. Epigyne (Figs. 397, 398) distant from the epigastric furrow with two pockets and slit-like copulatory openings. Its internal structures in the form of linked chambers. Basal segments of legs I orange-brown, tibiae brown, metatarsi and tarsi orange. Basal segments of legs II grey-orange-brown, femora ventrally yellow, three distal segments red-orange-brown. Legs III and IV slightly lighter with a similar colour gradation of particular segments. Hairs numerous, grey and brown, spines brown.

Paratypes usually do not differ from the above description, and the small differences in the structure of epigyne (Fig. 400) should be treated as a symptom of individual variability.

The species is distinguished by big body dimensions (females frequently exceed 10 mm), spermathecae double chambered, palps big their bulbus more elongate than in *P. dabanis,* chelicerae very thick in both sexes.

Apart from Viet-Nam the species occurs also in India.

Pancorius minutus sp. n.

Material: 1 ♀ holotype — Chine, 80 km SW Ha Noi, 28 VI 1959, PP, IZPAN.

Eye field light brown with an orange line along the middle part. The surroundings of eyes black-brown, near eyes III orange spots. Posterior part of cephalothorax orange. Eye field with sparse white and grey hairs, posteriorly more orange-brown ones. Also on the whole surface single brown bristles. Length of cephalothorax 1.80, length of eye field 0.78, width of eye field I 1.32, width of eye field III 1.26. Abdomen greatly macerated, light grey slightly yellow, covered with orange-brown hairs. Length 2.40. Spinnerets brown-grey. Clypeus orange, covered with sparse light grey and longer orange hairs. Chelicerae orange, pedipalps, maxillae, labium and sternum similar in colour. Venter yellow with traces of grey spots medially. Epigyne (Figs. 401, 402) damaged, its posterior margin distant from the epigastric furrow, pockets also present — similarly as in the former species. Copulatory openings crescent-shaped, internal structures in the form of three chambers linked together. Legs orange with orange hairs and slightly darker spines.

In comparison with former representatives of the genus this is a much smaller species having a lighter coloration and sparser hairs. Three-chambered internal structures of epigyne distinguish *P. minutus* from *P. magnus*.

Phintella Strand in Bösenberg et Strand, 1906

1906 *Phintella* Strand in Bösenberg et Strand, Abh. senck. naturf. Ges., **30**: 333.
1983 *Phintella*: Prószyński, Acta Arachn., **31**: 43–48.

Problems of nomenclature and systematics connected with the history of studies on the genus and its modified definition are discussed by Prószyński (1983a, c), who also suggests — on the basis of revision of type-species — a verification of related genera (*Icius, Epocilla, Chrysilla, Jotus* L. K.). Despite a considerable progress the studies should be continued. The unsatisfactory knowledge of these genera does not allow to determine precisely their ranges, thus causing difficulties in analysing their distribution. In the case of genus *Phintella* an additional obstacle is the structure of female copulatory organs — resembling some *Euophrydinae* (sensu Prószyński 1976) (e.g. *Euophrys* and *Chalcoscirtus*) — which are taxa commonly considered as phylogenetically distant.

Vietnamese species are characterized by small body size (ca 4 mm), slender shape and the dominance of grey-brown colours. Abdomen frequently with transverse light and dark streaks. The cuticle having in places a metallic lustre owing to the kind of its surface or to the presence of scale-like setae. Particular species are described in an order allowing for an analysis of greater degree of

complexity of the structure of male copulatory organs, and especially the structure of embolus, its flaky outgrowth and tibial apophysis (Figs. 447–454). Such regularities are difficult to grasp among females as the structure of epigynes is more uniform.

Phintella (sensu novo) has an Oriental distribution with single species in the Ethiopian Region and Palaearctic. The type-species of the genus is *Ph. typica* STRAND (= *Ph. bifurcilinea*).

Phintella bifurcilinea (BÖSENBERG et STRAND, 1906)

1906 *Telamonia bifurcilinea* BÖSENBERG et STRAND, Abh. senck. naturf. Ges., **30**: 331.
1983 *Phintella bifurcilinea*: PRÓSZYŃSKI, Acta Arachn., **31**: 43.

Material: 1 ♂ – Luc Yen, prov. Yen Bai, 300 m, beaten from bushes in forest, 1 XII 1971, 1 ♂ – 5 XII 1971, TM, HNHM. 2 ♂♂ – Bac Thai, Bach Thong, Duong Quang, jungle slope, 900 m, 17 X 1978, PTL.

Comparative material: ♂♂, ♀♀ "*Telamonia bifurcilinea* Bös. et STR. Type, Japan: Saga, DOENITZ 1882", SMF 2633.

Cephalothorax brown-grey, surroundings of eyes darker with light grey scale-like setae. Laterally also similar setae. Length of cephalothorax 1.74, length of eye field 0.78, width of eye field I 1.26, width of eye field III 1.14. Abdomen (Fig. 407) light grey, contrasting with cephalothorax, medially and laterally a longitudinal dark grey streaks. Hairs light and dark grey. Length of abdomen 1.62. Spinnerets grey. Clypeus dark brown with single hairs similar in colour. Chelicerae (Fig. 406) grey-brown, delicate, elongate. Maxillae similar in colour, labium brown, sternum orange. Venter greyish-yellow with a dark grey longitudinal median belt. Palpal organ (Figs. 403–405) slender, embolus without a flaky outgrowth, tibial apophysis single. Two distal segments of legs I and II greyish-yellow, other dark grey. Legs III similar on colour only their coxae lighter, legs IV also with light femora. Hairs grey, not very numerous, spines brown-grey.

As compared in the types – Vietnamese specimens differ considerably by a lighter colour of the abdomen. Palps identical.

The species is known only from Japan (BÖSENBERG and STRAND 1906, PRÓSZYŃSKI 1983c) and from China (SONG DAXIANG 1980). Its distribution shown on map 28.

Phintella debilis (THORELL, 1892), **comb. n.**

1892 *Chrysilla debilis* THORELL, Ann. Mus. Stor. nat. Genova, **31**: 319, 474.

Material: 1 ♂ – Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, IZPAN. 3 ♂♂, 5 ♀♀ – Cuc Phuong, prov. Ninh Binh, beaten from bushes near creek, 7–12 V 1966, 1 ♂, 1 ♀ – beaten from bushes in forest, 14 V 1966, T, 1 ♂ – Lao Cai, 5 km E town, 200 m, beaten from bushes in valley of a creek, 26 XI 1971, 1 ♀ – 17 km SE town, Dang Khao valley,

beaten from bushes, 29 XI 1971, 1 ♂ — Luc Yen, prov. Yen Bai, 300 m, beaten from bushes in forest, 5 XII 1971, TM, HNHM. 1 ♀ — Vinh Phu, Tam Dao, 1400 m, moist stone bed, 20 X 1978, PTL.

Comparative material: ♂♂ "*Chrysilla debilis* THORELL, Kagok Tegal, Singapore, Gutji, Tjuruk F. 562", det. W. KULCZYŃSKI, IZPAN.

Male. Cephalothorax with a metallic lustre, brown, surroundings of eyes black. Whole surface covered with rather sparse white-grey (anteriorly dominant) and brown setae. Length of cephalothorax 1.48, length of eye field 0.90, width of eye field I 1.32, width of eye field III 1.21. Abdomen (Fig. 411) with a metallic lustre. Medially and laterally longitudinal yellow streaks divided by a brown-grey field. Pale surfaces with yellowish setae, dark surfaces with grey-brown ones. Frequently the coloration is more intensive. Length of abdomen 1.86. Spinnerets brown-grey. Clypeus orange-brown, frequently darker with single grey scale-like setae and brown bristles. Chelicerae (Fig. 412) long, delicate, the same colour as clypeus. Maxillae and labium having an orange-brown shade, sternum grey. Venter grey-yellow or grey, lateral surfaces with a light margin. Palpal organ (Figs. 408–410) grey- or orange-brown with a single tibial apophysis. In comparison with *Ph. bifurcilinea* — embolus slightly split at the end. Two distal segments of legs I and II yellow, surroundings of joints dark grey. Other segments dark grey slightly brown, having a metallic lustre. Legs III and IV slightly paler. Hairs yellow and grey-brown, spines similar in colour. Sometimes legs paler, but then femora, patellae and tibiae orange-brown, other segments yellow. Always, at least on the surface of femora there is a metallic lustre.

Female. The colour and hairs on the body similar as in the male, only abdomen sometimes darker (Figs. 416, 419) with white bristles on the anterior margin. Length of cephalothorax 1.32, length of eye field 0.74, width of eye field I 1.02, width of eye field III 0.96. Length of abdomen 1.86. Clypeus brown with sparse grey-brown hairs. Chelicerae light brown, sometimes lighter, pedipalps yellow, maxillae, labium and sternum dark orange. Venter with a brown median belt and yellow streaks laterally. Epigyne (Figs. 413–415, 417, 418) varying as to the degree of sclerotization, with translucent copulatory canals and even whole spermathecae. Depending on the gradient of internal structures towards the external surface of the epigyne — the reciprocal position of copulatory canals and spermathecae seems to vary thus requiring a comparison in corresponding position. Near the outlet of copulatory canals to spermathecae the accessory glands are visible. Legs yellow with hairs and spines similar in colour. The species is closely related to *Ph. bifurcilinea*. Differences in the structure of copulatory organs of females are not visible, but these females have been found together with males in field samples. The males differ by the embolus shape. The existing differences are so small that one may doubt about the efficiency of morphological barriers dividing these two species. There are probably other isolating mechanisms (e.g. behavioural or ecological).

Ph. debilis occurs in the southern and eastern part of Asia (Map 29).

Phintella argenteola (SIMON, 1903)

1903 *Telamonia argenteola* SIMON, Ann. Soc. ent. Fr., **71**: 731.
1984 *Phintella argenteola*: PRÓSZYŃSKI, Zesz. Nauk. WSR-P, **2**: 107.

Material: 1 ♂ "*Telamonia argenteola* SIM., Phuc Son, (TR)", MNHN.

The drawings of palpal organ (Figs. 420, 421) made available by J. PRÓSZYŃSKI are at present the only documentation of the species. Their structure resembles that of *Ph. bifurcilinea*, but the base of thicker embolus is distinctly broader. At present the species is known only from Viet-Nam.

Phintella aequipeiformis **sp. n.**

Material: 1 ♂ holotype — Lao Cai, 5 km E town, 200 m, beaten from bushes in valley of a creek, 26 XI 1971, TM, HNHM.

Anterior part of cephalothorax grey-brown, in places having a metallic lustre, surroundings of eyes black (with the exception of median eyes I). Beyond the eye field a large orange patch — similar as in *Ph. suavis*, along the ventral margin broad orange streaks. In the anterior part of cephalothorax tufts of white and white-grey scale-like setae, posteriorly also grey-brown setae. Length of cephalothorax 1.92, length of eye field 0.90, width of eye field I 1.50, width of eye field III 1.38. Abdomen (Fig. 425) anteriorly grey, posteriorly alternate light and dark grey surfaces. Hairs sparse grey. Length of abdomen 2.04. Spinnerets greyish-yellow. Clypeus light-grey-brown with dark grey hairs and three bristles beneath median eyes I. Chelicerae, maxillae and labium grey-orange, sternum and venter grey. Palpal organ (Figs. 422–424) grey-orange, their distal segments lighter. Upper part of bulbus with a rounded flaky outgrowth accompanying the short bent embolus. Legs I along the dorsal part grey-orange, metatarsi lighter, all the rest grey-brown. Other legs grey-orange, darker around the joints. Hairs grey and brown, spines grey-brown.

The species is related to "*Telamonia*" *aequipes* PECKHAM. There are small differences in the shape of tibial apophysis, embolus and accompanying its outgrowth.

Phintella suavis (SIMON, 1885)

1885 *Thiania suavis* SIMON, Bull. Soc. zool. Fr., **10**: 439.
1901 *Telamonia suavis*: SIMON, Hist. nat. des Araign., **2** (3): 548.
1984 *Phintella suavis*: PRÓSZYŃSKI, Zesz. Nauk. WSR-P, **2**: 106.

Material: 1 ♂ — Luc Yen, prov. Yen Bai, 300 m, beaten from bushes, on bank of River Chai, 6 XII 1971, TM, HNHM. 1 ♂ — Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, IZPAN.

Comparative material: 1 ♂ "*Telamonia suavis* SIM., Malacca, [...]", MNHN 4172.

Cephalothorax anteriorly black-brown. Beyond the eye field an orange-brown patch, the remaining surface dark grey. Hairs grey and white-grey,

scale-like, having a metallic lustre. Also in the surroundings of eyes black-brown bristles. Length of cephalothorax 2.04, length of eye field 0.96, width of eye field I 1.32, width of eye field III 1.20. Abdomen with transverse alternate light and dark grey streaks. On paler surfaces numerous setae having a metallic lustre, whereas on darker ones grey-brown setae and brown bristles. Length of abdomen 1.98. Spinnerets grey-orange. Clypeus brown with sparse light grey setae having a metallic lustre. Chelicerae (Fig. 429) delicate, elongate, brown. Maxillae and labium dark brown, sternum and venter grey-brown. Palpal organ (Figs. 426–428) grey-brown, similar in structure to *Ph. accentifera,* but different as regards the shape of embolus and the outgrowth in the upper part of bulbus. Legs I and II dark brown slightly grey, two distal segments grey-yellow. Legs III additionally with two light basal segments, legs IV also with a grey-brown proximal part of femur. Hairs grey and grey-brown, in places having a metallic lustre, spines grey-brown.

The species known only from the Malay Peninsula (Malacca) and Nepal (oral inf. J. Prószyński) (Map 30).

Phintella accentifera (Simon, 1901)

1901 *Telamonia accentifera* Simon, Hist. nat. des Araign., **2** (3): 548.
1984 *Phintella accentifera*: Prószyński, Zesz. Nauk. WSR-P, **2**: 156.

Material: 2 ♀♀, 2 juv. – Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, 1 ♀, 1 juv. – Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN.

Comparative material: ♂, ♀ "*Telamonia accentifera* Sim., Madura (Fubu)", MNHN 20039.

The only documentation on the male are the drawings made available by J. Prószyński. Palpal organ (Figs. 430, 431) similar as in the former species, but the embolus is more bent and the outgrowth in upper part of bulbus – more complex. Chelicerae delicate slender (Fig. 432).

Female. Cephalothorax brown. Eye field and posterior surface with transverse streaks formed by grey setae having a metallic lustre. Similar setae also along the ventral margin. Whole surface with longer grey hairs and bristles. Length of cephalothorax 1.70, length of eye field 0.80, width of eye field I 1.25, width of eye field III 1.20. Abdomen with light and dark grey transverse streaks, covered with grey and grey-brown setae having a metallic lustre. Length of abdomen 2.35. Spinnerets grey-yellow. Clypeus light brown with single brown hairs and three bristles protruding beneath median eyes I. Chelicerae, maxillae and labium light brown, pedipalps white-yellow. Venter with a grey median patch against a yellow background. Epigyne (Figs. 433, 434) with large copulatory openings and strongly translucent copulatory canals. Spermathecae big, oval. All internal structures strongly sclerotized. Legs white-yellow with hairs similar in colour – some having a metallic lustre. Spines grey-brown.

The species is known only from India (Map 27).

Phintella vittata (C. L. KOCH, 1846), **comb. n.**

1846 *Plexippus vittatus* C. L. KOCH, Die Arachniden, **13**: 125.
1901 *Telamonia vittata*: SIMON, Hist. nat. des Araign., **2** (3): 539–541, 548.
1931 *Chrysilla vittata*: SHERRIFFS, Ann. Mag. Nat. Hist., 7, **10**: 540.

Material: 1 ♂, 1 ♀ – Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, 1 ♂ – in the litter, under calcareous rocks, 26 VI 1959, PP, 2 ♀♀, 1 juv. ♂ – Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1 ♀ – Thuong Linh, near Phu Ly, 27 V 1966, T, 1 ♀ – Muong Son, prov. Yen Bai, 300 m, beaten from bushes on southern slope, 8 XII 1971, TM, HNHM. 1 ♂ – Bac Thai, Vo Nhai, Dinh Ca, 200 m, thicket at the base steep rock, 16 X 1978, 1 ♀ – Bac Thai, Bac Can, tea plantation, 17 X 1978, PTL.

Comparative material: 1 ♀ "*Telamonia vittata* (KOCH), Singapore, (KINBERG Eng. Exp.)" ZRS 1639b. ♂♂, ♀♀ "*Telamonia vittata* (KOCH), Kagok", det. W. KULCZYŃSKI, IZPAN.,

Male. Cephalothorax grey-brown, posteriorly having a blue metallic lustre. Surroundings of eyes black-grey with sparse grey-brown setae. Also on the whole surface grey gleaming setae. Length of cephalothorax 1.98, length of eye field 0.96, width of eye field I 1.38, width of eye field III 1.32. Abdomen dark grey with longitudinal rows of light grey spots and a bigger patch posteriorly. Whole surface covered with grey-brown sparse bristles and small grey setae, some of them having a red metallic lustre. Length of abdomen 1.74. Spinnerets grey-brown. Clypeus grey-brown, its lower edge and around eyes with grey, having a metallic lustre setae. Chelicerae (Fig. 438) grey-brown, slender, maxillae and labium similar in colour, sternum dark grey, venter grey. Palpal organ (Figs. 435–437) dark grey, with a double lateral apophysis and a small tooth on the posterior (dorsal) surface of tibia. Embolus short and thin, flaky outgrowth in the upper part of bulbus well developed. Proximal part of metatarsus of legs I grey-yellow, other segments dark grey. Legs II and III with a light grey coxa, metatarsus and tarsus, legs IV with an additionally lighter proximal part of femur, the remaining part dark grey. Setae grey, gleaming blue, spines grey-brown.

Cephalothorax lighter in a number of specimens, the abdomen with transverse light and dark streaks – typical for other species of the genus. Also some individuals of a bigger size (e.g. for specimens from Kagok: length of cephalothorax 2.20, length of abdomen 2.50), chelicerae sometimes thicker and longer.

Female. Cephalothorax grey-brown with a light grey patch beyond the eye field. Setae grey-brown and pearly, scale-like, having a metallic lustre and denser in the posterior part. Length of cephalothorax 1.62, length of eye field 0.78, width of eye field I 1.14, width of eye field III 1.08. Abdomen (Fig. 441) light grey with traces of two dark grey transverse streaks and darker surroundings of spinnerets. On dark surfaces brown-grey setae, on light ones – grey scale-like ones. Length of abdomen 2.40. Spinnerets grey. Clypeus brown-grey with grey sparse hairs and three bristles beneath median eyes I. Chelicerae light brown slightly grey, pedipalps light grey, maxillae, labium and sternum brown-grey, venter yellow-grey. Epigyne (Figs. 439, 440) strongly sclerotized,

its posterior margin characteristically bent, protruding beyond the line of epigastric furrow. Copulatory openings well visible — sclerotized, copulatory canals externally in the shape of letter "V". Spermathecae oval. The internal structures of epigyne resemble that of *Ph. accentifera,* but copulatory canals longer. Legs greyish-yellow with sparse grey and grey-brown hairs. Spines grey-brown.

Coloration of some specimens more contrasting: transverse streaks on the abdomen more visible. In one of the females the ventral aspect of the abdomen with a dark grey longitudinal streak.

A species known from south and eastern part of Asia (Map 31) (BONNET 1956).

Phintella tibialis sp. n.

Material: 1 ♂ (palp only) holotype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN.

The species has been distinguished on the basis a single palp found in a tube together with other *Salticidae.* The structure of embolus and the accompanying flaky outgrowth as well as the general form of the copulatory organs (Figs. 442, 443) indicate that the species belongs to the genus *Phintella.* Also the structure of tibial apophysis is characteristic. Due to all this *Ph. tibialis* should be placed at the end of the morphological order (Figs. 447–454).

Phintella lucai sp. n.

Material: 1 ♀ holotype — Luc Yen, prov. Yen Bai, 300 m, beaten from bushes in forest, 5 XII 1971, TM, HNHM.

Eye field grey-orange, surroundings of eyes I grey-brown, of other — black. The remaining part of cephalothorax yellow. Around eyes white-grey, scale-like setae, also light grey and brown longer hairs. Posteriorly a transverse belt of brown- and light grey scale-like hairs. Length of cephalothorax 1.56, length of eye field 0.90, width of eye field I 1.26, width of eye field III 1.20. Abdomen (Fig. 446) — similarly as in some other species — with transverse light and dark streaks in the following sequence of colours: grey, dark grey, yellow, grey, yellow, grey. Darker surfaces with grey-brown setae, whereas the light ones mainly with yellow scale-like setae. Length of abdomen 1.86. Spinnerets yellow. Clypeus white-yellow, covered with pearly hairs. Beneath median eyes I three grey-brown bristles. Chelicerae greyish-yellow, palps white-yellow, maxillae, labium and sternum yellow. Venter yellowish, medially slightly grey. Epigyne (Figs. 444, 445) weakly sclerotized. Copulatory canals run into big pear-shaped spermathecae — by their shape the species is distinguished among other representatives of the genus. Accessory glands well visible. Legs white-yellow, hairs sparse, similar in colour, spines grey.

Phlegra SIMON, 1876

1876 *Phlegra* SIMON, Les Arachnides de France, **3**: 120.

This is a Palaearctic genus with a prevalance of species in the Mediterranean zone (BONNET 1958). Morphologically it is distinguished by an elongated cephalothorax — especially posteriorly — from the eye field to the posterior margin. Hairs rather dense on the body. The structure of palpal organ quite uniform: bulbus elongate, embolus thin, filamentous, barely visible – sometimes with a conductor. Tibial apophysis usually split, with an inner membraneous outgrowth. Copulatory organs in females more differentiated, usually in the form of elongated canals or multi-chamber ones twisted into coiled spirals.

These characters prove the close affinity between the genus and *Aelurillus* SIM. Some taxonomists consider these two genera as one (HARM 1977), other (e.g. PRÓSZYŃSKI 1971b, 1976) — consider them as two different taxa. The studies conducted at present will undoubtedly settle the matter (HĘCIAK and PRÓSZYŃSKI 1984, HĘCIAK in prep.). The type-species of the genus is *Ph. fasciata* (HAHN).

Phlegra pisarskii **sp. n.**

Material: 1 ♂ holotype — Chine, SW Ha Noi, in the litter, under calcareous rocks, 28 VI 1959, PP, IZPAN.

Cephalothorax elongate. Eye field black-brown, the remaining part brown. Posteriorly two slightly paler longitudinal streaks, covered with white-grey and brown setae. Similar hairs fringe the ventral margin. Surroundings of eyes also with grey hairs and brown bristles. Length of cephalothorax 2.57, length of eye field 0.78, width of eye field I 1.26, width of eye field III 1.32. Abdomen anteriorly grey-brown, further dark grey. The whole surface, especially medially — with orange spots, which become grey posteriorly and merge with the background. Hairs quite numerous, small, grey. Bristles brown. Length of abdomen 2.40. Spinnerets dark grey. Clypeus orange-brown with quite numerous white-grey hairs, parallelly to the lower edge. Chelicerae brown, at their basal part a transverse belt of white-grey hairs. Maxillae and labium dark brown, sternum greyish-brown, venter similar in colour, laterally with longitudinal rows of paler spots. Palpal organ (Figs. 455–457) slender, bulbus elongate, embolus relatively long, filamentous. Tibial apophysis double with a membraneous inner outgrowth. Legs greyish-dark-brown with grey-brown and brown hairs. Spines numerous, light brown.

The structure of some details of palpal organ (e.g. tibia) resembles that of species from the genus *Aelurillus* (*Phlegra* ?) — e.g. *Ae. v-insignitus* (CLERCK), whereas the shape of bulbus resembles that of *Phlegra samachiensis* PRÓSZ. (PRÓSZYŃSKI 1978b). These characters have to be considered jointly, because only then they allow to distinguish the species and may be an element of its characterization.

Plexippus C. L. Koch, 1846

1846 *Plexippus* C. L. Koch, Die Arachniden, **13**: 107.

The genus occurs in the fauna of all zoogeographical regions, but at present it is difficult to estimate the number of species as among the 68 species given by Bonnet (1958) — some belong to other genera. This, for example, concerns the majority of species described in genus *Plexippus* by Karsch, Thorell and C. L. Koch (Prószyński 1984a, Żabka unpubl. mat.). Thus all previously described types and those poorly documented ones should be revised.

As regards the structure of copulatory organs, body form, coloration and hairs of the majority of species of the genus (sensu stricto) resemble the type-species of the genus — *P. paykulli*. Because of these similarities some authors (e.g. Saito 1960, Chrysanthus 1968) misidentify described by them species as *P. paykulli* also changing their zoogeographical character.

When preparing the material from Viet-Nam the descriptive types of some species were used, as well as comparative specimens identified by Kulczyński and the latest, well documented papers on the Chinese fauna of spiders (Yin Chang-min and Wang Jia-fu 1979, Song Daxiang 1980) with descriptions of several representatives of the genus.

Plexippus paykulli (Savigny et Audouin, 1825)

1825 *Attus Paykulli* Savigny et Audouin, Hist. Nat., **1** (4): 172.
1878 *Plexippus punctatus* Karsch, Mitt. münch. ent. Ver., **2**: 25, **syn. n.**
1889 *Plexippus paykulli*: Simon, Journ. Asiat. Soc. Beng., **58**: 335.
1922 *Menemerus crassus* Hogg, Proc. zool. Soc. Lond., **1922**: 307, **syn. n.**

Material: 3 ♂♂, 2 juv. — Ha Noi, 3 V 1966, 1 ♀ — 26 V 1966, BP, IZPAN. 2 ♂♂, 4 ♀♀, 13 juv. — Ha Noi, Thong Nhat, park, 10 X 1978, PTL.

Comparative material: 1 ♀ "*Plexippus punctatus* Karsch, Type, Feejee Ins., Daemel", ZMB 1734. 1 ♀ "*Menemerus crassus* Hogg, Type, Dran Langbian Mts., 3000 m, S Annam, Boden Klass., Hogg det", BMNH. ♂♂, ♀♀ "*Plexippus paykulli* Sav. et Aud. — Borneo, Tarrakan, Buitenzorg, Washington, Guyane Fr.", all mat. det. W. Kulczyński, IZPAN.

Male. Eye field black-brown, cephalothorax posteriorly lighter — brown, lateral surface — orange. On the eye field a white streak with adpressed, easily falling out setae running towards the posterior edge, where it becomes orange. Dark surfaces covered with numerous grey-brown hairs, whereas orange surfaces with white ones. On the ventral margin also longer black hairs. Length of cephalothorax 3.70, length of eye field 1.60, width of eye field I and III 2.30. Abdomen with a yellow broad median belt, covered with white setae. Similar coloration of lateral surfaces. On both sides of median belt the abdomen grey-brown with dark-brown hairs. Posteriorly two or four symmetric white-yellow spots. Sometimes the hairs fall out uncovering a light-grey-brown background with orange dots. On the whole surface dark brown and white bristles, the latter more numerous on the anterior margin. Length of abdomen 4.01. Spinnerets orange-brown. Clypeus orange, under eyes I darker, covered with numerous

white and orange-brown hairs and with white-grey and orange bristles. Chelicerae dark brown, covered with grey hairs. Maxillae and labium brown (sometimes darker), their tips orange. Sternum yellow-orange. Venter in the anterior part white-grey, posteriorly a vast dark grey patch formed by numerous hairs. Palpal organ (Figs. 458–460) orange-brown, thick. Bulbus almost rectangular, embolus in its upper part. Tibial apophysis relatively short, laterally hooked, reaching $^1/_4$ of the cymbium. Coxae and trochanters of legs I orange, on femora longitudinal yellow and brown streaks, other segments brown. Coloration of legs II–IV lighter, their basal parts yellow with longitudinal brown streaks, distal segments orange-brown. Hairs and bristles numerous — white, brown and grey. Spines brown.

Female. Eye field brown, surroundings of eyes black. Posterior part of cephalothorax light brown, lateral surfaces with orange streaks. A similar streaks runs also from the eye field to posterior edge of cephalothorax. Hairs white (on orange surfaces), also grey and brown. On eye field additionally dark brown bristles. Length of cephalothorax 3.80, length of eye field 1.61, width of eye field I and III 2.40. Abdomen (Fig. 463) with a yellow longitudinal median belt and a fringe of a similar colour around the anterior part. Posteriorly two yellow spots. The remaining surface dark-grey-brown, posteriorly dark grey with small yellow spots. Hairs dense, forming basic colours, also present dark brown and white-grey bristles. Length of abdomen 4.50. Spinnerets greyish-brown. Clypeus orange-brown, covered with numerous white-grey and grey-brown hairs and bristles, some overhanging the basal part of chelicerae. Chelicerae and pedipalps brown, maxillae and labium similar in colour, only their tips yellow. Sternum grey-orange, venter grey-yellow with three longitudinal darker streaks. Epigyne (Figs. 461, 462) vast, copulatory openings slit-like, copulatory canals broad, thick-walled, spermathecae oval. Coxae of legs I orange, other segments brown. Legs II–IV — especially their proximal segments gradually lighter — orange-brown. Hairs numerous, dark brown, grey and white. Bristles similar in colour, spines brown.

Specimens of both sexes similar in size and colour.

The species has a pantropical distribution (Map 33), and abundant and well documented bibliography (Simon 1903a, Bösenberg and Strand 1906, Yin Chang-min and Wang Jia-fu 1979, Song Daxiang 1980). But despite this *P. paykulli* is frequently mistaken for other related species — especially *P. petersi* and *P. setipes* (Chrysanthus 1968).

Plexippus petersi (Karsch, 1878)

1878 *Euophrys Petersi* Karsch, Mon.-ber. Akad. Wiss., **1878**: 332.
1903 *Plexippus Petersi*: Simon, Hist. nat. des Araign., **2** (4): 728.

Material: 1 ♀ — Ha Noi, 3 V 1966, BP, IZPAN. 1 ♀ — Ha Noi, Bach Thao, park, 9 X 1978, 2 ♀♀ — Ha Noi, Thong Nhat, park, 10 X 1978, 1 ♂ — Bac Thai, in walls, 21 X 1978, PTL.

Comparative material: 1 ♂ "*Euophrys Petersi* KARSCH, Type, Inhambane", ZMB 2863. ♂♂, ♀♀ "*Plexippus paykulli* (SAV. et AUD.), Africa — ad fluv. Zambesi, Kagok, Tegal, N. Guinea, Palembang", all mat. det. W. KULCZYŃSKI, IZPAN.

Male. (Fig. 467). Cephalothorax dark brown, the surroundings of eyes black. From the eye field towards the posterior part and also laterally orange streaks covered with white setae. On eye field white and grey setae, bristles dark brown. Length of cephalothorax 3.10, length of eye field 1.31, width of eye field I 2.10, width of eye field III 2.01. Abdomen greyish-brown with a broad, turning grey posteriorly median belt and similar streaks laterally. Posteriorly four orange spots. Light part of abdomen covered with white setae, whereas the dark part with grey-brown ones, also present grey and brown bristles. Length 3.01. Spinnerets grey-brown. Clypeus orange, beneath median eyes I a darker one, covered with white-grey hairs overhanging the basal part of chelicerae. Beneath lateral eyes tufts of white setae. Chelicerae, maxillae and labium brown, sternum yellow-orange, venter with a vast, formed by setae, grey-brown patch. Pedipalps (Figs. 464–466, 468–470) orange-brown. Their structure resembling that of *P. paykulli* and *P. setipes* but embolus longer and tibial apophysis contiguous to the cymbium and reaching almost the top of bulbus. Coxae, trochanters and femora of legs I yellow-orange with longitudinal dark streaks laterally. Legs II–IV paler — orange. Hairs grey, brown and white, bristles similar in colour, spines brown.

Female. Eye field grey-brown, surroundigs of eyes black, posterior part of cephalothorax greyish-orange with an orange median belt. Lateral surfaces similar as in the male — orange, hairs also almost identical as in the male. Length of cephalothorax 3.80, length of eye field 1.90, width of eye field I 2.39, width of eye field III 2.30. Coloration and hairs on abdomen as in the male. Its length 6.03 (sometimes much less). Clypeus yellow with numerous white-grey hairs. Chelicerae, maxillae and labium orange-brown, sternum yellow. Venter grey-yellow with brown-grey, indistinct spots, covered with grey and grey-brown setae. Epigyne (Figs. 471, 472) elongate, with a trough-like hollow in the median part. Copulatory openings much elongated, slit-like, pass into short copulatory canals running into oval spermathecae. Legs yellow-orange with grey and grey-brown streaks and grey and dark brown bristles and spines.

The species is widely distributed. It occurs in south-eastern Africa, on islands of the Malay Archipelago, New Guinea and Japan. CHRYSANTHUS (1968) has identified the species as *P. paykulli* and PRÓSZYŃSKI (1973) — as *Plexippus* sp. 1. The distribution of the species shown on map 34.

"*Plexippus*" *pococki* THORELL, 1895

1895 *Plexippus* (?) *pocockii* THORELL, Descr. Cat. Spid. Burma, p. 368.

Material: 1 ♂ — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI 1959, PP, 1 ♀ — Ha Noi, 3 V 1966, BP, IZPAN. 1 ♀ — Xuan Dinh, NW of Ha Noi, lifted litter in cultivated area, 27 IV 1966, 1 ♀ — Cuc Phuong, prov. Ninh Binh,

beaten from bushes, 14 V 1966, 1 ♂ — Thuong Linh, near Phu Ly, from 25 pitfall traps in open field, 21–27 V 1966, T, HNHM. 1 ♂, 11 ♀♀, 2 juv. — Ha Noi, Thu Le, park, 10 X 1978, 1 ♀ — Bac Thai, Vo Nhai, Dinh Ca, 200 m, thicked at the base of steep rock, 16 X 1978, 1 ♀ — Ha Noi, Bac Thao, park, 19 X 1978, PTL.

Comparative material: 1 ♂ "*Plexippus pococki* THORELL, Burma: Tharrawady (OATES)", ZRS 1792.

Male. Eye field brown, surroundings of eyes black, the remaining part of thick cephalothorax — orange. Around median eyes I orange setae, posteriorly and laterally quite numerous, white and dark brown ones. Also near eyes black--brown bristles. Length of cephalothorax 3.06, length of eye field 1.38, width of eye field I 1.98, width of eye field III 2.10. Abdomen dark grey, posteriorly darkening, with an orange fringe covered with white hairs. Anteriorly a broad longitudinal orange belt, laterally rows of orange small spots. Posteriorly four tufts of white setae, whole surface covered with numerous brown hairs and bristles. Length of abdomen 3.30. Spinnerets grey-orange. Clypeus dark brown, with scale-like white hairs, also covering the basal part of dark brown chelicerae. Maxillae and labium brown with yellow tips. Sternum yellow-orange, with orange--brown and white hairs. Venter medially with a grey-brown patch narrowing into a wedge posteriorly and margined on sides by broad yellow streaks. Palpal organ (Fig. 473–477) slender, embolus long, sabre-shaped, tibial apophysis quite big — its distal part in the hollow of cymbium, where is a tuft of dark brown hairs. Legs I orange-brown, tarsi paler. Other legs grey-orange-brown with paler fringes on particular segments.

Female. Eye field orange, surroundings of eyes dark brown or black, the remaining part of cephalothorax yellow-orange. Hairs white and brown, around eyes also brown bristles. Length of cephalothorax 3.18, length of eye field 1.20, width of eye field I 1.86, width of eye field III 1.92. Abdomen yellowish-grey with rows of grey, posteriorly darkening spots. Similarly as in the male — posteriorly four pale spots, covered with white setae. Also on the whole surface numerous grey hairs and brown bristles. Length of abdomen 3.78. Spinnerets grey-orange. Clypeus yellow-orange, around eyes I white setae, also present brown bristles. Chelicerae, maxillae, labium and sternum yellow. Pedipalps yellow--orange, venter greyish-yellow, near spinnerets a small dark grey spot. Epigyne (Figs. 478–480) rather strongly sclerotized, with two parallel margins, between which is the central depression. Inner canals barely visible, spermathecae egg--shaped with distinct accessory glands. Legs orange with light brown hairs and spines.

General appearance of individuals of both sexes greatly resembles that of representatives of the genus *Plexippus*, but the structure of copulatory organs is somewhat doubtful as already mentioned by THORELL — the author of the original description.

The species is known from Burma (Map 35) and is related to "*Plexippus*" *albopunctatus* THORELL.

Plexippus setipes KARSCH, 1879

1879 *Plexippus setipes* KARSCH, Verh. naturh. Ver. preuss. Rheinl., **36**: 89,
Material: 1 ♂ — Thuong Linh, near Phu Ly, from 25 pitfall traps in open field, 21–27 V 1966, T, HNHM. 1 ♂, 1 juv. — Bac Thai, Bac Can, 850 m, tea plantation, 17 X 1978, PTL.

Male (Fig. 484). Eye field light brown, surroundings of eyes darker. The remaining part of cephalothorax dark orange, laterally paler with a light belt running from the eye field to the posterior margin. Near eyes yellow-grey setae, laterally white ones, posteriorly grey-brown ones. Also present grey-brown bristles near eyes. Length of cephalothorax 3.40, length of eye field 1.31, width of eye field I and III 2.20. Along the abdomen an orange belt, turning grey posteriorly, laterally a mosaic of yellow-orange dots against a grey background. Hairs numerous, grey-brown, bristles grey and brown. Length of abdomen 3.10. Spinnerets grey-brown. Clypeus orange-brown with similar hairs. Chelicerae brown, maxillae and labium similar in colour with yellow tips. Sternum yellow-orange, venter orange-brown with grey-brown setae. Palpal organ (Figs. 481–483, 485, 486) at the basal part orange, distal segments dark brown. Its structure resembles that of *P. paykulli*, but it is not so thick, bulbus irregular in the shape, embolus proportionally longer, tibia characteristically broadened. Coxae, trochanters of legs I greyish-orange, other segments dark brown. The coloration of other legs paler. Hairs quite numerous, grey and dark brown. Spines brown.

Some specimens paler and smaller: length of cephalothorax 2.50, length of abdomen 2.50.

The species is known from Japan (BÖSENBERG and STRAND 1906, PRÓSZYŃSKI 1973) and China (FOX 1937, YIN CHANG-MIN and WANG JIA-FU 1979, SONG DAXIANG 1980). Its distribution shown on map 36.

Portia KARSCH, 1878

1878 *Portia* KARSCH, Zeits. gesam. Naturw., **51**: 774.

An Oriental-Ethiopian genus distinguished by both the body form and the structure of copulatory organs. Cephalothorax usually thickset and tall, eyes III strongly developed — the size of lateral eyes I, abdomen rather slender. Palpal organ with an oval bulbus; in its upper part membraneous flanges and small furrows. Embolus usually long, tibia with numerous big apophyses. On the dorsal surface of cymbium frequently a distinct "cymbial flange" (WANLESS 1978e). Epigyne weakly sclerotized, densely covered with hairs, spermathecae oval. Legs in both sexes delicate and long, frequently with a scopula on the ventral surface of femora, patellae and tibiae.

Studies on genus *Portia* and other related genera are being carried out for some years by WANLESS (1978e, 1979, 1981b, c) and to a smaller extent by other authors (PRÓSZYŃSKI 1978b, PRÓSZYŃSKI and ŻABKA 1980). A kind

of recapitulation of these results is a monograph by WANLESS (1984) of the subfamily *Spartaeinae*. The paper puts in an order the problems of relationship, nomenclature and terminology and provides descriptions of six new genera.

Portia albimana (SIMON, 1900)

1900 *Linus albimanus* SIMON, Ann. Soc. ent. Fr., **69**: 33.
1978 *Portia albimana*: WANLESS, Bull. Brit. Mus. nat. Hist., **34**: 107, 108.

Material: 1 ♂ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 3 VI 1966, BP, IZPAN.

Cephalothorax elongate, tall, brown, only the surroundings of eyes darker. Eyes II the size of lateral eyes I. Anteriorly and laterally white setae, forming also a belt running from the eye field to the posterior margin of cephalothorax. Length 3.01, length of eye field 1.41, width of eye field I 1.79, width of eye field III 1.70. Abdomen along the median part orange-brown, laterally grey with few, slightly paler spots. Hairs sparse, grey and orange-brown. Length of abdomen 4.20. Spinnerets brown-grey. Clypeus broad, brown, with white hairs, forming an upside down V-shape. Also present grey and grey-brown hairs. Chelicerae long, brown, maxillae and labium similar in colour — their tips paler. Sternum light-brown-grey. Venter grey with an indistinct darker longitudinal median belt and two rows of light spots laterally. Palpal organ (Figs. 487–489) greyish-brown. Cymbium with a flange on the dorsal surface, bulbus oval, embolus rather short, tibial apophyses well developed. Legs (Fig. 490) slender, delicate, long, grey-dark-brown. Hairs long, numerous — on tibia and patella forming a scopula — grey and grey-brown. Spines short grey-brown.

The species known at present also from India and Ceylon (Map 32) (WANLESS 1978e).

Portia hoggi **sp. n.**

Material: 1 ♂ holotype, 1 ♂, 5 juv. paratypes — Vinh Phu, Tam Dao, 1400 m, moist stone bed, 20 X 1978, PTL.

Male (holotype) (Fig. 494). Cephalothorax tall, surroundings of eyes II and III black, beyond the eye field a vast light grey patch, the remaining part grey-brown. Posteriorly and laterally grey-brown setae, around eyes orange--brown and grey ones. Length of cephalothorax 3.10, length of eye field 1.49, width of eye field I 2.20, width of eye field III 2.01. Abdomen grey-brown, having a metallic lustre, along the median part slightly lighter with grey-orange small spots. Hairs grey-brown, anteriorly and posteriorly also longer white-grey ones. Length of abdomen 3.40. Spinnerets long, grey. Clypeus grey-brown, covered with hairs similar in colour and with three bristles beneath median eyes I. Also around eyes white-grey scale-like setae. Chelicerae light brown, maxillae

and labium grey-orange. Sternum yellow with a grey-brown margin. On the venter a vast central patch formed of grey-brown numerous setae, laterally with a margin of yellow streaks. Palpal organ (Figs. 491–493) orange-brown. Bulbus oval, in the upper part membraneous outgrowths. Embolus relatively short and thin, "sinuous". Tibia with many apophyses, cymbium without a flange. Legs very long, coloration not uniform — lighter and darker — grey-brown with numerous hairs and spines similar in colour.

In one of the juvenile females (Figs. 495, 496) the nuclei of epigyne.

Portia quei sp. n.

Material: 1 ♂ holotype — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI 1959, PP, IZPAN.

Cephalothorax tall, thickset (Fig. 500). Eye field orange with sparse orange setae and traces of bristles which fell out. Surroundings of median eyes I brown, of other — black with white and grey hairs. From the eye field to the posterior margin a white belt formed by adpressed setae. The remaining surface dark brown with white (especially along the ventral margin) and brown hairs. Length of cephalothorax 2.70, length of eye field 1.50, width of eye field I and III 1.90. Abdomen (Fig. 501) brown-grey, laterally darker. Anteriorly vast grey-yellow patches, whereas posteriorly two white-yellow spots formed by hairs. Length of abdomen 3.10. Spinnerets brown. Clypeus broad, brown, with four protruding brown bristles and single brown hairs overhanging the basal part of chelicerae. Chelicerae brown, but darker than the clypeus, their distal part orange. Maxillae and labium grey-brown, sternum similar in colour, covered with numerous light grey setae. Venter grey with two longitudinal rows of dark grey hairs and rows of greyish-yellow spots. Palpal organ (Figs. 497–499) of a structure typical of the genus. The ventral aspect with three visible tibial apophyses, bulbus oval, embolus long, a distinct flange on the dorsal surface of cymbium. Legs delicate and long, grey-brown, their distal segments slightly paler — grey-orange. Hairs grey and grey-brown — forming scopulae on tibiae of all legs. Spines grey-brown.

Structure of copulatory organs of *P. quei* proves a close relationship to *P. fimbriata* (Doleschall) (Wanless 1978e). Small differences in the shape of tibial apophyses, the structure of membraneous outgrowth near the base of embolus, form of cymbium and shape of flange.

Neobrettus Wanless, 1984

1984 *Neobrettus* Wanless, Bull. Brit. Mus. nat. Hist., **46**: 181.

The genus described by Wanless (1984) is one of the 13 genera belonging to the subfamily *Spartaeinae* — distinguished by the same author. The original diagnosis of the genus and drawings of the only one known at present representative — *N. tibialis* (Prószyński) are sufficient, whereas the Vietnamese species,

very closely related to *N. tibialis* does not provide any significant new elements to the original description.

Neobrettus phui sp. n.

Material: 1 ♂ holotype – Bac Thai, Phu Long, Nong Thinh, moist brook valley, 750 m, 17 X 1978, PTL. 1 ♂ paratype – Cuc Phuong, prov. Ninh Binh, beaten from bushes near creek, 12 V 1966, T, HNHM.

Male (holotype) (Fig. 506). Cephalothorax anteriorly light grey, posteriorly brown-grey, surroundings of eyes black with sparse grey setae. Length of cephalothorax 1.65, length of eye field 0.80, width of eye field I and III 1.20. Abdomen oval, light grey, with numerous white and single grey spots. Around the anterior part dark grey protruding bristles, on the remaining surface sparse dark grey setae. Length of abdomen 1.60. Spinnerets light grey. Clypeus medially light grey, covered with hairs similar in colour. Beneath lateral eyes I clypeus and hairs darker, beneath median eyes I a long dark grey bristle and two shorter light grey ones. Chelicerae, maxillae, labium and sternum light grey. Venter in its anterior part similar in colour, posteriorly darker with large white spots. Palpal organ (Figs. 502–505) orange-grey, the last segment club-like broadened. Bulbus oval, embolus very long, its distal part hidden between the bulbus and cymbium. Tibia with numerous complex apophyses. Legs (Fig. 507) long, light grey, covered with sparse grey and grey-brown hairs. Median segments of legs I with a scopula of black bristles. Spines grey-brown.

The paratype is of a more intensive coloration.

Body form, small size and the structure of copulatory organs prove the close relationship of the species to *N. tibialis*. The differences concern mainly the details of tibial structure and hairs on cephalothorax (PRÓSZYŃSKI 1978b).

Pseudamycus SIMON, 1885

1885 *Pseudamycus* SIMON, Ann. Soc. ent. Belg., **29**: 36.

An Oriental genus, which according to BONNET (1958) consist of six species. Its morphological characters are best illustrated by *P. albomaculatus* (HASSELT) – type-species of genus (Figs. 511, 512). Due to greatly protruding lateral surfaces of eye field the eyes are on distinct elevations. The structure of epigyne is characterized by the presence of large pockets on its posterior margin. Copulatory openings slit-like. Inner oval chambers linked by a narrow canal.

Pseudamycus hasselti sp. n.[1]

Material: 1 ♀ holotype "*Pseudamycus hasselti*, Tonkin, det. SIMON", MNHN 22299.

Comparative material: 1 ♀ "*Pseudamycus albomaculatus* (HASSELT), Java: Palebuan Gede", MNHN 20038.

[1] Name of species given by SIMON, but unpublished.

Eye field orange-brown, surroundings of eyes I red-brown, of eyes II and III grey-brown. The remaining part of cephalothorax yellow-orange in a grey-brown shade. Hairs not very dense: around eyes light grey, further — orange-brown. Lateral eyes I and eyes II and III on high elevations (Fig. 510). Length of cephalothorax 4.08, length of eye field 1.76, width of eye field I and III 2.80. Abdomen strongly macerated, grey-brown with four brown apodemes. Laterally longitudinal light and dark streaks. Hairs and bristles brown. Length of abdomen 3.93. Spinnerets brown. Clypeus orange-brown with white protruding setae and grey-brown sparse bristles. Chelicerae thick, orange-brown, covered with white and orange hairs. Pedipalps orange-brown, maxillae and sternum orange, labium darker. Venter above the epigastric furrow yellow-orange, posteriorly grey with four rows of brown spots. Epigyne (Figs. 508, 509) with a posterior margin distant from the epigastric furrow. Inner canals strongly sclerotized, baggy. Posteriorly, on the epigyne vast pockets visible.

Coloration and body form identical as in *P. albomaculatus* (HASSELT), only epigynes vary slightly as regards the position of inner structures (Figs. 511, 512).

Ptocasius SIMON, 1885

1885 *Ptocasius* SIMON, Ann. Soc. ent. Belg., **29**: 34.

1976 *Yaginumaella* (?) PRÓSZYŃSKI, Rozpr. WSP, **6**: 17.

An Oriental genus, six species given by BONNET (1958). However, this number should be increased further 27 species as some of the recently described representatives of the genus *Yaginumaella* should belong to the genus *Ptocasius* and the geographical range should include also the subtropical zone of the Himalayas (ŻABKA 1980c, 1981b, PRÓSZYŃSKI 1980). The type-species is *P. weyersi* SIMON (Figs. 530–534).

***Ptocasius kinhi* sp. n.**[1]

Material: 1 ♂ holotype, 3 juv. paratypes — Vinh Phu, Tam Dao, 1450 m, bamboo, ferns, 20 X 1978, PTL.

Comparative material: 1 ♂ "*Ptocasius weyersi* SIMON, L. DE KOCK (W)", MNHN 7112, (Typus? M. E. GALIANO IX 1959).

Male. Eye field black-brown, surroundings of eyes black, remaining part of cephalothorax dark brown. Around eyes and posteriorly sparse white and black-brown setae, anteriorly also present dark brown bristles. Length of cephalothorax 3.01, length of eye field 1.20, width of eye field I 2.01, width of eye field III 2.11. Abdomen (Fig. 516) with a vast median area being a mosaic of grey-brown and orange spots and lines. Similarly as in the next species (*P. strupifer*) there are traces of transverse grey and orange streaks, laterally dense, black-brown setae. On the whole surface present also grey and dark brown

[1] Kinh — dominant nationality group in Viet-Nam.

long hairs. Length of abdomen 2.90. Spinnerets grey-brown. Clypeus light brown with sparse grey long hairs and three brown bristles beneath median eyes I. Chelicerae black-brown, maxillae and labium similar in colour, only their tips lighter. Sternum grey-brown, venter brown-grey, laterally darker with longitudinal rows of light spots. Palpal organ (Figs. 513–515) brown, its structure resembling that of "*Yaginumaella*" *stemmleri* ŻABKA (ŻABKA 1981b), but embolus slightly shorter, bulbus different in shape and quite different coloration of abdomen. Small details in the structure of palpal organ of the species are different from the described further *P. strupifer*. Legs I and II dark brown, only basal segments and patellae — paler. Other legs orange-brown. Hairs numerous — grey, brown and black-brown. Spines brown.

Ptocasius strupifer SIMON, 1901

1901 *Ptocasius strupifer* SIMON, Ann. Soc. ent. Fr., **70**: 65.

Material: 1 ♂, 1 ♀, 3 juv. — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI 1959, 1 ♂ — Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, 1 ♂ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 2 VI 1966, BP, IZPAN. 1 ♂ — Minh Xuan, near Luc Yen, prov. Yen Bai, beaten from bushes, 2 XII 1971, TM, HNHM.

Comparative material: 1 ♀ "*Ptocasius strupifer* SIM., Tonkin, (BL.)", MNHN 22449.

Male. Cephalothorax dark brown, surroundings of eyes II and III black. Near the fovea media, posteriorly and laterally tufts of adpressed white setae. Around eyes brown and black-brown longer hairs and bristles. Length of cephalothorax 3.10, length of eye field 1.41, width of eye field I 2.10, width of eye field III 2.19. Abdomen (Figs. 520, 524) with transverse grey-brown and orange streaks. Hairs numerous — grey-brown (on dark surfaces), in the back — bristles similar in colour. Along the median part there are only bristles, no small hairs. Length of abdomen 3.10. Spinnerets grey-brown. In some specimens the abdomen darker and body size bigger. Clypeus brown with sparse long grey hairs. Chelicerae dark brown (sometimes black-brown), maxillae and labium similar in colour — only their tips lighter. Sternum light brown, venter medially dark grey (sometimes beige), laterally paler with rows of small brown spots. Palpal organ (Figs. 517–519, 521–523) orange-brown — similar as in the previous species, but embolus slightly shorter and also small differences in the shape of bulbus. Legs dark brown slightly greyish. Basal and distal segments lighter — brown. Hairs grey, brown and dark brown, protruding. Spines brown.

Female. Cephalothorax dark brown, surroundings of eyes darker. Hairs dark brown, small, posteriorly denser. Also around eyes present dark brown bristles. Length of cephalothorax 2.50, length of eye field 1.11, width of eye field I and III 1.80. Abdomen (Fig. 529) grey-brown with transverse pearly-white streaks anteriorly and medially and with a pale terminal patch. Whole abdomen with numerous grey-brown hairs (on dark surfaces), also present grey and light grey hairs and grey-brown bristles. Length of abdomen 2.30. Spinne-

rets grey-brown. Clypeus dark orange with sparse grey-orange hairs. Beneath median eyes I three light brown bristles. Chelicerae dark orange, pedipalps paler, maxillae and labium the same colour as chelicerae. Sternum grey-orange, venter beige with grey longitudinal streaks converging near spinnerets. Epigyne (Figs. 525–528) with characteristic pockets. Copulatory openings vast, internal canals strongly sclerotized — forming several loops. Legs grey-brown slightly orange, only femora darker. Hairs and spines as in the male.

The species is known at present also from Hong Kong (Map 37).

Rhene THORELL, 1869

1869 *Rhene* THORELL, N. Acta Soc. Sci. upsal., 3, **7**: 37.

The range of the genus covers all zoogeographical regions, but a verification of localities of particular species is not possible without revision studies. Apart from *Rhene* this also concerns other related genera (*Dendryphantes* C. L. K., *Zeuxippus*) and those morphologically similar (*Homalattus* WHITE, *Simaetha* THOR., *Stertinius* SIM.).

The Vietnamese species represent typical characters of the genus. They are square built, thickset. Cephalothorax flattened dorsoventrally, short, sometimes almost round. Abdomen egg-shaped, frequently with a scutum (especially in males), apodemes and narrow transverse streaks. On the paramedial edge of chelicerae a distinct incision may occur, and near the basal part a transverse belt of white hairs. Legs thick — especially legs I, hairs long, fine and numerous, spines short. Palpal organ with a large, bag-like bulbus, embolus short, sometimes with conductor. Tibial apophysis single. Epigynes externally variable; thus the necessity to analyse their internal structures. Copulatory openings slit-like or oval, internal canals not complex e.g. in *R. rubigera* or coiled spirally — e.g. in *R. flavigera*. In the median part of epigyne frequently a vast single pocket. The type-species of the genus is *R. flavigera*.

Rhene albigera (C. L. KOCH, 1848)

1848 *Rhanis albigera* C. L. KOCH, Die Arachniden, **14**: 87.
1892 *Homalattus albiger*: THORELL, Ann. Mus. Stor. nat. Genova, **31**: 473.
1901 *Rhene albigera*: SIMON, Hist. nat. des Araign., **2** (3): 635, 639.

Material: 1 ♂ — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI 1959, PP, 2 ♂♂ — Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1 ♂ — Cuc Phuong, prov. Ninh Binh, 5 V 1966, T, HNHM.

Comparative material: 1 ♂ "*Rhene albigera* (KOCH), Type, Bintang", ZMB 1831.

Cephalothorax greatly broadened and flat, orange-brown, anteriorly darker, surroundings of eyes black. Laterally — near the ventral margin — short white hairs and longer brown ones. Also white protruding hairs near eyes. Length of cephalothorax 2.10, length of eye field 1.40, width of eye field I 1.35, width of eye field III 2.05. Abdomen with a scutum, brown, posteriorly darkening — slightly grey. Anteriorly and laterally numerous white and white-grey hairs, the latter denser posteriorly. Length of abdomen 2.45. Spinnerets brown-

-grey. Clypeus orange-brown with sparse grey hairs. Chelicerae (Fig. 538) light brown, with an incision in the paramedial margin. Maxillae and labium similar in colour, sternum grey-orange. Venter medially beige, posteriorly and laterally dark grey with rows of small beige spots. Palpal organ (Figs. 535–537, 539, 540) orange, bulbus bag-like, embolus short and delicate, conductor of considerable size. Legs I light brown, thick, with numerous grey-brown long hairs – especially ventrally. Also there are white and brown hairs and short light brown spines. Other legs greyish-brown, metatarsi and tarsi grey-yellow, hairs sparser than on legs I.

The elaborated specimens differ as regards setation: the dark end of abdomen is frequently cut by a transverse streak of white setae. This variability is due to the fact that the setae tend to fall out – especially from the surface of scutum.

The species is at present known also from India, Sumatra and Malay Peninsula (Map 38).

Rhene flavigera (C. L. KOCH, 1848)

1848 *Rhanis flavigera* C. L. KOCH, Die Arachniden, **14**: 86.
1899 *Rhene flavigera*: SIMON, Ann. Soc. ent. Belg., **43**: 111.

Material: 1♀ "*Rhene phoenicea* SIM., Tonkin, (BL.)", MNHN 22438.

Comparative material: 1♀ "*Rhene flavigera* (KOCH), Padang, (WEYERS)", MNHN 21132.

Cephalothorax thickset, flat, orange-brown, anteriorly darker, surroundings of eyes black. On the whole surface nemerous protruding white-grey and grey-brown hairs, laterally also brown ones. Length of cephalothorax 2.60, length of eye field 1.40, width of eye field I 1.61, width of eye field III 2.69. Abdomen oval, thick orange-brown slightly turning grey, its terminal part dark grey. On the anterior margin large grey-orange spots, posteriorly traces of four transverse streaks and light brown apodemes. On the whole surface white-grey, grey and longer brown hairs. Length of abdomen 4.60. Spinnerets grey-brown. Clypeus orange-brown with long white-grey and grey-brown hairs. Chelicerae red-brown with a slight incision in the paramedial margin, hairs rather dense, white-grey, but lack of a distinct transverse streak. Pedipalps orange-brown, maxillae, labium and sternum red-brown. Venter beige with longitudinal rows of lighter spots. Epigyne (Figs. 541–543) with vast copulatory openings and pocket in the vicinity of epigastric furrow. Distal part of internal canals coiled spirally. Legs I thick, red-brown. Hairs fine, but long and dense – especially on the ventral side of femora and tibiae – brown, grey and whitish. Spines orange-brown. Other legs more delicate, orange-brown, paler around joints, hairs sparser than on legs I.

The species known at present from Sumatra (Map 40). Among other Vietnamese representatives of the genus it is distinguished by spirally coiled spermathecae.

Rhene rubigera (THORELL, 1887)

1887 *Homalattus rubiger* THORELL, Ann. Mus. Stor. nat. Genova, 2, **5**: 347.
1888 *Homalattus phoeniceus* SIMON, Ann. Soc. ent. Fr., 6, **8**: 203, **syn. n.**
1891 *Homalattus albostriatus* THORELL, Kongl. Svenska Vet.-Akad. Handl., **24** (2): 104, **syn. n.**
1901 *Rhene phoenicea*: SIMON, Hist. nat. des Araign., **2** (3): 635, 639.
1903 *Ligurra albostriata*: SIMON, Hist. nat. des Araign., **2** (4): 842.
1903 *Rhene rubigera*: SIMON, Ann. Soc. ent. Fr., **71**: 733.

Material: 1 ♂, 2 ♀♀, 1 juv. ♂ — Ha Noi, 3 V 1966, 2 ♂♂ — 26 VI 1966, 1 ♀ — Co Loa, 20 km NE Ha Noi, 10 V 1966, BP, IZPAN. 1 ♂, 1 ♀ — Yen So, SW of Ha Noi, beaten from bushes in village, 22 IV 1966, 1 ♀ — Thanh Liet, SW of Ha Noi, beaten from trees, 23 IV 1966, T, HNHM.

Comparative material: 2 ♂♂, 2 ♀♀, 4 juv. "*Rhene phoenicea* (SIM.), Tonkin BL.", MNHN 22438, 1 ♂, 1 ♀ "*Rhene* sp., Ha Noi (VLG.)", MNHN 22951. 1 ♂ "*Homalattus albostriatus* TH., (Original), Terressa, Galathea", ZMK. ♂♂, ♀♀ "*Rhene rubigera* (TH.), Kagok, Kalibakoeng, Djedjek", all det. W. KULCZYŃSKI, IZPAN.

Male. Cephalothorax flat, dark brown, anteriorly darker, surroundings of eyes black. Posteriorly and laterally white protruding hairs turning slightly yellow near eyes II. Anteriorly also present numerous brown hairs. Length of cephalothorax 2.80, length of eye field 1.80, width of eye field I 1.70, width of eye field III 2.60. Abdomen (Fig. 548) dark-orange-grey, laterally dark grey. Hairs numerous, adpressed, dark orange and less numerous ones, protruding, grey and brown. Medially and posteriorly three transverse narrow streaks of white setae. Also visible two small and four bigger apodemes. Length of abdomen 3.50. Spinnerets grey-brown. Clypeus light brown, covered with dark brown hairs. Chelicerae red-brown (Fig. 547). On their paramedial margin a small incision, in the basal part a transverse streak of white hairs. Maxillae and labium the same colour as chelicerae, only the tips paler. Sternum dark orange, covered with white hairs. Venter yellowish-grey, posteriorly dark grey with two rows of brown spots. Palpal organ (Figs. 544–546, 549–553) grey--orange-brown. Embolus short and delicate, lack of conductor, in the apical part of cymbium robust bristles. Legs I thick, dark brown with white and grey--brown hairs, especially dense ventrally on patellae and tibiae. Spines short, grey-brown. Other legs light brown, more delicate, hairs also sparser.

Other specimens of a similar coloration or darker, cephalothorax black-brown, other parts of body more pigmented, respectively. Hairs sometimes dense, with plenty of red adpressed ones on lateral surfaces of cephalothorax. Transverse streaks on the abdomen frequently rudimental.

Female. Cephalothorax dark brown slightly red, anteriorly darker, surroundings of eyes black. Hairs white — denser posteriorly and laterally, also longer grey-brown ones protruding around eyes. Length of cephalothorax 2.90, length of eye field 1.61, width of eye field I 1.79, width of eye field III 2.90. Abdomen (Fig. 556) grey-brown. Hairs dense, especially on the margin — white and grey. Also on the whole surface short, brown hairs. Transverse streaks

more or less distinct, apodemes as in the male. Length of abdomen 4.30. Spinnerets grey-brown. Clypeus dark brown, with numerous grey-brown hairs. Chelicerae as in the male, pedipalps orange with numerous long white-grey hairs and single brown ones. Maxillae and labium chestnut-brown with grey tips. Sternum light brown, venter grey-brown with two longitudinal rows of brown spots. Legs I (Fig. 557) thick, brick-red-brown with a scopula of grey-brown hairs. Also present single lighter hairs and grey-brown spines. Other legs paler, more delicate and less hairy. Epigyne (Figs. 554, 555, 558–562) greatly variable externally, with slit-like copulatory openings and an incision on the side of epigastric furrow. Internal canals strongly sclerotized, U-bent. The variability of epigynes is due to the different degree of their sclerotization. The visible on the drawings differences in the length of proximal and distal part of internal canals are due to the varying gradient of the object on slide.

The species is described on the basis of comparative material including descriptive types and other specimens — identified by SIMON and KULCZYŃSKI, and on the revision of South American species *R. phoenicea* by GALIANO (1963). It is difficult to put in order the synonymy because of different rank of material. The drawings of GALIANO point to the identical character of *R. phoenicea* and the Vietnamese specimens — which confirmed would increase considerably the range of the species. But regardless of results of such verification the name *R. rubigera,* published earlier by THORELL, should be assumed for the material from Viet-Nam.

The species is known from south and east part of Asia and from Mexico (?) (Map 39).

***Rhene setipes* sp. n.**

Material: 1 ♂ holotype — Luc Yen, prov. Yen Bai, beaten from bushes in forest, 5 XII 1971, TM, HNHM.

Cephalothorax red-brown, flat, oval. Surroundings of eyes black. Around the anterior part numerous white, yellow and grey protruding hairs. Posterior part with brown hairs, laterally longer. Length of cephalothorax 2.10, length of eye field 1.51, width of eye field I 1.50, width of eye field III 2.22. Abdomen with a scutum, orange-brown slightly turning grey. On the margin numerous white-yellow hairs, on the anterior margin also dark brown ones. Hairs posteriorly less dense, with a prevalence of grey-brown setae and traces of a white transverse streak. Length of abdomen 2.22. Spinnerets greyish-yellow. Clypeus red-brown with brown hairs overhanging the basal part of chelicerae. Chelicerae (Fig. 566) red-brown, with an incision on the paramedial margin. Maxillae and labium orange-brown, sternum orange, venter beige, posteriorly turning grey, covered with brown-grey setae. Palpal organ (Figs. 563–565) dark orange, similarly as in *R. albigera,* but embolus and conductor much more delicate and differently set. Legs I thick, proximal segments orange-brown, distal ones

darker. Hairs numerous, protruding, dark brown. Other legs orange slightly greyish — especially around joints, hairs light brown. On the surface of all legs also present white setae — forming tufts, spines brown and grey-brown, short.

The species is distinguished by the structure of embolus and conductor.

Siler Simon, 1889

1885 *Cyllobelus* Simon, Ann. Soc. ent. Fr., 6, **5**: 390 (part.).
1889 *Siler* Simon, Ann. Soc. ent. Fr., 6, **8**: 249.
1906 *Silerella* Bösenberg et Strand, Abh. senck. naturf. Ges., **30**: 371.

On the basis of the form of copulatory organs and other structural details (body size, coloration, hairs) it has been decided (after Prószyński 1985) to include into genus *Siler* the species of the genus *Silerella* and Oriental representatives of the genus *Cyllobelus*. *Siler* (sensu novo) covers a wide geographical range — from New Guinea through Moluccas and Singapore to Japan and China. The body is covered with numerous scale-like hairs, frequently forming on the abdomen transverse multicoloured streaks. Palpal organ with a long spatular tibial apophysis and an elongate bulbus. Epigynes oval, with strongly sclerotized spermathecae. Copulatory canals vary in length — sometimes completely reduced. The type-species of the genus is *S. cupreus* Simon.

Siler bielawskii sp. n.

Material: 1 ♀ holotype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, 1 ♀, 1 juv.♀ paratypes — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI 1959, 1 ♀ paratype — Chine, 80 km SW Ha Noi, lush shrubs at the foot of calcareous rocks and flat area overgrown with shrubs (in patches) and grass, 24 VI 1959, PP, IZPAN.

Female (holotype). Eye field brown, surroundings of eyes darker, the remaining part of cephalothorax orange-brown. All covered with dense grey, having a metallic lustre, scale-like setae. Above the ventral margin also brown setae and on eye field brown bristles. Length of cephalothorax 2.30, length of eye field 1.05, width of eye field I 1.40, width of eye field III 1.55. Abdomen covered with dense scale-like hairs giving the coloration: around the anterior part grey setae having a metallic lustre, further on a transverse orange streak, then alternately grey and brown streaks, finally dark grey. The coloration is shown on the diagram (Fig. 570). On the whole surface also dark brown bristles. Length of abdomen 3.55. Spinnerets dark grey. Clypeus grey-orange with hairs similar in colour. Chelicerae orange with short light brown bristles. Pedipalps light orange, maxillae, labium and sternum orange. Venter light grey, darkening laterally. Epigyne (Figs. 568, 569, 567 — paratype) with a cut bow-shaped anterior margin, under which are the copulatory openings running directly to oval spermathecae. Legs I grey-orange with grey, having a metallic lustre, setae and longer brown hairs. The latter form tufts on the ventral side of distal

parts of femora. Other legs orange, with grey streaks along the dorsal surface of femora and lateral surfaces of next segments — with the exception of tarsi. Hairs sparser than on legs I, spines long, light brown.

The coloration of the abdomen and structure of copulatory organs resembles that of "*Silerella*" *vittata* (KARSCH).

Siler hanoicus PRÓSZYŃSKI, 1985

1985 *Siler hanoicus* PRÓSZYŃSKI, Ann. zool., **39**: 75.

Material: 1 ♂ holotype — Ha Noi, (VLG.), MNHN 21984.

The drawings of palpal organ (Figs. 571, 572) made available by J. PRÓSZYŃSKI provide a following information: "The dorsal and ventral sides of tibiae I with long bristles". Palpal organ with an elongated bulbus, short embolus and large spatular tibial apophysis.

Synagelides STRAND in BÖSENBERG et STRAND, 1906

1906 *Synagelides* STRAND in BÖSENBERG et STRAND, Abh. senck. naturf. Ges., **30**: 330.
1963 *Tagoria* SCHENKEL, Mem. Mus. Hist. nat., N. S., Zool., **25**: 393.

A genus described from Japan, known also from China (SCHENKEL 1963, BOHDANOWICZ and HĘCIAK 1980), Primore (PRÓSZYŃSKI 1979), Nepal, Bhutan and Burma (BOHDANOWICZ 1978, 1979, in press). Recent investigations seem to indicate that the range of the genus has an Oriental character with a probable centre of speciation in the subtropical zone of Himalayas (PRÓSZYŃSKI 1980), and localities beyond that zone are probably caused by single species merging to the Palaearctic. A morphological characteristics of the genus, including all that is known on the subject, are given by BOHDANOWICZ (in press).

Synagelides palpalis sp. n.

Material: 1 ♂ holotype — Luc Yen, prov. Yen Bai, 300 m, beaten from bushes in forest, 5 XII 1971, 1 ♀ allotype, 1 juv. paratype — Minh Xuan, near Luc Yen, prov. Yen Bai, 300 m, beaten from bushes, 2 XII 1971, TM, 1 ♀ paratype — Cuc Phuong, prov. Ninh Binh, beaten from bushes in forest, 6 V 1966, 1 ♀ paratype — beaten from bushes, 12–18 V 1966, T, HNHM.

Male (holotype). Cephalothorax orange, surroundigs of eyes black. Whole surface characteristically pitted (stippled). Hairs single, light brown and white-grey (around eyes) and grey-orange. Length of cephalothorax 1.44, length of eye field 0.84, width of eye field I and III 1.08. Abdomen slender, with a slight constriction medially. Its anterior part orange-grey with two yellow spots, fringed with white setae. Medially a transverse lighter belt, the anterior part dark grey slightly brown. Whole surface covered with quite numerous brown setae. Length of abdomen 1.44. Spinnerets orange. Clypeus orange with hairs similar in colour. Chelicerae, maxillae and labium orange. Sternum yellow, venter in its basal part — similar in colour, posteriorly orange-brown, laterally grey. Palpal organ (Figs. 573–576) orange, its structure characteristic of the

genus: femur strongly dilated, tibial apophysis long and narrow — resting in the hollow of cymbium. Embolus coiled spirally, in its vicinity a large scale-like structure, probably functioning as conductor. Legs long, slender, coxae I grey-yellow, trochanters and femora dark orange. Other segments of all legs greyish-yellow-orange. Hairs sparse, orange, spines similar in colour — present only on tibia and metatarsus.

Female (allotype). Shape and body coloration (Fig. 579) as in the male, only abdomen slightly broader. Length of cephalothorax 1.56, length of eye field 1.02, width of eye field I 1.20, width of eye field III 1.26, length of abdomen 1.74. Frontal and ventral surfaces as in the male, with the exception of a darker, brown-grey abdomen. In one of the specimens (paratype) the anterior part of venter white-grey, and the posterior one dark grey. The external surface of epigyne (Fig. 577) rather strongly sclerotized with a single pocket anteriorly and semicircular slits divided by a central ridge. Oval spermathecae strongly translucent. From copulatory openings (their probable position indicated by an arrow) lead strongly sclerotized canals running most certainly into spermathecae. But this link is not visible. Accessory glands strongly developed (Fig. 578). Legs slender and long — especially legs I (Fig. 580) — greyish-orange, hairs and spines as in the male.

The character distinguishing the species is the structure of copulatory organs. This concerns especially the embolus, the accompanying scale and copulatory canals in females.

Telamonia Thorell, 1887

1877 *Viciria* Thorell, Ann. Mus. Stor. nat. Genova, **10**: 373 (part.).
1887 *Telamonia* Thorell, Ann. Mus. Stor. nat. Genova, 2, **5**: 385.

The present sense of the genus has been changed entirely by Prószyński (1984c), who — on the basis of earlier revisions (Prószyński 1967, 1968c) — has found a common generic classification of type-species of the genus *Telamonia* — *T. festiva* Thorell and the majority of species generally (but incorrectly) classified as the genus *Viciria*. Thus it has been necessary to verify some other genera (*Epeus, Phintella* — Prószyński 1983c, 1984b). The genus *Telamonia* (sensu novo) has an Oriental character and the number of Ethiopian species given by Bonnet (1959) seem greatly exaggerated as some of them represent different taxa (Berland and Millot 1941, Clark 1974).

The most characteristic morphological character of *Telamonia* is the presence of short thick bristles on the lateral surface of cymbium — near the apex of tibial apophysis.

Telamonia caprina (Simon, 1903), **comb. n.**

1903 *Viciria caprina* Simon, Ann. Soc. ent. Fr., **71**: 743-745, 748, 752.

Material: 2 ♂♂ — Phu Que, 80 km NW Vinh, young, dry, thick forest — trunks and branches, 16 VI1 959, 1 ♂ — Chine, 80 km SW Ha Noi, calcareous rocks, shrubs, grass, 24VI

1959, PP, 1 ♂ – Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, 1 ♂ – Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1 ♂ – Quang Ninh, Ha Long, garden, 13 X 1978, PTL.

Comparative material: 1 ♀ "*Viciria caprina* Sim., Phuc Son (Fr.)", MNHN 22104.

Male. Eye field orange-brown, surroundings of eyes dark brown. Around the ventral margin an orange belt covered with numerous white setae. The remaining part of cephalothorax orange. Setae grey-brown, denser on eye field, where longer hairs also present. Length of cephalothorax 3.20, length of eye field 1.60, width of eye field I 2.10, width of eye field III 2.20. Abdomen (Figs. 584, 588) with a white-yellow median belt, covered with numerous white setae. Laterally dark grey (formed by setae) spots on the grey-orange background. On the whole surface also grey-brown bristles. Length of abdomen 4.50. Spinnerets grey-brown. Clypeus orange-brown with long white hairs. Chelicerae light brown, maxillae and labium orange, sternum yellow-orange. Venter grey with a darker broad median belt. Palpal organ (Figs. 581–583, 585–587) orange, more slender than in *T. festiva,* embolus shorter, cymbium not much broader than tibia. Above the apex of apophysis – a tuft of short thick bristles. Proximal and distal segments of legs I orange, median ones – brown. Other legs of a similar coloration, but median segments gradually lighter. Hairs and bristles numerous (especially on median segments of legs I and II), brown, grey and white, spines brown.

Specimens in the series differ in size, intensity of colour and setation, which especially on the abdomen easily falls out uncovering the lighter background.

Female. Drawings of the epigyne (Figs. 589, 590) made available by J. Prószyński are the only documentation of the female. In comparison with the related species – *T. festiva* – has a baggy spermathecae with several internal septa. Externally epigynes very much alike.

The species is at present known only from Viet-Nam.

Telamonia elegans (Thorell, 1887), **comb. n.**

1887 *Viciria elegans* Thorell, Ann. Mus. Stor. nat. Genova, 2, **5**: 390.

Material: 1 ♀ – Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN.

Comparative material: 1 ♀ "*Viciria elegans* Thorell, Birma: Tharrawaddy (Oates)" ZRS 1800c, 1 ♂ "*Viciria elegans* Thorell, Ind., Neerl.? (V. Hasselt det.)", ZRS 1800a.

The only documentation of the male is the drawing of a palp (Fig. 591) made available thanks to J. Prószyński. When comparing with other species described here – attention should be paid to the distinct outgrowth on the bulbus surface.

Female (Fig. 592). Eye field yellow with single bristles similar in colour. Surroundings of median eyes I orange-brown with grey hairs, surroundings of other eyes black with white-yellow setae. The remaining part of cephalothorax yellow-orange. Length of cephalothorax 3.24, length of eye field 1.20,

width of eye field I 1.44, width of eye field III 1.38. Abdomen with small pigment white spots forming longitudinal rows divided by a white-yellowish background. On the whole surface sparse yellow hairs. Length of abdomen 5.70. Spinnerets yellow. Clypeus yellow with yellow-orange hairs and bristles. Chelicerae, maxillae, labium and sternum yellow-orange. Venter white-yellow with white spots. Epigyne (Figs. 593–595) with broad slit-like copulatory openings leading to membraneous and vast internal canals forming several loops. Their distal part strongly sclerotized become broad reservoirs. Legs yellow-orange with orange hairs and spines.

The structure of female copulatory organs, general body form and colour are different than in other representatives of the genus. The female was identified on the basis of comparative material and possibly individuals of both sexes were wrongly paired within the species and in reality they represent different taxa. *T. elegans* is at present known from India and Burma (Map 44).

Telamonia festiva Thorell, 1887

1887 *Telamonia festiva* Thorell, Ann. Mus. Stor. nat. Genova, 2, **5**: 386.
1892 *Viciria terebrifera* Thorell, Ann. Mus. Stor. nat. Genova, **31**: 397, 476.

Material: 1 ♂ – Chine, 80 km SW Ha Noi, jungle, 25 VI 1959, PP, 1 ♀ – Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, 1 ♂ – Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN. 1 ♀ – Luc Yen, prov. Yen Bai, 300 m, beaten from bushes in forest, 5 XII 1971, 1 ♂ – beaten from bushes on bank of River Chai, 6 XII 1971, TN, HNHM.

Comparative material: 1 ♂ "*Viciria terebrifera* Th., Annam, Phuc Son (F)", MNHN 22109.

Male. Cephalothorax rather thickset, tall. Eye field orange, surroundings of median eyes I brown, of other – black. Posterior part orange, around the ventral margin a broad brown fringe. Near eyes white, grey and orange setae and sparse brown bristles. Posteriorly also present grey-orange and white setae, on the surface of brown fringe also brown ones. Length of cephalothorax 3.20, length of eye field 1.40, width of eye field I 2.01, width of eye field III 1.91. Abdomen slender – similarly as in the female. Along the median part a broad orange belt. Laterally black-grey, irregular longitudinal streaks covered with setae similar in colour. Against the light background yellow setae, on the whole surface also present brown and yellow bristles. Length of abdomen 4.01. Spinnerets grey-brown. The colours on the abdomen may be more intensive, but according to the above described pattern. Also body dimensions greatly fluctuate. Clypeus orange-brown, sometimes darker up to dark brown colour. Hairs and bristles white and brown. Around eyes orange scale-like hairs. Chelicerae orange-brown, maxillae and labium orange, venter and sternum yellow. Palpal organ (Figs. 596–604) orange-brown. Embolus in the top part of bulbus – longer than in *T. caprina*. Cymbium almost twice as broad as tibia. Coxae and trochanters of all legs, also tarsi of legs I and II yellow, other segments dark

orange. Hairs dense, long (especially ventrally on legs I and II) grey-brown and shorter — similar in colour. Spines light brown.

Female. Cephalothorax yellow-orange, around eye field a yellow fringe. Surroundings of eyes I brown, of other — black. Hairs white and red, adpressed, denser on lateral surfaces, around eyes also brown bristles. Length of cephalothorax 3.50, length of eye field 1.50, width of eye field I 2.01, width of eye field III 1.92. Abdomen (Fig. 608) yellow with a dark-grey-brown pattern. Pale surfaces covered with white hairs, whereas dark ones — with grey-brown and red-brown hairs. Also present light brown bristles. Length of abdomen 5.80. Spinnerets I and II yellow, III — grey-brown. Clypeus yellow, covered with white hairs. Chelicerae, pedipalps, maxillae, labium and sternum yellow. Venter similar in colour with a longitudinal grey-dark-brown patch as a result three streaks merging together. Epigyne (Figs. 605–607, 609, 610) externally variable, in the form of vast depression, copulatory openings oval. Copulatory canals spacious, membraneous, pass into more sclerotized canals forming a double spiral and ending with broadened reservoirs. Legs yellow with grey--yellow hairs and grey-brown spines.

A common species in South-Eastern Asia (Map 45). Vietnamese specimens were identified on the basis of paper by PRÓSZYŃSKI (1967).

Thiania C. L. KOCH, 1846

1846 *Thiania* C. L. KOCH, Die Arachniden, **13**: 171.

This a genus having not many species (ca 20), known mainly from the Oriental Region. It contains spiders of a considerable size, having a broad flattened cephalothorax and slender abdomen. Palpal organ thick, apophysis quite big, laterally hooked. On the lateral surface of bulbus a meandering seminal reservoir, whereas in the upper part an oval strongly sclerotized plate being the base of embolus, frequently with a conductor. Epigynes big, in the form of two depressions divided by a median ridge. Copulatory openings slit-like. Internal canals frequently with distinct accessory glands, spermathecae oval or pear-shaped.

Much has been written about the genus, but only the paper of SCHENKEL (1963) and its redescription made by WESOŁOWSKA (1981b) provide good illustrations allowing to identifity the species.

Thiania abdominalis sp. n.

Material: 1 ♂ holotype — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 2 VI 1966, BP, IZPAN.

Cephalothorax broad, flat. Eye field grey-brown, posterior part brown. Setae dense, white-grey. Anteriorly also present single brown bristles. Length of cephalothorax 2.46, length of eye field 0.96, width of eye field I 1.62, width of eye field III 1.56. Abdomen (Fig. 614) slender, brown, with two orange

streaks anteriorly and an orange irregular spot medially. Setae white-grey, posteriorly also longer brown ones. Length of abdomen 2.83. Spinnerets grey-orange. Clypeus narrow, brown with single grey setae. Chelicerae brown, maxillae and labium grey-orange, sternum yellow, venter grey. Palpal organ (Figs. 611–613) grey-orange. Bulbus with a meandering seminal reservoir, embolus hooked, lack of conductor. Apophysis large, broadened spatularly and split at the end. Coxae, metatarsi and tarsi of legs I (Fig. 615) greyish-orange, other segments grey-brown — all long and thick. Hairs numerous, brown and grey, on the ventral side of tibiae a brush of black-brown bristles. Spines dark brown. Other legs more delicate, greyish-yellow, along lateral surfaces grey, with grey or light brown hairs and spines.

The species is distinguished by the coloration of abdomen and structure of palpal organs.

Thiania bhamoensis THORELL, 1887

1887 *Thiania bhamoensis* THORELL, Ann. Mus. Stor. nat. Genova, 2, **5**: 357.
1892 *Thiania opressa* THORELL, Ann. Mus. Stor. nat. Genova, **31**: 300, 474, **syn. n.**

Material: 1 ♂, 2 juv. — Bac Thai, Bac Can, 850 m, tea plantation, 17 X 1978, PTL. 1 ♀ — Coc Xan, prov. Lao Cai, beaten from bushes, 400 m, 21 XI 1971, TM, HNHM. 1 ♂ — Cuc Phuong, prov. Ninh Binh, tropical rain forest, calcareous rocks, 7 VI 1966, BP, IZPAN.

Comparative material: 1 ♂ "*Cosmophasis bhamoensis* TH., Loc. ign. (VAN HASS. ded.)", ZRS 1641b, 1 ♀ "*Cosmophasis bhamoensis* TH., Birma: Palon", ZRS 1641a. 1 ♂ "*Thiania bhamoensis* SIM. (?), Birma, Malmein, Bhamo, (DALM)", MNHN. 1 ♀ "*Thiania opressa* TH., THORELL determ., Nicobar minor, Galathea", 1 ♀ ,1 juv.♂ "*Thiania opressa* TH., THORELL determ., Assam, WIDERMANN", ZMK.

Male. Cephalothorax quite broad, flat, grey-brown with a darker eye field. Hairs white-grey, having a metallic lustre and denser around eyes I. Also anteriorly grey-brown bristles. Length of cephalothorax 2.58, length of eye field 0.96, width of eye field I 1.68, width of eye field III 1.56. Abdomen slender, black-grey, posteriorly lighter. Around the anterior part a fringe of grey scale-like setae — having a metallic lustre. Similar setae also medially and on the whole surface single grey and grey-brown bristles. Length of abdomen 2.88. Spinnerets black-grey. Clypeus grey-brown with single brown and more numerous white bristles. Chelicerae light brown, maxillae, labium and sternum grey-yellow, venter grey. Palpal organ (Figs. 616–619) grey-yellow, thick. Bulbus with the meandering seminal reservoir, embolus dagger-like on a scaly base, lack of conductor. Apophysis smaller than in the previous species, serrated on the internal edge. Coxae and trochanters of legs I yellowish-light-grey, other segments greyish-brown. Bases of other legs white-grey, femora (with the exception of the proximal part) grey. Other segments light grey slightly yellowish, lateral surfaces darker. Hairs and spines grey and grey-brown.

Specimens in a series varying as to the coloration intensity.

Female. Cephalothorax broad, flat, dark brown, covered with tufts of white setae, laterally very few brown ones. Around eyes also dark brown bristles.

Length of cephalothorax 2.76, length of eye field 0.96, width of eye field I 1.74, width of eye field III 1.68. Abdomen in the median part yellow-grey, the remaining part dark grey. Hairs scale-like, grey, forming an upside down V-pattern. On the whole surface also longer brown hairs and bristles. Length of abdomen 3.30. Spinnerets grey-brown. Clypeus orange-brown with light grey and brown long hairs. Chelicerae thick, dark brown. Basal segments of pedipalps grey-orange, distal parts brown with dark brown hairs. Maxillae and labium orange-brown, sternum grey-orange, venter grey. Epigyne (Figs. 620–624) with two light brown depressions divided by a lighter ridge. Near the epigastric furrow translucent spermathecae visible. Copulatory canals short, accessory glands well visible, spermathecae pear-shaped. Coxae and trochanters of thick legs I orange-grey, other segments greyish-brown — with the exception of dark orange tarsi. Coxae, trochanters and proximal parts of femora of legs II yellow--grey, the remaining part of femora grey-brown, other segments yellow-orange. Legs III and IV slightly paler. Hairs dense — especially on legs I — long, brown and shorter — white, scale-like. Spines brown.

Specimens of both sexes similar in shape and colour.

The genus is distinguished by the colour pattern of the abdomen and the structure of copulatory organs. Its range covers South-Eastern Asia (Map 43).

Thiania subopressa STRAND, 1907

1907 *Thiania subopressa* STRAND, Zool. Anz., **31**: 569.

Material: 1 ♀ — Lao Cai, 17 km SE of town, Dang Khao valley, beaten from bushes, 29 XI 1971, TM, 1 ♀ — Mai Lam, NE of Ha Noi, beaten from bushes in village, 16 IV 1966, TM, HNHM. 2 ♀♀ — Bac Thai, Vo Nhai, Dinh Ca, 200 m, thicket at the base of steep rock, 16 X 1978, PTL.

Comparative material: 2 ♂♂, 1 ♀ "*Thiania subopressa* STRAND, Palpe Swatow, 22. c. St.", MNHN.

Male. I had here only the drawings of palp, which were made available by J. PRÓSZYŃSKI (Figs. 628, 629). It is thicker as compared to the previous species. This is especially visible as regards the embolus and its scaly base. Tibial apophysis similar as in *T. bhamoensis*, but not serrated on the internal edge.

Female (Fig. 627). Cephalothorax broad and flat. Eye field dark brown, surroundings of eyes black. Around the ventral margin a broad brown belt, the remaining surface orange. Hairs sparse — white and brown, near eyes also brown bristles. Length of cephalothorax 3.80, length of eye field 1.30, width of eye field I 2.29, width of eye field III 2.19. Abdomen light grey, darkening laterally. The anterior part with white-grey fringe. Hairs sparse white-grey, having a metallic lustre, also longer protruding brown ones. Length of abdomen 4.10. Spinnerets grey-yellow. Frontal aspect with narrow dark brown clypeus and long sparse grey hairs. Chelicerae dark brown, pedipalps orange with brown hairs, maxillae and labium similar in colour. Sternum yellow, venter white-

-yellow-grey, medially a tuft of brown hairs. Epigyne (Figs. 625, 626, 630, 631) extremely vast, in the form of two depressions divided by a wedge-shaped median ridge. Copulatory openings lead to spacious, weakly sclerotized canals, which join the narrower, more sclerotized canals running into small spermathecae. In comparison with *T. bhamoensis* the epigyne is bigger and internal canals much longer. Legs I grey-brown, legs II slightly paler, III and IV — yellow. All much elongated, covered with brown hairs and spines.

Species at present known from China (Map 46) (WESOŁOWSKA 1981a).

Thyene SIMON, 1885

1846 *Attus*: ROSSI, Naturw. Abh. Wien, **1**: 12.
1885 *Thyene* SIMON, Bull. Soc. zool. Fr., **10**: 4.
1901 *Panysinus* (?) SIMON, Proc. zool. Soc. London, **1901**, **2**: 74.

The majority of species of the genus are described from the Ethiopian Region, whereas single ones — including the type-species — *T. imperialis* (ROSSI) — are also known from the Palaearctic, Oriental Region and even from Australia (?) (BONNET 1959).

A comparison of *T. orientalis* with *Panysinus grammicus* SIMON suggests that these forms are congeneric. Unfortunately I have not seen type-species of the genus *Panysinus* — *P. nitens* SIMON and therefore cannot decide on the status of the whole genus, which contains 5 species (BONNET 1958).

Thyene orientalis sp. n.

Material: 1 ♂ holotype, 1 ♂, 1 juv. paratypes "*Evarcha heteracantha* SIM., Tonkin, (BLAIRE)", MNHN 22439.

Comparative material: 1 ♂ "*Panysinus grammicus* SIM., [...]", MNHN 10269.

Male (holotype). Cephalothorax slender. On its whole length there is a broad orange belt including the eye field, with a wedge-like constriction towards the ventral margin. Surroundings of eyes I and II brown, of eyes III — black. Lateral surfaces orange-brown. On paler areas tufts of white setae, the remaining part covered with light brown and orange-brown hairs. Length of cephalothorax 2.40, length of eye field 1.14, width of eye field I and III 1.68. Abdomen slender, with a broad yellow, turning grey posteriorly median belt, covered with small setae. Laterally dense light brown scale-like setae — slightly longer near spinnerets. The anterior margin with a tuft of light brown bristles. Length of abdomen 2.82. Spinnerets grey-brown. Clypeus light orange, darkening laterally, with sparse orange-brown and white hairs and bristles. Chelicerae (Fig. 635) light brown, maxillae and labium orange-brown, sternum yellow with a darker margin and white hairs. Venter grey-yellow. Palpal organ (Figs. 632–634) orange with a thin and long embolus. At the lower part of bulbus a small membraneous outgrowth. Coxae and trochanters of all legs yellow-orange slightly greyish. Other segments of legs I and II light brown,

of legs III and IV — orange-brown. Hairs quite numerous, orange, grey and brown. Spines light brown.

Body form of *T. orientalis* differs considerably from *T. imperialis*, whereas palpal organ has similar structure. In comparison with *Panysinus grammicus* — outgrowth on the bulbus surface in its lower part (in *P. grammicus* — in upper one).

Uroballus Simon, 1902

1902 *Uroballus* Simon, Bull. Soc. ent. Belg., **46**: 400.

The genus is known at present on the basis of two species from Ceylon. Morphologically it is characterized mainly by much elongated spinnerets (Simon 1903a). Cephalothorax is flat and broadened, copulatory organs simple in structure. These characters and the character of their distribution may prove that this is a relict genus.

Uroballus peckhami sp. n.

Material: 1♀ holotype "*Uroballus* sp., Ha Noi (Vlg.)", MNHN 22998.

Cephalothorax slightly flattened and broadened, finely pitted. Surroundings of eyes I black-brown, of other — black. Eye field anteriorly darkening — almost black, with two dark spots. The remaining part of cephalothorax dark orange. Around lateral surfaces numerous protruding white hairs, posteriorly also single brown ones. Around eyes I also present light grey bristles. Length of cephalothorax 1.24, length of eye field 0.56, width of eye field I 0.80, width of eye field III 0.99. Abdomen (Fig. 638) with a grey pattern along the median part, the remaining surface light grey with white barely visible spots. Around the anterior margin light and dark grey protruding, long hairs, whole surface covered with sparse light grey setae. Length of abdomen (without the anal tubercle) 1.92. Spinnerets light grey, very long. Clypeus narrow, light brown, with white numerous hairs. Chelicerae short, orange, pedipalps similar in colour, maxillae and labium paler, sternum grey-orange, venter greyish-yellow. Epigyne (Figs. 636, 637) in the shape of two oval delicate depressions, out of which come baggy canals. Their distal broadened part functions as spermathecae. Legs I thick, short, with greatly dilated femora. Other legs more delicate. All yellow with grey joint areas, covered with grey and brown setae. On legs I and II light brown spines.

General appearance of the species resembles that of the type-species of the genus — *U. octovittatus* Simon (Simon 1903a).

Zeuxippus Thorell, 1891

1891 *Zeuxippus* Thorell, Kongl. Svenska Vet.-Akad. Handl., **24** (2): 109.

The three species of the genus known at present are from Burma and India, recently one of them — *Z. pallidus* — has been also described from China

(Wesołowska 1981a). The resemblance to *Rhene* is quite considerable — both as regards general appearance and the structure of palpal organ. But species of the genus *Zeuxippus* are more slender in outline (especially the abdomen) and copulatory organs of females are developed differently.

The genus has an Oriental geographic range and the locality in China may be one of many enclaves on the peripheries of a compact range.

Zeuxippus pallidus Thorell, 1895

1895 *Zeuxippus pallidus* Thorell, Descr. Cat. Spid. Burma, p. 331.
1981 *Rhene argentata* Wesołowska, Ann. zool., **36**: 47, 48.

Material: 1 ♂, 1 ♀, 2 juv. — Yen So, SW of Ha Noi, beaten from bushes, 19 IV 1966, T, HNHM. 1 ♀ — Thanh Ha, prov. Hoa Binh, 14 VI 1966, BP, IZPAN.

Comparative material: 1 ♀ "*Rhene argentata* sp. n., China, Kuangtung, Cisin-ien, 100 km W of Kanton, 5 XII 1965, leg. R. Bielawski, det. W. Wesołowska", IZPAN.

Male. Cephalothorax oval, flat, orange-brown, anteriorly paler, surroundings of eyes black-brown. Hairs numerous — especially laterally — white-grey protruding, long and also single light brown ones. Near eyes short adpressed white setae. Length of cephalothorax 1.74, length of eye field 0.90, width of eye field I 1.14, width of eye field III 1.56. Abdomen orange-brown slightly greyish, with barely translucent orange spots. Hairs similar as on cephalothorax, forming posteriorly transverse light streaks. Length of abdomen 2.58. Spinnerets orange-brown. Clypeus dark orange with numerous light grey and grey-orange long hairs. Chelicerae (Fig. 642) orange-brown, on the external surface of their basal part white scale-like setae. Maxillae orange-brown, labium brown, sternum orange. Venter in its basal part grey, posteriorly grey-brown with paler spots. Hairs numerous, grey. Palpal organ (Figs. 639–641) similar as in *Rhene*: bulbus baggy, embolus short, hooked, the conductor there thicker. Legs I thick, with numerous long white-grey and orange-brown hairs and short spines. Other legs yellow-orange slightly brown on lateral surfaces and joint areas. Hairs and spines as on legs I.

Female. Cephalothorax flat, yellow-orange, only surroundings of eyes black. Laterally white-yellow, orange and light brown hairs — denser anteriorly. Also present sparse, orange-brown hairs, on surroundings of eyes also white-grey ones. Length of cephalothorax 2.10, length of eye field 1.11, width of eye field I 1.30, width of eye field III 1.85. Abdomen (Fig. 645) yellowish-light-grey with numerous white spots and traces of grey-brown diagonal streaks laterally. Hairs yellowish-grey and grey-brown. Length of abdomen 4.01. Spinnerets yellowish-grey. Clypeus light orange, covered with numerous white hairs. Chelicerae, maxillae and labium orange, pedipalps and sternum yellow-orange. Venter as on dorsal side but without dark streaks. Epigyne (Figs. 643, 644) with two oval depressions and a pocket close to the epigastric furrow. Internal canals in the proximal part membraneous and S-bent, further one strongly clerotized, running parallelly towards the epigastric furrow and then into small

spermathecae. Legs I orange — longer than other yellow-orange ones. Hairs numerous, fine, white-yellow and light brown. Spines light brown.

The species is known at present from Burma and China (Wesołowska 1981a, Prószyński 1984a) (Map 41).

Zoogeographical analysis

Preliminary remarks

The discussion of zoogeographical problems requires a brief introduction indicating the conditions responsible for a deformed picture of fauna and explaining why the present considerations are of a general character and a more thorough approach has to be delayed.

As *Salticidae* of the south-eastern part of Asia are not known to the same extent (Table 1) it is a serious difficulty to analyse the ranges of particular species, the dynamics of their changes and to grasp the factors deciding about their present shape. Almost 400 species known from Malaya and Indonesia — considering the 9 ones from Thailand or 62 ones from Burma — speak for

Table 1. The degree of knowledge of the *Salticidae* of south and eastern parts of Asia (acc. to Bonnet 1945–1961, corrected with regard to the latest results of investigations)

Area	Viet-Nam	Thailand	Burma	China	Philipp-ines	Malaya, Indonesia			India	Ceylon
						N	MP, S J, B	C, M L		
Number of species	20	9	62	92	51	389			83	63
						16	302	71		

N — Nicobar Isl., MP — Malay Peninsula, S — Sumatra, J — Java, B — Borneo, C — Celebes, M — Moluccas, L — Lombok.

themselves even if it is assumed that the numbers concern nominal species and to some extent are not such as in reality. Also several data have a rather general character: localities are not given precisely and if they are — they concern some points of occurrence and not the general character of their occurrence. Thus, it is impossible to distinguish whether it is a reproductive population or single accidental individuals. There are also no data on the biology of species.

A serious difficulty is the poor knowledge of the taxonomy of the majority of species as it has been indicated several times in the systematic part. Although recently the studies have been more intense there is still much to be done in this respect.

The number of common species could be assumed as the most rational

and easy to apply in practice criterion of affinity of faunae from various regions. Although this is a commonly used criterion it is far from satisfactory as regards *Salticidae* and the obtained picture of faunistic and zoogeographical relations is incomplete. Thus, wherever it has been possible, I took into consideration also the groups of related species. The analysis is based on 50 species known earlier out of 100 elaborated species, the rest of which, being new for science, are mainly presented in tables and final conclusions.

Analysis of ranges

The confrontation of geographical range (Tables 2, 5) shows that 34 species (+50 new ones) have an Oriental type of distribution. Of them 17 species are known only from Indochina (including Burma), Malay Peninsula and Great Sunda Islands — mainly Sumatra and Java, 7 species have wider Oriental range including also India, Ceylon and Philippines and in one case — Bhutan.

Table 2. Geographical distribution of *Salticidae* species from Viet-Nam (acc. to BONNET 1945–1961, corrected with regard to the latest results of investigations)

Number I	Species in Viet-Nam II	Distribution III	Map IV
1	*Bianor hotingchiehi*	China	1
2	*Bianor maculatus*	New South Wales, Samoa*, Queensland, New Caledonia*	3
3	*Bianor monster*●		
4	*Bianor simoni*●		
5	*Bristowia heterospinosa*	Krakatau	2
6	*Carrhotus coronatus*	Burma*, Java, Sumatra	4
7	*Carrhotus sannio*	Malacca, Sumatra, Java, Celebes,* Philippines,* India, Yarkand, Burma	5
8	*Chalcoscirtus vietnamensis*●		
9	*Heliceroides longipalpis*●		
10	*Chrysilla lauta*	Burma	6
11	*Chrysilla versicolor*	Malaysia (Bintang), China (Tschekiang), Japan	7
12	*Colyttus lehtineni*●		
13	*Emathis weyersi*	Sumatra	14
14	*Epeus alboguttatus*	Burma	8
15	*Epeus glorius*●		
16	*Epocilla blairei*●		
17	*Epocilla calcarata*	China (Kuangtung), Borneo (Sarawak), Celebes	9
18	*Euophrys cooki*●		
19	*Euophrys poloi*●		
20	*Eupoa prima*●		
21	*Evarcha arcuata*	Palaearctic	10
22	*Evarcha bulbosa*●		
23	*Evarcha crassipes*●	Japan, Poland*	11

Table 2 (Continuation)

I	II	III	IV
24	*Evarcha pococki*●	Burma, Bhutan	12
25	*Evarcha flavocincta*	Japan, Java, Nicobar Isl, Malaysia	13
26	*Flacillula incognita*●		
27	*Gedea tibialis*●		
28	*Habrocestum orientale*●		
29	*Harmochirus brachiatus*	India, Ceylon*, Sumatra, Celebes*, Philippines, Japan	15
30	*Hasarius adansoni*	pantropical	17
31	*Hasarius kulczynskii*●	Sumatra, Java	16
32	*Hyllus diardi*	Burma, Thailand, Malacca,	
33	*Hyllus lacertosus*	Malaysia (Bintang), Java, Sumatra	18
34	*Icius kaszabi*●		
35	*Icius originalis*●		
36	*Irura bicolor*●		
37	*Irura mandarina*		
38	*Kinhia prima*●		
39	*Langerra oculina*●		
40	*Laufeia scutigera*●		
41	*Lechia squamata*●		
42	*Magyarus typicus*●		
43	*Marpissa magister*	China, Japan	42
44	*Meata typica*●		
45	*Menemerus bivittatus*	pantropical	20
46	*Menemerus brachygnathus*	Burma, Malacca*, Japan	19
47	*Myrmarachne annamita*●		
48	*Myrmarachne elongata*	middle and south part of Africa	21
49	*Myrmarachne gigantea*●		
50	*Myrmarachne globosa*	Angola, Zaire	22
51	*Myrmarachne hanoii*●		
52	*Myrmarachne kiboschensis*	Botswana, Kenya, Sudan, Tanzania	23
53	*Myrmarachne legon*	Ghana, Ivory Coast	24
54	*Myrmarachne lugubris*	Primore, Korea	25
55	*Myrmarachne thaii*●		
56	*Myrmarachne topali*●		
57	*Myrmarachne voliatilis*	Madagascar	26
58	*Neobrettus phui*●		
59	*Neon minutus*●		
60	*Nungia epigynalis*●		
61	*Onomastus simoni*●		
62	*Pancorius dabanis*		
63	*Pancorius minutus*●		
64	*Pancorius magnus*●	India	
65	*Phintella accentifera*	India	27
66	*Phintella aequipeiformis*●		
67	*Phintella argenteola*		

Table 2. (Continuation)

I	II	III	IV
68	*Phintella bifurcilinea*	Japan, China	28
69	*Phintella debilis*	Burma, Singapore, Sumatra, Java, India	29
70	*Phintella lucai*●		
71	*Phintella suavis*	Malacca	30
72	*Phintella tibialis*●		
73	*Phintella vittata*	Singapore, Nicobar Isl., Sumatra, Java, Philippines*, India	31
74	*Phlegra pisarskii*●		
75	*Plexippus paykulli*	pantropical	33
76	*Plexippus petersi*	Japan, Sumatra, Java, New Guinea, Mozambique, Zambia	34
77	*Plexippus pococki*	Burma	35
78	*Plexippus setipes*	China, Japan	36
79	*Portia albimana*	India, Ceylon	32
80	*Portia hoggi*●		
81	*Portia quei*●		
82	*Pseudamycus hasselti*●		
83	*Ptocasius kinhi*●		
84	*Ptocasius strupifer*	Hong Kong	37
85	*Rhene albigera*	Malaysia (Bintang), Sumatra, India	38
86	*Rhene flavigera*	Sumatra (Padang)	40
87	*Rhene rubigera*	India, Burma, Nicobar Isl., Sumatra, Mexico*	39
88	*Rhene setipes*●		
89	*Siler bielawskii*●		
90	*Siler hanoicus*		
91	*Synagelides palpalis*●		
92	*Telamonia caprina*		
93	*Telamonia elegans*	Burma, India	44
94	*Telamonia festiva*	Burma, Malay Peninsula, Sumatra, Java	45
95	*Thiania abdominalis*●		
96	*Thiania bhamoensis*	Burma, Malay Peninsula*, Sumatra, Nicobar Isl., India	43
97	*Thiania subopressa*	China	46
98	*Thyene orientalis*●		
99	*Uroballus peckhami*●		
100	*Zeuxippus pallidus*	Burma, China	41

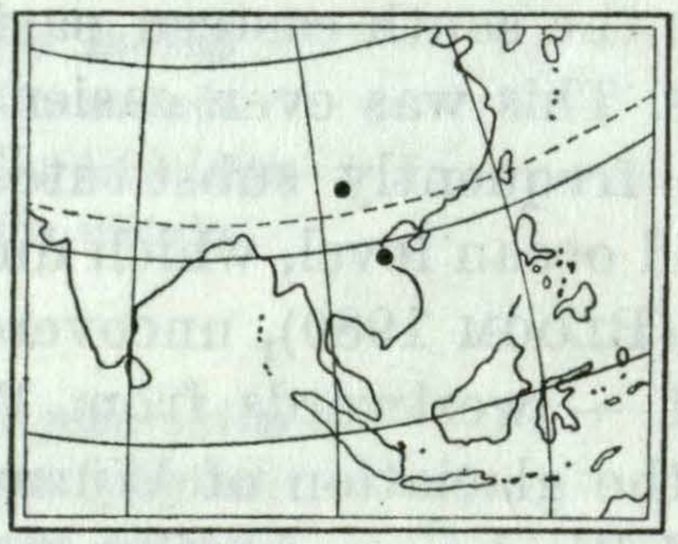
● – new species, * – locality not confirmed.

Finally the range of 9 species reaches the Palaearctic — mainly its eastern limits. These data prove a relatively high degree of affinity of Viet-Nam, Burma and part of Malay Archipelago faunae (to WALLACE's line). This is justified to some extent by the geological past of this area, which at least since the Lower

Tertiary has been a uniform region as regards climate, remaining in the zone of tropical influence (BARRON et al. 1981, PEARSON 1978, PODBIELKOWSKI 1977). Such conditions allowed probably for the movements of faunae, and at least for some species, to the north — beyond the present limits of the Oriental Region. But the uplift of Himalayas and adjacent mountain ranges inhibited this process and isolated to some extent the south-eastern part of Asia, where the faunae could continue their contacts. This was even easier as the existing at present narrow marine straits were frequently substituted by emerging landbridges. The fluctuations of the world ocean level, which during the glacial and interglacial period were 105–120 m (BLOOM 1980), uncovered considerable areas in the region of continental shelf — westwards from WALLACE's line. This occurred for the last time during the glaciation of Würm. Also of some significance could be the transport of *Salticidae* on drifting trunks, its being brought by man and air dispersal — especially during the summer monsoon, when juvenile *Salticidae* (dominant development stage in this time) could fly on gossamer threads from the area of Great Sunda Islands to Indochina (UDVARDY 1978).

As it is known, the reciprocal relations of faunae are to a considerable extent a result of specific character of the group of animals analysed, its age, expansion, dispersal abilities etc. All kinds of generalizations — even concerning systematically higher groups (e.g. families within an order) may be very confusing. Here, a good example are the studies of LEHTINEN and his collaborators (LEHTINEN and HIPPA 1979, LEHTINEN and SAARISTO 1980, LEHTINEN 1981), who prove that some families of spiders (*Lycosidae, Nesticidae, Tetrablemmidae*) are considerably related within the area of northern part of Australia, New Guinea, Oceania and S-E Asia, on the basis of which even a so-called Indo-Pacific region is distinguished. However, this concept is not confirmed sufficiently in present studies on *Salticidae*: the fauna of New Guinea — as compared with the continental part of Asia or even adjacent islands — seems to have a considerably distinct character being a mixture of Oriental elements (*Cosmophasis* SIM., *Bathippus* THOR.), Australian and Pacific (*Zenodorus* PECKH., *Mollika* PECKH., *Simaetha* THOR., *Euryattus* THOR.) and autochthonous ones (*Cocalodes* POC., *Coccorchestes* THOR.) (CHRYSANTHUS 1968, PRÓSZYŃSKI 1971a, BALOGH 1979, 1980, WANLESS 1982). The *Salticidae* of Australia are even a more distinct fauna: out of 265 species mentioned by BONNET (1945–1961), of which 140 are well known to me (ŻABKA unpubl. mat.) — only 15 have localities in the Oriental Region (including 4 species from Viet-Nam — 3 of them being pantropical) — both to the west and east of WALLACE's line. The real number of common species is probably greater, but too small to consider the area discussed as a homogenous zoogeographical region — assuming even that apart from the 15 species mentioned there are also groups of related species described in different genera (*Jotus* L. K., *Habrocestum–Euophrys, Clynotis* SIM.–*Icius*, ŻABKA in prep.).

Much more justified is the use for *Salticidae* of another concept of LEHTINEN



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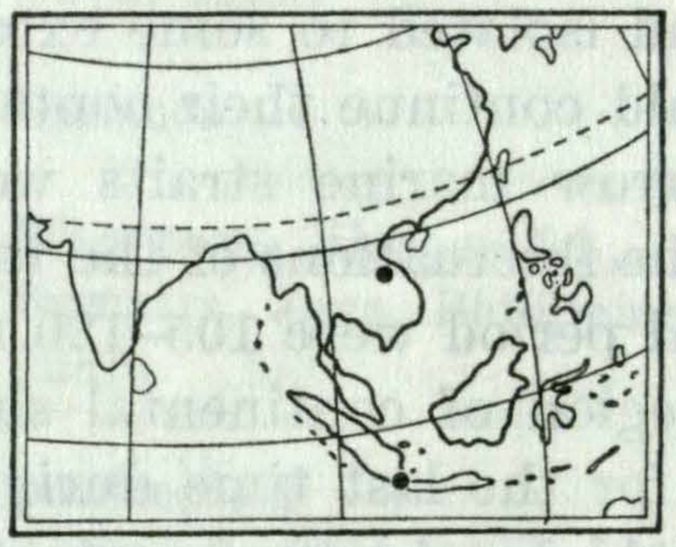

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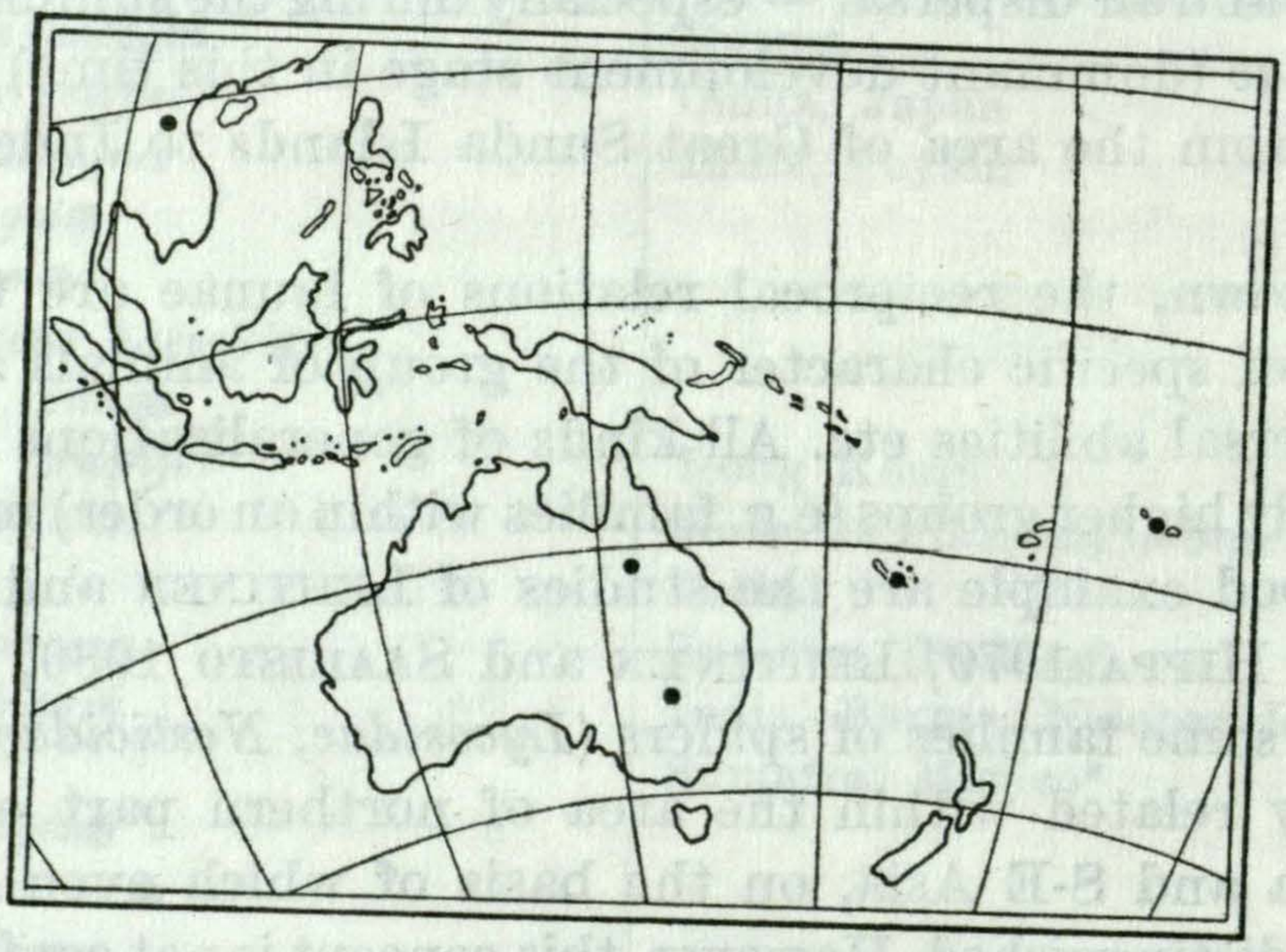

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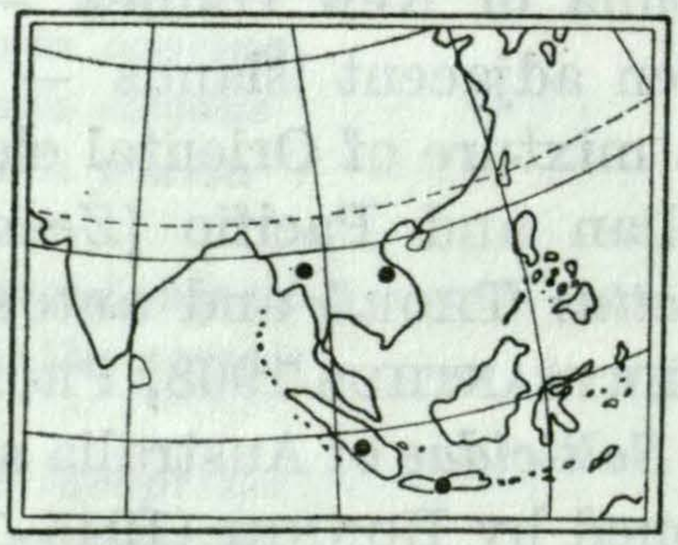

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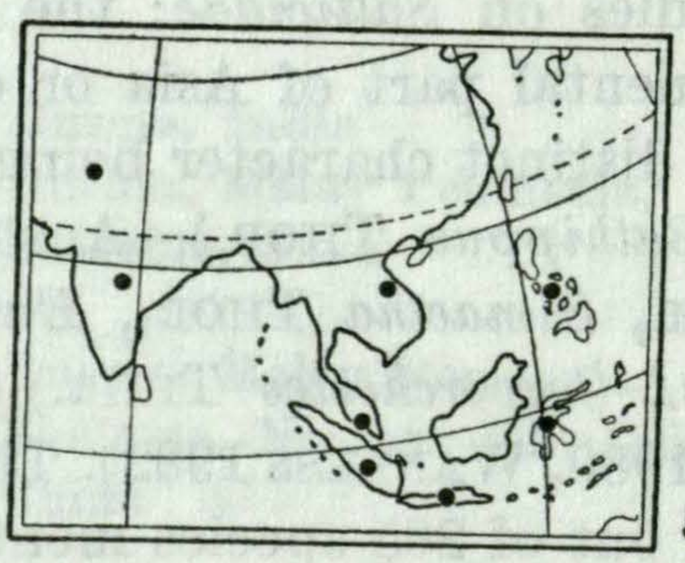

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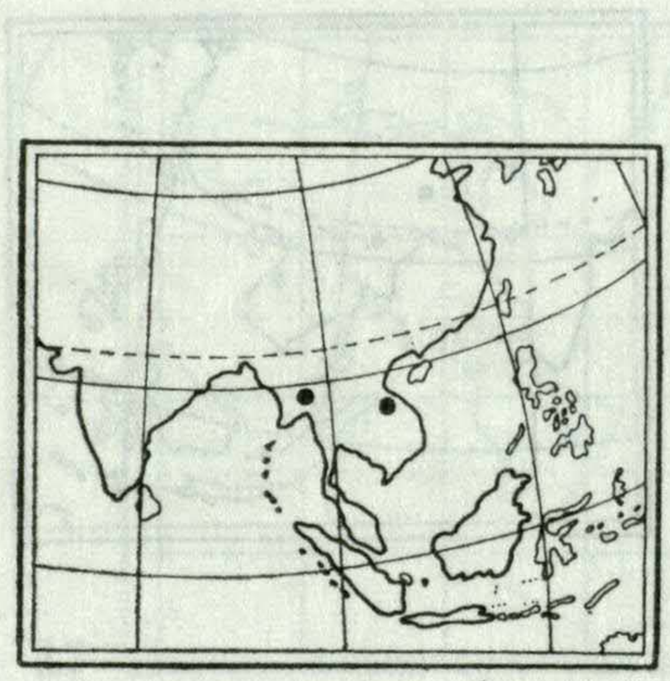
Maps 1–5. Distribution of: *Bianor hotingchiehi* (1), *Bristowia heterospinosa* (2), *Bianor maculatus* (3), *Carrhotus coronatus* (4) and *C. sannio* (5).



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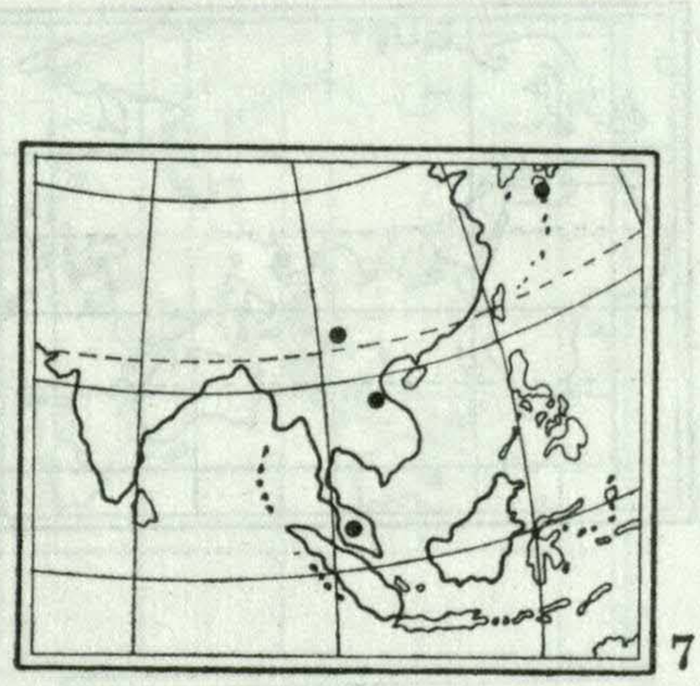

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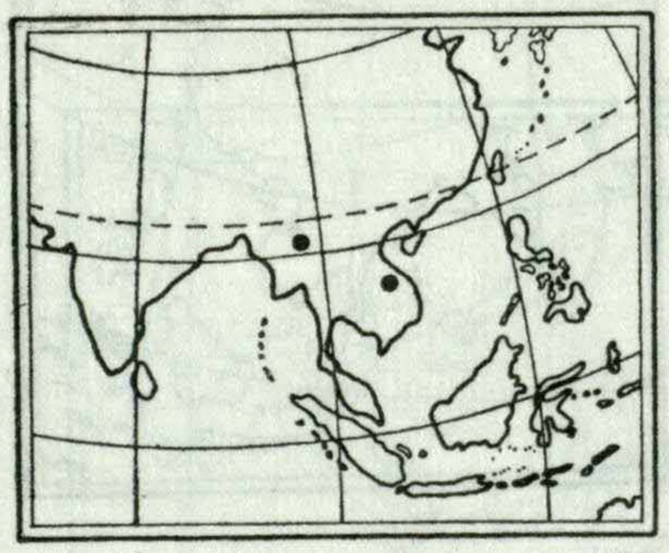

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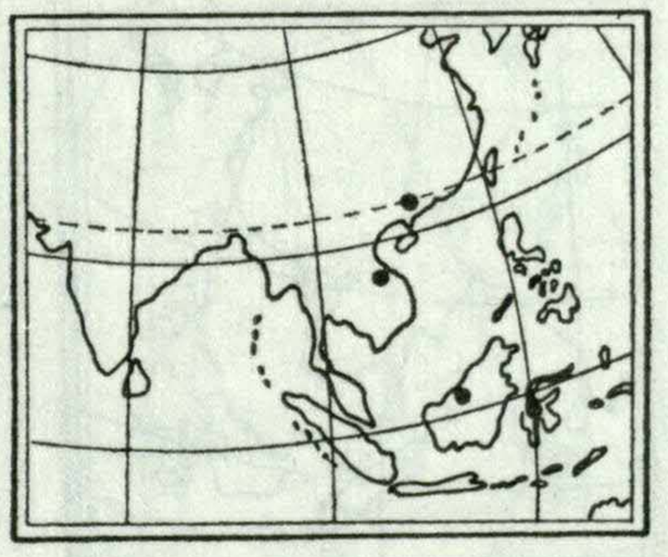

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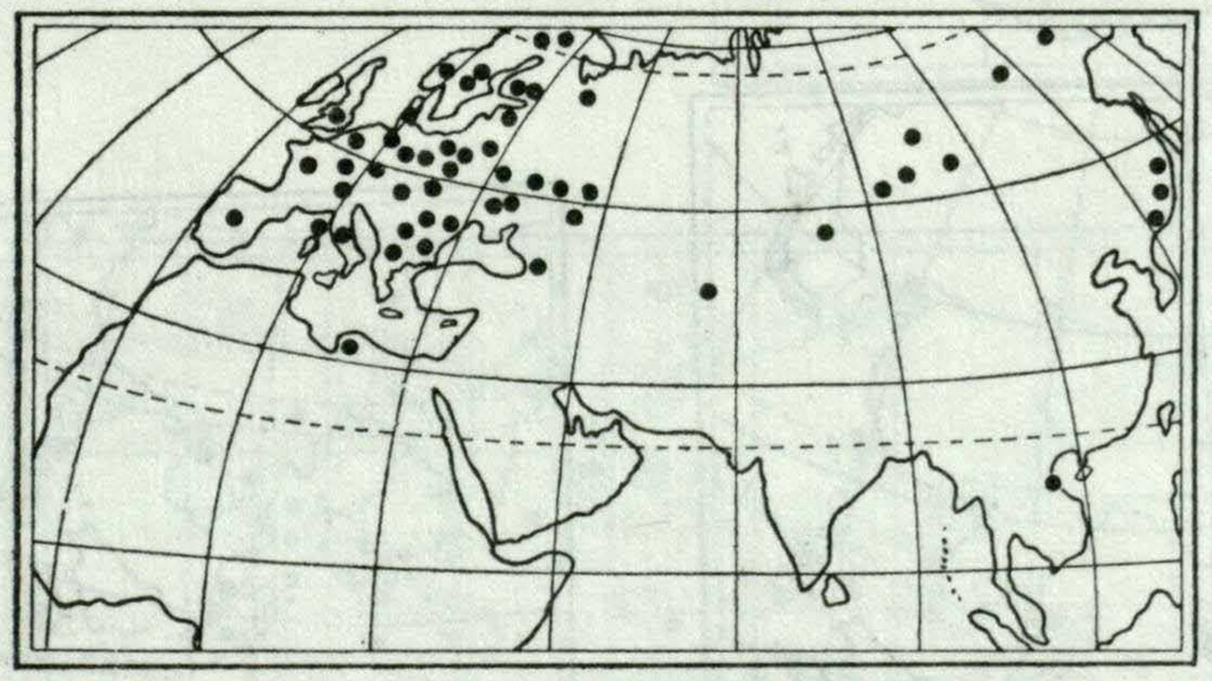

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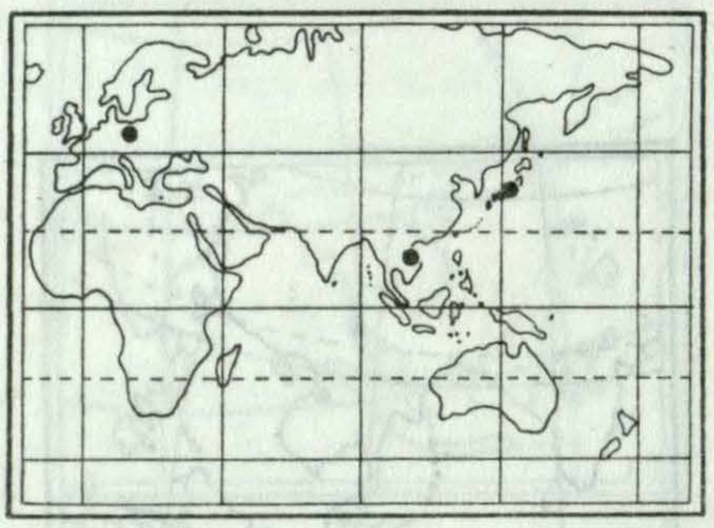
Maps 6–10. Distribution of: *Chrysilla lauta* (6), *Ch. versicolor* (7), *Epeus alboguttatus* (8), *Epocilla calcarata* (9) and *Evarcha arcuata* (10).



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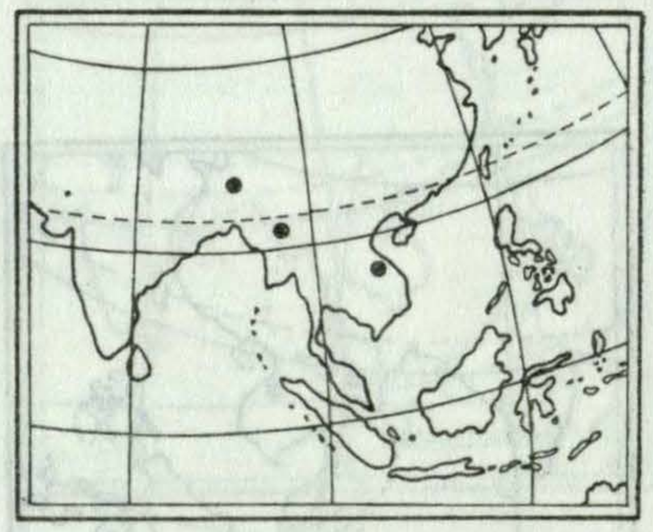

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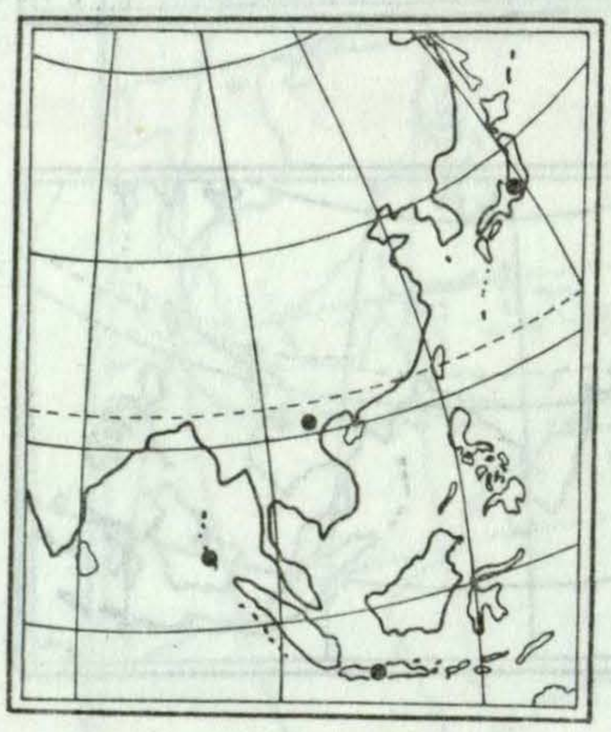

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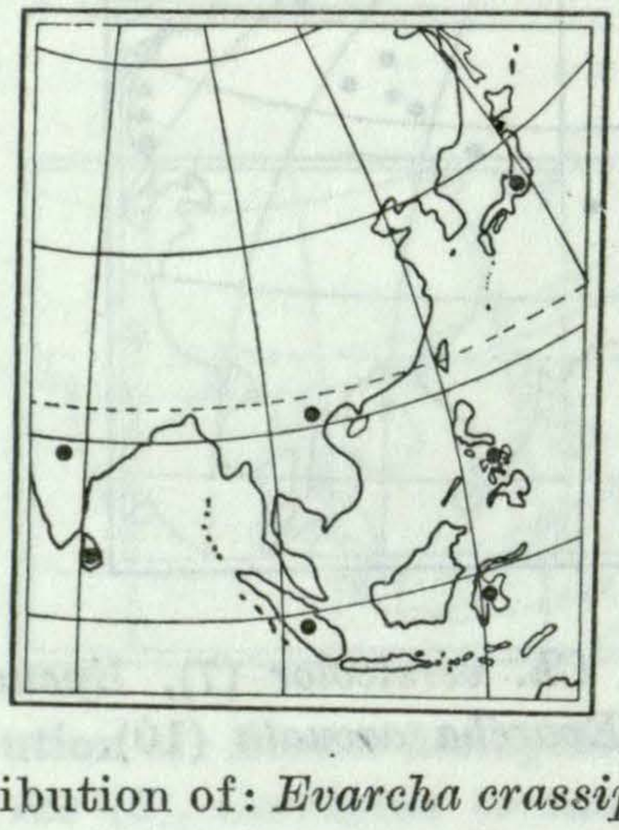

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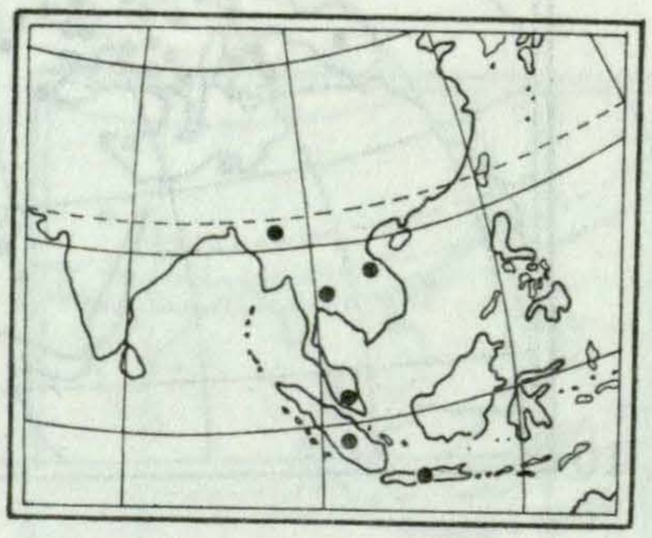

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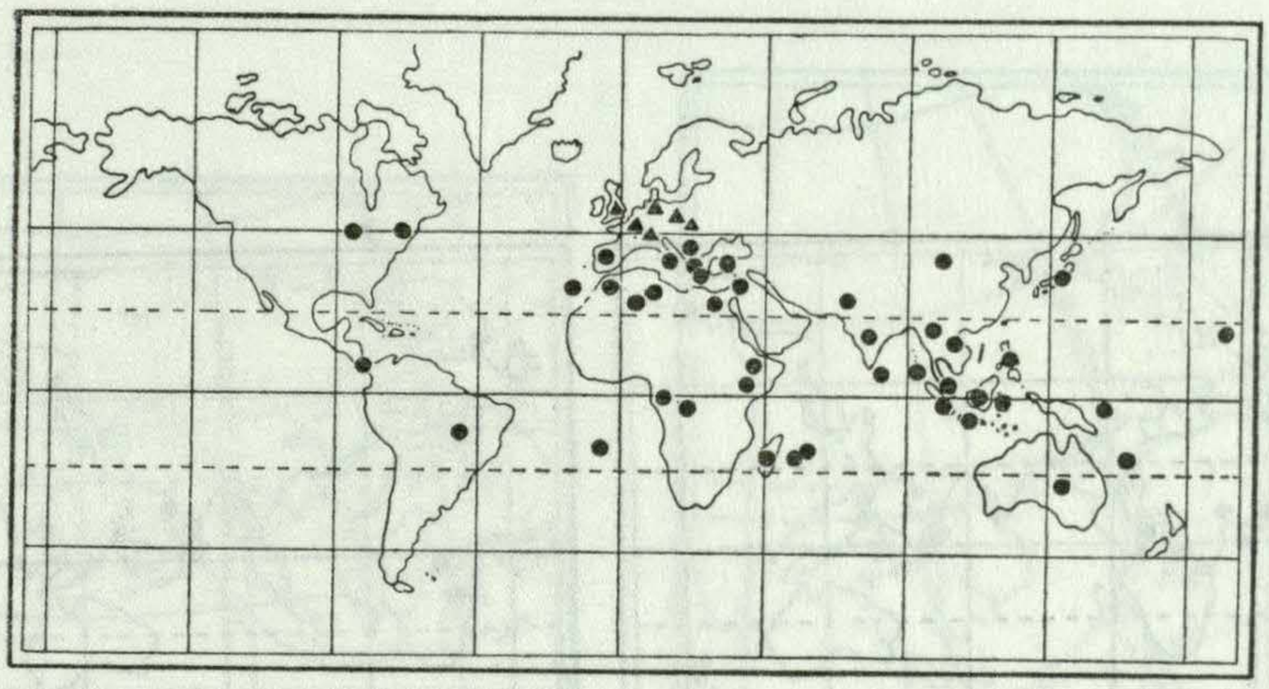
Maps 11–16. Distribution of: *Evarcha crassipes* (11), *E. pococki* (12), *E. flavocincta* (13 — locality in Malay Peninsula ommitted), *Emathis weyersi* (14), *Harmochirus brachiatus* (15) and *Hyllus diardi* (16).



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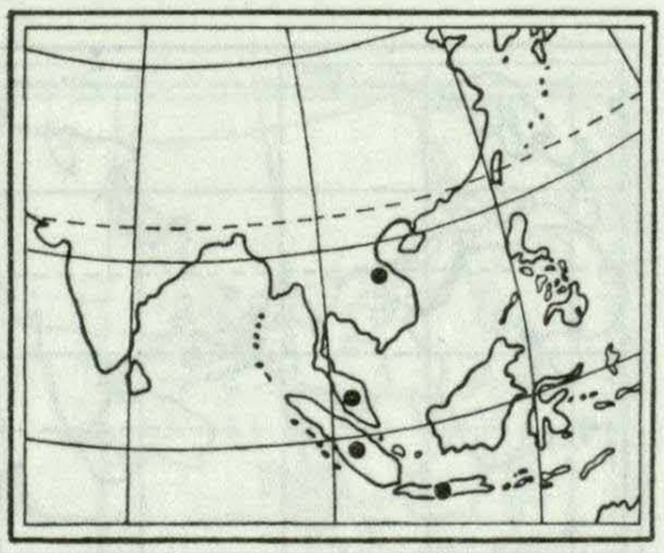

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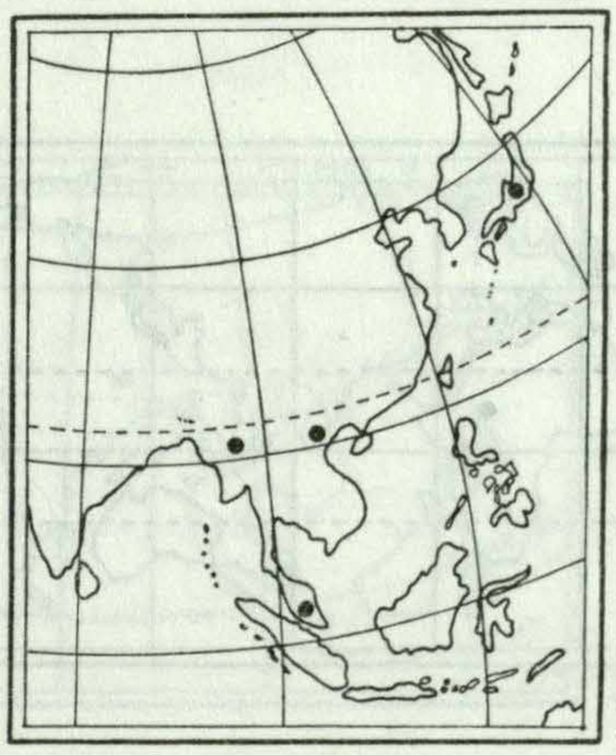

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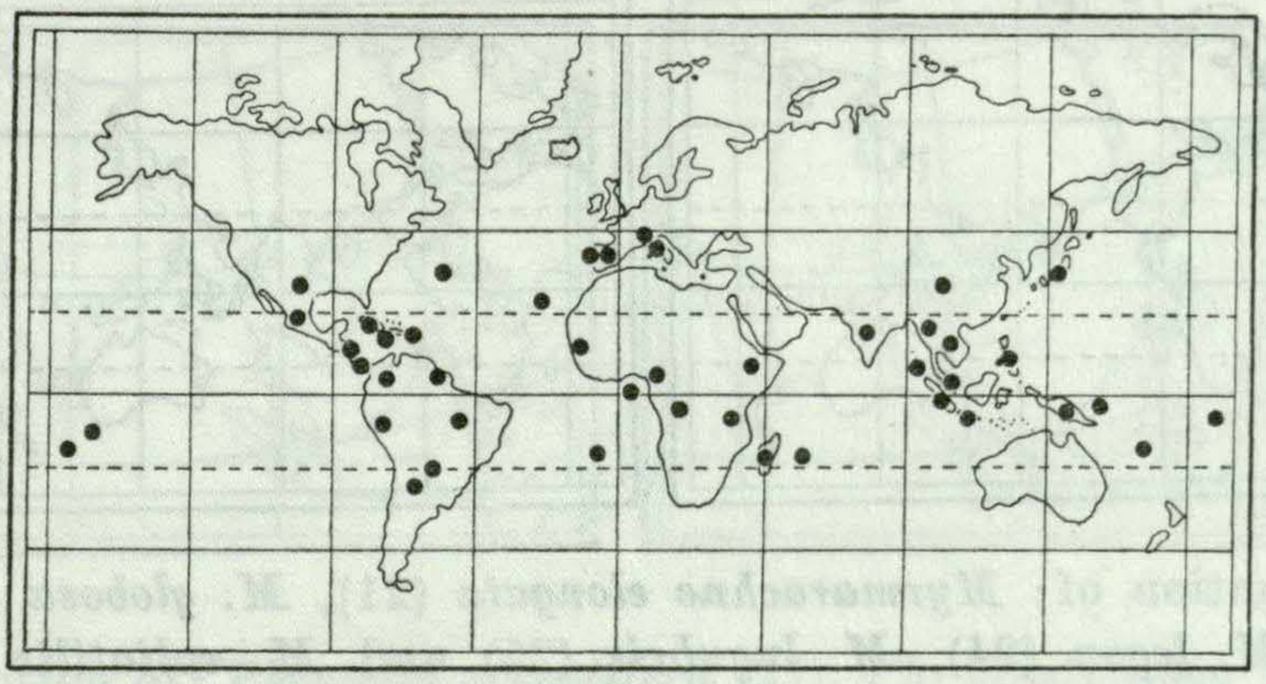

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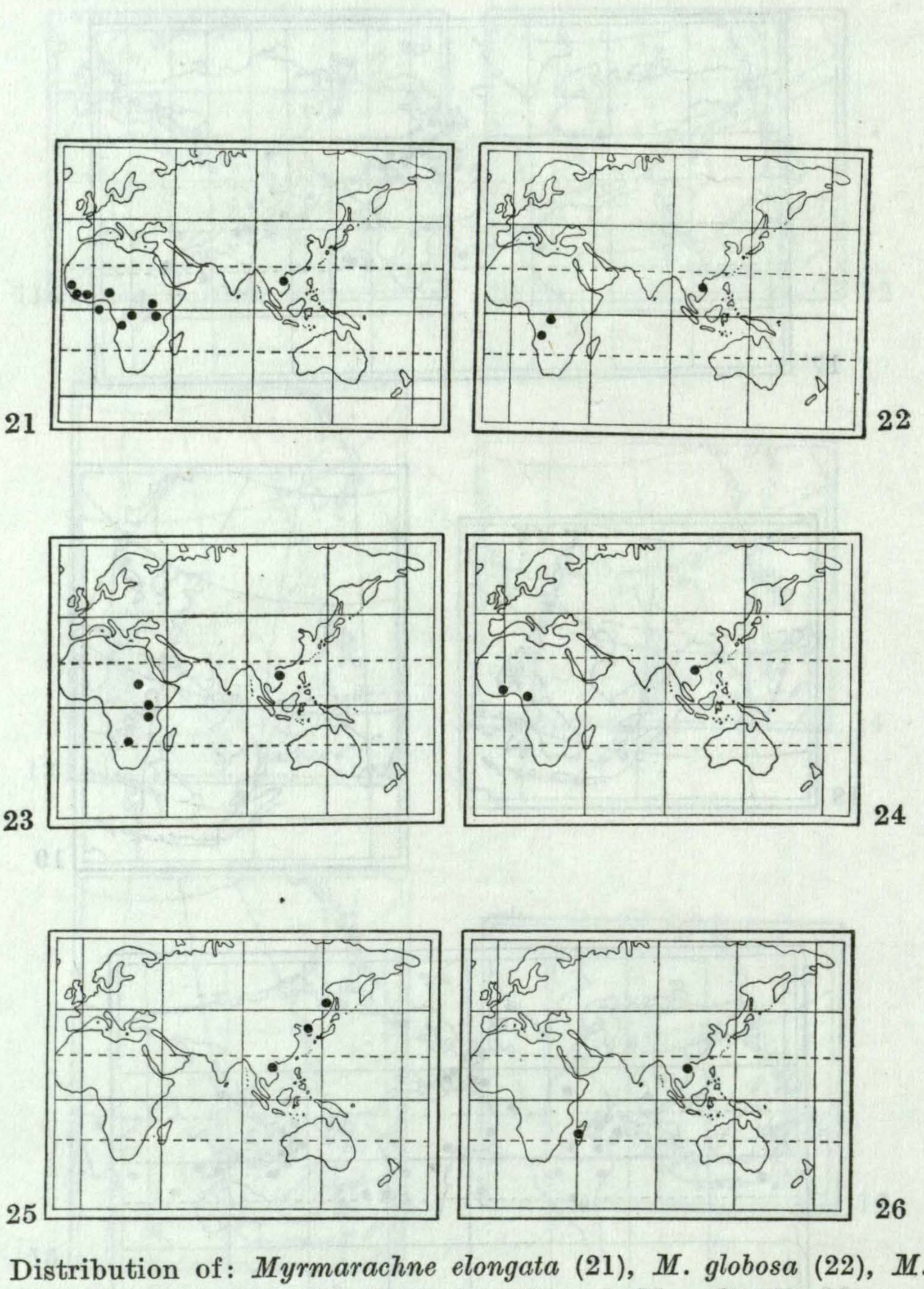
Maps 17–20. Distribution of: *Hasarius adansoni* (17 – triangles – localities in greenhouses), *Hyllus lacertosus* (18), *Menemerus brachygnathus* (19) and *M. bivittatus* (20).



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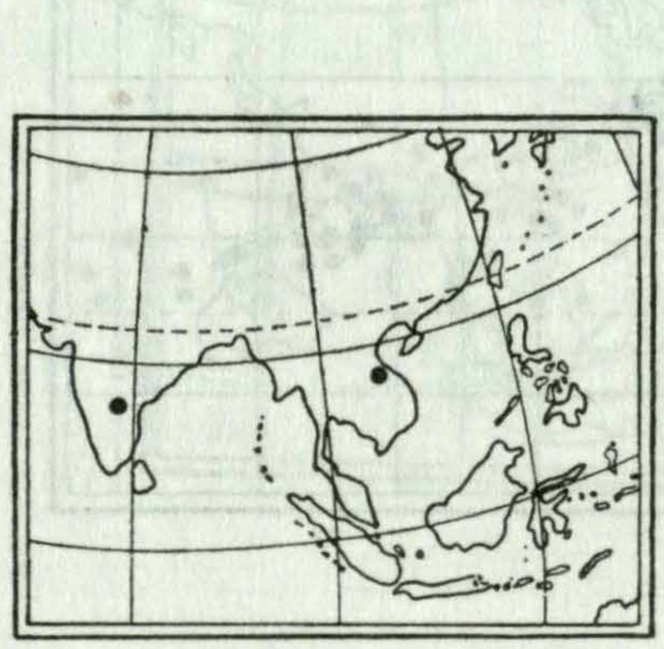
Maps 21–26. Distribution of: *Myrmarachne elongata* (21), *M. globosa* (22), *M. kiboschensis* (23), *M. legon* (24), *M. lugubris* (25) and *M. voliatilis* (26).



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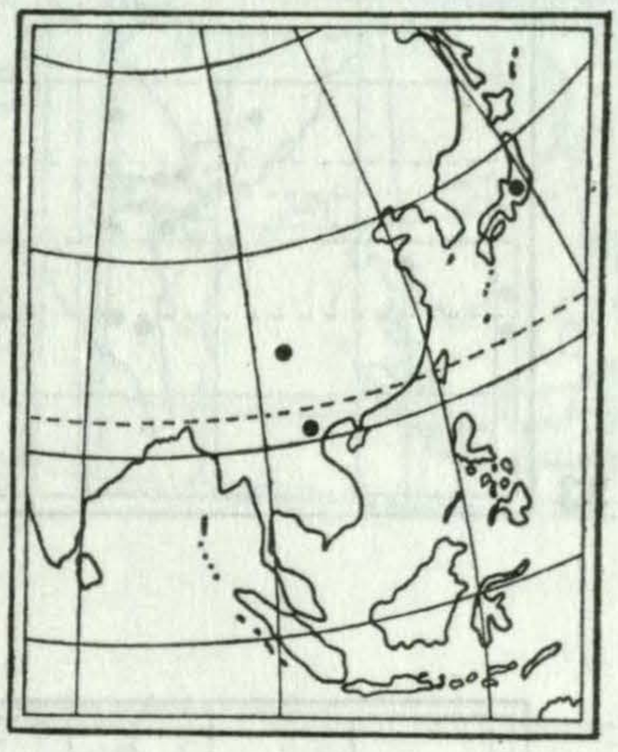

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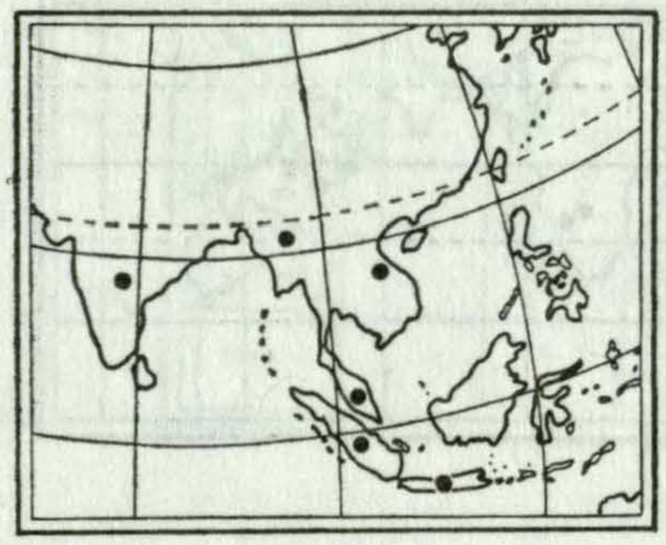

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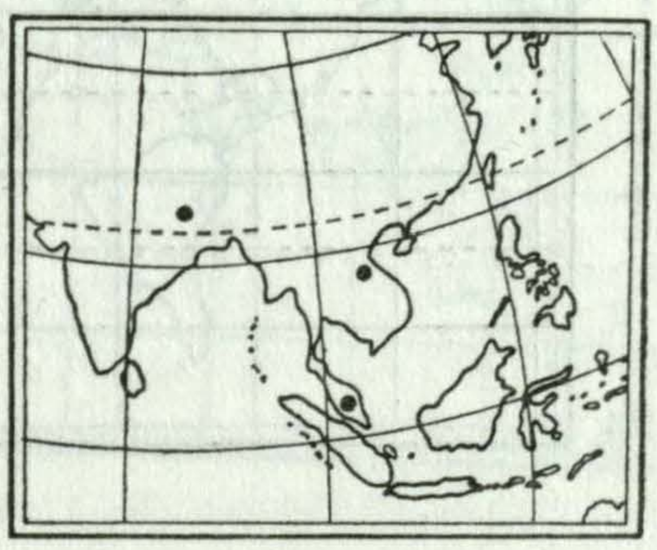

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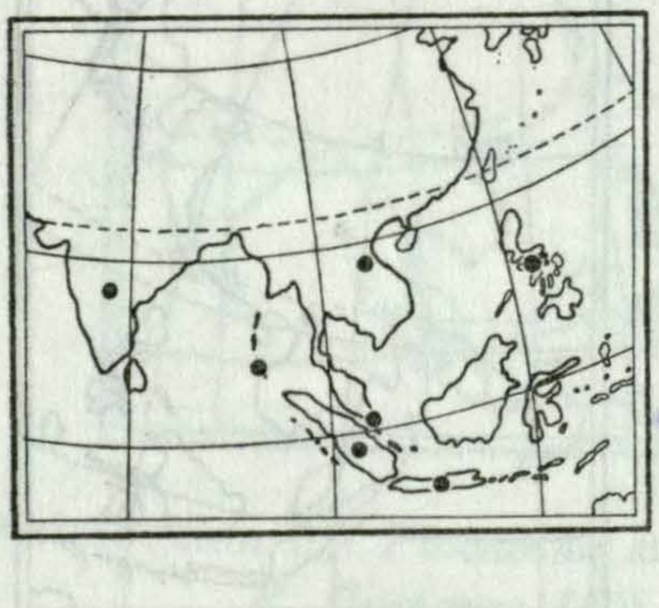

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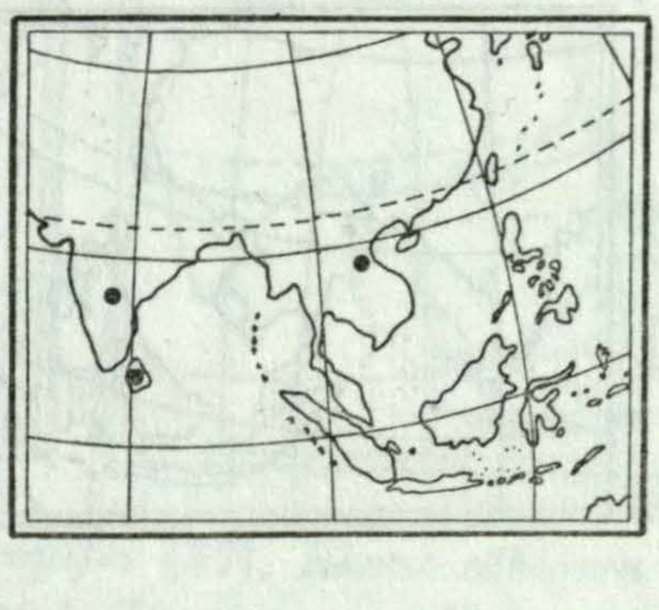

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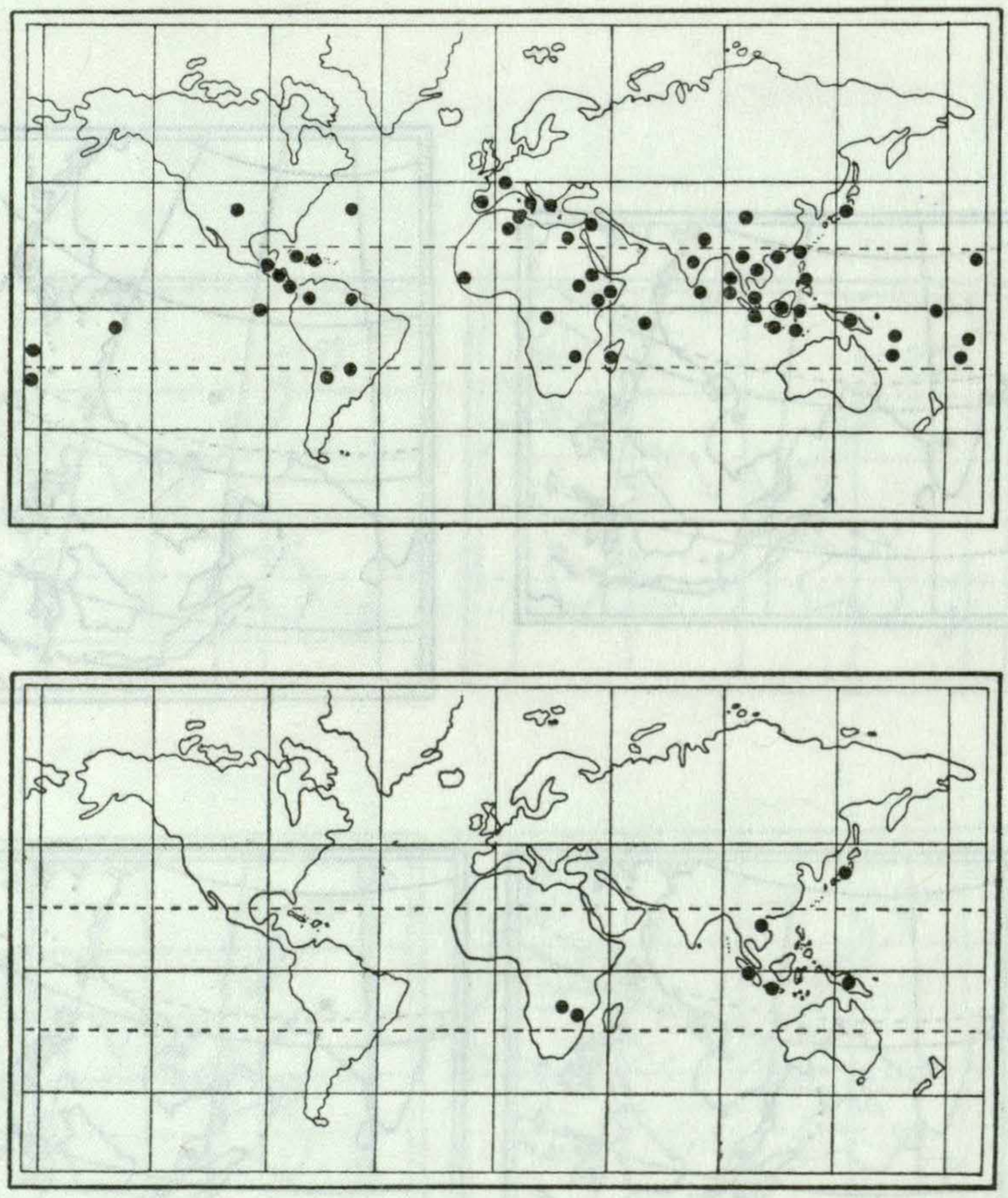
Maps 27–32. Distribution of: *Phintella accentifera* (27), *Ph. bifurcilinea* (28), *Ph. debilis* (29), *Ph. suavis* (30), *Ph. vittata* (31) and *Portia albimana* (32).



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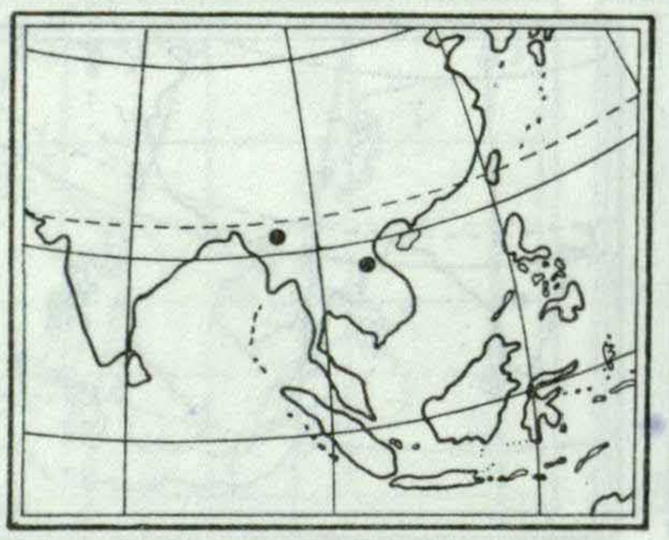

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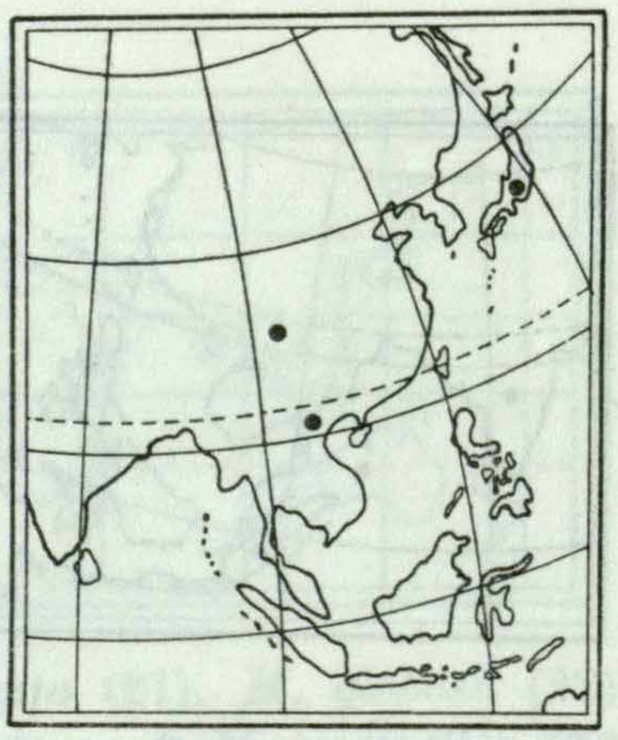

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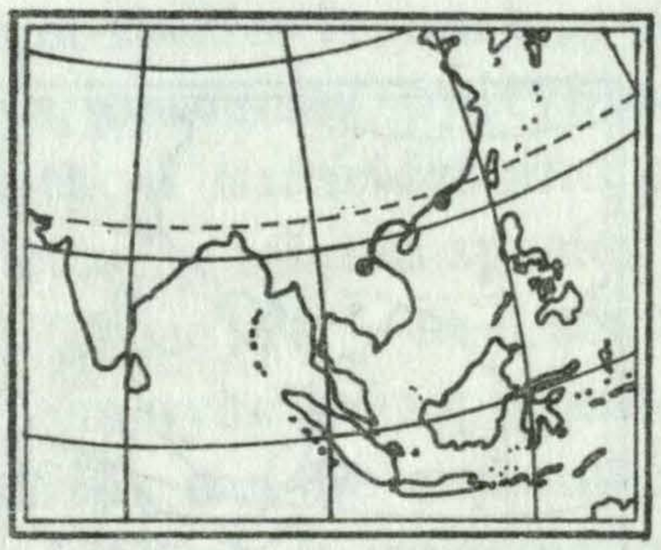
Maps 33–36. Distribution of: *Plexippus paykulli* (33), *P. petersi* (34), *P. pococki* (35) and *P. setipes* (36).



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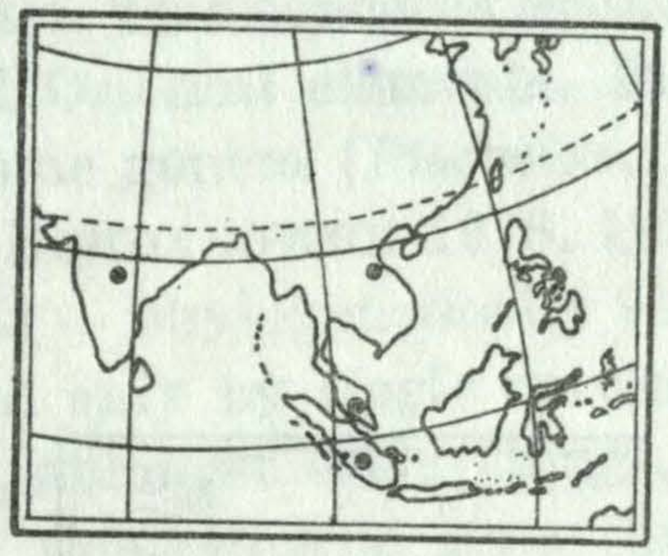

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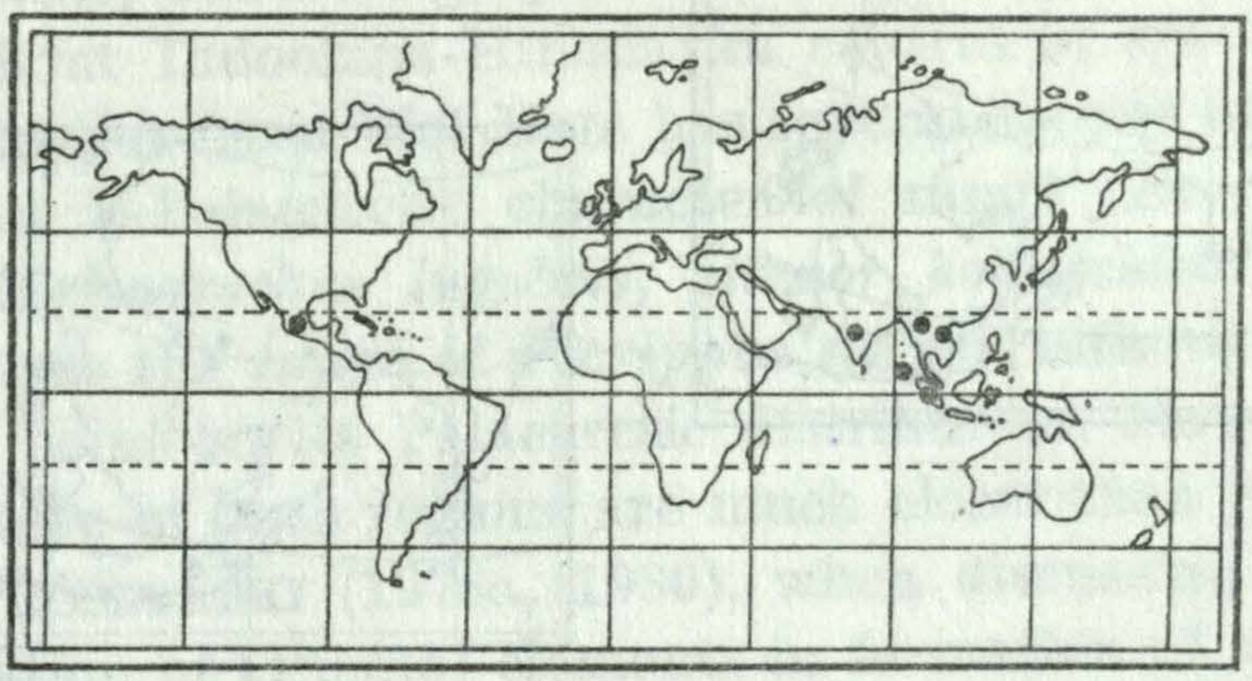

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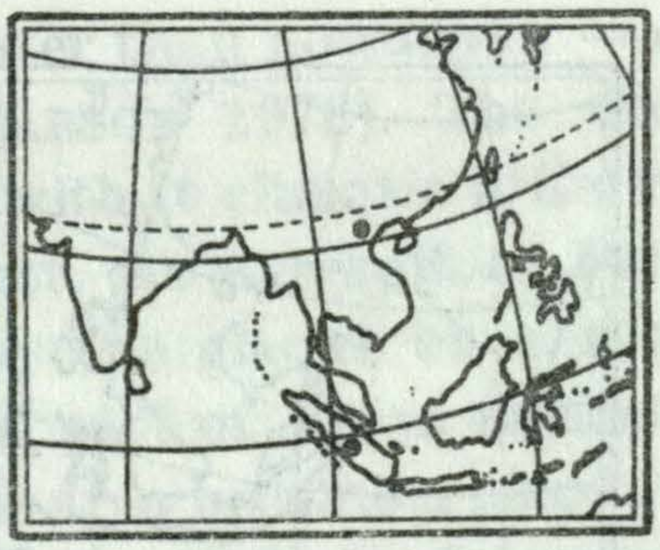

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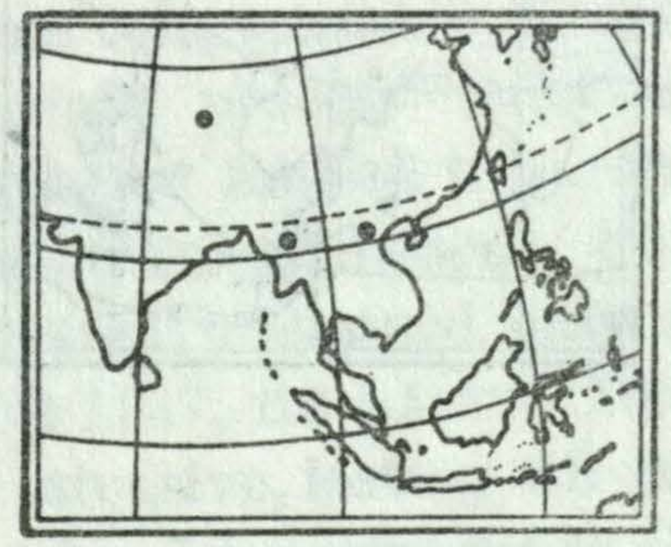

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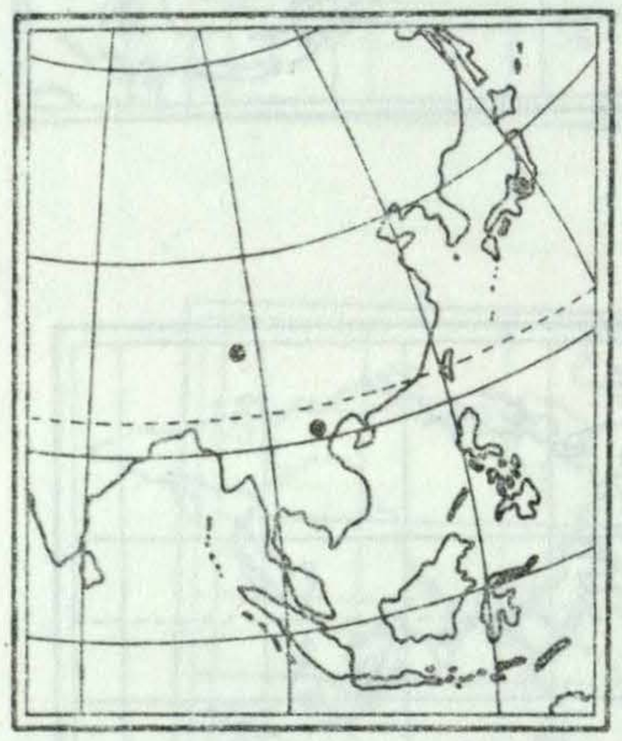
Maps 37–41. Distribution of: *Ptocasius strupifer* (37), *Rhene albigera* (38), *R. rubigera* (39), *R. flavigera* (40) and *Zeuxippus pallidus* (41).



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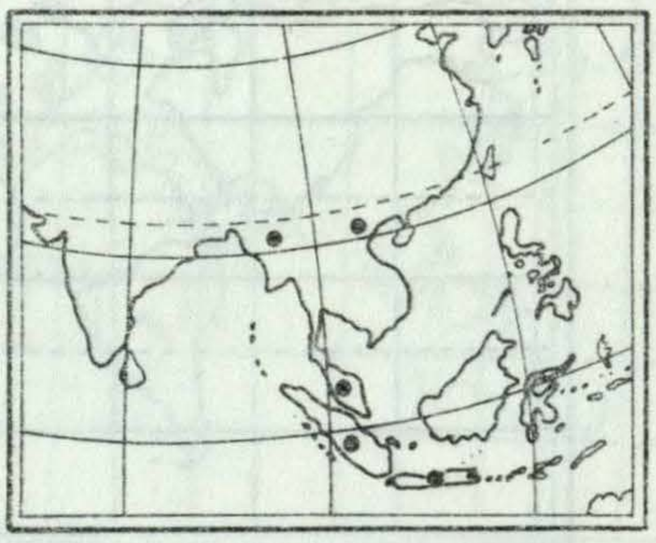

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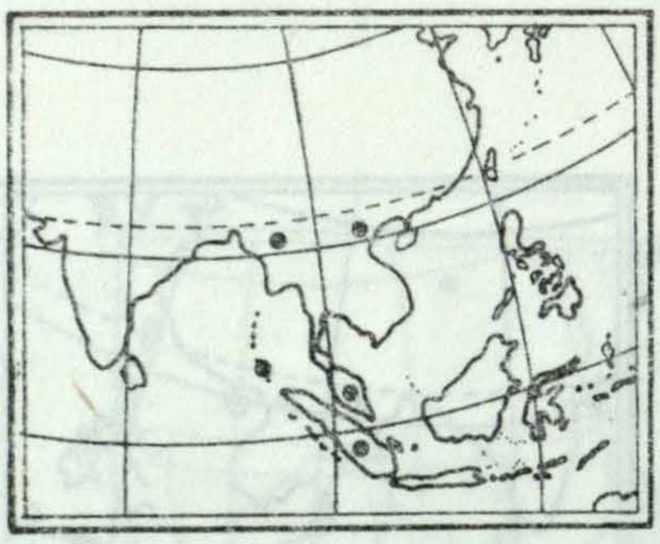

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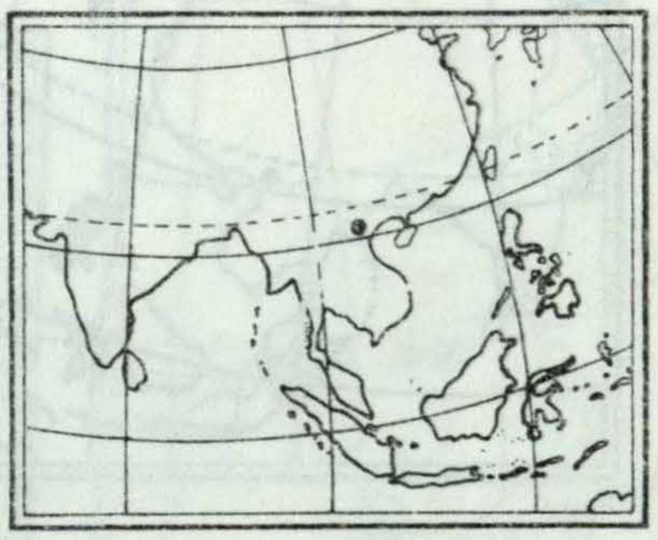

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Maps 42–46. Distribution of: *Marpissa magister* (42), *Thiania bhamoensis* (43), *Telamonia elegans* (44), *T. festiva* (45) and *Thiania subopressa* (46).

(1980) concerning the occurrence of a common speciation zone in the Indochina-Himalayan area. Although the data published (PRÓSZYŃSKI 1978b) and the present work provide only information about two common species, the preliminary analysis of vast material of *Salticidae* from Nepal (collected by Prof. J. MARTENS, Mainz) and Bhutan (expedition NHM Basel) allows to state that the number of common species is much greater. This concerns mainly the fauna of subtropical valleys, colonized by typical Oriental elements. In Himalayas there is a great wealth of *Salticidae* and some genera (*Ptocasius, Synagelides*) have several tens of closely related species (BOHDANOWICZ 1978, 1979, in press, ŻABKA 1980c, 1981b). These are — as it seems — phylogenetically young genera, which beyond the Himalayas are represented only by single species, and their wealth in the Himalayas can be explained, amongst other things, by specific speciation processes in high mountains of this climatic zone (SZAFER 1975, UDVARDY 1978, MARTENS 1979, PRÓSZYŃSKI 1980). However, there are some genera (*Plexippus, Rhene*) containing species having wider range and in this case one may talk about Indochina-Himalayan centres of speciation.

The fauna of *Salticidae* from Viet-Nam has several species of a Palaearctic (*Evarcha arcuata*) and E-Palaearctic character of range (*Evarcha crassipes, Marpissa magister, Myrmarachne lugubris, Bianor hotingchiehi*). At present it is difficult to estimate the range of *Plexippus setipes,* although its localities in China and Japan point to its Palaearctic distribution. However, the real relations between faunae of both regions are much closer than judging by the species mentioned. PRÓSZYŃSKI (1978a, 1980), when discussing this problem, suggests the participation of Oriental elements in formation of the Palaearctic fauna — mainly its eastern part. It seems that in the period preceding the orogenesis of Himalayas and elevation of Tibet the migrations of fauna in Asia could be much greater than nowadays — due to favourable climatic conditions (SINICYN 1965, PEARSON 1978). The orogenic process (Miocene, Pliocene) and the connected with it climatic differentiation limited this exchange to the eastern Asiatic coast. As a result of Pleistocene glaciations, the Palaearctic fauna (destroyed by the glacier on a vast area) remained only in refugia in E-China, Korea and part of Japan (REINING 1937, DE LATTIN 1967, UDVARDY 1978). Therefore this area became a place of intensive, lasting till present times, contacts: mild climate and lack of topographical barriers made the expansion easier. Thus out 39 Vietnamese genera analysed — 24 are also found in the Palaearctic (Table 3). Some of them (*Marpissa, Neon, Euophrys, Chalcoscirtus*) have a Palaearctic type of distribution, other — an Oriental one (*Phintella, Thiania, Plexippus, Synagelides, Ptocasius, Zeuxippus* — altogether 9 species in Viet-Nam), expanding their area northwards to Korea, E-China, Primore and Japan. Summing up, the rather intensive mixing of Palaearctic and Oriental elements in East Asia should be pointed out, and *Salticidae* from Viet-Nam are a good illustration of this process.

The Ethiopian element consists of 5 species — representatives of the genus *Myrmarachne* (*M. elongata, M. globosa, M. kiboschensis, M. legon, M. voliatilis*)

and *Plexippus petersi*. Also some genera (*Thyene, Hyllus, Portia, Asemonea* O. P.-C., *Hispo* SIM.) have an Ethiopian-Oriental character of distribution (BERLAND and MILLOT 1941, WANLESS 1978e, 1980d, 1981a). Similar cases,

Table 3. Geographical distribution of chosen *Salticidae* genera represented in the fauna of Viet-Nam (acc. to BONNET 1945–1961, corrected with regard to the latest results of investigations)

Number	Genus	Number of species	Viet-Nam	Orient.	Palae-arctic	Ethiop.	Austral Pacif.	Nearct.	Neotr.	cosmop. pantr.
1	*Ptocasius*	33	2	33						
2	*Pancorius*	12	3	12						
3	*Chrysilla*	9	2	9						
4	*Epeus*	8	2	8						
5	*Pseudamycus*	7	1	7						
6	*Onomastus*	5	1	5						
7	*Irura*	4	2	4						
8	*Uroballus*	3	1	3						
9	*Zeuxippus*	3	1	3						
10	*Colyttus*	2	1	2						
11	*Gedea*	2	1	2						
12	*Bristowia*	1	1	1						
13	*Synagelides*	22	1	18	4					
14	*Phintella*	11	9	9	2					
15	*Epocilla*	8	2	7	1					
16	*Flacillula*	5	1	4	1					
17	*Telamonia*	42?	3	26		16?				
18	*Portia*	19	4	8		11				
19	*Thyene*	30	1	7	1	22				
20	*Harmochirus*	6	1	2	1	3				
21	*Thiania*	20	3	16	3		1			
22	*Chalcoscirtus*	9	1	2	5			2		
23	*Siler*	9	2	6	2		1			
24	*Rhene*	39	4	21	5	6	3		4	
25	*Hyllus*	75?	2	18	3	46?	2		6	
26	*Habrocestum*	29?	1	2	15	5?		6?	1?	
27	*Bianor*	25	4	8	7	2	3	1	4	
28	*Euophrys*	145?	2	13	70	13?	1	3	43?	
29	*Evarcha*	25	5	7	9	5		2	2	
30	*Carrhotus*	15	2	5	4	4	1		1	
31	*Marpissa*	50?	1	4	20	2	7?	9	8?	
32	*Phlegra*	42	1	3	25	12		1	1	
33	*Emathis*	8?	1	2					6?	
34	*Neon*	18	1	1	9			5	3	
35	*Myrmarachne*	199	11	82	14	76	9	2	15	1
36	*Plexippus*	52?	4	26	3	6	9?	1	6	1
37	*Hasarius*	37?	2	17?	6	6	4		3	1
38	*Icius*	83?	2	14	34	15?		11?		
39	*Menemerus*	44?	2	3	19	9?	22	2	8	1

concerning other groups of animals, are discussed by MÜLLER (1974), who distinguished even — after the example of plant geography — Paleotropical Region. In the case of *Salticidae* this concept can not be confirmed sufficiently by the existing data. A most probable justification of occurence of common taxa assumes their originally wide Oriental-Ethiopian distribution in habitats having similar climatic parameters and vegetational cover. During the pluvial periods of Pleistocene when the northern part of Africa, Asia Minor and Arabia Peninsula were acquiring the characteristics of a steppe and desert (CROWE

Table 4. Quantitative composition of genera and species of the *Salticidae* represented in Vietnamese fauna (on the basis of Table 2)[1]

	Oriental	Palaearctic	Ethiopian	Australian	pantropical	others
Genera	20	6	2			11
Species	84	6	6	4		

[1] The criterion assumed when determining the zoogeographical character of the genus are the quantitative relations of species in particular zoogeographical regions. Although this is a controversial criterion, it is difficult at the moment to find another one.

1978), some of the fauna might have been pushed out or died. Rapid climatic and ecological changes intensified this process and the barriers formed function till present day. There is also possible a contemporary or ancient broadening of range, formely limited to one of the two continents.

In the case of representatives of the genus *Myrmarachne* there is also a possibility of convergent occurrence of morphologically similar forms, but genetically separate. Although this thesis can not be proved yet, the ant-like body form in various spider families shows that convergent evolution may occur both in geographically isolated groups and in those being phylogenetically distant.

Three species — *Hasarius adansoni, Menemerus bivittatus* and *Plexippus paykulli* have a pantropical character. They are widely distributed in warm climatic zones of the Old and New World. Sometimes they are found in a colder climate, proliferating in microenvironments having favourable parameters (e.g. *H. adansoni* brought to greenhouses). The other two species were probably brought by man too.

Zoological and biogeographical literature presents a number of theories justifying the pantropical type of distribution (transoceanic dispersion, expansion through Bering Strait, drifting on continental table-lands etc.). MAYR (1976), when discussing these concepts, sounds sceptical and mentions the lack of convincing evidence, frequently contradictory and speculative character of considerations; in the case of *Salticidae* it is difficult to estimate their usefulness because of insufficient knowledge of faunae, scarse or no data on the age and biology of species. It seems that the pantropical distribution is an effect of joint action of many factors.

Conclusions

The zoogeographical character of *Salticidae* from Viet-Nam is determined by the geographical position, which makes easy the penetration of Palaearctic elements from the north and of Indo-Malayan ones from the south.

The species composition of the material analysed suggests that it is an effect of influences of faunae more or less distant areas and autochthonous elements. These influences either took place in the past or last till the present day and

Table 5. Geographical distribution of Oriental species of *Salticidae* from Viet-Nam.

Indochina (with Viet-Nam) Malay Peninsula, Great Sunda Islands	+India, Ceylon, Bhutan, Philippines	+Palaearctic: E China, Japan
Bristowia heterospinosa		
Carrhotus coronatus		
Chrysilla lauta		
Emathis weyersi		
Epeus alboguttatus		
Hyllus diardi		
Hyllus lacertosus		
Irura mandarina		
Pancorius dabanis		
Phintella argenteola		
Phintella suavis		
Plexippus pococki		
Ptocasius strupifer		
Rhene flavigera		
Telamonia caprina		
Telamonia elegans		
Telamonia festiva		
Phintella accentifera	x	
Phintella debilis	x	
Phintella vittata	x	
Portia albimana	x	
Rhene albigera	x	
Rhene rubigera	x	
Thiania bhamoensis	x	
Carrhotus sannio	x	x
Chrysilla versicolor		x
Epocilla calcarata		x
Evarcha flavocincta		x
Harmochirus brachiatus	x	x
Menemerus brachygnathus		x
Phintella bifurcilinea		x
Thiania subopressa		x
Zeuxippus pallidus		x

they can be measured by the degree of affinity expressed by the number of common species, genera and groups of species.

The Oriental element is represented by 85 species, out of which 56 (this including 50 species new for science) are at present known only from Viet-Nam and at least some of them have an undoubtedly wider range. Nevertheless, the degree of distinct character of fauna occurring on lowland areas isolated by topographical barriers to the west may be quite considerable. Seventeen species occur exclusively on the area of Indochina, Malay Peninsula, Sumatra and Java, 7 further species have been found additionally in India, Ceylon and Bhutan, whereas 9 species (altogether 34 Oriental species known earlier) enter also the Palaearctic. These data prove a great affinity of fauna in S-E Asia (Table 5), which seems to be effect both of its common genesis and the inefficiency of existing barriers.

The Palaearctic element consists of 6 species, and furthermore there are 24 common genera (61.5% of genera analysed), of which 6 have a Palaearctic character, 9 — an Oriental one, other are widespread. Such a considerable degree of faunae affinity is the effect of reciprocal contacts, lasting probably from the Tertiary to the present day (migrations along the eastern coasts of Asia).

Six species represent the Ethiopian fauna, there are also 17 common genera (43.6 % of analysed ones): 2 of them have an Ethiopian character (*Thyene, Portia,* locality of *Hyllus* — not clear), 4 have an Oriental type of distribution and the other are widely distributed.

Three pantropical species were probably brought by man, although other factors could have been responsible for that, such as e.g. air dispersion, aquatic dispersion — drifting trunks, etc.

Some related groups of species and 15 species of an Oriental-Australian range (including 4 species from Viet-Nam) — despite their total number known rom both regions — cover only a small per cent pointing thus to the distinct fharacter of these two faunae.

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[Tytuł: Studium systematyczne i zoogeograficzne nad rodziną *Salticidae* (*Araneae*) z Wietnamu]

Praca zawiera opisy i rysunki taksonomiczne stu gatunków *Salticidae* z Wietnamu; z tej liczby 50 opisano jako nowe, wyodrębniono także osiem nowych rodzajów: *Heliceroides, Eupoa, Kinhia, Langerra, Lechia, Magyarus, Meata, Nungia*. Pod względem zoogeograficznym opracowana fauna ma charakter orientalny z domieszką elementów wschodniopalearktycznych oraz — w mniejszym stopniu pantropikalnych, etiopskich i australijskich.

РЕЗЮМЕ

[Заглавие: Систематическое и зоогеографическое изучение семейства *Salticidae* (*Araneae*) из Вьетнама]

Работа содержает таксономические описания и рисунки ста видов *Salticidae* из Вьетнама. 50 из них описаны как новые; выделено также восемь новых родов: *Heliceroides, Eupoa, Kinhia, Langerra, Lechia, Magyarus, Meata, Nungia*. С зоогеографической точки зрения разрабатываемая фауна носит ориентальный характер, с примесью элементов из восточной Палеарктики, циркумтропических, эфиопских и австралийских.

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INDEX OF SPECIES

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