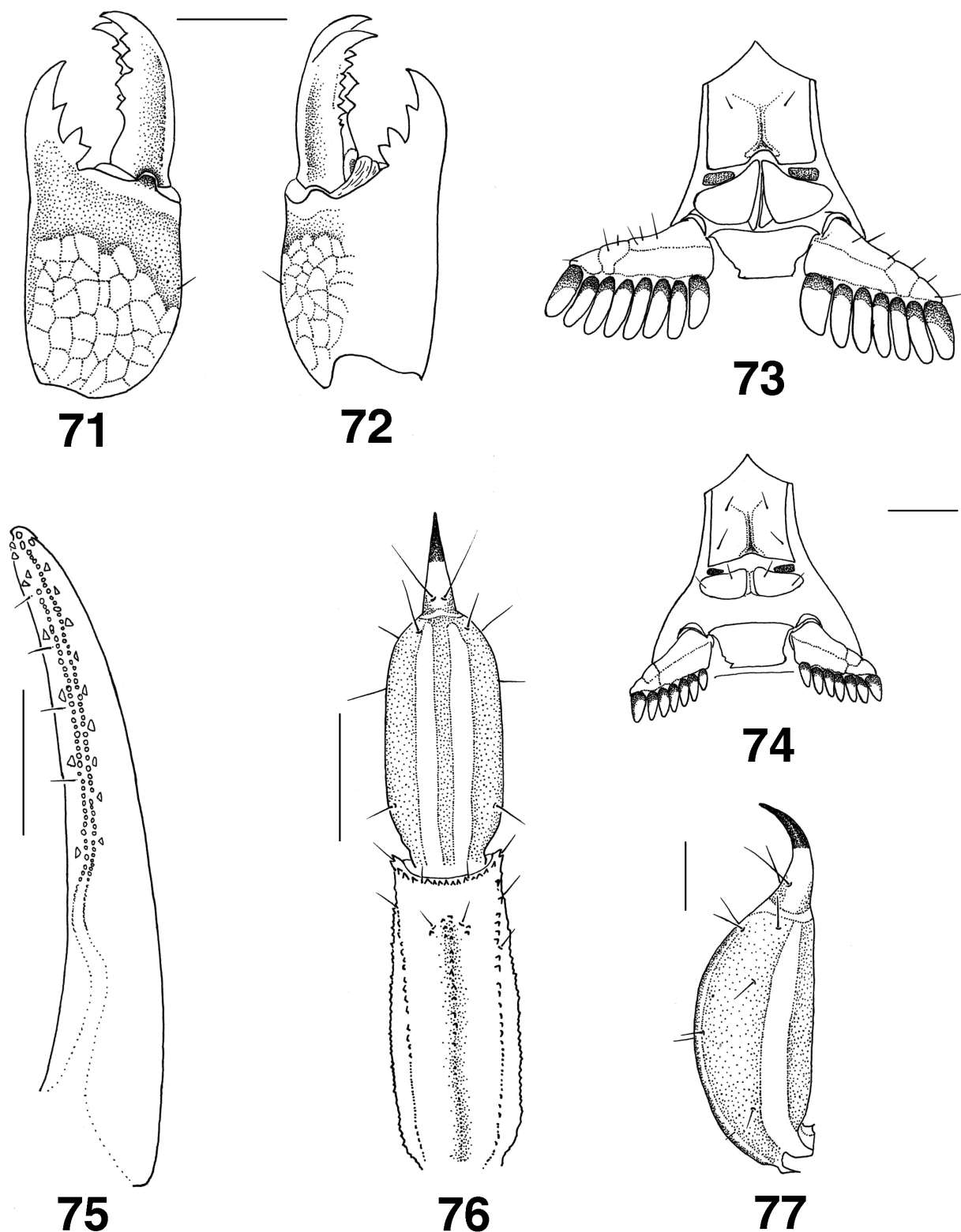


Figures 63–70: *Euscorpiops vachoni* sp. n., male holotype. 63–67. Chela, dorsoexternal, ventral, external and internal aspects. 67 same as 66, female paratype. 68. Femur dorsal aspect. 69–70. Patella dorsal and ventral aspects. Scales = 1 mm.



Figures 71–77: *Euscorpiops vachoni* sp. n., male holotype. 71–72. Chelicera, dorsal and ventral aspects. 73. Sternum, genital operculum and pectines. 74 same as 73, female paratype. 75. Dentate margin of the pedipalp chela movable finger. 76. Metasomal segment V and telson, ventral aspect. 77. Telson, lateral aspect. Scales = 1 mm.

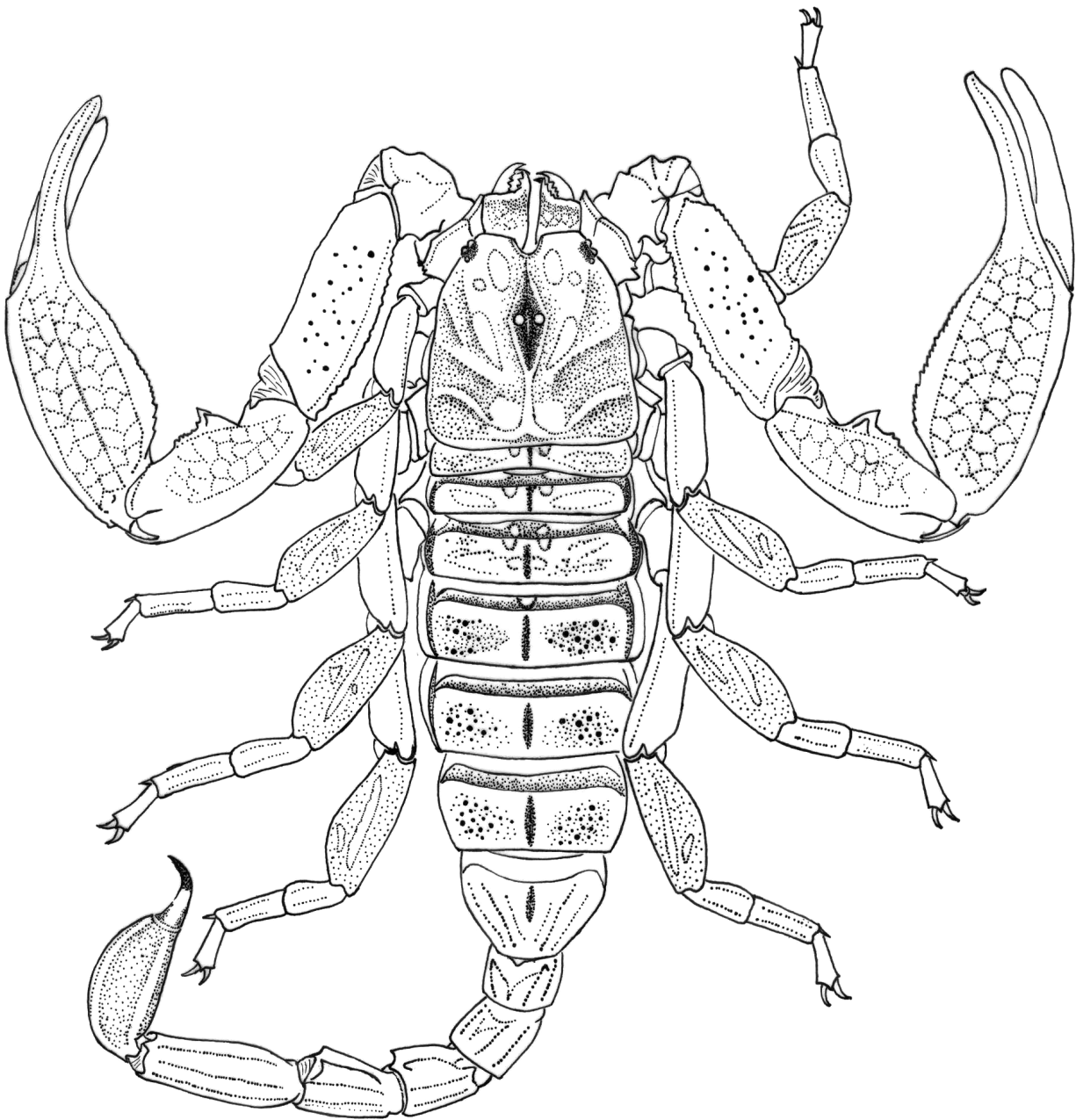
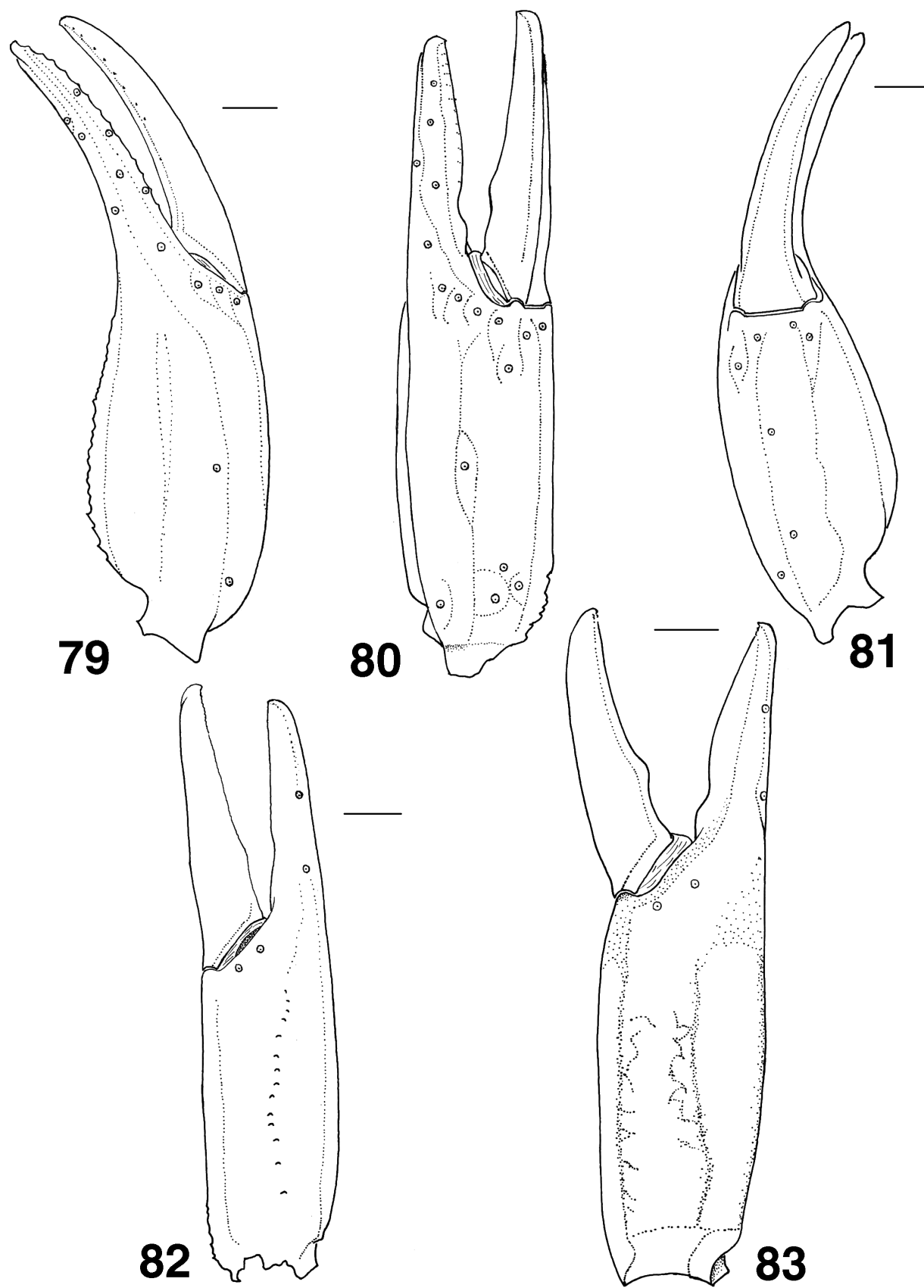


Figure 78: *Euscorpiops shidian* sp. n., male holotype, habitus. Total length 48.85 mm.

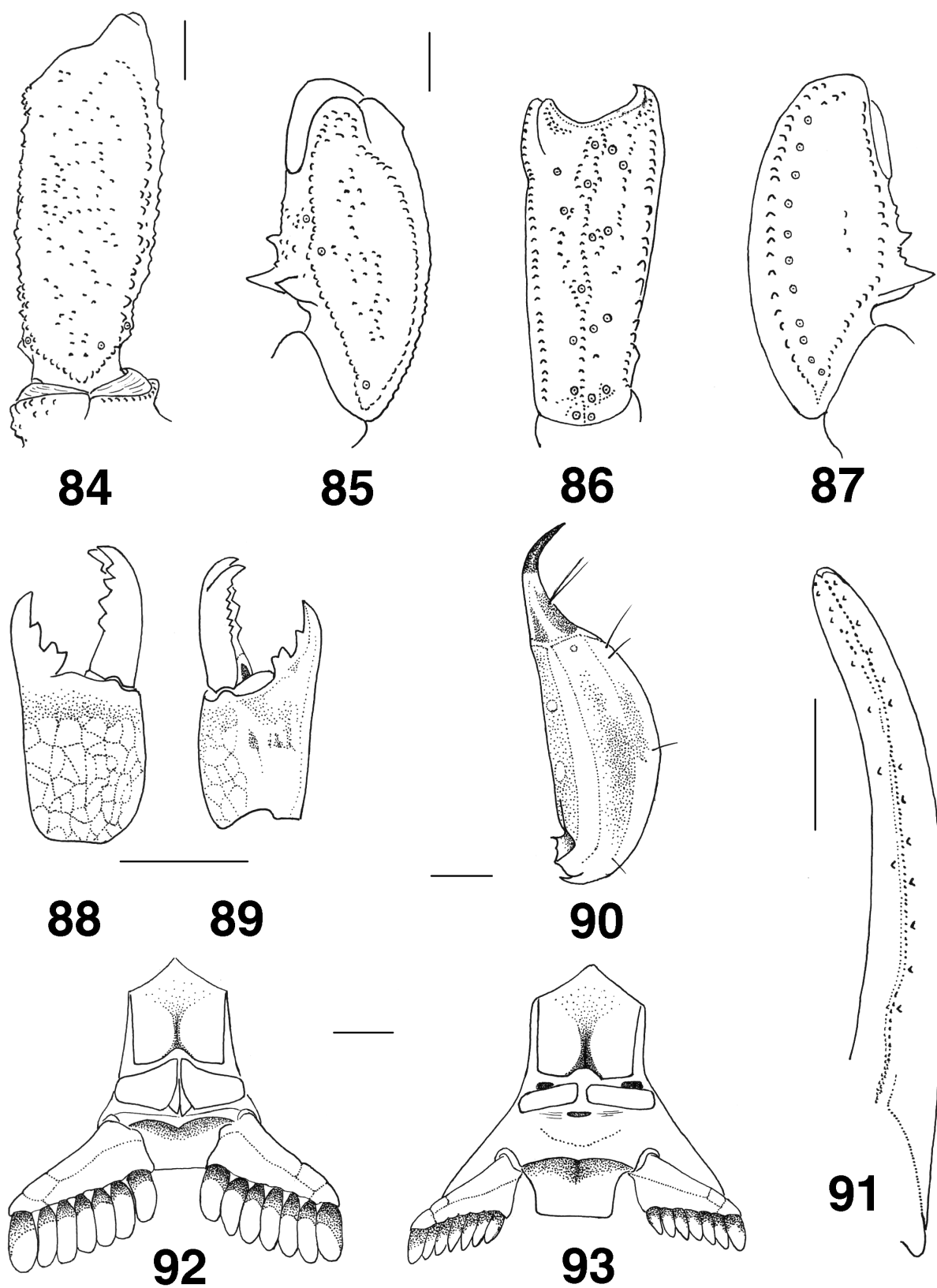
four coarsely granular, weak carinae. Metasomal segments II to V are longer than wide; segments I to V have 10-8-8-8-7 carinae; the dorsal carinae on segments I to IV is a single spinoid posterior granule; the tegument punctated; dorsal carinae of segment V are minutely granular. Vesicle surface is coarse.

Pedipalps: each segment is flat. Femur with dorsal internal and dorsal external carinae coarsely granular, ventral internal and ventral external carinae, which are crenulate; tegument bears pale stripes. Patella with dor-

sal internal, ventral internal, ventral external and external carinae, which are smooth; two spinoid granules present on the internal aspect, the internal-ventral spinoid granule being much larger than the internal-dorsal one; tegument is coarsely granular dorsally and smooth ventrally. Chela with dorsal marginal, external secondary, and ventral internal carinae, which are coarsely granular; ventral median carina is strong; other carinae are vestigial or absent; tegument is granulated dorsally and punctated ventrally, with pale reticulation stripes.



Figures 79–83: *Euscorpiops shidian* sp. n., male holotype. Chela, dorsoexternal, external, ventral and internal aspects. **83** same as **82**, female paratype. Scales = 1 mm.



Figures 84–93: *Euscorpiops shidian* sp. n., male holotype. 84. Femur, dorsal aspect. 85–87. Patella, dorsal, external and ventral aspects. 88–89. Chelicera, dorsal and ventral aspects. 90. Telson, lateral aspect. 91. Dentate margin of the pedipalp chela movable finger. 92. Sternum, genital operculum and pectines. 93 same as 92, female paratype. Scales = 1 mm.

Trichobothriotaxy type C (Vachon, 1974). Chela with 4 ventral trichobothria. Patella with 17 external and 11 ventral trichobothria.

Female paratype. Coloration and morphology are very similar to that of the male holotype. Some of the segments are slightly bulkier. Pectinal tooth count 7-7. Telson is smaller than that of the male.

Measurements (male holotype/female paratype). Total length, 48.85/59.81. Carapace: length, 7.40/7.78; anterior width, 3.32/3.44; posterior width, 7.40/8.29. Metasomal segment I: length, 2.30/2.42; width, 2.81/3.06. Metasomal segment V: length, 9.56/6.38; width, 2.68/1.91; depth, 2.81/2.17. Vesicle: width, 3.95/2.30; depth, 3.83/2.17. Pedipalp: femur length, 8.93/7.65; width, 3.70/3.19; patella length, 8.29/6.38; width, 4.08/3.70; chela length, 10.20/9.05; width, 6.38/3.83; depth, 4.59/3.95; movable finger length, 9.82/7.91.

***Euscorpions karschi* Lourenço, Zhu et Qi, sp. n.**
(Figs. 94–108)

Diagnosis: The new species is of moderate size (Fig. 94) and also differs from the other members of the group in possessing evenly scattered coarse granules of moderate size on carapace. Body color is basically brown; the aculeus is shorter than half of vesicle length; all tergites with coarse and evenly scattered moderate granules; pectinal tooth count 7 to 9; dorsal carinae of metasoma IV end in an almost lobe-shaped denticle.

Material: 1 ♀ holotype, Tibet, Zayü district, Xia Zayü town (28°30' N, 97°00' E), 8 August 2002, Ming-Sheng Zhu leg. (MHBU). Paratypes: 2 ♀ and 2 immature ♂, same data as holotype (one in MHBU, one in MNHN).

Etymology: Patronym in honor of Friedrich Karsch who first described *Mesobuthus martensii* (Buthidae), a widespread scorpion species in China.

Description (based on female holotype):

Coloration: Basically brown without any diffuse variegated fuscous spots. Carapace is brown, and some black area near the eyes. Tergites are dark brown, fuscous. Pedipalps dorsally are dark reddish-brown and ventral yellow. The top of aculeus is reddish brown. Tarsal claw is dark brown. Venter and sternites are yellowish.

Morphology: Carapace is evenly covered with coarse sparse granules and bears anteromedian lateral carinae, which are granular and weak; lateral furrow broad and flat, posterior median furrow shallow, slit-shaped. Median eyes are anterior to the center of the carapace; three pairs of lateral eyes, the third ones being vestigial and situated behind the first two. Sternum is pentagonal and

longer than wide. Tergites are coarsely granular; tergite I is almost acarinate; segments II-V have a pair of marked lateral carinae; segments VII bears a very weak median and two pair of lateral carinae. Sternum is pentagonal, smooth and longer than wide. Pectinal tooth count 7-7. Sternites are smooth and shiny; segment VII has four weak carinae, which are coarsely granular. Metasoma segments II to V are longer than wide; segments I to V have 10-10-10-8-7 carinae. Dorsal carinae are serrated, and all end in a pair of pointed spines; those on segment VI end in a pair of lobes; dorsal carinae of segment V are weak, other carinae are granular. Vesicle is smooth.

Pedipalps: femur is scattered with irregularly coarse granules on dorsal surface, interior aspect with serrated carinae; tegument is weakly granular. Patella: external carinae crenulate; interior carinae armed with two pointed protuberances and several small ones; tegument coarsely granular dorsally and smooth ventrally. Chela with dorsal marginal and external secondary carinae, which are granular; ventral internal is dentated; ventral median carina is strong; other carinae are vestigial or absent. Trichobothriotaxy type C (Vachon, 1974). Chela with four ventral trichobothria. Patella with 17 external and eight ventral trichobothria.

Male paratype. Morphology is very similar to that of the female holotype. Coloration is darker than that of female. Pectinal tooth count 9-9.

Measurements (in mm) (female holotype). Total length, 48.18. Carapace: length, 7.65; anterior width, 3.32; posterior width, 7.40. Metasomal segment I: length, 2.30; width, 3.06. Metasomal segment V: length, 6.38; width, 2.04; depth, 2.04. Vesicle: width, 2.30; depth, 2.42. Pedipalp: femur length, 7.78; width, 2.93; patella length, 6.38; width, 3.40; chela length, 8.93; width, 4.59; depth, 4.02; movable finger length, 7.40.

List of the known Chinese species of Scorpipinae (tribe Scorpipini)

1. *Scorpiops atomatus* Qi, Zhu et Lourenço, sp. n.
2. *Scorpiops hardwickii* (Gervais, 1843)
3. *Scorpiops jendeki* Kovařík, 1994
4. *Scorpiops langxian* Zhu, Qi et Lourenço, sp. n.
5. *Scorpiops luridus* Zhu, Lourenço et Qi, sp. n.
6. *Scorpiops margerisonae* Kovařík, 2000
7. *Scorpiops petersii* Pocock, 1893
8. *Scorpiops tibetanus* Hirst, 1911
9. *Scorpiops pococki* Zhu, Qi et Lourenço, sp. n.
10. *Euscorpions vachoni* Zhu, Qi et Lourenço, sp. n.
11. *Euscorpions novaki* Kovařík, 2005
12. *Euscorpions karschi* Lourenço, Zhu et Qi, sp. n.
13. *Euscorpions shidian* Zhu, Qi et Lourenço, sp. n.

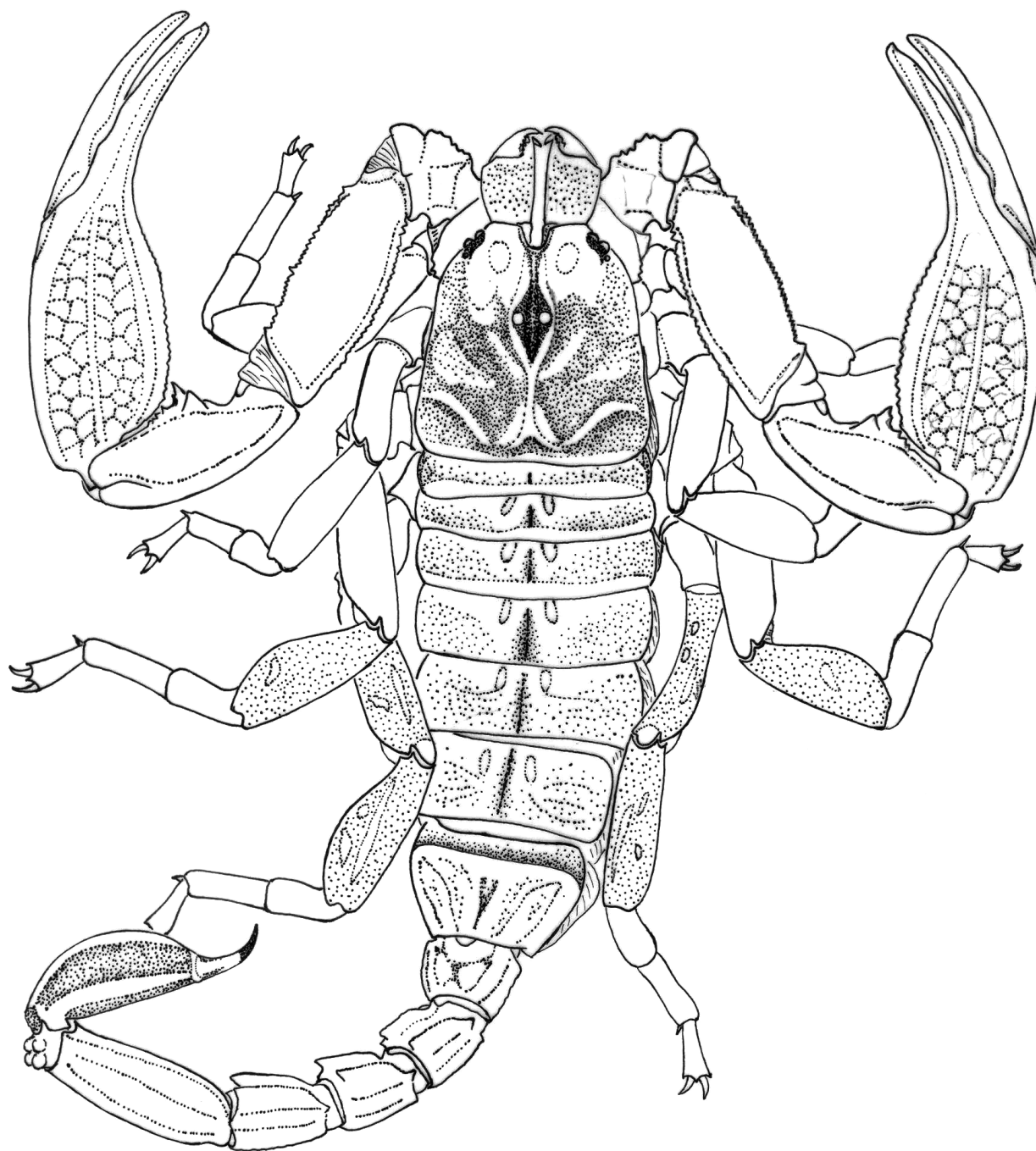
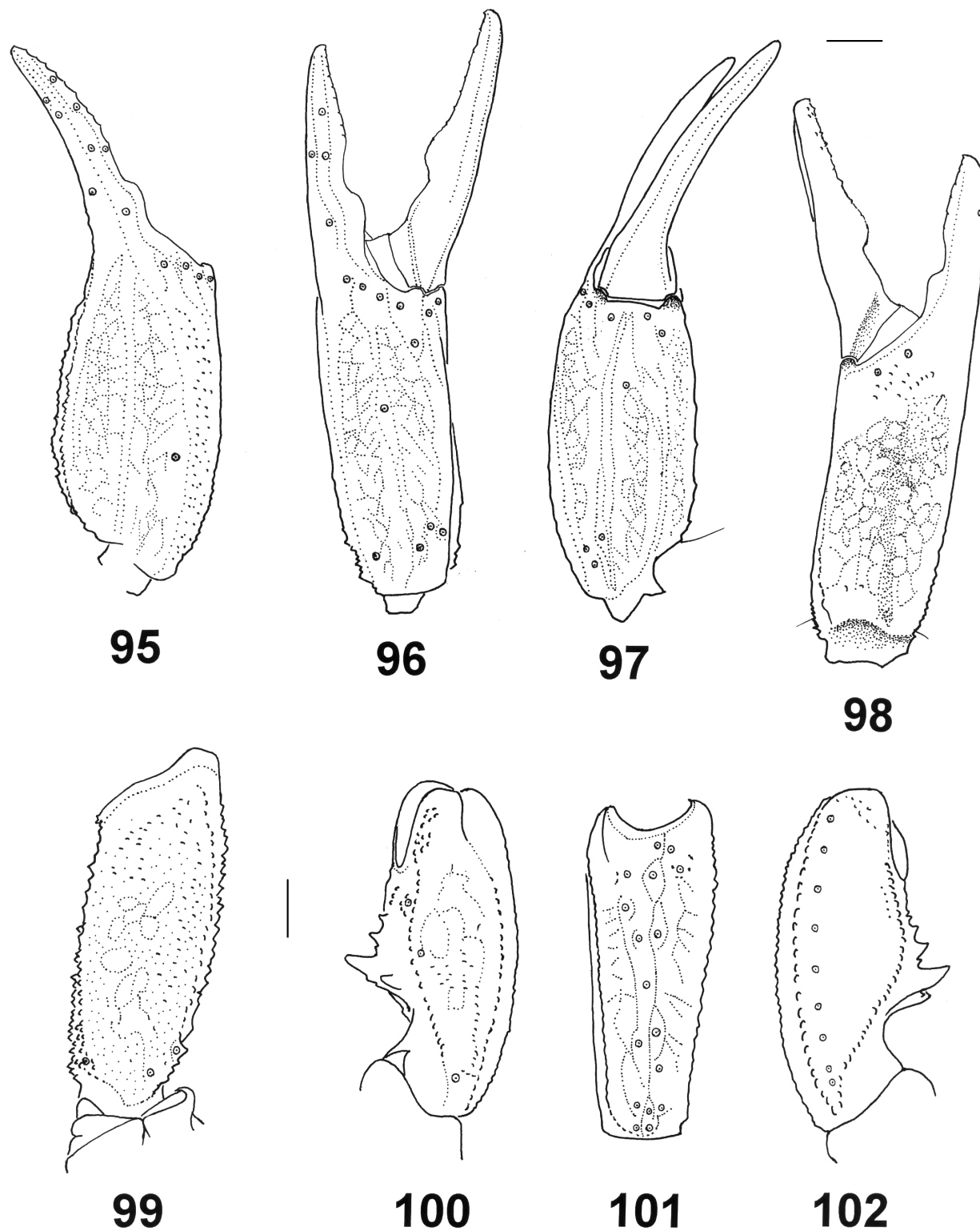
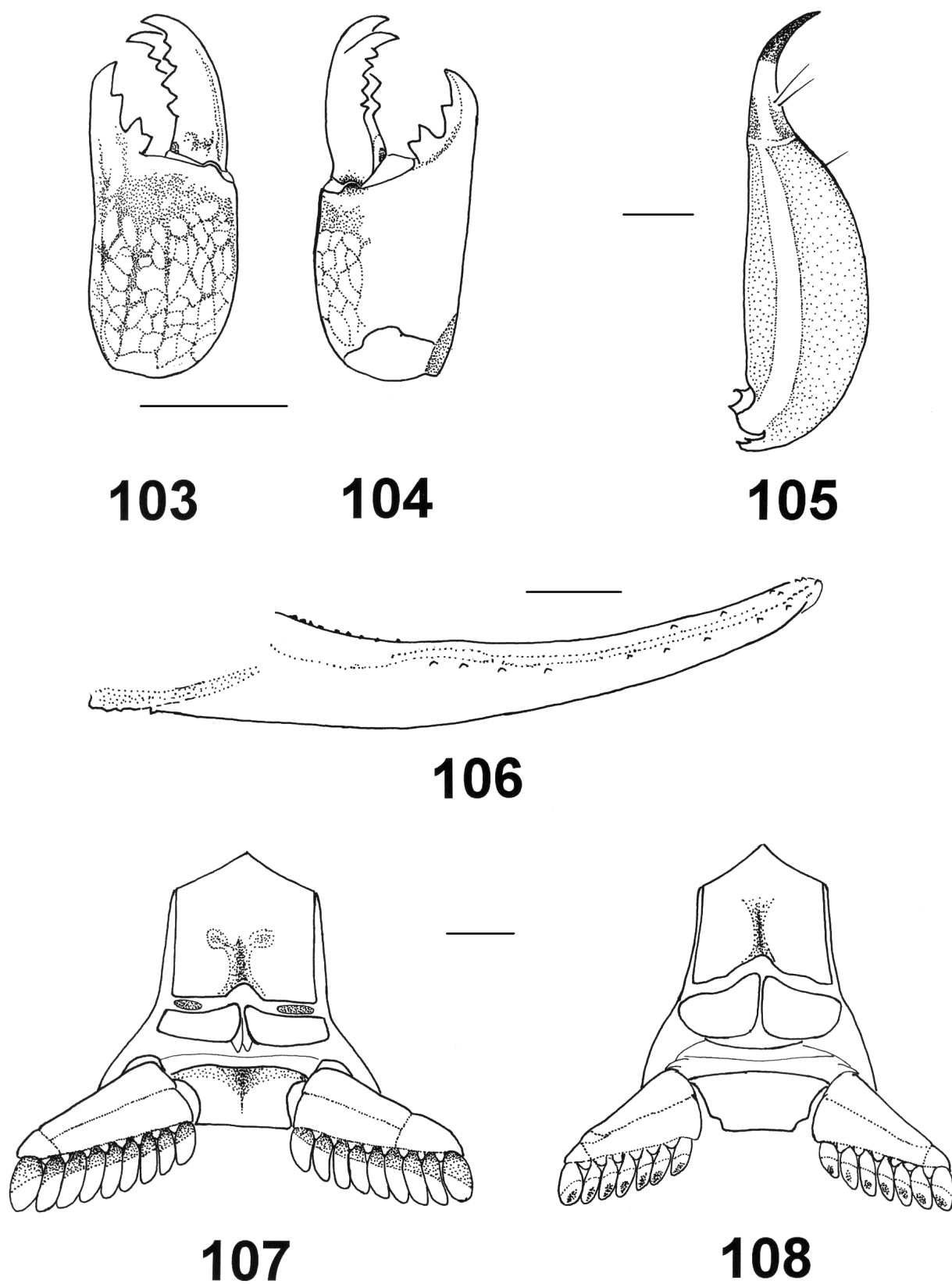


Figure 94: *Euscorpiops karschi* sp. n., female holotype, habitus. Total length 48.18 mm.



Figures 95–102: *Euscorpiops karschi* sp. n., female holotype. 95–98. Chela, dorsoexternal, external, ventral and internal aspects. 99. Femur dorsal aspect. 100–102. Patella dorsal, external and ventral aspects. Scale = 1 mm.



Figures 103–108: *Euscorpiops karschi* sp. n., female holotype. **103–104.** Chelicera, dorsal and ventral aspects. **105.** Telson, lateral aspect. **106.** Dentate margin of the pedipalp chela movable finger. **107–108.** Sternum, genital operculum and pectines. **107.** male paratype. **108.** female holotype.

**Key to the known Chinese species
of Scorpiopinae (tribe Scorpiopini)**

1. Trichobothria *Eb*₃ on the external aspect of the chela located basally to trichobothrium *Dt*. Annular ring at vesicle/aculeus juncture absent ... 2 (genus *Scorpiops*)
- Trichobothria *Eb*₃ on the external aspect of the chela located distally to trichobothrium *Dt*. Annular ring at vesicle/aculeus juncture present ... 11 (genus *Euscorpiops*)
2. Fingers of pedipalps in both males and females straight, not flexed; 6 or 7 ventral trichobothria on the patella (generally 6, rarely 7) *Scorpiops jendeki*
- Fingers of pedipalps clearly flexed 4
4. Pedipalp chela manus almost as long as wide; six to eight ventral trichobothria on the patella (generally six or seven, rarely eight) *S. hardwickii*
- Pedipalp chela manus usually longer than its width .. 5
5. Eight to nine ventral trichobothria on the patella; pectinal teeth number 12 to 13; shorter metasoma and smaller telson *S. margerisonae*
- Number of pectinal teeth less than or equal to 11 ... 6
6. Body color from yellowish to yellow *S. luridus*, **sp. n.**
- Body color from dark brown to black 7
7. Body size less than 40 mm *S. atomatus*, **sp. n.**
- Body size more than 50 mm 8
8. Distance between median eyes much more than their diameter *S. langxian*, **sp. n.**
- Distance between median eyes only slightly more than their diameter 9
9. Smooth oval region found behind lateral ocular tubercles; 8 ventral trichobothria on the patella *S. pococki*, **sp. n.**
- Smooth oval region behind lateral ocular tubercles not present 10
10. Carapace is granulated, but not densely; usually 7 (rarely 6 to 8) ventral trichobothria on the patella; pectinal teeth number 4 to 7 *S. petersii*
- 7 to 10 (usually 9, sometimes 7) ventral trichobothria on the patella *S. tibetanus*
11. 11 ventral trichobothria on the patella; pectinal teeth number 7 *Euscorpiops shidian*, **sp. n.**
- Less than 11 ventral trichobothria on the patella ... 12
12. 10 ventral trichobothria on the patella *E. vachoni*, **sp. n.**

- Less than 10 ventral trichobothria on the patella ... 13

13. 9 ventral trichobothria on the patella; pectinal teeth number 8 (male) *E. novaki*

- 8 ventral trichobothria on the patella; pectinal teeth number 9 (male), 7 (female) *E. karschi*, **sp. n.**

**Family Chaerilidae Pocock, 1893
Subfamily Chaerilinae Pocock, 1893**

Comments. According to the *Catalog of Scorpions of the World* (Fet, 2000a), this monotypic family includes 21 species, all belonging to the genus *Chaerilus* Simon, 1877. In a recent revision, Kovařík (2000) defined 18 species as valid, and added two more species most recently (Kovařík, 2005a). This genus was originally described and placed in the family Chactidae; subsequently it was moved to its own subfamily Chaerilinae, and placed in the family Iuridae by Pocock (1893). A few years later, Laurie (1896) moved the Chaerilinae as a subfamily to the family Buthidae. Finally, Kraepelin (1899) raised the Chaerilinae to the rank of family. Vachon (1963) defined a unique pattern of cheliceral dentition for the Chaerilidae. Some years later, the same author (Vachon, 1974) characterized the unique trichobothrial pattern of Chaerilidae, defined as Type B, a totally different type from both Buthidae (type A) and all other families (type C).

The family Chaerilidae is distributed only in South and Southeast Asia. To explain this pattern of distribution, Lamoral (1980) suggested that the ancestors of the chaerilids originated in Pangaeian times as an eastern Laurasian relic that moved into the Oriental Region after the Indian plate connected with Eurasia. They became isolated in the Oriental Region as the Himalayas formed (Sissom, 1990). Santiago-Blay et al. (2004) described a fossil genus *Electrochaerilus* and subfamily Electrochaerilinae from the Cretaceous amber of Myanmar (Burma). In China, representatives of this family were poorly known until now. The only one known species and another, new species are both from the Tibet region.

Genus *Chaerilus* Simon, 1877

Chaerilus Simon, 1877: 238; Kraepelin, 1899: 157; Pocock, 1900: 53; Vachon, 1974: 912; Tikader & Bastawade, 1983: 317; Fet, 2000a: 323; Kovařík, 2000b: 38; Kovařík, 2005a: 1.

Diagnosis. All four teeth on fixed finger of chelicera are distinct (i.e., the median and basal teeth do not form a bicuspid). The movable finger has one subdistal and one basal tooth on the external margin; external distal tooth smaller than the internal distal; internal margin with distinct serration or a row of small teeth. Trichobothrial pattern is of Type B. All species possess the fundamental number and pattern of Type B (Vachon 1974). The