

## A review of the family Gnaphosidae in the fauna of the Urals (Aranei), 4. The first record of *Gnaphosa tigrina* Simon, 1878 and remarks on two species from the *rufula* group

### Обзор пауков семейства Gnaphosidae фауны Урала (Aranei), 4. Первая находка *Gnaphosa tigrina* Simon, 1878 и замечания о двух видах группы *rufula*

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КЛЮЧЕВЫЕ СЛОВА: фауна, Урал, Gnaphosidae, новый вид.

**ABSTRACT.** The Ancient-Mediterranean species *Gnaphosa tigrina* Simon, 1878 is recorded from the Urals for the first time. Part of the type series of *G. steppica* Ovtsharenko *et al.*, 1992 is shown to belong to a new species, *G. azerbaijdzhanica* sp.n.; the latter is described based on specimens from Azerbaijan. *G. steppica* is redescribed and figured.

**РЕЗЮМЕ.** Древне-средиземноморский вид *Gnaphosa tigrina* Simon, 1878 впервые указывается для Урала. Показано, что часть типовой серии *G. steppica* Ovtsharenko *et al.*, 1992 относится к новому виду *G. azerbaijdzhanica* sp.n., который описан по азербайджанским экземплярам. *G. steppica* переописана и иллюстрирована.

#### Introduction

This paper continues our investigation of the Urals gnaphosid fauna [Efimik & Esyunin, 1996; Esyunin & Tuneva, 2002; Tuneva & Esyunin, 2002]. A small quantity of material was collected by us during an expedition to the South Urals' steppe zone. While treating the specimens of *G. tigrina* Simon, 1878, which is a new record for the Urals, they were compared with those of the type series of *G. steppica* Ovtsharenko, Platnick et Song, 1992. This type series turned out to be mixed, with the paratypes from Azerbaijan representing a new species, *Gnaphosa azerbaijdzhanica* sp.n. described in this paper. *G. tigrina* and *G. steppica* are also redescribed.

The holotype of the new species and the examined specimens from the type series of *Gnaphosa steppica*, have been deposited in the Zoological Museum of the Moscow University (ZMMU); the paratypes of the new species are in

the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZIN) and the Institute of Biological Problems of the North, Far Eastern Branch, Russian Academy of Sciences, Magadan (IBPN). The Urals specimens have been deposited in the collections of the ZMMU, Institute for Systematics and Ecology of Animals, Novosibirsk (ISEA) and the Zoology Department of the Perm State University (PSU).

The following abbreviations are used in the text: a — apical, d — dorsal, p — prolateral, r — retrolateral, v — ventral. The chaetotaxy uses the following formula: basal-medial-apical spines. For example, tibia I v1-2(1)-2(a), means that tibia I has one basal, two (or one) medial and two apical ventral spines. All measurements are in mm.

#### Survey of species

##### *Gnaphosa azerbaijdzhanica* sp.n.

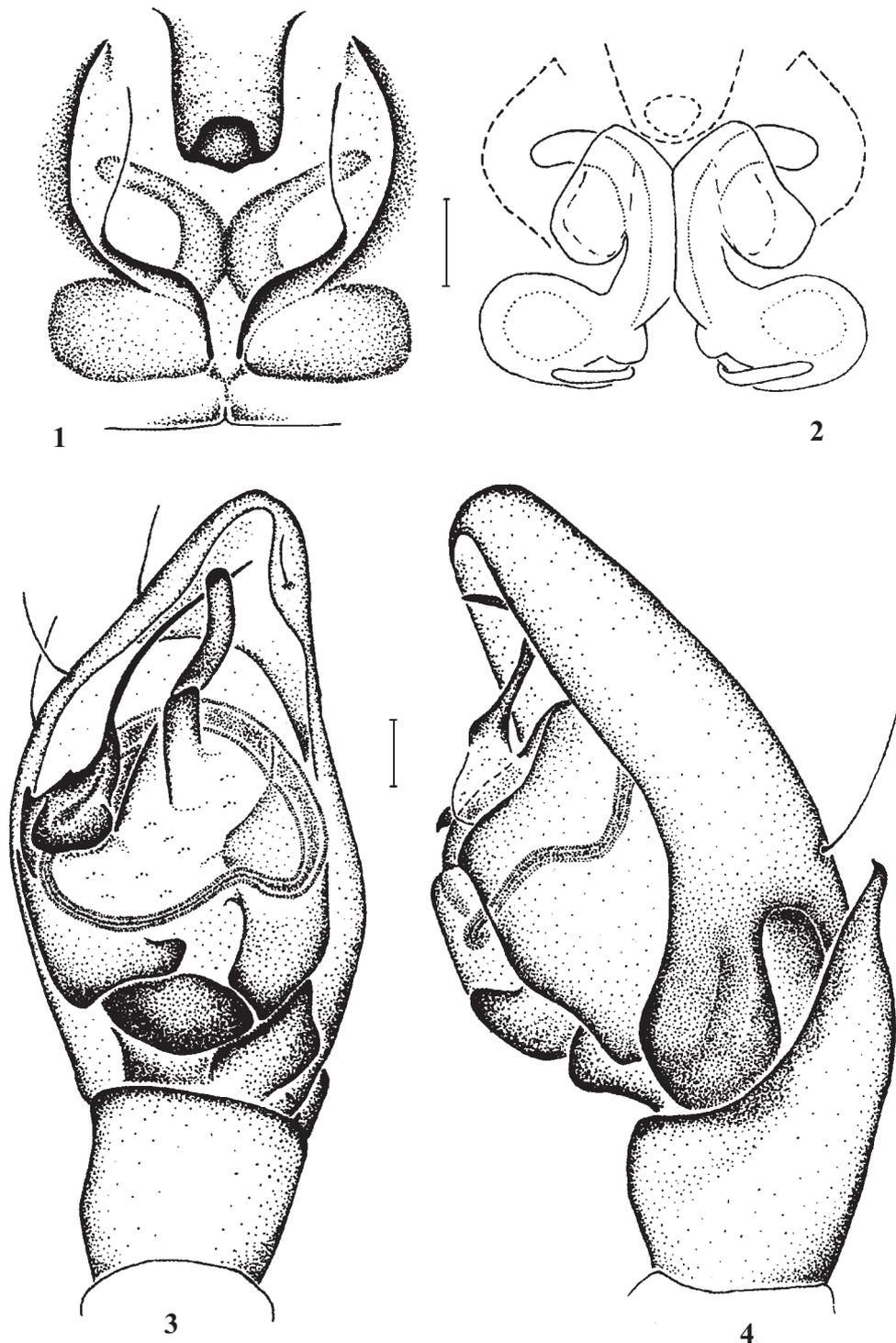
Figs 1–4.

*Gnaphosa steppica* Ovtsharenko, Platnick et Song 1992 (*pro parte*; the specimens from Azerbaijan only): 37.

Holotype ♂ (ZMMU), Azerbaijan, Gyandzha (=Kirovobad) Distr., ca 2 km S of Khanlar (40°41'N, 46°21'E), 8.V.1986, leg. P.M. Dunin. — Paratypes: 2 ♂♂ (ZIN A-1187), together with the holotype; 1 ♀ (ZIN A-0612), Lerik Distr., Gosmalyan (ca 38°47'N, 48°26'E), 28.VI.1985, leg. P.M. Dunin; 1 ♂ (IBPN), SE AZERBAIJAN, Zuvand area, env. of Pirasora Vill., 38°43,3'N 48°22,8'E, 1700–2000 m, 25–26.05.2003, leg. Yu.M. Marusik.

**ETYMOLOGY.** The specific epithet is after the type locality, Azerbaijan.

**DIAGNOSIS.** *G. azerbaijdzhanica* sp.n. is extremely similar to *G. steppica* Ovtsharenko *et al.*, 1992, but can be distinguished by the shape of the median apophysis, which is relatively thick in lateral view in *G. steppica* (thinner in *G. azerbaijdzhanica* sp.n.) and the armature of the embolic base ("bearing sharp, small tubercle" in *G. steppica*; without such a tubercle in *G. azerbaijdzhanica* sp.n.) in males and the longer median epigynal ducts in females (cf. Figs 2 and 7). In addition, males of *G. azerbaijdzhanica* sp.n. can be distinguished by the more swollen lateral knob of the embolus.

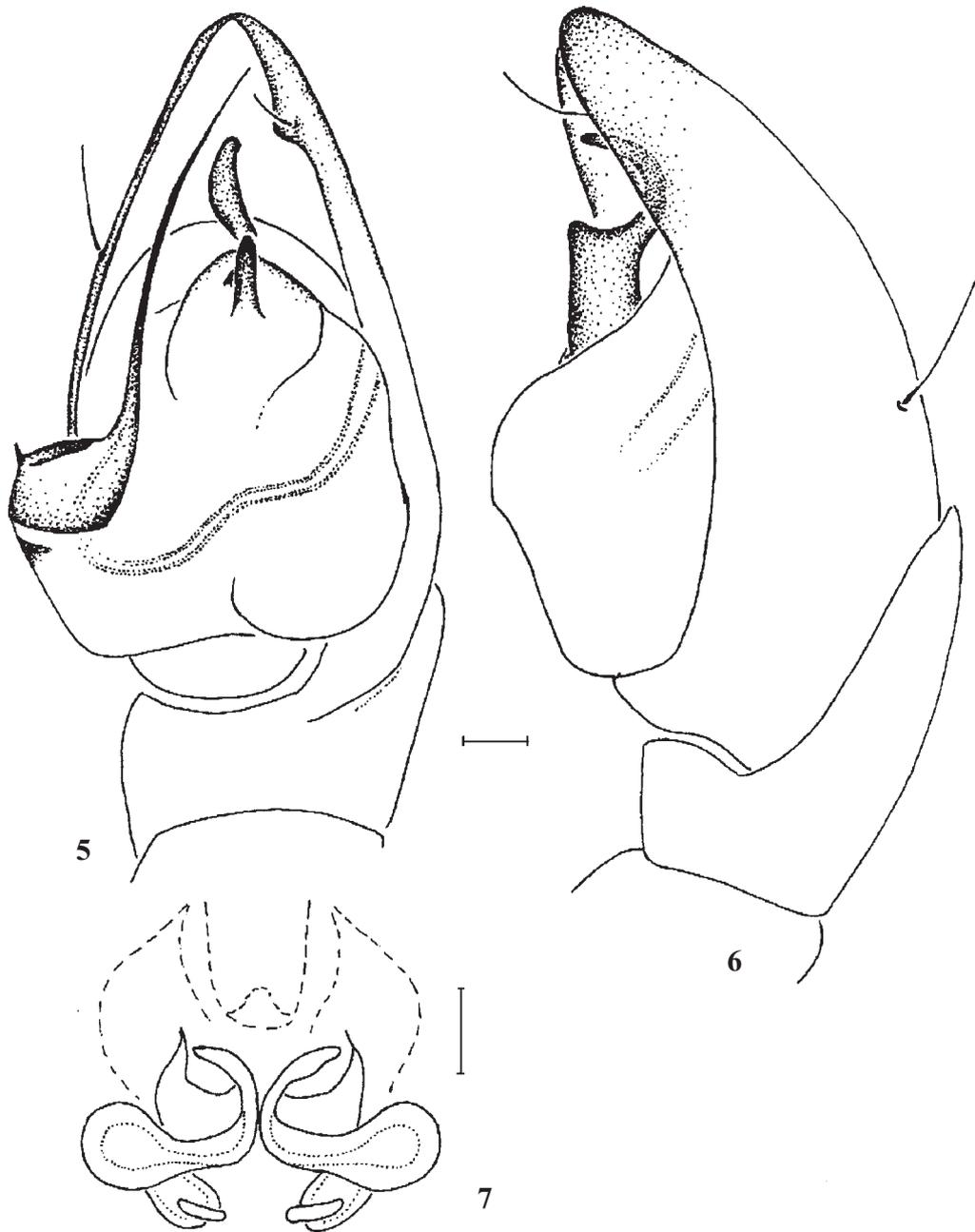


Figs 1–4. Copulatory organs of *Gnaphosa azerbaijdzhanica* sp.n.: 1 — epigyne; 2 — endogyne; 3 — male palp, ventral view; 4 — same, lateral view.

Рис. 1–4. Копулятивный аппарат *Gnaphosa azerbaijdzhanica* sp.n.: 1 — эпигина; 2 — эндогина; 3 — палец самца, вид снизу; 4 — то же, вид сбоку.

**DESCRIPTION.** Male. Total length 6.45(5.75–7.10). Carapace 2.83(2.60–3.00) long, 2.28(1.95–2.50) wide, from grey-brown to brown with thin, dark margins. Sternum brown with dark margins. Abdomen dark grey-brown. Femur II 3.62(3.15–4.10) long. Chelicerae, palp and legs brown.

Palpal femur with 1 dorsomedial and 2 dorsoapical spines. Leg spination: femora I d1-1-0, p0-0-1; II d1-1-0, p0-1-1; III d1-1-0, p0-1-1, r0-1-1; IV d1-1-0, p0-1-1, r0-1-1; tibiae I p1-0-0, v1-2-2; II p1-0-0, v1-2-2; III d1-0-0, p2-1-1, r1-1-1, v2-2-2(a); IV d1-0-0 p2-1-1, r2-1-1, v2-2-2(a); metatarsi I, II v0-



Figs 5–7. Copulatory organs of *Gnaphosa steppica* Ovtsharenko, Platnick and Song, 1992: 5 — male palp, ventral view; 6 — same, lateral view; 7 — endogyne.

Рис. 5–7. Копулятивный аппарат *Gnaphosa steppica* Ovtsharenko, Platnick and Song, 1992: 5 — палец самца, вид снизу; 6 — то же, вид сбоку; 7 — эндогина.

2-0; III p1-2-2, r1-2-2, v2-2-2; IV p1-2-2, r1-2-2, v2-2-2. Palp with median apophysis, which is wide in its basal half (seen in lateral view) and hook-shaped at its tip (Fig. 4); retrolateral apophysis triangular, curved at tip (Fig. 4).

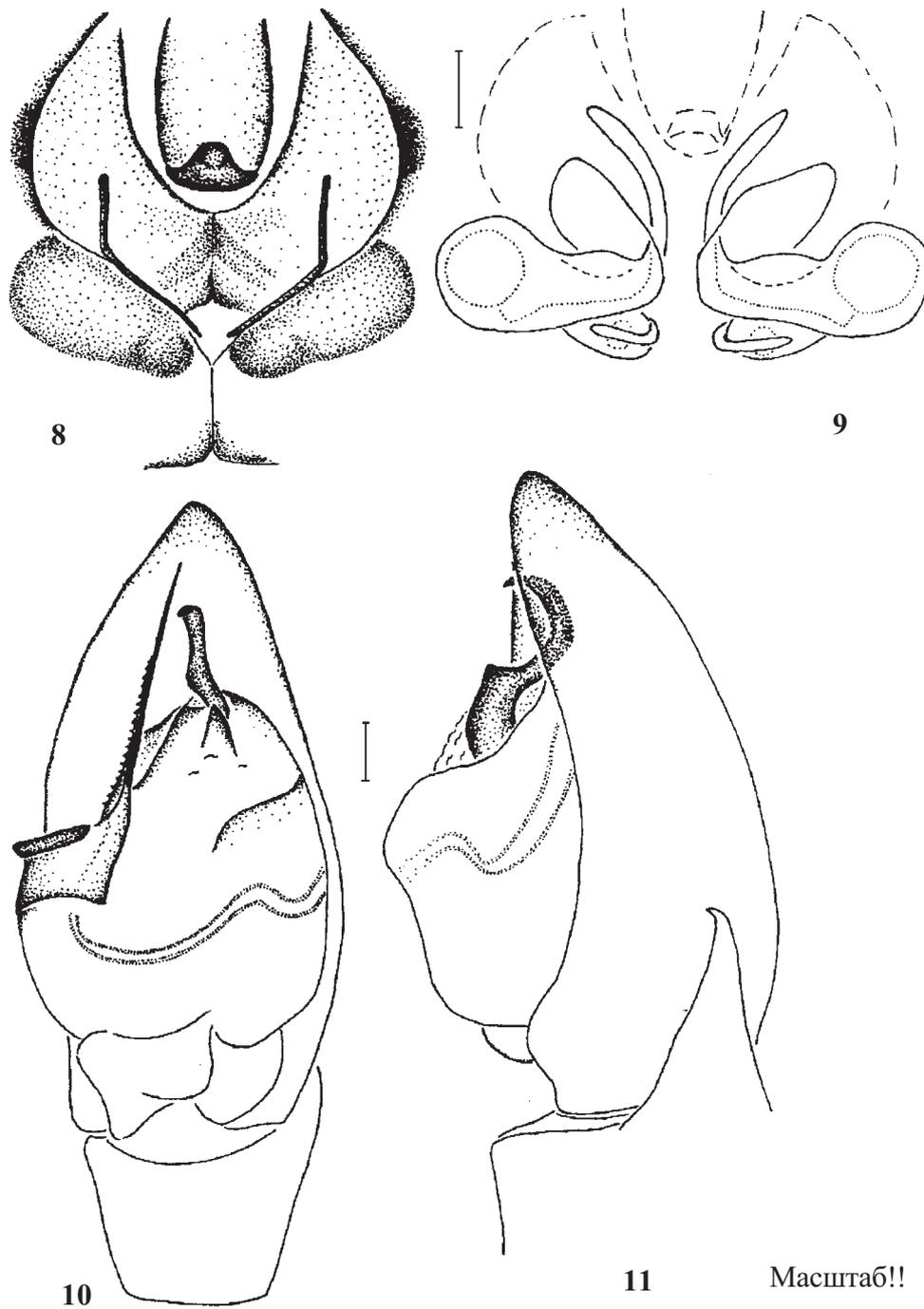
Female. Total length 7.80. Carapace 3.05 long, 2.30 wide, yellow-brown, with dark margins. Sternum brown with dark margins. Abdomen grey-yellow. Legs and pedipalp yellow. Femur II 1.70 long. Leg spination as in male. Epigynal ducts long, ventrally separated from the spermathecae (Fig. 2).

DISTRIBUTION. Azerbaijan.

*Gnaphosa steppica* Ovtsharenko, Platnick et Song, 1992

Figs 5–7.

*Gnaphosa steppica* Ovtsharenko, Platnick et Song 1992 (*pro parte*, except for the specimens from Azerbaijan): 37, figs 127, 128, 133–136 (♂♀).



Figs 8–11. Copulatory organs of *Gnaphosa tigrina* Simon, 1878: 8 — epigyne; 9 — endogyne; 10 — male palp, ventral view; 11 — same, lateral view.

Рис. 8–11. Копулятивный аппарат *Gnaphosa tigrina* Simon, 1878: 8 — эпигина; 9 — эндогина; 10 — палец самца, вид снизу; 11 — тоже, вид сбоку.

TYPE SERIES ("Other material" in Ovtsharenko, Platnick & Song, 1992). Russia: 1 ♂ (ZIN), Rostov Area, Zavetinsk District, ca 4 km SE of Fedoseevka (ca 46°54'N, 44°05'E), 11.VI.1973, leg. A.V. Ponomarev. — Kazakhstan: 1 ♂ (ZMMU), West Kazakhstan Area, Dzhanlybek (ca 49°26'N, 46°50'E), *Artemisia* steppe, 31.V–3.VI.1982; 2 ♂♂, 1 ♀ (ZMMU), same locality, 31.V–3.VI.1982; 2 ♂♂ (ZMMU), same locality, 3–6.VI.1982; 3 ♂♂ (ZMMU),

same locality, 5–8.VI.1982; 2 ♂♂, 1 ♀ (ZMMU), same locality, 6–9.VI.1982; 1 ♂ (ZMMU), same locality, 8–11.VI.1982; 2 ♂♂, 2 ♀♀ (ZMMU), same locality, 9–12.VI.1982; 1 ♀ (ZMMU), same locality, 14–17.VI.1982; 1 ♂ (ZMMU), same locality, 17–20.VI.1982; 2 ♂♂ (ZMMU), same locality, 20–23.VI.1982; 1 ♀ (ZMMU), same locality, 22.VI.1982; 1 ♀ (ZMMU), same locality, 23–26.VI.1982; 1 ♂ (ZMMU), same locality, 24–27.VI.1982; 1

♂, 1 ♀ (ZMMU), same locality, 26–29.VI.1982; 1 ♂ (ZMMU), same locality, 27–30.VI.1982; 1 ♀ (ZMMU), same locality, 27.VIII.1982; 1 ♀ (ZMMU), same locality, 30.VIII–2.IX.1982; 1 ♀ (ZMMU), same locality, 17–20.IX.1982; all specimens were collected by K.G. Mikhailov.

OTHER MATERIAL. Russia: 45 ♂♂, 34 ♀♀ (ZMMU), North Osetiya, near Unal and Zintsar, Alagir gorge (43°02'N, 44°14'E), 1000–1200 m a.s.l., pitfall-traps, 11.VI–7.IX.1985, leg. S.K. Alekseev.

DIAGNOSIS. *G. steppica* is closely related to *G. tigrina* Simon, 1878, but males can be distinguished from it by the shape of the median apophysis, which is thick, with a hook-shaped tip in *G. steppica* (thin, long and moderately curved in *G. tigrina*) and in ventral view is curved retrolaterally in *G. steppica* (prolaterally in *G. tigrina*); females are distinguished by their wide and short median epigynal ducts (see Figs 7 and 9).

DESCRIPTION. Male. Described by Ovtsharenko *et al.* [1992]. Palp with the median apophysis wide basally (seen in lateral view) and hook-shaped at its tip (Fig. 6); the retrolateral tibial apophysis evenly tapers towards its tip (Fig. 6).

Female. Described by Ovtsharenko *et al.* [1992]. Epigynal ducts short, dorsally separated from the spermathecae (Fig. 7).

DISTRIBUTION. Russia (Kalmykia, Krasnodar Province, North Osetiya, Rostov-na-Donu, Samara, Volgograd), Kazakhstan (Kokchetav, Uralsk) and Turkey [Ovtsharenko *et al.*, 1992].

### *Gnaphosa tigrina* Simon, 1878

Figs 8–11.

*Gnaphosa tigrina*: Grimm, 1985, 82, figs 44:a,b, 70–71 (♂♀).

*Gnaphosa* sp. 3: Marusik & Logunov, 1995: 192, figs 67–68 (♀).

MATERIAL. South Urals: 14 ♂♂, 4 ♀♀ (PSUN 1270), 14 ♂♂, 5 ♀♀ (ZMMU), 13 ♂♂, 5 ♀♀ (ISEA), Orenburg Area, Sol'-Iletsk District, Chybynda (ca 50°40'N, 50°30'E), declivity of a chalk cliff, pitfall-traps, 5–13.VI.2000, leg. S.L. Esyunin.

DIAGNOSIS. See above under *Gnaphosa steppica* Ovtsharenko *et al.*, 1992.

DESCRIPTION. Male. Total length 6.47(5.95–7.05). Carapace 2.94(2.55–3.20) long, 2.44(2.20–2.65) wide, dark brown, with dark radial fascia and thin dark margins. Sternum colour as for carapace. Abdomen black-brown dorsally, grey-brown ventrally. Femur II 1.75(1.60–1.90) long. Palp and legs grey-yellow. Palpal femur with 1 dorso-medial spine and 2 dorso-apical spines. Leg spination: femora I d1-1-0, p0-0-1; II d1-1-0, p0-1-1; III d1-1-0, p0-1-1, r0-1-1; IV d1-0-0, p0-1-1, r0-1-1; tibiae I v2-2-2; II v2-2-2; III d1-0-0, p2-1-1, r2-1-2(1), v2-2-2(a); IV d1-0-0, p2-1-1, r2-1-2(1), v2-2-2(a); metatarsi I v2-0-0; II v2-0-0; III d1-0-0, p1-2-2, r1-2-2, v2-1-2(a); IV p1-2-2, r1-2-2, v2-2-2(a). Palp with thin, prolaterally-curved median apophysis (Fig. 11); retrolateral apophysis indented at tip (Fig. 11).

Female. Total length 8.70(7.50–10.05). Carapace 3.10(2.70–3.45) long, 2.40(2.15–2.65) wide, brown-yellow. Abdomen grey-yellow. Palp and legs yellow. Armature of pedipalp as in male. Femur II 1.63(1.30–1.90) long. Leg spination: femora I d1-1-0, p0-0-1; II d1-1-0, p0-1-1; III d1-1-0, p0-1-1, r0-1-1; IV d1-0-0, p0-1-1, r0-0-1; tibiae I v0-0-1; II v0-0-1; III d1-0-0, p2-1-1, r1-1-1, v2-2-2(a); IV p1-1-1, r2-1-1, v2-2-2(a); metatarsi I v2-0-0, II v2-0-0; III p1-2-2, r1-2-2, v2-1-2; IV p1-2-2, r1-2-2, v2-2-2(a). Epigynal ducts (Fig. 9).

REMARKS. This species appears to have been described as *Gnaphosa* sp. 3 by Marusik & Logunov [1995] from Tuva. Although we have been unable to re-examine the Tuvan material, the original illustrations provided by Marusik & Logunov [1995: figs 67–68] allowed us to conclude that this record undoubtedly belongs to *G. tigrina*.

DISTRIBUTION. The mountain regions of the Western Mediterranean (Morocco, Italy, Spain) and Central Europe (France, Switzerland) [Grimm, 1985], Tuva [Marusik & Logunov, 1995: sub *Gnaphosa* sp. 3].

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