

Two Gnaphosid Spiders (Araneae: Gnaphosidae) New to Korean Spider Fauna

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Abstract

Drassyllus yaginumai Kamura, 1987 and *Zelotes tortuosus* Kamura, 1987 belonging to Gnaphosidae were captured by pitfall trap in maize and soybean fields during the survey of arthropod fauna of agricultural ecosystem in Korea. Present work describes these 2 species with illustrations of taxonomic characters.

Keywords

Drassyllus yaginumai, *Zelotes tortuosus*, Araneae, Gnaphosidae, Description, Korea

1. Introduction

Gnaphosid spider fauna of Korea comprises 48 species in 20 genera to date [1]. *Drassyllus yaginumai* Kamura, 1987 and *Zelotes tortuosus* Kamura, 1987 belonging to Gnaphosidae are known to be founded only in Japan. These species are medium-sized hunting spiders and captured by pitfall trap in maize and soybean fields during the intensive survey of arthropod fauna of agricultural ecosystem in Korea. Present work describes these 2 species with illustrations of taxonomic characters.

2. Material and Method

The external morphology of *D. yaginumai* and *Z. tortuosus* was examined and illustrated taxonomic characters using a stereoscopic dissecting microscope. Measurements were made with an ocular micrometer and are recorded in millimeters. Leg measurements are given as “leg number, total length (femur, patella, tibia, metatarsus, and tarsus)”. Pedipalp measurements are listed as “total length (femur, patella, tibia, tarsus)”. The following ab-

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breviations are used in the description: AME, anterior median eye; ALE, anterior lateral eye; PME, posterior median eye; PLE, posterior lateral eye; MEs, median eyes; Les, lateral eyes; AER, anterior eye row; PER, posterior eye row; MOQ, median ocular quadrangle. The specimens studied are lodged in the deposited in National Institute of Biological Resources (NIBR) of the ministry of Environment, Korea.

3. Taxonomic Account

Genus *Drassyllus* Chamberlin, 1922 [2]

Carapace ovoid; truncated posteriorly, narrowed anteriorly; clypeus low. Both eye row procurved in front. Chelicerae with 4 - 5 promarginal teeth and 2 - 3 retromarginal teeth. Legs stout; tarsi IV with sparse scopula. Abdomen oval; anteriodorsallyscutum in male. Male palp with retrolateral tibial apophysis; terminal apophysis situated near middle. Female epigynum usually with median septum and distinct curved anterior margin.

Drassyllus yaginumai Kamura, 1987 (Korean name: *Yaginumachammaegeomi*)

Drassyllus yaginumai Kamura, (1987a) [3]; Kamura, 2009 [4].

Measurements. Female: Body length 6.52, Carapace length 2.80/width 2.12, Abdomen length 3.72/width 2.35, Cheicera length 0.75/width 0.34, Endite length 0.76/width 0.35, Labium length 0.59/width 0.48, Sternum length 1.63/width 1.30, Anterior eye row 0.60, Posterior eye row 0.72, Legs: I 7.97 (2.10, 1.28, 1.78, 1.56, 1.25), II 6.99 (1.80, 1.15, 1.52, 1.35, 1.17), III 6.09 (1.62, 0.90, 1.16, 1.47, 0.94), IV 8.06 (2.48, 1.18, 2.05, 2.35, 1.10), Pedipalp 2.87 (1.04, 0.40, 0.50, 0.93).

Description. Female: Carapace longer than wide, reddish brown, thoracic region slightly raised, cervical, radial and median groove dark reddish brown and distinct, fovea needle shaped (**Figure 1(A)** and **Figure 1(B)**). Eight eyes, AER and PER slightly recurved, AMEs black and round, ALEs white, PEs all white, PMEs semicircle in shape, MOQ slightly wider posteriorly (**Figure 1(C)**). Chelicerae longer than wide, reddish brown, armed with 5 promarginal teeth and 3 retromarginal teeth (**Figure 1(E)**). Endites longer than wide, reddish brown with dark margin. Labium longer than wide, reddish brown with dark margin. Sternum reddish brown with dark margin, shield shaped, slightly convex (**Figure 1(D)**). Legs reddish brown, metatarsi and tarsi light reddish brown, leg formula 4-1-2-3. Pedipalps reddish brown. Abdomen longer than wide, ovoid with truncate anterior part, covered with dense black hairs, grayish brown without distinct pattern, 3 pairs of muscle impressions distinct, posterior part wrinkled, dense blackish brown bristles along the anterior margin (**Figure 1(A)** and **Figure 1(B)**). Spinnerets reddish brown, cylinder shaped. Female epigynum with median septum, copulatory duct and spermathecae visible, surrounded with pear shaped sclerotized rim (**Figure 1(F)**). Male was described by Kamura (1987a) [3].

Specimen examined. 1 female, 11-VII-2012, Chilseong-myeon, Goesan-gun, Chungcheongbuk-do, ST Kim and SY Lee leg.

Ecological remarks. This species inhabits in the maize fields and is collected by pitfall trap.

Distribution. Korea (newly recorded), Japan.

Genus *Zelotes* Gistel, 1848 [5]

Carapace oval covered with fine hairs; narrowed in front. Anterior eye row slightly procurved, posterior row straight in front. Chelicerae with black hairs on prolateral side; promargin with 3 - 4 teeth and one row of bristles, retromargin with 1 - 4 denticles. Legs relatively long; tibiae and metatarsi III and IV usually with ventral spines; metatarsi with scopulae. Abdomen long oval; anteriodorsallyscutum in male. Male palp with retrolateral tibial apophysis; usually with terminal apophysis and median apophysis. Female epigynum usually with distinct groove-like anterior and lateral margins.

Zeltotes tortuosus Kamura, 1987b (Korean name: *Geomeunyeomrageomi*)

Zelotes davidi Yaginuma, 1986 [6], *Zelotes tortuosus* Kamura, 1987b [7]; Kamura, 2009 [4].

Measurements. Male: Body length 4.92, Carapace length 2.34/width 1.77, Abdomen length 2.58/width 1.50, Cheicera length 0.65/width 0.30, Endite length 0.54/width 0.28, Labium length 0.30/width 0.30, Sternum length 1.42/width 1.00, Anterior eye row 0.28, Posterior eye row 0.34, Legs: I 6.29 (1.94, 1.02, 1.28, 1.15, 0.90), II 5.34 (1.50, 0.92, 1.07, 1.05, 0.80), III 4.83 (1.28, 0.82, 0.78, 1.20, 0.75), IV 7.41 (2.10, 0.97, 1.35, 1.94, 1.05),

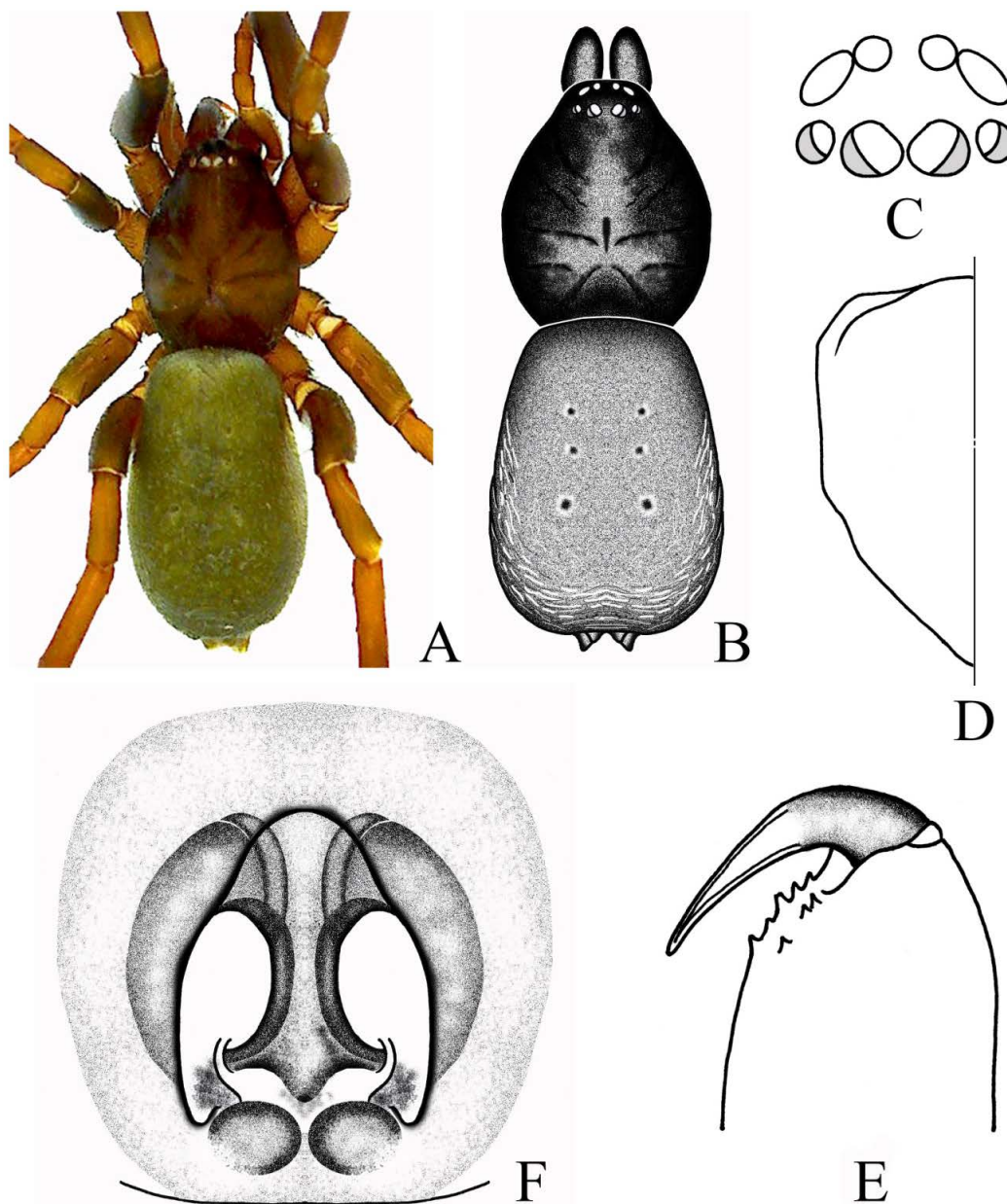


Figure 1. *Drassyllus yaginumai* Kamura, 1987 (A. Body, specimen, B. Body, C. Eye, D. Sternum, E. Chelicera, F. Female epigynum, ventral view).

Pedipalp 2.44 (0.92, 0.30, 0.29, 0.93).

Description. Male: Caparace longer than wide, dark blackish brown, cervical groove indistinct, fovea indistinct needle shaped, radial groove visible faintly, thoracic region slightly convex (**Figure 2(A)** and **Figure 2(B)**).

Eight eyes, AER strongly recurved, PER almost straight, AMEs black, ALEs white, PMEs semicircle in shape, MOQ slightly wider posteriorly (**Figure 2(C)**). Chelicerae longer than wide, dark blackish brown, armed with 3 promarginal teeth and 2 retromarginal teeth (**Figure 2(E)**). Endites longer than wide, light blackish brown, yellowish white at anterior end. Labium equal in length and width, dark blackish brown. Sternum dark blackish brown, rounded shield shaped, dense black bristles along the margin, split pits scattered, slightly convex (**Figure 2(D)**). Legs dark blackish brown, metatarsi and tarsi light yellowish brown, leg formula 4-1-2-3. Pedipalps dark blackish brown. Abdomen longer than wide, long oval with lusterousscutum at anterior part, dense black bristles along the anterior margin (**Figure 2(A)** and **Figure 2(B)**). Spinnerets dark blackish brown, cylinder shaped.

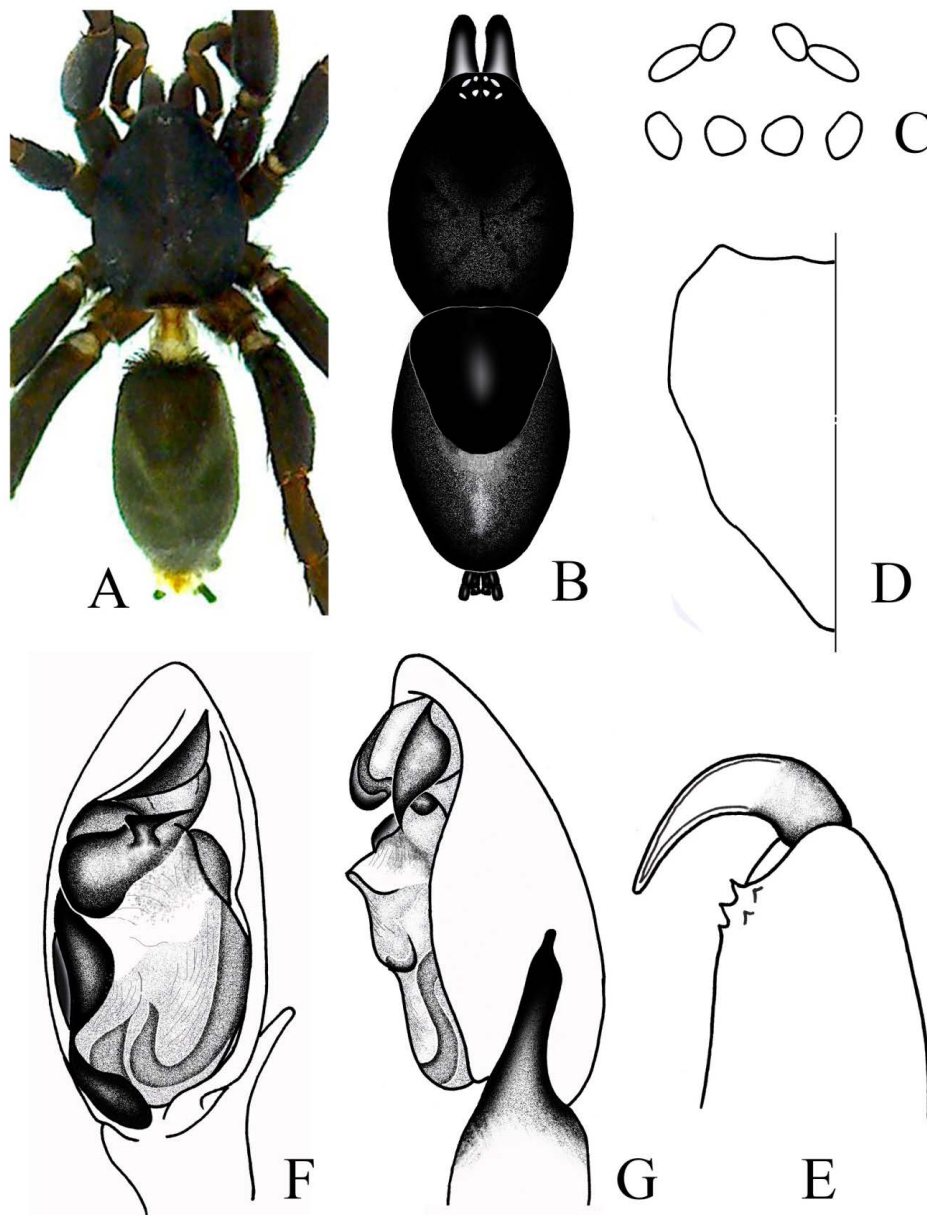


Figure 2. *Zelotes tortuosus* Kamura, 1987 (A. Body, specimen; B. Body; C. Eye; D. Sternum; E. Chelicera; F. Male palp, ventral view; G. Ditto, prolateral view).

Male palp with long and thick retrolateral tibial apophysis, digits form (Figure 2(G)), median apophysis angular hook shaped with sharp tip (Figure 2(F)). Female was described by Kamura (1987b) [7].

Specimen examined. 1 male, 13-IX-2012, Samgi-myeon, Gokseong-gun, Cheollanam-do, ST Kim and SY Lee leg.

Ecological remarks. This species inhabits in the soybean fields and is collected by pitfall trap.

Distribution. Korea (newly recorded), Japan.

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