

THE ECOLOGICAL AND ZOOGEOGRAPHICAL REVIEW OF THE SPIDERS (FAMILY PHILODROMIDAE) DISTRIBUTED IN EAST GEORGIA

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Abstract

The ecological investigation of Family Philodromidae spiders from East Georgia has shown that 6 species and 1 subspecies are mesophilous, 2 species belong to xerophilous ecological unit and 2 - to hygrophilous. It was established that in studied fauna from autochthonous element 1 genus and 1 subspecies are characterized with South Caucasian distribution. From allochronous element of fauna with Holarctic distribution are characterized 2 genera, 4 species, with Palearctic - 2 genera, 3 species; one by one genus and as much species belong to the following zoogeographical units: European, Mediterranean, Europe-Siberian.

Key words: taxonomy, mesophilous, xerophilous, hygrophilous.

Introduction

3 genera and 10 species and 1 subspecies of the family Philodromidae were registered in East Georgia. The family Philodromidae comprises the following genera: *Philodromus* Walck., - 4 species, *Tibellus* Sim. - 3 species and 1 subspecies, *Thanatus* Koch. - 3 species [Mkheidze, 1992].

Studies of spiders fauna of the family Philodromidae in different landscape zones and altitudinal mountain belts in Georgia were carried out from the beginning of XX century, but in ecological and zoogeographical viewpoint it was not discussed till now.

Materials and Methods

Materials have been collected during 2000-2004 in East Georgia. To precise the list of species of the family Philodromidae and supplement with some information about their zoogeographical distribution, scientific sources were used [Mkheidze, 1992; Mikhailov, 1997].

Results and Discussion

Mesophilous group of spiders of the family Philodromidae, according to abiotic factors, includes 6 species and 1 subspecies (*Philodromus dilutus*, *Philodromus rufus*, *Philodromus aureolus*, *Thanatus liniatipes*, *Thanatus imbecilus*, *Tibellus macellus*, *Tibellus macellus* Sim., sub species - *georgicus*), xerophilous group - 2 species (*Philodromus histrio*, *Thanatus arenarius*), and

hygrophilous one - 2 species (*Tibellus maritimus*, *Tibellus oblongus*) (Table 1.) [Azheganova, 1968; Mkheidze, 1992].

Studied spiders as a predators hunt on their preys on all living forms of vegetation - grasses, bushes and trees (*Philodromus dilutus*, *Philodromus histrio*, *Philodromus rufus*, *Philodromus aureolus*, *Thanatus liniatipes*, *Thanatus arenarius*, *Thanatus imbecilus*, *Tibellus oblongus*, *Tibellus maritimus*, *Tibellus macellus*, *Tibellus macellus georgicus* sub spn.).

From the feeding point of view spiders are typical predators (zoophagus), which hunt for insects: Coleoptera, Myriapoda, Aphidodea (Hemiptera), Diptera.

As regards to the zoogeographical studies of the spiders of the family Philodromidae from autochthonous element of fauna 1 genus and 1 subspecies are characterized with South Caucasian distribution (*Tibellus macellus* Sim., *georgicus* sub spn.).

From allochthonous element of fauna with Holarctic distribution characterized 2 genera, 4 species (*Philodromus rufus*, *Philodromus aureolus*, *Tibellus maritimus*, *Tibellus oblongus*) [Azheganova, 1968; Mikhailov, 1997; Mkheidze, 1992; Tyschenko, 1971], with Palaearctic - 2 genera, 3 species (*Philodromus histrio*, *Thanatus arenarius*, *Thanatus imbecilus*), one by one genus and as much species belong to the following zoogeographical units: European (*Philodromus dilutus*), Mediterranean (*Thanatus liniatipes*), Europe-Siberian (*Tibellus macellus*) [Mikhailov, 1997; Mkheidze, 1992].

Table 1. Data of Ecological and Zoogeographical Studies of Spider's (Family Philodromidae) Fauna of East Georgia.

N				Family, Genera, Species	Distribution	Areal types	The relation to humidity			landscape genetic-type	The relation to plant's life forms			Food (prey)
							Hygro-hillous	Meop-hillous	Xerophillous		Tree	Brush	Grass	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	1			Philodromidae <i>Philodromus</i> (Walck., 1826) <i>Philodromus dilutus</i> (Thor., 1875)	North Caucasus (Russia), European countries of the former Soviet Union, South Caucasus (Georgia)	E	-	+	-	Pr.f	-	-	+	Insects (Diptera, Coleoptera)

	2	Philodromus histrio (Latr., 1819)	Europe (wide), Carpathians, Russia, Estonia, Latvia, Lithuania, Ukraine, South Caucasus (Georgia) Middle Asia (Turkmenistan, Uzbekistan, Tajikistan), Kazakhstan, the Urals, Amur-Maritime area.	P	-	-	+	f	-	+	+	Insecta (Diptera, Aphilodea Hemiptera)
	3	¹ Philodromus rufus (Walck., 1826)		H	-	+	-	Fr.f	+	+	-	Insecta
	4	² Philodromus aureolus (Clerck., 1757)		H	-	+	-	f	-	-	+	Insecta (Aphidoidea Hemiptera, Phoris)
2	5	Thanatus (Koch., 1837) Thanatus liniatipes (Simon, 1870)	Syria, Tunisia, Spain, Portugal, South Caucasus (Georgia)	M	-	+	-	Fr.f	-	-	+	Insecta (Hemiptera)
	6	Thanatus arenarius (Thor., 1872)	Europe (wide), Turkey, Carpathians, Russia, Latvia, Ukraine, Byelorussia, Moldavia, South Caucasus (Azerbaijan, Georgia), Kazakhstan, the Urals, Siberia, Middle Asia	P	-	-	+	Fr.f	-	+	+	Insecta (Coleoptera)
	7	Thanatus imbeciles (Koch., 1878)	Europe (wide), Turkey, Russia, South Caucasus (Georgia), Middle Asia (Uzbekistan, Turkmenistan, Tajikistan)	P	-	+	-	Fr.f	+	-	+	Insecta (Diptera, Hemiptera)

3	8	Tibellus (Simon, 1878) (=Metastenus Bert., 1878) Tibellus macellus (Simon, 1878)	Russia, Ukraine, South Caucasus (Georgia), the Urals	ES	-	+	-	Fr.f	-	+	+	Insecta (Diptera)
	8.1	Tibellus macellus (Sim., georgicus Sub.spn.)	South Caucasus (Georgia)	SC	-	+	-	Fr.f	-	-	+	Insecta (Coleoptera)
	9	Tibellus maritimus (Menge., 1875)	Carpathians, Russia, Estonia, Latvia, Lithuania, South Caucasus (Azerbaijan, Georgia) Kazakhstan, Middle Asia (Uzbekistan, Turkmenistan), the Urals, Siberia, Kamchatka, Amurmaritime area, North America	H	+	-	-	Fr.f	-	+	+	Insecta (Coleoptera, Hemiptera)
	10	Tibellus oblongus (Walek., 1802)	Europe (wide), Carpathians, Russia, Estonia, Latvia, Lithuania, Ukraine, Moldavia, South Caucasus (Azerbaijan, Armenia, Georgia), Middle Asia (Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan), Sakhalin, Kamchatka, Japan, Amurmaritime area, North America	H	+	-	-	ff	-	+	+	Insecta (Aphidoidea)

Abbreviations: E – European, P – Palaearctic, H – Holarctic, M – Mediterranean, ES – Europe-Siberian, SC – South Caucasian, Frf – Forest-field, f – field.

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აღმოსავლეთი საქართველოში გავრცელებული ობობების ოჯახი Philodromidae-ს ექოლოგიური და ზოომეორაფიული მიმოხილვა

მხეიძე თ., გეგეკორი არნ., ფხაკაძე ე.

ზოოლოგიის კათედრა, ივ. ჯავახიშვილის სახელობის თბილისის სახელმწიფო
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