

History and advances of spider studies in the Caucasus

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It is an update of the lecture given in Blagoevgrad in 2005

History was divided into 4 periods/stages

- 1) Beginning 1878-1938**
- 2) Pre-Dunin 1939-1974**
- 3) Dunin's 1974-1998**
- 4) Modern 1999- ...**

Now one more period should be added. Guess what?

First period:

1878 1789

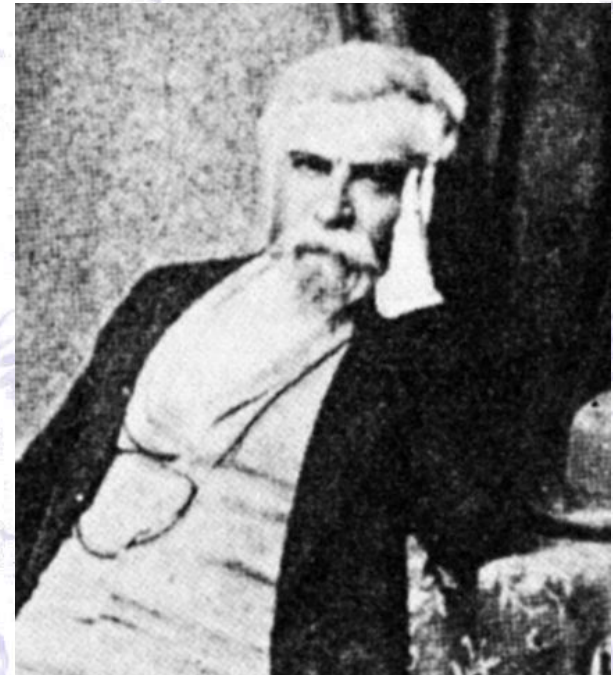
First was Samuel G. G. Gmelin (1744-1774), in whose book 3 species were described in Kalmykia (not coincides with modern boundaries). Passed away in captivity in Daghestan.



Victor I. Motschulsky

**Started to collect when he was army officer
during the Caucasian War, visited Tiflis.**

**Described 2 species from “Kalmykia” in
1849.**



First period:

Collecting efforts: E. Keyserling (visited Northern Persia in 1859, and collected there).

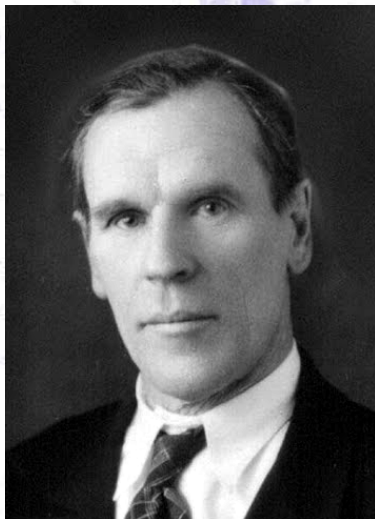
First detail publication by L. Koch (1878): 25 species of spiders, as well as scorpions, pseudoscorpions, Opiliones and solifuges.



Contributions were made by Russians: A. Kroneberg, E. Wierzbicki, A.M. Zavadski, S.A. Spassky, and foreign arachnologists: W. Kulczyński, E. Simon, T. Thorell.

***Affinities:* all authors lived outside the Caucasus (except Spassky); 206 species reported and described.**

Second period: Start by series of papers by Charitonov (1939) and activities of Georgian arachnologist Tamara S. Mcheidze. Another contributors A.S. Utotchkin (Perm) and V.E. Pitchka (Kiev).

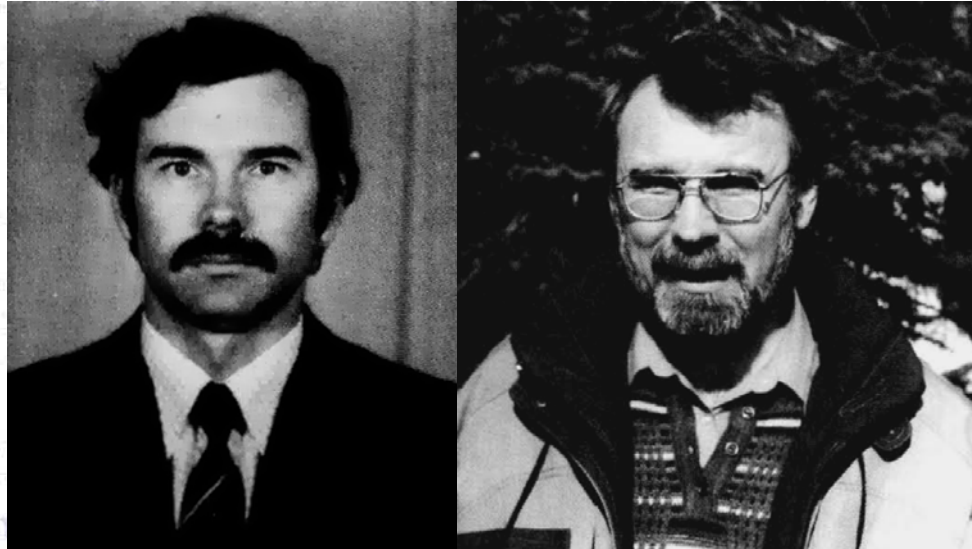


I had a pleasure to mee Tamara Mcheidze when visited Georgia in 1982. She gave me a bottle of Georgian brandy (we say Коньяк)? And it was consumed with other colleagues-arachnologists in Leningrad.

***Affinities:* slow and low growth of knowledge.**

Third period: 1974-1998

I count it from Peter Dunin (1952-1998) from Baku who started publishing papers since 1974.



Vladimir Ovtsharenko (1977, 1978, 1979) was second “farther”, and created informal team to study spiders of the Caucasus.

Then A.A. Zyuzin, K.Y. Eskov, A.V. Tanasevitch, K.G. Mikhailov, D.V. Logunov. Also J. Wunderlich, late J. Buchar and S. Heimer, and some others published papers.

***Affinities:* -Over 30 publications and 60 new species only by Dunin.**

- Revision of Caucasian Linyphiidae by Tanasevitch (1987, 1990) (over 100 additional species and 40 new to science).

- Book by Mcheidze (1997) about spiders of Georgia. Translated by Stefan Otto to English.

- More than 400 additional species have been added during this time.

After collapse of the Soviet Union few studies were based on museum material.

Forth period: 1998-2007

Starts when arachnological studies restarted in Azerbaijan.

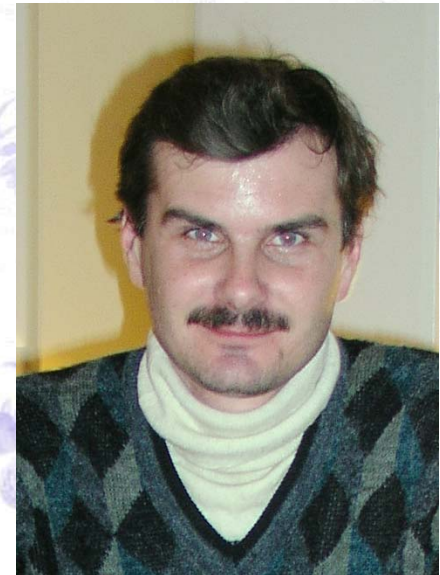
Contributors: E. F. Guseinov (=Huseynov), D.V. Logunov, K.G. Mikhailov, S. Koponen, P.T. Lehtinen, M.M. Kovblyuk, V.A. Gnelitsa, etc.

***Affinities:* - Significant growth in number of supraspecific taxa 5 additional families, one new subfamily, over 30 additional genera.**

- Revisional surveys of Salticidae and Agelenidae of Azerbaijan.**
- Start of ethological studies.**

Elchin managed to involve R. Jackson from New Zealand to Baku.

PROMOTOR: Elchin F. Huseynov



Forth period?

Stefan Otto's Catalog (since 2007). It is incredibly useful tool for those who study Caucasus

The most interesting features

Presence of 9 species in the Caucasus with Caucasus-Far Eastern disjunctive range

Nesticidae

Howaia mogera (Yaginuma 1972)

Araneidae

Larinia bonneti Spasski 1939

Salticidae

Myrmarachne formicaria (De Geer 1778)

Phintella castrisiana (Grube 1861)

Uloboridae

Octonoba yesoensis (Saito 1934)

Theridiidae

Rhomphaea hyrcana (Logunov & Marusik 1991)

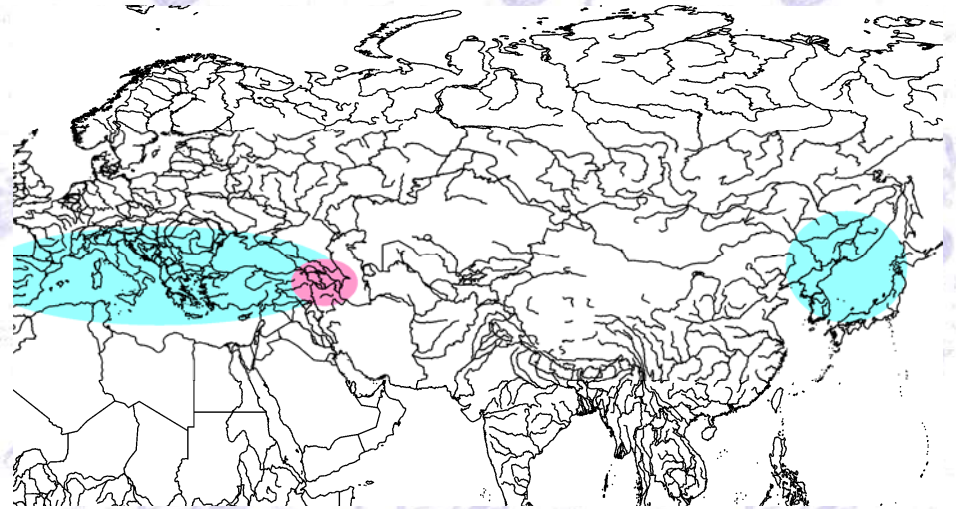
Rhomphaea sagana (Dönitz & Strand 1906)

Yaginumena maculosa (Yoshida & Ono 2000)

Thomisidae

Tmarus horvathi Kulczyński 1895

Similar range is known in 1 feathery beetle, one saw fly and one terrestrial mollusk.



The most interesting finds+

Endemic subfamily Ovtchinnikoviinae.

Tricholathys ovtchinnikovi, a member of the Nearctic genus, with 2 species in Palaearctic, Central Asia and Caucasus.

The most species rich families in Caucasus are Linyphiidae (180/206), Gnaphosidae (100/132), Salticidae (122/131), and Lycosidae (100/110).

	1928	1932	1989	1996	2008	2015	2021
Armenia			118	127	124	141	163
Azerbaijan			500	559	642	669	720
Georgia			326	456	463	581	639
Soviet Caucasus	178+	206+	671		1012		1143

Results

- The worst studied areas are whole Armenia, arid areas of Georgia and Azerbaijan (exception Absheron Peninsula and Gobustan), Daghestan.
- Value of endemism in different families ranges from 0 to 100% (Nemesiidae 5 species, Leptonetidae 2). Among the species diverse families the highest level of endemism is in Dysderidae, of 89 species 65 are endemics, or 73%). General value of endemics is 22%.
- The most promising areas are all arid territories, subtropical communities along west and east coasts of Caucasus.
- Families that may occur in the Caucasus: Anapidae, Cithaeronidae, Hersiliidae, Sicariidae, Synaphridae.

ადლობა ყურადღებისთვის!

Շնորհակալություն ուշադրության համար:

Diqqətiniz üçün təşəkkürlər!

İlginiz için teşekkür ederim!

Спасибо за внимание!

ا تشكر از توجه شما!

Thank you for attention!

Дякую за увагу!

- 1) 5 families new to Caucasus: **Desidae**, Mysmenidae, Palpimanidae, Prodidomidae and Zoropsidae
- 2) 6 genera new to the former USSR
- 3) Many species new to science and additional to Caucasian fauna
- 4) 2 hours collecting near Sochi reveals one family new to Russia (Zoropsidae) and 2 families new to European part of Russia (Oonopidae, Mysmenidae)

Results

- Spider fauna of Caucasus encompass over 1000 species or about 1/3 of the fSU fauna
- The most species rich families in Caucasus are Linyphiidae (180/206), Gnaphosidae (100/132), Salticidae (122/131), and Lycosidae (100/110).
- Due to past 5 year collecting efforts fauna of Azerbaijan became most family rich in former Soviet Union (44 families/46 in Caucasus).
- Value of endemism in different families ranges from 0 to 100% (Nemesiidae, Leptonetidae). Among the species diverse families the highest endemism is in Dysderidae (70 species, 59% of endemics). General value of endemics is 22%.