

A brief historical overview of the development of arachnology in Russia

Краткий исторический обзор развития арахнологии в России

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ABSTRACT. A brief historical overview of arachnological research (excluding acarology) in Russia is provided. The three main periods are described as follows: (1) preliminary data accumulation (eighteenth century–1860s); (2) descriptive faunistics (1870s–1967); and (3) descriptive taxonomy (1968–present).

РЕЗЮМЕ. Представлен краткий исторический обзор арахнологических исследований (без акарологии) в России. Описано три главных периода: (1) накопление первоначальных данных (18-й век – 1860-е годы); (2) описательная фаунистика (1870-е годы – 1967); и (3) описательная таксономия (1968 – современность).

KEY WORDS: Russian arachnology, history, overview.

КЛЮЧЕВЫЕ СЛОВА: Российская арахнология, история, обзор.

Introduction

A proper history of arachnological studies in Russia has not been written yet, with many intriguing facts and amazing characters remaining poorly known or unheard-of even by Russians. The brief historical overview presented here is only intended as a framework, within which future scrupulous historiography studies can be conducted. For the sake of convenience I consider the history of the Russian (partly as Soviet) arachnological studies in three periods: (1) preliminary data accumulation eighteenth century–1860s); (2) descriptive faunistics (1870s–1967); and (3) descriptive taxonomy (1968–present). A fourth, analytical period, is still under way. This overview does not consider the latest period of descriptive taxonomy in

Russia (the late 1990s onwards), the scientific contributions of the few currently active Russian authors will be analyzed in more detail elsewhere.

The period of preliminary data accumulation

The first period started with the so-called Academie des Sciences expeditions for the study of Russian nature (1760s–1770s), but only a handful of spider species were found, and most of the identifications remain doubtful. Scarce records of spiders are scattered among the voluminous books of naturalists such as P.S. Pallas (Fig. 1), I.G. Falk, S.G. Gmelin, I.I. Lepekhin, E.G. Laxmann and some others. Spider taxonomy during this period was based mainly on



Fig. 1. Peter Simon Pallas (1741–1811).
Рис. 1. Петр С. Паллас (1741–1811).



Fig. 2. Ivan Alekseevich Dwigubsky (1772–1839).
Рис. 2. Иван Алексеевич Двигубский (1772–1839).

superficial characters, without examination of the copulatory organs.

Arachnological studies in the first half of the nineteenth century were also conducted by naturalists and general zoologists, such as I.A. Dwigubsky (Fig. 2), K.F. Kessler, V.I. Motschulsky, Yu.I. Siemaschko, E. Nordmann, etc. For example, only several spider species were reported from Moscow Area by Dwigubsky [1802] in his famous list of the Moscow fauna.

The period of descriptive faunistics

The first true arachnological papers appeared later, in the 1870s. The first faunistic reviews covered the Kharkov Gouvernment [Reinhard, 1874, 1877], Turkestan [Kroneberg, 1875] (Fig. 3), the south of the Russian Empire [Thorell, 1875], and the Yenisei River flood-valley [L. Koch, 1879]. All these papers are among the earliest works to be based on the study of spider copulatory organs. Numerous dubious and erroneous identifications of west European species in the Middle Asian and Siberian faunas were peculiar to that time. The first faunistic

studies were made at that time in central Russia by Vagner [1892] and Freiberg [1895, 1897].

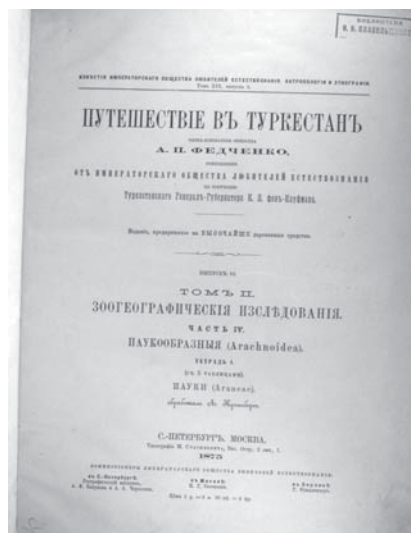


Fig. 3. The book on Turkestan spiders by A.I. Kroneberg [1875].

Рис. 3. Книга А.И. Кронеберга [Kroneberg, 1875] по паукам Туркестана.

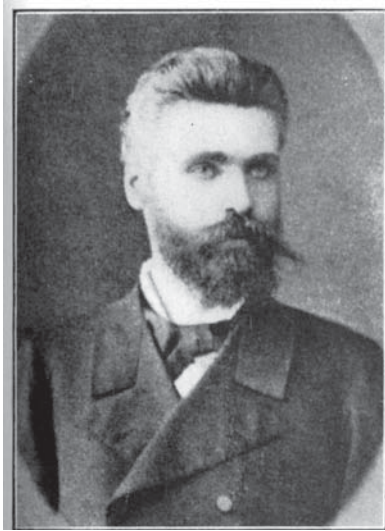


Fig. 4. Vladimir Aleksandrovich Vagner (1849–1934); a majestic figure in Russian arachnology and general zoology, whose real contribution to and influence on Russian and international arachnology is still largely underestimated.

Рис. 4. Владимир Александрович Вагнер (1849–1934); значительная фигура русской арахнологии и общей зоологии, чей реальный вклад и чье влияние на русскую и международную арахнологию остается в значительной степени недооцененной.

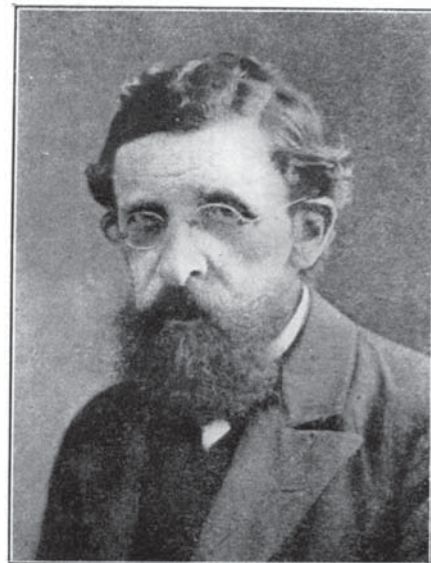


Fig. 5. Vladislav Kuleczyński (1854–1919); the famous Polish arachnologist, a pioneer of arachnological studies in Siberia.

Рис. 5. Владислав Кульчинский (1854–1919); известный польский арахнолог, пионер арахнологических исследований в Сибири.

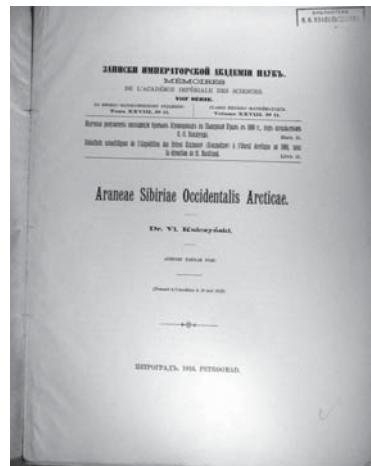
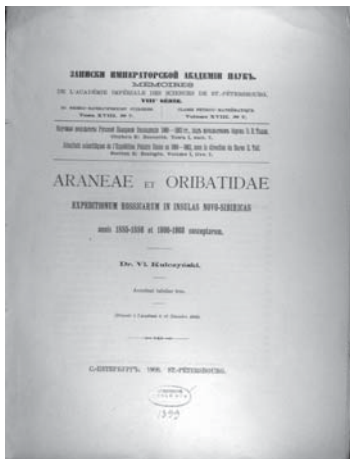


Fig. 6. V. Kuleczyński's papers on northern spiders [1908, 1916].

Рис. 6. Статьи В. Кульчинского [1908, 1916] по паукам Севера.

Morphological and anatomical studies of different arachnids were conducted in the 1880s by V.M. Schimkevitch, V.A. Vagner (Fig. 4) and A.I. Kroneberg. The first system of spider families based on the copulatory organs was proposed by V.A. Vagner [1888].

The famous Polish arachnologist, V. Kuleczyński (Fig. 5), who lived in Krakow (Austrian–Hungarian Empire at that time) contributed mainly to the study of the northern and eastern spider faunas [1885, 1908, etc.; Fig. 6]. The fauna of the Kurile Islands (part of the Russian



Fig. 7. Dmitry Mikhailovich Fedotov (1888–1972).
Рис. 7. Дмитрий Михайлович Федотов (1888–1972).

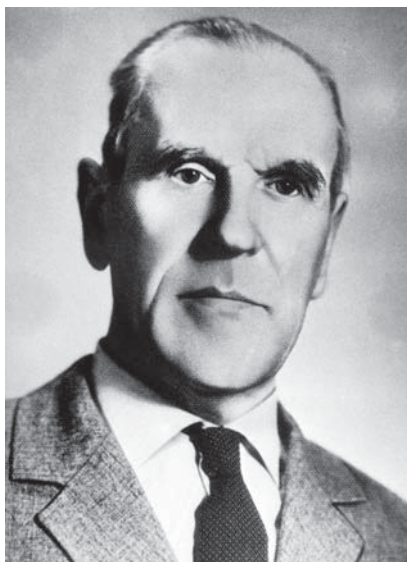


Fig. 9. Dmitry Evstratievich Kharitonov (1896–1970); the famous Russian arachnologist and the founder of the arachnological school of the Perm State University; the culmination of his academic activity was the comprehensive bilingual “Katalog der russischen Spinnen” [1932, 1936]. His and his successors’ spider collections, including numerous type specimens, are kept in the collection of the Zoology Department of the Perm State University.

Рис. 9. Дмитрий Евстратьевич Харитонов (1896–1970); известный русский арахнолог и основатель арахнологической школы Пермского университета; кульминацией его академической активности был исчерпывающий двуязычный “Каталог русский пауков” [1932, 1936]. Его коллекция и коллекции пауков его последователей, в том числе многочисленный типовой материал, хранятся на кафедре зоологии Пермского университета.



Fig. 8. Sergei Aleksandrovich Spassky (1882–1958); the famous Russian arachnologist with an international reputation at his time, who published over 30 taxonomic papers and described tens of new taxa from the European part of the ex-USSR and central Asia. S.A. Spassky is the author of the first Russian identification key to spiders, viz., “A guide to spiders of the Don Area” [1925]. His massive spider collections and excellent library are kept in the Zoological Institute of RAS (St.-Petersburg, Russia).

Рис. 8. Сергей Александрович Спасский (1882–1958); известный русский арахнолог, который опубликовал более 30 таксономических работ и описал десятки новых таксонов из европейской части бывшего СССР и центральной Азии. С.А. Спасский является автором первого русского определительного ключа по паукам, а именно, “Определителя пауков Донской Области” [1925]. Его значительные коллекции пауков и великолепная библиотека хранятся в Зоологическом институте РАН (Санкт-Петербург, Россия).

Far East since 1945 and previously a territory of the Japanese Empire) was initially studied by W. Bösenberg [Bösenberg & Strand, 1906], and later by S. Saito in the 1930s. The greatest number of Russian faunistics papers were published from 1910–1920s by the following authors: N.S. Greze, D.M. Fedotov (Fig. 7), S.A. Spassky (Fig. 8), S.V. Pokrovsky, D.E. Kharitonov (Fig. 9), V.N. Ermolaev, V.I. Pereleshina-Sytshevskaya (Fig. 10), and others. The first identification book for the south-eastern European part of Russia (Don Region) was published by S.A. Spassky [1925; Fig. 11], who was also famous for his contributions to the biology of spiders [Spassky, 1920, 1935, etc.].



Fig. 10. Valentina Ivanovna Pereleshina-Sytshenskaya (1901–1983).

Рис. 10. Валентина Ивановна Перелешина-Сычевская (1901–1983).

The culmination of this second period was certainly the bilingual German–Russian spider catalogue by D.E. Kharitonov [1932, 1936].

Later, in the 1940s–1950s, arachno-faunistic studies in the USSR declined. In the 1950s

and early 1960s, several papers on the USSR fauna were produced by east European arachnologists, such as J. Kratochvil, J. Prószyński (Fig. 12), J. Buchar, and some others. Several Russian arachnologists appeared at that time: N.S. Azheganova (Fig. 13) and A.S. Utochkin (Fig. 14) in Perm, V.P. Tyshchenko in Leningrad [see the paper about him by A.A. Stekolnikov in this volume] and S.A. Beer (Fig. 15) in Moscow. Unfortunately, most of them were forced, for one reason or another, to divert their scientific endeavours towards medical entomology, the physiology of insects or parasitology.

An important contribution to spider biology was made by P.I. Marikovsky (Fig. 16) in the 1940s (published in 1956). His book on the biology of venomous spiders, viz., “The Russian tarantula (*Lycosa singoriensis*) and the karakurt or the black widow (*Latrodectus tredecimguttatus*)” [Marikovsky, 1956; Fig. 17], is still often used by many arachnologists and general zoologists. At this point, it is impossible to avoid mentioning the monograph on the bionomics of *Latrodectus tredecimguttatus* published by K.N. Rossikov [1904], who produced a comprehensive study of all biological aspects of the blackwidow and was therefore the predecessor of P.I. Marikovski. Being published in Russian, Rossikov’s and Marikovsky’s books

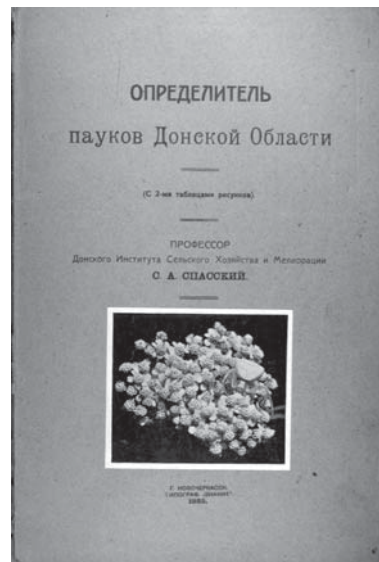


Fig. 11. Some books by S.A. Spassky [1920, 1925].

Рис. 11. Некоторые из книг С.А. Спасского [1920, 1925].



Fig. 12. Jerzy Prószyński (born 1935); the famous Polish arachnologist and specialist in Salticidae, whose general work of 1979 served for many years as the first identification manual to the Salticidae of the ex-USSR.

Рис. 12. Ежи Прушинский (родился в 1935); известный польский арахнолог и специалист по Salticidae, чья обобщающая работа 1979 года многие годы служила первым определителем по сольтицидам бывшего СССР.



Fig. 13. Nina Sergeevna Azheganova (born 1914); a representative of the arachnological school of the Perm State University and the sole author of the "Brief Guide to spiders (Aranei) of the forest and forest-steppe zones of the ex-USSR" [1968].



Fig. 14. Aleksander Stepanovich Utochkin (1924–1992); the acknowledged Russian arachnologist, who headed the arachnological school of the Perm State University for many years and who was the author of the very useful identification book for the genus *Xysticus* in the ex-USSR fauna [1968].

Рис. 14. Александр Степанович Уточкин (1924–1992); известный русский арахнолог, который в течение многих лет руководил арахнологической школой Пермского университета, и кто написал очень полезный определитель пауков рода *Xysticus* фауны бывшего СССР [1968].



Fig. 15. Sergei Alekseevich Beer (born 1941).
Рис. 15. Сергей Алексеевич Беер (родился в 1941).

Рис. 13. Нина Сергеевна Ажеганова (родилась 1914); представитель арахнологической школы Пермского университета и автор "Краткий определитель пауков (Aranei) лесной и лесостепной зоны СССР" [1968].

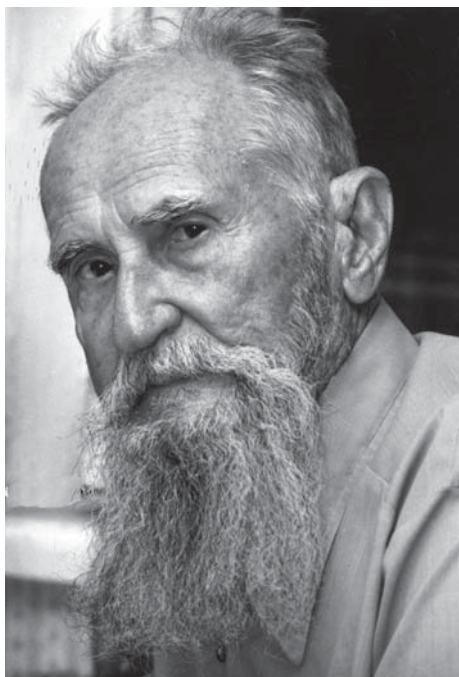


Fig. 16. Pavel Iustinovich Marikovsky (born 1912); an extremely well known zoologist, popularizer and traveler; the author of the famous book “Tarantula and Karakurt” [1956] and numerous popular books on spiders and insects.

Рис. 16. Павел Иустинович Мариковский (родился в 1912); очень известный зоолог, популяризатор и путешественник; автор известной книги “Тарантул и каракурт” [1956] и многочисленных популярных книг по паукам и насекомым.

have remained almost totally unknown in arachnological circles in the west.

For other arachnid orders, two monographs were produced by the famous arachnologist and ornithologist, A.A. Byalynitsky-Birula (Fig. 18) [1917 — scorpions; 1938 — solpugids; Fig. 19]. V.V. Redikortsev (Leningrad, USSR, Fig. 20) and M. Beier (Austria) described dozens of pseudoscorpions in the 1920s and 1930s. Opilionids were mainly neglected at that time. Only a few faunistic notes are known, in addition to one serious taxonomic contribution by V.V. Redikortsev [1936].

Advances in the studies of arachnids were presented by two different authors in the first volume of the book “Animal world of the USSR” [see Zernov & Kuznetsov, 1936]. D.E. Kharitonov wrote about spiders and V.V. Redikortsev about the smaller arachnid orders. In the subsequent volumes, only spiders were repeat-

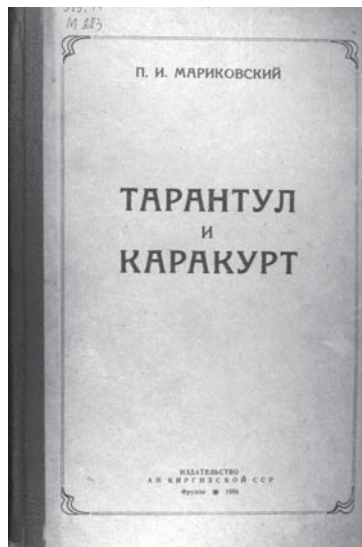


Fig. 17. The book “Tarantula and Karakurt” by P.I. Marikovsky [1956].

Рис. 17. Книга П.И. Мариковского [1956] “Тарантул и каракурт”.



Fig. 18. Aleksei Andreevich Byalynitsky-Birula (1864–1937); the famous Russian arachnologist and ornithologist, the author of several taxonomic books on Scorpiones and Solifuga of the ex-USSR [e.g., 1917, 1938].

Рис. 18. Алексей Андреевич Бялыницкий-Бируля (1864–1937); известный русский арахнолог и орнитолог, автор нескольких таксономических книг по Scorpiones и Solifuga бывшего СССР [напр., 1917, 1938].

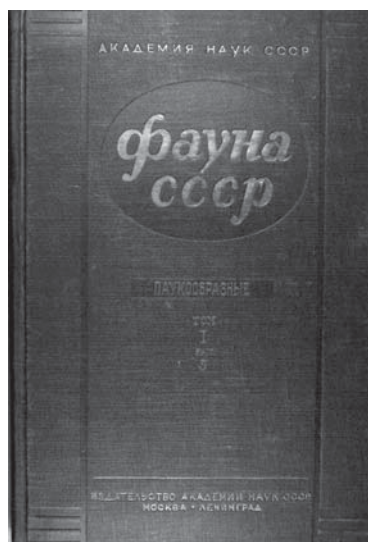


Fig. 19. Books on scorpions and solpugids by A.A. Bialynitsky-Birula [1917, 1938].

Рис. 19. Книги А.А. Бялыницкого-Бирули [1917, 1938] о скорпионах и сольпугах.



Fig. 20. Vladimir Vladimirovich Redikortsev (1873–1942); the author of the first serious taxonomic contribution on Opiliones of the ex-USSR fauna. His main arachnological contributions, however, were in the area of pseudoscorpion taxonomy.

Рис. 20. Владимир Владимирович Редикорцев (1873–1942); автор первой серьезной таксономической работы по Opiliones бывшего СССР. Однако, его наиболее значимые работы по арахнологии были в области таксономии ложноскорпионов.

edly reviewed by D. Kharitonov [1948–1950]. Selected spiders and scorpions were also presented in A.V. Ivanov's "The major practical work on Invertebrates" [1946, second edition 1983].

In 1962, fossil arachnids were reviewed by V.B. Dubinin in the corresponding volume of the treatise "Principles of Palaeontology" [Dubinin, 1962].

The macrotaxonomy of arachnids (at family and higher levels) was elaborated by acarologists and general arachnologists such as A.A. Zakhvatkin [1952], V.B. Dubinin [1959; etc.] and, to a lesser extent, by A.B. Lange [1962; etc.]. Unfortunately, these original papers and reviews were mainly published in Russian without proper English abstracts.

The period of descriptive taxonomy

The third period started with the production of three identification manuals to spiders by N.S. Azheganova [1968], A.S. Utochkin [1968] and V.P. Tyshchenko [1971] (Figs 21, 22), and furthermore with the treatise of A.V. Ivanov [1965; Fig. 23]. The publication of these books resulted in increasing numbers of students dedicated to spiders, mainly in Leningrad (V.P. Tyshchenko's research group) and Perm (the

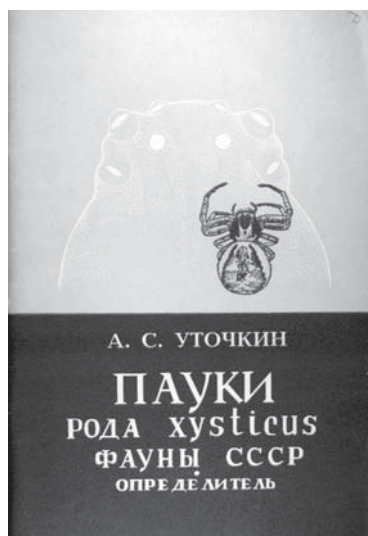


Fig. 21. Identification book for *Xysticus* by A.S. Utochkin [1968].

Рис. 21. Определитель А.С. Уточкина [1968] по роду *Xysticus*.

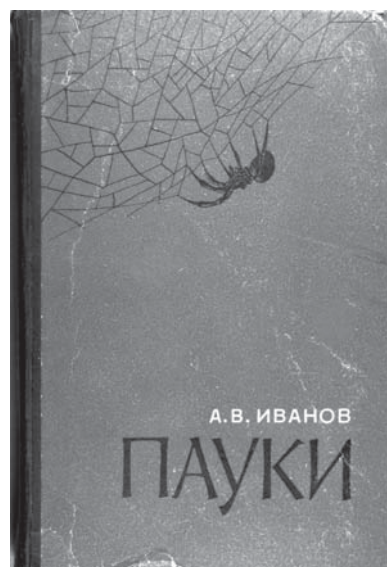


Fig. 23. The treatise on spiders, by A.V. Ivanov [1965].

Рис. 23. Пособие по паукам А.В. Иванова [1965].



Fig. 22. The identification guide to spiders of the European part of the USSR, by V.P. Tyshchenko [1971].

Рис. 22. Определитель пауков европейской части СССР В.П. Тыщенко [1971].

research group of D.E. Kharitonov and A.S. Utochkin). Of those new students, E.M. Andreeva (Fig. 24), with her pioneer book on the

spiders of Tadjikistan [1976; Fig. 25], is especially commended here; a brave and keen arachnologist, she made a real breakthrough in the contemporary knowledge of Central Asian spiders. Her unique collections still serve as a source for conducting revisions and taxonomic surveys of that area. The first scrupulous taxonomic revision of *Pardosa* (Lycosidae) was carried out by A.A. Zyuzin [1979] and seems to have remained the most comprehensive one since that time.

In the late 1970s–1990s, the spider collections of the Zoological Institute of the USSR Academy of Sciences (St.-Petersburg) were curated by V.I. Ovtsharenko (now in New York).

In Moscow, arachnological studies were renewed in the late 1970s (K.Yu. Eskov and A.V. Tanasevitch). Spiders in the collection of the Zoological Museum of the Moscow State University were first re-examined in 1980 by A.B. Nenilin (Tashkent), and later by K.G. Mikhailov (the curator of this museum since 1983). After the Second World War, this collection was visited only once, in 1967 by J. Buchar (Czechoslovakia).

In the mid 1980s, a number of young active arachnologists appeared both in Leningrad



Fig. 24. Ekaterina Mikhailovna Andreeva (born 1940); a famous representative of the Leningrad arachnological school and the author of "Spiders of Tajikistan" [1976], which still remains the only comprehensive taxonomic book on spiders of central Asia.

Рис. 24. Екатерина Михайловна Андреева (родилась в 1940); известная представительница ленинградской арахнологической школы и автор "Пауков Таджикистана" [1976], книги, которая все еще остается единственной полноценной таксономической сводкой по центральной Азии.

(Yu.M. Marusik and D.V. Logunov) and Perm (S.L. Eshyunin).

Since the late 1980s, the number of faunistic and taxonomic papers has increased immensely and has resulted in the appearance of a new journal 'Arthropoda Selecta' launched in 1992, as well as several regional catalogues [Krasnobaev & Matveev, 1993; Eskov, 1994; Eshyunin & Efimik, 1996; Logunov & Marusik, 2000; Marusik *et al.*, 2000; Matveev *et al.*, 2003], and even a regional monograph on the spiders of Georgia [Mkheidze, 1997]. A general catalogue was published by K.G. Mikhailov in 1997, with subsequent additions in 1998–2000 (now available as an online version; Mikhailov [2003]). A large monograph revising the genus *Yllenus* (Salticidae) was recently produced by D.V. Logunov and Yu.M. Marusik [2003].

Some foreign arachnologists have contributed greatly to arachnological studies in Russia,

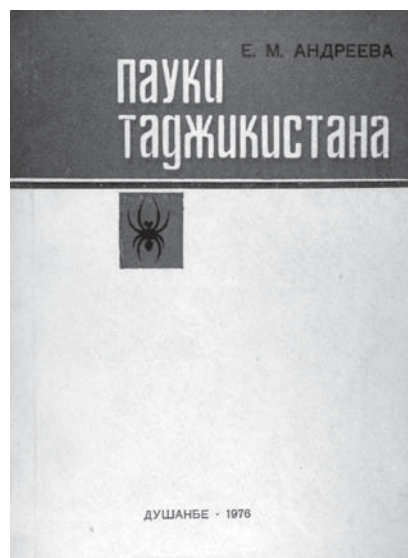


Fig. 25. The book on Tajikistan spiders by E.M. Andreeva [1976].

Рис. 25. Книга Е.М. Андреевой [1976] по паукам Таджикистана.

especially since the late 1980s, including such famous specialists as J. Prószyński, J. Martens, W. Schawaller, W. Starega, S. Koponen, T. Kronstedt, H. Ono and some others.

Taxonomy of the smaller orders was studied by V.Ya. Fet (scorpions; 1980s), A.V. Gromov (scorpions, solpugids; 1990s–present), S. Dashdamirov (pseudoscorpions; 1990s). The study of opilionids was re-started only in the late 1990s (A.N. Chemeris, D.V. Logunov, G.Sh. Farzalieva, etc.).

Macrotaxonomic studies have been performed by Ya.I. Starobogatov [1985a,b, 1990, 1991; for all arthropods], K.Yu. Eskov and S.L. Zonshtein [1990; etc.], and by O.A. Melnikov *et al.* [1992].

Russian arachnological schools

Three main arachnological groups, or schools, can be recognized in Russia. The oldest is the research group of the Perm State University founded in 1916. The first native arachnologist, D.E. Kharitonov (1892–1970) grew up under the supervision of D.M. Fedotov, an arachnologist from St.Petersburg. His

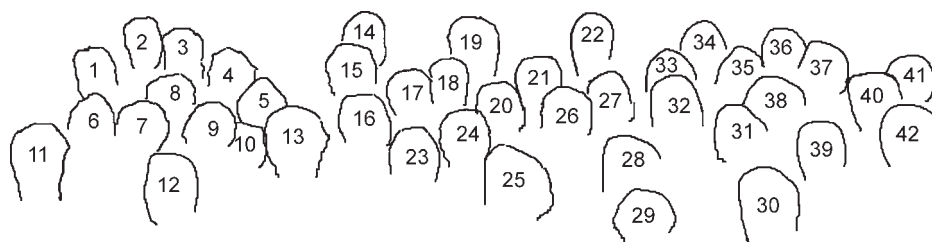


Fig. 26. Participants of the First All-Union Arachnid Conference: 1 — A.Yu. Tsellarius, 2 — S.L. Esyunin, 3 — K.Yu. Eskov, 4 — A.A. Zyuzin, 5 — V.E. Pichka (Gurianova), 6 — S.F. Kuznetsov, 7 — S.D. Uzenbaev, 8 — S.N. Danilov, 9 — E.M. Zhukovets, 10 — M.V. Legotai, 11 — Ya.I. Starobogatov, 12 — A.S. Utochkin, 13 — V.P. Tyshchenko, 14 — A.B. Nenilin, 15 — S.V. Mironov (acarologist), 16 — M.T. Sternbergs, 17 — A.V. Tanasevitch, 18 — I. Kabak, 19 — S.L. Zonstein, 20 — N.A. Kalinichev, 21 — V.Ya. Fet, 22 — K.G. Mikhailov, 23 — V.I. Ovtsharenko, 24 — N.M. Pakhorukov, 25 — L.G. Savelieva, 26 — N.Zh. Ashikbaev, 27 — N.Yu. Polchaninova, 28 — T.I. Oliger, 29 — G.A. Yanyuk (Sekirova), 30 — V. Filippova (technical assistant), 31 — K.F. Sedykh, 32 — P.M. Dunin, 33 — T.V. Pavlenko, 34 — unknown postgraduate student, entomologist, 35 — Ch.K. Tarabaev, 36 — V.A. Krivokhatskiy (entomologist), 37 — A.V. Ponomarev, 38 — V. Bragina, 39 — M.V. Izmailova, 40 — Yu.M. Marusik, 41 — D.V. Logunov, 42 — unknown student.

Рис. 26. Участники первой всесоюзной арахнологической конференции: 1 — А.Ю. Целлариус, 2 — С.Л. Есюнин, 3 — К.Ю. Еськов, 4 — А.А. Зюзин, 5 — В.Е. Пичка (Гурьянова), 6 — С.Ф. Кузнецов, 7 — С.Д. Узенбаев, 8 — С.Н. Данилов, 9 — Е.М. Жуковец, 10 — М.В. Леготай, 11 — Я.И. Старобогатов, 12 — А.С. Уточкин, 13 — В.П. Тыщенко, 14 — А.Б. Ненилин, 15 — С.В. Миронов (акаролог), 16 — М.Т. Штернбергс, 17 — А.В. Танасевич, 18 — И. Кабак, 19 — С.Л. Зонштейн, 20 — Н.А. Калинин, 21 — В.Я. Фет, 22 — К.Г. Михайлов, 23 — В.И. Овчаренко, 24 — Н.М. Пахоруков, 25 — Л.Г. Савельева, 26 — Н.Ж. Ашикбаев, 27 — Н.Ю. Полчанинова, 28 — Т.И. Олигер, 29 — Г.А. Янюк (Секирова), 30 — В. Филиппова (лаборант), 31 — К.Ф. Седых, 32 — П.М. Дунин, 33 — Т.В. Павленко, 34 — неизвестный аспирант-энтомолог, 35 — Ч.К. Тарабаев, 36 — В.А. Кривохатский (энтомолог), 37 — А.В. Пономарев, 38 — В. Брагина, 39 — М.В. Измайлова, 40 — Ю.М. Марусик, 41 — Д.В. Логунов, 42 — неизвестный студент.



Fig. 27. Participants of the Second All-Union Arachnid Conference (Perm State University, 11 March 1988): Sitting (from left to right): Yu.I. Korobeinikov, V.A. Matveev, Yu.P. Krasnobaeв, A.S. Utochkin, P.M. Dunin, L.G. Savelieva, L. Komarova, T.P. Ryabikova, N.M. Pakhorukov, T.I. Oliger, E.P. Narchuk (dipterologist), S.V. Ovchinnikov, N.A. Chebotareva, A.A. Zyuzin; standing (from left to right): S.L. Zonstein, D.V. Logunov, K.Yu. Eskov, S.L. Esyunin, A.B. Polyanin, V.E. Efimik, Ch.K. Tarabaev, Yu.M. Marusik, N.E. Ergashev, E.M. Zhukovets, unknown PSU student, A.V. Kulik, N.Yu. Polchaninova, A.V. Tanasevitch, unknown PSU student, N.A. Kalinichev, K.G. Mikhailov, S.D. Usenbaev, A.V. Ponomarev.

Рис. 27. Участники второй всесоюзной арахнологической конференции (Пермский Университет, 11 марта 1988): Сидят (слева направо): Ю.И. Коробейников, В.А. Матвеев, Ю.П. Краснобаев, А.С. Уточкин, П.М. Дунин, Л.Г. Савельева, Л. Комарова, Т.П. Рябикова, Н.М. Пахоруков, Т.И. Олигер, Е.П. Нарчук (диптеролог), С.В. Овчинников, Н.А. Чеботарева, А.А. Зюзин; стоят (слева направо): С.Л. Зонштейн, Д.В. Логунов, К.Ю. Еськов, С.Л. Есюнин, А.В. Полянин, В.Е. Ефимик, Ч.К. Тарабаев, Ю.М. Марусик, Н.Е. Эргашев, Е.М. Жуковец, неизвестный аспирант, А.В. Кулик, Н.Ю. Полчанинова, А.В. Танасевич, неизвестный аспирант, Н.А. Калинин, К.Г. Михайлов, С.Д. Узенбаев, А.В. Пономарев.

successors have been (A.S. Utochkin in the 1960s), N.M. Pakhorukov (in the 1970s) and S.L. Esyunin (in the 1990s). In Georgia, T.S. Mkheidze, who was a postgraduate of Kharitonov, has been working since the late 1930s.

The Leningrad group was founded in the early 1970s by Prof. V.P. Tyshchenko, and, to a lesser extent by the general zoologist A.I. Ivanov and the parasitologist Yu.S. Balashov. Students of this school now work in Russia (Magadan, etc.), Kazakhstan (Alma-Ata), and even in the USA (New York; V.I. Ovtsharenko) and the UK (Manchester; D.V. Logunov). In Leningrad, this group declined in the late 1990s. Earlier, during the first third of the twentieth century, arachnologists from St.-Petersburg (Leningrad during the Soviet period) mainly studied the smaller arachnid orders (scorpions, solpugids, opilionids, pseudoscorpions) rather than spiders. Important contributions to arachnid morphology, anatomy, embryology and even karyology were made during that time (E.N. Pavlovsky, P.P. Ivanov, I.I. Sokolov, etc.).

The Moscow group appeared in the late 1970s and included graduates from two main institutions: the Department of Entomology of the Moscow State University (K.Yu. Eskov and K.G. Mikhailov) and the Department of Zoology of the Moscow Teacher's University (A.V. Tanasevitch). Previously, the Moscow group existed at the end of the nineteenth and the beginning of the twentieth century due to researchers at the Zoological Museum of the Moscow State University (P.R. Freiberg, N.S. Grese, S.V. Pokrovsky and V.I. Pereleshina), but declined in the early 1930s. General zoologists from the Moscow zoological school founded by G. Fischer von Waldheim at the beginning of the nineteenth century studied the morphology and behaviour of spiders and other arachnids in the 1880s–1890s (V.A. Vagner, V.M. Schimkevitch, A.I. Kroneberg, etc.).

The Arachnological Section of the All-Union Entomological Society was formally established in 1984, and then in 1992 was transformed into the Eurasian Arachnological Society. Three

national arachnological meetings have been organized (Leningrad, 1984; Perm, 1988; Alma-Ata, 1992; see Figs 26, 27). Since 1989, Russian arachnologists have participated in most international (European and American) arachnological congresses, conferences, colloquia and meetings. The latest such meeting was the 21st European Colloquium of Arachnology, which was held in St.-Petersburg in 2003.

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