International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2019): 7.583

Species Diversity of Reptile Nematodes Uzbekistan

E. F. Ikromov

Namangan State University

Abstract: ***The article presents the results of long-term studies on the species diversity of reptile nematodes in Uzbekistan, which are represented by 62 species belonging to 28 genera, 12 families, and 3 orders of parasitic nematodes. The richest species diversity was observed in nematodes from the family Pharyngodonidae and Oxyuridae - 14 species each, followed by the family Physalopteridae - 13 species, in other families the number of species is from 1 to 5 species. For each nematode species, the systematic position, host range, and location of their detection are indicated.***

Keywords: reptiles, nematode, nematodofauna, biodiversity, Uzbekistan.

1. Introduction

60 species of reptiles live in various geographical and ecological conditions of Uzbekistan. Despite this biodiversity of reptiles, their helminthic fauna, including nematodes, is still very poorly studied. There are several reports in the scientific literature (1-4) collected by several herpetologists and parasitologists in the last century. At present, there is no generalizing work that would indicate a complete list of the species composition of reptile nematodes and their distribution area.

From 2000 to the present, the subject of the author's research is parasitic nematodes of reptiles of Uzbekistan, part of which was published earlier (5-10).

Purpose of this paper: on the basis of their own research and literature data, systematically compile the species composition of nematodes, indicating their hosts and places of detection on the territory of Uzbekistan.

2. Material and methods of research

Reptiles were harvested in various biocenoses in all vertical zones of Uzbekistan. Complete helminthological autopsies of reptiles were performed according to the traditional method according to K. I. Scriabin (11).

In 2000-2019, 2,568 reptiles belonging to 53 species and subspecies were examined. Collection, fixation and cameral treatment of helminthological material was carried out by generally accepted methods according to I. E. Bykhovskaya-Pavlovskaya (12). the determination of nematodes was carried out on total preparations under the MBI-4 microscope. The monograph of V. P. Sharpilo (13) was used to identify the species belonging to nematodes.

3. Results and Discussion

According to the results of long-term studies, the species composition of reptile nematodes in Uzbekistan is represented by 62 species, which are grouped into 28 genera, 12 families, and 3 orders of parasitic nematodes.

Systematic review of helminths
Type Nemathelminthes Schneider, 1973
Class Nematoda Rud., 1808
Order Rhabditida Chitwood, 1933
The Family *Rhabdiasidae* Railliet, 1915

***Rhabdias fuscovenosus* (Railliet, 1899)**
Host: *Natrix tessellata* (Laurenti, 1768), *Coluber ravergieri* Menetries, 1832, *Elaphe dione* (Pallas, 1773), *Psammophis lineolatus* (Brandt, 1838), *Macrovipera lebetina* (Linnaeus, 1758).
Location: throughout Uzbekistan, except for the Samarkand region.
***Paraentomelas kazachstanika* (Sharpilo et Vakker, 1972)**
Host: *Pseudopus apodus* (Pallas, 1775).
Location: Samarkand region.
***Hexadontophorus ophisauri* (Kreis, 1940)**
Host: *Trapelus sanguinolentus* (Pallas, 1814), *Pseudopus apodus* (Pallas, 1775).
Location: Jizzakh, Namangan, Ferghana, Tashkent (Khumsan village, Bostanlyk district) and Syrdarya regions.
The family Strongyloididae Chitwood et Melntosh, 1934
***Strongyloides mirzai* (Singh, 1954)**
Host: *Eryx tataricus* (Lichtenstein, 1823), *Natrix tessellata* (Laurenti, 1768), *Psammophis lineolatus* (Brandt, 1838).
Location: Surkhandarya, Syrdarya, Navoi regions, Ferghana valley and Tashkent city.
***Strongyloides darevskyi sp. nov.* (Sharpilo, 1976)**
Host: *Eremias velox* (Pallas, 1771).
Location: Surkhandarya (Sherabad district) region.
Order Ascaridida Skryabin et Schulz, 1938
The Family Ascarididae Blanchard, 1849
***Hexametra skrjabini* (Markov et Bogdanov, 1960)**
Host: *Coluber karelinii* (Brandt, 1838).
Location: Kashkadarya and Surkhandarya regions.
***Ophidascaris najae* (Gedoelst, 1916)**
Host: *Natrix tessellata* (Laurenti, 1768), *Psammophis lineolatus* (Brandt, 1838).
Location: Tashkent region.
***Ophidascaris sp.* (Kuchbaev, Kucharova et al., 2001)**
Host: *Pseudopus apodus* (Pallas, 1775).
Location: Ferghana valley.
***Polydelphis attenuata* (Molin, 1858)**
Host: *Coluber karelinii* (Brandt, 1838), *Naja oxiana* (Eichwald, 1831).
Location: Jizzakh and Bukhara regions.
Polydelphis sp.
Host: *Coluber karelinii* (Brandt, 1838).
Location: Ferghana (Rishtan district) region.
The Family Angusticaecidae Mosgovoy, 1951
***Amplicaecum schikhobalovi* (Mosgovoy, 1950)**

Host: *Eremias velox* (Pallas, 1771), *Varanus griseus* (Daudin, 1803), *Natrix tessellata* (Laurenti, 1768), *Psammophis lineolatus* (Brandt, 1838), *Naja oxiana* (Eichwald, 1831), *Macrovipera lebetina* (Linnaeus, 1758).

The Family Atractidae Travassos, 1917

***Atractis dactyluris* (Rud., 1819)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Surkhandarya, Ferghana, Namangan, Andijan, Kashkadarya, Khorezm and Tashkent regions.

The Family Oxyuridae Cobbold, 1864

***Tachygonetria longicollis* (Schneider, 1866)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Kashkadarya and Bukhara regions, Ferghana valley.

***Tachygonetria lobota* (Dubinina, 1949)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Surkhandarya (Sherabad district) region.

***Tachygonetria macrolaimus* (Linstov, 1899)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Surkhandarya (Sherabad district) region.

***Tachygonetria torticolis* (Rees, 1935)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Surkhandarya (Sherabad district) region.

***Tachygonetria conica* (Drasche, 1884)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Namangan region.

Tachygonetria dentata (Drasche, 1884)

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Namangan region.

***Mehdiella stylosa* (Thapar, 1925)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Surkhandarya, Ferghana, Namangan, Andijan, Kashkadarya, Khorezm and Tashkent regions.

***Thaparia thapari* (Dubinina 1949)**

Host: *Agrionemys (Testudo) horsfieldii* (Gray, 1844).

Location: Surkhandarya, Ferghana, Namangan, Andijan, Kashkadarya, Khorezm and Tashkent regions.

***Parapharhyngodon dogieli* (Markov et Bogdanov, 1965)**

Host: *Laudakia himalayana* (Steindachner, 1869), *Trapelus sanguinolentus* (Pallas, 1814).

Location: Navoi, Surkhandarya (Katta-kum desert, Kugitang) and Ferghana valley (Shakhimardan village and Ok-kum desert).

***Parapharhyngodon brevicaudatus* (Bogdanov et Markov, 1955).**

Host: *Phrynocephalus strauchi* Nikolsky, 1899, *Trapelus sanguinolentus* (Pallas, 1814).

Location: Samarkand and Surkhandarya (Kugitang) regions, as well as the Ferghana valley.

***Parapharhyngodon skrjabini* (Vakker, 1969)**

Host: *Trapelus sanguinolentus* (Pallas, 1814), *Pseudopus apodus* (Pallas, 1775).

Location: Namangan and Kashkadarya regions.

***Parapharhyngodon szczerbaki* (Radchenko et Sharpilo, 1975)**

Host: *Phrynocephalus mystaceus* (Pallas, 1776), *Ph. strauchi* (Nikolsky, 1899), *Laudakia lehmanni* (Nikolsky, 1896), *Trapelus sanguinolentus* (Pallas, 1814), *Cyrtopodion fedtschenkoi* (Strauch, 1887), *Eremias intermedia* (Strauch, 1876), *E. velox* (Pallas, 1771).

Location: Navoi (Zeravshan district, Agalyk village), Namangan (Mazgil village, Mingbulak district) and Andijan (Buz district) regions, as well as the Republic of Karakalpakstan.

***Thelandros markovi* (Radchenko et Sharpilo, 1975)**

Host: *Laudakia himalayana* (Steindachner, 1869), *Trapelus sanguinolentus* (Pallas, 1814), *Cyrtopodion fedtschenkoi* (Strauch, 1887).

Location: Navoi, Bukhara, Surkhandarya (Kughitang mountains) and Ferghana (Shakhimardan village) regions.

***Thelandros popovi* (Markov et Bogdanov, 1963)**

Host: *Trapelus sanguinolentus* (Pallas, 1814).

Location: the Surkhan-Darya (the Sherabad district of the ridge. Kugitang).

The Family Pharyngodonidae Travassos, 1919

***Pharyngodon mamillatus* (Linstow, 1897)**

Host: *Eremias arguta uzbekistanica* (Cernov, 1934), *E. grammica* (Lichtenstein, 1823), *Ablepharus deserti* (Strauch, 1867), *Varanus griseus* (Daudin, 1803), *Naja oxiana* (Eichwald, 1831), *Macrovipera lebetina* (Linnaeus, 1758).

Location: Djizak, Surkhandarya, Kashkadarya, Tashkent, Namangan and Andijan regions.

***Pharyngodon termezensis* (Markov et Bogdanov, 1962)**

Host: Cyrtopodion (Mediodactylus) russowi (Strauch, 1887), C. fedtschenkoi (Strauch, 1887), Teratoscincus scincus (Schlegel, 1858).

Location: Surkhandarya (Zarabog village)and Ferghana regions, Samarkand and Termez.

***Pharyngodon elongata* (Markov et Bogdanov, 1961)**

Host: *Eremias intermedia* (Strauch, 1876), *E. velox* (Pallas, 1771).

Location: Surkhandarya region.

***Pharyngodon geckinis* (Lin et Wu, 1941)**

Host: Teratoscincus scincus (Schlegel, 1858).

Location: Navoi (Kyzyl-kum desert) region.

***Pharyngodon sp.* (Siddicov, 1984)**

Host: *Trapelus sanguinolentus* (Pallas, 1814), *Cyrtopodion fedtschenkoi* (Strauch, 1887).

Location: Navoi and Jizzakh regions.

***Spauligodon annaevi* (Sarpilo, 1976)**

Host: *Phrynocephalus strauchi* (Nikolsky, 1899), *Erimias nigrocellata* (Nikolsky, 1896), *E. intermedia* (Strauch, 1876), *E. lineolata* (Nikolsky, 1896), *E. velox* (Pallas, 1771), *Alsophylax laevis* (Nikolsky, 1905).

Location: Andijan (Ulughnar district), Ferghana (Kokand district), Kashkadarya and Surkhandarya regions.

***Spauligodon eremiasi* (Markov et Bogdanov, 1961)**

Host: *Phrynocephalus mystaceus* (Pallas, 1776), *Ph. reticulatus* (Eichwald, 1831), *Eremias arguta* (Pallas, 1773), *E. a. uzbekistanica* (Cernov, 1934), *E. grammica* (Lichtenstein, 1823), *E. intermedia* (Strauch, 1876), *E. nigrocellata* (Nikolsky, 1896), *E. scripta* (Strauch, 1867), *E. velox* (Pallas, 1771).

Location: widely distributed throughout Uzbekistan.

***Spauligodon termezensis* (Markov et Bogdanov, 1962)**

Host: *Phrynocephalus strauchi* (Nikolsky, 1899), *Cyrtopodion fedtschenkoi* (Strauch, 1887), *C. (Mediodactylus) russowi* (Strauch, 1887), *Eremias velox* (Pallas, 1771).

Location: Surkhandarya and Namangan (Pap district) regions.

***Spauligodon pseudoeremiasi* (Sharpilo, sp.nov., 1976)**

Host: *Phrynocephalus interscapularis* (Lichtenstein, 1856), *Eremias arguta* (Pallas, 1773), *E. a. Uzbekistanica* (Cernov,

1934), *E. intermedia* (Strauch, 1876), *E. nigrocellata* (Nikolsky, 1896).
Location: Ferghana (Dangara district) and Khorezm region.
***Spauligodon parasskiffi* (Markov et Bogdanov , 1961)**
Host: *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. interscapularis* (Lichtenstein, 1856), *Ph. raddei* (Boettger, 1888), *Ph. reticulatus* (Eichwald, 1831), *Ph. strauchi* (Nikolsky, 1899), *Ph. helioscopus saidaliewi* (Sattorov, 1981), *Eremias grammica* (Lichtenstein, 1823), *E. velox* (Pallas, 1771), *Psammophis lineolatus* (Brandt, 1838).
Location: Namangan, Surkhandarya (Jarkurgan district), Bukhara and Navoi regions.
***Spauligodon saxicolae* (Sharpilo, 1961)**
Host: *Phrynocephalus strauchi* (Nikolsky, 1899), *Eremias arguta* (Pallas, 1773), *E. a. uzbekistsnica* (Cernov, 1934), *E. intermedia* (Strauch, 1876), *E. lineolate* (Nikolsky, 1896), *E. scripta* (Strauch, 1867), *E. velox* (Pallas, 1771).
Location: Surkhandarya, Andijan (Ulagnar district), Fergana (Yazh-Yavan desert on the territory Buvayda) and Namangan region.
***Spauligodon lasertae* (Sharpilo, 1966)**
Host: *Cyrtopodion fedtschenkoi* (Strauch, 1887), *Teratoscincus scincus* (Schlegel, 1858), *Eremias lineolata* (Nikolsky, 1896), *E. scripta* (Strauch, 1867), *E. velox* (Pallas, 1771).
Location: Surkhandarya (Jarkurgan district), Kashkadarya, Ferghana and Namangan regions.
***Spauligodon phrynocephali* (Sharpilo, sp. nov., 1976)**
Host: *Phrynocephalus interscapularis* (Lichtenstein, 1856), *Ph. strauchi* (Nikolsky, 1899), *Eremias arguta* (Pallas, 1773), *E. a. uzbekistsnica* (Cernov, 1934), *E. grammica* (Lichtenstein, 1823), *E. nigrocellata* (Nikolsky, 1896), *E. velox* (Pallas, 1771).
Location: Tashkent, Surkhandarya (Katta-kum desert) and Khorezm regions.
***Skrjabinodon pigmentatus* (Markov et Bogdanov, 1961)**
Host: *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. helioscopus saidaliewi* (Sattorov, 1981), *Erimias nigrocellata* (Nikolsky, 1896).
Location: Andijan, Namangan and Surkhandarya (Katta-kum village, Surkhan-Darya valley, Ak-Kapchigai region).
***Skrjabinidon schikhobalovi* (Annayev, 1973)**
Host: *Trapelus sanguinolentus* (Pallas, 1814), *Pseudopus apodus* (Pallas, 1775), *Crossobamon eversmanni* (Wiegmann, 1834), *Teratoscincus scincus* (Schlegel, 1858), *Eremias lineolate* (Nikolsky, 1896), *E. velox* (Pallas, 1771), *Ablepharus deserti* (Strauch, 1867).
Location: Surkhandarya and Namangan (Yangikurgan district) regions.
The family Cosmocercidae (Railliet et Henry, 1916, Subfam) Travassos, 1925
***Cosmocerca commutata* (Diesing, 1851)**
Host: *Natrix tessellata* (Laurenti, 1768)
Location: Tashkent region.
***Raillietnema uzbekistanica sp.n.* (Ikromov et Azimov, 2003)**
Host: Agrionemys (Testudo) horsfieldii (Gray, 1844).
Location: Namangan (Chust, Turakurgan and Yangikurgan districts) region.
Order Spirurida Chitwood, 1933
The Family Spiruridae Oerly, 1885
***Ascarops strongylina* (Rud., 1819), larvae**
Host (reservoir) : *Pseudopus apodus* (Pallas, 1775), *Eremias arguta* (Pallas, 1773), *E. a. uzbekistsnica* (Cernov, 1934), *E. velox* (Pallas, 1771), *Eryx tataricus* (Lichtenstein, 1823), *Natrix tessellata* (Laurenti, 1768).
Location: the Tashkent, Surkhandarya, Syrdarya and Jizzakh (Nurata district).
Physocephalus sexalatus* (Molin, 1860), *larvae
Host (reservoir): *Laudakia lehmanni* (Nikolsky, 1896), *Pseudopus apodus* (Pallas, 1775), *Crossobamon eversmanni* (Wiegmann, 1834), *Eremias lineolate* (Nikolsky, 1896), *Varanus griseus* (Daudin, 1803), *Coluber nummifer* (Reuss, 1834), *Natrix tessellata* (Laurenti, 1768).
Location: Ferghana valley and Surkhandarya, Syrdarya, Navoi, Tashkent, Jizzakh (Zaamin district) regions, as well as the Republic of Karakalpakstan.
Spirocerca lupi* (Rud.1819), *larvae
Host (reservoir): *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. interscapularis* (Lichtenstein, 1856), *Ph. mystaceus* (Pallas,1776), *Ph. reticulatus* (Eichwald, 1831), *Ph. strauchi* (Nikolsky, 1899), *Trapelus sanguinolentus* (Pallas, 1814), *Pseudopus apodus* (Pallas, 1775), *Cyrtopodion (mediodactylus) russowi* (Strauch, 1887), *Eremias scripta* (Strauch, 1867), *E. velox* (Pallas, 1771), *Ablepharus deserti* (Strauch, 1867), *Varanus griseus* (Daudin, 1803), *Natrix tessellata* (Laurenti, 1768).
Location: Tashkent, Syrdarya, Jizzakh, Samarkand, Namangan, Andijan and Surkhandarya regions.
Vigisospirura potekhini* (Petrow et Potekhina, 1953), *larvae
Host (reservoir): *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. reticulatus* (Eichwald, 1831), *Ph. sogdianus* (Cernov, 1948), *Trapelus sanguinolentus* (Pallas, 1814), *Cyrtopodion fedtschenkoi* (Strauch, 1887), *Varanus griseus* (Daudin, 1803).
Location: Surkhandarya region, as well as the Ferghana valley.
The Family Gongylonematidae Hall, 1916
Gongylonema pulchrum* (Molin, 1860), *larvae
Host (reservoir): *Phrynocephalus strauchi* (Nikolsky, 1899), *Ablepharus pannonicus* (Fitzinger, 1823), *Coluber karelinii* (Brandt, 1838).
Location: Surkhandarya, Andijan (Buz district) and Namangan (Papsky district) regions, as well as Tashkent.
The Family Physalopteridae Leiper, 1908
Physaloptera clausa* (Rud., 1819), *larvae
Host (reservoir): *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. strauchi* (Nikolsky, 1899), *Eremias intermedia* (Strauch, 1876).
Location: Namangan, Ferghana, Surkhandarya (Termez and Sherabad districts) regions.
Physaloptera praeputiale* (Linstov, 1889), *larvae
Host (reservoir): *Phrynocephalus raddei* (Boettger, 1888), *Trapelus sanguinolentus* (Pallas, 1814), *Alsophylax pipiens* (Pallas, 1814).
Location: Namangan (near the village of Alami, Mingbulak district) and Surkhandarya (semi-fixed sands of Katta-kum) regions.
***Abbreviata uzbekistanica* (Bogdanov et Markov, 1955)**
Host: *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. helioscopus saidaliewi* (Sattorov, 1981), *Ph. mystaceus* (Pallas, 1776), *Ph. reticulatus* (Eichwald, 1831), *Ph. strauchi* (Nikolsky, 1899), *Trapelus sanguinolentus* (Pallas, 1814), *Teratoscincus scincus* (Schlegel, 1858), *Eremias*

velox (Pallas, 1771), *Varanus griseus* (Daudin, 1803), *Psammophis lineolatus* (Brandt, 1838).
Location: Surkhandarya (Katta-kum sands), Jizzakh (Nurata district) regions, as well as the Yaz-Javan deserts in the Ferghana valley.
Abbreviata abbreviata (Rud., 1819)
Host: *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. mystaceus* (Pallas, 1776), *Ph. reticulatus* (Eichwald, 1831), *Laudakia himalayana* (Steindachner, 1869), *Trapelus sanguinolentus* (Pallas, 1814), *Pseudopus apodus* (Pallas, 1775), *Eremias arguta* (Pallas, 1773), *E. a. uzbekistsnica* (Cernov, 1934), *E. nigrocellata* (Nikolsky, 1896), *E. nikolskii* (Bedriaga, 1905), *E. velox* (Pallas, 1771), *Varanus griseus* (Daudin, 1803), *Naja oxiana* (Eichwald, 1831), *Macrovipera lebetina* (Linnaeus, 1758).
Location: throughout the territory of Uzbekistan.
***Abbreviata kazachstanica* (Markov et Paraskiv, 1956)**
Host: *Phrynocephalus sogdianus* (Cernov, 1948), *Laudakia lehmanni* (Nikolsky, 1896), *Trapelus sanguinolentus* (Pallas, 1814), *Pseudopus apodus* (Pallas, 1775).
Location: Andijan, Tashkent, Jizzakh, Namangan, Surkhandarya and Kashkadarya regions.
***Abbreviata schulzi* (Markov et Bogdanov , 1961)**
Host: *Phrynocephalus mystaceus* (Pallas, 1776), *Eremias velox* (Pallas, 1771).
Location: Ferghana (Buwayda and Yazh-Yavan sands) region.
***Abbreviata paradoxa* (Linstow, 1908)**
Host: *Varanus griseus* (Daudin, 1803).
Location: Bukhara, Namangan, Ferghana and Jizzakh regions.
***Abbreviata dentata* (Linstow, 1883)**
Host: *Phrynocephalus strauchi* (Nikolsky, 1899).
Location: Namangan (Gulistan, Mingbulak district) region.
***Abbreviata skrjabini* (Markov, Ivanov, Nikulin et Tchernobai, 1962)**
Host: *Phrynocephalus mystaceus* (Pallas, 1776), *Trapelus sanguinolentus* (Pallas, 1814).
Location: for all populations of steppe agama in Uzbekistan.
***Pseudabbreviata markovi* (Annayev, 1972)**
Host: *Phrynocephalus helioscopus* (Pallas, 1771), *Ph. interscapularis* (Lichtenstein, 1856), *Ph. mystaceus* (Pallas, 1776), *Trapelus sanguinolentus* (Pallas, 1814), *Eremias arguta* (Pallas, 1773), *E. a. uzbekistsnica* (Cernov, 1934), *Eremias lineolata* (Nikolsky, 1896), *Eremias velox* (Pallas, 1771).
Location: Kashkadarya, Namangan and Andijan (Buz district) area.
***Pseudabbreviata sp.* (Radchenko, 1976)**
Host: *Laudakia himalayana* (Steindachner, 1869), *Trapelus sanguinolentus* (Pallas, 1814).
Location: Surkhandarya (Kuhitang) region and Ferghana valley.
***Thubunaea schukurovi* (Annaev, 1973)**
Host: *Eremias velox* (Pallas, 1771).
Location: Kashkadarya region.
Thubunaea sp.
Host: *Phrynocephalus strauchi* (Nikolsky, 1899).
Location: Namangan region.
The Family Thelaziidae Skryabin, 1915
***Skrjabinelazia hoffmanni* (Li, 1934)**

Host: *Ablepharus deserti* (Strauch, 1867).

Location: Andijan (Pakhtabad district) region.

The richest species composition is noted for nematodes from the family Pharyngodonidae - 15 species, followed by families: Oxyuridae-14 species and Physalopteridae-13 species, in the remaining families the number of species is from 1 to 5 species. Among the helminths observed in reptiles, 7 (11.3%) species are larval forms, in this case, reptiles participate as reservoir hosts of helminths of the apatidae.

Studies have shown that 53 reptile species participate in the life cycles of 62 nematode species (Figure 1).

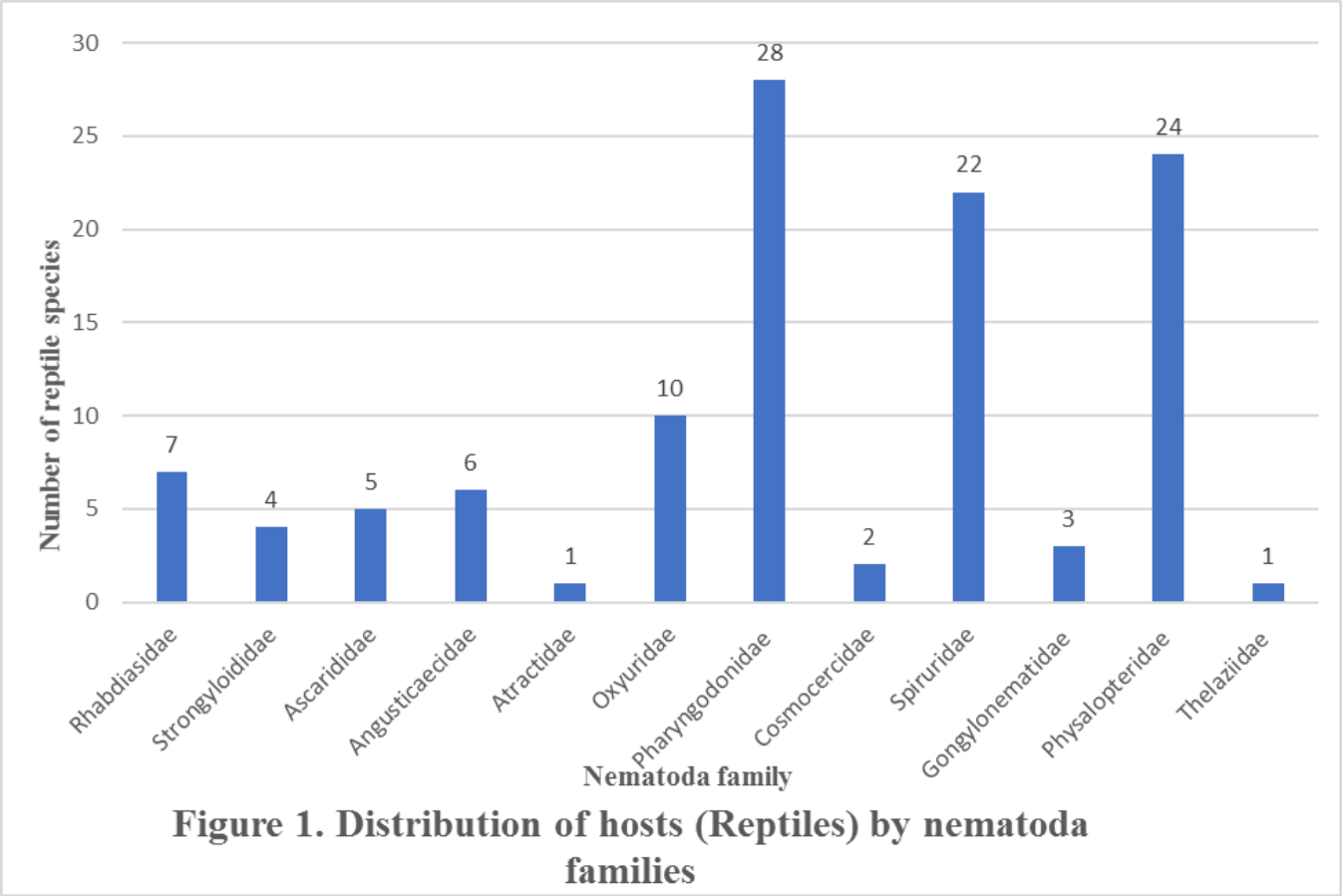

Figure 1. Distribution of hosts (Reptiles) by nematoda families

Figure 1: Distribution of hosts (Reptiles) by nematoda families

According to the figure, nematodes from the families Pharyngodonidae - 28 species, Physalopteridae - 24 species and Spiruridae - 22 species are the most rich in hosts. It can be considered that by the latitude of the arael hosts nematodes from the family Atractidae (1 species), Cosmocercidae (2 species) and Gongylonematidae (3 species) they are highly specific groups of this region.

The results of our research showed that for the first time in the fauna of Uzbekistan, 16 species of nematodes were identified in reptiles: *Atractis dactyluris, Tachygonetria longicollis, T. lobota, T. macrolaimus, T. torticolis, T. conica, T. dentate, Mehdiella stylosa, Thaparia thapari, Parapharhyngodon dogieli, Parapharhyngodon brevicaudatus, Par. szczerbaki, Pharhyngodon mamillatus, Ph. elongata, Spauligodon parasskiffi,* and *Skryabinodon pigmentatus*. New definitive and reservoir hosts were identified for 25 species of parasitic nematodes.

References

[1] Azimov D.A., Kuchbaev A.E., Kucharova I.Sh., Shakarbaev E.B., Golovanov V.I. Biodiversity of nematodes of reptiles in desert ecosystem // Russian Journal of Nematology. - 2001. - Vol . 9, No. 2. - P. 144.

[2] Kuchbaev A., Kucharova I., Azimov D. E. F. Ikromov Helminths of reptiles of Uzbekistan // Uzb. Biol.j. – Tashkent, 2001.- No. 2.-P. 53-56.

[3] Mavlanova R. On the helminth fauna of some species of reptiles Jizzakh region // Uzb. Biol. W., 1989. - No. 1. - Pp. 54-55.

[4] Matchanov N. M., Dadaev S., Kabilov T. K., Siddikov B. H. Helminths of reptiles // Helminths of animals of the desert communities of Uzbekistan // Tashkent: Science, 1989. – S. 44-46.

[5] Ikromov F. E., Azimov D. A., Vashetko E. V. Seasonal dynamics of infection of helminths of reptiles of the North-Eastern part of Central Fergana // Proceedings of chemical-biological Sciences. - Tashkent, 2002. - No. 1. - pp. 47-49.

[6] Ikromov E. F., Vashetko E. V. Ecological and faunal analysis of endemic species and subspecies of reptiles of the Ferghana valley of Uzbekistan // Biologiya-nauka XXI veka [Biology-science of the XXI century]. 7th Pushchinskaya School-Conference of Young Scientists. - Pushchino, 2003. - P. 175.

[7] Ikromov E. F., Myuong Rae Cho. On new Representatives of the Helminthofauna of Reptiles (Testudines and Saura) in Uzbekistan / / Journal of Asia-Pacific Entomology, 2004. - Vol. 7, No. 1. - P. 14-17.

[8] Ikromov E. F. On the finding of a female nematode-Parapharhyngodon szszerbaki in reptiles in Uzbekistan / / 1st scientific and practical conference of International Becker readings. Volgograd, 2010, pp. 392-393.

[9] Ikromov E. F. Fauna and ecology of helminths of reptiles of Uzbekistan // Vestnik AS RUz, 2006. - no. 2. - Nukus. - pp. 19-20.

[10] Ikromov E. F. Helminthofauna of amphibians, reptiles of Uzbekistan and factors of its formation // Bulletin of the CMT Academy of Sciences of Uzbekistan, 2019. - No. 3. - Nukus. - S. 40-43.

[11] Scriabin K. I. Method of complete helminthological dissections of vertebrates, including humans. - Moscow: publishing house of the 1st Moscow State university, 1928. - 45 p.
[12] Bykhovskaya-Pavlovskaya I. E. Parasitological study of fish. Leningrad: Science, 1969. - 108 p. (Methods of parasitological research, vol. 1).
[13] Sharpilo V. P. Parasitic worms of reptiles of the fauna of the USSR systematics, chronology, biology. Kiev: Naukova dumka, 1976. - 287 p.