

The Distribution of Amphibians in the Volga-Kama Region

VALERIAN I. GARANIN

Kazan State University, Kazan, Russia; For correspondence: Russia 420029 Kazan, P.O. Box 220

Accepted 10 March 1999

РЕЗЮМЕ. Распространение земноводных в Волжско-Камском крае. В.И. Гаранин. Обзор данных о распространении земноводных в Волжско-Камском крае. Даны карты точек находок и кадастры распространения сибирского углозуба (*Salamandrella keyserlingii*), обыкновенного (*Triturus vulgaris*) и гребенчатого (*T. cristatus*) тритонов, краснобрюхой жерлянки (*Bombina bombina*), обыкновенной чесночницы (*Pelobates fuscus*), обыкновенной (*Bufo bufo*) и зеленой (*B. viridis*) жаб, озерной (*Rana ridibunda*), прудовой (*R. lessonae*), съедобной (*R. kl. esculenta*), остромордой (*R. arvalis*) и травяной (*R. temporaria*) лягушек. Данные охватывают 719 точек находок по 230 административным районам, 15 областям и республикам. Приводятся годы наблюдений и источники информации.

ABSTRACT. Overview of the data on the distribution of *Salamandrella keyserlingii*, *Triturus vulgaris*, *T. cristatus*, *Bombina bombina*, *Pelobates fuscus*, *Bufo bufo*, *B. viridis*, *Rana ridibunda*, *R. lessonae*, *R. kl. esculenta*, *R. arvalis* and *R. temporaria* to the east of the Russian Plain, in the Volga and Kama river basins, between 52° and 59°N and 44-56° E. Information on each species includes lists of localities (totally 719 localities for 230 administrative districts, 15 provinces and republics) with data on years of observation and sources of data as well as maps.

STUDY AREA

The Volga-Kama region is the territory at the east of the Russian Plain, formed by the basin of the Volga River and its tributary Kama, between 52 and 59°N and 44-56°E, i.e. between the meridians of Saransk and Ufa cities and parallels of Kirov and Orenburg cities (Popov, 1960). This area has been studied by zoologists from Kazan City for many years. The region covers about 525 thousand square km (this paper, however, embraces more than 700 thousand sq. km). This area is much larger than any European country, even those such as the Ukraine.

The region includes the lowlands of the valleys of the Volga, Kama, Vyatka, Belaya, Sura, Sviyaga and other rivers, as well as elevated hilly areas, such as the northern part of the Obshchii Syrt, Bugulminsko-Belebeevskaya, spurs of Ural Mountains north to the Kama River: Sarapulskaya and Mozhginskaya elevations, many spurs on the right bank of the Kama and the left bank of the Volga: Tikhie Gory, Svinnye Gory, Sokolii Gory, Sorochii Gory, Vyatskii Uval, as well as Privolzhskaya elevation on the right bank of the Volga and its

subdivisions: Uslonskie Gory, Tetyushskie Gory, Shchuchii Gory, Undorskie Gory, Sengileevskie Gory, Zhiguli etc. In the south-east of the region, and including also the northern and western districts of Orenburg Province, part of the Ural river basin is included: namely the Sakmara River and its tributaries. In general, the Volga-Kama Region includes (either partly or totally) 15 administrative provinces and republics to the east of European Russia: the republics of Marii El, Chuvashia, Tatarstan, Udmurtia, Bashkortostan, as well as Ulyanovskaya and Samarskaya provinces, almost the whole of the Nizhegorodsk and Samara provinces, the south-east region of the Kostroma and the south-west of the Perm provinces, the eastern part of Mordovia Republic and the Penza Province, the extreme north of the Saratov Province, as well as the north and west of the Orenburg province. The amphibian distribution in these areas is described in this paper.

Vegetation types in the region includes taiga forests, namely, dark taiga in the north-east and the southern taiga (pine forests) in the north-west. There are also broad-leaved forests with oak and associated plants in the west, secondary small-leaved forests with birch and aspen, mixed forests and finally forest steppe and steppe towards the south. The expansion of the open landscapes from the south is alleviated by anthropogenic activity.

Air temperatures above freezing are important for amphibians. In this regard, it should be observed that mean daily temperatures exceed $+10^{\circ}\text{C}$ by 1 May in the south of the region (north of Saratov and Samara provinces but not the north of Orenburg Province). To the north of the region (Kostroma and Kirov provinces, north of Udmurtia and Perm Province) this takes place at least ten days later (Popov, 1960). The latter line is almost coincident with the southern margin of the range of *Salamandrella keyserlingii* and the northern margin of the range of *Triturus cristatus*. North of this line, stable snow cover remains for at least 150 days of the year. From the south of the other line mentioned above (exceeding of mean daily temperatures above $+10^{\circ}\text{C}$ since 1 May) the snow cover remains for less than 140 days.

Landscape types in the Volga-Kama Region are quite diverse and can be distinguished into 24 large major types. Four of them are related to dark forest types composed of spruce and fir with an admixture of pine and leafed trees; 5 relate to pine with an admixture of broad-leaved trees; 2 belong to broad-leaved forests; 2 to birch forests, 2 to aspen forests, as others comprise floodland forests and hills. Other habitat complexes are forest rides and band forests; steppe areas, including pastures; meadows, including floodland meadows; shores of water bodies and fields; and human settlements. Each group includes several subdivisions. Although this scheme was elaborated for birds in 1977, it is applicable also to amphibians.

HISTORY OF STUDY

The first mention of some of the amphibian and reptile species in the Volga-Kama Region belongs to the time of first Academic expeditions (1768 – 1774), when they were

described in this territory: *Rana ridibunda* Pallas, found in the Volga delta and upper reaches, and by J.G. Georgi in spring 1774 in the area of Kazan City (Georgi, 1775; Pallas, 1776, [1814]); *Bufo viridis* Laur., *Pelobates fuscus* Laur., etc. The third volume of the "Zoographia Rosso-Asiatica" by P.S. Pallas, published in 1814 (Svetovidov, 1976) contains data on 11 species of amphibians. Among them, the following species also live in the Volga-Kama Region: *Lacerta aquatica* (= *Triturus cristatus* (Laur.)), *Rana cruenta* (= *Bombina bombina* (L.)), *Rana bufo* (= *Bufo bufo* (L.)), *Rana arborea* (= *Hyla arborea* (L.)), *Rana esculenta* (= *R. esculenta* L., *R. lessonae* Cam.), *Rana temporaria* (= *R. temporaria* L., *R. arvalis* Nilss.). Thus, almost all amphibian species, known here at present, were also noted in the 18th century. Subsequent records do not extend this list significantly (except for *Salamandrella keyserlingii*), but added further minor details. For example, B.V. Krasavtsev found the latter species in July 1930 in the Nizhegorodskii Region (now Kostromskaya Province): this was the first record of this species in Europe (1931); D.L. Nikiforov (1966) in Marii El Republic, A.M. Bolotnikov with co-writers (1968) in Permskaya Province, V.A. Ushakov (1978) in Gorky (Nizhegorodskaya) Province, A.N. Solovjov (1991) in Kirovskaya Province later reported this species. It is more difficult to analyze the priority of other records, but it is possible to determine the first more or less full description of batrachofauna of different parts of the region. For example, for Nizhegorodskaya Province this is the list made by N.A. Varpakhovskii (1888), for Kazanskaya Province lists by N.A. Varpakhovskii (1884, 1885) and M.D. Ruzskii (1894), for Vyatskaya Province by L.K. Krulikovskii (1888 – 1914), and for the Orenburgskii Region by N.A. Zarudnoi (1896). Subsequent overviews have been published after the well-known monograph on the amphibians and reptiles of Russian Empire (Nikolsky, 1918), i.e. during the Soviet era. Among them, the works by P.A. Dryagin (1926) on the Vyatskaya Region, A.N. Formozov (1935) on the Gorky Region, P.V. Terentjev (1935) on Chuvashia, P.A. Polozhentsev (1937, 1941) on the contemporary Ulyanovskaya and Samarskaya provinces, P.A. Polozhentsev and M.G. Khanislamov (1942) on Bashkiria, as well as I.I. Puzanov with cowriters (1942) on Gorky (now Nizhegorodskaya) Province. The second editions of the last two titles were published in 1949 and 1955 respectively.

Since the end of the Second World war in 1945, numerous overviews on particular regions have appeared containing lists of amphibian species. In 1949, the third edition of the well-known guide of amphibians and reptiles of the USSR was published by P.V. Terentjev and S.A. Chernov. The first two editions were published in 1936 and 1940. The work by V.A. Popov and A.V. Lukin (1949) on the vertebrates of the Tatarian ASSR was one of the first regional overviews of this kind to be published after the war. This work contained a list of 10 amphibian species with brief accounts of their ecology. The 2nd and 3rd editions of this book contained chapters on amphibians with necessary additions prepared by V.I. Garanin (1971, 1988). In a book on the fauna of the Urals (Shvarts et al., 1951), amphibians of this region were described and original data on their ecology were presented. In the same year a note on the amphibians of the Kuibyshevskaya

(now Samara) province was published (Shikleev, 1951). A.P. Raiskii (1951, 1954) published data on the amphibians of Chkalovskaya (now Orenburgskaya) Province. Collective work by zoologists from Kazan City headed by V.A. Popov provided the results of studies of the fauna of the flood zone of the Kuibyshevskoe Reservoir. This work includes data on amphibian species in the valleys of the Kama and Volga rivers above the Zhiguli Mountains. This work was published in the Proceedings of Kazan State University in 1954. Amphibian species were noted also in the subsequent collections of papers, "Nature of Penza Province" (1955) and "Nature of Kirovskaya Province" (1960). Data on amphibians of Chuvashia were published by I.M. Oliger et al. (1966), on amphibians of Udmurtia by Yu.K. Popov (1972). Materials from the Volga-Kama Region were used in the well-known books "Animal Life" (A.G. Bannikov ed., 1969, 1985) and the guide to amphibians and reptiles of the USSR (Bannikov et al., 1977).

Later, some data on amphibians were mentioned in the faunistic works on Kirovskaya Province (Koroleva, 1976), Udmurtia (Priezzhev and Popov, 1963), Marii El (Efremov, 1984), Kuibyshevskaya Province (Gorelov, 1990), Chuvashia (Voronov, 1990), Orenburgskaya Province (Gavlyuk et al., 1993), Ulyanovskaya Province (Osipova, 1993) and Bashkiria (Bayanov, 1995). In 1984, the Red Data Book of Bashkiria was published. It listed the following amphibian species as rare in this republic: *Triturus cristatus*, *Bufo bufo*, *Rana lessonae* and *R. temporaria*. In 1995, the Red Data Book of Tatarstan was published. It is not only a manual, but also the official legal document. Only two species of amphibians were included in that Red Data Book, *T. cristatus* and *B. bufo*. Only one general review exists for this territory (Garanin, 1983). However, this work now needs a serious reappraisal. This includes, in particular, data on geographic distributions: the book contains neither names of localities of amphibian records, nor cadastres.

Finally, there are many studies of different aspects of amphibian ecology, in particular habitat distribution, population numbers, food (e.g., Motkova, 1977; Belova, 1965) etc.

SOME PECULIARITIES OF THE AMPHIBIAN DISTRIBUTION

The species composition of reptiles in the Volga-Kama Region becomes richer towards the south. *Vipera ursinii* appears southwards from the Kama River, *Emys orbicularis* from the Cheremshan River, *Eremias arguta*, *Natrix tessellata* and *Elaphe dione* from the Samarskaya Luka, etc. Amphibians, however, display a different pattern. *Salamandrella keyserlingii* exists in the northern part of the region and disappears in the south, although in the recent past it penetrated the southern parts of the region as far as the foothills of the Bashkirian Urals Mountains. The composition of other amphibian species does not change from the north to the south, though some species do become rare: *T. cristatus*, *B. bufo*, *R. temporaria*, *Rana lessonae* and, probably *R. kl. esculenta* disappear from the southern part of the region. *Rana lessonae* has penetrated Eastern Europe from the west via broad-leaved forests, and its range reaches the lower regions of the Vyatka River, except for its lowermost parts, as well as the

Kama and middle Volga rivers and areas of the Zhiguli and Samara Rivers. Northern species of amphibians become more and more seldom from the lower current of the Kama River southwards. The presence of *Rana temporaria* there is clearly associated with underground water sources, while *B. bufo* inhabits the relic areas of wet forests. The distribution of *T. cristatus* populations seems to relate also to clear forest ponds.

At the same time, it is necessary to note the past presence of *T. cristatus* in the delta of the Volga River (Zoological Museum of Kazan University no. DK 15, 4 specimens, Astrakhan City, 19th Century). Probably, They were collected by V. Khelbnikov, who provided *T. vulgaris* from the same location to the Zoological Museum of Russian Academy of Sciences (2 specimens, ZISP 1612 and 1882). A.M. Nikolsky (1918), K.P. Paraskiv and P.M. Butovskii (1960) doubted the validity of this last record. However, there is a specimen of *T. vulgaris* in the Zoological Museum of Kazan University (no. DK 21) labelled as "Temir-baba. Vost. bereg Kasp. morya. T. Peltsam", i.e. "Temir-Baba, eastern shore of Caspian Sea. E. Peltsam". Mr. E. Peltsam worked in Kazan University until the end of the 19th Century, and no doubts may remain here. In addition, L.S. Berg (1923) reported *T. vulgaris* from near the shores of Aral Sea and Balkhash Lake. All these data do not allow us to refute clearly the possibility of the existence of this species there in the past. The same concerns also exist for *T. cristatus*. Both species could have existed much further to the south than at present. It is known that the climate of the Ural-Turgai region, adjacent to the Aral and Caspian seas, was much wetter, and the territory was much more forested in the past than at present. For example, beavers existed in the Emba River (P.P. Suchkin in Kulagin, 1921). This was confirmed by researches by S.V. Kirikov (1959), who reported the existence of dense riparian bushes on the riverbanks of Emba in the past, which would have provided food for beavers. One of the tributaries of the Emba is even called Kunduzdy, i.e. Beaver River.

Past existence of *Hyla arborea* in the Volga-Kama Region poses a special problem. This tree frog has not been reported in this region during the last 100 years, although naturalists did report it earlier. I.P. Falk (1786) reported this species on the rivers Volga and Ural and even in Siberia, near Tobolsk City. The tree frog was mentioned among other amphibians in one of the volumes of "Economic Description of Perm Province" (1813). P.S. Pallas ([1814]) wrote that "*Rana arborea*" exists on the Volga River and, very rarely, in the Southern Siberia. E. Eichwald (1841) reported records of *H. arborea* on the lower Volga. E.A. Eversmann, however, did not note tree frogs in the description of his travels to the South-Western Urals. K. Zerrenner (1853) reported that tree frogs occur fairly often in forests and forest rides in the Permskaya Province. L.P. Sabaneev (1872, 1874) did not observe the tree frog in the Urals, but mentioned some data that "frogs living on trees occur seldom on the south-western slope of the Urals, in linden forests of Nyazepetrovskaya dacha [forest area – S.K.]". V.V. Belov (1887) mentioned the existence of tree frogs in the former Orlovskii County of Vyatskaya Province (now Khalturiskii District of Kirovskaya Province). N.A. Zarudnoi (1896) noted that the tree frog occurs in a fairly small number in Karavaevskaya dacha near the city of Orenburg

(now it is living district of this city). Two decades later A.M. Nikolsky (1918) considered the Don River as the eastern margin of range of this species. He noted that the tree frog was not certainly found along any part on the Volga River. N.D. Grigoriev, a zoologist from Kazan City, heard from hunters in 1960s that frogs living on trees occur in the area of Nyazepetrovsk Town at the north-west of Chelyabinskaya Province, Ufa River basin. Although the bulk of this data contain many dubious sources, we can not doubt the evidence of such eminent naturalists as I.G. Georgi, L.P. Sabaneev and N.A. Zarudnoi. Therefore, the supposition that the tree frog lived on the Volga and the Southern Urals and became extinct later seems to be reasonable. There were no significant climatic changes in these territories during the last 200 years. Therefore, anthropogenic alteration of habitats, and destruction of forests in particular, might provide the cause for extinction of this species. However, better conditions of humidity and density of river network in the past cannot be excluded, especially if we consider the past distribution of beavers and their activity in changing the environment.

Changes produced by people and the subsequent high anthropogenic pressure have combined with natural landscape changes. These are forest cutting, ploughing of steppes and forestless areas, changes in species and age composition of forests, creation of reservoirs along large and medium-sized rivers, urbanization, as well as industrial, agricultural and transport pollution of environment, etc. About 40 years ago, forest cover averaged ca. 21% of the region's area, from 3% in Orenburg Province to 44% in Udmurtia and 52% in Marii El. About 1/3 of their area consisted of secondary birch and aspen forests. In the majority of provinces and republics of the Volga-Kama region, the extent of ploughing varies from 30 to 60% and more. Intensive use of artificial chemicals in agriculture decreased only in the last decade of the 20th Century. Its consequences are not yet completely apparent. Large reservoirs, such as Kuibyshevskoe, Cheboksarskoe, Nizhnekamskoe, Sarapulskoe and Kamskoe, as well as small reservoirs, such as Zainskoe, Karabashskoe, Pavlovskoe etc., consumed flooded meadows, slowed river currents and have become outlets for industrial and other waste. All these influenced the remaining natural water bodies, as well as amphibian populations.

There are 10 cities and towns in the Volga-Kama Region, and 30 of them are large; populations of 5 of them exceed 1 million. There are also many urban agglomerations. Cities, settlements etc. influence local fauna in many ways. The same can be said of mines, sand quarries, oil wells, transport magistral, electric lines, etc. We can note the following aspects of regarding the influence of roads, and especially highways, on animals:

1. Roads as a factor of environmental pollution by heavy metals;
2. Roads as a factor of isolation of populations;
3. Roads as a pathway of dispersal or feeding;
4. Roads as an "ecological riverbed";
5. Roads as a significant mortality factor.

The first factor, pollution, influences amphibians at different stages of their development. It leads to deterioration of the reproductive facilities of a population, its decline and ultimately extinction of a whole population or group of populations, if the animals fail to adapt to the presence of the road.

The second factor causes the isolation of a part of a population or the dividing of a population into several parts which may then develop independently. Populations of *R. lessonae* at lakes Lebyazhie and Glubokie in Kazan City serve as an example of this. This population was divided by the highway between Kazan – Zelenodolsk (Ganeev, 1978).

The third and fourth factors have positive influences on amphibian populations. The presence of food and facilitation of dispersal attract frogs and toads onto roads. The latter are used, for example, by *Bufo viridis* for penetration into forests or for crossing forests. Sometimes these migrants may settle in open areas of forest. Green and brown frogs migrate via ditches along roadsides. These ditches, being filled with water, are used for laying eggs, and are especially useful in areas with a deficiency of water. The final factor above also results from this attraction for amphibians, but its influence in such cases is opposite. Mortality on roads is known for all species of our amphibians, but the extent of it is poorly understood. Mortality occurs during migrations of adult individuals to and from their reproduction sites, as well as affecting juvenile migrations from ponds and to hibernacula. To the greatest extent, this concerns the most conservative species: toads, whose populations or separate micropopulations may face extinction after the construction of road through their migration routes, especially after the destruction of their breeding ponds. The same effects follow landscape changes in urbanized areas. Breeding pools represent the most vulnerable habitat of amphibians. Probably, for some species, e.g. *T. cristatus*, *B. bombina* etc., water pollution and the change of water chemistry are important. Sewage waste from cattle farms seem to influence *B. bombina* and *R. lessonae* to a lesser extent. The latter species is more influenced by industrial pollution. It is never found near sites of industrial outpour, in contrast to *R. ridibunda* and, probably, *R. kl. esculenta*. I observed this peculiarity in the 1950s in the area of Saransk City, Insar River.

Among terrestrial frogs, *R. temporaria* is the most sensitive to alterations in the landscape. This species was practically extinct from the city of Kazan after street surfaces were made permanent and construction of stone buildings took place, as well as flooding of the Kazanka River which contained numerous springs. Populations of *Bombina bombina* have declined significantly. The animals are most vulnerable during their autumn and spring migrations between hibernacula and breeding ponds, and they are vulnerable to the effects of frosts during these terrestrial stages. This occurs particularly when frosts occur early in the autumn or late in the spring. Intensive use of agrochemicals in agricultural areas and adjacent water bodies makes the fire-bellied toads more vulnerable. Other causes of the sharp decline of this species are unknown.

The Edible Frog (*Rana kl. esculenta*) is poorly known in the Volga-Kama Region. However, its distribution there represents a very interesting area of research, because the region contains the north-eastern range margins of three species of the *Rana esculenta* complex. Studies of green frogs in the territory of the Volzhsko-Kamskii Nature Reserve revealed not only morphological but also ecological aspects of interspecific differentiation (Korchagina and Garanin, 1996).

DISTRIBUTIONS OF AMPHIBIAN SPECIES

Data on amphibian distributions by provinces and republics of the Volga-Kama Region and adjacent territories are provided in the following order: name of each species (the same on the map); province (*oblast*, in Russian) or republic within Russian Federation and district (*raion*) according to the present administrative subdivision (sometimes *uezd* – county and *guberniya* – province of the past administrative subdivision are indicated); locality (record); author and year (date) of record, communication and/or publication, or the quotation of museum collections are indicated. In the cadastres, the names of districts and provinces are given as a direct transcription from Russian and not in the English fashion (e.g., Samarskaya Province, Stavropolskii District, except for Samara Province, Stavropol District, where the province and district are called after the names of their administrative centres, Samara and Stavropol, respectively). I used my personal material (author's name is not indicated in such cases), as well as material from the following museums: Zoological Institute of Russian Academy of Sciences, St. Petersburg (ZISP), Zoological Museum of Moscow State University (ZMMU), Zoological Museum of Kazan State University (KSU), Zoological Museum of Nizhnii Novgorod (Gorky) State University (NNSU), Museum of Izhevsk Agricultural Institute (MIAI) and the State United Museum of the Republic of Tatarstan (SUMRT). In the 1950s I examined also collections (expositions) of the lore museums in the cities of Izhevsk, Ufa, Orenburg, Samara, Ulyanovsk and Saransk. Doubtful data, or data requiring further validation, are indicated by a question mark. More general geographic indications (province and larger) were not included in the lists. Where possible, geographic names are indicated according to the current administrative subdivision and designation. The list of references contains not only formally published works, but also diploma works of students. Authors and, where possible, timing are provided for personal communications. If the data from personal communications were published later, reference to that publication is indicated.

Siberian Newt, *Salamandrella keyserlingii* Dybowski, 1870 (Fig. 1)

1. Kostromskaya Province, Pyshchugskii District – Sapozhenkov, 1976 (?); Kuzmin, 1994.
2. Kostromskaya Province, Vokhomskii District – Sapozhenkov, 1976 (?); Kuzmin, 1994.
3. Kostromskaya Province, Ponazyrevskii District, Kiselevo Village – Krasavtsev, 1931a, b; Kuzmin, 1994.
4. Nizhegorodskaya Province, Tonshaevskii District, Pizhma River basin, 2 km SW Pizhma Station – ZISP 4709; V.A. Ushakov, 13.05.1976; Ushakov, 1978.



5. Kirovskaya Province, Afanasievskii District, Kamskii Settlement (17.08.1976 – 1989) – Solovjov, 1991; Kuzmin, 1994.
6. Kirovskaya Province, Luzskii District, Fabrika Settlement – Solovjov, 1991.
7. Kirovskaya Province, Slobodskoi District, Lekma Settlement – Solovjov, 1991.
8. Kirovskaya Province, Zuevskii District, Spasozaozerie Village – Solovjov, 1991.
9. Permskaya Province, Krasnovisherskii District – A.M. Karlyukov, 1968, pers.comm.; Shurakov and Bolotnikov, 1977.
10. Permskaya Province, Dobryanskii District, V. Kvazhva – Voronov et al., 1971.
11. Permskaya Province, Permskii District, Levshino Settlement – Voronov et al., 1971.
12. Permskaya Province, Lysvenskii District – Litvinov, 1984.

13. Permskaya Province, Kungurskii District, Troelga Village – Bolotnikov et al., 1968; Yushkov, 1997.
14. Permskaya Province, Ordinskii District – R.S. Galimzyanov, pers.comm., 1969; Shurakov and Bolotnikov, 1977.
15. Permskaya Province, Kishertskii District, Spas-Barda Village, near Aspa River – Bolotnikov et al., 1968.
16. Marii El Republic, Kilemarskii District, Shusher Settlement – Nikiforov, 1966; Kuzmin, 1994.
17. Permskaya Province, Medvedevskii District, Lyulpany Village – D.L. Nikiforov, pers.comm., 1966.
18. Permskaya Province, Medvedevskii District, Starozhilsk Settlement – L.B. Rybalov, pers. Comm.; Kuzmin, 1994.
19. Udmurtia Republic, Glazovskii District, Chepts River – Volkov, pers.comm.; Kuzmin, 1994.
20. Orenburg Province, Orenburg District, "Ural under Orenburg" – ZISP 2439, 1-25.05.1911, N.N. Navozov – Gabel, 1958; Garanin, 1965, 1983; Kuzmin, 1994.

Smooth Newt, *Triturus vulgaris* (Linné, 1758) (Fig. 2)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981.
2. Nizhegorodskaya Province, Lyskovskii District, Chernaya Maza Settlement – NNSU.
3. Nizhegorodskaya Province, Vorotynskii District, Vasilsursk Settlement – Ruzskiy, 1894.
4. Kirovskaya Province, Murashinskii District, Murashi Town – Koroleva, 1970.
5. Kirovskaya Province, Yuryanskii District, Velikaya River – Koroleva, 1976.
6. Kirovskaya Province, Yuryanskii District, Medyany Settlement – Koroleva, 1976.
7. Kirovskaya Province, Nagorskii District, Nagorsk Settlement; Mulino Settlement – Koroleva, 1970.
8. Kirovskaya Province, Khatlurin Town – Dryagin, 1926.
9. Kirovskaya Province, Orichavskii District, Strizhi Settlement – V. Arbuzov, pers. Comm., 1960s.
10. Kirovskaya Province, Kirov City – Dryagin, 1926; Koroleva, 1976.
11. Kirovskaya Province, Sanchurskii District, Sanchursk Settlement – Koroleva, 1976.
12. Kirovskaya Province, Urzhumskii District, Lazarevo Village – Krulikovskiy, 1902.
13. Kirovskaya Province, Kilmezhskii District, Kilmez Settlement – Koroleva, 1926.
14. Kirovskaya Province, Malmyzhskii District – E.I. Korenberg, pers. comm., 1960s.
15. Kirovskaya Province, Malmyzhskii District, Melet Settlement – Koroleva, 1976.
16. Permskaya Oblast, Dobryanskii District, V. Kvakhva Settlement – Voronov and Zhukova, 1976.
17. Permskaya Oblast, Krasnokamsk Town – S.P. Chashchin, pers. comm., 1960s.
18. Permskaya Oblast, Perm City – S.P. Chashchin, pers. comm., 1960s; Yushkov, 1977.
19. Permskaya Oblast, Permskii District, Sylva Settlement – S.P. Chashchin, pers. comm., 1960s.
20. Permskaya Oblast, Kungurskii District, Kungur Town – ZISP 1741, 7 spec., 1889, Khlebnikov; Yushkov, 1997.
21. Permskaya Oblast, Kungurskii District, "Kungurskaya Lesostep" – Yushkov, 1997.
22. Permskaya Oblast, Kishertskii District, Kishert River – Bolotnikov et al., 1967; Spas-Barda Settlement – Voronov and Zhukova, 1976.
23. Permskaya Oblast, Oktyabrskii District, Chernaya Rechka Settlement.
24. Mordovia Republic, Lyambiskii District, Belogorskii Settlement, 9.1957.
25. Mordovia Republic, Saransk City – V.I. Astradamov, pers. comm., 1970s.
26. Mordovia Republic, Bolshebereznikovskii District, Simkino Village – V.I. Astradamov, pers. comm., 1970s.
27. Chuvashia Republic, Batyrevskii District, Pervomaiskoe Settlement; Tat. Timyashi Village – Tikhvinskii, 1934; Bula River, 6. 1957.
28. Marii El Republic, former Tsarevokokshaiskii County, Kazanskaya Province – Ruzskii, 1894; Gornomariiskii District, Enikeevo Village, 1966.
29. Marii El Republic, Kilemarskii District, Shusher Settlement – E.A. Rodikova, pers. comm., 1997 – 1998.
30. Marii El Republic, Medvedevskii District, Lyulpany Village – D.L. Nikiforov, pers. comm., 1966.

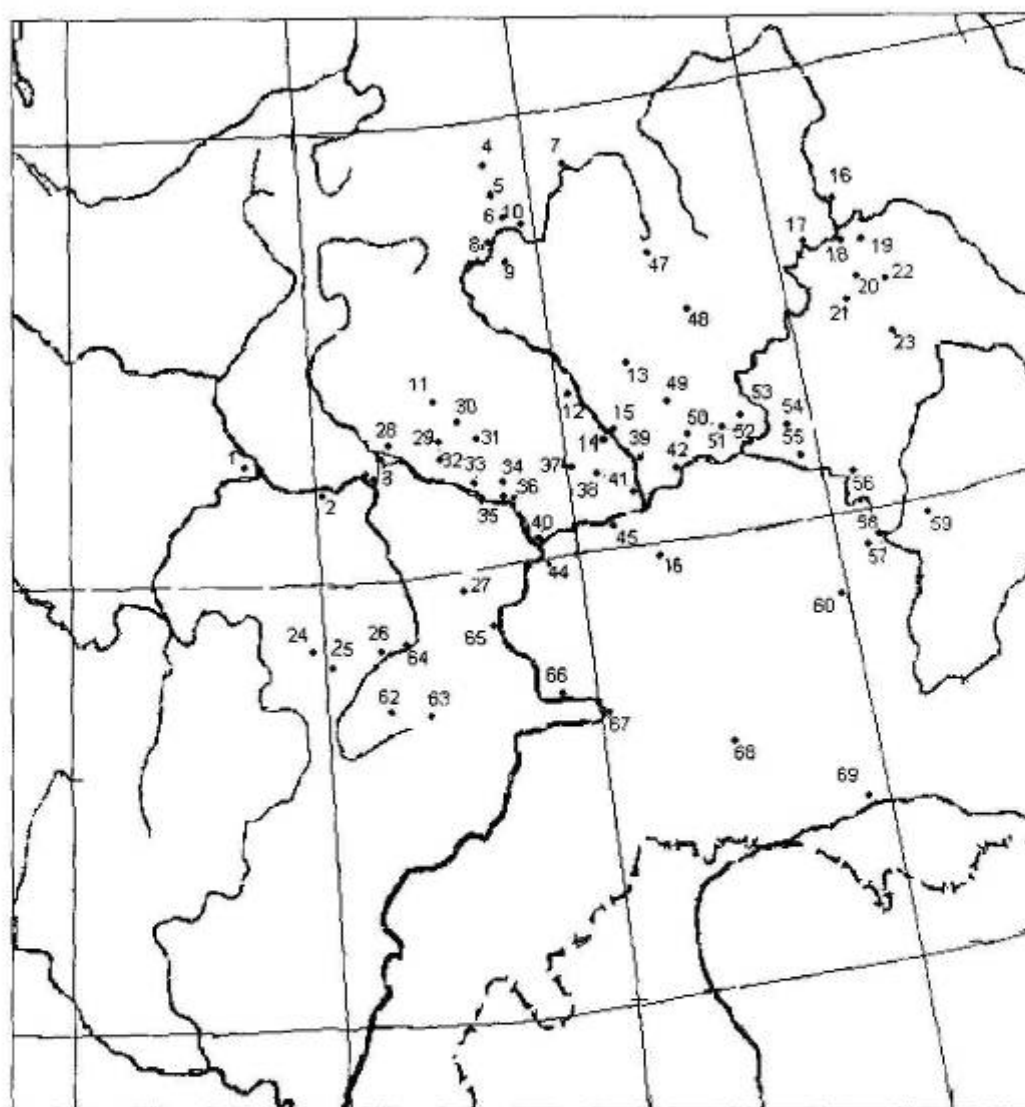


Fig. 2. Distribution of *Triturus vulgaris*.

31. Marii El Republic, Medvedevskii District, Oshlinskii Detdom – Kh.F. Baldaev, pers. comm., 1970.
32. Marii El Republic, Medvedevskii District, Mariiskii Nature Reserve, Palenoe Lake – Yu.S. Kotov, pers. comm., 1972.
33. Marii El Republic, Zvenigovskii District, Marii Chodra Nature Park, Kerebelyak Settlement.
34. Tatarstan Republic, Zelenodolskii District, Volzhsko-Kamiskii Nature Reserve, Raifskii Area – Garanin, 1983.
35. Tatarstan Republic, Zelenodolskii District, Oktyabrskii Settlement.
36. Tatarstan Republic, former Kazanskii County of Kazanskaya Province – Ruzsky, 1894; Kazan City (Botanical Garden of Kazan University: Varpakhovsky, 1885; Kizitsa – SUMRT, 1899; KSU: M.D. Ruzsky, 1894; M.N. Bogdanov, 4.1870; M.Klyki Village – KSU; B. Klyki Village).

37. Tatarstan Republic, Arskii District, Istoki Kazanki Natural Park, 7.1974.
38. Tatarstan Republic, Tyulyachinskii District, B. Nyrsi Village.
39. Tatarstan Republic, Kukmorskii District, Lubyany Settlement.
40. Tatarstan Republic, former Laishevskii County of Kazanskaya Province – Ruzsky, 1894; Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
41. Tatarstan Republic, former Mamadyshevskii County of Kazanskaya Province – Ruzsky, 1894.
42. Tatarstan Republic, Elabuzhskii District, Nizhnayaya Kama natural Park, Bolshoi Bor – khotko and Ganeev, 1993.
43. Tatarstan Republic, Kaibitskii District, Saltyganovo Veillage; Berlibash Village; Araslanovo Village, 7.1966.
44. Tatarstan Republic, Spasskii District, former Komarovka Village; former Malinovka Village, 7.1962.
45. Tatarstan Republic, former Chistopolskii County of Kazanskaya Province – KSU, I. Strelnikov, 1890; Ruzsky, 1894.
46. Tatarstan Republic, Novosheshminskii District, Pokrovskii Settlement, Kichui River, 7.1964.
47. Udmurtia Republic, Yarskii District, Pudem Settlement – G.P. Priezzhev, pers. comm., 1970s.
48. Tatarstan Republic, Krasnogorskii District, Malyagurt Village, 1958.
49. Tatarstan Republic, Syumsinskii District, Kilmez Settlement – G.P. Priezzhev, pers. comm., 1970s.
50. Tatarstan Republic, Mozhginskii District, M. Syuga Village – G.P. Priezzhev, pers. comm., 1970s.
51. Tatarstan Republic, Malopurginskii District, M. Prga Village – G.P. Priezzhev, pers. comm., 1970s.
52. Tatarstan Republic, Sarapulskii District, Sarapul Town – Krulikovsky, 1901, 1914.
53. Tatarstan Republic, Kamarskii District, Butysh Settlement, Kama River – G.P. Priezzhev, pers. comm., 1970s.
54. Bashkortostan Republic, Yanaulskii District, Amzya Settlement – G.P. Priezzhev, pers. comm., 1970s.
55. Bashkortostan Republic, Dyurtlinskii District, Yusupovo Settlement, 1959.
56. Bashkortostan Republic, Birsksii District, Bazhenovo Village, 4.1959.
57. Bashkortostan Republic, Ufinskii District, lower reaches of the Dema River – M.G. Bayanov, pers. comm.
58. Bashkortostan Republic, Ufinskii District, Ufa City – Polozhentsev and Khanislamov, 1942; Bayanov, 1995.
59. Bashkortostan Republic, Iglinskii District, Ulu-Telyak Settlement – Bayanov, 1995.
60. Bashkortostan Republic, Alshevskii District, Alyshevo Village – Polozhentsev and Khanislamov, 1942, 1949.
61. Bashkortostan Republic, Burzyanskii District, Bashkirskii Nature Reserve – Shosheva, 1985.
62. Penzenskaya Province, former Gorodishchenskii County of Saratvskaya Province, Stolypino Village – ZMMU 977.
63. Penzenskaya Province, Kuznetskii District, Privolzhskaya Lesostep Nature Reserve, Istoki Sury Area – P.V. Pavlov, pers. comm., 1996.
64. Ulyanovskaya Province, Surskii District, Surskoe Settlement; B. Kuvai Village; St. Besovka Village – Osipova, 1993.
65. Ulyanovskaya Province, Ulyanovskii District, Ulyanovsk City – SUMRT; I.B. Abrakhina, pers. comm., 1970s.
66. Samarskaya Province, Stavropolskii District, Tolyatti City – Vekhnik and Saksonov, 1998.
67. Samarskaya Province, Samara City – Pavlov et al., 1995.
68. Orenburgskaya Province, Buzulukskii District, Buzulukskii Bor – Polozhentsev, 1935.
69. Orenburgskaya Province, Orenburgskii District, Sakmara River – Zarudnoi, 1896.

Great Crested Newt, *Triturus cristatus* (Laurenti, 1786) (Fig. 3)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981; Sluda, Dubenka River – Puzanov et al., 1955.
2. Nizhegorodskaya Province, former Kurmyshskii County of Simbirskaya Province – Ruzsky, 1894.

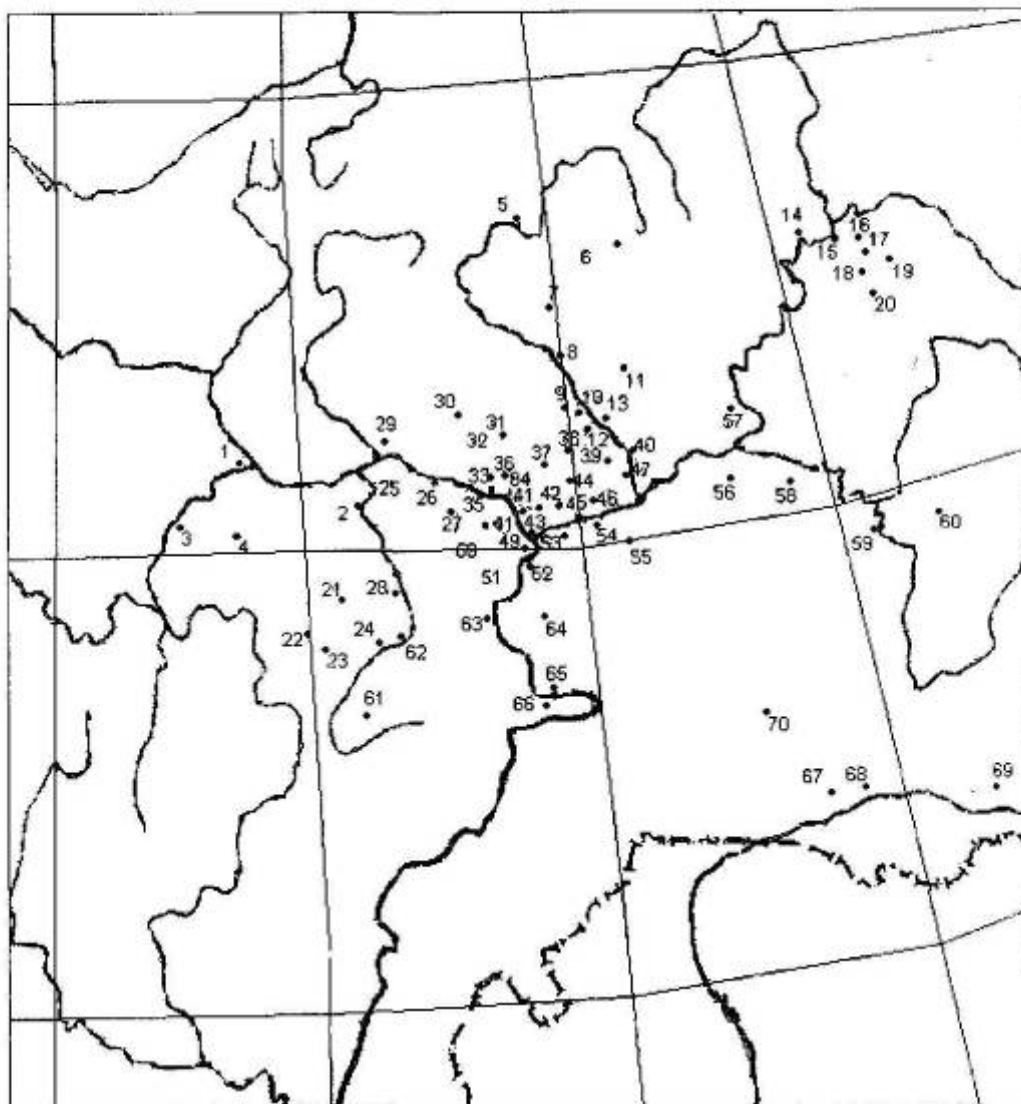


Fig. 3. Distribution of *Triturus cristatus*.

3. Nizhegorodskaya Province, Navashinskii District, Tesha River – ZISP 1631, 4 spec., Varpakhovsky, 1887.
4. Nizhegorodskaya Province, Arzamasskii District, Chernukha Village – ZISP 1632, 5 spec., Varpakhovsky, 1887.
5. Kirovskaya Province, Kirov City – Krulikovskiy, 1901; Plesskii, 1960.
6. Kirovskaya Province, Kirovo-Chepetskii District, Prosnitsa Village – Koroleva, 1976.
7. Kirovskaya Province, Sunskii District – Dryagin, 1926.
8. Kirovskaya Province, Nolinskii District, Medvedskii Bor – Dryagin, 1926.
9. Kirovskaya Province, Urzhumskii District, Urzhum Town – Koroleva, 1976.

10. Kirovskaya Province, Urzhumskii District, Russkii Turek Village – Krulikovskiy, 1902.
11. Kirovskaya Province, Kilmezhskii District, Kilmez Settlement – Koroleva, 1976.
12. Kirovskaya Province, Malmyzhskii District, 1970; Malmyzh Town – Krulikovskiy, 1901, 1908.
13. Kirovskaya Province, Malmyzhskii District, Melet Settlement – Koroleva, 1976.
14. Permskaya Province, Krasnokamsk Town – S.P. Chashchin, pers. comm., 1960s.
15. Permskaya Province, Permskii District, Perm City – S.P. Chashchin, pers. comm., 1960s.
16. Permskaya Province, Permskii District, Sylva Settlement – S.P. Chashchin, pers. comm., 1960s.
17. Permskaya Province, Kungurskii District, Kungur Town – ZISP 1742, 3 spec., Khlebnikov, 1889; Yushkov, 1997.
18. Permskaya Province, “Kungurskaya Lesostep” – Yushkov, 1997.
19. Permskaya Province, Kishertskii District, Spas Barda Settlement – Voronov and Zhukova, 1976.
20. Permskaya Province, Uinskii District – Khazieva and Bolotnikov, 1972.
21. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alatyr River – Zhitkov, 1900.
22. Mordovia Republic, Lyambirskii District, Belogorskii Settlement, 1957.
23. Mordovia Republic, Saransk City – V.I. Astradamov, pers. comm., 1970s.
24. Mordovia Republic, Bolshebereznyakovskii District, Simkino Village – Astradamov and Alysheva, 1979.
25. Chuvashia Republic, former Yadrinskii County of Kazanskaya Province – Ruzskiy, 1894; Yadrinskii District, Yadrin Town – V.A. Ushakov, pers. comm., 1970s.
26. Chuvashia Republic, former Cheboksarskii County of Kazanskaya Province – Ruzskiy, 1894.
27. Chuvashia Republic, former Tsivilskii County of Kazanskaya Province – Ruzskiy, 1894.
28. Chuvashia Republic, Alatyrskii District, Alatyr Town – A.N. Lvova, pers. comm., 1960s.
29. Marii El Republic, Gornomariiskii District, Enikeevo Village – D.L. Nikiforov, pers. comm., 1960s; Garanin, 1983.
30. Marii El Republic, Medvedevskii District, B. Kokshaga and M. Kokshaga rivers – Ruzskiy, 1894.
31. Marii El, Morkinskii District, Ilet River.
32. Marii El, Volzhskii District, Ilet River.
33. Marii El, Volzhskii District, B. Paraty Village.
34. Tatarstan Republic, former Kazanskii County of Kazanskaya Province – Ruzskiy, 1894; Kazan City (Kaban Lake – KSU) – M.N. Bogdanov, 7.1870; Ruzskiy, 1894; Kizitsa – Ruzskiy, 1894; M. Glubokoe Lake, 9.1961; Glubokoe Lake – Garanin, 1983.
35. Tatarstan Republic, Zelenodolskii District, Zelenodolsk Town – P.K. Gorshkov, pers. comm.; Oktyabrskii Settlement, 1980s.
36. Tatarstan Republic, Zelenodolskii District, Volzsko-Kamskii Nature Reserve, Raifskii Area – Garanin, 1983.
37. Tatarstan Republic, Arskii District, Kazaklar Village – Lukin and Aristovskaya, 1954.
38. Tatarstan Republic, Sabinskii District, Shemordan Settlement – 8.1965.
39. Tatarstan Republic, Kukmorskii District, Bereznayak Village, Oshforma River, 8.1965; Yatmas-Dusai Village – S. Iliin, pers. comm., 1991.
40. Tatarstan Republic, Kukmorskii District, Lubyany Settlement, 1984 – Zakirov, 1985.
41. Tatarstan Republic, Laishevskii District, former village Berezovaya Griya.
42. Tatarstan Republic, former Laishevskii County of Kazanskaya Province – Ruzskiy, 1894; Matyushino Village – P.K. Gorshkov, pers. comm., 1970s; M. Kabany Village – N.M. Utrobina, pers. comm., 1960s; Sokury Village; Stolbishchenskoe Forestry – S.A. Tsvetkov, pers. comm., 1992.
43. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
44. Tatarstan Republic, Tyulyachinskii District, Tyulyachi Village.
45. Tatarstan Republic, Rybno-Slobodskoi District, B. Saltan Village – A.V. Pavlov, pers. comm., 1993.
46. Tatarstan Republic, Rybno-Slobodskoi District, Shumbut River – Lapshin, 1984.

47. Tatarstan Republic, Mamadyshskii District, St. Cherkas Village, 7.1992; Vyatka River S from the Shiya River mouth, 7.1965; Mamadysh Town.
48. Tatarstan Republic, Kaibitskii District, Saltyganovo Village; Araslanovo Village, 7.1966; Verkhneuslonskii District, Yunusovskii Island.
49. Tatarstan Republic, Kamsko-Ustiinskii District, M. Klyari Village, 7.1966.
50. Tatarstan Republic, Buinskii District, Cherki-Dyurtile Village – I.D. Golubeva, pers. comm., 10.1966.
51. Tatarstan Republic, Tetyushskii District, Ivanovka Village, 7.1966.
52. Tatarstan Republic, former Spasskii County of Kazanskaya Province – Ruzsky, 1894; Spasskii District, Bolgar Town.
53. Tatarstan Republic, Alekseevskii District.
54. Tatarstan Republic, former Chistopol County of Kazanskaya Province – Ruzsky, 1894; Chistopolskii District, Chistopol City.
55. Tatarstan Republic, Novosheshminskii District, Pokrovskii Settlement, Kichui River mouth, 7.1963.
56. Tatarstan Republic, Menzelinskii District – L.V. Milchakov, pers. comm., 1980s.
57. Udmurtia Republic, Sarapulskii District, Sarapul Town – Krulikovskiy, 1914.
58. Bashkortostan Republic, Dyurtyulinskii District – M.G. Bayanov, pers. comm.
59. Tatarstan Republic, Ufimskii District, Ufa City – M.G. Bayanov, pers. comm. (Nizhegorodka Settlement; Sutoloka River – Bayanov, 1995).
60. Tatarstan Republic, Iglinkii District, Ulu-Telyak Settlement – M.G. Bayanov, pers. comm.
61. Penzenskaya Province, former Gorodishchenskii County of Saratovskaya Province, Stolypino Village – ZMMU 976, B.Olenin.
62. Ulyanovskaya Province, Surskii District, Surskoe Settlement – Osipova, 1993.
63. Ulyanovskaya Province, former Simbirskii County of Simbirskaya Province – Ruzsky, 1894; Ulyanovskii District, Ulyanovsk City – Osipova, 1993.
64. Ulyanovskaya Province, Melekesskii District – Osipova, 1993.
65. Samarskaya Province, Stavropolskii District, Tolyatti City – Vekhnik and Saksonov, 1998.
66. Samarskaya Province, Zhiguli Hills – Kizeritsky, 1939.
67. Orenburgskaya Province, Perevolotskii District, Samara River – Zarudnoi, 1896.
68. Orenburgskaya Province, Orenburgskii District, Sakmara River – Zarudnoi, 1896.
69. Orenburgskaya Province, Kuvandykskii District, Sakmara River valley – Zarudnoi, 1896.
70. Orenburgskaya Province, Abdulinskii District, Ik River valley – Zarudnoi, 1896.

Fire-Bellied Toad, *Bombina bombina* (Linné, 1761) (Fig. 4)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981 (Sluda – Puzanov et al., 1955).
2. Nizhegorodskaya Province, Borskii District, Borskie Meadows – Puzanov et al., 1955.
3. Nizhegorodskaya Province, former Kurmyshskii District of Simbirskaya Province – Ruzsky, 1894.
4. Kirovskaya Province, Malmyzhskii District – E.I. Korenberg, pers. comm., 1960s; Garanin, 1983.
5. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alatyr River – Zhilkov, 1900.
6. Mordovia Republic, Ruzayevskii District, Levzha Settlement – V.I. Astradamov, pers. comm., 1970s.
7. Mordovia Bolshebereznikovskii District, Simkino Village – Astradamov and Alysheva, 1979.
8. Chuvashia Republic, Yadrinskii Forestry, Yadrin Town – V.A. Ushakov, pers. comm., 1970s.
9. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
10. Chuvashia Republic, Krasnochetaiskii District, Vishnery Village.
11. Chuvashia Republic, former Alatyrskii County of Simbirskaya Province – Ryzsky, 1894; Alatyrskii District, Alatyr River – Terentjev, 1935.
12. Chuvashia Republic, Marrinsko-Posadskii District – Terentjev, 1935.
13. Chuvashia Republic, Urmarskii District, Tegeshevo Village, 7.1966.
14. Marii El Republic, Gornomariiskii District, lower reaches of the Vetluga River – Kh.F. Baldaev, pers. comm., 1970s.

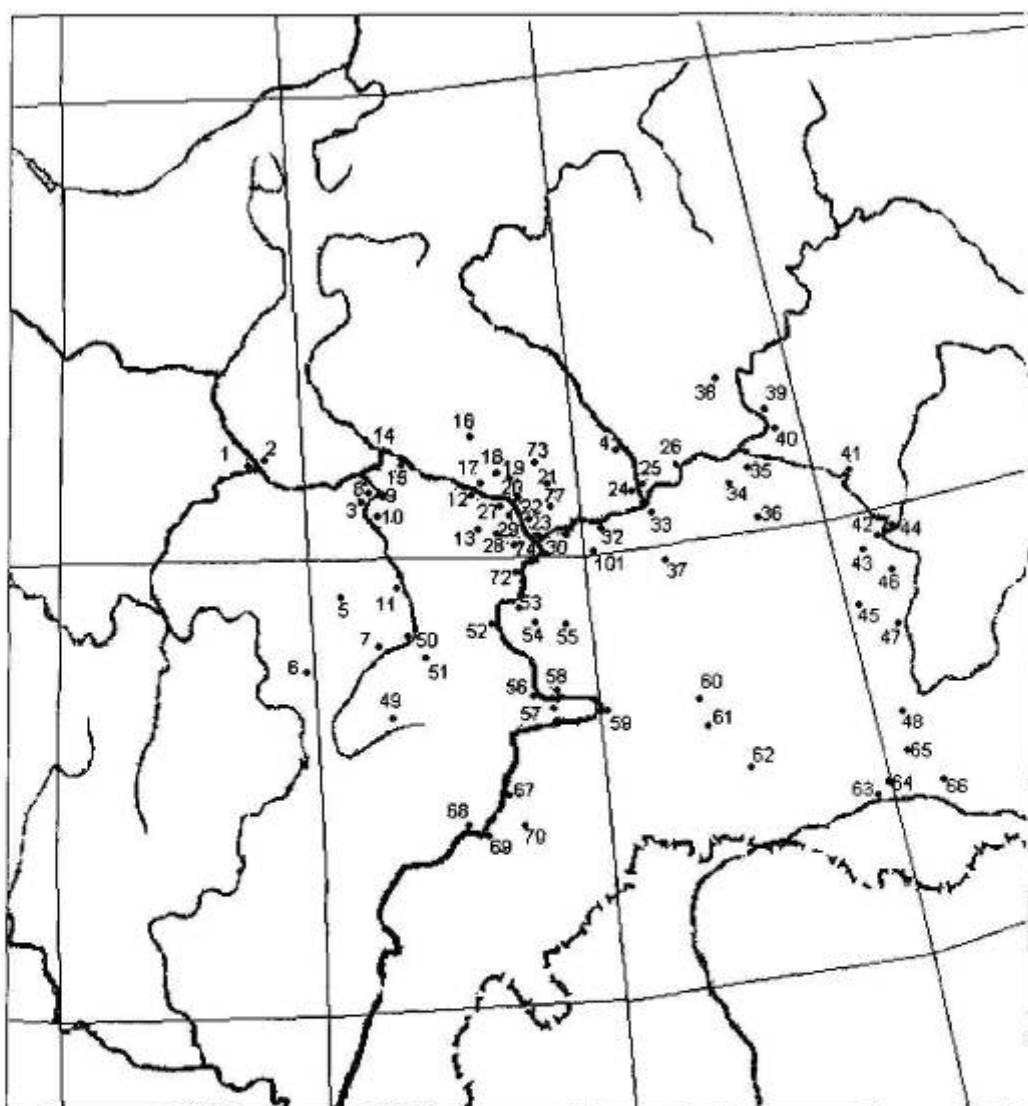


Fig. 4. Distribution of *Bombina bombina*.

15. Marii El Republic, Gornomariiskii District, Sokolinaya Gora – Kh.F. Baldaev, 1970s.
16. Marii El Republic, Yoshkar-Ola City – Vesna, 1926.
17. Marii El Republic, Zvenigovskii District, Kokshemar Settlement.
18. Marii El Republic, Volzhskii District, Bizergub Village; B. Paraty Village; Marii Chodra National Park, Yalchik Lake – Efremov et al., 1984.
19. Tatarstan Republic, Zelenodolskii District, Gari Village; Krasnyi Yar Village, 7.1966; Oktyabrskii Settlement, 1980s; Volzhsko-Kamskii Nature Reserve, Raifskii Area – Garanin, 1983.
20. Tatarstan Republic, Kazan City (Kizitsa – SUMRT; KSU; M. Derbushki Village, 7.1958; Derbyshki Village; Moskovskii District, 1980s).

21. Tatarstan Republic, Pestrechenskii District, Lenino-Kokushkino Village, 5.1959; Pestretsy Village: P.K. Gorshkov, pers. comm., 1970s; Bogorodskoe Village, 1980s.
22. Tatarstan Republic, Laishevskii District, M. Kabany Village – N.M. Utrobina, pers. comm., 1960s; Matyushino Village – P.K. Gorshkov, pers. comm., 1970s; Kovalevskoe Lake, 7.1985; former village Berezovaya Griva.
23. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Knorre and Garanin, 1969.
24. Tatarstan Republic, Mamadyshskii District, Malmyzhka Village, 7.1965; mouth of the Shiya River; St. Cherkas Village, 6.1992; Mamadysh City.
25. Tatarstan Republic, Elabuzhskii District, Bessonikha Village.
26. Tatarstan Republic, Elabuzhskii District, Tanaika Village, Nizhnyaya Kama National Park, B. Bor and M. Bor areas – Khotko and Ganeev, 1993.
27. Tatarstan Republic, Zelenodolskii District, Ulitino Village; Nizh. Vyazovye Settlement: B. Shirdany Village; Rus. Tanaevo Village; Tat. Tanaevo Village; Tat. Naratly Village; Tat. Azileevo Village; B. Shirdany Village; Akzigitovo Village; Kugushevo Village; Utyakovo Village, 7.1966.
28. Tatarstan Republic, Kaibitskii District, Saltyganovo Village; Araslanovo Village; Kulaberdino Village; Nadezhdino Village; M. Memi Village, 7.1966.
29. Tatarstan Republic, Verkhneulonskii District, Rus. Makulovo Village; Nov. Rus. Mamatkozino Village; Sobolevskoe Village, 7.1966; Pustye Morkvashi – V.G. Ivliev, 1970s.
30. Tatarstan Republic, Spasskii District, Krestyanskii Forest near Spassk City – ZISP 3507, Bashkirov, 1933; surroundings of Spassk City; former village Komarovka; former village Malinovka; Bolgar City; Otrada Village; Vozhi Village; Aktai River, 7.1962.
31. Tatarstan Republic, Alekseevskii District, Ibrysh River; Kurkul Village; Yalkyn Village, 7.1962; Sosnovyi Bor Island; Pervomaiskii Island, 7.1968.
32. Tatarstan Republic, Chistopolskii District, Buldar Village; Sluzhilaya Shentala Village, 8.1962; former Chistopolskii County of Kazanskaya Province – Ruzsky, 1894.
33. Tatarstan Republic, Nizhnekamskii District, Starosheshminsk Village; Krasnyi Luch Settlement, 7.1962.
34. Tatarstan Republic, Menzelinskii District, former village Karakuly; former village Igim; Shadrinskoe Lake, 7.1967.
35. Tatarstan Republic, Aktanyshskii District, former village Semiostrovo – M.V. Tikhvinskaya, pers. comm., 1980.
36. Tatarstan Republic, Muslyumovskii District, Muslyumovo Village, 7.1964.
37. Tatarstan Republic, Almetievskii District, Yamash Village; Aktashskoe Forestry, 6.1959.
38. Udmurtia Republic, Izhevsk City – G.P. Priezzhev, pers. comm., 1970s.
39. Udmurtia Republic, Kambarskii District, Butysh Settlement, Kama River – G.P. Priezzhev, pers. comm., 1970s; Garanin, 1983.
40. Bashkortostan Republic, Yanaul District, Amzya Settlement – G.P. Priezzhev, pers. comm., 1970s; Garanin, 1983.
41. Bashkortostan Republic, Birskskii District, Birsksk Town – Garanin, 1983.
42. Bashkortostan Republic, Ufa City, Demä River – M.G. Bayanov, pers. comm., 1970s.
43. Bashkortostan Republic, Chishminskii District, Demä River – Polozhentsev and Khanislamov, 1942.
44. Bashkortostan Republic, Ufa City, Ufa River – Polozhentsev and Khanislamov, 1942, 1949.
45. Bashkortostan Republic, Alshevskii District, Demä River – Polozhentsev and Khanislamov, 1942, 1949.
46. Bashkortostan Republic, Karmaskalinskii District, Beketovo Village, 6.1959.
47. Bashkortostan Republic, Sterlitamakskii District, Sterlitamak Town, 6.1959.
48. Bashkortostan Republic, Kumertauskii District, Kumertau Town – M.G. Bayanov, pers. comm., 1970s.
49. Penzenskaya Province, Gorodishchenskii District, Chaadaevka Settlement, 7.1957.
50. Ulyanovskaya Province, Surskii District, Polyanski Village, 7.1957; St. Besovka Village, Karakul Lake – Osipova, 1993.

51. Ulyanovskaya Province, Karasunskii District, Novosursk Settlement, 7.1957.
52. Ulyanovskaya Province, Ulyanovsk City – I.B. Abrakhina, pers. comm., 1980s.
53. Ulyanovskaya Province, Chardaklinskii District, Ivanovka Village – S.S. Gainiev, pers. comm., 1960s.
54. Ulyanovskaya Province, Melekesskii District, B. Cheremshan River mouth, 5.1951.
55. Ulyanovskaya Province, Novomalyklinskii District, floodland lakes of the B. Cheremshan River – Osipova, 1993.
56. Samarskaya Province, Shigonskii District, Klimovka Village; Usolie Village, 5.1951.
57. Samarskaya Province, Stavropolskii District, Zhiguli Hills – Kizeritsky, 1939.
58. Samarskaya Province, Tolyatti City; Sereyish Island, 6.1957.
59. Samarskaya Province, Samara City – Pavlov et al., 1995.
60. Samarskaya Province, Kinel-Cherkasskii District, 1957 (*Tiashevskie Forest bands* – Malchesvkii, 1941).
61. Samarskaya Province, Bogatovskii District, Andreevka Village – Yu.T. Artemiev, pers. comm., 1958.
62. Orenburgskaya Province, Totkskii District, totskoe Village – Bening, 1926.
63. Orenburgskaya Province, Orenburg City, Ural River; Sakmara River – Zarudnoi, 1896.
64. Orenburgskaya Province, Sakmarskii District, Sakmara Village, 6.1959.
65. Orenburgskaya Province, Oktyabrskii District, Salmysh River – Zarudnoi, 1896.
66. Orenburgskaya Province, Saraktashskii District, Sakmara River – Zarudnoi, 1896.
67. Saratovskaya Province, Dukhovitskii District – Kozlovskii, 1951.
68. Saratovskaya Province, Volskii District, Volsk Town – V.S. Zaletaev, pers. comm., 1960s.
69. Saratovskaya Province, Balakovskii District, Irgiz River; Plekhany Village – V.S. Zaletaev, pers. comm., 1960s.
70. Saratovskaya Province, former Pugachevskii County of Samarskaya Province – Bazhanov, 1930.
71. Tatarstan Republic, Laishevskii District, former settlement Maevka, 4.1961.
72. Tatarstan Republic, Tetyushskii District, Prolei Kasha Village, 7.1966.
73. Tatarstan Republic, Vysokogorskii District, Isleitaraskoe Forestry, Ilet River, 8.1965.
74. Tatarstan Republic, Kamsko-Ustiinskii District, St. Kazeevo Village; Karatalga Village; Mal. Klyari Village, 7.1966.

Common Spaedfoot, *Pelobates fuscus* (Laurenti, 1768) (Fig. 5)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981.
2. Nizhegorodskaya Province, Arzamasskii District, St. Pustyn Village – Puzanov et al., 1955.
3. Nizhegorodskaya Province, Buturlinskii District, Bomukovo Village – ZISP 1627, 2 spec., Varpakhovskiy, 1887; Puzanov et al., 1955.
4. Kirovskaya Province, Kiknurskii District, Kiknur Settlement – Koroleva, 1976.
5. Kirovskaya Province, Nolinskii District, Nolinsk Town – Koroleva, 1970.
6. Kirovskaya Province, Nolinskii District, Medvenskii Bor – Dryagin, 1926; Koroleva, 1976.
7. Kirovskaya Province, Urzhumskii District, Urzhum Town – Koroleva, 1976.
8. Kirovskaya Province, Malmyzhskii District, Malmyzh Town – Koroleva, 1976.
9. Kirovskaya Province, Malmyzhskii District, Melet Settlement – Koroleva, 1976.
10. Permskaya Province, Perm City – ZMMU 97, O. Tikhomirov and A. Tikhomirov; ZISP (Zabolotnoe Settlement, 4 spec., 6.1948); Yushkov, 1997.
11. Permskaya Province, Kungurskii District, “Kungurskaya Lesostep” – Yushkov, 1997.
12. Permskaya Province, Kishertskii District, Kishert Settlement – Bolotnikov et al., 1967.
13. Permskaya Province, Chastinskii District, 6.1959; Garanin 1983.
14. Permskaya Province, Elovskii District, Zavertukha Village, Giblya River, 6.1959.
15. Mordovia Republic, Ruzaevskii District, Levzha River – V.I. Astradamov, pers. comm., 1970s.
16. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alaty River – Zhitkov, 1900.
17. Mordovia Republic, Bolshebereznikovskii District, Simkino Village – Astradamov and Alysheva, 1979.

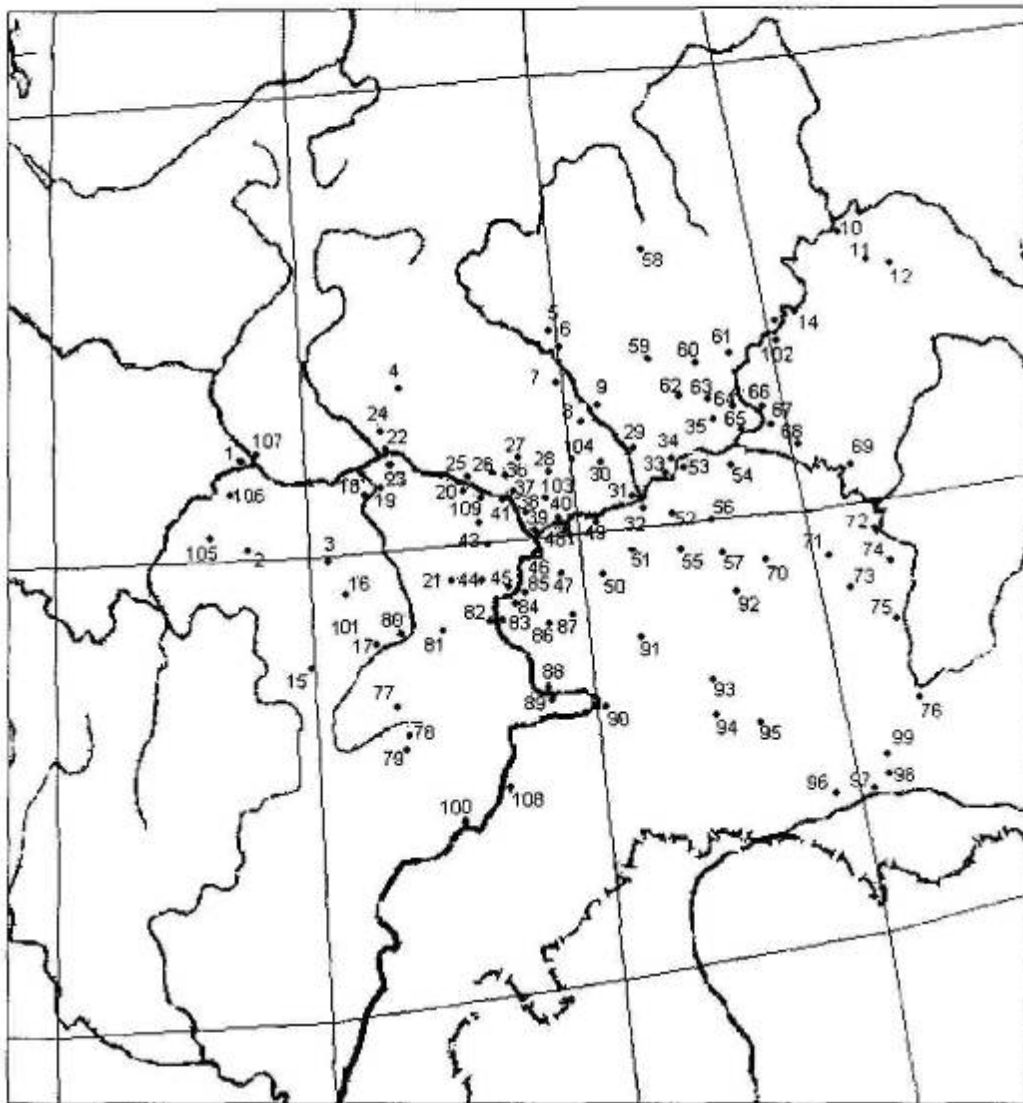


Fig. 5. Distribution of *Pelobates fuscus*.

18. Chuvashia Republic, Yadrinskii District, Yadrin Town – V.A. Ushakov, pers. comm., 1970s.
19. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1979.
20. Chuvashia Republic, Mariinsko-Posadskii District, Marrinskii Posad Town – Terentjev, 1935.
21. Chuvashia Republic, Batyrevskii District – Tikhviinskii, 1934.
22. Marii El Republic, Gornomariiskii District, Volga River – Efremov, 1957.
23. Marii El Republic, Gornomariiskii District, Sokolinaya Gora – Kh.F. Baldaev, pers. comm.
24. Marii El Republic, Gornomariiskii District, Nuzhyar Lake – Kh.F. Baldaev, pers. comm.
25. Marii El Republic, Zvenigovskii District, Volga River – Efremov, 1957; Tair Lake.
26. Marii El Republic, Volzhskii District, B. Paraty Village, 1960s.
27. Tatarstan Republic, Vysokogorskii District, Potanikha Village; Isleitarskoe Forestry, 8.1965; 7.1974.

105. Nizhegorodskaya Province, Pavlovskii District, Vorsma River – ZISP 1626, 2 spec., Varpakhovsky, 1887.
106. Nizhegorodskaya Province, Navashinskii District, Salavir Village – ZISP 1635, 2 spec., Varpakhovsky, 1887.
107. Nizhegorodskaya Province, Nizhny Novgorod City, right bank of the Volga River – ZISP 1636, Varpakhovsky, 1887.
108. Saratovskaya Province, Dukhovitskiy District – Kozlovskii, 1951.
109. Tatarstan Republic, Zelenodolskii District, Ulitino Village; Nizh. Vyazovye Settlement; Kugushevo Village; Nurlaty Village; Tat. Tanaevo Village, 7.1966.
110. Tatarstan Republic, Nizhnekamskii District, Staroshesminsk Village, 6.1961; Krasnaya Kadka Village, 7.1964.

Common Toad, *Bufo bufo* (Linné, 1758) (Fig. 6)

1. Kostromskaya Province, Ponazyrevskii District, Kiselevo Village, Neya River, 7.1930 – Krasavtsev, 1931a, b.
2. Kostromskaya Province, Ponazyrevskii District, Ponazyrevo Settlement – Krasavtsev, 1931a, b.
3. Nizhegorodskaya Province, Tonshaevskii District, Pizhma Settlement – Ushakov and Pestov, 1983.
4. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981.
5. Kirovskaya Province, Verkhnekamskii District, Lesnoi Settlement – Koroleva, 1976.
6. Kirovskaya Province, Murashinskii District, Murashi Town – Koroleva, 1976.
7. Kirovskaya Province, Darovskii District, Darovskii Settlement – Koroleva, 1976.
8. Kirovskaya Province, Slobodskoi District, Bykovo Village – Dryagin, 1926.
9. Kirovskaya Province, Kirov City – Dryagin, 1926; Koroleva, 1976.
10. Kirovskaya Province, Zuevskii District, Kosino Village – Dryagin, 1926.
11. Kirovskaya Province, Kumenskii District, Yakimovagino Village – Dryagin, 1926.
12. Kirovskaya Province, Tuzhinskii District, Tuzha Settlement – Koroleva, 1976.
13. Kirovskaya Province, Nolinskii District, Nolinsk Settlement – Dryagin, 1926; Plesskii, 1960.
14. Kirovskaya Province, Nolinskii District, Medvedskii Bor – Dryagin, 1926.
15. Kirovskaya Province, Kilmezhskii District, Kilmez Settlement – Koroleva, 1976.
16. Kirovskaya Province, Malmyzh Town – Koroleva, 1976; former Malmyzhskii County of Vyatskaya Province – Krulikovskiy, 1901.
17. Kirovskaya Province, Malmyzhskii District, Melet Settlement – Koroleva, 1976.
18. Permskaya Province, Perm City – Bolotnikov et al., 1967; ZMMU 278, B. Zhitkov.
19. Permskaya Province, Kungurskii District, "Kungurskaya Lesostep" – Yushkov, 1997.
20. Permskaya Province, Kishertskii District, Kishert River – Bolotnikov et al., 1967.
21. Permskaya Province, Elovskii District, Zavertukha Village, 6.1959.
22. Permskaya Province, Kuedinskii District, B. Usa Village, 6.1959.
23. Mordovia Republic, former Ardatovskii County of Simbirskaya Province – Ruzsky, 1894; Ardatovskii County, Alatyr River – Zhitkov, 1900.
24. Mordovia Republic, Bolshebereznykovskii District, Simkino Village – V.I. Astradamov, pers. comm., 1970s.
25. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
26. Chuvashia Republic, Cheboksarskii District, Cheboksary City – A.N. Lvova, pers. comm., 1960s.
27. Chuvashia Republic, Marrinsko-Posadskii District, Marinskii Posad Town – Terentjev, 1935.
28. Chuvashia Republic, Alatyrskii District, Alatyr River – Terentjev, 1935; former Alatyrskii County of Simbirskaya Province – Ruzsky, 1894.
29. Chuvashia Republic, Batyrevskii District, Tat. Timyashi Village – Tikhvinskii, 1934.
30. Marii El Republic, Gornomariiskii District, Volga River – Efremov, 1957.
31. Marii El Republic, Kilemarskii District, Shusher Settlement – D.L. Nikiforov, pers. comm., 1966; Kichma Village – Kh.F. Baldaev, pers. comm., 1970s; E.A. Rodikova, pers. comm., 1998.

61. Udmurtia Republic, Votkinskii District, Votkinsk Town – MIAI.
62. Udmurtia Republic, Mozhginskii District, Syuga Village – G.P. Priezzhev, pers. comm., 1960s.
63. Udmurtia Republic, Malopurginskii District, M. Purga Village – G.P. Priezzhev, pers. comm., 1960s.
64. Udmurtia Republic, Sarapulskii District, Sarapul Town – G.P. Priezzhev, pers. comm., 1960s.
65. Udmurtia Republic, Karakulinskii District, Galanovo Village, 6.1948.
66. Udmurtia Republic, Kambarskii District, Kama Settlement – G.P. Priezzhev, pers. comm., 1960s.
67. Bashkortostan Republic, Yanaulskii District, Amzya Settlement – G.P. Priezzhev, pers. comm., 1960s.
68. Bashkortostan Republic, Dyurtyulinskii District, Yusupovo Village, 7.1968.
69. Bashkortostan Republic, Birsksii District, Birsks Town, 6.1959.
70. Bashkortostan Republic, Tuimazinskii District, Kandry-Kul Lake.
71. Bashkortostan Republic, Chishminskii District, Dema River.
72. Bashkortostan Republic, Ufimskii Ufa City – Bayanov, 1970.
73. Bashkortostan Republic, Alsheevskii District, Dema River – Polozhentsev and Khanislamov, 1942.
74. Bashkortostan Republic, Karmaskalinskii District, Beketovo Village, 6.1959.
75. Bashkortostan Republic, Sterlitamakskii District, Sterlitamak Town, 6.1959.
76. Bashkortostan Republic, Kugarchinskii District, Khudaiberdino Village, 6.1959.
77. Penzenskaya Province, Gorodishchenskii District, Chaadaevka Settlement, 7.1957.
78. Penzenskaya Province, Kameshkirskii District, Penzenskaya Lesostep Nature Reserve, Borok Arca.
79. Penzenskaya Province, Kameshkirskii District, Kuncherovskaya Steppe – P.V. Pavlov, pers. comm. 1996.
80. Ulyanovskaya Province, Surskii District, Polyanki Village, 7.1957; St. Besovka Village – Osipova, 1993.
81. Ulyanovskaya Province, Karsunskii District, Novosursk Settlement, 7.1957.
82. Ulyanovskaya Province, Ulyanovskii District, Ulyanovsk City – I.B. Abrakhina, pers. comm.
83. Ulyanovskaya Province, Ulyanovskii District, Ulanovsk City, Zavolzhskii Living District – Osipova, 1993.
84. Ulyanovskaya Province, Cherdaklinskii District, Ivanovka Village – S.S. Gainiev, pers. comm., 1960s.
85. Ulyanovskaya Province, Staromainskii District, Utka River mouth, 5.1951; Osipova, 1993.
86. Ulyanovskaya Province, Melekesskii District – Osipova, 1993.
87. Ulyanovskaya Province, Novomalyklinskii District – Osipova, 1993.
88. Samarskaya Province, Stavropolskii District, Tolyatti Town, 7.1957.
89. Samarskaya Province, Stavropolskii District, Seredysh Island, 5.1951; Zhiguli Hills – Snigirevskaya, 1951.
90. Samarskaya Province, Samara City – Pavlov et al., 1995.
91. Samarskaya Province, Krasnoyarskii District, Sok River – Zarudnoi, 1896.
92. Samarskaya Province, Sergievskii District, Surgut River – Zarudnoi, 1896.
93. Samarskaya Province, Kinel-Cherkasskii District, Timashevskie Forest Bands – Malchevskii, 1941.
94. Samarskaya Province, Bogatovskii District, Andreevka Village – Yu.T. Artemiev, pers. comm., 1960s; Arzamastseva Village, 8.1971 – Gorelov, 1990.
95. Orenburgskaya Province, Buzulukskii District, Buzulukskii Bor – Polozhentsev, 1935.
96. Orenburgskaya Province, Perevolotskii District, Samara River – Zarudnoi, 1896.
97. Orenburgskaya Province, Orenburgskii District, Orenburg City – ZISP 2687, Forshtadskie Meadows, 8.1927, Vorontsovsky; 2685, Ural River valley, 9.1928, Vorontsovsky.
98. Orenburgskaya Province, Sakmarskii District, Sakmara Village, Salmysh River mouth, 6.1959.
99. Orenburgskaya Province, Oktyabrskii District, Salmysh River – Zarudnoi, 1896; Belozerka Village, 6.1959.
100. Saratovskaya Province, Vol'skii District, Privolskaya Station – I.G. Gancev, pers. comm., 1977.
101. Mordovia Republic, Saransk City, 8.1957.
102. Permskaya Province, Osinskii District, Kama River, 6. 1959.
103. Tatarstan Republic, Laishevskii District, former settlement Maevka, 6.1961.
104. Tatarstan Republic, Sabinskii District, Sababashskoe Forestry, 7.1974.

105. Nizhegorodskaya Province, Pavlovskii District, Vorsma River – ZISP 1626, 2 spec., Varpakhovsky, 1887.
106. Nizhegorodskaya Province, Navashinskii District, Salavir Village – ZISP 1635, 2 spec., Varpakhovsky, 1887.
107. Nizhegorodskaya Province, Nizhny Novgorod City, right bank of the Volga River – ZISP 1636, Varpakhovsky, 1887.
108. Saratovskaya Province, Dukhovitskiy District – Kozlovskii, 1951.
109. Tatarstan Republic, Zelenodolskii District, Ulitino Village; Nizh. Vyazovye Settlement; Kugushevo Village; Nurlaty Village; Tat. Tanaevo Village, 7.1966.
110. Tatarstan Republic, Nizhnekamskii District, Staroshesminsk Village, 6.1961; Krasnaya Kadka Village, 7.1964.

Common Toad, *Bufo bufo* (Linné, 1758) (Fig. 6)

1. Kostromskaya Province, Ponazyrevskii District, Kiselevo Village, Neya River, 7.1930 – Krasavtsev, 1931a, b.
2. Kostromskaya Province, Ponazyrevskii District, Ponazyrevo Settlement – Krasavtsev, 1931a, b.
3. Nizhegorodskaya Province, Tonshaevskii District, Pizhma Settlement – Ushakov and Pestov, 1983.
4. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981.
5. Kirovskaya Province, Verkhnekamskii District, Lesnoi Settlement – Koroleva, 1976.
6. Kirovskaya Province, Murashinskii District, Murashi Town – Koroleva, 1976.
7. Kirovskaya Province, Darovskii District, Darovskii Settlement – Koroleva, 1976.
8. Kirovskaya Province, Slobodskoi District, Bykovo Village – Dryagin, 1926.
9. Kirovskaya Province, Kirov City – Dryagin, 1926; Koroleva, 1976.
10. Kirovskaya Province, Zuevskii District, Kosino Village – Dryagin, 1926.
11. Kirovskaya Province, Kumenskii District, Yakimovagino Village – Dryagin, 1926.
12. Kirovskaya Province, Tuzhinskii District, Tuzha Settlement – Koroleva, 1976.
13. Kirovskaya Province, Nolinskii District, Nolinsk Settlement – Dryagin, 1926; Plesskii, 1960.
14. Kirovskaya Province, Nolinskii District, Medvedskii Bor – Dryagin, 1926.
15. Kirovskaya Province, Kilmezskii District, Kilmez Settlement – Koroleva, 1976.
16. Kirovskaya Province, Malmyzh Town – Koroleva, 1976; former Malmyzhskii County of Vyatskaya Province – Krulikovskiy, 1901.
17. Kirovskaya Province, Malmyzhskii District, Melet Settlement – Koroleva, 1976.
18. Permskaya Province, Perm City – Bolotnikov et al., 1967; ZMMU 278, B. Zhitkov.
19. Permskaya Province, Kungurskii District, "Kungurskaya Lesostep" – Yushkov, 1997.
20. Permskaya Province, Kishertskii District, Kishert River – Bolotnikov et al., 1967.
21. Permskaya Province, Elovskii District, Zavertukha Village, 6.1959.
22. Permskaya Province, Kuedinskii District, B. Usa Village, 6.1959.
23. Mordovia Republic, former Ardatovskii County of Simbirskaya Province – Ruzsky, 1894; Ardatovskii County, Alatyr River – Zhitkov, 1900.
24. Mordovia Republic, Bolshebereznikovskii District, Simkino Village – V.I. Astradamov, pers. comm., 1970s.
25. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
26. Chuvashia Republic, Cheboksarskii District, Cheboksary City – A.N. Lvova, pers. comm., 1960s.
27. Chuvashia Republic, Marrinsko-Posadskii District, Marinskii Posad Town – Terentjev, 1935.
28. Chuvashia Republic, Alatyrskii District, Alatyr River – Terentjev, 1935; former Alatyrskii County of Simbirskaya Province – Ruzsky, 1894.
29. Chuvashia Republic, Batyrevskii District, Tat. Timyashi Village – Tikhvinskii, 1934.
30. Marii El Republic, Gornomariiskii District, Volga River – Efremov, 1957.
31. Marii El Republic, Kilemarskii District, Shusher Settlement – D.L. Nikiforov, pers. comm., 1966; Kichma Village – Kh.F. Baldaev, pers. comm., 1970s; E.A. Rodikova, pers. comm., 1998.

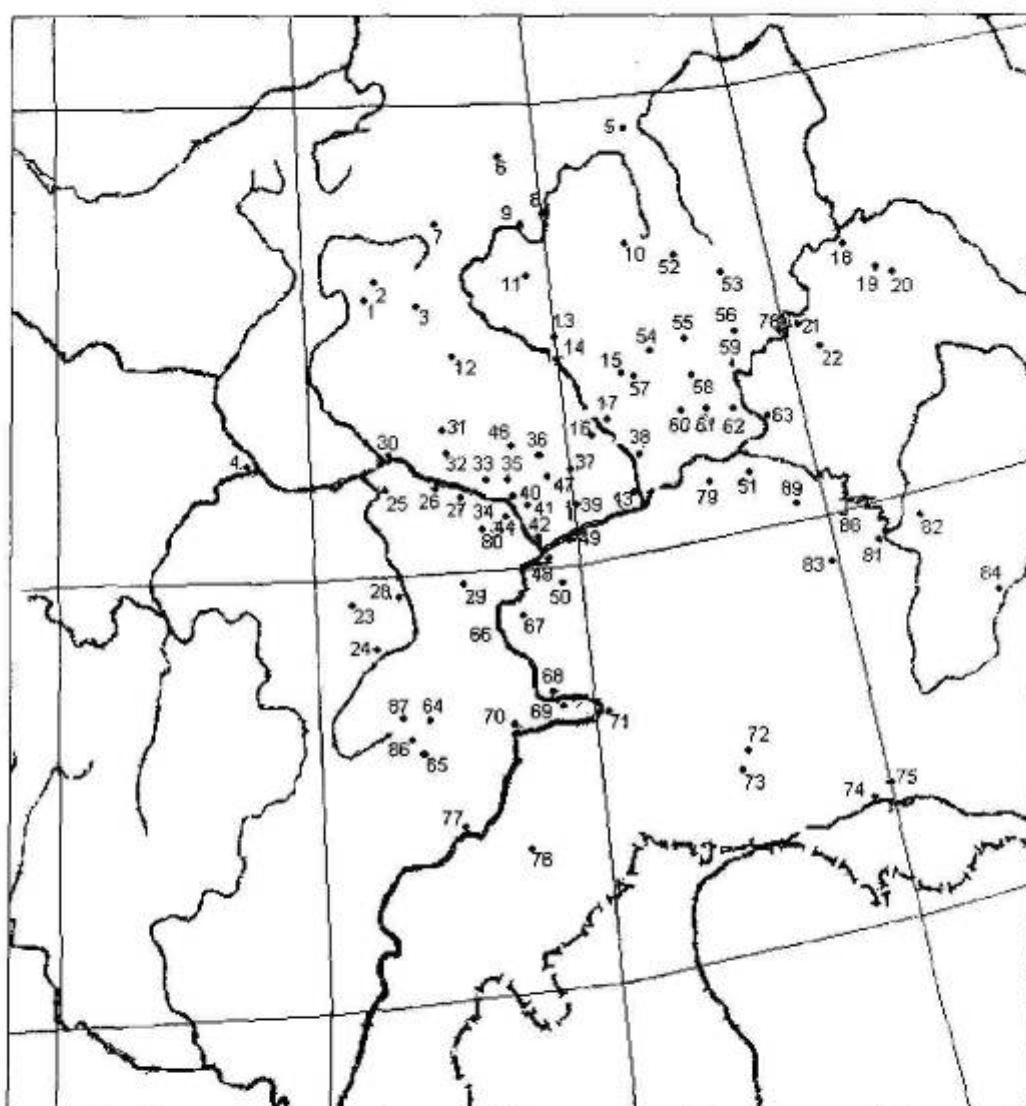


Fig. 6. Distribution of *Bufo bufo*.

32. Marii El Republic, Medvedevskii District, Lyulpany Village – D.L. Nikiforov, pers. comm., 1966; Mariiskii Nature Reserve, lakes Palenoe, Solenoe and Lomashier – Yu.S. Kotov, pers. comm., 1972.
33. Marii El Republic, Zvenigovskii District, Volga River – Efremov, 1957; Tair Lake, Kerebelyak Settlement, 1980s.
34. Marii El Republic, Volzhskii District – S.R. Muratov, pers. comm., 1998; Yalshik Lake, 1990s.
35. Tatarstan Republic, Zelenodolskii District, Volzhsko-Kamskii Nature Reserve, Raifskii Area – Garanin, 1983.
36. Tatarstan Republic, Arstkii District, Kultes Village – A.S. Zheltukhin, 1970s.
37. Tatarstan Republic, Arskii District, Sikertan Village – Zabusova-Zhdanova, 1954.

38. Tatarstan Republic, Kukmorskii District, Lubyany Settlement – Zakirov, 1985.
39. Tatarstan Republic, Tyulyachinskii District, Shadki Village – S.V. Kurshakov, pers. comm., 1970s.
40. Tatarstan Republic, Kazan City (kizitsa – KSU 69, 4.1911); Leninskii District – N.V. Shosheva, pers. comm., 1984; Kirovskii District – R.I. Zamaletdinov, 1998.
41. Tatarstan Republic, Laishevskii District, M. Kabany Village – N.M. Utrobina, pers. comm., 1960s; Stolbishchenskoe Forestry – S.A. Tsvetkov, 9.1993.
42. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
43. Tatarstan Republic, Mamadyshskii District, Mamadysh Town, 1960s.
44. Tatarstan Republic, Verkhneuslonskii District, Elizavetino Village – P.K. Gorshkov, pers. comm., 1970s.
45. Tatarstan Republic, former Tetyushskii County of Kazanskaya Province – Ruzsky, 1894.
46. Tatarstan Republic, Vysokogorskii District, Isleitariskoe Forestry, 1978 – Sergeev, 1979.
47. Tatarstan Republic, Vysokogorskii District, Kurkachi Village, 8.1988 – I.V. Askeev and O.V. Askeev, 1990s.
48. Tatarstan Republic, Spasskii District, 1960s.
49. Tatarstan Republic, Alekseevskii District, Ibrysh River; Lebedino Village, 8.1962; Sosnovyi Bor Island, 8.1968.
50. Tatarstan Republic, Alkeevskii District, Chuvashskii Brod Village; Yukhmachi Village, 1960s.
51. Tatarstan Republic, Aktanyshskii District – V.G. Marfin, 8.1986.
52. Udmurtia Republic, Glazovskii District, N. Chuna Village, 1958.
53. Udmurtia Republic, Kezskii District, Kuzma Village – Dryagin, 1926.
54. Udmurtia Republic, Seltinskii District, 1960s.
55. Udmurtia Republic, Yakshur-Bodiinskii District, 1960s.
56. Udmurtia Republic, Sharkanskii District, Sharkan Village – Dryagin, 1926.
57. Udmurtia Republic, Syumsinskii District, Kilmez Settlement – G.P. Priezzhev, pers. comm., 1960s.
58. Udmurtia Republic, Uzhevsk City, 1950s.
59. Udmurtia Republic, Votkinskii District, Votkinsk Town – MIAI.
60. Udmurtia Republic, Mozhginskii District, M. Syuga Village – G.P. Priezzhev, pers. comm., 1960s.
61. Udmurtia Republic, Malopurginskii District, M. Purga Village – G.P. Priezzhev, pers. comm., 1960s.
62. Udmurtia Republic, former Sarapulskii County of Vyatskaya Province, Sarapul Town – Krulikovskiy, 1888.
63. Udmurtia Republic, Kambarskii District, Kama Settlement – G.P. Priezzhev, pers. comm., 1960s.
64. Penzenskaya Province, Kuznetskii District, Privolzhskaya Lesostep Nature Reserve, Istoki Sury Ar a – P.V. Pavlov, pers. comm., 1996.
65. Penzenskaya Province, Kameshkirskii District, Privolzhskaya Lesostep Nature Reserve, Borok Ar a – P.V. Pavlov, pers. comm., 1996.
66. Ulyanovskaya Province, former Simbirskii County of Simbirskaya Province – Ruzsky, 1894; Ulyanovsk City – Osipova, 1993.
67. Ulyanovskaya Province, Cherdaklinskii District, Ivanovka Village – S.S. Gainiev, pers. comm., 1960s.
68. Samarskaya Province, Stavropolskii District, Tolyatti Town – Vekhnik and Saksonov, 1998.
69. Samarskaya Province, Stavropolskii District, Khryashchevka Village, 5.1951.
70. Samarskaya Province, former Syzranskii County of Simbirskaya Province – Ryzhkov, s.a.
71. Samarskaya Province, Samara City – Pavlov et al., 1995.
72. Orenburgskaya Province, former Buzulukskii County of Samarskaya Province – Bazhanov, 1930.
73. Orenburgskaya Province, former Buzulukskii County, south from the Samara River – Bazhanov, 1930.
74. Orenburgskaya Province, Orenburgskii District, Ural River – Raiskii, 1951.
75. Orenburgskaya Province, Sakmarskii District, Verkh. Kargalka River; Sr. Kargalka River – Lindholm, 1902.
76. Saratovskaya Province, former Pugachevskii County of Samarskaya Province – Bazhanov, 1930.

77. Saratovskaya Province, Volskii District, Volsk Town – V.S. Zaletaev, pers. comm., 1960s.
78. Permskaya Province, Osinskii District, 6.1959.
79. Tatarstan Republic, Menzelinskii District, former village St. Krasnyi Bor, 6.1948.
80. Tatarstan Republic, Zelenodolskii District, Utyakovo Village, 7.1966.
81. Bashkortostan Republic, Ufa City – Bayanov, 1970.
82. Bashkortostan Republic, Iginskii District, Chuvashi Village – Bayanov, 1970.
83. Bashkortostan Republic, Chishminskii District, Dema River – Bayanov, 1995.
84. Bashkortostan Republic, Beloretskii District – Bayanov, 1995.
85. Bashkortostan Republic, Nurimanovskii District, Pavlovskoe Reservoir – Kuzherov et al., 1984; Bayanov, 1995.
86. Penzenskaya Province, former Kuznetskii County of Saratovskaya Province – ZMMU 251, K. Ikonnikov, 1908.
87. Penzenskaya Province, Gorodishchenskii District, Kadadinskoe Forestry – Barabash, 1939.
88. Bashkortostan Republic, Kushnarenkovskii District – Bayanov, 1995.
89. Bashkortostan Republic, Chekmagushevskii District – Bayanov, 1970.

Green Toad, *Bufo viridis* Laurenti, 1768 (Fig. 7)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Shal'dybin, 1970; Lebedinsky, 1981.
2. Nizhegorodskaya Province, Arzamasskii District, St. Pustyn Village – Ushakov and Tusnolobova, 1982.
3. Kirovskaya Province, Belokholunitskii District, Klimovka Village – Ershov, 1929.
4. Kirovskaya Province, Kirov City – Dryagin, 1926.
5. Kirovskaya Province, Khalturinskii District, Khalturin City – Vesna, 1926.
6. Kirovskaya Province, Nolinskii District, Nolinsk Town – Dryagin, 1926; Plesskii, 1960.
7. Kirovskaya Province, Nolinskii District, Medvenskii Bor – Koroleva, 1976.
8. Kirovskaya Province, Sanchurskii District, Sanchursk Settlement – Koroleva, 1976.
9. Kirovskaya Province, Urzhumskii District, Urzhum Town – Koroleva, 1976.
10. Kirovskaya Province, Kilmezskii District, Kilmez Settlement – Koroleva, 1976.
11. Kirovskaya Province, Malmyzhskii District, 1970; former Malmyzhskii County of Vyatskaya Province – Krulikovskiy, 1908.
12. Kirovskaya Province, Malmyzhskii District, Melet Settlement – Koroleva, 1976.
13. Permskaya Province, Kuedinskii District – Bolotnikov et al., 1977.
14. Permskaya Province, Chernushinskii District, Chernushka City – Bolotnikov et al., 1977.
15. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alatyr River – Zhitkov, 1900.
16. Mordovia Republic, Saransk City, 1957.
17. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
18. Chuvashia Republic, Cheboksary City – A.N. Lvova, pers. comm., 1960s.
19. Chuvashia Republic, Tsivilskii District, Tsivilsk Town – Vesna, 1926; Aktashevo Settlement – Terentjev, 1935.
20. Chuvashia Republic, Marrinsko-Posadskii District, Mariinskii Posad Town – Terentjev, 1935.
21. Chuvashia Republic, Vurnarskii District, Vurnary Settlement – Terentjev, 1935.
22. Chuvashia Republic, Alatyrskii District, Alatyr Town – Vesna, 1926.
23. Marii El Republic, Gornomariiskii District, Sokolinaya Gora – Kh.F. Baldaev, pers. comm., 1970s.
24. Marii El Republic, Gornomariiskii District, Nuzhyar Lake – Kh.F. Baldaev, pers. comm., 1970s.
25. Marii El Republic, Gornomariiskii District, Volga River – Efremov, 1957.
26. Marii El Republic, former Tsarevokokshaiskii County of Kazanskaya Province – Varpakhovskiy, 1885.
27. Marii El Republic, Medvedevskii District, Yoshkar-Ola City; Tsibeknur Village, spring 1924 and 1926.
28. Marii El Republic, Volzhskii District, Bizergub Village, 1960s.
29. Tatarstan Republic, Arskii District, Arsk Settlement – Vesna, 1926.
30. Tatarstan Republic, Vysokogorskii District, Kudash Village, 8.1965; Isleitsarskoe Forestry, 7.1974.

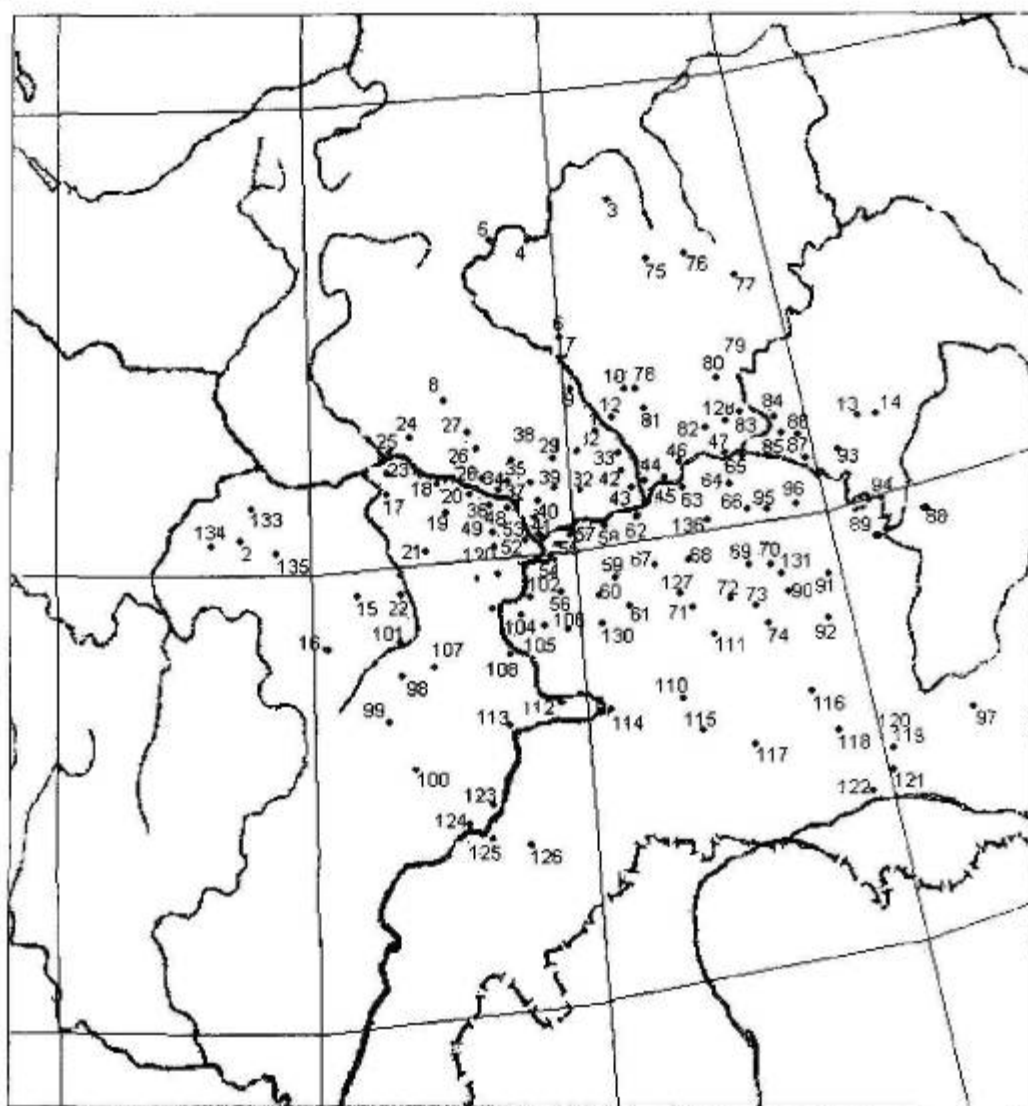


Fig. 7. Distribution of *Bufo viridis*.

31. Tatarstan Republic, Vysokogorskii District, Kurkachi Village, 6.1959.
32. Tatarstan Republic, Tyulyachinskii District, Shadki Village – S.V. Kurshakov, pers. comm., 1970s.
33. Tatarstan Republic, Kukmorskii District, Kukmor Settlement; Oshtorma River, 8.1965.
34. Tatarstan Republic, Zelenodolskii District, Zelenodolsk Town – Garanin, 1988.
35. Tatarstan Republic, Zelenodolskii District, Volzhsko-Kamskii nature Reserve, Raifskii Area – Garanin, 1983; SUMRT, A.A. Shtukenberg.
36. Tatarstan Republic, Zelenodolskii District, Ulitino Village; Selishche Govyadino Village; Britviro Village; Kosyakovo Village; Akzigitovo Village; Kugushevo Village; Tat. Tanaevo Village, 7.1966.
37. Tatarstan Republic, Kazan City (Zaimishche; Glubokoe Lake; Kazanka River; Boriskovo) – KSI; 1998; former Kazanskii County of Kazanskaya Province – Ruzsky, 1894.

38. Tatarstan Republic, Pestrechenskii District, Lenino-Kokushkino Village, 5.1959.
39. Tatarstan Republic, Pestrechenskii District, Panovka Village.
40. Tatarstan Republic, Laishevskii District, M. Kabany Village ~ N.M. Utrobina, pers. comm., 1960s; Pigoli Village; Maevka Settlement, Mesha River, 6.1961.
41. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
42. Tatarstan Republic, Mamadyshskii District, Novaya Ucha Village.
43. Tatarstan Republic, Mamadysh Town, 7.1965.
44. Tatarstan Republic, Elabuzhskii District, Mamylovka Village.
45. Tatarstan Republic, Elabuzhskii District, Elabuga Town, 7.1965.
46. Tatarstan Republic, Mendeleevskii District, Mendeleevsk Town.
47. Tatarstan Republic, Agryzskii District, Varzi River, Varzi-Pelga Village, 7.1965.
48. Tatarstan Republic, Verkhneustlonskii District, Morkvashi Settlement – KSU; Zoological Station of KSU, 6.1958.
49. Tatarstan Republic, Kaibitskii District, Semekcevo Village; Murali Village; M. Memi Village, 7.1966.
50. Tatarstan Republic, Drozhzhanovskii District, St. Shaimurzino Village.
51. Tatarstan Republic, Buinskii District, Nizh. Narotbash Village; Ivashevka Village.
52. Tatarstan Republic, Kamsko-Ustiinskii District, B. Klyari Village; M. Klyari Village, 7.1966.
53. Tatarstan Republic, Kamsko-Ustiinskii District, Krasnovidovo Village – KSU, A. Shtukenberg, 1881.
54. Tatarstan Republic, Spasskii District, Spassk Town, dam across the river Bezdna – ZISP 3497, 2 spec., Bashkirov, 1933; former town of Spassk.
55. Tatarstan Republic, Spasskii District, Vozhi Village; Ekaterinovka Village; Krasnaya Sloboda Village; Shchuchie Lake, 7.1962.
56. Tatarstan Republic, Alkeevskii District, Yukhmachi Village – V.A. Popov, pers. comm., 7.1948; Chuvashskii Brod Village, 1960s.
57. Tatarstan Republic, Alekseevskii District, Lebedino Village; St. Aktai Lake, 7.1962; Stepnaya Shentala Village, 8.1962.
58. Tatarstan Republic, Chistopolskii District, Buldyr Village, 6.1948, 6.1959, 7.1970; Belaya Gora Village; St. Ivanaevo Village, 7.1970; Chistopol Town; former Chistopolskii County of Kazanskaya Province – KSU 106, I. Strelnikov, 1890.
59. Tatarstan Republic, Aksubaevskii District, Sunchelevo Village.
60. Tatarstan Republic, Nurlatskii District, Gaitankino Village; Chulpanovo Village; Tyurnyasevo Village; Mamykovo Village, 8.1964.
61. Tatarstan Republic, Nurlatskii District, Nurlat Town, 8.1962.
62. Tatarstan Republic, Nizhnekamskii District, Starosheshemsk Village, 8.1962; Elantovo Village, 6.1989.
63. Tatarstan Republic, Tukaevskii District, Kuvady Village; Ostankovo Village, 7.1964; Semekcevo Village, 7.1970; Tlyanche-Tamak Village; Naberezhnye Chelny Town, Shipovo Lake, 7.1963.
64. Tatarstan Republic, menzelinskii District, former village Krasnyi Bor, 6.1948; Menzelinsk Town; St. Aleksandrova Village, Ik River; Ayu Village, 6.1961; Igimskii Bor, 1961-1970, 1992.
65. Tatarstan Republic, Aktanyshskii District, Derbeshkinskii Settlement, 6.1948.
66. Tatarstan Republic, Muslyumovskii District, Toigildino Village; Katmysh Village; Muslyumovo Village, 7.1964.
67. Tatarstan Republic, Novosheshemskii District, Lenino Village, 7.1963; Sklony Korzhinskogo Nature Park, 6.1989 – Pavlov and Agzamov, 1993.
68. Tatarstan Republic, Almetievskii District, Yamash Village; Bagryazh Village, 6.1959; Russkii Aktash Settlement, 6.1959-8.1962; Dobromysh Village; Kuzaikino Village, 7.1968.
69. Tatarstan Republic, Aznakaevskii District, Aznakaev Town; Aseevo Village, 6.1961-7.1963; Tumutuk Village, 7.1963.
70. Tatarstan Republic, Aznakaevskii District, Chatyr-Tau Hill, Elga River, 6.1959-7.1970.
71. Tatarstan Republic, Ilenogorskii District, Shugurovo Settlement, 8.1964; Nizh. Chershiy Village, 7.1970; Spiridonovka Village, 6.1989 – Pavlov and Agzamov, 1993.

72. Tatarstan Republic, Bugulminskii District, Bugulma Town, 6.1959-7.1964; Andreevka Village, 7.1954.
73. Tatarstan Republic, Yutazinskii District, St. Karazerik Village; Ekaterinovka Village, Dymka River mouth, 7.1964.
74. Tatarstan Republic, Bavlinskii District, Shatly Village, Ik River; Kzyl-Yar Village; Khansverkino Village, 7.1964.
75. Udmurtia Republic, Yarskii District, Pudem Settlement – G.P. Proezzhev, pers. comm., 1960s.
76. Udmurtia Republic, Glazovskii District, Glazov Town – M.G. Tazetdinov, pers. comm.
77. Udmurtia Republic, Debesskii District, Debessy Town – Garanin, 1983.
78. Udmurtia Republic, Syumsinskii District, Kilmez Settlement – G.P. Priezzhev, pers. comm., 1960s.
79. Udmurtia Republic, Votkinskii District, Votkinsk Town – MIAI.
80. Udmurtia Republic, Izhevsk City, 6.1959.
81. Udmurtia Republic, Mozhginskii District, M. Syuga Village – G.P. Priezzhev, pers. comm., 1960s.
82. Udmurtia Republic, Malopurginskii District, M. Purga Village – G.P. Priezzhev, pers. comm., 1960s.
83. Udmurtia Republic, former Sarapulskii County of Vyatskaya Province – Krulikovskiy, 1888; Sarapul Town – Krulikovskiy, 1901.
84. Udmurtia Republic, kambarskii District, Kama Settlement – G.P. Priezzhev, pers. comm., 1960s.
85. Bashkortostan Republic, Yanaulskii District, Amzya Settlement – G.P. Priezzhev, pers. comm., 1960s.
86. Bashkortostan Republic, yanaulskii District, Yanaul Town, 6.1959 – Garanin, 1983.
87. Bashkortostan Republic, Dyurtyufinskii District, Yusupovo Village, 7.1968.
88. Bashkortostan Republic, Iglinskii District, Ulu-Telyak Settlement – M.G. Bayanov, pers. comm., 1970s.
89. Bashkortostan Republic, Ufa City – Vesna, 1926; – M.G. Bayanov, pers. comm., 1970s; Ufimskii District, Dema River – M.G. Bayanov, pers. comm., 1970s.
90. Bashkortostan Republic, Tuimazinskii District, Ik River; Kandry-Kul Lake.
91. Bashkortostan Republic, Chishminskii District, Karayakupovo Village.
92. Bashkortostan Republic, Davlekanovskii District, Asli-Kul Lake – Polozhentsev and Kuzherov, 1957.
93. Bashkortostan Republic, Buraevskii District, Kuzbaevo Village, 6.1959.
94. Bashkortostan Republic, Blagoveshchenskii District – M.G. Bayanov, pers. comm., 1970s.
95. Bashkortostan Republic, Bakalinskii District, Karpovka Village.
96. Bashkortostan Republic, Chekmagushevskii District – M.G. Bayanov, pers. comm., 1970s.
97. Bashkortostan Republic, Kugarchinskii District – M.G. Bayanov, pers. comm., 1970s.
98. Penzenskaya Province, Nikolskii District, Osokino Village – Vesna, 1926.
99. Penzenskaya Province, Gorodishchenskii District, Chaadaevka Settlement, 7.1957.
100. Penzenskaya Province, kameshkirskii District, Privolzhskaya Lesostep Nature Reserve, Kuncherovskaya Steppe Area – P.V. Pavlov, pers. comm., 1996.
101. Ulyanovskaya Province, Surskii District, Surskoe Settlement – Osipova, 1993.
102. Ulyanovskaya Province, Staromaiskii District – Osipova, 1993.
103. Ulyanovskaya Province, Ulyanovsk City – ZISP 2986, K. Gilsen, 6.1904; Osipova, 1993; former Simbirskii County of Simbirskaya Province – Ruzsky, 1894.
104. Ulyanovskaya Province, Cherdaklinskii District, Ivanovka Village – S.S. Gainiev, pers. comm., 1960s.
105. Ulyanovskaya Province, Melekesskii District – Osipova, 1993.
106. Ulyanovskaya Province, Novomalykinskii District – Osipova, 1993.
107. Ulyanovskaya Province, Inzenskii District, Osokino Village – Vesna, 1926.
108. Ulyanovskaya Province, Sengileevskii District – Osipova, 1993.
109. Ulyanovskaya Province, Tsilninskii District – Osipova, 1993.
110. Samarskaya Province, Kinel-Cherkasskii District, Timashevskie Forest Bands – Malchevskii, 1941.
111. Samarskaya Province, Klyavinskii District, 6.1989 – Pavlov and Agzamov, 1993.
112. Samarskaya Province, Stavropolskii District, Zhiguli Hills – Snigirevskaya, 1951; Zhigulevskii Nature Reserve, Seredysh Lake, 6.1957.
113. Samarskaya Province, former Syzranskii County of Simbirskaya Province – Ryzhkov, s.a.

114. Samarskaya Province, Samara City – Pavlov et al., 1995.
115. Samarskaya Province, Bogatovskii District, Andreevka Village – Yu.T. Artemiev, pers. comm., 1960s; Garanin, 1983.
116. Orenburgskaya Province, Abdulinskii District, Ik River valley – Zarudnoi, 1896.
117. Orenburgskaya Province, Buzulukskii Bor – Polozhentsev, 1935.
118. Orenburgskaya Province, Sharlykskii District, Sharlyk Village, 6.1959.
119. Orenburgskaya Province, Oktyabrskii District, Salmysh Lake – Zarudnoi, 1896.
120. Orenburgskaya Province, Oktyabrskii District, Belozerska Village, 6.1959.
121. Orenburgskaya Province, Sakmarskii District, Verkh. Karagalka River and Sr. Karagalka River – Lindholm, 1902; Sakmara Village, 6.1959.
122. Orenburgskaya Province, Orenburgskii District, Sakmara River – Zarudnoi, 1896; Orenburg City – ZISP 2784, surroundings of Orenburg, 3 spec., 4.1907; ZISP 2785 Forshtadskie Meadows, 4 spec., 5.1907, Vorontsovskii.
123. Saratovskaya Province, Khvalynskii District, Sosnovaya Maza Village – B.V. Nekrasov, pers. comm., 1960s.
124. Saratovskaya Province, Volskii District, Volsk Town – Garanin, 1983.
125. Saratovskaya Province, Balakovskii District, Plekhany Village; Elanka Village; Irgiz River – V.S. Zaletae, pers. comm., 1960s.
126. Saratovskaya Province, former Pugachevskii County of Samarskaya Province – Bazhanov, 1930.
127. Tatarstan Republic, Cheremshanskii District, Berket-Klyuch Village; Nizh. Karmalka Village, 6.1961, 6.1989.
128. Tatarstan Republic, Agryzskii District, Agryz Town; Tukai Settlement, 7.1965.
129. Tatarstan Republic, Apastovskii District, M. Kokuzy Village, 7.1966.
130. Tatarstan Republic, Nurkatskii District, Yugan Lake.
131. Tatarstan Republic, Aznakaevskii District, Nizh. Styarle Village, Ayaz-Kul Lake, 7.1964; Chekan Village, 6.1961-7.1964.
132. Tatarstan Republic, Sabinskii District, Sababashkoe Forestry, 7.1974.
133. Nizhegorodskaya Province, Pavlovskii District, Vorsma Town – ZISP 1625, Varpakhovskiy, 1887.
134. Nizhegorodskaya Province, Navashinskii District, Salavir Village – ZISP 1633, 2 spec., Varpakhovskii, 1887.
135. Nizhegorodskaya Province, Perevozskii District, Perevoz Settlement – ZISP 1634, Varpakhovskiy, 1887.
136. Tatarstan Republic, Sarmanovskii District, Kulmetievo Village, menzelya River; B. Nurkevo Village, 7.1964.

Marsh Frog, *Rana ridibunda* Pallas, 1771 (Fig. 8)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981.
2. Nizhegorodskaya Province, Borskii District, Borskie Meadows – Krasavtsev, 1939b.
3. Nizhegorodskaya Province, Pilninskii District, Kurmysh Village, Sura River – KSU, M. Ruzsky, 6.1889.
4. Kirovskaya Province, Belokholunitskii District, Klimovka Village – Ershov, 1929.
5. Kirovskaya Province, Yur'yanskii District, Murygino Settlement – Plesskii, 1960.
6. Kirovskaya Province, Kirov City – ZISP 3344, pond of Agricultural Institute, A.I. Batmanov, 5.1950; Koroleva, 1976.
7. Kirovskaya Province, Kirovo-Chepetskii District, M. Konyp Village – Koroleva, 1976.
8. Kirovskaya Province, Kumenskii District, Kumeny Settlement – Dryagin, 1926.
9. Kirovskaya Province, Uninskii District, Uni Settlement – Koroleva, 1976.
10. Kirovskaya Province, Tuzhinskii District, Tuzha Settlement – Koroleva, 1976.
11. Kirovskaya Province, Nolinskii District, Nolinsk Town – Dryagin, 1926.
12. Kirovskaya Province, former Malmyzhskii County of Vyatskaya Province – Krulikovskiy, 1901; Malmyzhskii District – S.V. Kurshakov, pers. comm., 1971.

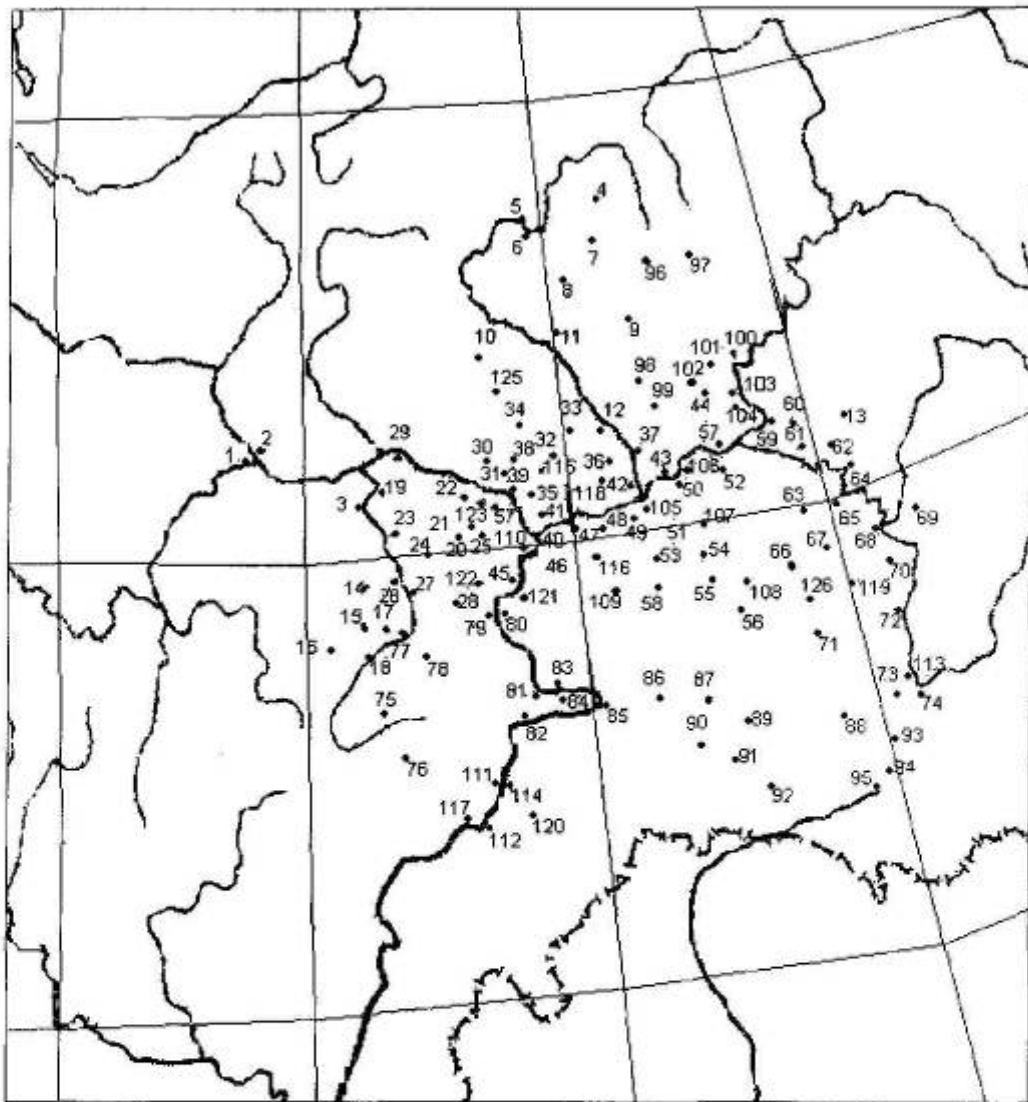


Fig. 8. Distribution of *Rana ridibunda*.

13. Permskaya Province, Kuedinskii District, Bikhbada Village – Bolotnikov et al., 1977.
14. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alatyr River – Zhitkov, 1900.
15. Mordovia Republic, Atyashevskii District, 1950s.
16. Mordovia Republic, Lyambirskii District, Bersenevka Village: Saransk Town, Insar River, 8.1957.
17. Mordovia Republic, Dubenskii District, Sura River, 8.1957.
18. Mordovia Republic, Bolshebereznikovskii District, Simkino Village – Astradamov and Alysheva, 1979.
19. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
20. Chuvashia Republic, Tsivilskii District, Tsivilsk Town – Vesna, 1926.

21. Chuvashia Republic, Tsivilskii District, St. Aktashevo Village – Terentjev, 1935.
22. Chuvashia Republic, Marrinsko-Posadskii District, Marrinskii Posad Town – Terentjev, 1935.
23. Chuvashia Republic, Shumerlinskii District, Myslets River – Terentjev, 1935.
24. Chuvashia Republic, Vurnarskii District, Vurnary Settlement – Terentjev, 1935.
25. Chuvashia Republic, Urmarskii District, B. Yanikovo Village – Terentjev, 1935; Tegeshevo Village, 7.1966.
26. Chuvashia Republic, Alatyrskii District, Alatyr Town – Vesna, 1926; Terentjev, 1935.
27. Chuvashia Republic, Alatyrskii District, Alatyrskoe Forestry, Bezdna River – Terentjev, 1935.
28. Chuvashia Republic, Batyrevskii District, Pervomaiskoe Settlement – Tikhvinskii, 1934; Bula River, 7.1957.
29. Marii El Republic, Gornomariiskii District, Volga River – Efremov, 1957.
30. Marii El Republic, Volzhskii District, Marii Chodra National Park, Yalchik Lake – KSU, 7.1997.
31. Marii El Republic, Volzhskii District, Bizergub Village, 1960s.
32. Tatarstan Republic, Arskii District, Kazaklar Village; Sikertan Village – Lukin et al., 1954; Istoki Kazanki Nature Park, 7.1974.
33. Tatarstan Republic, Baltasinskii District, St. Kushket Village, 7.1974.
34. Tatarstan Republic, Vysokogorskii District, Isleitsarskoe Forestry, Ilet River; Potanikha Village; Kudash Village; Yuvas Village, 8.1965.
35. Tatarstan Republic, Pestrechenskii District, Zmeevo Village – Terentjev, 1931; Lenino-Kokushkino Village, Ushnya Fishery, 6.1956, 6.1958, 5.1959; Alvidino Village, Iske-Yurt Village; Kolkomerka Village; Raikovo Village, 7.1965; Pestretsy Village, Mesha River, 11.1986.
36. Tatarstan Republic, Kukmorskii District, Bailyangar Settlement; Kamyshly Village, Oshforma River; Plaksikha Village, 8.1965.
37. Tatarstan Republic, Kukmorskii District, Lubyany Settlement, Lubyanka River – Zakirov, 1985.
38. Tatarstan Republic, Zelenodolskii District, Zelenodolsk; Gari Village, 7.1966; Krasnyi Yar Village; Oktyabrskii Settlement – KSU, 1971; Belo-Bezvodnoe Village; Volzhsko-Kamskii Nature Reserve, Raifskii Zrea, Raifskoe Lake – Garanin, 1983.
39. Tatarstan Republic, Kazan City – KSU 77, tadpoles; D. Kaban Lake; Kazanka River, 1998.
40. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
41. Tatarstan Republic, Laishevskii District, Volga River, former villages Berezhovaya Griva and Kartashikha; Maevka Settlement, Mesha River, 6.1961; Kirbi Village; Im. 25 Oktyabrya Settlement, 6.1965; Stolbishche Village, Zayachie Lake, 6.1993.
42. Tatarstan Republic, Mamadyshskii District, Nov. Cherkas Village, 7.1965, 6.1992; Nov. Kumazan Village; Shiya River mouth; Malmyzhka Village; Verkh. Oshma Village; Mamadysh Town, 7.1965.
43. Tatarstan Republic, Elabuzhskii District, Anzirka River; Tanaika Village; Elabuga Town, 7.1965; Nizhnyaya Kama National Park, B. Bor Site, 7.1970; M. Bor Site – Khotko and Ganeev, 1993.
44. Tatarstan Republic, Agryzskii District, Izh-Baiki Village; Tersi Village; Tuba Village; Tukai Village.
45. Tatarstan Republic, Tetyushskii District, former settlement Zolnyi, 4.1951; B. Turma Village; Chulla Village; Krasnaya Polyana Village; Narmonka Village; Tetyushi Town; Ivanovka Village; Krasnaya Zvezda Village; Zhukovo Village; Prolei-Kasha Village; Laptevka Village, 7.1966.
46. Tatarstan Republic, Spasskii District, Bolgar Town; former town Spassk; Shcherbet Village; b. villages Isachka, Komarovka and Malinovka; Nikolskoe Village, 7.1962.
47. Tatarstan Republic, Alekseevskii District, Karavaevo Village; Yalkyn Village; St. Aktai Lake; Shentala River mouth, 7.1962.
48. Tatarstan Republic, Chistopolskii District, B. Tolkish Village – V.A. Popov, pers. comm., 7.1962; Mordovskysy Bagana Village; Kutluskino Village; Sluzhilaya Shentala Village; Podkolok Village, 8.1962; Zmeevo Village; Buldyr Village; Belaya Gora Village; Sukzhevskii Pond, 8.1962, 7.1970.
49. Tatarstan Republic, Novosheshminskii District, Lenino Village, Kichui River mouth, 7.1963; St. Utyashkino Village; Sloboda Arkhangelskaya Village, 7.1964; Sekenes Village – Pavlov and Agzamov, 1993.

50. Tatarstan Republic, Tukaevskii District, Ishteryakovo Village; Ostankovo Village, 7.1964; Naberezhnye Chelny Town, Zaliy Lake, 8.1962.
51. Tatarstan Republic, Zainskii District, Svetloe Ozero Village; Utyashkino Village, 7.1963, 7.1964; Shikmamaevo Village, 7.1964.
52. Tatarstan Republic, Menzelinskii District, Igimskoe Forestry; former villages Karakuly and Shadrino; St. Aleksandrovka Village, 6.1961.
53. Tatarstan Republic, Almetievskii District, Bagryazh Village, 6.1959; Rus. Aktash Village; Yamash Village, 6.1959-7.1964; Zai-Chishma Village; Novotroitskoe Village; Boriskino Village; Kalcikino Village; Vladimirovka Village; former village Sas-Kul, 7.1964.
54. Tatarstan Republic, Aznakeevskii District, Chatyr-Tau Hill, Elga River, 6.1959, 7.1964, 6.1970; Nizh. Sukhoyash Village, 6.1961; Tumutuk Village; Kuk-Tyaka Village; Aseevo Village; Suyunduk Village; Urmanaev Village, Sterlya River; Nizh. Styarl Village, Ayaz-Kul Lake; Chekan Village; Konstantinovka Village, 7.1964.
55. Tatarstan Republic, Leninogorskii District, Bakirovo Village; Spiridonovka Village, 6.1989.
56. Tatarstan Republic, Bugulminskii District, Zai River – Pallas, 1788; Bugulma Town, 6.1959; Andreevka Village, 7.1964.
57. Tatarstan Republic, Agryzkii District, Varzi-Pelga Village, 7.1965.
58. Tatarstan Republic, Cheremshanskii District, Nizh. Karmaika Village, 6.1961-6.1989; Nizh. Chegodaika Village, 8.1964.
59. Bashkortostan Republic, Yanaulskii District, Amzya Settlement – G.P. Priezzhev, pers. comm., 1960s.
60. Bashkortostan Republic, Yanaulskii District, Yanaul Town – Garanin, 1983.
61. Bashkortostan Republic, Dyurtyulinskii District, Yusupovo Village, 7.1968.
62. Bashkortostan Republic, Buraevskii District, Kuzbaevo Village, 6.1959.
63. Bashkortostan Republic, Chekmagushevskii District – M.G. Bayanov, 1970s.
64. Bashkortostan Republic, Birkii District, Birk Town, 6.1959.
65. Bashkortostan Republic, Kushnarenkovskii District – M.G. Bayanov, pers. comm., 1970s.
66. Bashkortostan Republic, Tuimazinskii District, Kandry-Kul Lake.
67. Bashkortostan Republic, Chishminskii District – M.G. Bayanov, pers. comm., 1970s.
68. Bashkortostan Republic, Ufimskii District, Ufa City, 6.1959; Ufa River – Polozhentsev and Khanislamov, 1942; M.G. Bayanov, pers. comm., 1970s; lower reaches of the Demä River – M.G. Bayanov, pers. comm., 1970s.
69. Bashkortostan Republic, Iginskii District, Ulu-Telyak Settlement – M.G. Bayanov, pers. comm., 1970s.
70. Bashkortostan Republic, Karmaskalinskii District, Beketovo Village, 6.1959.
71. Bashkortostan Republic, Bizhoulyakskii District – M.G. Bayanov, pers. comm., 1970s.
72. Bashkortostan Republic, Sterlitamakskii District – M.G. Bayanov, pers. comm., 1970s.
73. Bashkortostan Republic, Kumertauskii District, Kuretau Town, 6.1959.
74. Bashkortostan Republic, Kugarchinskii District, Yalchino Village, 6.1959.
75. Penzenskaya Province, Gorodishchenskii District, Chaadaevka Village, 7.1957.
76. Bashkortostan Republic, Kameshkirskii District, Privolzhskaya Lesostep Nature Reserve, Borok Area – P.V. Pavlov, pers. comm., 1996.
77. Ulyanovskaya Province, Surskii District, Polyanki Village, 7.1957.
78. Ulyanovskaya Province, Karasunskii District, Novosursk Town, 7.1957.
79. Ulyanovskaya Province, Ulyanovsk City, 7.1967; Sviyaga River – KSU 79, M. Ruzsky, 4.1895.
80. Ulyanovskaya Province, Ulyanovsk City, Zavolzhskii District – Osipova, 1993.
81. Samarskaya Province, Shigonskii District, Usolie Village, 5.1951.
82. Samarskaya Province, Syzranskii District, Pecherskoe Village, 7.1957.
83. Samarskaya Province, Stavropolskii District, Tolyatti Town, 5.1951, 6.1957.
84. Samarskaya Province, Stavropolskii District, Samarskaya Luka – KSU, 4 spec., N. Krotov, 6.1891; Zhiguli; Zhigulevskii Nature Reserve, Shalyga Island – Snigirevskaya, 1951; Seredysk Island, 6.1957.

85. Samarskaya Province, Samara River – Pavlov et al., 199; Volga River; Samara River – Melnichenko et al., 1938.
86. Samarskaya Province, Kinel-Cherkasskii District, Kinel River; Elshanka River – Malchevskii, 1941.
87. Samarskaya Province, Pokhvistnevskii District, M. Tol'kai Village – B.V. Nekrasov, pers. comm.
88. Orenburgskaya Province, Sharlykskii District, Sharlyk Village, 6.1959.
89. Orenburgskaya Province, Grachevskii District, Ignashkino Village – Pallas, 1788.
90. Orenburgskaya Province, former Buzulukskii County of Samarskaya Province, south from the Samara River – Bazhanov, 1930; Buzulukskii District, Buzulukskii Bor – Polozhentsev, 1935.
91. Orenburgskaya Province, Tot'skii District, Tot'skoe Village – Pallas, 1788.
92. Orenburgskaya Province, Sorochinskii District, M. Uran River – Pallas, 1788.
93. Orenburgskaya Province, Oktyabrskii District, Vasilievka Village – Lindholm, 1902; Belozerka Village, 6.1959.
94. Orenburgskaya Province, Sakmarskii District, Verkh. Kargalka River; Sr. Kargalka River – Lindholm, 1902.
95. Orenburgskaya Province, Orenburg City, Kargala Settlement – Lindholm, 1902; ZISP 399, Severtzov, 1857; ZISP 2991, 2 spec., 5.1907, ZISP 2982, 2 spec., ZISP 2983, 2 spec., 7.1907 (Forstadske Meadows), all Vorontsovsky.
96. Udmurtia Republic, Yarskii District, Pudem Settlement – G.P. Priezzhev, pers. comm., 1960s.
97. Udmurtia Republic, Glazovskii District, Glazov Town – M.G. Tazetdinov, pers. comm.
98. Udmurtia Republic, Syumsinskii District, Kilmez Settlement – G.P. Priezzhev, pers. comm., 1960s.
99. Udmurtia Republic, Mozhginskii District, M. Syuga Village – G.P. Priezzhev, pers. comm., 1960s.
100. Udmurtia Republic, Votkinskii District, Votkinsk Town – MIAI; Gavrilovka Village, 6.1959.
101. Udmurtia Republic, Izhevsk City (Pozim River, Izhevskii Pond).
102. Udmurtia Republic, Malopurginskii District, M. Purga Village – G.P. Priezzhev, pers. comm., 1960s.
103. Udmurtia Republic, Zavyalovskii District, Zavyalovo Village – Krulikovsky, 1901; Timmevka Village – Krulikovsky, 1901.
104. Udmurtia Republic, former Sarapul'skii County of Vyatskaya Province – Krulikovsky, 1888; Sarapul'skii District, Sarapul Town – Krulikovsky, 1914.
105. Tatarstan Republic, Mízhnekamskii District, Starosheshminsk Village, 7.1961, 8.1962; Kamskii Settlement; Smylovka Village; Kamskie Polyany Settlement, 8.1962; Borok Village; Krasnyi Klyuch Settlement; Nizh. Chelny Village; Blagodatnaya Village, 7.1964; Elantovo Village, 6.1989; Krasnaya Kadka Village, 7.1964.
106. Tatarstan Republic, Tukaevskii District, Nizhnyy Kama National Park, Kzyl-Tau Site; Iliichevskii Settlement, 6.1961.
107. Tatarstan Republic, Sarmanovskii District, B. Nurkevo Village; Sulyukovo Village; Churashovo Village; Nov. Saklovo Village, 7.1964.
Muslyumovskii District, Tamyán Village, 6.1964; Mellyá-Tamak Village; Narat-Asty Village; Toigildino Village; B. Chekmak Village; Muslyumovo Village; Rus. Shugan Village; Katmysh Village, 7.1964.
108. Tatarstan Republic, Yutazinskii District, Yutaza Village; Yassy-Tugai Village; Ekaterinovka Village; Dymka River mouth, 7.1964.
109. Tatarstan Republic, Aksubaevskii District, Tyurnyasevo Village; Svetloe Ozero Village, B. Cheremshan River; Yugan Settlement, Yugan Lake, 8.1964.
110. Tatarstan Republic, Kamsko-Ustiinskii District, Tenki Village; Varvarino Village; St. Baryshevo; Karatalga Village; Krasnovidovo Village; Chelny Village; St. Kazevo Village; B. Klyari Village; M. Klyari Village; Antonovka Village; Kamskoe ustie Settlement; Mordovskii Karatai Village; Syukevo Village, 7.1966.
111. Saratovskaya Province, Khvalynskii District, Sosnovaya Maza Village – B.V. Nekrasov, pers. comm., 1960s.
112. Saratovskaya Province, Balakovskii District, Elanka Village; Irgiz River – V.S. Zaletaev, pers. comm., 1960s.
113. Bashkortostan Republic, Meleuzskii District, Belaya River, 6.1959.

114. Saratovskaya Province, Dukhovnitskii District – Kozlovskii, 1951.
115. Tatarstan Republic, Vysokogorskii District, Kurkachi Village, 6.1959.
116. Tatarstan Republic, Alkeevskii District, Yukhmachi Village – V.A. Popov, pers. comm., 8.1948. Boriskino Village, 7.1962.
117. Saratovskaya Province, Volskii District, Volsk Town – V.S. Zaletaev, pers. comm., 1960s.
119. Bashkortostan Republic, Alsheevskii District, Dema River – Polozhentsev and Khanislamov, 1942. 1949.
120. Saratovskaya Province, former Pugachevskii County of Samarskaya Province – Bazhanov, 1930.
121. Ulyanovskaya Province, Staromainskii District, Volga River, 5.1951.
122. Tatarstan Republic, Buinskii District, Mamotkozino Village; Ivashevka Village, 7.1966.
123. Tatarstan Republic, Zelenodolskii District, Ulitino Village; B. Shirdany Village; Selishche Govyadino Village; Akzigitovo Village; Kugushevo Village; Kosyakovo Village; Tavolino Village; Mamadysh-Akilovo Village; Tat. Tanaevo Village; Utyakovo Village; Gorodishche Village; Tat. Naratly Village; Rys. Naratly Village, 7.1966.
- Verkhneuslonskii District, Zoological Station of KSU, 6.1958-7.1998; Pustye Morkvashi Settlement, 7.1998; Sobolevskoe Village; Rus. Makulovo Village; Korguza Village; Patrikeev Village, 6-7.1966.
- Kaibitskii District, Saltyganovo Village; Araslanovo Village; Burunduki Village; M. Memi Village; Kushmany Village; Nadezhdino Village; Chistye Klyushi Village; Kargaly Village, 7.1966.
- Apastovskii District, Kaby-Kopri Village; M. Kokuzy Village; Verkh. Indyrchi Village; Bulym-Bulykhchi Village; Shemyakovo Village; St. Burnashevo Village; Deusgevi Village; Apastovo Village; St. Enali Village; B. Bolgoyary Village; St. Yumraly Village; Shonguty Village; Bishevo Village.
124. Tatarstan Republic, Bavlinskii District, Kit-Ozero Village; Popovka Village; Dmitrievka Village; Nikolashkino Village; Shalty Village, 7.1964.
125. Marii El Republic, Sernurskii District, Vasilenki Village, 1961-1972 – Sezonaya, 1979.
126. Bashkortostan Republic, former Belebeevskii County of Ufimskaya Province – ZMMU 885, Kolobaev, 7.1900.
127. Marii El Republic, Kilemarskii District, Mariiskii Nature Reserve, Shusher Settlement – E.A. Rodikova, pers. comm., 1998.

Pool Frog, *Rana lessonae* Camerano, 1882 (Fig. 9)

1. Nizhegorodskaya Province, Nizhny Novgorod City – Lebedinsky, 1981.
2. Nizhegorodskaya Province, Lukyanovskii District – Borisova et al., 1985.
3. Kirovskaya Province, Nolinskii District, Nolinsk Town – Dryagin, 1926; Plesskii, 1960.
4. Kirovskaya Province, Kiknurskii District, Kiknur Settlement – Koroleva, 1976.
5. Kirovskaya Province, Kiknurskii District, Russkie Krai Village – Koroleva, 1976.
6. Kirovskaya Province, Malmyzhskii District, Argyzh Wetland – S.V. Kurshakov, pers. comm., 1971. Koroleva, 1976; Melet Settlement – Koroleva, 1976.
7. Kirovskaya Province, Malmyzhskii District, B. Kityak Village – Koroleva, 1976.
8. Mordovia Republic, Kovylkinskii District, Ezhovka Village – A.I. Dushin, pers. comm., 1960s.
9. Mordovia Republic, Ruzevskii District, Levzha Settlement – A.I. Dushin, pers. comm., 1960s.
10. Mordovia Republic, Saransk City, Insar River, 8.1950-9.1958.
11. Mordovia Republic, Bolshebereznykovskii District, Simkino Village – Astradamov and Alysheva, 1979.
12. Chuvashia Republic, Yadrinskii District, Yadrin Town – V.A. Ushakov, pers. comm., 1970s.
13. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
14. Chuvashia Republic, Cheboksarskii District, Kugesi Village – Voronov et al., 1995.
15. Chuvashia Republic, Novocheboksarsk Town – Voronov et al., 1995.
16. Chuvashia Republic, Mariinsko-Posadskii District, Mariinskii Posad Town – Terentjev, 1935.
17. Chuvashia Republic, Krasnochetayskii District, Vishnery Village, 1960s.
18. Marii El Republic, Gornomariiskii District, Sokolnya Gora – Kh.F. Baldaev, pers. comm., 1970s.

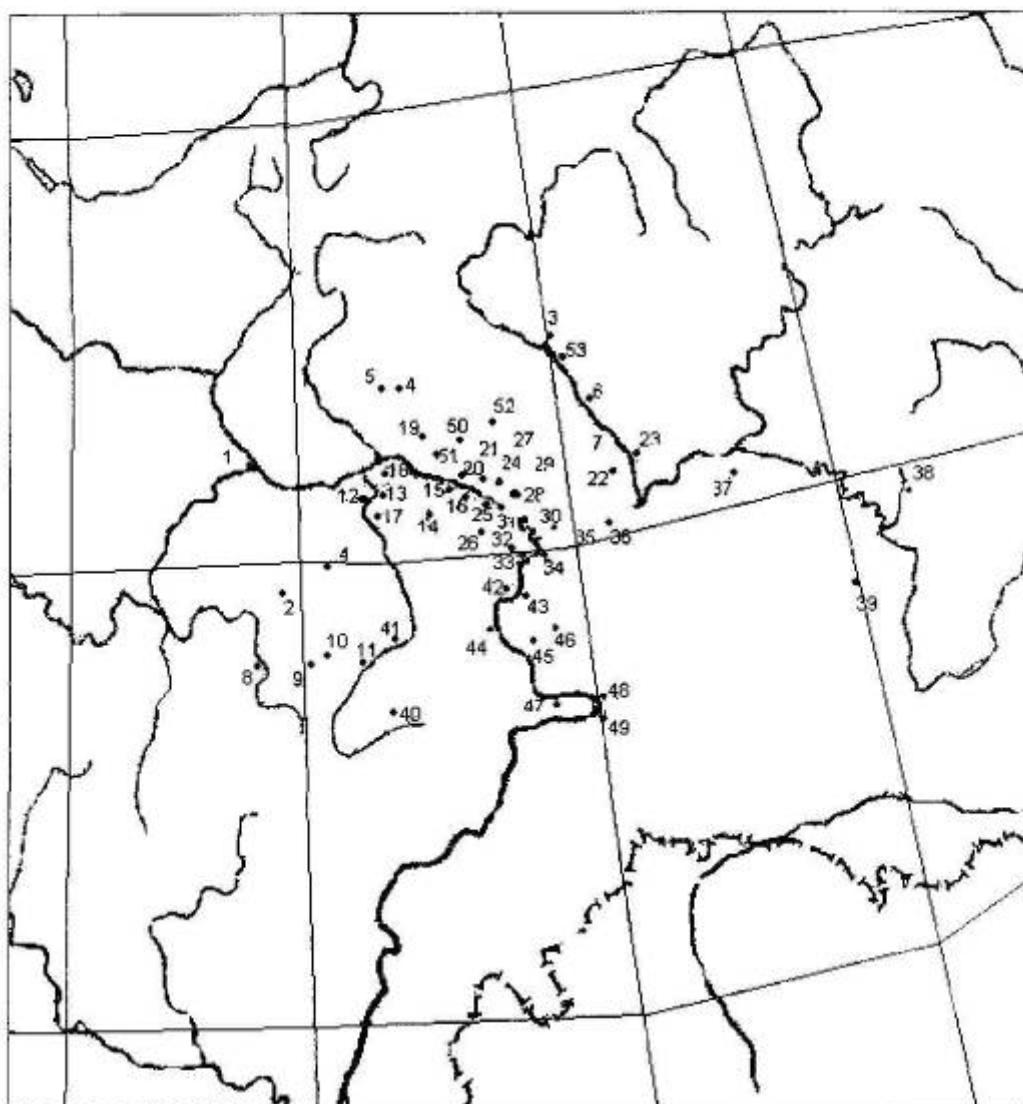


Fig. 9. Distributions of *Rana lessonae* and *R. kl. esculenta*.

19. Marii El Republic, Kilemarskii District, Mariiskii Nature Reserve, Shusher Settlement – D.L. Nikiforov, pers. comm., 196; E.A. Rodikova, pers. comm., 1996-1998; Aktayuzh Village – Sezonnaya, 1979.
20. Marii El Republic, Medvedevskii District, Mariiskii Nature Reserve, Lomashier Lake – Yu.S. Kotov, pers. comm., 1973.
21. Marii El Republic, Volzhskii District, Bizergub Village; B. Paraty Village, 1960s.
22. Tatarstan Republic, Kukmorskii District, Baityangar Village, 6.1959.
23. Tatarstan Republic, Kukmorskii District, Lubyany Settlement, Lybyanka River – Zakirov, 1985.
24. Tatarstan Republic, Zelenodolskii District, Oktyabrskii Settlement, Biological Station of Kazan State University – KSU, 1971; Volzhsko-Kamskii Nature Reserve, Raifskii Area – Garanin, 1983.
25. Tatarstan Republic, Zelenodolskii District, Ulitino Village, 8.1965; Kugushevo Village, 7.1966.

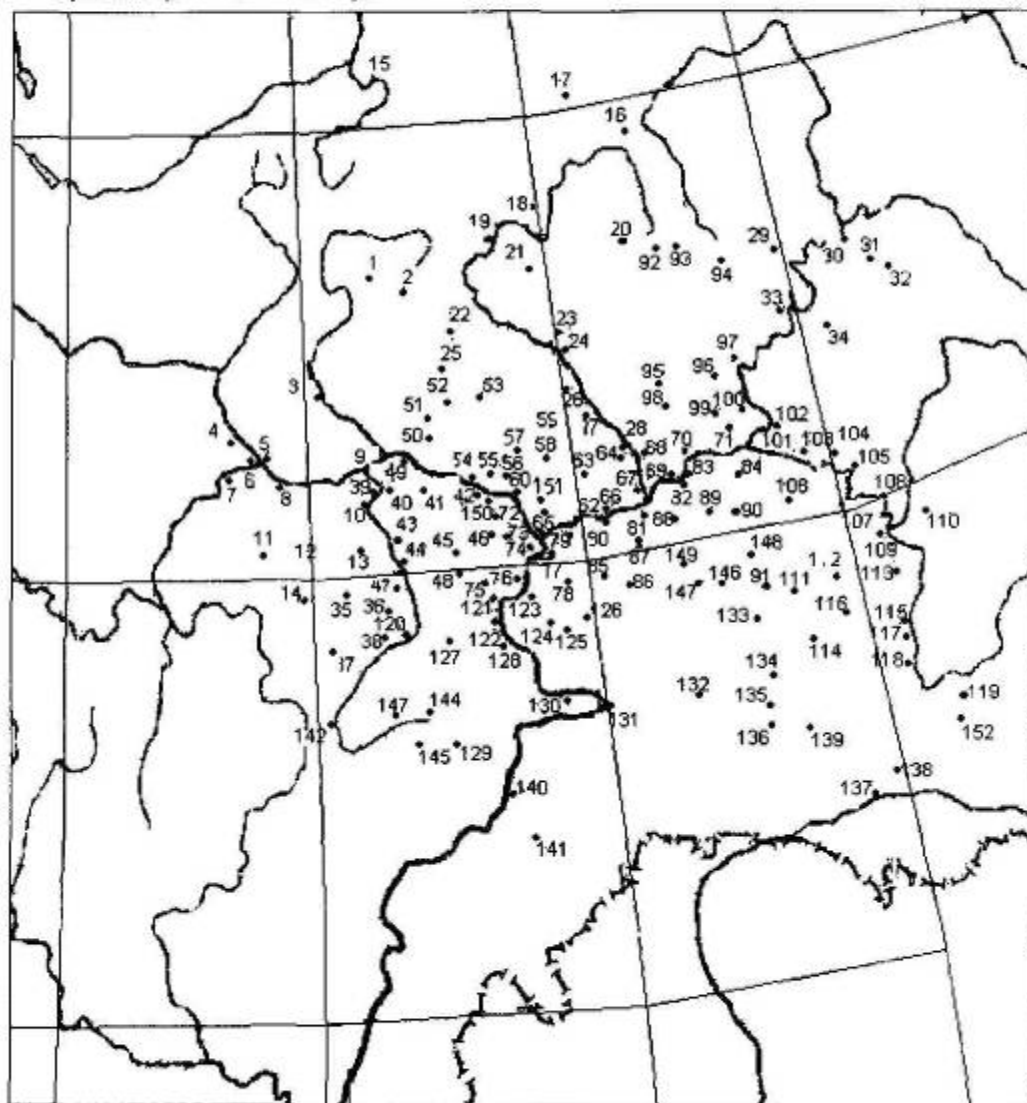
26. Tatarstan Republic, Zelenodolskii District, Mamadysh-Akilovo Village, 7.1966.
27. Tatarstan Republic, Kazan City (Kizhitsa – KSU, 4.1889; Arakchinskoe Swamp – KSU, 1891, N. Maksinov; 5.1972; Zaimishche; Lebyazhie Lake; Glubokoe Lake; M. Glubokoe Lake; Goluboe Lake, 1948-1998; Derbyshki, 1990s).
28. Tatarstan Republic, Laishevskii District, Kovalevskoe Lake, 7.1985-7.1998.
29. Tatarstan Republic, Laishevskii District, Matyushino Village; former village Yasnaya Polyana, 1960s.
30. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
31. Tatarstan Republic, Verkhneuslonskii District, Pustye Morkvashi Settlement – V.G. Ivliev, pers. comm., 1970s.
32. Tatarstan Republic, Kamsko-Ustiinskii District, B. Klyara Village; M. Klyara Village, 7.1966.
33. Tatarstan Republic, Tetyushskii District, former settlement Zolnyi, 4.1951.
34. Tatarstan Republic, Spasskii District, former town Spassk; former villages Malinovka, Komarovka and Nechaevka; Bulgarovka Settlement; Bolgary Village, Mochilishche Lake, 7.1962.
35. Tatarstan Republic, Alekseevskii District, Ibrysh River; Kurkul Lake; Sosnovyi Bor Island; Pervomaiskii Island, 7.1968.
36. Tatarstan Republic, Chistopolskii District, St. Ivanaevo Village, 6.1959; Buldyr Village, 7.1948-6.1959.
37. Tatarstan Republic, Menzelinskii District, Igimskii Bor, Igim Lake, 7.1963, 6.1968; former village Karakuly, 7.1963.
38. Bashkortostan Republic, Nurimanovskii District, Novokulevo Village – M.G. Bayanov, pers. comm., 1970s (?).
39. Bashkortostan Republic, Alshevskii District, Dema River – Polozhentsev and Khanislamov, 1942, 1949 (?).
40. Penzenskaya Province, former Gorodishchenskii County of Saratovskaya Province, Stolypino Village – ZMMU 345, B.Olenin.
41. Ulyanovskaya Province, Surskii District, Surskoe Settlement – Osipova, 1993.
42. Ulyanovskaya Province, Tsilninskii District – Osipova, 1993.
43. Ulyanovskaya Province, Staromainskii District, 5.1951; Osipova, 1993.
44. Ulyanovskaya Province, Ulyanovsk City – I.B. Abrakhina, pers. comm., 1990s.
45. Ulyanovskaya Province, Melekesskii District – Osipova, 1993.
46. Ulyanovskaya Province, Melekesskii District, Dimitrovgrad Town – V.A. Ushakov, pers. comm., 1990s.
47. Samarskaya Province, Stavropolskii District, Zhigulevskii Nature Reserve, Shalyga Island – Snigirevskaya, 1951.
48. Samarskaya Province, Samara City, Volga River – Melnichenko et al., 1938.
49. Samarskaya Province, Samara City, Samara River – melnichenko et al., 1938.
50. Marii El Republic, Yoshkar-Ola City, 1957-1972 – Sezonaya, 1979.
51. Marii El Republic, Zvenigorodskii District, Tashnur Village, 1960-1972 – Sezonaya, 1979.
52. Marii El Republic, Sernurskii District, 1990s.
53. Kirovskaya Province, Nolinskii District, Medvenskii Bor – Dryagin, 1926.
54. Nizhegorodskaya Province, Buturlinskii District, Bornukovo Village, Nyana River – ZISP 1608, Varpakhovsky, 1887.

Edible Frog, *Rana kl. esculenta* Linné, 1758 (Fig. 9)

1. Tatarstan Republic, Zelenodolskii District, Volzhsko-Kamskii Nature Reserve, Raifskii Area – Garanin, 1983.
- 2 (27). Tatarstan Republic, Kazan City (Arakchinskoe Swamp – KSU, 5.1972; Lebyazhii Lakes, 1990s).
- 3 (30). Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area, 1980-1990s.

Moor Frog, *Rana arvalis* Nilsson, 1842 (Fig. 10)

1. Kostromskaya Province, Ponazyrevskii District, Ponazyrevo Settlement – Krasavtsev, 1939a.
2. Nizhegorodskaya Province, Tonshayevskii District, Pizhma Settlement – ZISP 80; Ushakov and Pestov, 1983.
3. Nizhegorodskaya Province, Krasnobakovskii District – Nosova, 1989.]
4. Nizhegorodskaya Province, Balakhninskii District – Nosova, 1989.
5. Nizhegorodskaya Province, Borskii District, left bank of the Volga River – Krasavtsev, 1939a; Nosova, 1989.
6. Nizhegorodskaya Province, Nizhny Novgorod City – ZISP 1638, 6 spec.; ZISP 3586, 7 spec.; Varpakhovsky, 1887; Lebedinsky, 1981.

Fig. 10. Distribution of *Rana arvalis*.

7. Nizhegorodskaya Province, Pavlovskii District, Gorbatov Town – ZISP 3073, 4 spec., 1887.
8. Nizhegorodskaya Province, Kstovskii District – Nosova, 1989.
9. Nizhegorodskaya Province, Vorotynskii District, Vasilsursk Settlement.
10. Nizhegorodskaya Province, Pilninskii District, Kurmysh Village, Sura River.
11. Nizhegorodskaya Province, Arzamasskii District, Uzhovka Station – Krasavtsev, 1939a.
12. Nizhegorodskaya Province, Buturlinskii District, Bornukovo Village – ZISP 3070, 12 spec., 1887; Puzanov et al., 1955.
13. Nizhegorodskaya Province, Krasnooktyabrskii District, Endovishchi Village – NNSU; Krasavtsev, 1939a.
14. Nizhegorodskaya Province, Lukyanovskii District – Borisova et al., 1985.
15. Kirovskaya Province, Luzskii District, Lalsk Settlement – Koroleva, 1976.
16. Kirovskaya Province, Verkhnekamskii District, Lesnoi Settlement – Koroleva, 1976.
17. Kirovskaya Province, Nagorskii District, Sinogorie Village – Dryagin, 1926.
18. Kirovskaya Province, Kirov City – Dryagin, 1926; Koroleva, 1976.
19. Kirovskaya Province, Khalturinskii District, Khalturin Town – Vesna, 1926; Dryagin, 1926.
20. Kirovskaya Province, Zuevskii District, Kosino Settlement – Dryagin, 1926.
21. Kirovskaya Province, Kumenskii District, Kumeny Settlement – Dryagin, 1926.
22. Kirovskaya Province, Tuzhinskii District, Tuzha Settlement – Koroleva, 1976.
23. Kirovskaya Province, Nolinskii District, Nolinsk Town – Dryagin, 1926; Koroleva, 1976.
24. Kirovskaya Province, Nofinskii District, Medvedevskii Bor – Dryagin, 1926.
25. Kirovskaya Province, Yaranskii District, Yaransk Town – Koroleva, 1976.
26. Kirovskaya Province, Urzhumskii District, Urzhum Town – Koroleva, 1976.
27. Kirovskaya Province, Malmyzhskii District, Malmyzh Town – S.V. Kurshakov, pers. comm., 1971; former Malmyzhskii County of Vyatskaya Province – Krulikovskiy, 1901.
28. Kirovskaya Province, Vyatsko-Polyanskii District, Vyatskie Polyany Town – Koroleva, 1976.
29. Permskaya Province, Vereshchaginskii District – Voronov et al., 1970.
30. Permskaya Province, Perm City – ZMMU 389, Teploukhov; ZMMU 381, Tikhomirov; ZMMU 393, O.Tikhomirov and A. Tikhomirov; Bolotnikov et al., 1967; Yushkov, 1997.
31. Permskaya Province, Kungurskii District, Kungur Town – ZISP 1743, Khlebnikov, 1889; Troelga Village – Voronov et al., 1970; Kungurskii Nature Reserve – Voronov, 1950; “Kungurskaya Lesostep” – Yushkov, 1997.
32. Permskaya Province, Kishertskii District, Spas-Barda Village – G.A. Voronov, pers. comm., 1971.
33. Permskaya Province, Chastinskii District, 6.1959.
34. Permskaya Province, Kuedinskii District, B. Usa Village, 6.1959.
35. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alatyr River – Zhitkov, 1900.
36. Mordovia Republic, Dubenskii District, Sura River, 8.1957.
37. Mordovia Republic, Saransk City, 8.1957.
38. Mordovia Republic, Bolshehereznikovskii District, Simkino Village – Astradamov and Alysheva, 1979.
39. Chuvashia Republic, Yadrinskii District, Yadrin Town – V.A. Ushakov, pers. comm., 1970s.
40. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
41. Chuvashia Republic, Sundyrskii (Morgaushskii) District, Iliinskoe Forestry.
42. Chuvashia Republic, Marrinsko-Posadskii District, Marrinskii Posad Town – Terentjev, 1935.
43. Chuvashia Republic, Shumerlinskii District, Myslets River – Terentjev, 1935.
44. Chuvashia Republic, Poretskii District, Algashi Village; Sura River – Terentjev, 1935.
45. Chuvashia Republic, Komsomolskii District.
46. Chuvashia Republic, Urmarskii District.
47. Chuvashia Republic, Alatyrskii District, Alatyr Town – Vesna, 1926; Terentjev, 1935.
48. Chuvashia Republic, Batyrevskii District – ZISP 3475, Antipin, 5.1932; Pervomaiskoe Settlement – Tikhvinskii, 1934; Bula River, 7.1957.

49. Marii El Republic, Gornomariiskii District, Volga River, 1957; Sokolinaya Gora, Kh.F. Baldaev, pers. comm., 1960s.
50. Marii El Republic, Medvedevskii District, Marriskii Nature Reserve – Yu.S. Kotov, pers. comm., 1972.
51. Marii El Republic, Kilemarskii District, Kichma Village – D.L. Nikiforov, pers. comm., 1966; Mariiskii Nature Reserve, Shusher Settlement – D.L. Nikiforov, pers. comm., 1966; E.A. Rodikova, pers. comm., 1996-1998.
52. Marii El Republic, Medvedevskii District, Lyulpany Village – D.L. Nikiforov, pers. comm., 1966.
53. Marii El Republic, Sovetskii District, M. Kundysh River – V.M. Alenchikov, pers. comm., 1960s.
54. Marii El Republic, Zvenigovskii District, Volga River – Efremov, 1957.
55. Marii El Republic, Volzhskii District, Marii Chodra National Park, Yalchik Lake, Bizergub Village; B. Paraty Village, 1960s.
56. Tatarstan Republic, Zelenodolskii District, Oktyabrskii Settlement, Biological Station of Kazan State University – KSU, 8.1971; Volzhsko-Kamskii Nature Reserve, Raifskii Area – Garanin, 1983; Osinovo Village, 1998.
57. Tatarstan Republic, Vysokogorskii District, Isleitarskoe Forestry, Ilet River; Yuvas Village; Kudash Village; Potanikha Village, 8.1965; Kurkachi Village, 6.1959.
58. Tatarstan Republic, Arskii District, Arskoe Forestry; Surnarskoe Forestry – A.S. Zheltukhin, pers. comm., 1960s.
59. Tatarstan Republic, Baltasinskii District, St. Kushket Village, 7.1974.
60. Tatarstan Republic, Kazan City – KSU, Bulich, 9.1891; (Boriskovo – KSU, M. Ruzsky, 7.1893; Lebyazhie Lake; Glubokoe Lake; M. Glubokoe Lake; Kazanka River; Derbyshki; Botanical Garden of Kazan State University, 1948-1998).
61. Tatarstan Republic, Pestrechenskii District, Lenino-Kokushkino Village, 6.1958.
62. Tatarstan Republic, Tyulyachinskii District, Abdi Village, 4.1970.
63. Tatarstan Republic, Sabinskii District, Sababashskoe Forestry; Shemordan Settlement.
64. Tatarstan Republic, Kukmorskii District, Berezhnyak Village; Oshtorma River; Plaksikha Village, 8.1965.
65. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin, 1983.
66. Tatarstan Republic, Rybno-Slobodskoi District, Shumbutka River.
67. Tatarstan Republic, Mamadushskii District, Nov. Ucha Village – N.M. Utrobina, pers. comm., 1960s; Mamadysh Town; Yakovka Village; Shiya River mouth; 8.1965; Bersut Village.
68. Tatarstan Republic, Kukmorskii District, Lubyany Settlement, 6.1959.
69. Tatarstan Republic, Elabuzhskii District, Bessonikha Village, 7.1965; Tanaika Village, 7.1965 – Khotko and Ganeev, 1993; Elabuga Town, 7.1948, 7.1965; Nizhnaya Kama National Park, Malyy Bor Area – Khotko and Ganeev, 1993; Bolshoi Bor Area, 7.1970 – Khotko and Ganeev, 1993.
70. Tatarstan Republic, Mendelevskii District, Mendelevsk, 7.1965.
71. Tatarstan Republic, Agryzskii District, Tukai Settlement; Varzi-Pelga Village; St. Chekalda Village; Komsomolka Settlement, 7.1965.
72. Tatarstan Republic, Verkhneuslonskii District, Morkvashi Village – KSU; Zoological Station of Kazan State University, 6.1949-7.1998; Yunusovskii Island; Tashevka Village; Rus. Makulovo Village; Patrikevo Village, 7.1966.
73. Tatarstan Republic, Kaibitskii District, Saltyganovo Village; Araslanovo Village; Muratovo Village; Shusherma Village; Nadezhdino Village; M. Memi Village; Murali Village; Kargaly Village, 7.1966. Apastovskii District, Bishevo Village; Bulym-Bulykhchi Village; Shonguty Village; Apastovo Village; St. Enali Village; Churu-Baryshevo Village; Karamasary Village; Yangildino Village; St. Kulka Village; Deushevo Village; St. Yumrally Village; Verkh. Indyrchi Village, 7.1966.
74. Tatarstan Republic, Kamsko-Ustiinskii District, St. Kazeevo Village; B. Klyari Village; St. Baryshevo Village; Karatalga Village, 7.1966.
75. Tatarstan Republic, Buinskii District, Ivashevka Village, 7.1985.
76. Tatarstan Republic, Tetyushskii District, former Zolnyi Settlement, 4.1951; Prolei-Kasha Settlement, 7.1966.

77. Tatarstan Republic, Spasskii District, surroundings of Spassk Town, Krestyanskii Forest – ZISP 3501, 3 spec., 3502, 2 spec., 3503-3506, Bashkirov, 8.1934; Spassk Island (former town Spassk, villages Shcherbet and Bol. Yasachka; Krasnaya Sloboda Village; Portirovka Village; Bugrovka Village; Nikolskoe Village; Vozhi Village; Yambukhtino Village, 7.1962.
78. Tatarstan Republic, Alkeevskii District, Yukhmachi Village – V.A. Popov, 8.1948; Alpakovo Village.
79. Tatarstan Republic, Alekseevskii District, Ibrysh River; Karavaevo Village; Yalkyn Village, 7.1962; Sosnovyi Bor Island; Pervomaiskii Island, 7.1968; Barskie Sady Island, 7.1997.
80. Tatarstan Republic, Chistopolskii District, Buldyr Village, 7.1948; Sukachinskii Pond; Podkolok Village; M. Polyana Village; Karataevka Village, 8.1962; Kutlushkino Village, 7.1963.
81. Tatarstan Republic, Nizhnekamskii District, Starosheshminsk Village, 6.1961; Kamskie Polyany Settlement; Kamskii Settlement; Smylovka Village; Krasnyi Klyuch Settlement, 8.1962; Zai River mouth, 7.1963; Elantovo Village, 6.1989; Krasnaya Kadka Village, 7.1964.
82. Tatarstan Republic, Naberezhnye Chelny Town, Zliv Lake, 8.1962.
83. Tatarstan Republic, Tukaevskii District, Betki Village; Ostankovo Village, 7.1964; Nizhnyaya Kama National park, Kzyl-Tau Area, 6.1961, 7.1970, 1992.
84. Tatarstan Republic, Menzelinskii District, Blagodarovka Village, 6.1961; Karakuly Village, 7.1963; Igimskii Bor, 6.1963, 7.1967, 7.1970.
85. Tatarstan Republic, Nurlatskii District, Nizh. Chelny Village; V. Nurlat Village; Karaulnaya Gora Village, 7.1964; Chulpanovo Village; Yugan Lake, 8.1964.
86. Tatarstan Republic, Cheremshanskii District, Cheremshan Village; Nizh. Karmalka Village, 6.1961.
87. Tatarstan Republic, Nivisheshminskii District, Lenino Village, Kichui River mouth, 7.1963; Tat. Utyashkino Village; Sloboda Arkhangelskaya Village; Ivanovka Village; Novosheshminsk Village; Sklony Korzhinskogo Nature Park, 6.1970, 6.1989.
88. Tatarstan Republic, Zainskii District, Svetloe Ozero Village; Utashkino Village.
89. Tatarstan Republic, Muslyumovskii District, Tamyan Village; Toigildino Village; Meliya-Tamak Village, 7.1964.
90. Tatarstan Republic, Muslyumovskii District, B. Chekmak Village; Rus. Shugan Village; Shuganga Village, 6.1961; Katmysh Village; Muslyumovo Village; Salauz-Mukhan Village, 7.1964.
91. Tatarstan Republic, Yutazinskii District, St. Karazerik Village; Dymka River mouth; Ekaterinovka Village, 7.1964.
- Bavlinskii District, Kzyl-Yar Village; Nikolashkino Village, 7.1964.
92. Udmurtia Republic, Yarskii District, Pudem Settlement – G.P. Priezzhev, pers. comm., 1960s.
93. Udmurtia Republic, Glazovskii District, N. Chuna Village.
94. Udmurtia Republic, Debesskii District, Debessy Village.
95. Udmurtia Republic, Syumsinskii District, Kilmez Settlement – G.P. Priezzhev, pers. comm., 1960s.
96. Udmurtia Republic, Izhevsk City; Pozim River, 6.1959.
97. Udmurtia Republic, Votkinskii District, Votkinsk Town.
98. Udmurtia Republic, Mozhginskii District, M. Suga Village – G.P. Priezzhev, pers. comm., 1960s.
99. Udmurtia Republic, Malopurginskii District, M. Purga Village – G.P. Priezzhev, pers. comm., 1960s.
100. Udmurtia Republic, Sarapulskii District, Sarapul Town – Krulikovskiy, 1888; former Sarapulskii County of Vyatskaya Province – Krulikovskiy, 1914.
101. Udmurtia Republic, Karakulinskii District, Galanovo Village, 6.1948.
102. Bashkortostan Republic, Neftekamsk Town (Nikolo-Berezovka Village), 6.1948.
103. Bashkortostan Republic, Dyurtlinskii District, Yusupovo Village, 7.1968.
104. Bashkortostan Republic, Buraevskii District, b Kuzbaevo Village, 6.1959.
105. Bashkortostan Republic, Birskskii District, Birsksk Town, 6.1959.
106. Bashkortostan Republic, Chekmagushevskii District – M.G. Bayanov, pers. comm., 1970s.
107. Bashkortostan Republic, Kushnarenkovskii District – M.G. Bayanov, pers. comm., 1970s.
108. Bashkortostan Republic, Blagoveshchenskii District – M.G. Bayanov, pers. comm., 1970s.
109. Bashkortostan Republic, Ufa City – M.G. Bayanov, pers. comm., 1970s.

110. Bashkortostan Republic, Iglinskii District.
111. Bashkortostan Republic, Tuimazinskii District, Kandry-Kul Lake.
112. Bashkortostan Republic, Chishminskii District – Polozhentsev and Khanislamov, 1942.
113. Bashkortostan Republic, Karmaskalinskii District, Beketovo Village, 6.1959.
114. Bashkortostan Republic, Bizhbulyakskii District – M.G. Bayanov, pers. comm., 1970s.
115. Bashkortostan Republic, Sterlitamakskii District, Sterlitamak Town, 6.1959.
116. Bashkortostan Republic, Alsheevskii District, Dema River – Polozhentsev and Khanislamov, 1942, 1949.
117. Bashkortostan Republic, Salavatskii District, Salavat Town – O.V. Mitropolskii, pers. comm.
118. Bashkortostan Republic, Meleuzskii District, Zirgan Settlement, Belaya River, 6.1959.
119. Bashkortostan Republic, Kugarchinskii District, Yalchino Village, 6.1959.
120. Ulyanovskaya Province, Surskii District, Polyanki Village, 7.1957.
121. Ulyanovskaya Province, Tsilninskii District – Osipova, 1993.
122. Ulyanovskaya Province, Ulyanovsk City – SUMRT.
123. Ulyanovskaya Province, Staromainskii District, Volga River, 5.1951.
124. Ulyanovskaya Province, Melekesskii District – Osipova, 1993.
125. Ulyanovskaya Province, Melekesskii District, Dimitrovgrad Town – V.A. Ushakov, pers. comm., 1970s.
126. Ulyanovskaya Province, Novomalyklinskii District – Osipova, 1993.
127. Ulyanovskaya Province, Karsunskii District, Novosursk Settlement, 7.1957.
128. Ulyanovskaya Province, Sengileevskii District – Osipova, 1993.
129. Ulyanovskaya Province, Nikolaevskii District, Belozerskoe Forestry, 7.1957.
130. Samarskaya Province, Stavropolskii District, Zhigulevskii Nature Reserve, Sereyish Island – ZISP 3478, Soboleva, 6.1934.
131. Samarskaya Province, Samara City – Pavlov et al., 1995.
132. Samarskaya Province, Kinel-Cherkasskii District, Timashevskie Forest Bands – Malchevskii, 1941.
133. Samarskaya Province, Klyavinskii District, 6.1989 – Pavlov and Agzyamov, 1993.
134. Orenburgskaya Province, Matveevskii District, St. Kutlumbetovo, 6.1959.
135. Orenburgskaya Province, Buzulukskii District, Buzulukskii Bor – Polozhentsev, 1935.
136. Orenburgskaya Province, former Buzulukskii County of Samarskaya Province, southerly from the river Samara – Bazhanov, 1930.
137. Orenburgskaya Province, Orenburg City – ZISP (Forshtadskie Meadows, 2995, 5.1907; 3001, 9.1907; 286, 7.1928, P.Vorontsovsky).
138. Orenburgskaya Province, Sakmarskii District, Verkh. Kargalka and Sr. Kargalka rivers – Lindholm, 1902; Sakmara Village, 6.1959.
139. Orenburgskaya Province, Totkskii District, Totskoe Village – Bening, 1926.
140. Saratovskaya Province, Dukhovnitskii District – Kozlovskii, 1951.
141. Saratovskaya Province, former Pugachevskii County of Samarskaya Province – Bazhanov, 1930.
142. Penzenskaya Province, Penza Cty, 7.1957.
143. Penzenskaya Province, Gorodishchenskii District, Kadadinskoe Forestry – Barabash, 1939; Chaadaevka Settlement, 7.1957.
144. Penzenskaya Province, Kuznetskii District, Privolzhskaya Lesostep Nature Reserve, Kuncherovskaya Steppe Area – P.V. Pavlov, pers. comm., 1996.
145. Penzenskaya Province, Kameshkirskii District, Privolzhskaya Lesostep Nature Reserve, Kuncherovskaya Steppe Area – P.V. Pavlov, pers. comm., 1996.
146. Tatarstan Republic, Bugulminskii District, Bugulma Town, 7.1964.
147. Tatarstan Republic, Leninogorskii District, Nizh. Chershily Village, 7.1970; Spiridonovka Village, 6.1989.
148. Tatarstan Republic, Aznakaevskii District, Chatyr-Tau Hill, 6.1961, 7.1963, 7.1970; Nizh. Sukhoyash Village, 6.1961; Aznakaev Town, 7.1963; Nizh. Styarle Village; Konstantinovka Village, 7.1964.

149. Tatarstan Republic, Almetievskii District, Rus. Aktash Settlement; Zai-Chishma Village. 7.1964; Minnibaev Village. 7.1970.
150. Marii El Republic, Zelenodolskii District, Ulitino Village; Nizh. Vyazovye Settlement; Kugushevo Village; Rus. Azelevo Village. 7.1966.
151. Tatarstan Republic, Laishevskii District, Mesha River – KSU, Bogdanov, 1870; Matyushino (Borovoe Matyushino) Village – KSU, 1888; M. Kabany Village – Aleinikova and Utrobina, 1951; Nikolskoe Village; former village Berezovaya Griva; Shuran Village.
152. Bashkortostan Republic, Kugarchinskii District, Mrakovo Village, B. Ik River – ZISP. G. Shaposhnikova, 6.1959.

Common Frog, *Rana temporaria* Linné, 1758 (Fig. 11)

1. Kostromskaya Province, Ponazyrevskii District, Ponazyrevo Settlement – Krasavtsev, 1939a.
2. Nizhegorodskaya Province, Tonshaevskii District, right bank of the Pizhma River – Ushakov and Pestov, 1983.
3. Nizhegorodskaya Province, Nizhny Novgorod City – ZISP 1637, Varpakhovsky, 1887; Krasavtsev, 1939a; Puzanov et al., 1955; Lebedinsky, 1981, 1984.
4. Nizhegorodskaya Province, Pilnitskii District, Kurmysh Village, Sura River.
5. Nizhegorodskaya Province, Arzamasskii District, Yablonki Village; Zaklyuchennoe Village – Krasavtsev, 1939a.
6. Kirovskaya Province, Luzskii District, Lalsk Settlement – Koroleva, 1976.
7. Kirovskaya Province, Podosinovetskii District, Pinyug Settlement, 1961-1973 – Sezonaya, 1979; Koroleva, 1976.
8. Kirovskaya Province, Verkhnekamskii District, Lesnoi Settlement – Koroleva, 1976.
9. Kirovskaya Province, Nagorskii District, Mulino Village – Dryagin, 1926.
10. Kirovskaya Province, Murashinskii District, Murashi Town – Koroleva, 1976.
11. Kirovskaya Province, Afanasievskii District, Gordino Village – Dryagin, 1926.
12. Kirovskaya Province, Khatlurinskii District, Khatlurin Town – Dryagin, 1926; Belov, 1887; 1961-1972 – Sezonaya, 1979.
13. Kirovskaya Province, Kirov City – Dryagin, 1926.
14. Kirovskaya Province, Zuevskii District, Kosino Settlement – Dryagin, 1926.
15. Kirovskaya Province, Falenskii District, Talitsa Village – Dryagin, 1926.
16. Kirovskaya Province, Kumenskii District, Kumeny Settlement – Dryagin, 1926.
17. Kirovskaya Province, Darovskii District, Darovskii Settlement – Koroleva, 1976.
18. Kirovskaya Province, Tuzhinskii District, Tuzha Settlement – Koroleva, 1976.
19. Kirovskaya Province, Nalinskii District, Medvedskii Bor – Dryagin, 1926.
20. Kirovskaya Province, Urzhumskii District, Urzhum Town – Sezonaya, 1969; Koroleva, 1976.
21. Kirovskaya Province, former Malmyzhskii County of Vyatskaya Province – Krulikovskiy, 1901.
22. Kirovskaya Province, Vyatsko-Polyanskii District, Vyatskie Polyny Town.
23. Permskaya Province, Karagaitskii District – Nikolaev, 1951.
24. Permskaya Province, Dobryanskii District, Verkh. Kvazhva Settlement – G.A. Voronov, pers. comm., 1970s.
25. Permskaya Province, Vereshchaginskii District – Voronov et al., 1970.
26. Permskaya Province, Perm City – Bolotnikov et al., 1967; Yshkov, 1997.
27. Permskaya Province, Kungurskii District, Kungurskii Nature Reserve – Voronov, 1950; Troelga Village – Voronov et al., 1970; Kungurskaya Lesostep – Yshkov, 1997.
28. Permskaya Province, Kishertskii District, Spas-Barda Village – G.A. Voronov, pers. comm., 7.1971.
29. Permskaya Province, Osinskii District, 6.1959.
30. Mordovia Republic, former Ardatovskii County of Simbirskaya Province, Alatyr River – Zhitkov, 1900.
31. Mordovia Republic, Chamzinskii District – Astradamov and Varsobina, 1988.

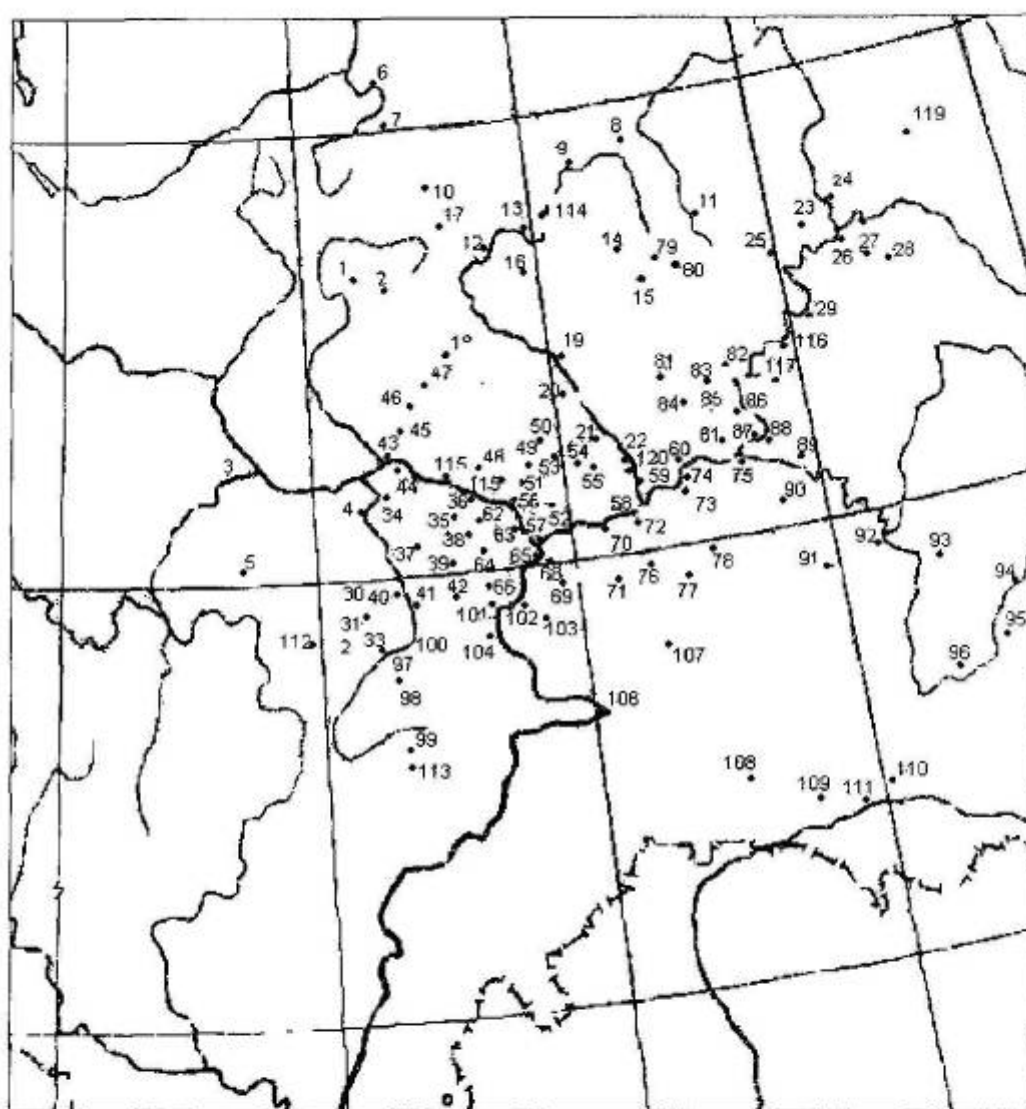


Fig. 11. Distribution of *Rana temporaria*.

32. Mordovia Republic, Saransk City, Insar River, 8.1957; Garanin, 1983.
33. Mordovia Republic, Bolshebereznikovskii District, Simkino Village – Astradamov and Alysheva, 1979.
34. Chuvashia Republic, Yadrinskii District, Zasurskoe Forestry – Ushakov and Lebedinsky, 1978.
35. Chuvashia Republic, Tsivilskii District, Aktashevo Village – Terentjev, 1935.
36. Chuvashia Republic, Mariinsko-Posadskii District, Mariinskii Posad Town – Terentjev, 1935.
37. Chuvashia Republic, Vurnarskii District, Vurnary Settlement – Terentjev, 1935.
38. Chuvashia Republic, Urmarskii District, Tegeshevo Village, 7.1966; Kozylar Village.
39. Chuvashia Republic, Komsomolskii District, 7.1957.
40. Chuvashia Republic, Alatyrskii District, Alatyrsk Town – Terentjev, 1935.

41. Chuvashia Republic, Alatyrskii District, Alatyrskoe Forestry – Terentjev, 1935.
42. Chuvashia Republic, Batyrevskii District, Nov. Shikhirdany Village, southern slope of the Bula River – ZISP 3461, 4.1932.
43. Marii El Republic, Gornomariiskii District, Volga River – Efremov, 1957.
44. Marii El Republic, Gornomariiskii District, Sokolinaya Gora – Kh. F. Baldaev, pers. comm., 1970s.
45. Marii El Republic, Gornomariiskii District, Nuzhyar Lake – Kh.F. Baldaev, pers. comm., 1970s.
46. Marii El Republic, Kilemarskii District, Kichma Village; Mariiskii Nature Reserve, Shusher Settlement – D.L. Nikiforov, pers. comm., 1966; E.A. Rodikova, pers. comm., 1996-1998.
47. Marii El Republic, Medvedevskii District, Lyulpany Village – D.L. Nikiforov, pers. comm., 1966.
48. Marii El Republic, Volzhskii District, Marii Chodra National Park, Yalchik Lake.
49. Tatarstan Republic, Arskii District, Surnarskoe Forestry, Istoki Kazanki Nature Park, 7.1974.
50. Tatarstan Republic, Baltasinskii District, St. Kushket Village, 7.1974.
51. Tatarstan Republic, Vysokogorskii District, Kurkachi Village, 6.1959.
52. Tatarstan Republic, Pestrechinskii District, former village Nizh. Serda – KSU. 1894.
53. Tatarstan Republic, Sabinskii District, Shemordan Settlement, 8.1965.
54. Tatarstan Republic, Meshebashskoe Forestry, 7.1974.
55. Tatarstan Republic, Sababashskoe Forestry, 7.1974.
56. Tatarstan Republic, Kazan City – SUMRT (Kizitsa, spawn, Ruzsky, 1899); Kazanka River, before 1957.
57. Tatarstan Republic, Laishevskii District, Volzhsko-Kamskii Nature Reserve, Saralovskii Area – Garanin et al., 1989.
58. Tatarstan Republic, Mamadyshskii District, Malmyzha Village; yakovka Village, 7.1965.
59. Tatarstan Republic, Elabuzhskii District, Anzirka River.
60. Tatarstan Republic, Mendeleevskii District, Mendeleevsk Town.
61. Tatarstan Republic, Agryzskii District, St. Chekalda Village, 7.1965.
62. Tatarstan Republic, Zelenodolskii District, Ulitino Village; M. Shirdany Village; Kosyakovo Village; Britvino Village, 7.1966.
63. Tatarstan Republic, Verkhneuslonskii District, Tashevka Village.
64. Tatarstan Republic, Apastovskii District, St. Yumrally Village, 7.1966.
65. Tatarstan Republic, Kamsko-Ustiinskii District, Kamskoe Ustie Settlement.
66. Tatarstan Republic, Buinskii District, Ivashevka Village; Akkul Village, Beloe Lake, 7.1985.
67. Tatarstan Republic, Zelenodolskii District, Belo-Bezvodnoe Village, Sumka River.
68. Tatarstan Republic, Spasskii District, former village Malinovka.
69. Tatarstan Republic, Alkeevskii District, Yukhmachi Village.
70. Tatarstan Republic, Chistopolskii District, Buldyr Village, 7.1948.
71. Tatarstan Republic, Aksubaevskii District, Nov. Aleksandrova Village, 8.1962; Nurkatskii District, Nizh. Nurkat Village.
72. Tatarstan Republic, Nizhnekamskii District, Elantovo Village, 6.1989 – Pavlov and Akzamov, 1993.
73. Tatarstan Republic, Naberezhnye Chelny Town, Zaliv Lake, 7.1963.
74. Tatarstan Republic, Tukaevskii District, Nizhnyaya Kama National Park, Kzyl-Tau Site, 7.1970.
75. Tatarstan Republic, Aktanyshskii District, former settlement Derbeshkinskii.
76. Tatarstan Republic, Cheremshanskii District, Nizh. Karmalka Village, 6.1961.
77. Tatarstan Republic, Leninogorskii District, Shugurovo Settlement; Spiridonovka Village, 6.1989 – Pavlov and Agzamov, 1993.
78. Tatarstan Republic, Almetievskii District, Rus. Aktash Settlement, 6.1961.
79. Udmurtia Republic, Yarskii District, Pudem Settlement – G.P. Priezzhev, pers. comm., 1970s.
80. Udmurtia Republic, Glazovskii District, N. Chuna Village – M.G. Tazetdinov, pers. comm.
81. Udmurtia Republic, Syumsinskii District, Kilmez Settlement – G.P. Priezzhev, pers. comm., 1960s.

82. Udmurtia Republic, Votkinskii District, Votkinsk Town – G.P. Priezzhev, pers. comm., 1960s.
83. Udmurtia Republic, Izhevsk City, Pozim River, 6.1959.
84. Udmurtia Republic, Mozhginskii District, M. Syuga Village – G.P. Priezzhev, 1960s.
85. Udmurtia Republic, Malopurginskii District, M. Purga Village – G.P. Priezzhev, pers. comm., 1960s.
86. Udmurtia Republic, former Sarapulskii County of Vyatskaya Province – Krulikovskiy, 1888; Sarapulskii District, Sarapul Town – ZISP 2598, 6 spec., Krulikovskiy, 1896; Krulikovskiy, 1888.
87. Udmurtia Republic, Karakulinskii District, Galanovo Villgae, 6.1948.
88. Bashkortostan Republic, Krasnokamskii District, Nikolo-Berezovka Settlement, 6.1948.
89. Bashkortostan Republic, Dyurtyulinskii District, Yusupovo Village, 7.1968.
90. Bashkortostan Republic, Chekmagushevskii District, Baza Riverbasin, Rezyapovo Village – M.G. Bayanov, pers. comm., 1970s.
91. Bashkortostan Republic, Chishminskii District, Karayakupovo Village – Kucherov et al., 1984.
92. Bashkortostan Republic, Ufa City – ZISP 3460, 1933.
93. Bashkortostan Republic, Arkhangelskii District – Bayanov, 1995.
94. Bashkortostan Republic, Beloretskii District, Yuzhno-Uralskii Nature Reserve, Tyulmen River – Bayanov, 1995.
95. Bashkortostan Republic, Burzyanskii District, Bashkirskii Nature Reserve, Uzyanskii Area, Uzyan River – KSU, 7.1984; ZISP 3488, 2 spec., E.M. Snigirevskaya, 1936.
96. Bashkortostan Republic, Burzyanskii District, Shulgan-Tash Nature Reserve, Shulgan River, Kapova Cave, 7.1984.
97. Penzenskaya Province, Nikolskii District, Sabanovskoe Forestry – A.S. Ayupov, pers. comm.
98. Penzenskaya Province, Gorodishchenskii District, Kadadinskoe Forestry – Barabash, 1939.
99. Penzenskaya Province, Kuznetskii District, Privolzhskaya Lesostep Nature Reserve, Istoki Sury Area – P.V. Pavlov, pers. comm., 1996.
100. Ulyanovskaya Province, Surskii District, Picherki Lake – I.B. Abrakhina, pers. comm., 1970s; Surskoe Settlement – Osipova, 1993.
101. Ulyanovskaya Province, Tsilninskii District – Osipova, 1993.
102. Ulyanovskaya Province, Staromainskii District – Osipova, 1993.
103. Ulyanovskaya Province, Melekesskii District – Osipova, 1993.
104. Ulyanovskaya Province, Ulyanovsk City – Osipova, 1993; Vinnovskaya Grove – I.B. Abrakhina, pers. comm., 1970s.
105. Samarskaya Province, Stavropolskii District, Zhiguli, Khryashchevka Village, 5.1951.
106. Samarskaya Province, Samara City, 1957.
107. Orenburgskaya Province, former Buguruslanskii County of Samarkaya Province – KSU, M. Ruzsky, 1894.
108. Orenburgskaya Province, Totkskii District, Totkskoe Village – Bening, 1926.
109. Orenburgskaya Province, Perevolotskii District, mamadaevka Village – Zarudnoi, 1896.
110. Orenburgskaya Province, Sakmarskii District, Verkh. Karagalka and Sr. Karagalka rivers – Lindholm, 1902.
111. Orenburgskaya Province, Orenburgskii District, Sakmara River – Zarudnoi, 1896; Ural River – Raiskii, 1954.
112. Mordovia Republic, Lyambirskii District, Nov. Uda Village, 9.1957.
113. Penzenskaya Province, Kuznetsk Town, 1930-1960 – Sezonnaya, 1969.
114. Kirovskaya Province, Slobodskoi Town, 1961-1972 – Sezonnaya, 1979.
115. Marii El Republic, Zvenigovskii District, Volga River – Efremov, 1957.
116. Permskaya Province, Elovskii District, 6.1959.
117. Permskaya Province, Chaikovskii District, right bank of the Usa River, 6.1959.
118. Permskaya Province, Kuedinskii District, B. Usa River, 6.1959.
119. Permskaya Province, Aleksandrovsk Town, Lunievka Settlement – ZMMU 445. Ivanov.
120. Tatarstan Republic, Kukmorskii District, Plaksikha Village.

CONCLUSION AND ACKNOWLEDGEMENTS

This paper is not a full review of amphibian biology in the Volga-Kama Region. It is dedicated only to their geographic distribution, and represents the first attempt at the compilation of a full cadastre and mapping of one of the most interesting regions in Eastern Europe from a batrachofauna point of view. I hope that zoologists from different provinces and republics of this region will implement this cadastre with new data and corrections.

I express my deep gratitude to all colleagues who provided informations between 1948 and 1998: I.B. Abrakhina, V.M. Alenchikov, V. Arbuzov, Yu.T. Artemiev, I.V. Askeev, O.V. Askeev, V.I. Astradamov, A.S. Ayupov, Kh.F. Baldaev, M.G. Bayanov, A.I., S.P. Chashchin, Dushin, S.S. Gainiev, I.G. Ganeev, I.D. Golubeva, P.K. Gorshkov, S. Iliin, V.G. Ivliev, E.I. Korenberg, Yu.S. Kotov, S.V. Kurshakov, A.N. Lvova, V.G. Marfin, L.V. Milchakov, O.V. Mitropolskii, S.R. Muratov, B.V. Nekrasov, D.L. Nikiforov, A.V. Pavlov, P.V. Pavlov, P.V. Plesskii, V.A. Popov, F.P. Priezzhev, E.A. Rodikova, N.V. Shosheva, M.G. Tazetdinov, M.V. Tikhvinskaya, S.A. Tsvetkov, V.A. Ushakov, N.M. Utrobina, G.A. Voronov, V.S. Zaletaev, R.I. Zamaletdinov and A.S. Zheltukhin.

REFERENCES

- Aleinikova, M.M. and Utrobina, N.M. 1951. [On the problem of role of Amphibia in the ecosystems of forest groves]. – *Zoologicheskyy Zhurnal* 30 (5): 391-397 (in Russian).
- Astradamov, V.I. and Alysheva, G.I. 1979. [On the ecology and behaviour of Anura]. – In: *Ekologo-Faunisticheskie Issledovaniya v Nechernozemnoi Zone RSFSR* (2). Saransk: 64-77 (in Russian).
- Astradamov, V.I. and Varsobina, L.I. 1988. *Redkie i Ischezayushchie Vidy Rastenii i Zhivotnykh Mordovii* [Rare and Endangered Plant and Animal Species of Mordovia]. Saransk, 103 p. (in Russian).
- Bannikov, A.G. 1969. [Order Urodela, or Caudata]. – In: *Zhizn Zhivotnykh* 4 (2). Moscow: 35-62; – 2nd edition: 1985, vol.5: 30-51 (in Russian).
- Bannikov, A.G., Darevsky, I.S., Ishchenko, V.G., Rustamov, A.K. and Szczerbak, N.N. 1977. *Opredelitel Zemnovodnykh i Presmykayushchikhsya Fauny SSSR* [Guide to Amphibians and Reptiles of the USSR Fauna]. Moscow: Prosveshchenie Publ., 414 p. (in Russian).
- Barabash, I.I. 1939. [Overview of habitat distribution of vertebrates in the Kadadinskoe Forestry, Penza Province]. – *Byulleten Voronezhskogo Obshchestva estestvoispytatelei* 3 (2): 21-29 (in Russian).
- Bayanov, M.G. 1970. [Animal world]. – In: *Ocherki po Fizicheskoi Geografii g. Ufy i Ego Okrestnostei*. Ufa: 143-154 (in Russian).
- Bayanov, M.G. 1995. [Class Amphibia]. – In: *Zhivotnyi Mir Bashkortostana*. Ufa: 211-217 (in Russian).
- Bazhanov, V.S. 1930. [List of amphibians and reptiles of Buzuluk and Pugachev counties of the former Samara Province, collected in 1928]. – *Sredne-Volzhskaya Kraevaya*

- Stantsiya Zashchity Rastenii ot Vreditel'ei pri Kraizemupravlenii: Byulleten za 1926-1928 gg (Samara): 69 (in Russian).
- Belov, V.V. 1887. [Fauna of Orlovskii County]. – In: Materialy po Statistike Vyatskoi Gubernii 3. Vyatka: 90-94 (in Russian).
- Belova, Z.V. 1965. Biologiya Lichinok Ozernoi Lyagushki i Ikh Pishchevye Vzaimootnosheniya s Molodiyu Ryb v Delte Volgi [Biology of *Rana ridibunda* Larvae and Their Feeding Relationships with Fry Fishes in the Volga Delta]. Ph. D. Diss. Moscow: Moscow State Pedagogical Inst., 140 p. (in Russian).
- Bening, A.L. 1926. [Materials on hydrofauna of the Samara River]. – Raboty Volzhskoi Biologicheskoi Stantsii 9 (1/2): 11-110 (in Russian).
- Berg, L.S. 1923. *Molge vulgaris* (L.) von der Ufern des Balchaschsees. – Russkii Gidrobiologicheskii Zhurnal 2 (11-12): 218 (in Russian).
- Bolotnikov, A.M., Khazieva, S.M. and Kamensky, Yu.N. 1967. [On the ecology of some amphibians in the Perm Province]. – Uchenye Zapiski Permskogo Gosudarstvennogo Pedagogicheskogo Instituta (41): 3-8 (in Russian).
- Bolotnikov, A.M., Shurakov, A.I. and Bolotnikov, N.A. 1968. [On the distribution and some peculiarities of biology of *Hynobius keyserlingi*]. – Permskii Gosudarstvennyi Pedagogicheskii Institut: Uchenye Zapiski 52: 52-54 (in Russian).
- Bolotnikov, A.M., Shurakov, A.I. and Khazieva, S.M. 1977. [On the species composition, limits of distribution and fecundity of amphibians of Perm Province]. – In: The Problems of Herpetology. Leningrad: 39-40 (in Russian).
- Borisova, V.I., Smirnova, M.I. and Eskina, N.N. 1985. [Regularities in the distribution of helminths in populations of *Rana lessonae* and *R. arvalis*]. – In: Regionalnye Problemy Ekologii (2). Kazan: 37-38 (in Russian).
- Chinaev, M.I. 1969. [Kuznetsk Town]. – In: Sezonnaya Zhizn Prirody Russkoi Ravniny. Kalendar Prirody Tsentra i Yuga Evropeiskoi Territorii SSSR za 1939-1960 gg. Leningrad: 110-117 (in Russian).
- Denisova, M.N. 1969: [Order Ecaudata, or Anura]. – In: Zhizn Zhivotnykh 4 (2). Moscow: 63-133; 2nd edition: 1985, vol. 5: 51-108 (in Russian).
- Dryagin, P.A. 1926. [Reptiles and amphibians of the Vyatka Region]. – Trudy Vyatskogo Pedagogicheskogo Instituta 1: 113-155 (in Russian).
- Efremov, P.G. 1957. [Animals of forests and fields]. – In: Priroda Mariiskoi ASSR. Yoshkar-Ola: 157-177 (in Russian).
- Efremov, P.G. 1984. [Class Amphibia]. – In: Zhivotnyi Mir Mariiskoi ASSR: Nazemnye Pozvonochnye. Yoshkar-Ola: 20-29 (in Russian).
- Eichwald, E. 1842. Fauna Caspio-Caucasica, nonnullis observationibus novis. – Nouv. Mem. Soc. Imp. Nat. de Moscou 7: 1-292.
- Ershov, V.S. 1929. [Work of the 57th All-Union Helminthological Expedition in Vyatskaya Province, 15 June-1 October 1928]. Vyatka: 46 (in Russian).
- Falk J.P. 1786. Beytrage zur topographischen Kenntniss des Russischen Reiches 3. St. Petersburg, 584 S.

- Formozov, A.N. 1935. [Account of the fauna of terrestrial vertebrates of Gorky Region]. – In: Priroda Gorkovskogo i Kirovskogo Kraev. Gorky: 135-182 (in Russian).
- Ganeev, I.G. 1978. K Ekologii Osnovnykh Vidov Pribrezhnykh Pozvonochnykh Ozer Lesoparka "Lebyazhie" [On the Ecology of Dominant Species of Vertebrates in the Lakes of the Lebyazhie Forest Park]. Diplome Work, Kazan: Kazan State Univ., 35 p. (in Russian).
- Garanin, V.I. 1971. [Amphibians]. – In: Zhivotnyi Mir Tatarii (Pozvonochnye). Kazan: 50-60 (in Russian).
- Garanin, V.I. 1977. [Amphibians and reptiles]. – In: Zhivotnyi Mir Bashkirii. Ufa: 252-255 (in Russian).
- Garanin, V.I. 1983. Zemnovodnye i Presmykayushchiesya Volzhsko-Kamskogo Kraya [Amphibians and Reptiles of Volga-Kama Region]. Moscow: Nauka, 175 p. (in Russian).
- Garanin, V.I. 1988. [Amphibians]. – In: Zhivotnyi Mir Tatarii (Pozvonochnye). Kazan: 53-62 (in Russian).
- Gavlyuk, E.V., Davygora, A.V. and Rudi, V.N. 1993. Zhivotnyi Mir Orenburgskoi Oblasti [Animal World of Orenburgskaya Province]. Orenburg: Orenburg State Pedagogical inst. Publ. (in Russian).
- Georgi J.G. 1775. Bemerkungen einer Reise im Russischen Reiche im Jahre 1772. Bd. 1. St.Petersburg, 560 S.
- Georgi J.G. 1801. Geographisch-physikalische und Naturhistorische Beschreibung des Russischen Reichs 3 (7) Bissher bekannt gewordene Thierarten. Königsberg: 1681-2222.
- Gorelov, M.S. 1990. [Amphibians and reptiles]. – In: Priroda Kuibyshevskoi Oblasti. Kuibyshev: 365-375 (in Russian).
- Khazieva, S.M. and Bolotnikov, A.M. 1972. [Amphibians of Permskaya Province]. – Uchenye Zapiski Permskogo Gosudarstvennogo Pedagogicheskogo Instituta (107): 54-61 (in Russian).
- Khotko, A.L. and Ganeev, I.G. 1993. [Amphibians and reptiles in the surroundings of Elabuga Town]. – In: Materialy Ekologicheskoi Nauchnoi Konferentsii, Posvyashchennoi 80-letiyu so Dnya Rozhdeniya Prof. V.A. Popova. Kazan: 44-47 (in Russian).
- Khozyaistvennoe Opisanie Permskoi Gubernii po Grazhdanskomu i Estestvennomu Ee Sostoyaniyu (2) Zemnovodnye [Economic Description of the Permskaya Province in Relation to Its Civil and Natural State (2) Amphibians. 1813. St. Petersburg: 265-267 (in Russian).
- Kirikov, S.V. 1959. Izmeneniya Zhivotnogo Mira v Prirodnykh Zonakh RSFSR: Stepnaya Zona i Lesostep [Changes in Animal World in Nature Zones of RSFSR: Steppe and Forest Steppe Zones]. Moscow: Acad. Sci. USSR Publ. (in Russian).
- Kizeritsky, V.A. [*Natrix tessellata* on the Lower Volga]. – Priroda (3): 71-72 (in Russian).

- Korchagina, T.A. and Garanin, V.I. 1996. [On the ecological and morphological differentiation of green frogs of Prikazania]. – In: Aktualnye Problemy Gerpetologii i Toksinologii (2). Tolyatti: 28-30 (in Russian).
- Koroleva, V.A. 1970. [Some results from the study of amphibians in Kirovskaya Province]. – Materialy Chetvertoi nauchnoi Konferentsii Zoologov Pedagogicheskikh Institutov. Gorky: 309-310 (in Russian).
- Koroleva, V.A. 1976. [Amphibians]. – In: Zhivotnyi Mir Kirovskoi Oblasti (3): 31-48 (in Russian). ✓
- Kozlovskii P.P. 1951. [On the problem of study of parasitofauna of reptiles of Saratovskaya Province]. – Uchenye Zapiski Saratovskogo Pedagogicheskogo instituta (16): 101-105 (in Russian).
- Krassawzeff, B.A. 1931a. *Hynobius keyserlingii* Dyb. in Europa. – Zool. Anz. 94 (5/8): 170-172.
- Krasavtsev, B.A. 1931b. [New Siberian element in the fauna of Nizhegorodsk Region]. – Nizhegorodskoe Kraevedenie (9-10): 9-10 (in Russian).
- Krassawzeff B.A. 1932. Zur Biologie von *Bufo bufo bufo* L. – Arch. f. Hydrobiol. 29 (2): 185.
- Krasavtsev, B.A. 1939a. Materials concerning the ecology of the frog (*Rana terrestris terrestris* Andr.). – In: Voprosy Ekologii i Biotsenologii (4). Moscow-Leningrad: 253-268 (in Russian).
- Krasavtsev, B.A. 1939b. [On the usefulness of *Rana ridibunda* in the floodland meadows]. – Trudy Obshchestva Estestvoispytatelei pri Kazanskom Universitete 52 (6): 60-63 (in Russian).
- Krasnaya Kniga Bashkirskoi ASSR [Red Data Book of Bashkirian ASSR]. 1984. Ufa (in Russian).
- Krasnaya Kniga Respubliki Tatarstan [Red Data Book of Republic of Tatarstan]. 1995. Kazan: Priroda Publ. (in Russian).
- Krulikovsky, L.K. 1888. [A note on the fauna of amphibians and reptiles in surroundings of Sarapul Town]. – Zapiski Uralskogo Obshchestva Lyubitelei Estestvoznaniya 11: 233-235 (in Russian).
- Krulikovsky, L. 1901. [Zoological notes 2. Data on amphibian and reptile fauna in Vyatskaya Province]. – Zapiski Uralskogo Obshchestva Lyubitelei Estestvoznaniya 22: 1-2 (in Russian).
- Krulikovsky, L. 1902. [Zoological notes 4. Some more on amphibians and reptiles of Vyatskaya Province]. – Zapiski Uralskogo Obshchestva Lyubitelei Estestvoznaniya 23: 119 (in Russian).
- Krulikovsky, L. 1908. [Brief account of the fauna of Vyatskaya Province]. – In: Pamyatnaya Knizhka Vyatskoi Gubernii i Kalendar na 1909 God. Vyatka: 37-69 (in Russian).
- Krulikovsky, L. K. 1914. [Lists of animal fauna of the Middle Prikamie]. – Izvestiya Sarapulskogo Zemskogo Muzeya (4): 99-106 (in Russian).

- Kucherov, E.V., Migranov, M.G. et al. 1984. [Animals deserving protection and sustainable use]. – In: Krasnaya Kniga Bashkirskoi ASSR. Ufa: 158-160 (in Russian).
- Kulagin, N.M. 1921. [On the history of the European Russia]. – Priroda (7/9): 41-58 (in Russian).
- Kuzmin, S.L. 1994. Areal. – In: The Siberian Newt (*Salamandrella keyserlingii* Dybowski, 1870): Zoogeography, Systematics, Morphology. Moscow, 367 p. (in Russian).
- Lapshin, I.A. 1984. K Izucheniyu Pamyatnikov Prirody Nizhnego Priamya [To the study of nature monuments in the Lower Prekamie]. Diplome Work, Kazan: Kazan State Univ. (in Russian).
- Lebedinsky, A.A. 1984. Zemnovodnye v Usloviyakh Urbanizirovannoi Territorii (na Primere G.Gorkogo) [Amphibians under Urbanized Territory Conditions (Gorky City as an Example) Ph.D. Diss.Thes., Moscow: Moscow State Univ., 23 p. (in Russian).
- Lepin, A.T. 1990. [Amphibians and reptiles of the Zhigulevskii Protected Area]. – In: Sotsialno-Ekologicheskie Problemy Samarskoi Luki. Kuibyshev: 149-152 (in Russian).
- Lindholm W.A. 1902. Biologische Beobachtungen an einigen Batrachiern des Europaischen Russlands – Zool. Gart. 43 (12): 390-403.
- Litvinov, N.A. 1984. [On the problem of amphibian and reptile distribution in Permskaya Province]. – In: Vid i Ego Produktivnost v Areale (5) Voprosy Gerpetologii. Sverdlovsk: 28-29 (in Russian).
- Lukin, A.V., Aristovskaya G.V. et al. 1954. [Use of collective farm ponds in TASSR for rearing of fishes in relation to the maintenance of fish populations in the Kuibyshevskoe Reservoir]. – Trudy Tatarskogo Otdeleniya VNIIOKh (7): 3-49 (in Russian).
- Malchevskii, A.S. 1941. Fauna Pozvonochnykh Zhivotnykh Uzkikh Polezashchitnykh Polos Zavolshya (s Tochki Zreniya Slozheniya Biotsenozov i Znacheniya Ikh Izmeneniya) [Vertebrate Fauna of Narrow Forest Bands if the Zavolzhie, from the Standpoint of Ecosystem Formation and Value of their Changes]. Ph.D. Diss., Leningrad: Leningrad State Univ. (in Russian).
- Melnichenko A., Polozhentsev, P. et al. 1938. [Kuibyshev City and its surroundings as places for school zoology excursions.]. – Uchenye Zapiski Kuibyshevskogo Pedagogicheskogo Instituta, Fakultet Estestvoznaniya (1): 158-167 (in Russian).
- Motkova, M.Yu. 1977. [On the feeding and ecology of anuran larvae]. – In: The Problems of Herpetology. Leningrad: 148-149 (in Russian).
- Nikiforov, D. 1966. [The enigma of *Hynobius keyserlingi*]. – Vokrug Sveta (8): 58-59 (in Russian).
- Nikolaev, S. 1951. Priroda Nashego Kraja [Nature of Our Region]. Molotov, 202 p. (in Russian).
- Nikolsky A.M. 1918. Faune de la Russie et des Pays Limitrophes: Amphibiens (Amphibia). Petrograd: Russ. Acad. Sci. Publ., 319 p. (in Russian).
- Nosova, K.F. 1989. [To the cadastre estimation of helminth fauna of *Rana arvalis* in Gorkovskaya Province]. – Vsesoyuznoe Soveshchenie po Probleme Kadastra i Ucheta Zhivotnogo Mira: Tezisy Dokladov 94). Ufa: 314-316 (in Russian).

- Oliger, I.M., Sysoletina, L.G. and Voronov, N.P. 1966. Zhivotnyi Mir Chuvashii [Animal World of Chuvashia]. Cheboksary, 175 p. (in Russian).
- Osipova, V.B. 1993. [Classes Amphibia and Reptilia]. – In: Abrakhina, I.B., V.B. Osipova, V.B. and Tsarev, G.N. 1993. Pozvonochnye Zhivotnye Ulyanovskoi Oblasti. Ulyanovsk: 50-63 (in Russian). ✓
- Pallas, P.S. 1771. Reise durch Verschiedene Provinzen des Russischen Reiches 1, Aufl. 1. St. Petersburg: Imp. Acad. Sci. Publ.
- Pallas, P.S. 1776. Reise durch Verschiedene Provinzen des Russischen Reiches 3. St. Petersburg: Imp. Acad. Sci., 760 S.
- Pallas, P.S. 1788. Puteshestvie po Raznym Provintsiyam Rossiiskoi Imperii [Travel in Different Provinces of Russian Empire] 3. St. Petersburg (in Russian).
- Pallas, P. [1814] 1831. Zoographia Rosso-Asiatica, Sistens Omnium Animalium in Extensio Imperio Rossico et Adjacentibus Maribus Observatorum Recensionem, Domicilia, Mores et Descriptiones, Anatomen atque Icones Plurimorum 3. Petropoli: Acad. Sci., 428 p.
- Paraskiv, K.P. and Butovskii, P.M. 1960. [On the amphibian and reptiles fauna of the Western Kazakhstan]. – Trudy Instituta Zoologii Akademii Nauk Kazakhskoi SSR 13: 148-159 (in Russian).
- Pavlov, A.V. and Agzamov, R.R. 1993. [On the herpetofauna of Sheshma River valley]. – Materialy Ekologicheskoi Nauchnoi Konferentsii, Posvyashchennoi 80-letiyu so Dnya Rozhdeniya Prof. V.A. Popova. Kazan: 48-49 (in Russian).
- Pavlov, S.I., Magdeev, D.V. and Zalyashchev, S.V. 1995. [Impoverishment of amphibian fauna in the urban ecosystems of Samara City]. – In: Pervaya Konferentsiya Gerpetologov Povolzhya. Tolyatti: 40-49 (in Russian).
- Plesskii, P.V. [Vertebrates]. – In: Priroda Kirovskoi Oblasti. Kirov: 184-215 (in Russian). ✓
- Polozhentsev, P.A. 1935. [On the fauna of mammals, reptiles and amphibians of the Buzulukskii Bor]. – In: Materialy po Izucheniyu Prirody Srednego Povolzhya (1). Kuibyshev: 77-96 (in Russian).
- Polozhentsev, P.A. 1941. [Classes Reptilia and Amphibia]. – In: Zhivotnyi Mir Srednego Povolzhya. Kuibyshev: 103-114 (in Russian).
- Polozhentsev, P.A. and Kucherov, E.V. 1957. Izuchim Zhivotnyi Mir Bashkirii [Let Us Study Animal World of Bashkiria]. Ufa, 55 p. (in Russian).
- Polozhentsev, P.A. and Khanislamov, M.G. 1942. [On the problem of amphibian and reptile fauna of Bashkirian SSR]. – Trudy Bashkirskogo Selskokhozyaistvennogo Instituta 3: 143-147 (in Russian).
- Polozhentsev, P.A. and Khanislamov, M.G. 1949. [Classes Reptilia and Amphibia]. – In: Zhivotnyi Mir Bashkirii (Poleznye i Vrednye Zhivotnye). Ufa (in Russian).
- Popov, V.A. 1977. [Brief physical-geographical account of Volga-Kama Region]. – In: Ptitsy Volzhsko-Kamskogo Kraya: Nevorobiinye. Moscow: 6-10 (in Russian).
- Popov, V.A. 1960. Mlekopitayushchie Volzhsko-Kamskogo Kraya: Nasekomoyadnye, Rukokrylye, Gryzuny [Mammals of Volga-Kama Region: Insectivora, Chiroptera and Rodentia]. Kazan: Kazan Branch of the USSR Acad. Sci. Publ. (in Russian).

- Popov, V.A. and Lukin, A.V. 1949. Zhivotnyi Mir Tatarii (Pozvonochnye) [Animal World of Tataria (Vertebrates)]. Kazan, 218 p. (in Russian).
- Popov, V.A., Popov, Yu.K., Priezzhev, G.P., Kulaeva, T.M., Voronov, N.P., Garanin, V.I., Nazarova I.V., Izotova T.E. and Krasovskaya L.A. 1954. [Results of studies on the fauna of the flood zone of the Kuibyshevskoe Reservoir]. – Trudy Kazanskogo Filiala AN SSSR, Seriya Biologicheskikh Nauk (3): 7-217 (in Russian).
- Popov, Yu.K. 1972. [Amphibians]. – In: Priroda Udmurtii. Izhevsk: 220-221 (in Russian).
- Priezzhev, G.P. and Popova, N.Yu. 1983. [Amphibians and reptiles]. – In: Zhivotnyi Mir Udmurtii. Izhevsk: 53-56 (in Russian).
- Puzanov, I.I., Kozlov, V.I. and Kiparisov, G.P. 1955. Zhivotnyi Mir Gorkovskoi Oblasti (Pozvonochnye) [Animal World of Gorkovskaya Province (Vertebrates)]. – Gorky (in Russian).
- Radzhueit, A.R. 1955. [Amphibia]. – In: Priroda Penzenskoi Oblasti. Penza: 413-415 (in Russian).
- Raiskii, A.P. 1951. [Fauna of Chkalovskaya Province]. – In: Ocherki Fizicheskoi Geografii Chkalovskoi Oblasti. Chkalov: 157-202 (in Russian).
- Raiskii, A.P. 1954. [On the animals of Chkalovskaya Province]. – In: Po Rodnomu Krayu (Kraevedcheskie Ocherki). Chkalov: 71-89 (in Russian).
- Ruzsky, M. 1894. [Results of studies of amphibians and reptiles in Kazanskaya Province and adjacent areas]. – In: Prilozhenie k Protokolam Zasedanii Obshchestva Estestvoispytatelei pri Imperatorskom Kazanskom Universitete (139): 1-8 (in Russian).
- Ryzhkov, N.O. s.a. Geograficheskii Ocherk Syzranskogo Uezda [Geographical Account of Syzranskii County]. Syzran, 108 p. (in Russian).
- Sabaneev, L. 1874. Pozvonochnye Srednego Urala i Geograficheskoe Resprostranenie Ikh v Permskoi i Orenburgskoi Guberniyakh [Vertebrates of the Middle Urals and Their Geographic Distribution in Perm and Orenburg Provinces]. Moscow: V. Gautier, 204 p. (in Russian).
- Sapozhenkov, Yu.F. 1976. [Frogs, toads and snakes: their value in nature]. – In: Priroda Kostromskoi Oblasti i Ee Okhrana (2). Yaroslavl: 84-92 (in Russian).
- Sergeev, V.A. 1979. Rastitelnyi i Zhivotnyi Mir Isleitarskogo Lesa (TASSR) [Plant and Animal World of Isleitarskii Forest (Tatarian ASSR)]. Diplome Work, Kazan: Kazan State Univ. (in Russian).
- Sezonnaya Zhizn Prirody Russkoi Ravniny: Kalendari Prirody Nechernozemnoi Zony RSFSR za 1960-1972 gg. [Seasonal Life of Nature of Russian Plain: Calendars of Nature of the Nechernozemnaya Zone of RSFSR for 1960-1972]. 1979. Leningrad, 161 p. (in Russian).
- Shaldybin, S.L. 1970. [On the feeding of *Rana ridibunda* in Gorkovskaya Province]. – In: Materialy Chetvertoi Nauchnoi Konferentsii Zoologov Pedagogicheskikh Institutov. Gorky: 320 (in Russian).
- Shikleev, S.M. 1951. [Amphibians]. – In: Priroda Kuibyshevskoi Oblasti. Kuibyshev: 288-289 (in Russian).

- Shurakov, A.I. and Bolotnikov, A.M. 1977. [Clarification of the list of amphibian fauna of Permskaya Province]. – In: Biogeografiya i Kraevedenie. Perm: 10-13 (in Russian).
- Shvarts, S.S., Pavlinin, V.N. and Danilov, N.N. 1951. Zhivotnyi Mir Urala [Animal World of the Urals]. Sverdlovsk: Uralian Branch of USSR Acad. Sci. Publ., 161 p. (in Russian).
- Snigirevskaya, E.M. 1951. [Kuibyshevskii Nature Reserve]. – In: Priroda Kuibyshevskoi Oblasti. Kuibyshev: 363-384 (in Russian).
- Solovjov, A. [N.] 1991. [A live contemporary of the mammoth: on the records of *Salamandrella keyserlingii* in Kirovskaya Province]. – In: Po Rodnomu Krayu (Sbornik Kraevedcheskikh Materialov). Kirov: 118-122 (in Russian).
- Svetovidov, A.N. 1976. [On the years of publication of "Zoographia Rosso-Asiatica" by P.S. Pallas]. – Zoologicheskyy Zhurnal 55 (4): 596-599 (in Russian).
- Terentjev P.V. 1931. Biometrische Untersuchungen uber die morphologischen Merkmale von *Rana ridibunda* Pall. (Amphibia: Salientia) – Biometrika 23 (1-2): 27.
- Terentjev, P.V. 1935. Zur Kenntniss der Amphibien und Reptilien von Tschuwaschrepublik. – Trudy Obshchestva Estestvoispytatelei pri Kazanskom Universitete 52 (1): 39-59 (in Russian).
- Terentjev, P.V. and Chernov, S.A. 1936. Kratkii Opredeitel Zemnovodnykh i Presmykayushchikhsya SSSR [Brief Guide to Amphibians and Reptiles of USSR]. Moscow-Leningrad: Uchpedgiz Publ., 96 p. (in Russian).
- Terentjev, P.V. and Chernov, S.A. 1949. Opredeitel Zemnovodnykh i Presmykayushchikhsya SSSR [Guide to Amphibians and Reptiles of USSR]. Moscow-Leningrad: Sovetskaya Nauka Publ., 340 p. (in Russian).
- Tikhvinskii, V.I. 1934. [Results of stationary studies of the ecology of marmot ecology in Volga-Kama Region]. – In: Raboty Volzhsko-Kamskoi Zonalnoi Okhotnichie-Promyslovoi Biologicheskoi Stantsii (3). Kazan: 95 (in Russian).
- Ushakov, V.A. 1978. New data on distribution of *Hynobius keyserlingi* (Hynobiidae) in the European part of the USSR. – Zoologicheskyy Zhurnal 57 (5): 799-801 (in Russian).
- Ushakov, V.A. and Lebedinsky, A.A. 1978. [Distribution of amphibians on the terraces in the lower reaches of Sura River]. – In: Nazemnyi i Vodnye Ekosistemy. Gorky: 146-151 (in Russian).
- Ushakov, V.A. and Pestov, M.V. 1984. [On the biology of *Vipera berus* in Gorkovskaya Province]. – In: Vid i Ego produktivnost v Areale (5) Voprosy Gerpetologii. Moscow: 80 (in Russian).
- Ushakov, V.A. and Tusnolobova, T.P. 1982. [Daily activity of *Bufo viridis* in different parts of its distribution]. – In: Nazemnyi i Vodnye Ekosistemy. Gorky: 38-43 (in Russian).
- Varpakhovsky, N. 1884. [Preliminary data from the study of the fauna of Kazanskaya Province]. – Prilozheniya k Protokolam Zasedanii Obshchestva Estestvoispytatelei pri Imperatorskom Kazanskom Universitete (68): 1-8 (in Russian).
- Varpakhovsky, N. 1885. [Reptiles and amphibians. A note on the herps in Kazanskaya Province]. Kazan, 8 p. (in Russian).

- Varpakhovsky, N. 1888. [Comments on zoological researches in Nizhegorodskaya Province]. Nizhny Novgorod, 11 p. (in Russian).
- Vekhnik, V.P. and Saksonov, S.V. 1998. [Amphibians, reptiles and mammals of Stavropolskii District, Samarskaya Province in need of protection]. – In: Problemy Okhrany i Ratsionalnogo Ispolzovaniya Prirodnykh Ekosistem i Biologicheskikh Resursov. Penza: 306-309 (in Russian).
- Vesna 1924. 1926. Publication by Student Sci. Soc. "Lyubiteli Prirody", Kazan State Univ. Kazan (in Russian).
- Voronov, G.A., Bolotnikov, A.M., Chashchina, L.A., Zotova, E.P. and Kishmereshkina, M.I. 1970. [On *Rana temporaria* and *R. arvalis* in Kamskoe Preuralia]. – In: Optimalnaya Plotnost i Optimalnaya Struktura Populyatsii Zhivotnykh (2). Sverdlovsk: 72-73 (in Russian).
- Voronov, G.A., Shurakov, A.I. and Kamensky, Yu.N. 1971. [On the biology of *Hynobius keyserlingi* in Permskaya Province]. – Uchenye Zapiski Permskogo Gosudarstvennogo Pedagogicheskogo Instituta (84): 70-74 (in Russian).
- Voronov, G.A. and Zhukova, N.B. 1976. [On the ecology of amphibians in the southern taiga of Preuralia, Siberia and the Far East. Communication 1. *Hynobius keyserlingi* and *Triturus cristatus*]. – In: Biogeografiya i Kraevedenie (4). Perm: 18-27 (in Russian).
- Voronov, L.N., Nikolaeva, E.V., Grigorieva, O.V. and Ruban, Zh.V. 1995. [Ecological pathomorphology of *Rana lessonae* in the area of CPO "Khimprom", Novocheboksarsk Town]. – In: Pervaya Konferentsiya Gerpetologov Povolzhya. Tolyatti: 7-9 (in Russian).
- Voronov, N.P. 1990. Oni Nuzhdayutsya v Zashchite [They Need Protection]. Cheboksary: Chuvashskoe Knizhnoe Publ., 158 p. (in Russian).
- Yushkov, R.A. 1997. Geografiya i Ekologiya Amfibii i Reptilii Kamskogo Priuralya (Permskaya Oblast) [Geography and Ecology of Amphibians and Reptiles of Kamskoe Preuralia (Permskaya Province)]. Ph. D. Diss. Abstr., Perm: Perm State Univ., 25 p. (in Russian).
- Zabrusova-Zhdanova, Z.I. 1954. [Pests of the nesting and growing fish ponds in the Tatarian ASSR]. – Trudy Tatarskogo Otdeleniya VNIORKH (7): 59-63 (in Russian).
- Zakirov, A.K. 1985. Kompleksnoe Obsledovanie Lubyanskogo Lesa [Complex examination of the Lubyanskii Forest]. Diplome Work, Kazan: Kazan State Univ. (in Russian).
- Zarudnoi, N. 1896. [Materials on the fauna of amphibians and reptiles of Orenburg Region]. – Bull. Soc. Imp. Nat. de Moscou, N.S. 9: 361-370 (in Russian).
- Zerrenner, C. 1853. Erdkunde Gouvernements Perm, als Beitrag zur Naheren Kenntniss Russlands (3-4). Leipzig: Verl. W. Engelmann: 303-455.
- Zhitkov, B.M. [An account of nature of the lower reaches of the Volga River basin 1. Valley of the Alatyr River]. – Estestvoznaniye i Geografiya (9): 1-21 (in Russian).