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# Principles of the Ecology scientific journal



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### From the editorial board

Dear readers, authors and reviewers!

The third issue of the journal presents the materials of the Second International Conference "Population Ecology of Animals", dedicated to the memory of Academician I.A. Shilov.

Reviewing, editorial preparation and makeup were carried out by the organizing committee of the conference.

The correct link to the collection:

II International scientific conference "Population Ecology of Animals", dedicated to the memory of Academician I.A. Shilov (Tomsk, October 10-14, 2016) // Principy èkologii. 2016. Vol. 5. № 3. P. 1-168.

With the constant willingness to work cooperatively, Editorial board of journal "Principy èkologii"

## DIVERSITY, PREVALENCE, DISTRIBUTION AND NATURE CONSERVATION STATUS OF WESTERN SYBERIA AMPHIBIA

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This work was built on collections and field research of authors in spring and summer of 1975–2015 from various locations in Western Syberia. We used 40-years (1972–2012) electronic Amphibia records of V.A. Yakovlev from Northeastern Altay along with zoo data bank of the zoomonitoring lab of the Animal Ecology and Systematics Institute of RAS SD (Novosibirsk). Literature search was conducted, followed by revision of collections and catalogues of zoology museum in AESI RAS SD (Novosibirsk), Development Biology Institute named after N.K. Koltsov of RAS (Moscow), Zoology Institute (St. Petersburg), Saratov, Tomsk and Moscow state universities and their relevant departments. We also analyzed questionnaires of professional zoologists, biology teachers along with the hunting and forestry industry personnel (1987–1989, 2002–2003). Using data obtained, we created cadaster schematic maps in MapInfo Professional v.7.

We ended up with summary data on diversity, modern prevalence and distribution with nature conservation status of Amphibia species, inhabiting various zones of Western Siberia limited by Republic of Altay, Altay Province, left bank of Yenisei in Krasnoyarsk Province, as well as Novosibirsk, Kemerovo, Tomsk, Omsk, Tyumen, Kurgan, Sverdlovsk and Chelyabinsk Provinces and Khanty-Mansiisk and Yamal-Nenets autonomous districts.

Western Siberia batrachofauna is relatively poor and is only represented by 11 species: Salamandrella keyserlingii, Lissotriton vulgaris, Triturus cristatus, Pelobates fuscus, Bufo bufo, Bufotes viridis, Bf. pewzowi, Rana temporaria, R. arvalis, R. amurensis and Pelophylax ridibundus. The number of species westwards decreases: T. cristatus, R. temporaria, P. fuscus and Bf. viridis inhabit only Western part of the valley (Bf. viridis is also introduced in Novosibirsk, found around Novosibirsk water reserve). Considering taxonomy of Bufo (Bufotes) viridis group, species composition of Amphibia of this region was enriched with new the tetraploid species of Pevtsov toad Bf. pewzowi in Altay (Litvinchuk et al., 2010), which was earlier attributed to *Bf. viridis* (Malkov et Malkov, 2002). This is the only territory where this species exists in Russia. We recorded gradual reduction of batrachofauna species diversity northwards and southwards wooded steppe. As a result of our analysis (more than 1800 new records and findings, illustrated with 11 maps and their cadasters), we clarified the species areal borders' origin: Northern for T. vulgaris, Bf. pewzowi, Western – R. amurensis, Eastern – R. temporaria, T. cristatus, P. fuscus, Bf. viridis. Invasive species imported for fishfarming in this region (P. ridibundus) expanded more than 900 km Northwards along Ob valley during the last 50 years.

10 out of 11 species (excluding *R. arvalis*) were introduced in the Red Books and their appendices of various regions with nature conservation status "rare", "areal peripheral species with sporadic prevalence", "species with academic and esthetic content". Pevtsov toad, *Bf. pewzowi* was recommended for inclusion in the Russian Red Book.

This research was conducted as part of the Competitiveness Improvement Program of TSU (SA  $N_{2}8.1.25.2015$ ), state order  $N_{2}6.657.2014/K$ .