

## INTRODUCTION TO THE STUDY ON FISH COMMUNITY OF MONGOLIA

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In this abstracts review fish community in the lakes of Arctic Ocean catchment, Pacific Ocean catchment and Lakes in the endorheic Central Asian Internal Basin in Mongolia. Fish fauna complexes change from Oriental to Palaearctic. Due to the complicated geography and complex topographical formations, dry continental weather, etc., there is 78 species and subspecies, belonging to 13 families, have up to now been collected or recorded [1]. Considering the fish community waterbodies of Mongolia characterized by the dominance of eurytopic and limnophilous species. With respect to reproductive guilds the fish assemblages consisted mostly of lithophilic, phytolithophilic with psammophilic species. This composition of fish community characterized ecological quality of aquatic ecosystems.

Some of them have very high commercial value. In addition to the species diversity, there are some endemic species and genera, and some species have very restricted distribution inside of Mongolia. Due to the pressure from the freshwater fishing, construction of dykes and hydropower projects (for example, Dorgon nuur hydropower station, in Khovd aimag) water pollution and aqua-ecological environments once suitable to native freshwater fishes have been degraded and the stock of natural fishes has greatly decreased.

Lakes in the endorheic Central Asian Internal basin contained some number of endemic - *Oreoleuciscus pewzowi*, *O. potanini*, *O. humilis*, *Thymallus brevirostris* and rare species – *Barbatula strauchi*, and new species – *Triplophysa gundriseri* Prokofiev [2].

Estimates of annual catch of fish stock in the Great Lakes Basin have been approximately from 90 to 140 tons. The *Oreoleuciscus* and Mongolian grayling are more valuable on the Russian and Chinese market and all catch is exported [3]. The introductions of new fish species as, *Coregonus autumnalis migratorius*, *C. peled* led to increase in fish catches of Western Mongolia [4].

Recently as a result of human activities and climate warming have revealed significant changes in biocenoses of many waterbodies in Mongolia. Long-term climate data indicate that climate of Mongolia has warmed by almost 2 °C over the last 40 years. Permafrost temperatures are only about – 1 °C, so then there is permafrost thaw as the climate has warmed. Thereafter, permafrost thaw also play main role in change channel of the rivers and change range expansions of some species, such as *Parasilurus asotus*, *Cyprinus carpio haematopterus*, *Abramis brama*, *Gymnocephalus cernus* from Baikal Basin to the Selenga, Orhon rivers. As well as, the phenomenon that *Oreoleuciscus humilis* penetrate into the Arctic Ocean Rivers of Mongolia from watershed of the Central Asian closed basin (Lake Sangiin-Dalai), is also concerned with climate changes. New expansion fish community and aquatic species must be continued in the future.

Establishing mechanisms for native fish preservation, strictly enforcing environmental regulations concerning new water conservancy projects of the unique nature of Mongolian fish community are all key aspects for achieving the goal of sustainable use of the wild freshwater fish resources.

### References

1. *Dulmaa Ayuriin*. Mongolian Fish Biodiversity and Ecology // Proceedings of The XIXth International Congress of Zoology. Beijing, China. 2004. C. 490-491.
2. *Dulmaa Ayuriin*. Limnology and Fish Diversity of Mongolia // The 7<sup>th</sup> Indo-Pacific Fish Conference. Howard International House, Taipei. Taiwan. 2005. C. 86-87.
3. *Mendsaikhan B., Erdenebat M., Odsuren B.* Fishery Evolution of Lakes Khar, Khar-Us, Durgan of the Great Lakes Basin in Western Mongolia // Geological Issues in Mongolia. Mongolian Academy of Sciences, Institute of Geoecology. Ulaanbaatar. 2007. Special edition Dedicated to the 10<sup>th</sup> anniversary of the Institute. C. 79-82.
4. *Dulmaa A.* Acclimatization of the Baikal omul – *Coregonus autumnalis migratorius* (Georgi) in water bodies of Western Mongolia. Proceedings of MAS. 2007. Number 3, volum 185. C. 2-5. Ulaanbaatar.

## ВОПРОСЫ К ИЗУЧЕНИЮ СООБЩЕСТВА ИХТИОФАУНЫ МОНГОЛИИ

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В работе рассматривается сообщество ихтиофауны и влияние потепления климата на распространение и структуру ихтиофауны Монголии.