

Sakhalin Taimen Conservation Strategy



The history of research of Sakhalin taimen *Parahucho perryi* (Brevoort, 1856) in Russian part of distribution range is that. The first scientific article (Krykhtin et al, 1964) described the Aynskoe lake population in Western Sakhalin. In 1970s, Gritsenko and the co-authors was studying the populations in Northeast Sakhalin. Parpura, Semenchenko and Bushuev published several articles about taimen in the rivers of Primorye. Burlachenko-Korablina, Safronov and Nikitin studied taimen on Sakhalin, while Zolotukhin studied them in the rivers of the South Khabarovsk territory.

Protection of Sakhalin taimen through legislation begun in 1997 when populations of Sakhalin Island were included in the Red Book of the Russian Federation. Now these protection measures are outdated. This species was also included in the regional Sakhalin and Primorsky Territory Red books. But in Khabarovsk a different conservation strategy was chosen. In 2006 P. Rand, together with local experts, included the species along its whole distribution range in the International Union of Conservation Nature Red list. The highest degree of extinction threat of species is reflected by the category “CR” in the IUCN Red list but the status of this list is only a recommendation.

After that, an in-depth study on the status of the species was undertaken by Zolotukhin and Semenchenko. The authors estimate the rate of abundance decrease of mature adults even in best rivers at 15 to 20 % a year and many populations are already extinct (Semenchenko, Zolotukhin, 2011). Sooner or later each local population will get sucked into the so-called “extinction whirlpool” and disappear if nothing is undertaken. Now we are trying to create a map of the current state of populations, using materials from field expeditions and information of voluntary correspondents. The last publication (Fukushima et al, 2011) indicates that taimen exists in 110 Sakhalin rivers. We preliminary estimate the current status in these rivers as follows: 11 basins – vulnerable (VU), 37 basins (EN), 62 basins – critically threatened (CR) or disappeared (EX). The genetic diversity component of the study was conducted by Dr. Zhivotovsky from the Institute of general genetics (Zhivotovsky et al, 2011).

It was possible to separate population groups using genetic components. Within each group it was possible to identify primary rivers with the best taimen abundance and genetic diversity. According very high value of homing degree no exchange between even neighboring populations. This is a tragedy of Sakhalin taimen – after disappearing from one river, they will not recover on their own. In other words, this species has no metapopulations. We propose to reintroduce taimen from corresponding primary rivers to basins where his populations are extinct. The taimen young raised in either a hatchery or in river incubation pans can be used for reintroduction.

The main threat for Sakhalin taimen in Russia is not habitat degradation but decrease in abundance due to poaching, sport fishing, bycatch in commercial harvest and migration route blockage.

To conserve the most charismatic of all taimen species, the Sakhalin Taimen Conservation Network was created at the beginning of this year, comprised of experts from various countries and regions. The Species Conservation Strategy was developed based on the latest research and with the population principle (Pavlov, 1992) in mind. It should be, first of all, polyvectorous, if possible, *in situ*, and have basic and additional elements as well as aspects of education and public outreach.

This strategy has several directions. Creation of new protected areas located on key rivers have been initiated. Increased protection of the species has been offered for all other rivers. Reintroduction methods for extinct populations are being developed that take into account genetic diversity. These are the basic elements of the Strategy. A further Strategy element that was suggested is the prevention of taimen bycatch in commercial and sport fisheries, and the developing of the "catch and release" principle.

Specific public campaign “Sakhalin taimen year” being developed for species conservation. It was identified target groups and conducted analyses of considerable environment, designed posters, brochures and other materials for propaganda of conservation ideas. Also we are read popularization lectures for different audiences and lead corresponding theme on the web-site of Fishing club “Sakhalin-Curils” www.sakhriver.ru.

We hope for support of the project from the symposium participants.