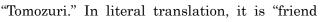
Nakatsugawa a symbol of Morioka (Reference for July 12, 2014, internal document.)

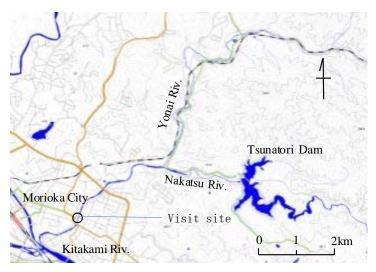
Morio TSUJI (m_tsuji@iwate-pu.ac.jp)

Morioka residents love Nakatsugawa. Although this river flows through center of Morioka city, Nakatsugawa maintains a natural water environment and a beautiful surrounding landscape. The riverside promenade, paved in the flood plain, is used by many for strolling and commuting. The river flowing through the city has extremely high water quality: BOD, 0.5 mg/L; T-N, 0.6 mg/L; EC, 6.4 ms/m (average during May 2011 – December 2012).

In May, our organization (Party of Nakatsugawa) and others, as well as individuals (sponsored by Ministry of Land, Infrastructure), cleaned up trash that had been carried into the flood plain area by snow melt.

In July, the Ayu (*Plecoglossus altivelis*) fishing season opens. These fish are distributed throughout eastern Asia, but Japan is the center of its distribution. These fish, which eat algae attached to stone surfaces, are caught using a peculiar method called





Map of Nakatsugawa.



Nakatsugawa view near the visit site.



Cleanup by residents.



Ayu fishing in Nakatsugawa.



http://kazikazi.blog58.fc2.com/blog-entry-210.html

Live Ayu decoy

Target

Ayu (Beautiful and delicious).

fishing." A live Ayu is used as a decoy to fish for the target. This fishing is famous among anglers. It is often said that Tomozuri is an important part of Japanese culture.

Device of "Tomozuri".



Salmon spawning in spring water from the river bed.

In October, residents look forward to salmon coming upstream for spawning. A noteworthy species among them is chum Salmon (*Oncorhynchus keta*). Many people watch salmon on bridges or from the water's edge. Salmon spawn in a specific place in rivers that have spring water gushing from the river bed.

Many of the salmon in this river is estimated natural spawning. People stock the river with 10,000 salmon fry annually. But the number of released salmon's mother-river homing is estimated as only 30 fishes (coast homing rate



In October people watch the river for Salmon.

3%, river return rate 10%). However, the actual number of salmon which are mother-river homing are several hundred. Besides the released salmon is multiplied in Sarugaishi river, and the homeriver return time differs. The upstream time in Nakatsugawa occurs in October. For Sarugaishi River, it happens in December (Watanabe, 2011 personal communication).