

River School: The Report of Environmental Education Program on Elementary School using Aquatic Insects

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In mountainous areas, river is one of the most approachable natural environments nearby. Community structure of aquatic insects such as mayfly (*Ephemeroptera*) and caddisfly (*Trichoptera*) provides useful information when understanding the current environment conditions of surrounding areas. This paper reports the environmental education program "River School" using these aquatic insects, carried out at a river in Hoshino Resort Tomamu located in Shimukkapu Village (Hokkaido, Japan). The aim of this program was to broaden the perspective of schoolchildren on aquatic life and build a better understanding of regional environment. Using scientific explanation with plain language, we practiced to show schoolchildren about the relationship between aquatic insects and river. This program consisted of two parts: hands-on experience on insect-collecting and acrylic plastomount production (Part1), and an interactive classroom lecture with a short quiz session to remember part1 and presentation of completed specimen to schoolchildren (Part2).

Part1

On July 12th, we hosted 42 schoolchildren (Shimukappu chuo elementary school and Tomamu elementary school) , and provided them opportunity to collect aquatic life in the field and to produce acrylic-resin-based plastomount of aquatic insects. The plastomount was aimed to serve as remembrance of the program so that students would keep in mind about the experience. The mounting session was conducted with the guidance of graduate students. We kept them and later present them to students because acrylic resin needed over 24 hours to harden

Part2

Three months later, we brought the plastomounts to schoolchildren in both schools. An interactive short quiz session was provided to remember the first part as well as to check the level of learning from the first part. In the quiz, two graduate students played the role as Doctor Aquatic Insect and facilitator. Including live video images of stonefly (*Plecoptera*), we further expanded their interests in aquatic insects. When presenting the plastomounts, we also sent them the cards explaining the identification keys to distinguish each species of aquatic insects.

Later on, we received impression essays from schoolchildren. The essay shows that they were impressed with the wonders of aquatic insects, and be willing to better manage the rivers in Shimukkapu. Overall the program was successful achieving our aims. To improve "River School", the further modifications of this program are needed.

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