Geophysical Research Abstracts
Vol. 13, EGU2011-13636, 2011
EGU General Assembly 2011

The relationship between variations of the fish fauna and water quality of the Feitsui reservoir in Taiwan

Chen Yi- Ron (1) and Hou Wen- Shang (2)

(1) Department of Bio-lndustrial Mechatronics Engineering,National Taiwan University Taiwan(R.O.C.)(r89622042@ntu.edu.tw), (2) Department of Bioenvironmental Systems Engineering, National Taiwan University Taiwan(R.O.C.)(houws@ntu.edu.tw)

The fish fauna is in a close relation with the changes of water quality. It contains wide ranges of nutrition and is located at the high level in aquatic food chain. Feitsui Reservoir is one of the important collection watersheds in the Northern Taiwan. In 1988, successively biology monitored plan had been processed. There was no research between fish and water quality until 1997 and it lasted about 3 years. The object of this study is to investigate the varieties of the fish and the relations between fish mass and water quality to provide the strategies for the Feitsui Reservoir administrations.

The results showed the percentages of catching weight from the original dominant species of larger cyprinids, Sinibrama macrops, Carassius cuvieri, were lower than eight years ago. Culter erythropterus and Oreochromis sp. have replaced Carassius cuvieri to become the new dominant in Feitsui Reservoir. In small size fish, the numbers of Sinibrama macrops and Hemiculter leucisculus were the highest. Hemiculter leucisculus and Oxyeleotris marmorata, the new non-native species in Feitsui Reservoir, were caught in 2006.

The larger cyprinids Sinibrama macrops, Cyprinus carpio carpio, Carassius cuvieri have the higher correlation with chlorophyll-a in spring, summer and autumn, respectively. The phenomenon possibly caused by feeding habits. The ecosystem maybe produced and changed gradually due to the raising of the non-native species during 2000 to 2006. We proposed the monitoring of variation in the condition of fish should be carried out continuously, and established the continuous, correlative information between fish and water quality.