

浦仔溝溪日本沼蝦標誌放流再補率估計之研究

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摘要

In this study we aimed at the freshwater shrimp (*Macrobrachium nipponense*) as the object for assessment of mark-recapture. Samples were collected from the downstream of the Nanzaigou stream. This study focused on fry shrimp with 22mm-25mm using the methods of double marking, i.e., the shrimp sprayed with fluorescent pigment soaking on the skin of shrimp after fed with tetracycline and uropod-cutting methods. The survival rates, mark retention rates and hydrology data were separately measured every three days during November, 2008. About two hundred fry were marked and released in Nanzaigou stream from February to October, 2009. The results were as follows: (1) The survival rate of double marking (tetracycline, cut second foot, uropod-cutting method) group and control group were significant difference ($p < 0.05$), and the survival rate of fry remained after marked and released were 27%, 83%, 93%. (2) The Gonadosomatic Index (GSI) showed high values during April to September. (3) Petersen mark-recapture estimates were obtained monthly amongs 4% to 10%.

關鍵字: *Macrobrachium nipponense*, Nanzaigou Stream, tagging