京都大学防災研究所年報概要集 第 50 号 平成 19 年 4 月

Abstracts for Annuals of Disas. Prev. Res. Inst., Kyoto Univ., No. 50, 2007

堰堤で仕切られた都市河川の魚類相と生息場の特性

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要 旨

堰堤で仕切られた都市河川の環境改善を測るための基礎として，京都市内にある賀茂川と高野川で魚類相と生息場構造を調べた。賀茂川は植生砂州が発達し，河床底質は石が多く固定されていた。いっぽう，高野川には裸地砂州があり，砂利や砂の底質が多く，浮石やはまり石が形成されていた。そのため，カワヨシノボリの生息密度が賀茂川（0.02個体/m^2）より高野川で高かった（0.06個体/m^2）。反対に，賀茂川には止水環境が多く，止水性の魚種が出現したため，高野川（14種）より魚種が多かった（21種）と考えられる。河床整正の影響は高野川で顕著に見られ，施工直後の区間では礫底面積およびカワヨシノボリの生息密度が減少したが，施工後時間が経つにつれ，いずれも回復することがわかった。

キーワード：都市河川，堰堤，生息場構造，魚類相，カワヨシノボリ

Characteristics of Fish Fauna and Habitat Structure in Urban Rivers with a Series of Weirs

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Synopsis

To provide basic information for environment improvement of urban rivers with a series of weirs, characteristics of fish fauna and habitat structure were examined in Kamo and Takano River running through Kyoto City, Japan. Kamo River was characterized by the vegetated bars and channels with fixed stony substrates, whereas Takano River by the bare bars with gravel and sand substrates making un-embedded and embedded stone. Therefore, density of freshwater goby was higher in Takano River (0.06 indivs/m^2) than Kamo River (0.02 indivs/m^2). Contrastingly, higher species density of fish fauna in Kamo River (21 species) than in Takano River (14 species) may be attributed the lentic habitats more abundant in Kamo River. Influence of bar improvement for river was bigger in Takano River. Cobble bed area and density of freshwater goby were decreased in the reaches which improved in 2005. However, both area and density were increased as time passed.

Keywords: urban river, weirs, habitat structure, fish fauna, freshwater goby