

UNDERSTANDING HABITAT USE, MOVEMENT PATTERNS, AND SPAWNING SITE FIDELITY OF COMMON CARP IN LAKE WINNIPEG TO INFORM MARSH HABITAT RESTORATION STRATEGIES

Abstract type

Oral presentation

Session type

General Session - G2 - Processes

Author Speaker

Eva C. Enders

Affiliation

Fisheries and Oceans Canada

Co-authors

Colin Charles, Doug A. Watkinson

Abstract

Common Carp (*Cyprinus carpio*) feeding and spawning behaviours may negatively impact the functioning of marsh ecosystems. In the Netley-Libau Marsh situated on the southern end of Lake Winnipeg, water level regulations due to hydropower production and the non-native Common Carp are thought to be the main contributors to the degradation of the marsh habitat. A common coastal marsh restoration practice is to install exclusion screens that preclude Common Carp to move into the marsh habitat prior to the spawning season. Using acoustic telemetry, we analysed the spatial ecology and spawning site fidelity of Common Carp in the Lake Winnipeg basin over a three year time period. During the tracking period, Common Carp showed a 100% spawning site fidelity to Netley-Libau Marsh moving into the marsh on an annual basis in late spring/early summer depending on ice-off conditions on the lake. Results from this study suggest that Common Carp could have a considerable negative impact on the marsh habitat during their annual spawning migration and residency in the marsh. These findings will inform habitat and fisheries managers in the effort to undertake evidence-based management solutions for Common Carp and marsh restoration projects in the Lake Winnipeg ecosystem.

Keywords

Common Carp; telemetry; spawning site fidelity; fish movement; migration; space use; marsh restoration, Lake Winnipeg