



# Fry

## Ecology

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- Alevins become fry (0+ juveniles) when they can swim freely.
- Fry may remain in their natal streams for the first summer, however, most fry move downstream and ascend other streams which are referred to as non-natal and may be over 1000 km or more downstream of their natal stream (Bradford et al. 2008; Daum and Flannery 2011).
- Dispersal to non-natal tributaries in the Whitehorse area commences in late May and about a month later in the Dawson area at a fork length of 45 – 55 mm.
- Juveniles may migrate significant distances (greater than 20 km) upstream in non-natal tributaries.
- Young of year juveniles are seldom found in completely still water such as beaver ponds in non-natal rearing streams.
- At any given time during the summer, fry in upstream areas of non-natal tributaries tend to have greater average lengths than do those closer to the mouth.
- High densities of small fry may be found immediately downstream of partial- or total obstructions such as beaver dams, implying interrupted upstream migration.
- Fry are absent or present in low densities in waters with high turbidity, or where periods of high turbidity are frequent.
- Densities of fry tend to be low in clear water streams after summer storms cause high water/high turbidity events, implying displacement.
- Fry are generalist feeders, and consume all available invertebrates that are of an appropriate size.
- Aquatic predators of fry are known to include northern pike, burbot and inconnu.
- Avian predators on fry include but are not limited to kingfishers, gulls and loons.

## Potential Limiting Factors

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- Short-term variation in severity and timing of spring breakup, resulting in fry being exported from rivers or isolated in pools/back channels in flood plains.
- Short-term climatic/hydrologic variation resulting in reduced quantity of habitat in low water years, decreased quality of habitat (low water temperatures, limited food supply) in high water years, and displacement of fry from rearing areas at high flows (Neuswanger et al. 2015).
- Effects of sediment inputs from land instability and placer mining resulting in sands/silts/clays filling streams and reducing availability of food organisms.
- Effects of toxic materials released from developing or operating quartz mines.
- Barriers to upstream migration in natal or non-natal streams by beaver or hydroelectric dams and entrainment in hydroelectric facilities.
- Predation by avian predators (juvenile Chinook are almost absent in streams after families of mergansers have passed through, inferring significant predation).