RESIDENCY & MOVEMENT PATTERNS OF ARCTIC CHARR, *Salvelinus alpinus*, RELATIVE TO MAJOR ESTUARIES


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tag sites +, Bay of Two Rivers (BR) & Sylvia Grinnell (SG) estuaries, NW (1) & SW (2) Armshow R, Iqaluit ★, Channel Islands →, estuarine ●, extra-estuarine ○ and freshwater □ acoustic receivers 2008 (a) & 2009 (b)
MARINE MIGRATION OF INNER FROBISHER BAY ARCTIC CHARR

* ESTUARINE RESIDENCY: home bodies OR nomads?

* MOVEMENTS: Tidally influenced: move with flood & ebb? Travel rates?

Extra-estuarine: extent (SLD from FW) & timing

Inter-estuarine: % migrants & timing

* DURATION: SW entry/exit?
Estuarine presence of charr in BR & SG during 2008 & 2009
<table>
<thead>
<tr>
<th>Tide phase</th>
<th>bl.s$^{-1}$</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0.93</td>
<td>69</td>
</tr>
<tr>
<td>Ebb</td>
<td>0.99</td>
<td>109</td>
</tr>
<tr>
<td>Low</td>
<td>0.76</td>
<td>36</td>
</tr>
<tr>
<td>Flood</td>
<td>0.60</td>
<td>143</td>
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</tbody>
</table>
32.9 cm $F_L$

0.3 kg

5 returns SG

Jul 9 – Jul 28

Long distance trip

Jul 28 → Aug 19

Stayed @ BR

until Aug 28

FW

Sep 4

CHARR T45

“Righty-OH”
54.5 cm $L_F$
1.6 Kg

BR Jul 21-29

? Aug undetected

44 km SLD return trip
BR $\leftrightarrow$ SR in 4 d.

FW Sep 2 $\rightarrow$ ?
switched branches via estuary Sep 11

! RECAP
6 Dec !
54.0 cm FL
2.1 kg
BR Jul & Aug
Extent <30 km SLD from BR or SR
FW
24 Aug 2009

! RECAP !
4 Aug 2010
Duration = 63 +/- 7 d.

Mean estuarine residency index 0.4 ('09) - 0.5 ('08)
min 0.1
max 1 (34 d.)

42% of tracked charr moved beyond 11 km of main river mouths

Of 2009 survivors, 19% used both BR & SG estuaries

Migrants near shore up to 30 km SLD from main river mouths (mid-late July)
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IN THE FIELD:


PBP DOGS:

Kahru & Lily
"Comments, ?s ?"