



"Our environment is our future"

RESEARCH COLLOQUIUM SERIES

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Friday

Feb. 5, 2010

3:30 - 4:30

LECTURE THEATRE

7 - 152

LIGHT REFRESHMENTS
SERVED AT 3:20 PM

Should I stray or should I go home?

Selection of suitable sites for spawning is critical because the highest rates of mortality in salmonids generally occur during the incubation period and mortality is closely related to features of the spawning/incubation site. For Pacific salmon, the downstream migration to exploit the nutrient rich resources of the ocean favours the development of large body size, but necessitates a return migration and the ability to find suitable habitat for spawning. Our understanding has been that Pacific salmon "home" to the location where they were spawned. There is considerable support for this paradigm as reproductive isolation due to homing behaviour and spawning site fidelity creates genetic divergence and we can identify genetically distinct populations. Recent studies, however, have demonstrated that the proportion of fish that do not return to their natal streams is appreciable and fish may stray long distances to spawn in locations that differ from their parents. A number of factors may contribute to higher rates of long-distance dispersal; availability of new habitat, disturbance, and population size. The use of genetic markers and elemental signatures in bone has provided us with clear evidence that straying from natal streams occurs. Such low levels of gene flow may be particularly important for small populations as they can elevate effective population size and preserve genetic variability. So how do Pacific salmon know where to spawn if they do not go home?