

# Development of pink salmon genetic markers for the Alaska Hatchery Research Program

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Alaska Hatchery Research Program  
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# Alaska Hatchery Research Program

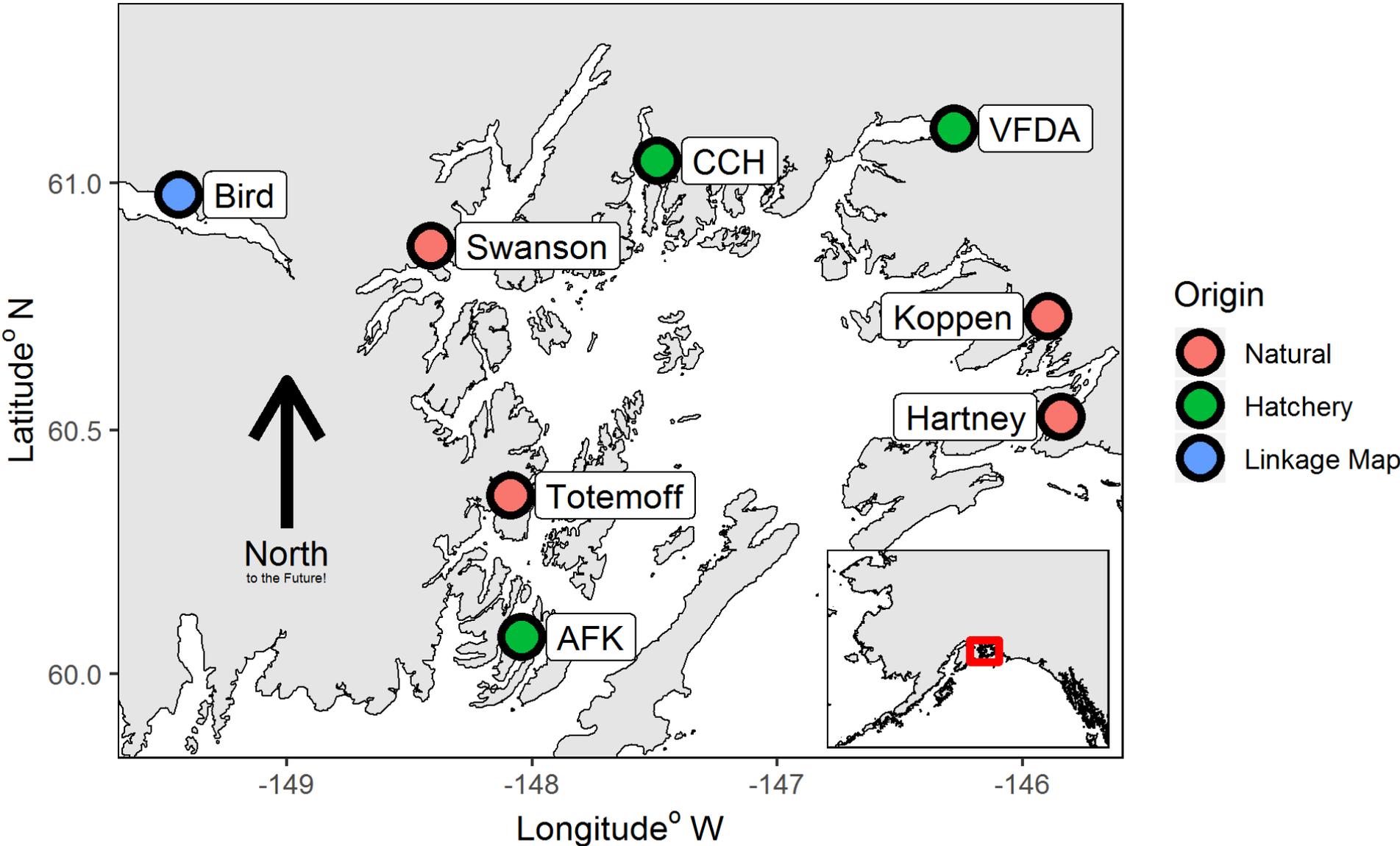
- 1) What is the genetic structure of pink and chum in PWS and SEAK?
- 2) What is the extent and annual variability of straying?
- 3) What is the impact on fitness (productivity) of natural pink and chum stocks due to straying hatchery pink and chum salmon?

# Why did we need new markers?



- Traditional Pop Structure
  - 16 markers available
  - Very low throughput
  - \$\$\$\$\$\$\$\$
  - Not enough information content for parentage
- Available Old Chemistry
  - 51 markers available
  - Mid throughput
  - \$\$\$\$\$
- New Chemistry
  - Select 100s from 10,000s
  - High throughput
  - \$\$\$

# Marker Discovery



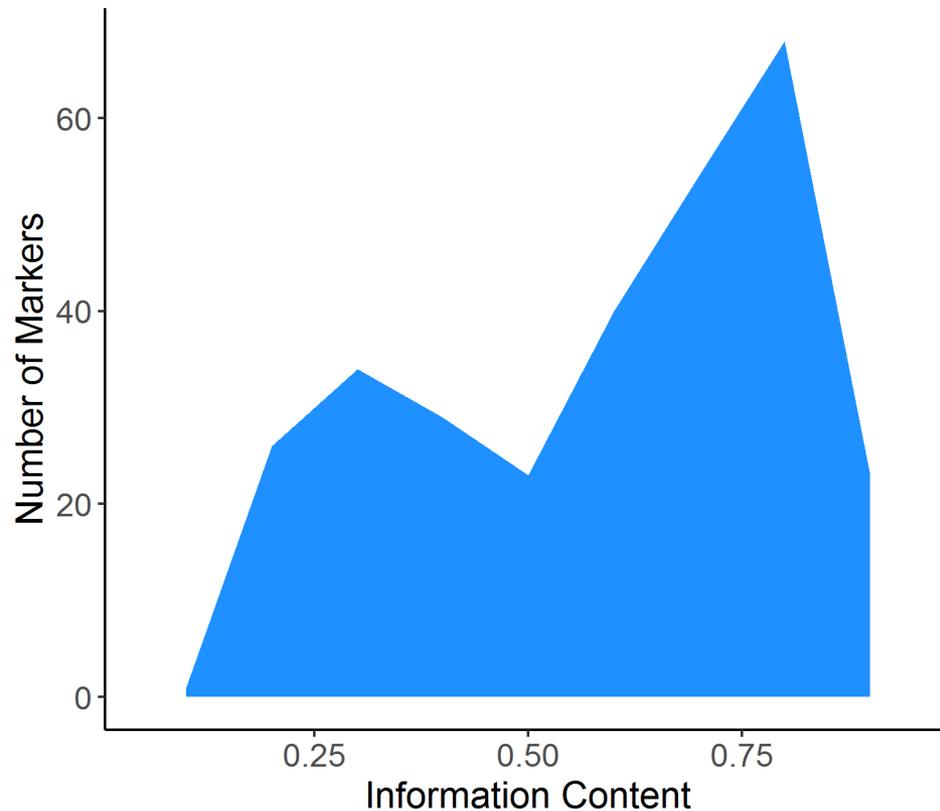
# Marker filtering and selection



# Marker Development Final Result

- First GTseq panel (new chemistry) for pink salmon
- Linkage map ensures markers distributed across genome
- 298 markers designed specifically for Prince William Sound pink salmon
- Large time and cost savings for the fitness component of the Alaska Hatchery Research Program

Information Content for Parentage Analysis in Prince William Sound



# Acknowledgements

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