

Can juvenile sockeye salmon research be utilized for stock-specific forecasts of returning adults to Bristol Bay Alaska?

Bering-Alutian Salmon International Survey

BASIS

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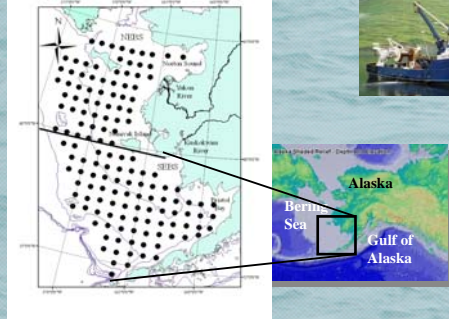
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Survey Area

Stations sampled mid August to early September 2002-2007



Collections at each station included:

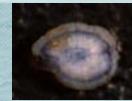
30 minute trawl

Fish



Methods

Freshwater Age – Determined using otoliths and preferred scales



Age 1.0



Age 2.0

Abundance by age determined by:

$$\text{Area Surveyed} / \text{Area Sampled} * \text{Average CPUE} / \text{catchability}$$

$$\text{Area Surveyed} = 296,382 \text{ km}^2$$

$$\text{Area Sampled (by net)} = 0.25 \text{ km}^2$$

$$\text{Catchability} = 0.6$$

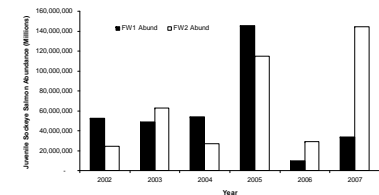
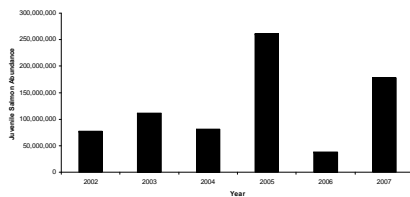
Stock-ID determined by:

Alaska Department of Fish and Game, Anchorage, Alaska

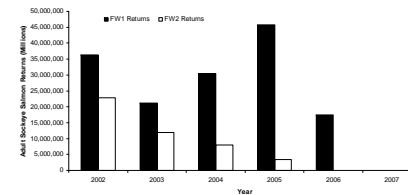
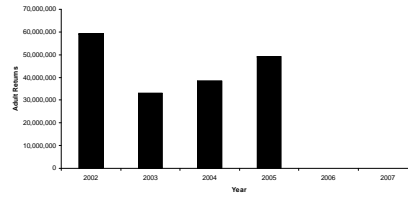


Results

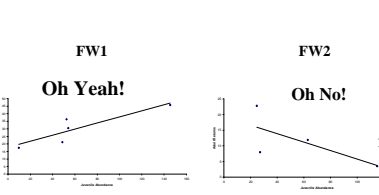
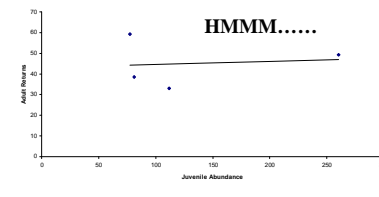
Juvenile Sockeye Salmon Abundance



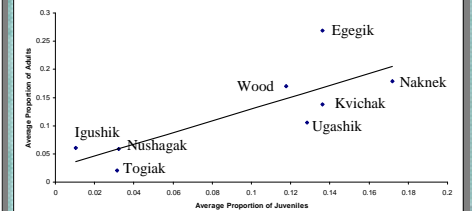
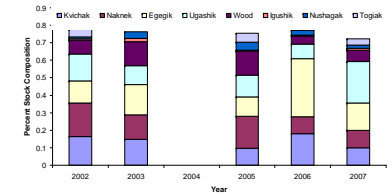
Adult Sockeye Salmon Abundance



Relation to Adult Returns



Stock ID of Juvenile Sockeye Salmon



Answer - Maybe

*It is likely we have ageing error in our juvenile data.

*Appears to be a good relationship between average (2002, 2003, and 2005) proportion of juvenile and adult Bristol Bay stocks

*Marine mortality could play a role – however the larger freshwater age-2 fish should have higher marine survival.

