

DEVELOPING AN ALASKAN OYSTER
Results of the Molluscan Broodstock
Program 1996-2009

By

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Alaska Sea Grant Marine Advisory Program

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THE MBP PROJECT

- The Molluscan Broodstock Program (MBP)
 - USDA funded ARS program
 - Hatfield Marine Laboratory, Oregon State University, Newport, OR
 - The MBP selects generalist oyster broodstock
 - Consistent, higher yields, faster growth, and better survival
 - The Pacific West coast oyster industry is benefiting from improved yields and reduced variability in growth

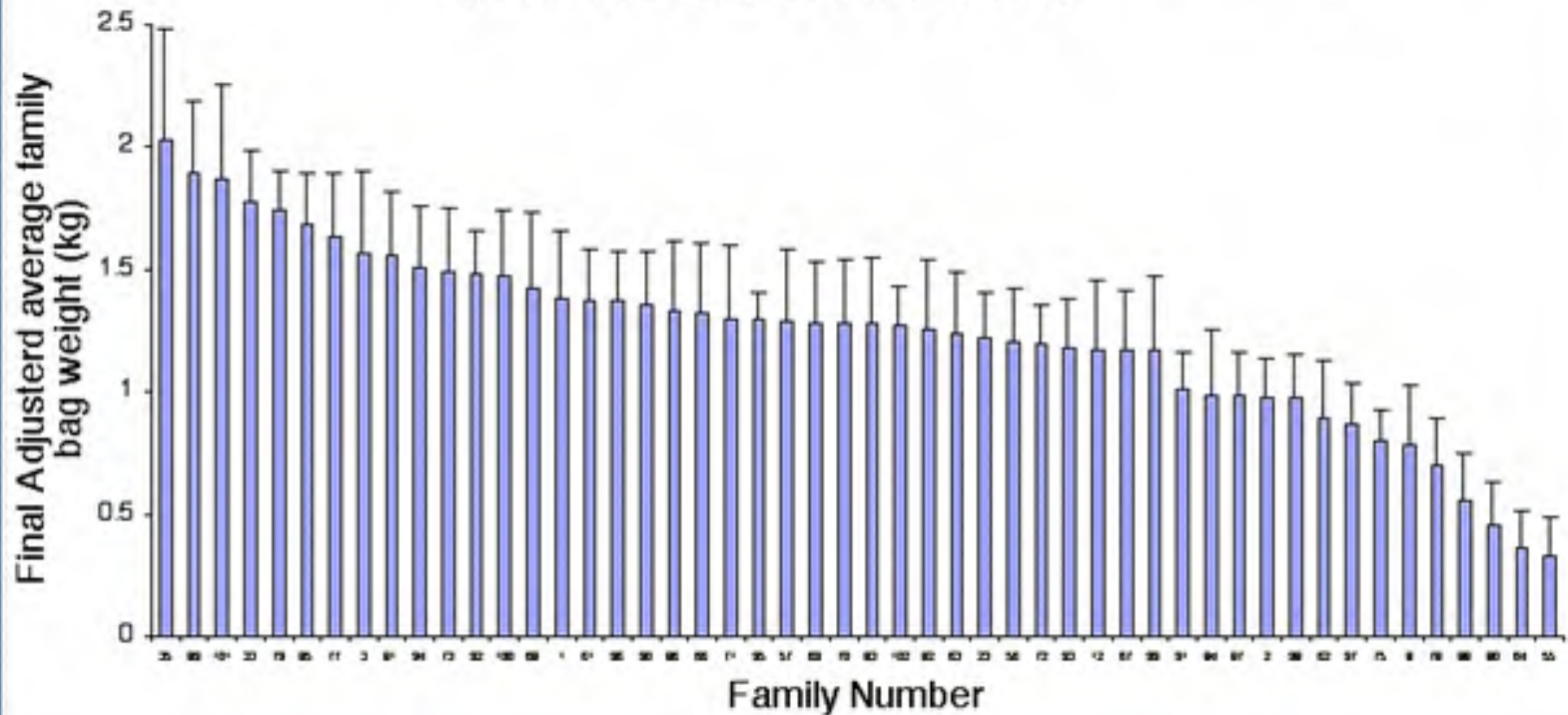


THE OBJECTIVES OF MBP ARE:

- Improving Pacific and Kumamoto oyster broodstock through selection in order to enhance commercial yields and other desirable traits.
- Establishing a broodstock management program for industry for sustainable, long-term improvements in commercial production.
- Maintaining a repository for selected top-performing oyster families.

EARLY RESULTS

Prince William Sound, AK (Site #4): Adjusted average family bag weights
(planted 4/26/97, harvested 4/28/99).



MBP OBJECTIVES FOR ALASKA

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HOW MPB WORKS IN ALASKA

- The money
 - Alaska Science & Technology Foundation 1999
 - Alaska Sea Grant 2006- 2010
- Site selection
 - Prince William Sound and Kachemak Bay
- Farmer cooperators
 - Dave Sczawinski, Gary & Debbie Seims, Greg Bates
- Oregon State University
 - Management and oyster seed production
 - Graduate students

ALASKA MBP SITES

1997-2006

Eaglek Bay, PWS

Dave Sczawinski

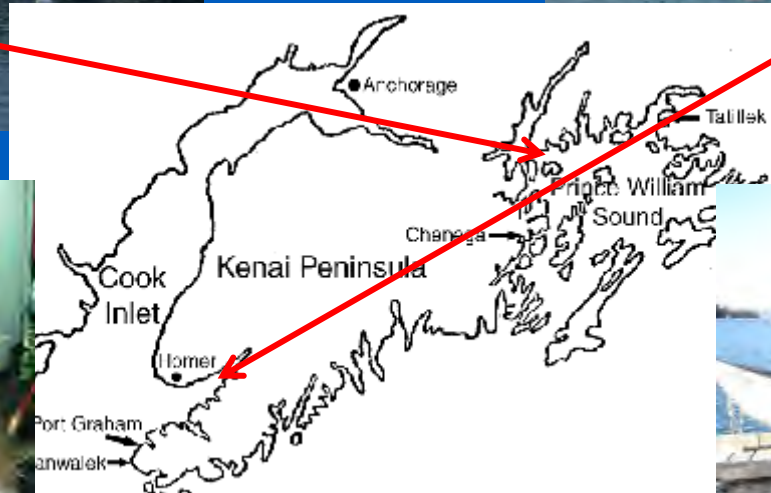
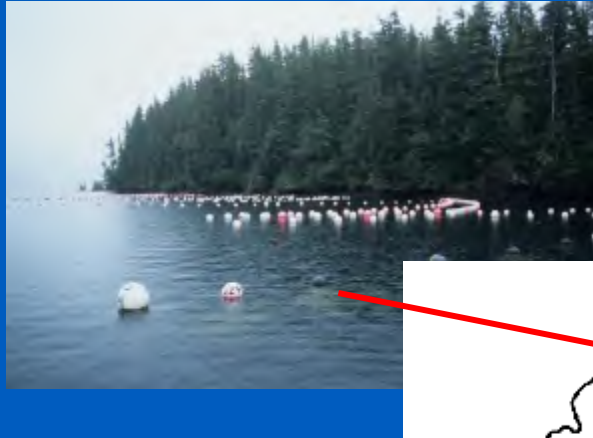
60° 50.696'N

2006-2009

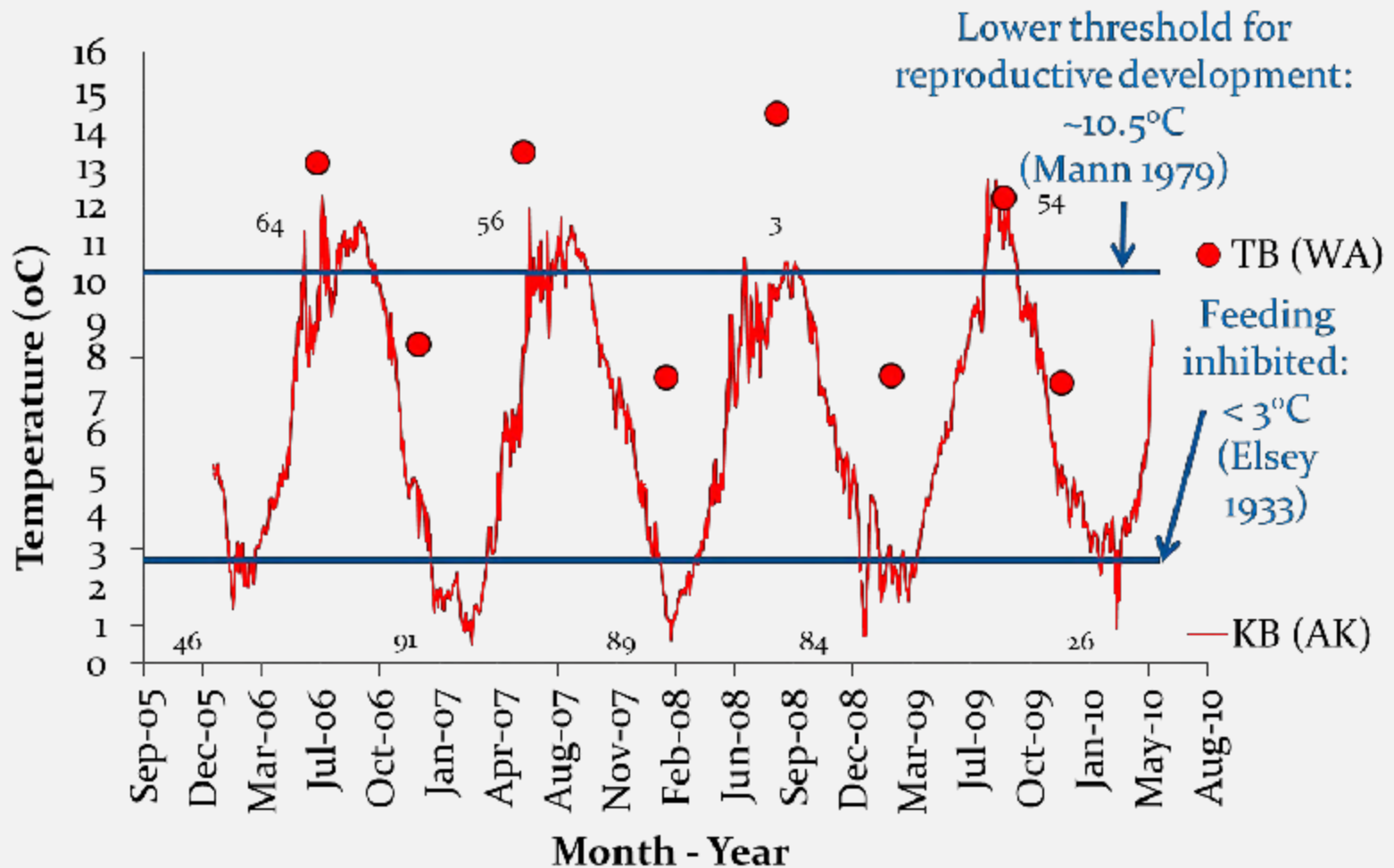
Peterson Bay, KB

Gary Seims

59° 36.161N

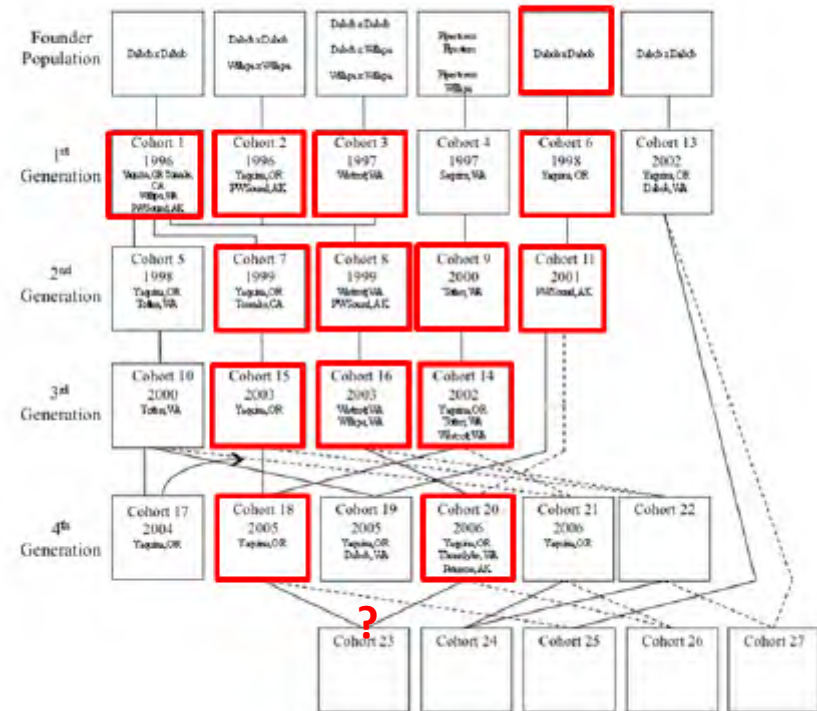


WATER TEMPERATURES



THE BREEDING PROGRAM

- Founder families
- Performance trial
- Choose top seven
- Breed next generations
- Repeat
- Long term process
 - 3-4 year cycle for Alaska
- Big project
 - 47 families + controls = 56
 - 10 replicates
 - 560 lantern nets chambers



WORK AT THE MBP SITE

Planting



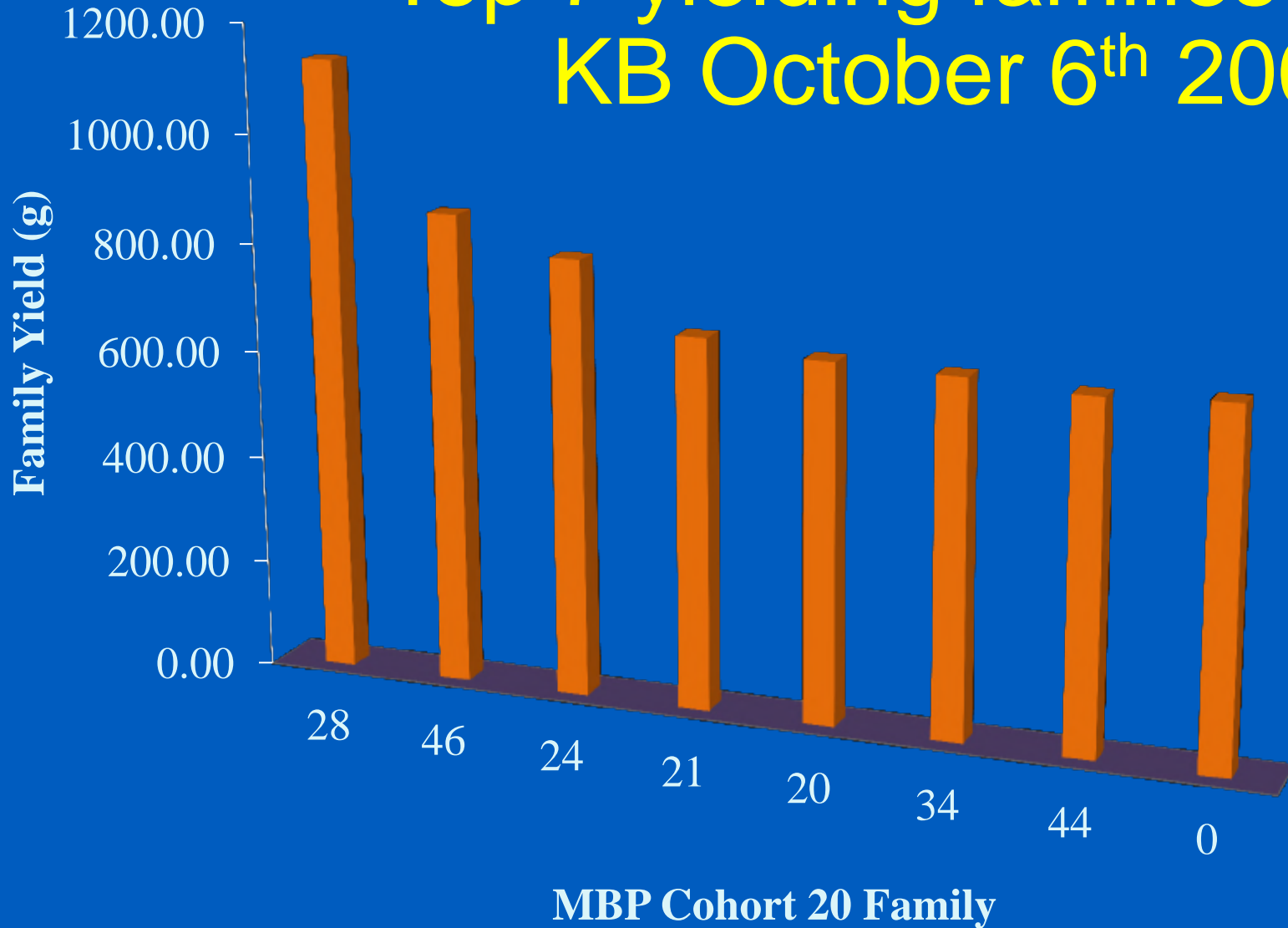
Maintenance



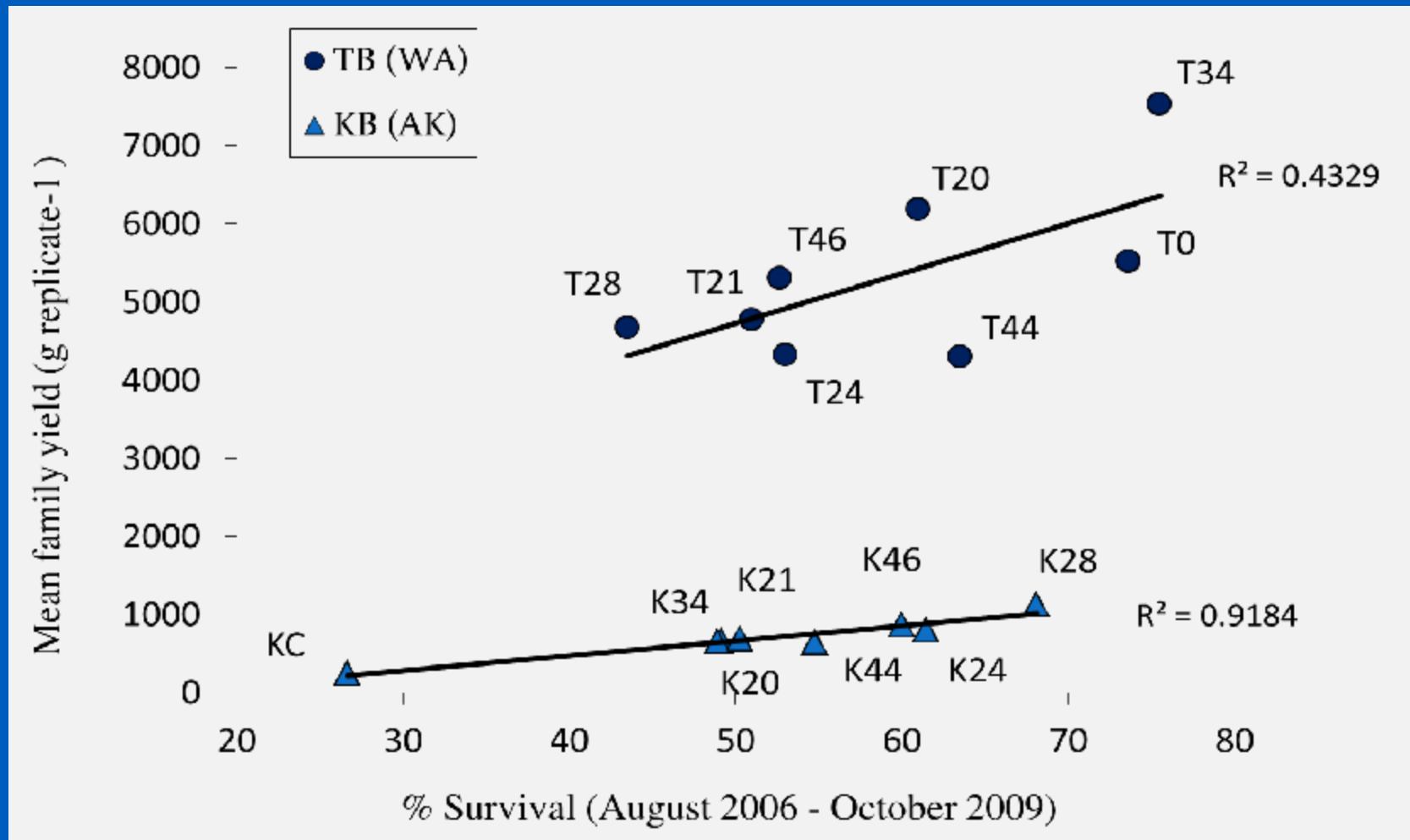
Evaluation



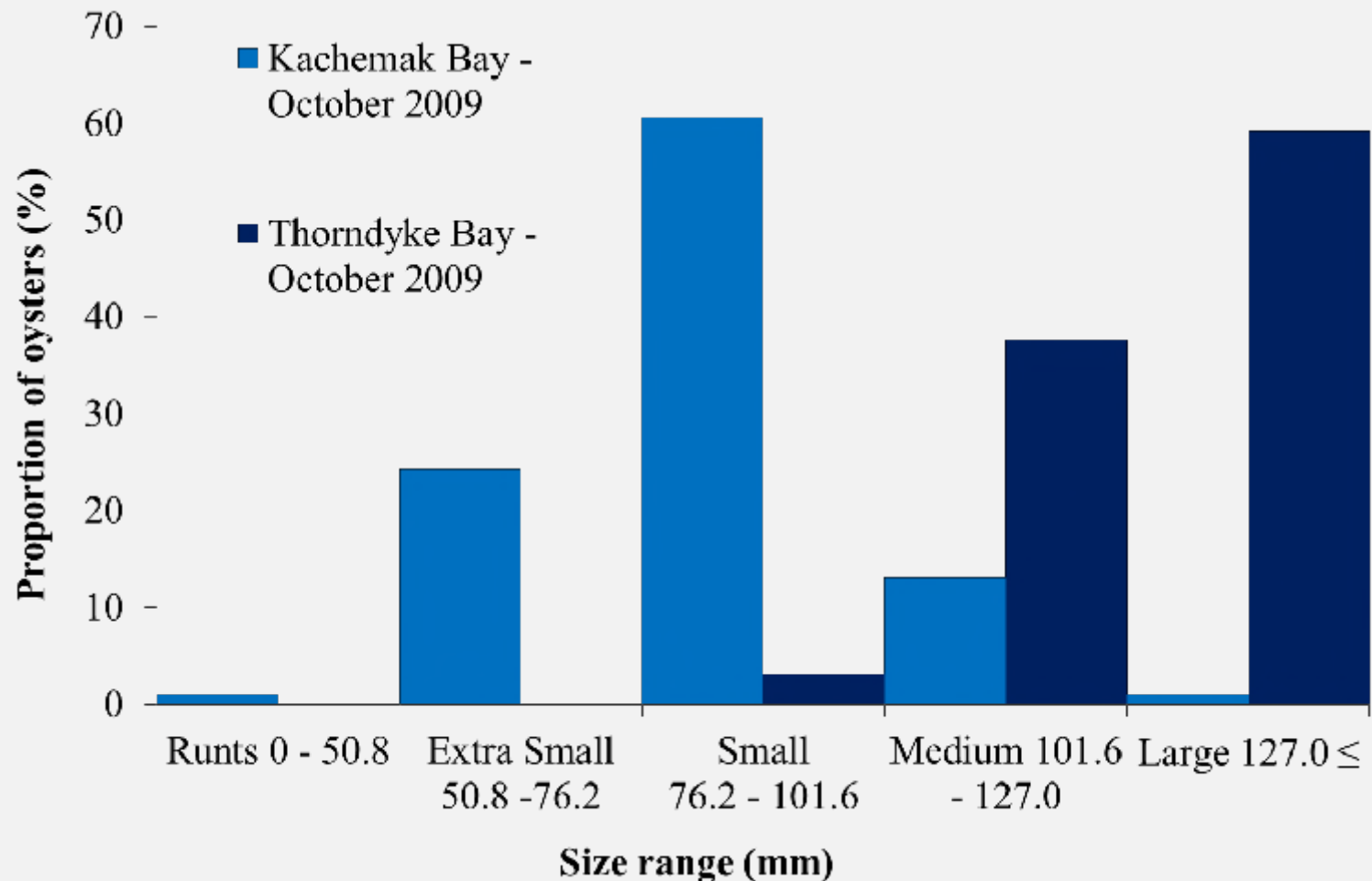
Top 7 yielding families at KB October 6th 2009



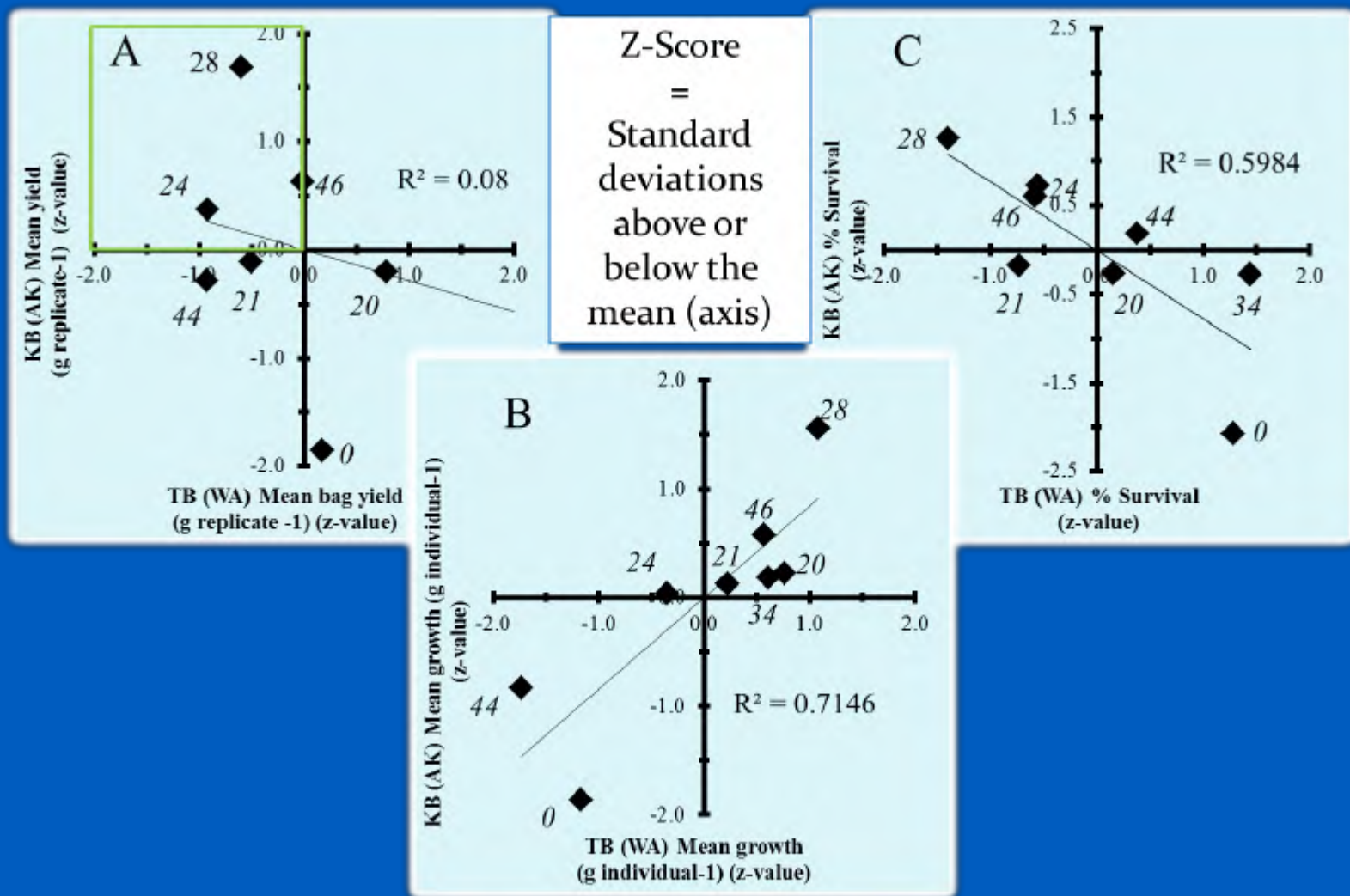
FAMILY YIELD VS. SURVIVAL



SIZE GRADES



IS THERE A GENERALIST FAMILY?



GRADUATE STUDENTS



Ford Evans



Sean Matson



Stuart Thomas Evan Durland

WHERE DO WE GO FROM HERE?

- MPB no longer funded with USDA.
- Change of management to make transition
- Transferring program to industry in the planning phase.
- Planning committee formulating
- Will continue in some form
- Likely reduced in scope and more burden placed on industry

ALASKA NEEDS

- Broodstock housed in the Alutiiq Pride Hatchery
- Growout trials in Kachemak Bay and Southeastern Alaska
- MBP manager can supply seed we need
- Alaska industry collaborator to participated in changing MBP program
- Funding

MORE THIS AFTERNOON

Post harvest quality

- More comparisons
- Condition indexing
- Shell qualities
- Reproductive condition
- Seasonal differences
- Meat qualities
 - Glycogen
 - Fatty Acids
 - Protein
 - Etc