

SPECIAL PROJECT APPLICATION
2008 RACE BOTTOM TRAWL SURVEYS
EBS Bottom Trawl Survey

- 1. Project Title:** King Crab Population Genetics
Principle Investigator (PI)/Point of Contact: Pam Jensen, Frank Morado
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2. History of work with AFSC RACE Division

- a. Past Special Projects with RACE:** DNA based identification of EBS fish and invertebrates, trophic interactions, Bitter Crab Syndrome, Diseases/parasites of red and blue king crabs

b. Priorities proposed project relates to:

Objective	Performance Measure	Strategy	Program Outcome
Maintain healthy stocks important to commercial, recreational and subsistence fisheries	Reduce the level of uncertainty associated with our estimates of stock status and biological potential below 1996 levels.	“periodically assess stocks to ascertain whether changes in their status due to natural or human-related causes have occurred”	Added measure: to identify the nature and extent of king crab stocks in the North Pacific

- c. RACE collaboration:** Pathobiology staff will collect and analyze samples.

3. General Description and Justification: It is presently uncertain how many king crab stocks exist in the North Pacific. This information is critical for the proper management of commercial species as various populations/stocks may require different exploitation rates or methods for conservation. We would like 400 blood samples placed in ethanol from sexually mature males & females per species per location for baseline population genetics research. The sampler will collect hemolymph by syringe from as many king crab species at each haul station completed by the vessel, when available. Hemolymph will be preserved in 100% ethanol.

COLLECTION PROTOCOL

- 4. Detailed collection procedures:** a specific collection form is required and attached.

What: Crab hemolymph from the following: *Paralithodes camtschaticus*, *P. platypus*

When: After routine haul duties, when species are available, all three legs of EBS survey, one boat only

Collection methodology: Record crab species, sex, carapace length, plate #, vessel, cruise and haul. Using a syringe draw 0.2mL hemolymph from the arthrodistal membrane. Preserve hemolymph sample in 100% ethanol stored in pre-filled 96-well plates.

Quantity: up to 400 hemolymph samples

Time Requirement: 20-30 min per sampled station, after other survey tasks are completed

- 5. List of supplies:** We will provide 500 1mL syringes, calipers, 4 96-well plates, sharps containers, biohazard bags, datasheets, shipping materials
- 6. Data storage:** We do not require data storage in the Groundfish database, but would like to relate our data to haul level data.

7. Hazardous materials: 100% Ethanol (filled into 96-well plates prior to survey).

SHIPPING

8. 24/7 contacts: Christie Shavey (206) 526.6715, Pam Jensen (206) 526.4122

9. Detailed shipping instructions:

Shipping: Will use AFSC shipping van to and from Dutch Harbor. Ethanol packaging conforms to small quantity exception 49 CFR 173.4, proper shipping papers not required.

Shipping containers used: Outer container – DOT approved 5-gallon plastic twist top labeled buckets. Inner container - 96-well plates (1.2 ml wells) containing ethanol and sample individually contained in resealable plastic bags with absorbent spill pad. Used syringes will be transported in autoclave bags to be disposed of at AFSC. Used needles will be contained in sharps containers and disposed of at AFSC.

PERMITS

10. Permits issued: ADF&G Fish Resource Permit #