



SCRIPPS INSTITUTION OF OCEANOGRAPHY
9500 GILMAN DRIVE MC0208
LAJOLLA, CALIFORNIA 92093-0208

August 6, 2008

The San Diego Unified Port District
Environmental Services Department
P.O. Box 120488
San Diego, Ca 92112-0488

Mid-Point Progress Report
for
Relative health of California halibut (*Paralichthys californicus*) in the Bay of San Diego

Dear Port Review Committee,

The project to discern the relative health of the California halibut (*Paralichthys californicus*) in the bay of San Diego is progressing nicely. Thus far I have been on 3 collection trips to the Bay of San Diego with SIO collections manager Eddie Kisfaludy and collected 36 of California halibut (34 from within the bay and 2 from elsewhere). 34 liver samples have been harvested from the fish from the bay and immediately snap-frozen in liquid nitrogen for RNA work. Preliminary RNA work on four of the samples from the first collection trip began last fall to ensure the safe collection methods of the tissues and thus far the RNA quality has been exceptional. The control fish collected from outside the bay are being kept in clean aquaria at SIO.

Furthermore, blood samples from the halibut were also collected and streaked upon *Vibrio* specific plates to explore the possibility of *Vibrio* pathogens infecting these fish. This was originally done by pooling blood samples randomly from half of the collected fish. Since beginning this effort five colonies of the pathogens have been grown from blood samples taken in the winter, and now we are taking blood samples individually from collected fish. Eight blood samples were taken from the first four fish at the two collection sites within the bay. Currently one colony of *Vibrio* is growing and we look forward to sequencing it for taxonomic purposes very soon.

This project is a very interesting and very fun endeavor and I look forward to the data generation phase once we have a sufficient number of control fish from outside of the bay. Our last two collection trips have been far more productive than the first in that we now know where in the bay is best to collect California halibut (the first trip was spend sorting through lots of trawled-up sting rays and kelp). Thus far it has proven much easier to find halibut within the bay than without. Most all of our fish have come from the deeper section lining the middle of the bay and we are still searching for halibut from the surrounding waters outside the bay. In our first attempt to collect from an area off of Blacks Beach we caught a multitude of juvenile flatfish which (after some growth) turned out to all be Pacific sanddab (*Citharichthys sordidus*). We plan to undergo at least three more collection trips and hope to have meaningful results in-hand by next spring though it will likely take til the end of next summer to fully process the results.

Sincerely,

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