

Kemp's Ridley Continuation Project

December 2013 Progress Report

The basic requirement of this project is to provide a continuation of the Kemp's ridley stock assessment. There are two major phases, a field study and an updated modeling assessment. The objectives of the field study are to gather size distribution for Kemp's ridley nesting at Rancho Nuevo in 2014 (to quantify a maturity schedule by age), flipper-and PIT-tag up to 300 new Kemp's ridleys and examine all nesting females encountered for previous tags. The objectives of the updated modeling assessment are to gather 2012 Gulf of Mexico effort data, gather 2013 nesting data and rerun the assessment model with the updated data.

Field Study

The field study is divided into three major tasks (1) equip the Rancho Nuevo Project with 4 ATV's, flipper tags, PIT tags, tagging equipment and 1 laptop computer; 2) conduct the field study during April-August 2014 and 3) provide a report describing the results. Task 1 was concluded by Gladys Porter Zoo personnel and they have billed for the equipment according to schedule (\$33,300).

Modeling

A major part of the modeling effort was to train Dr. Raborn as a back-up to Mr. Gazey. His efforts have been learning the modeling procedures under the tutelage of Mr. Gazey. We had budgeted to send him to British Columbia but elected to use the travel funds for more time to learn the model; i.e. travel was not necessary given enhanced communications. We have gathered the offshore effort data which was published by LGL (2013). These data by area, trimester, and depth zones are attached.

Total offshore effort in 2012 was 70,505 nominal days fished as compared to 66,641 nominal days fished in 2011. Recall that due to the lack of data, we assumed 2012 effort was the same as in 2011. In 2012, offshore effort increased.

The inshore data by region in 2012 as compared to 2011 was:

		Region				
	Tri	1	2	3	4	Total
2011	1	500.4	1636.8	6528	62.8	8728.0
	2	2095.7	4543.4	16483.6	717.0	23839.7
	3	921.6	5284.6	15838.8	415.0	22460.0
	Total	3517.7	11464.8	38850.4	1194.8	55027.7
2012	1	40.6	249.9	2557.2	243.4	3091.1
	2	45.6	3860.9	894.6	1146.1	5947.2
	3	99.1	5785.3	16438.5	254.3	22577.2
	Total	185.3	9896.1	19890.3	1643.8	31615.5

In 2012, inshore effort decreased as compared to 2011. Average number of nets remained the same in 2012 as compared to 2011.

The nesting data for 2013 at the three index beaches was 15,284. This compares to 19,163 in 2009; 12,377 in 2010; 19,368 in 2011; and 20,197 in 2012. The exponential trend of increase for 1969 through 2009 has been interrupted—at best. While we have yet to run the assessment model, it is obvious the existing model will not fit the data gathered since 2009. The trend of increase has flattened following the huge nesting reduction in 2010, coincident with the BP oil spill. Nesting in 2011 and 2012 was near the levels observed in 2009, but the 2013 nesting level declined abruptly from the 2012 value.

We will formally run the model in the first quarter of 2014.

Attachment 1

yr	area	tri	dpz	eezEff	steff	toteff
2012	1	1	1	0	117	117
2012	1	1	2	2,138	3	2,141
2012	2	1	1	0	346	346
2012	2	1	2	26	2	29
2012	2	1	3	134	5	139
2012	3	1	1	2,349	1,254	3,603
2012	3	1	2	2,170	11	2,181
2012	3	1	3	888	6	895
2012	4	1	1	0	1,348	1,348
2012	4	1	2	592	0	592
2012	4	1	3	691	0	691
2012	1	2	1	0	235	235
2012	1	2	2	659	0	659
2012	2	2	1	0	2,178	2,178
2012	2	2	2	743	86	829
2012	2	2	3	816	116	933
2012	3	2	1	9,274	4,817	14,091
2012	3	2	2	3,515	138	3,654
2012	3	2	3	1,487	7	1,494
2012	4	2	1	0	2,532	2,532
2012	4	2	2	2,679	45	2,724
2012	4	2	3	1,047	2	1,049
2012	1	3	1	0	72	72
2012	1	3	2	1,550	0	1,550
2012	2	3	1	0	1,230	1,230
2012	2	3	2	222	29	252
2012	2	3	3	1,293	112	1,404
2012	3	3	1	5,948	3,035	8,983
2012	3	3	2	1,785	110	1,895
2012	3	3	3	2,695	90	2,785
2012	4	3	1	0	2,287	2,287
2012	4	3	2	6,193	13	6,206
2012	4	3	3	1,384	0	1,384