Rangia Clam Mortality in San Antonio Bay

Drought Impact & Recovery in Texas Estuaries

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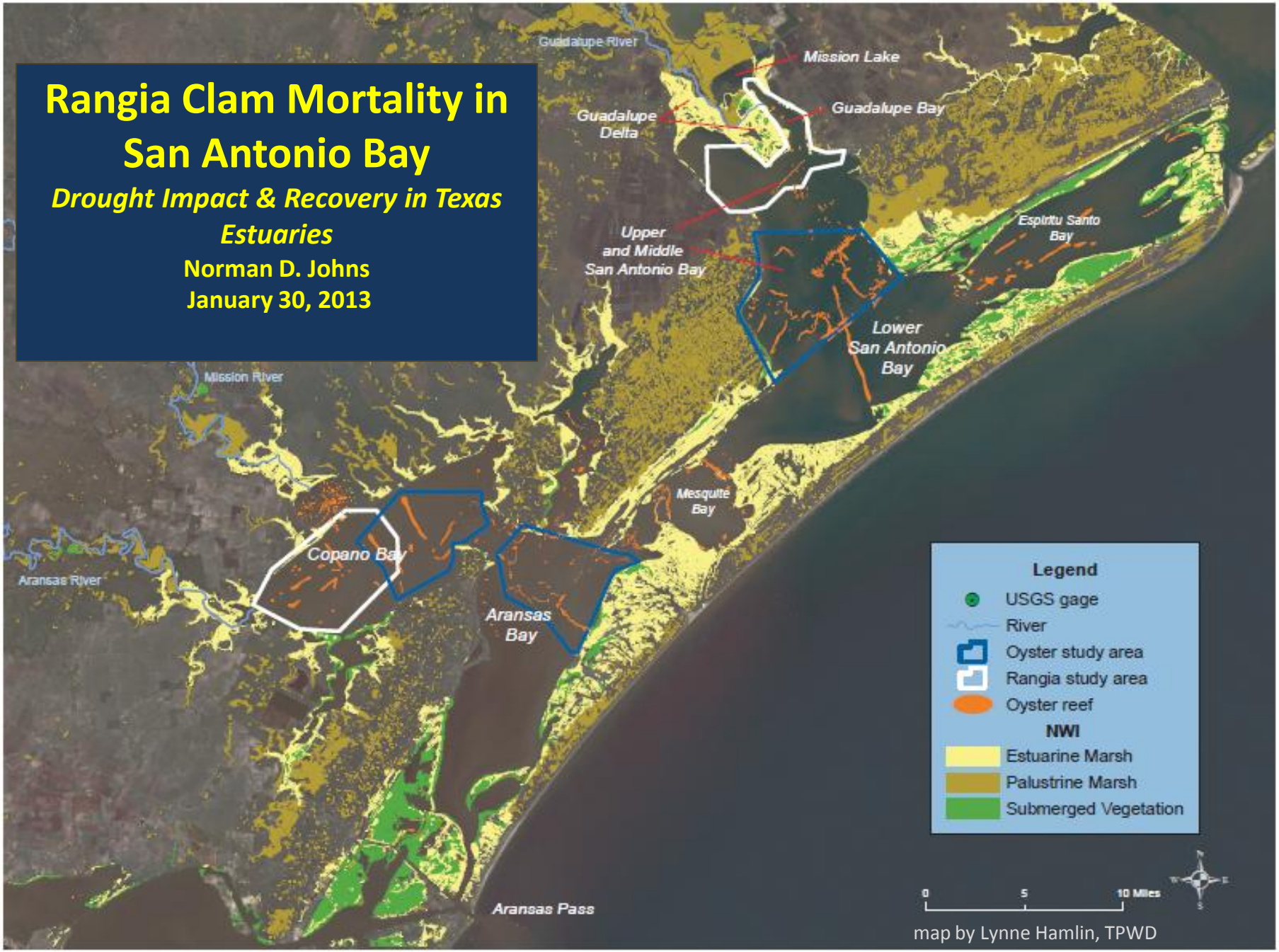
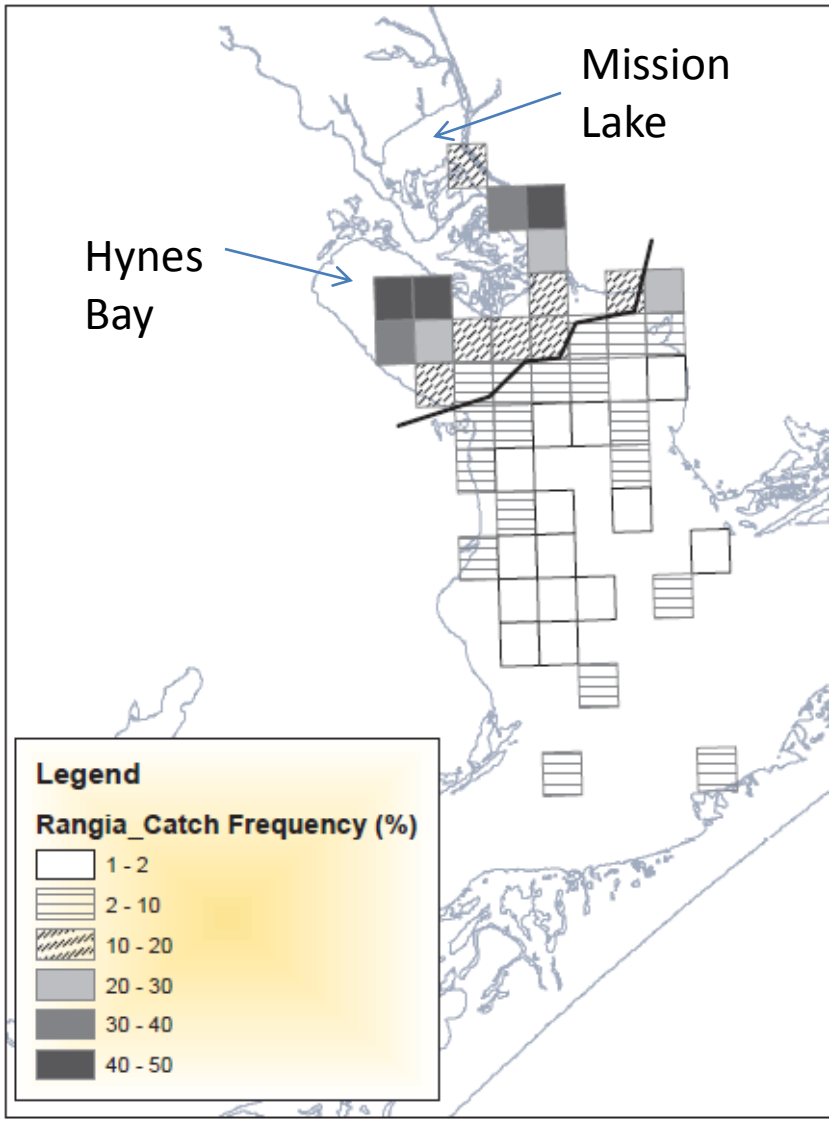
January 30, 2013



map by Lynne Hamlin, TPWD



from Guadalupe-San Antonio Bay Basin Expert Science Team, 2011

Hynes Bay Sites Sampled on 01/31/12

01/31/2012

Site 2 (Hynes Bay).

Dead open-shelled Rangia at site 4 (Hynes Bay).

Upper Bay/ Mission Lake Sites Sampled on 01/31/12

Dead whole-shelled Rangia at site 9 (Mission Lake).

Dead whole-shelled Rangia condition (Mission Lake).

Dead whole-shelled Rangia at site 10 (Mission Lake).

The single live Rangia found in Mission Lake at site 12 (Mission Lake).

Apparent recent mortality “event(s)”- evidence:

-absence of live adults;

-undisturbed character / color of dead whole clams

Potential Causes:

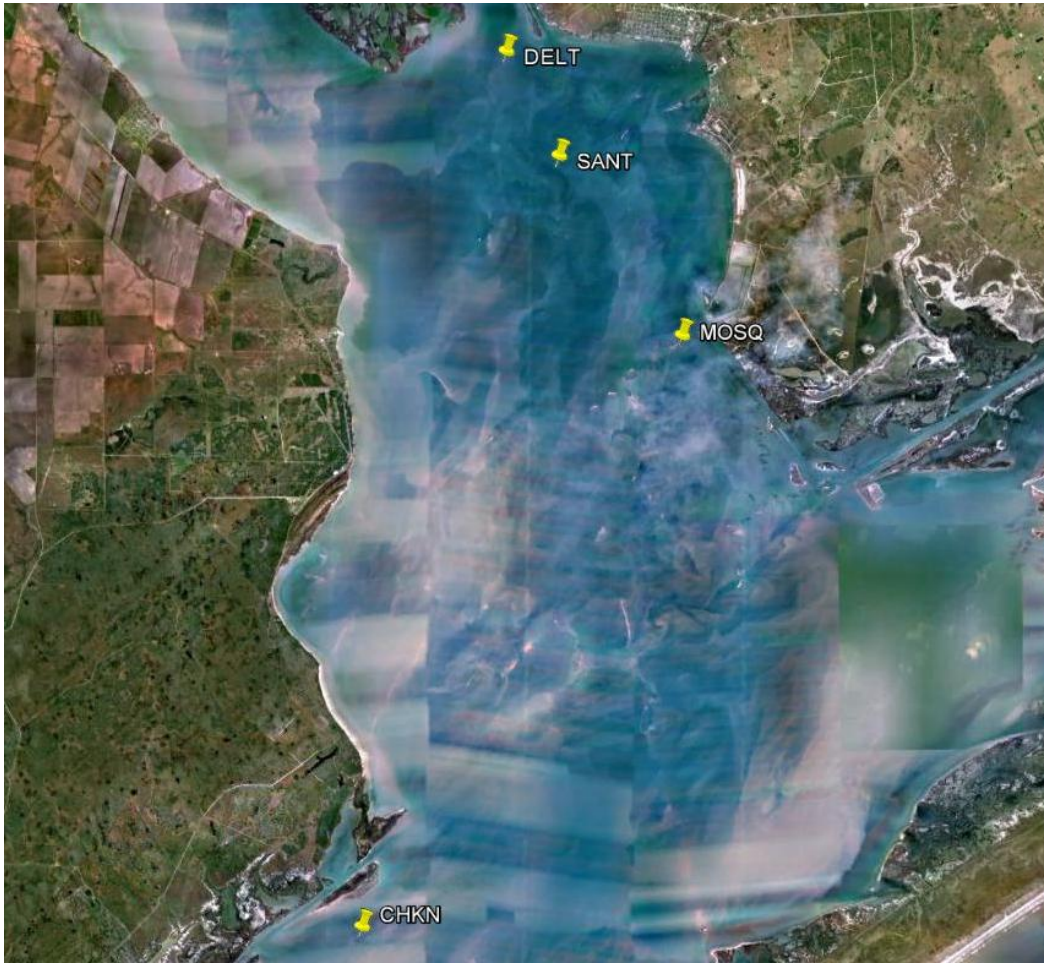
1) high salinity

2)

3)

4)

5)


DELT
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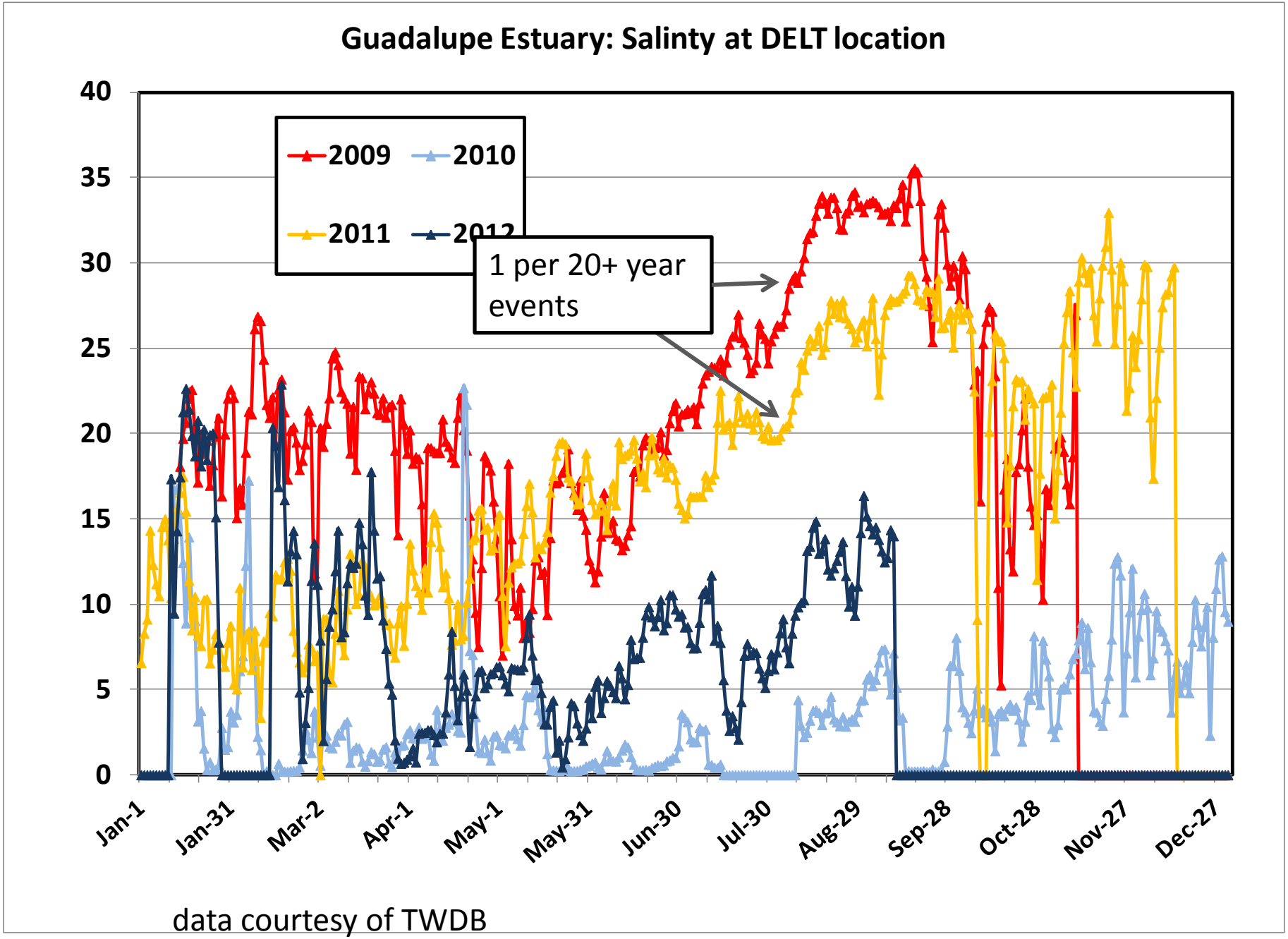

data courtesy of TWDB

“A preliminary test demonstrated that, if gradually acclimated, Rangia could survive, without food, in salinities ranging from 0-39 ppt for a period of at least 2 months”

Bedford & Anderson, 1972. “The Physiological Response of the Estuarine Clam Rangia Cuneata to Salinity. I Osmoregulation.”

Potential Causes:

1) high salinity -- ??

2) food disruption (salinity induced?)

3) ~~Red Tide~~

4) disease (salinity promoted?)

5) combination of above

6) other

END