

*Influence of Traps Equipped with
Bycatch Reduction Devices on
Blue Crab Catch and Texas
Diamondback Terrapin Bycatch*

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**Texas Sea Grant



Bycatch Reduction Devices (BRDs)



National Aquarium



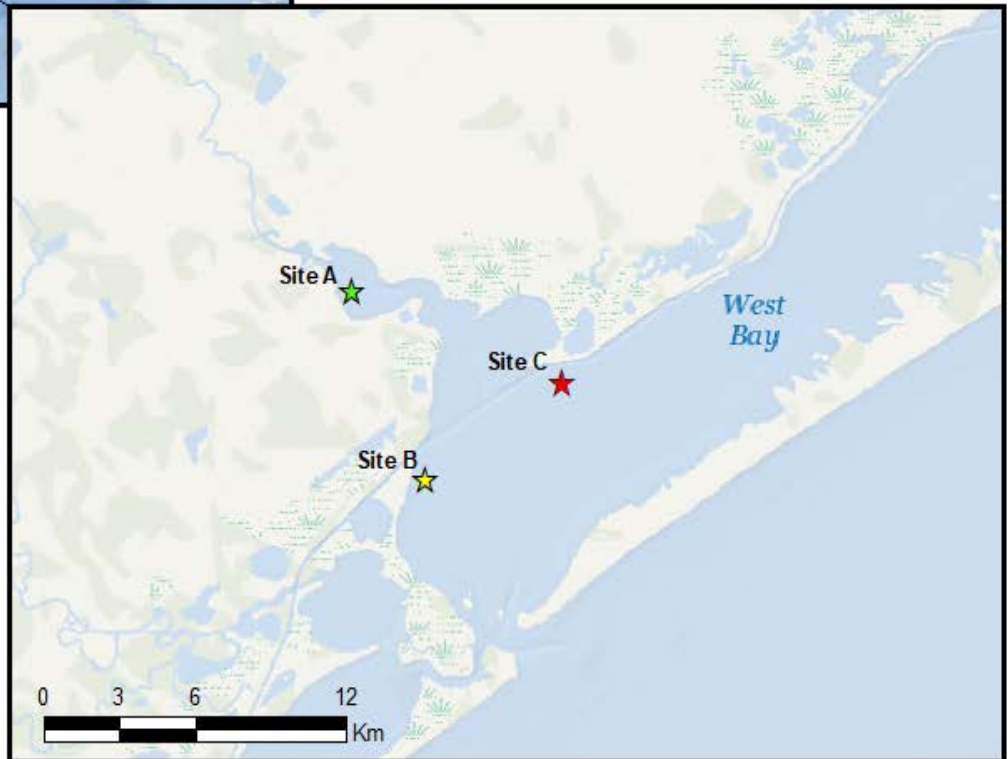
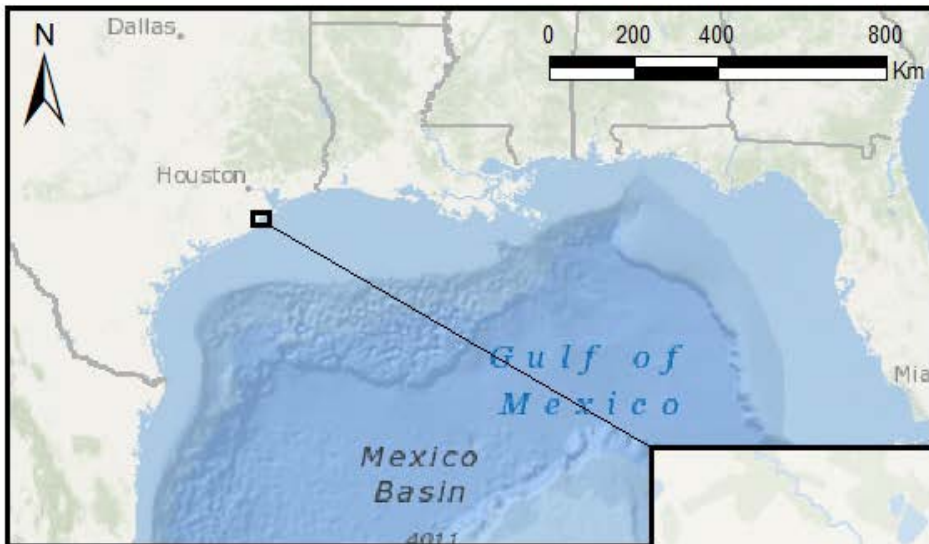
Wetlands Institute



Study Design

- Partnered with commercial crab fisherman
 - More consistent with normal commercial behavior

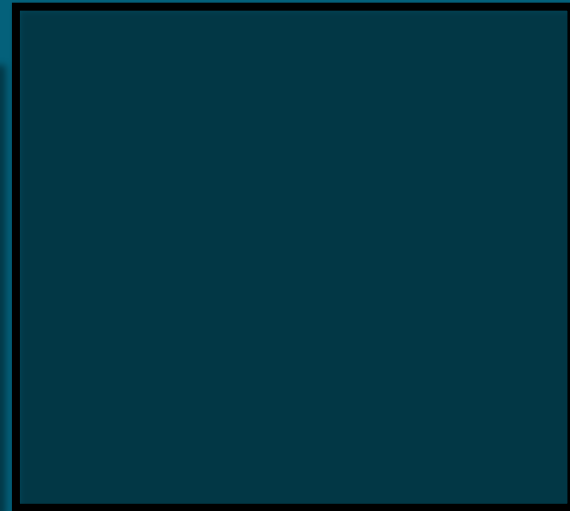
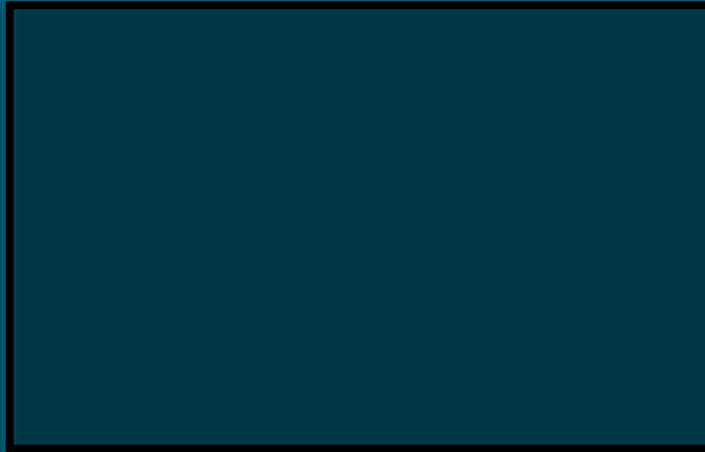
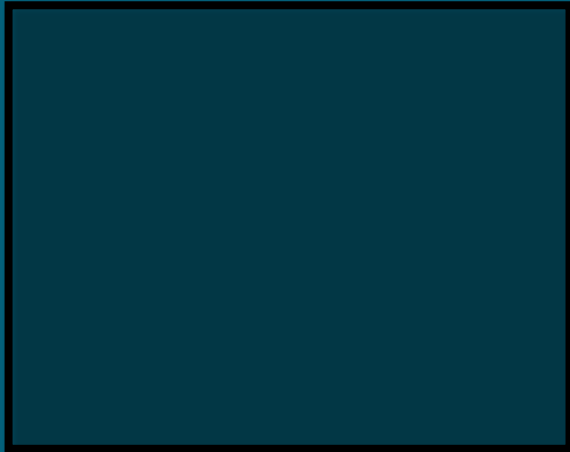




- 18 traps (9 regular, 9 BRD-equipped) at each site for 3 trap nights
 - Randomly assigned location on 2 parallel lines
 - ≥ 100 yds apart
 - Baited and set by crab fisherman then soaked overnight



- Environmental parameters at start and end of each trap line
- Recorded and measured all catch
 - Crabs: sex; carapace length, width, and depth
 - TL for all other species



Results



General

- Over 2,900 trap nights
- Landed over 7,800 individuals and almost 4,700 crabs
- Encountered 39 species in traps

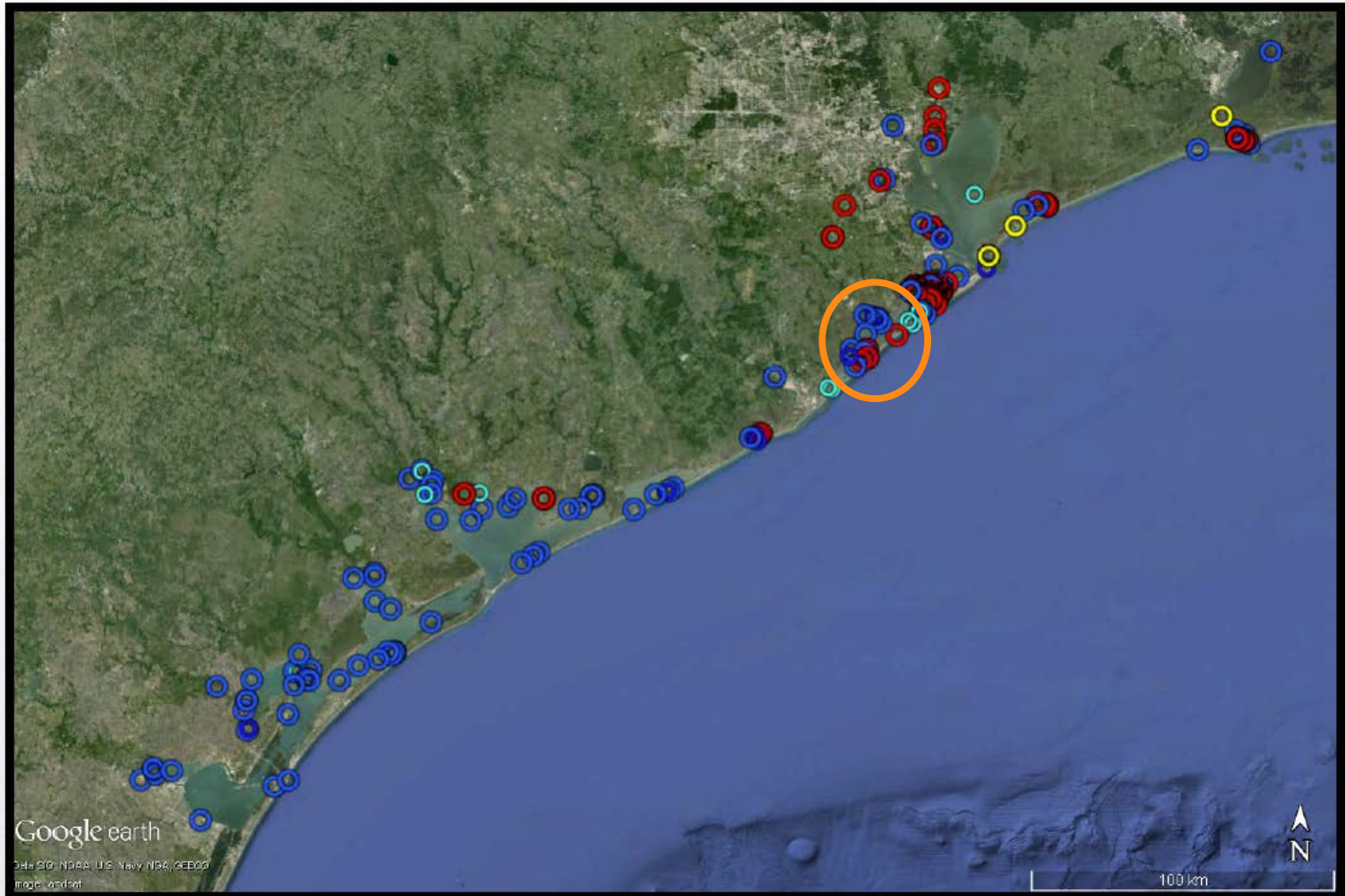


Commonly encountered species



How effective are BRDs at reducing terrapin bycatch?

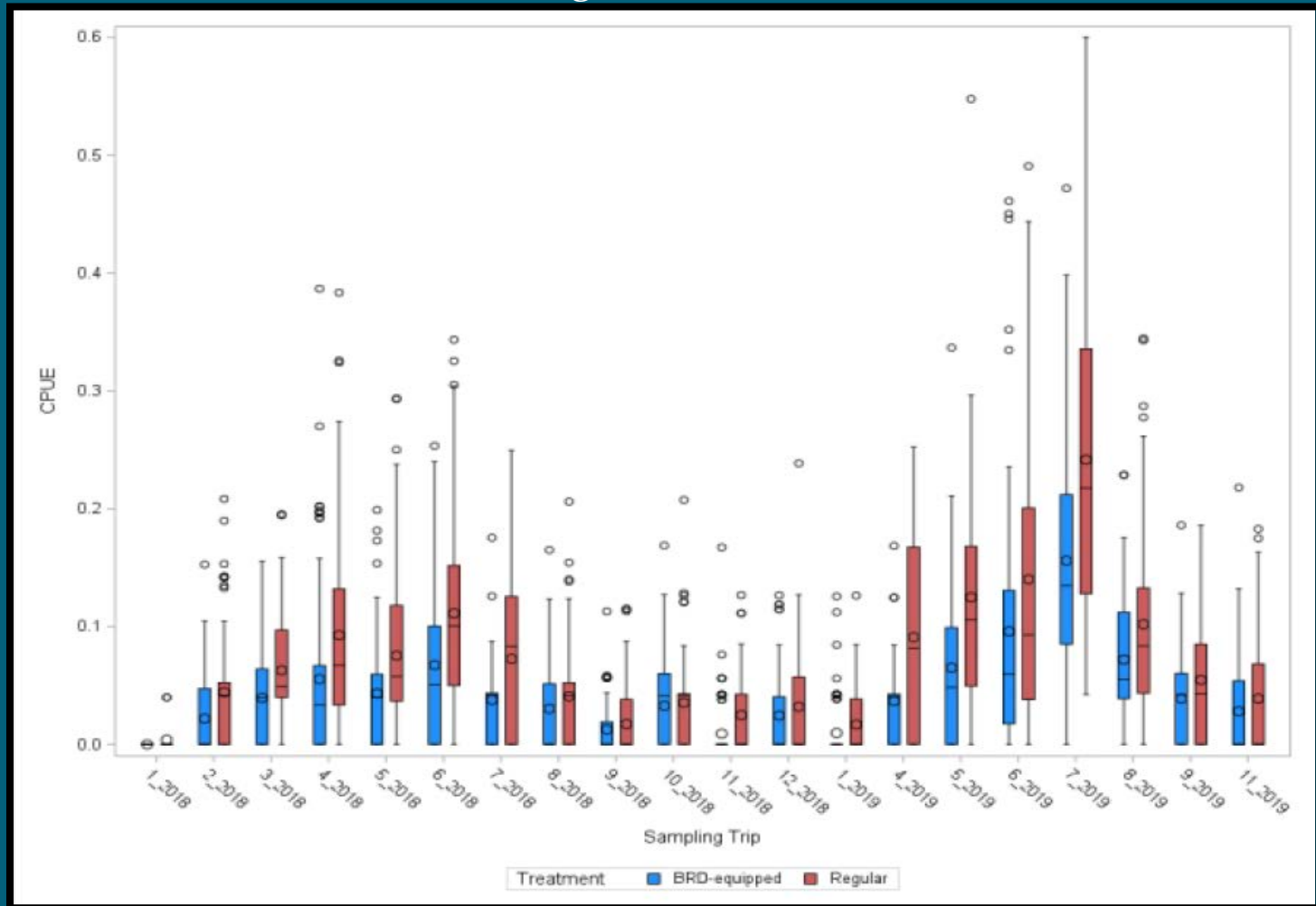




Distribution of modern and historical terrapin observations compiled during 2014 mid-upper coast study.
Teal = TPWD independent monitoring reports from 1977-2013; yellow = incidental sightings reported to EIH personnel from 2008-2014; red = captures made by EIH personnel from 2008-2014; blue = observations reported in 2014 online questionnaire.

Do BRDs affect catch of legal crabs?

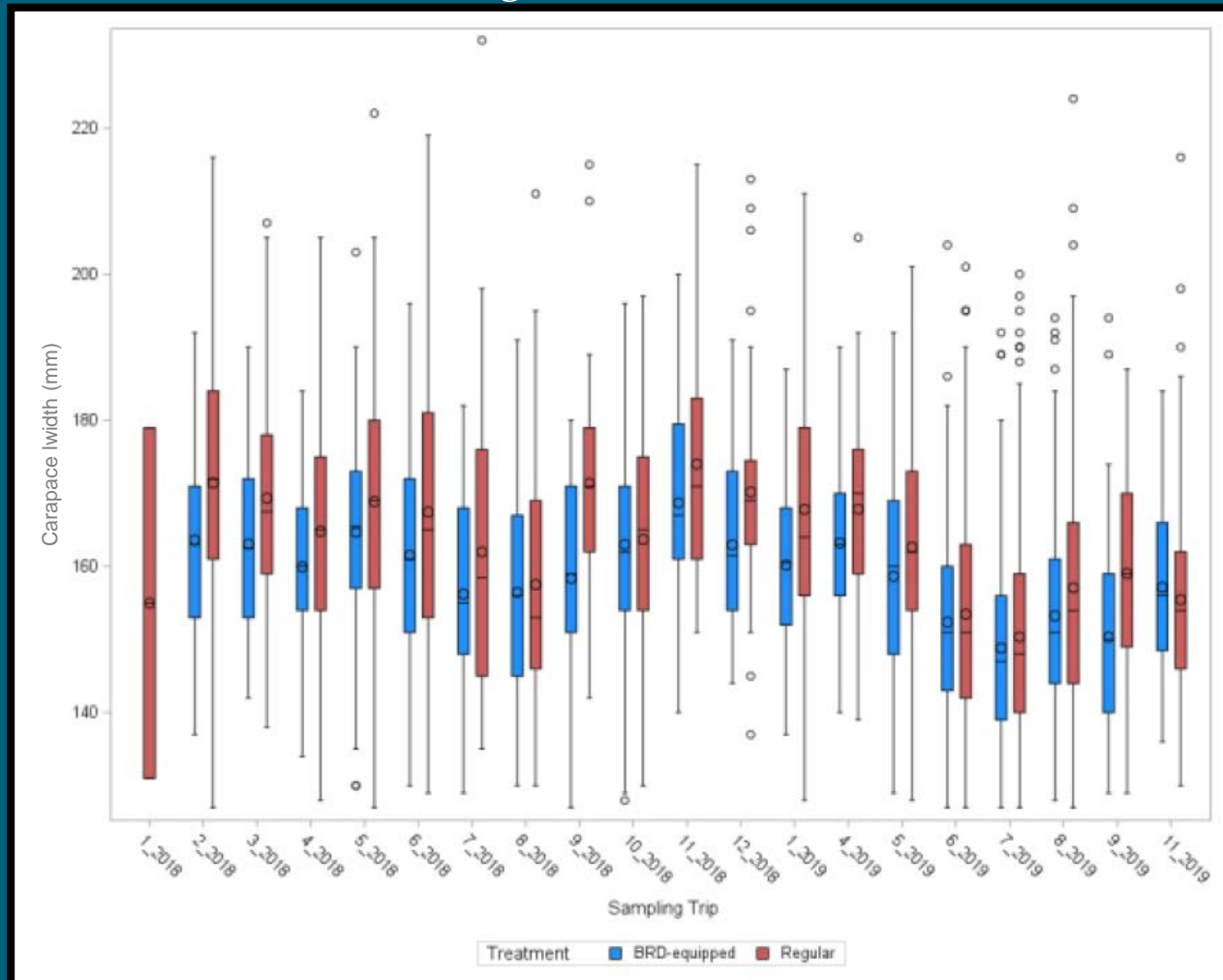
All Legal Crabs CPUE



Significant effects of site ($p < 0.01$) and sampling trip ($p < 0.01$)
Significant BRD x site ($p = 0.04$) and BRD x trip ($p < 0.01$) interactions

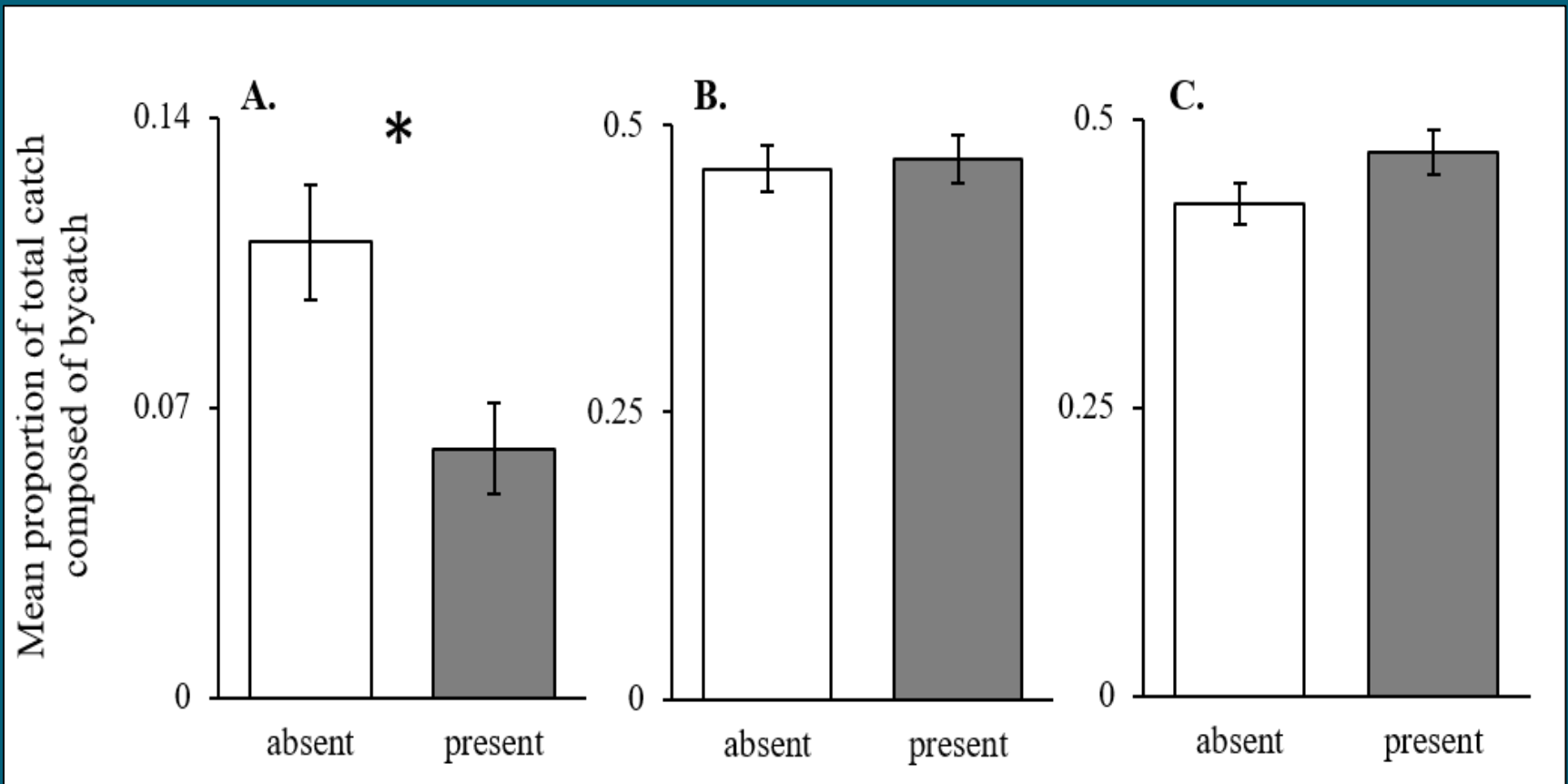
Do BRDs affect size of crabs?

Legal Crabs- Size



Significant interaction of site and sampling trip ($p < 0.01$)

What about Bycatch?



Summary

- BRD only significantly impacts catch during some periods of the year
 - Pattern differs for different sites
 - Impact always negative if it exists
- BRD did not significantly affect size of crab caught
- BRD effects on bycatch different for different sites

Acknowledgements



TEXAS

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