

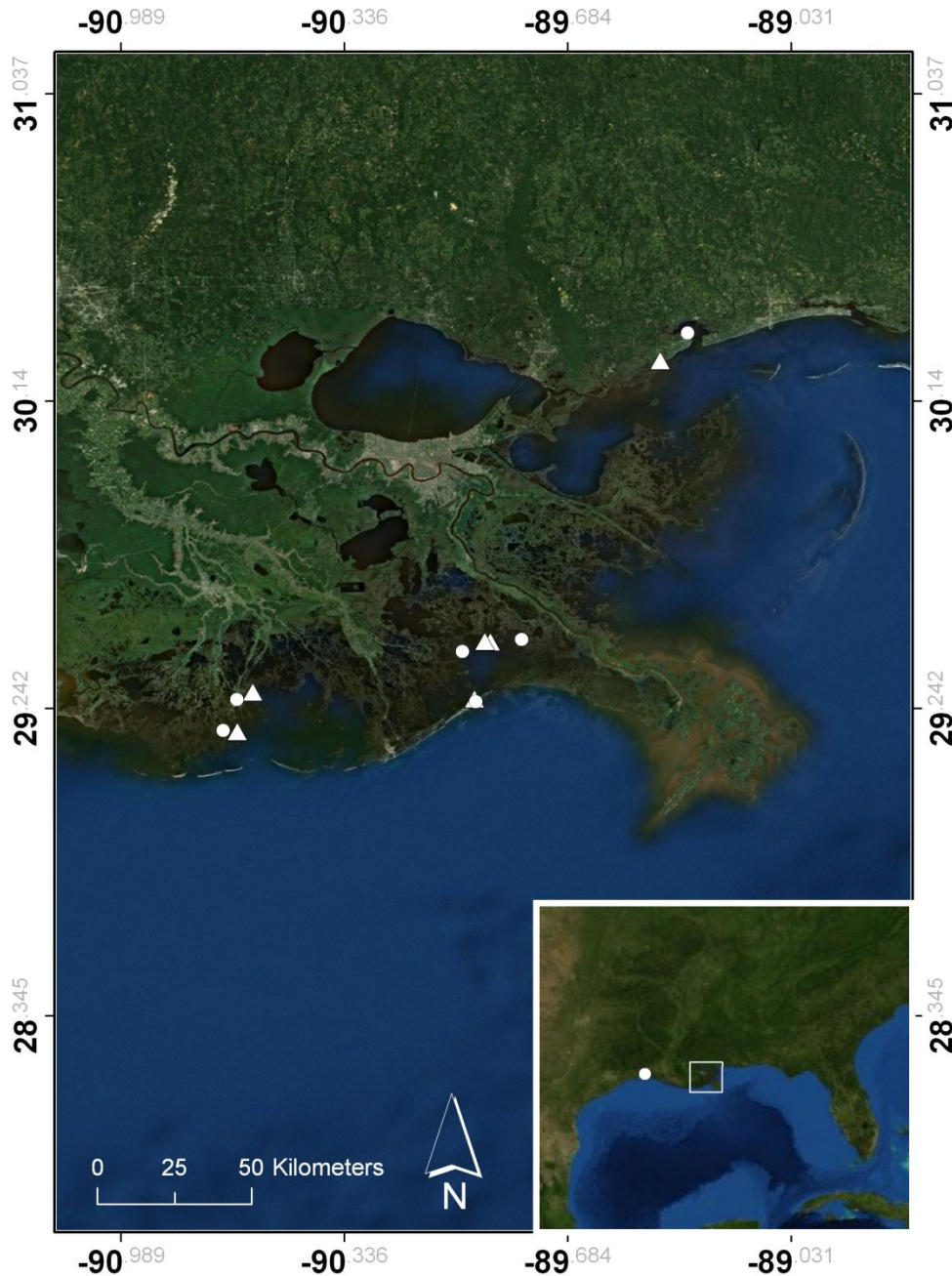
Disturbance and recovery of salt marsh arthropod communities following BP Deepwater Horizon oil spill

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2010: 10 sites

2011: 12 sites

Control and oiled
interspersed

All salt marsh
with abundant
*Spartina
alterniflora*

Transects conducted in areas with no obvious impact

Mostly dead
(and dead crabs and bivalves)

Lots of oily debris and stems

No obvious effect
(live snails, crabs,
grasshoppers)









Photo: C-K. Ho



Photo: T. Decker



Photo: J. Sheehan



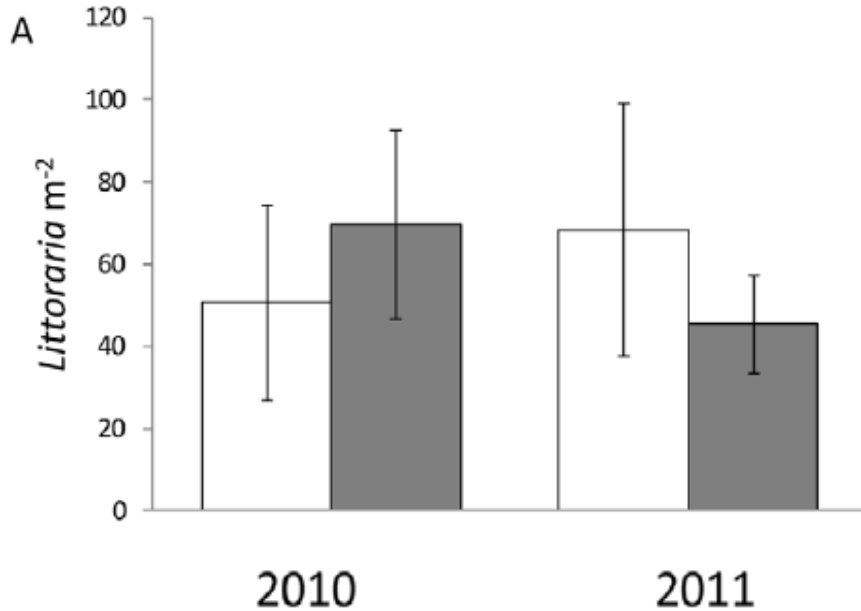
Photo: J. Sheehan

Sites were similar

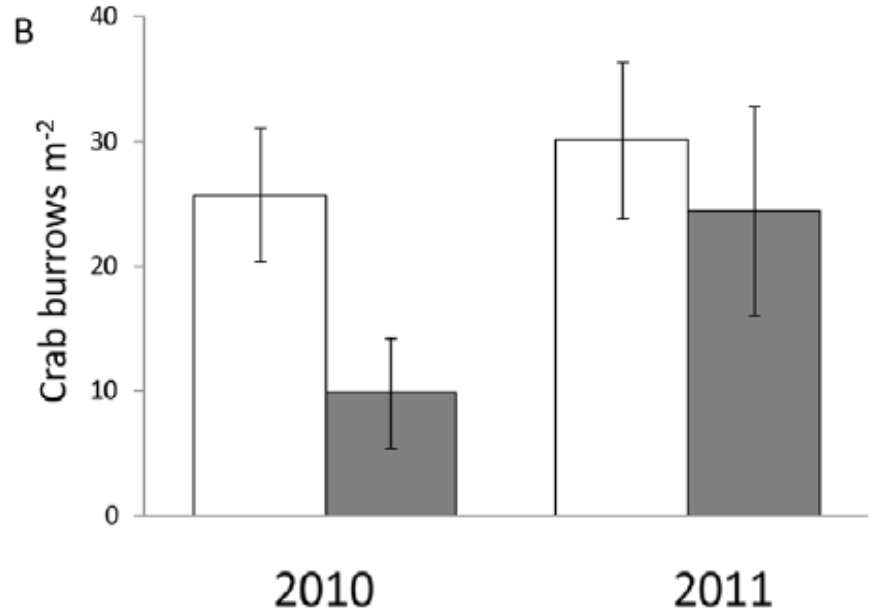
- No difference
 - Soil % organic
 - Soil % water
 - Porewater salinity
 - Live *Spartina* height
 - Live *Spartina* % cover
 - Dead *Spartina* % cover
- Different
 - *Spartina* leaf N higher at oiled sites

Marine invertebrates

Control Oiled



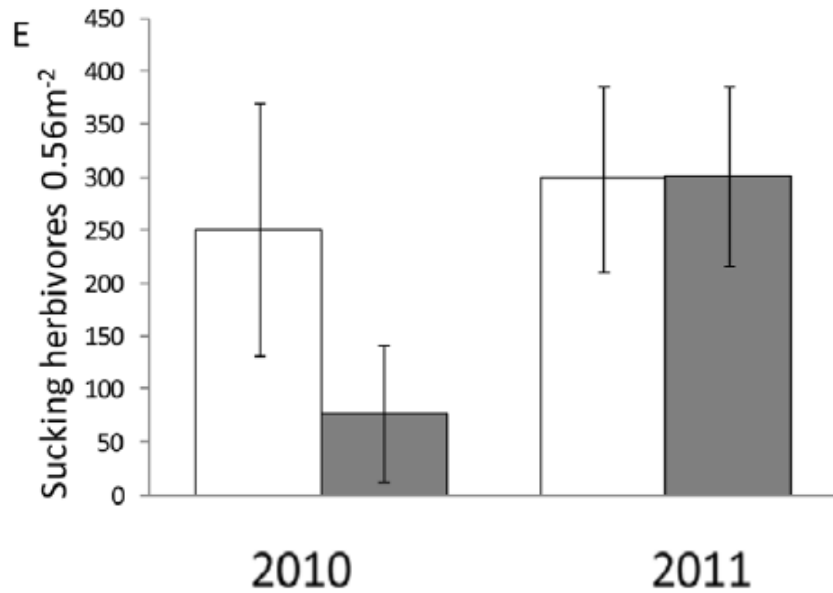
Not significant



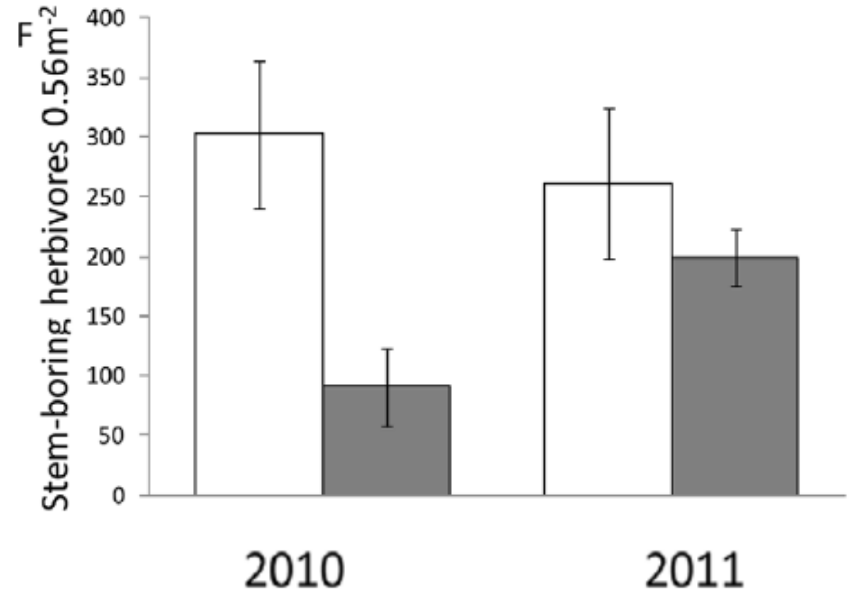
Oil: $p=0.02$
Year: $p=0.07$
Oil*year: $p=0.17$

Herbivores

Control Oiled



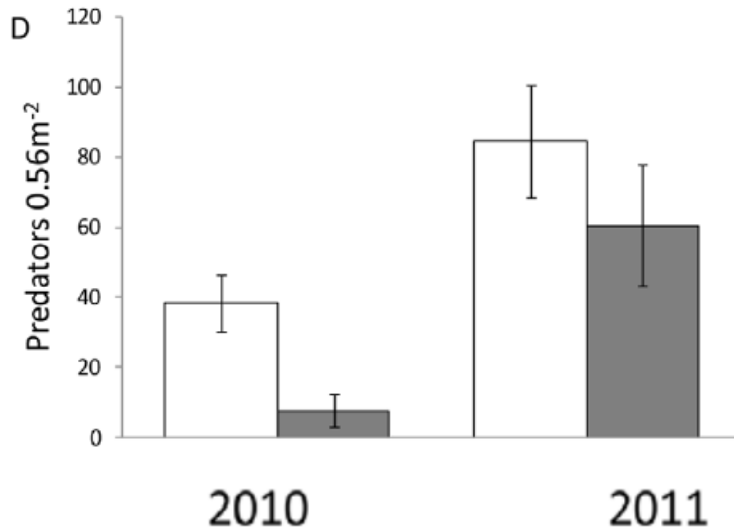
Oil: $p=0.02$
Year: $p=0.004$
Oil*year: $p=0.03$



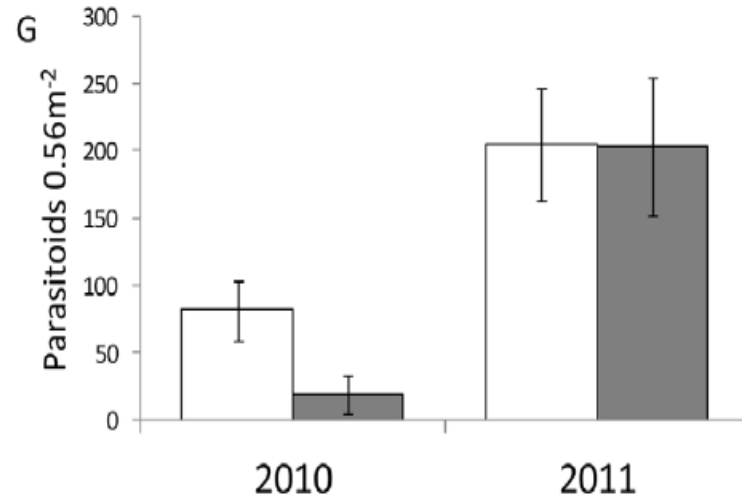
Oil: $p=0.01$
Year: $p=0.12$
Oil*year: $p=0.03$

Predators and parasitoids

Control Oiled

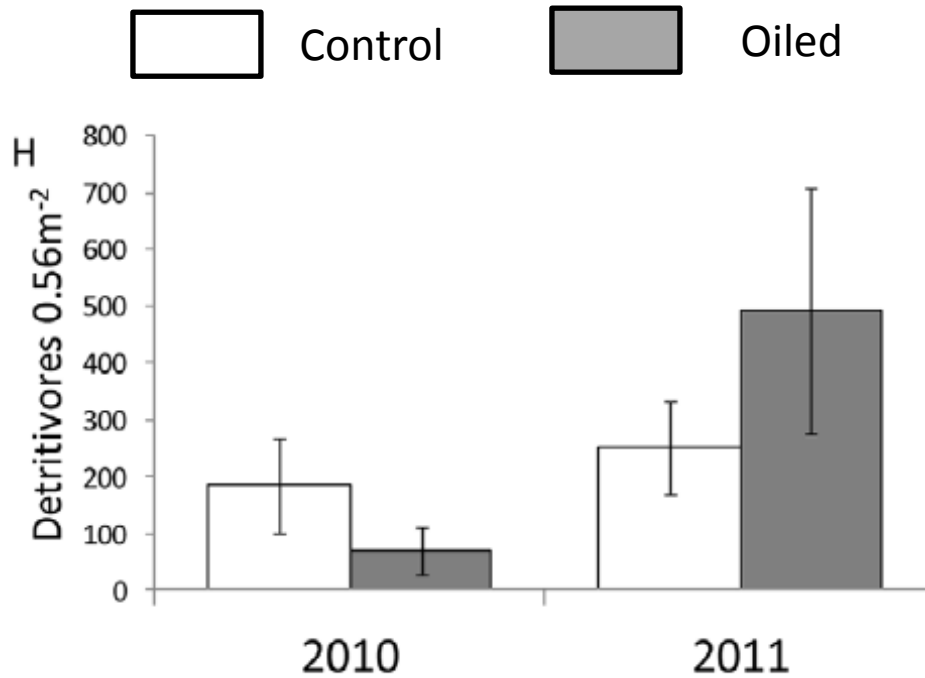


Oil: $p=0.001$
Year: $p=0.0001$
Oil*year: $p=0.02$



Oil: $p=0.43$
Year: $p=0.001$
Oil*year: $p=0.45$

Detritivores



Not significant

Caveat: we sampled areas where plants did not die

Conclusion: arthropods vulnerable but resilient

