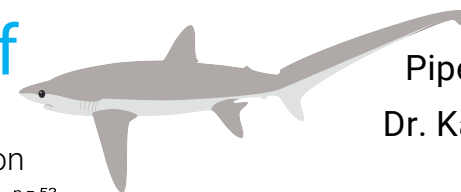


Organic Contaminants in Two Species of Thresher Sharks



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Introduction

Habitat:

- Common Threshers are coastal
- Bigeye Threshers are deep water

Persistent Organic Pollutants (POPs):

- Many were banned over 30 years ago, but are still found in high levels
- Southern California is a DDT hot spot

Goal

Test if differences in ecological niches of the two species would result in differences in their accumulation of POPs

Methods

- Threshers were sampled through fisheries-dependent and independent methods
- Livers were extracted and analyzed for a suite of POPs

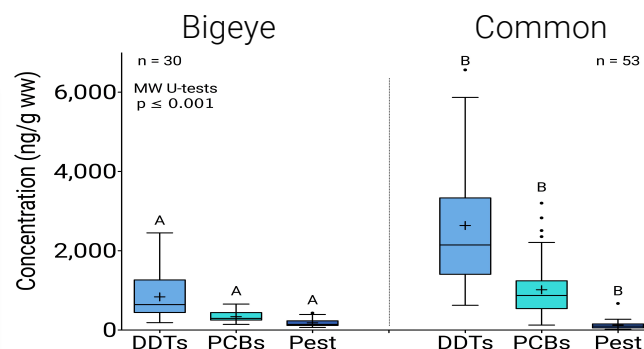


Fig. 1 - Comparison of 3 POPs. Mann Whitney-U Test performed by species by contaminant group

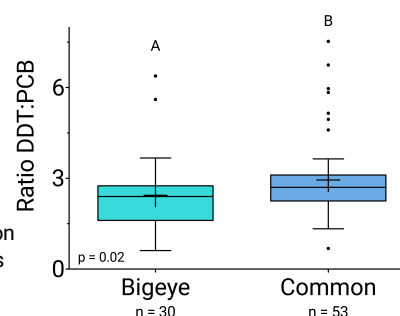


Fig. 2 - Comparison of DDT/PCB ratios

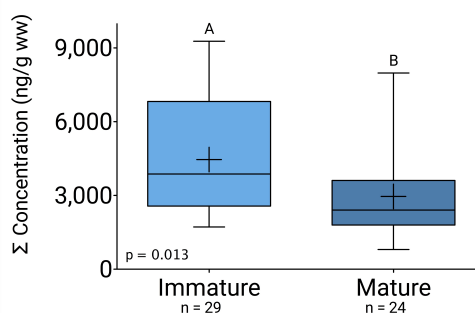


Fig. 3 - Comparison of Maturity Status in Common Threshers (Mann Whitney U Test).

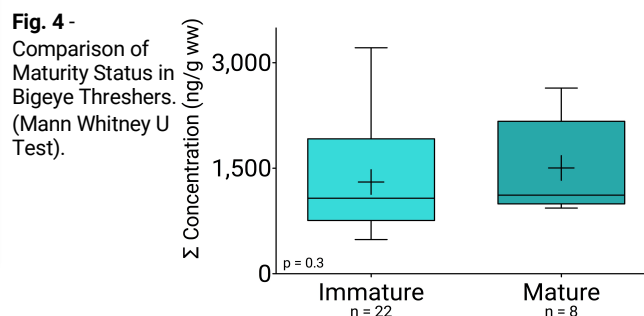


Fig. 4 - Comparison of Maturity Status in Bigeye Threshers. (Mann Whitney U Test).

Comparison of POP levels

Significantly higher PCBs, DDTs, and total POPs in Common Threshers

- Could be the result of closer proximity to anthropogenic activity
- Common Threshers had higher contributions of DDTs

Common Thresher Maturity Status

Juveniles were significantly higher than mature sharks

- Maternal offloading may account for higher levels in juveniles

Bigeye Thresher Maturity Status

No significant difference between juvenile and mature sharks

- Sample contained mainly mature males; sex bias of samples implicated

Conclusion

Ecological differences in niche space result in different accumulation of POPs

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