

GOA Shark Assessments



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GOA Sharks

- Executive Summary Only
- Updated catch data for 2015 and 2016 (as of Oct 3, 2016)



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GOA Sharks

- ABC/OFL set for complex as a whole as sum of:
 - Tier 6* (random effects biomass) – Spiny dogfish
 - Tier 6 (average catch history) – all other shark species



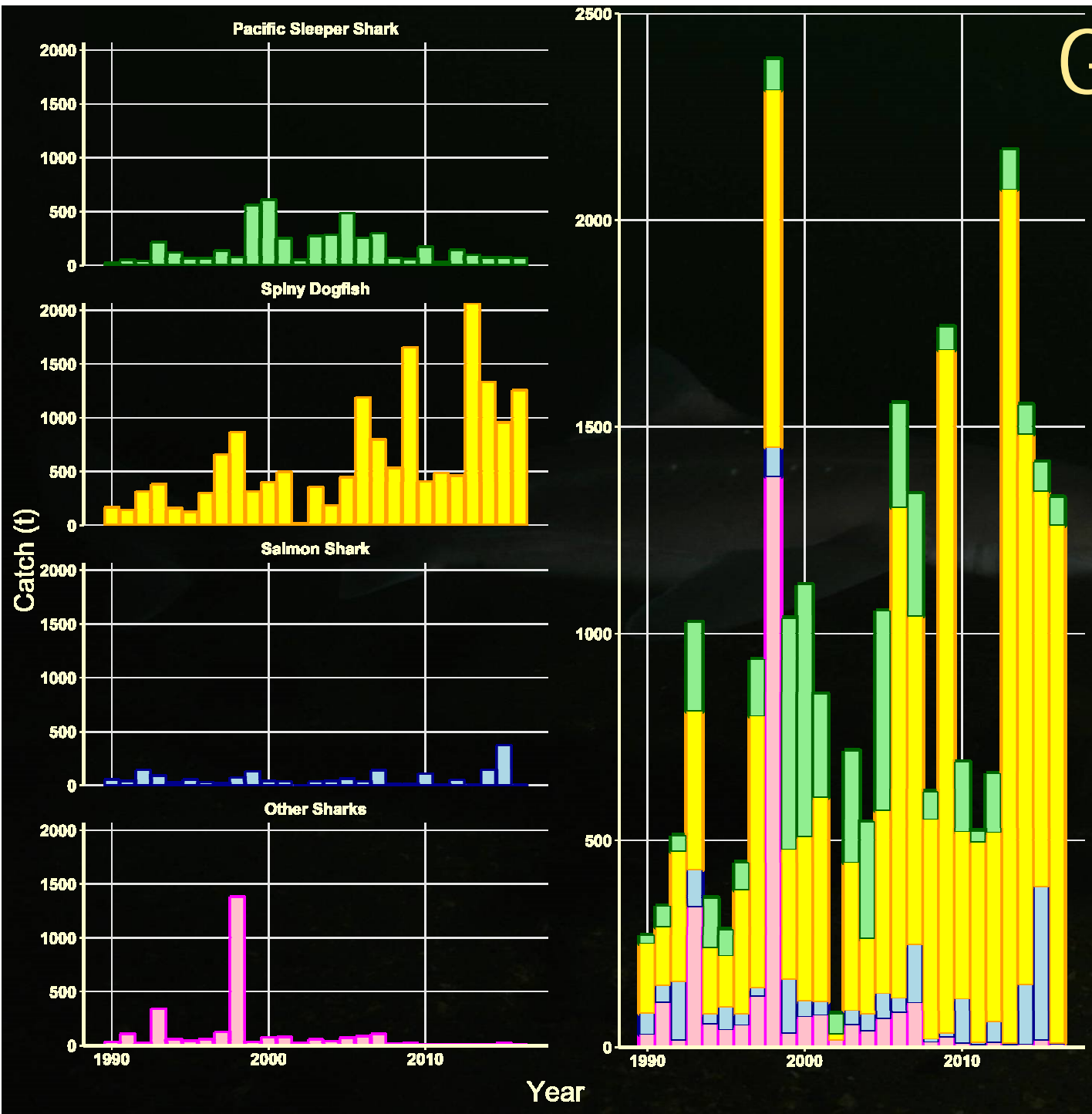
Shark Complex 2017 and 2018 recommendations



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	Spiny Dogfish	Pacific Sleeper Shark	Salmon Shark	Other/Unid Sharks	Total Sharks
Tier	6*	6	6	6	
M	0.097	UNK	0.18	UNK	
RE Biomass	56,181	NA	NA	NA	
Avg Catch	NA	312	70	188	
ABC	4,087	234	52	141	4,514
OFL	5,450	312	70	188	6,020

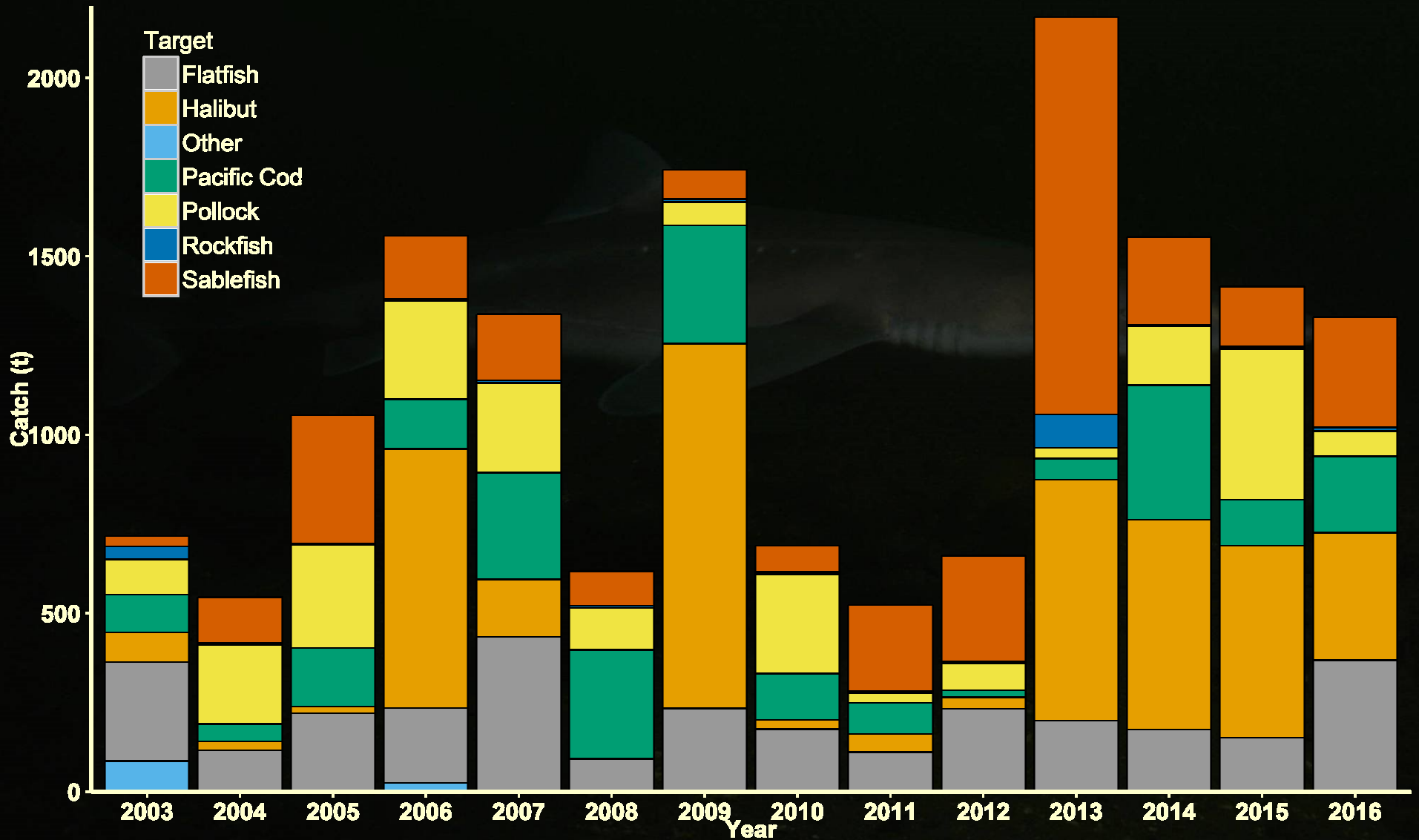
GOA Shark Complex Catch



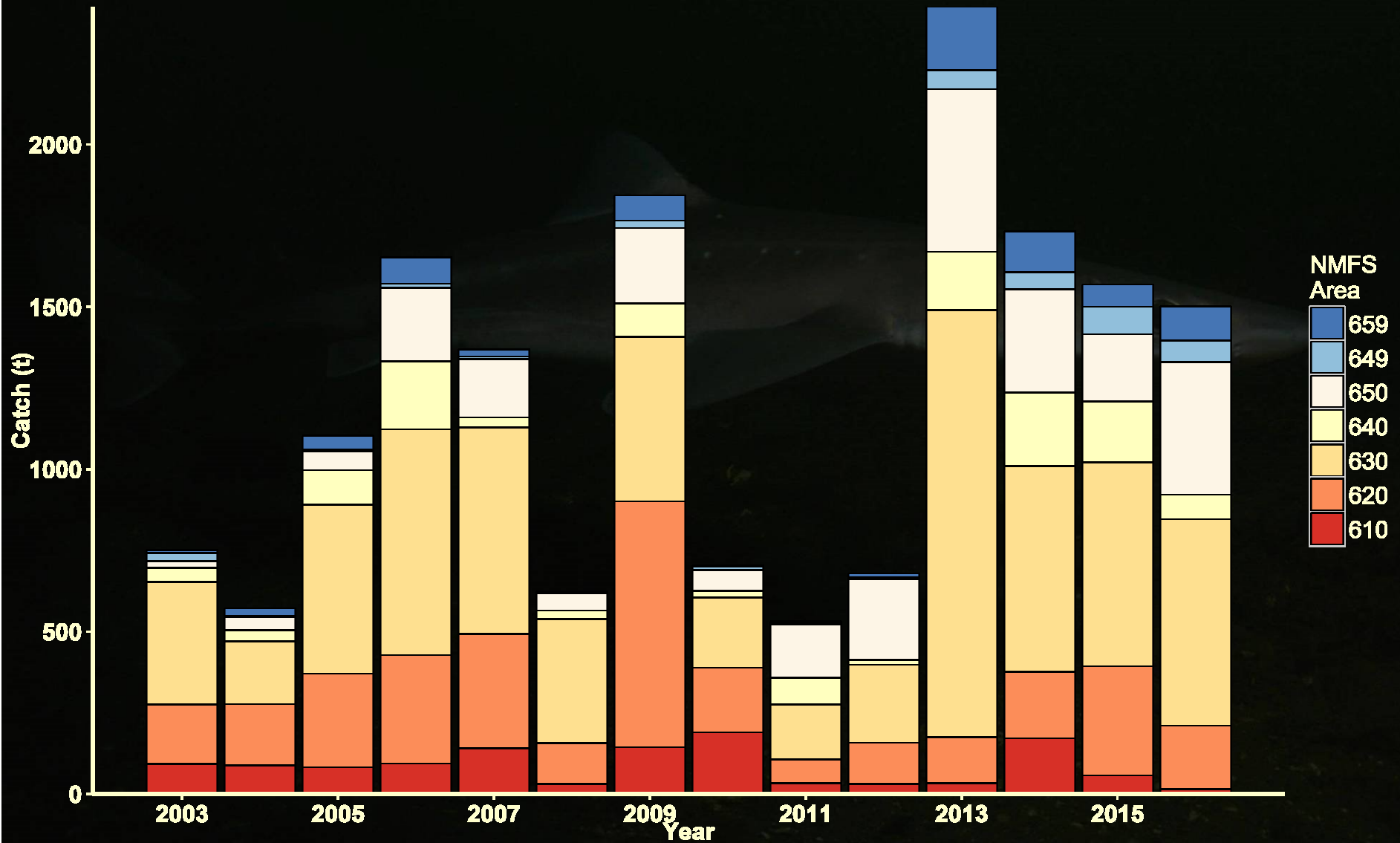
GOA Shark Complex Catch



Catch by Target Group



Catch by area



PT/SSC Comments

- Major comments (paraphrased):
 - Include Tier 6 alternatives in the next assessment
 - Average catch with CI
 - Maximum catch
 - Median catch
 - Continue to explore means to estimate biomass in INSD waters, so catch in 649/659 can be incorporated into the assessment
 - Continue working on estimating catchability
 - Incorporate shared process error into random effects



Research and Future Directions

- Catch by numbers
 - Avg wt concerns
 - Hard/impossible to weigh
 - Drop offs
 - Unidentified or rare species....no weight data
 - Observations with numbers but not weight
 - Not in CAS!!!



Research and Future Directions

- Catch by numbers
 - AKRO has programmers working on it
 - Estimating catch by numbers for all sharks
 - Should be available for 2017 assessment cycle



Research and Future Directions

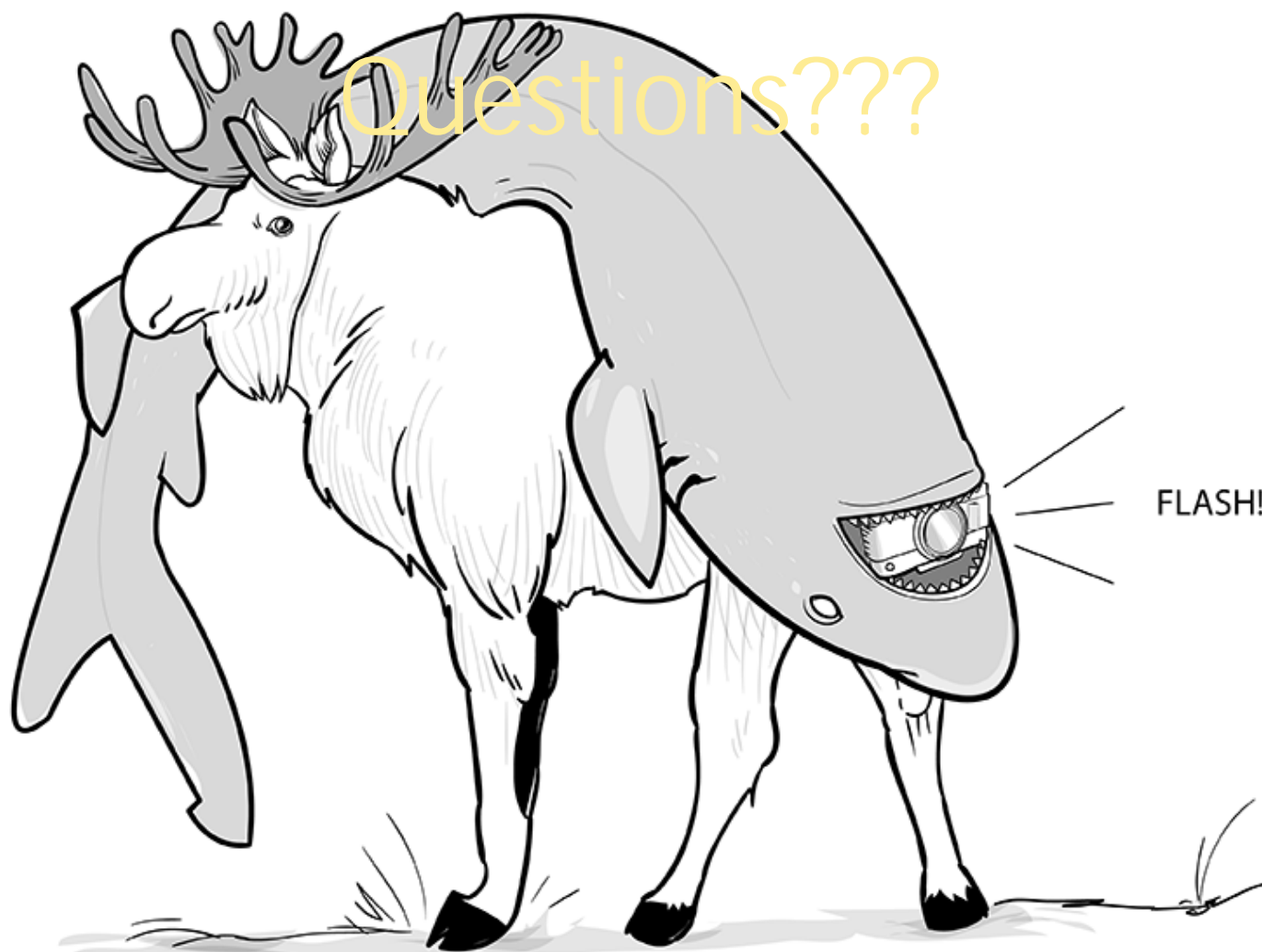
- Catch by numbers
- Request to PT:
 - “The Team recommends the analyst continue with efforts to estimate catch by numbers and examine the impact of potentially incorrect average weights”



Research and Future Directions

- Catch by numbers
- Pacific Sleeper Shark
 - Ageing, genetics
 - West coast data?
- Spiny dogfish
 - Biomass model, Ageing, Migration, Catchability





a shark riding a moose taking pictures of nature