
Pelagic Longline

Catch Composition

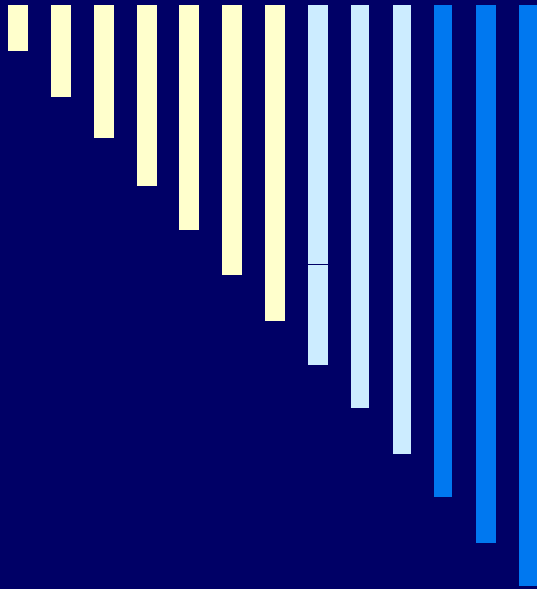


Image: www.fpir.noaa.gov/OBS/obs_american_samoa.html



Introduction

Data Collection Duties

1. Estimate effort for each gear deployment;
 2. **Identify every individual caught and assess catch condition and fate;**
 3. **Collect biological information on target and other identified species as requested;**
 4. Record all sightings and interactions with marine mammals and sea turtles;
 5. Record vessel and fishing gear characteristics.
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Objectives

- ❑ Describe the catch composition sampling process for pelagic longlining
- ❑ Describe 2 situations when you can modify the standard catch composition sample
- ❑ List 3 pieces of information that must be collected from every animal caught
- ❑ List 3 types of gear needed on deck for catch composition sampling
- ❑ Demonstrate ability to complete the Catch Composition form



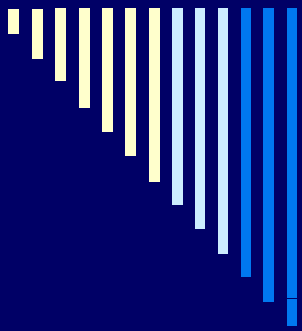
Catch Composition form

- 1 per set
 - For each fish, record
 - Species code (lowest taxonomic level)
 - Condition
 - Kept/return
-

Catch Composition - Pelagic Longline

Hook No.	Species name	Species code	Caught condition	Kept / return code	Damage code	Sex (M, F, I, U)	Type	Measurement	Type	Measurement	Type	Measurement	Type	Measurement	Tag / specimen / carcass no.	Photos	Comment
							Length 1		Length 2		Length 3		Weight				
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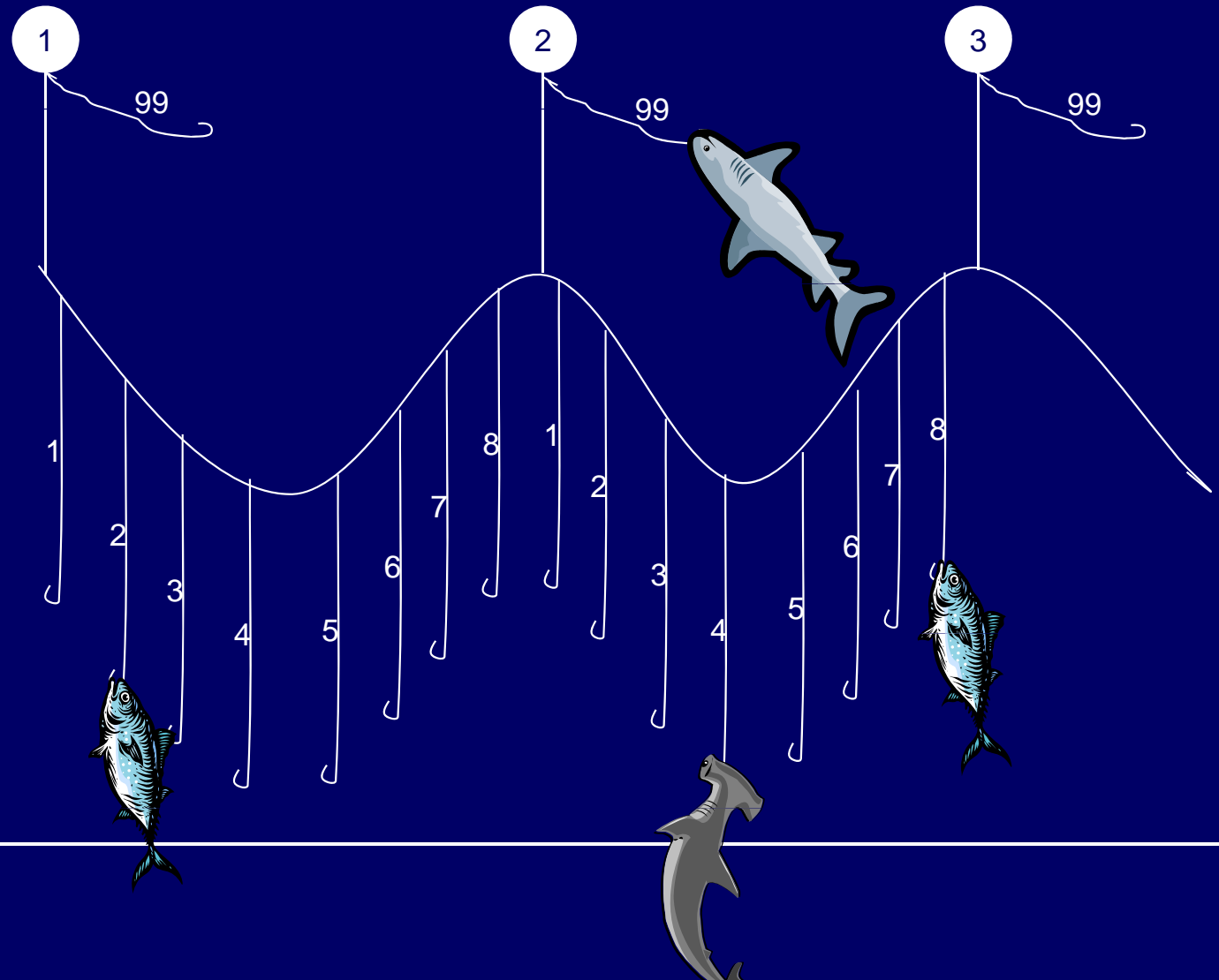
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Sex codes M Male F Female I Indeterminate U Unknown (not inspected)					



Catch Composition Form



Hook number assigned based on direction of gear deployment



Catch Composition - Pelagic Longline

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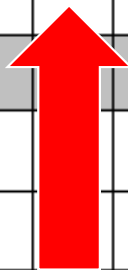
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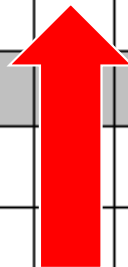
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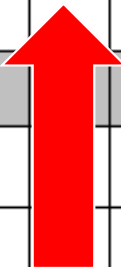


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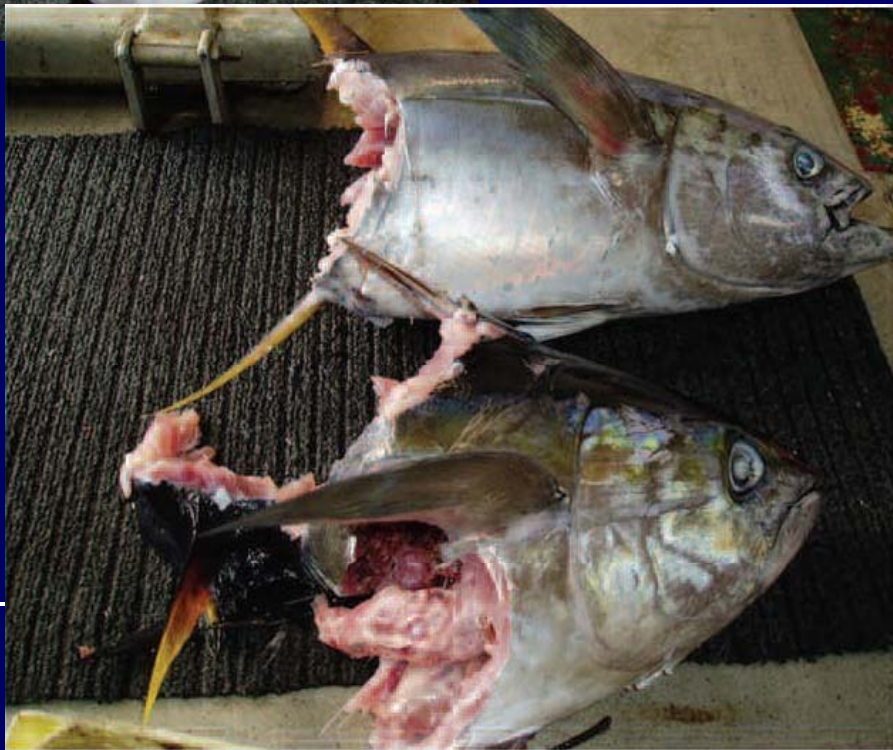
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Damage – **M**arine mammal (usu. toothed whale)

- often only head remains
- Widely spaced tooth punctures
- Often on multiple fish
- Jagged bite edges



Damage – Cookie cutter



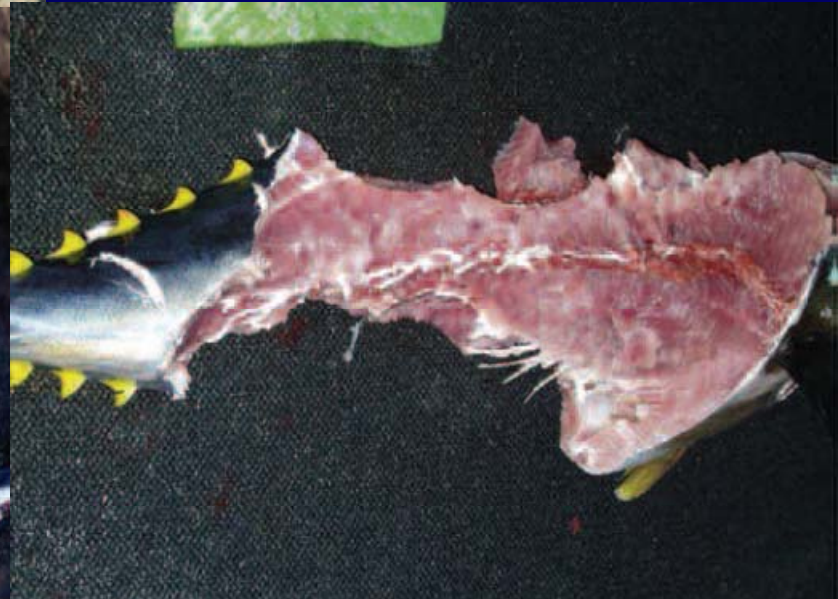
- circular / oval – clean edges



Damage – other Shark



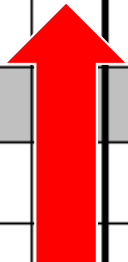
- Large bites; few long strips of tissues
- Gouge marks from individual teeth – look more like lacerations
- Frequently multiple bites



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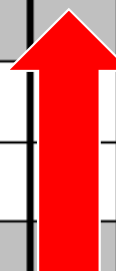


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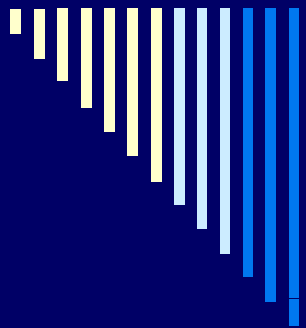
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Straight

vs.

Curved
lengths



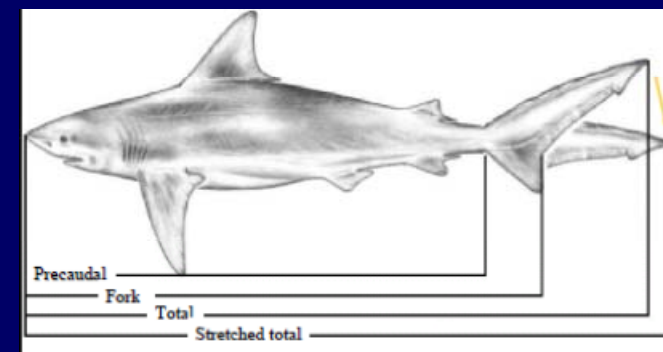
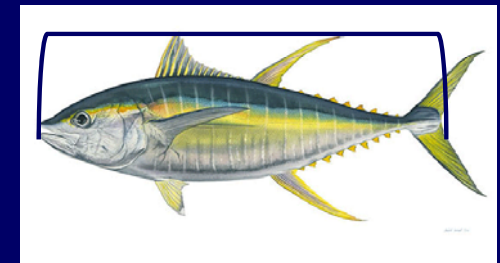
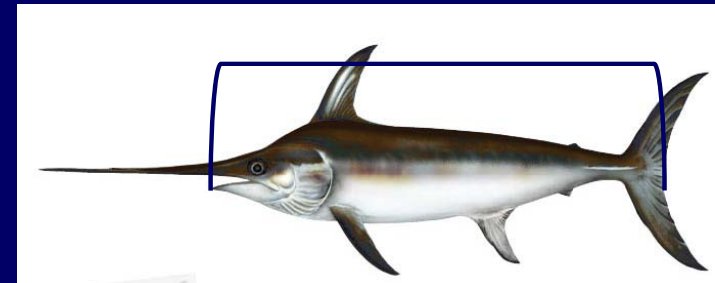
48 cm



53 cm

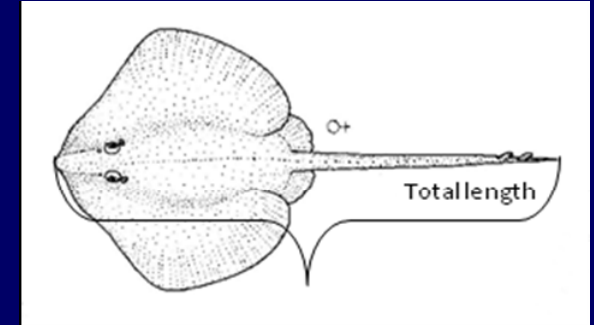
Length Rule of Thumb (primary measurements)

- ❑ Swordfish and billfish – lower jaw to fork length, curved (type 05C)
- ❑ Tunas & most other fish – straight fork length (type 01S)
- ❑ Sharks – stretched total length (type 13S) or fork length (type 01S)



Length Rule of Thumb (primary measurements)

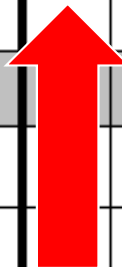
- Rays – total length (type 02S)
- suborder Myliobatoidei - disc length to pelvic fin (type 14S)



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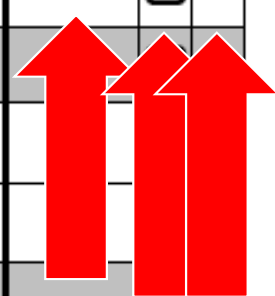
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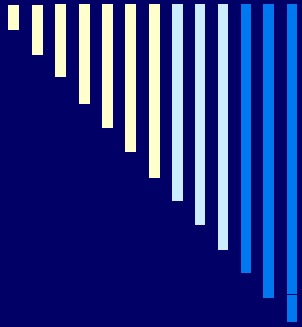
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Catch composition – sampling exceptions

Issue	Alternative
Too many fish to keep up	Reduce number of sexed lengths
Rough seas / seasick	Cease measurements but still try to watch
Hunger / toilet	Select a random subsample



Catch Composition Form

- ❑ Questions on catch composition sampling?
 - ❑ Practice exercise
 - ❑ Groups of 2
 - ❑ Same vessel, observer, tripID, set # used in Set & Haul Information Exercise
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Catch Composition - Pelagic Longline

Observer code Y2473	Vessel code 00555	Trip ID 347	Set No. 32
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							Length 1		Length 2		Length 3		Weight				
1	<i>albacore</i>	ALB	A1	K		M	01S	80								<input type="checkbox"/>	
2	<i>blue shark</i>	BSH	U	K		F	01S	67								<input type="checkbox"/>	
3	<i>bigeye</i>	BET	A2	K	C	F	01S	73								<input type="checkbox"/>	
4	<i>pelagic stingray</i>	PLS	U	X		F	11S	25								<input type="checkbox"/>	
5	<i>albacore</i>	ALB	A2	K	S	M	01S	92								<input type="checkbox"/>	
6	<i>common thresher</i>	ALV	A1	F		F	01S	79	02S	141						<input checked="" type="checkbox"/>	
7	<i>yellowfin</i>	YFT	X	K		M	01S	80								<input checked="" type="checkbox"/>	
8	<i>wahoo</i>	WAF	X	X		U	01S	60								<input checked="" type="checkbox"/>	
9	<i>Blue marlin</i>	BUM	A2	A2	NI	U	04E	250								<input type="checkbox"/>	1
10	<i>albacore</i>	ALB	A2	K		F	01S	128								<input type="checkbox"/>	

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							Length 1		Length 2		Length 3		Weight				
11	Blue shark	BSH	A2	A2		M	01S	49								<input type="checkbox"/>	
12	dolphinfish	DOL	A2	A2	U	M	01S	77								<input type="checkbox"/>	
13	skipjack	SKJ	A2	K		I	01S	103								<input type="checkbox"/>	
14	wahoo	WAH	A2	K		U	01S	52								<input type="checkbox"/>	
15	Blue shark	BSH	A1	K		M	01S	63								<input type="checkbox"/>	
16	skipjack	SKJ	A1	K		U	01S	78								<input type="checkbox"/>	
17	shortfin mako	SMA	X	U		U	01S	128								<input type="checkbox"/>	
18	Seranidae, Unid	BSX	X	X		M	02S	36								<input checked="" type="checkbox"/>	
19	swordfish	SWO	A1	K		F	05S	96								<input type="checkbox"/>	
20	Blue shark	BSH	A1	K		M	01S	45								<input type="checkbox"/>	

Comments (reference by number in comments box):

1 - Fish released before landing. Estimated lower jaw to fork length at 2.5 meters



Summary

- Describe the catch composition sampling process for pelagic longlining
 - List 3 pieces of information that must be collected from every animal caught
 - when you can modify the standard catch composition sampling protocol and describe the modification for each
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Summary

- What sort of equipment do you think you will need for catch composition sampling on pelagic longline vessels?
 - Foul weather gear
 - Clip board & deck sheets
 - Pencils
 - Measuring tape
 - Tally (thumb) counters
-



References

- ❑ Brogan, D., S. Fukofuka, and P. Sharples. 2006. Longline Observer Guide. Secretariat of the Pacific Community Oceanic Fisheries Programme, Noumea, New Caledonia.
 - ❑ Chapman, L., P. Sharples, D. Brogan, A. Desurmont, S. Beverly, and W. Sokimi. 2006. Marine species identification manual for horizontal longline fishermen. Secretariat of the Pacific Community, New Caledonia.
 - ❑ NMFS. 2008a. American Samoa Observer Program Manual. Pacific Islands Regional Office, Sustainable Fisheries Division
 - ❑ PIRO. 2009. Hawaii Longline Observer Program Observer Field Manual. Pacific Islands Regional Office, NMFS, Honolulu, HI.
 - ❑ Southeast Fisheries Science Center. 2007. Pelagic Observer Program - Observer Manual. Pelagic Observer Program, Miami, FL.
 - ❑ SPC. 2007. SPC/FFA Scientific Observer forms. Secretariat of the Pacific Community and Forum Fisheries Agency.
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