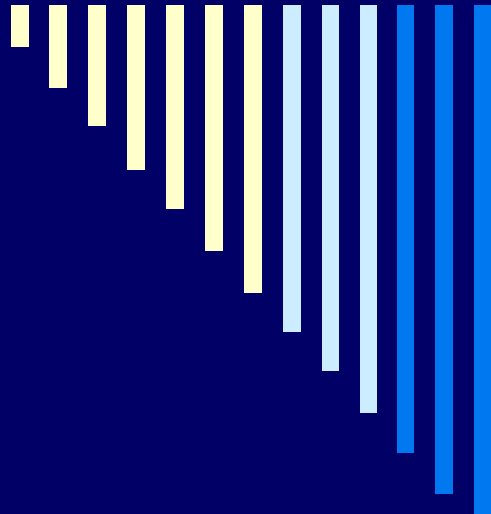

Demersal Longline

Fishing Procedures & Gear

INSERT presenter name here



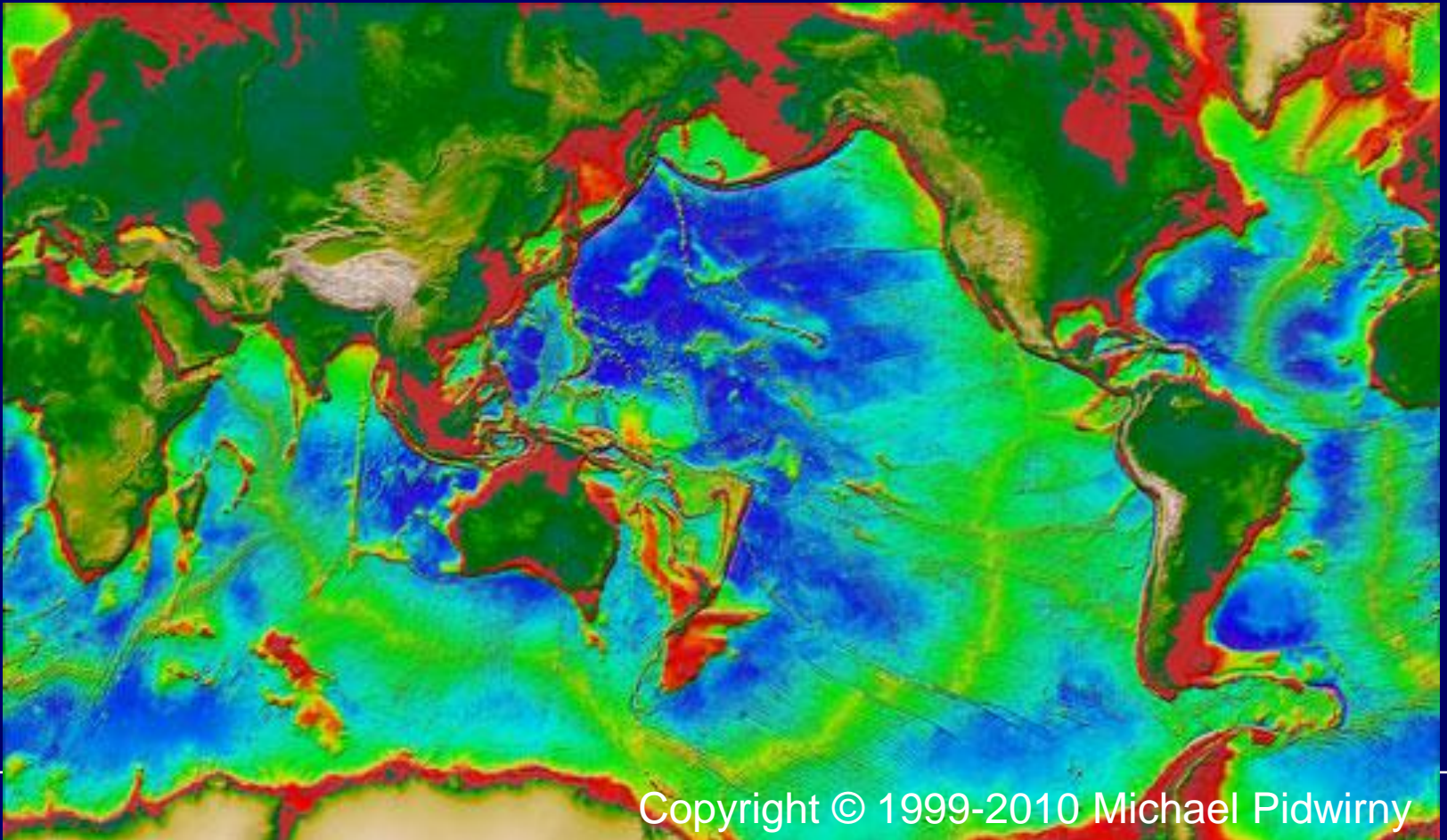
<http://www.worldwideseafoods.ca/fleet.html>



Trinidad longliner, 2005, FAO Fisheries Technical Paper. No. 482

Introduction

- Demersal longlining is global



Copyright © 1999-2010 Michael Pidwirny

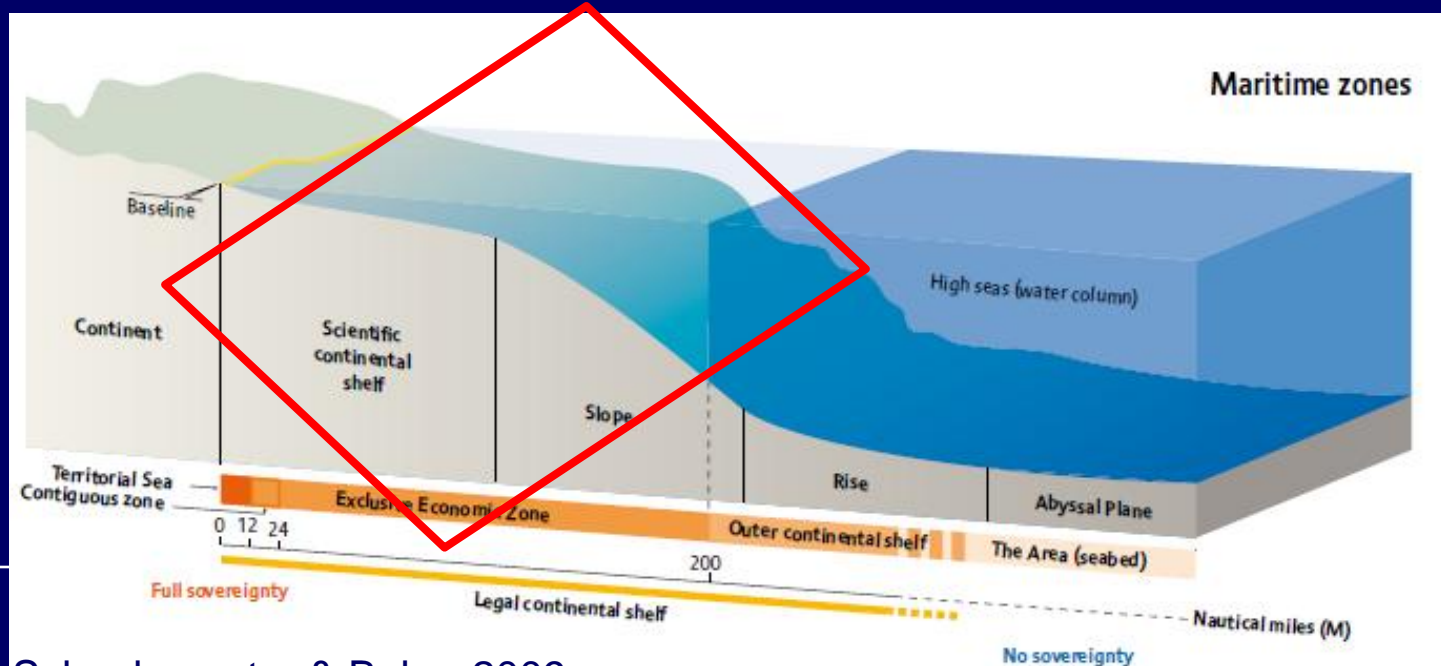


Objectives

- ❑ Define demersal longlining & describe 1 potential impact
 - ❑ Describe 3 components of demersal longline gear
 - ❑ List 2 types of specialized equipment you may encounter
 - ❑ Demonstrate ability to complete the Gear Description form
-

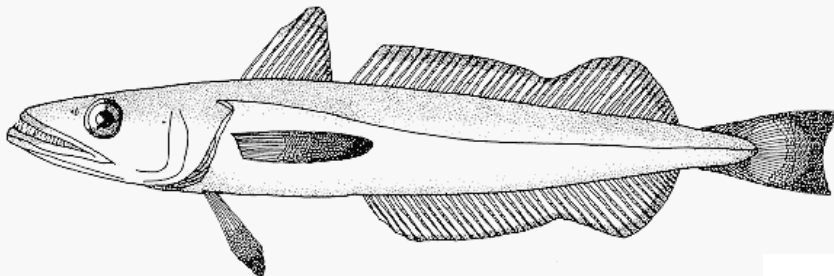
What is demersal longlining?

- Hook & line gear – uses bait to attract fish in on or near bottom
- Usually on continental shelf or slope



What is demersal longlining?

- Hook & line gear – uses bait to attract fish on or near bottom
- Usually on continental shelf & slope
- Primary targets: gadiiformes, sharks



Cohen et al. 1990; FAO via <http://www.fishbase.org/>



<http://hawaii.gov/dlnr/dar/sharks/offshore.html>



What is demersal longlining?

- Hook & line gear – uses bait to attract fish on or near bottom
- Usually on continental shelf & slope
- Primary targets: gadoids, sharks
- Bait = fish or squid depending on target



What is demersal longlining?

- Hook & line gear – uses bait to attract fish on or near bottom
- Usually on continental shelf & slope
- Primary targets: gadoids, sharks
- Bait = fish or squid depending on target
- Fishery impacts – bycatch of seabirds, sharks, coral



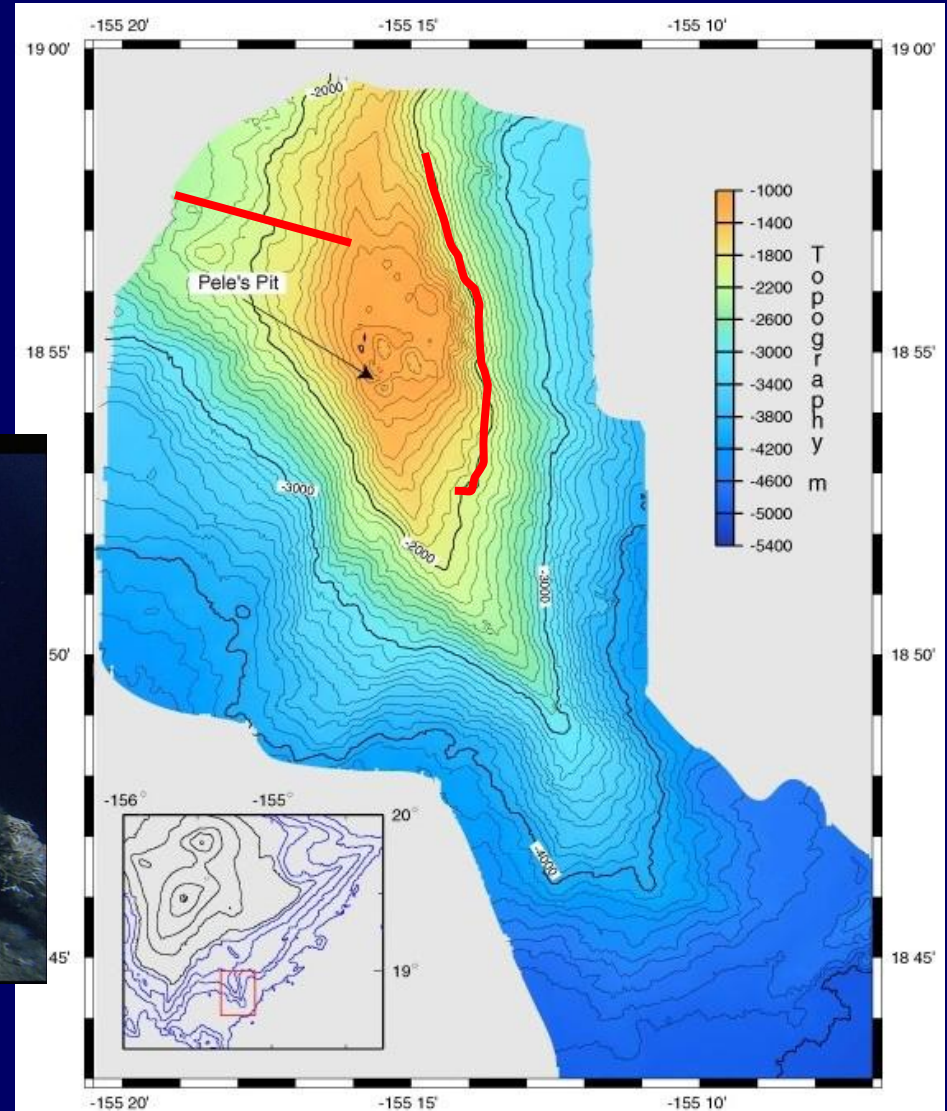


Data collection priorities

1. Estimate effort for each gear deployment;
 2. Identify every individual caught in subsample and estimate percent retained;
 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.**
-

How is gear fished?

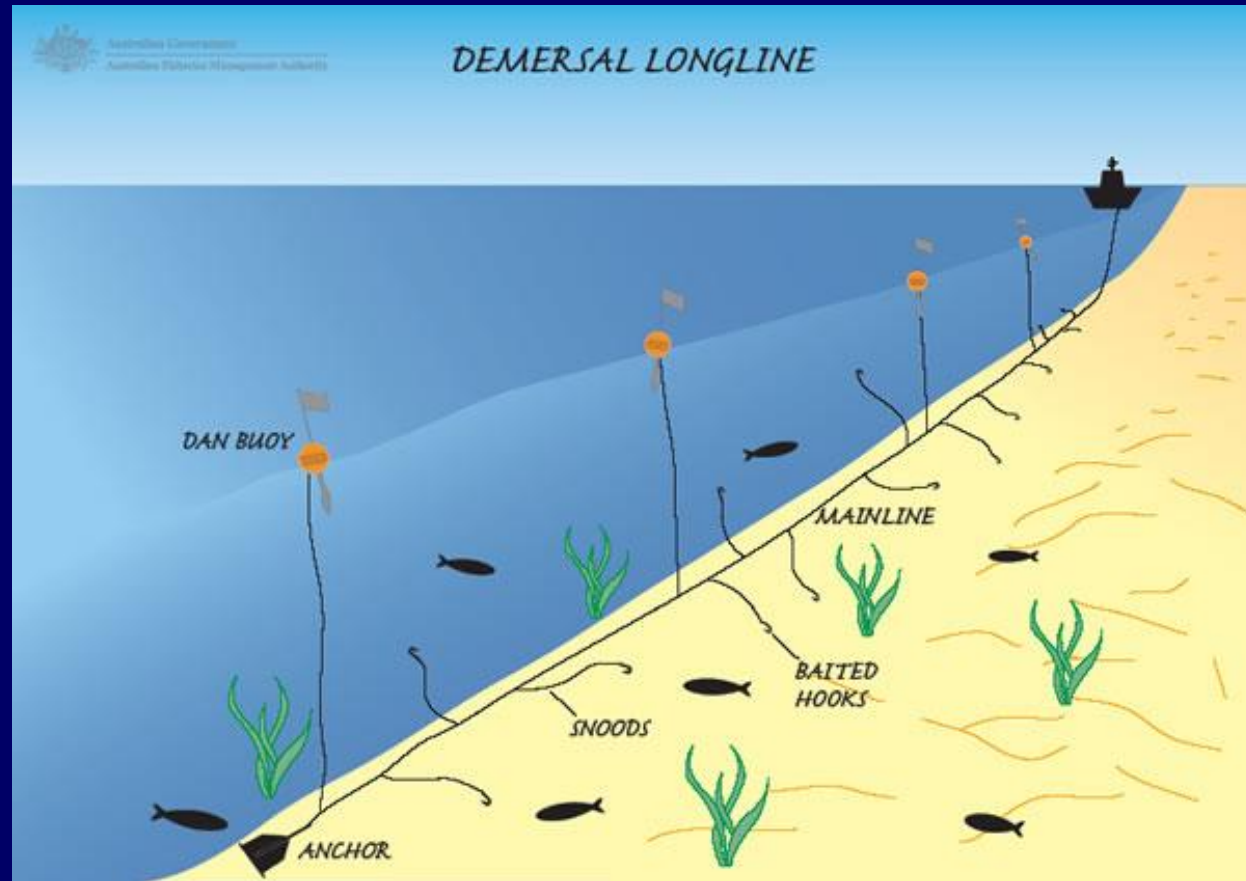
□ Strategies



http://flowergarden.noaa.gov/image_library/deepreefimages.html

How is gear fished?

- Strategies
- Deployment
(videos – 1 –
2 – 3)



How is gear fished?

- Strategies
- Deployment
- Retrieval



B. Richardson 2005 SEASWAP



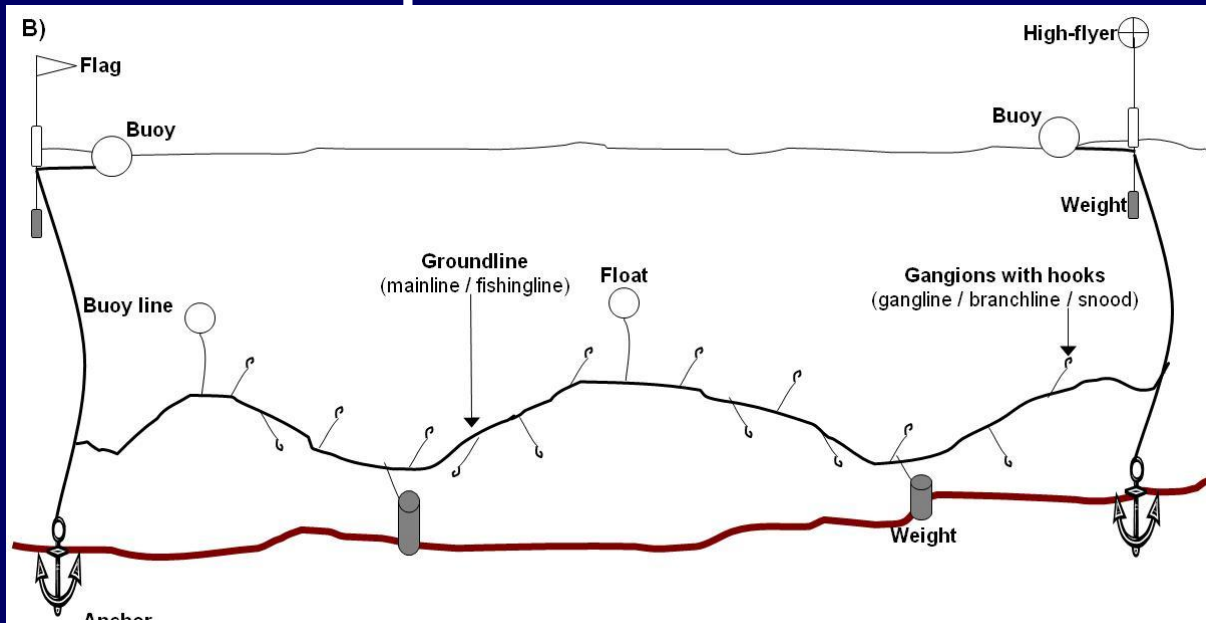
Andy Murch,
<http://sharkdiver.wordpress.com/>



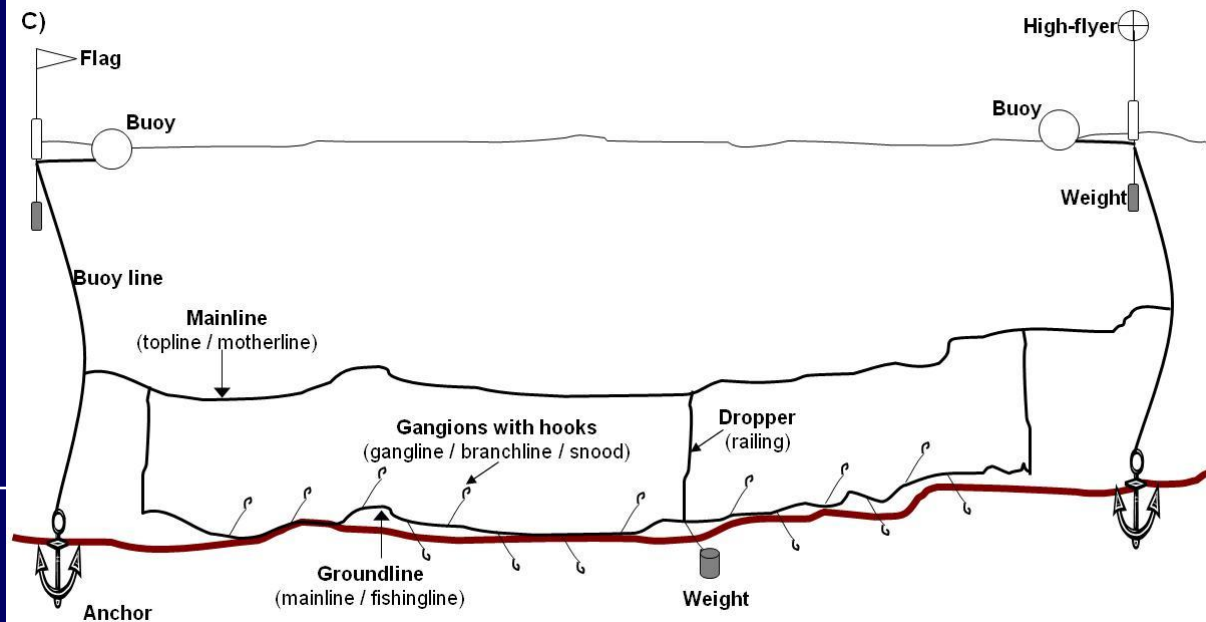
John Bennett -
<http://sanaspiring.wordpress.com>

Gear components - overview

Single line



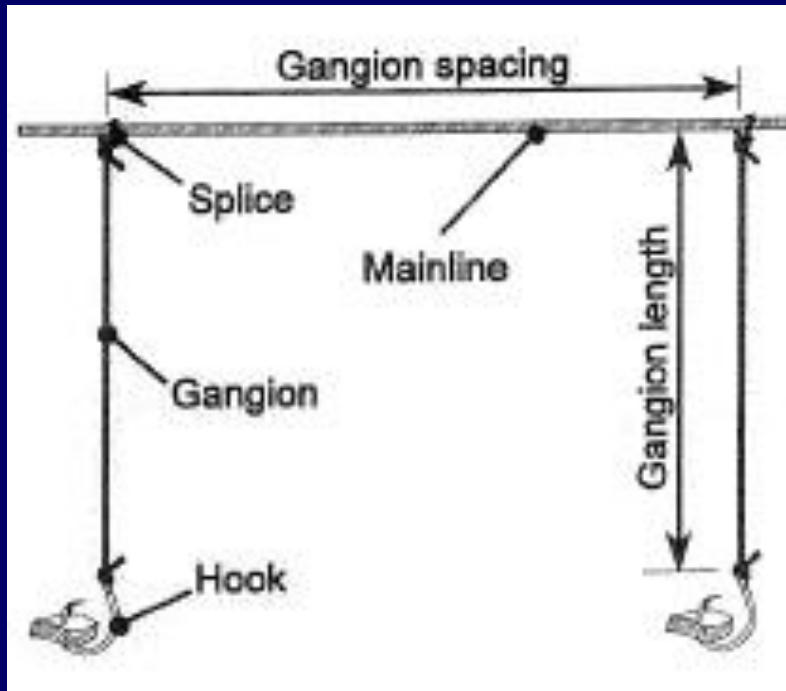
Double line



Gear components - groundline



Gear components - gangion



*Drawing modified from
Hanrahan et al. 1997*

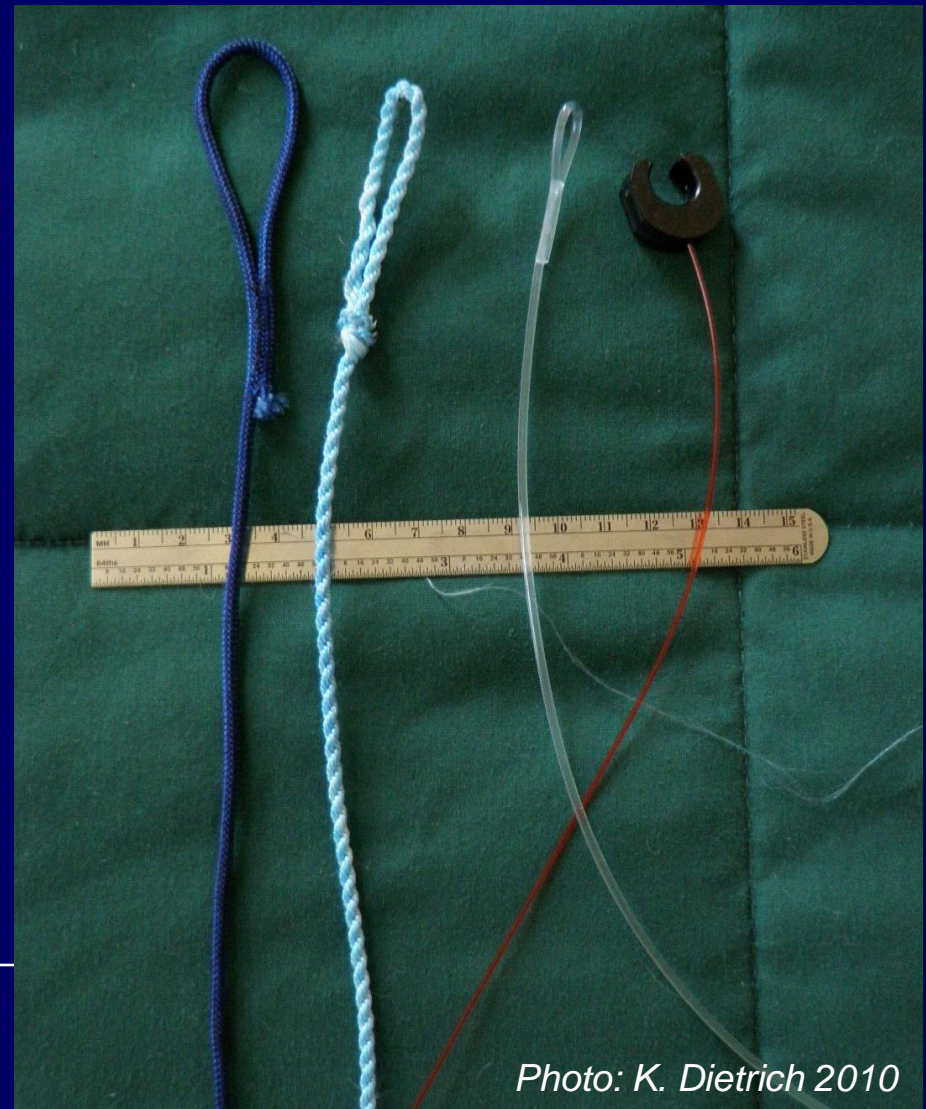
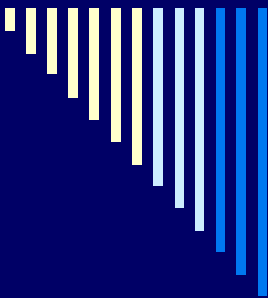
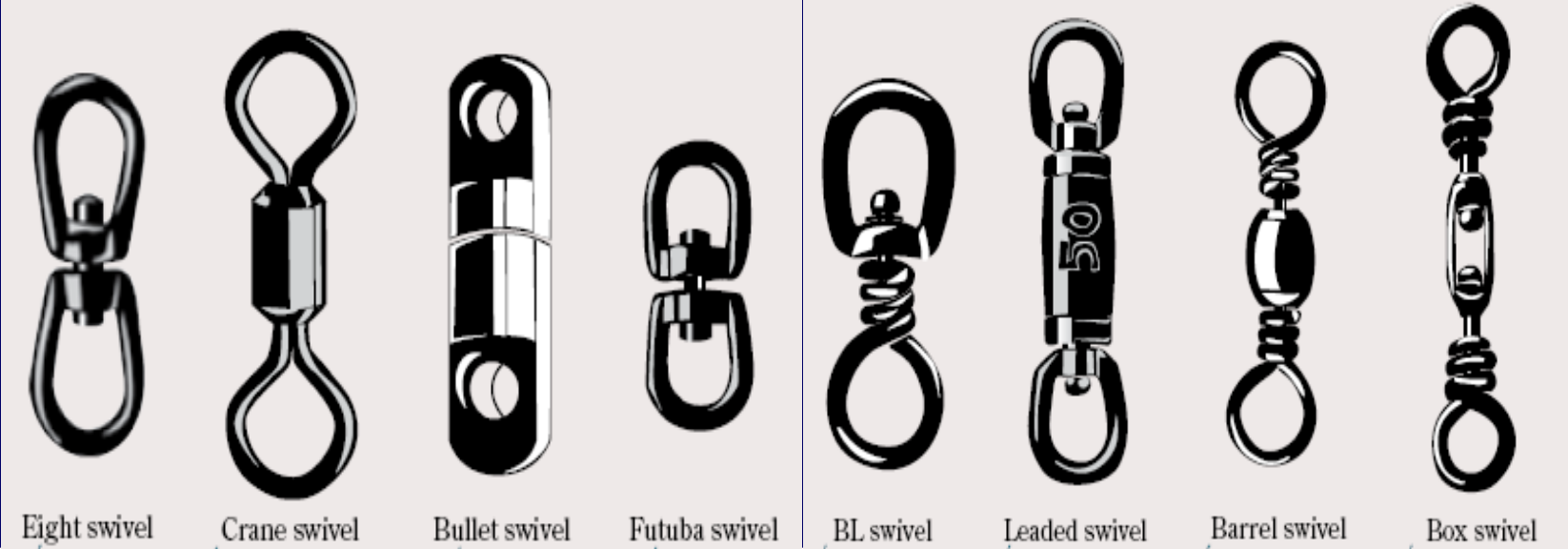


Photo: K. Dietrich 2010



Snap (clip; www.leadertec.com)



Eight swivel

Crane swivel

Bullet swivel

Futuba swivel

BL swivel

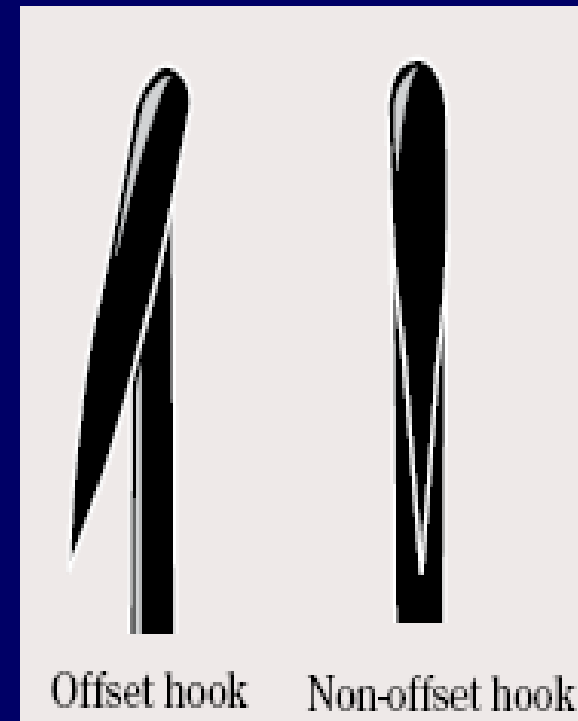
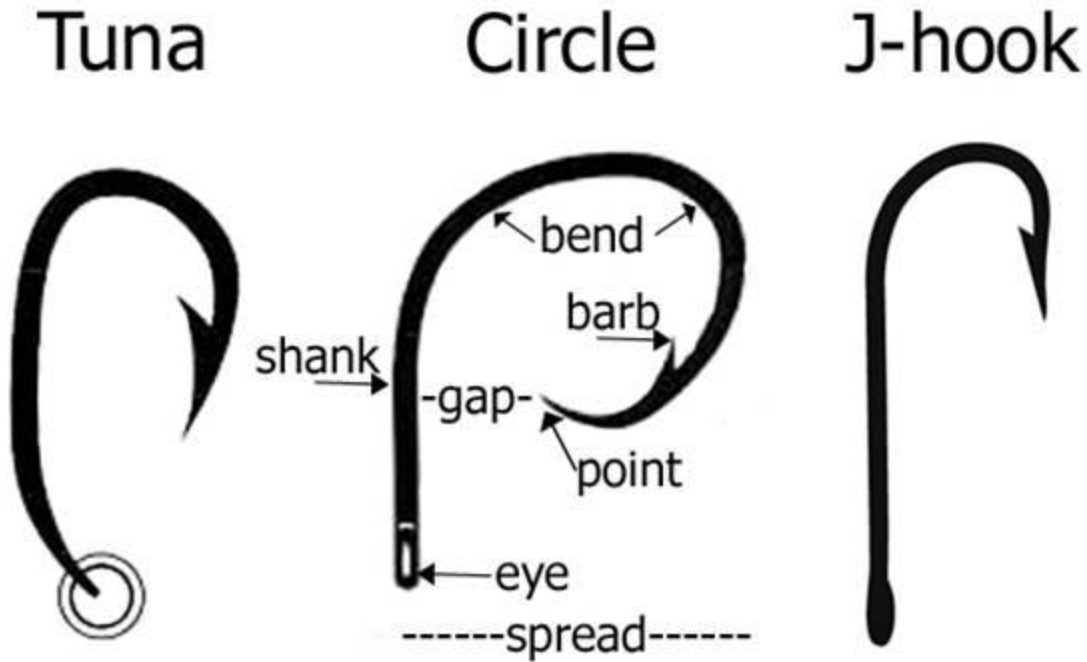
Leaded swivel

Barrel swivel

Box swivel

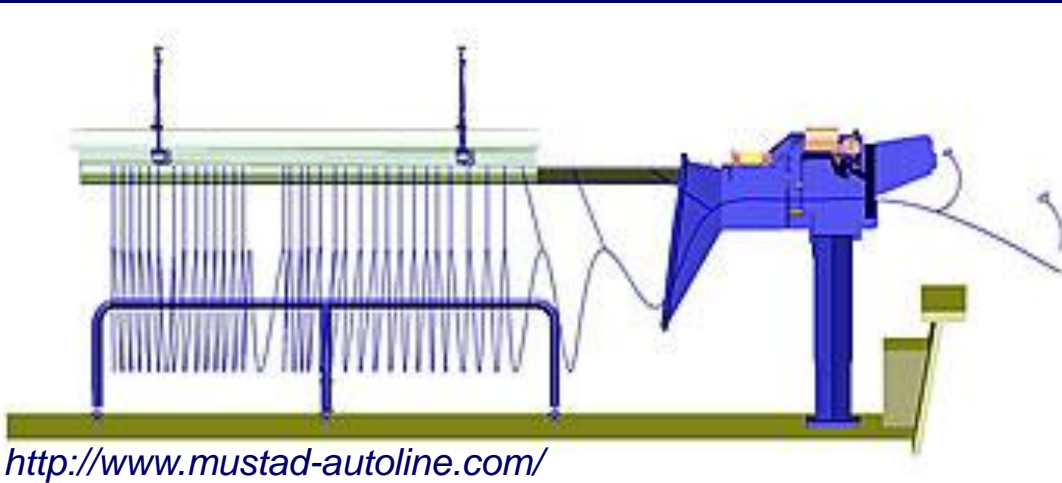
Swivels (Beverly 2009)

Gear components - hooks



Gear – setting devices

□ Autobiater – Autoline system



□ Setting tube

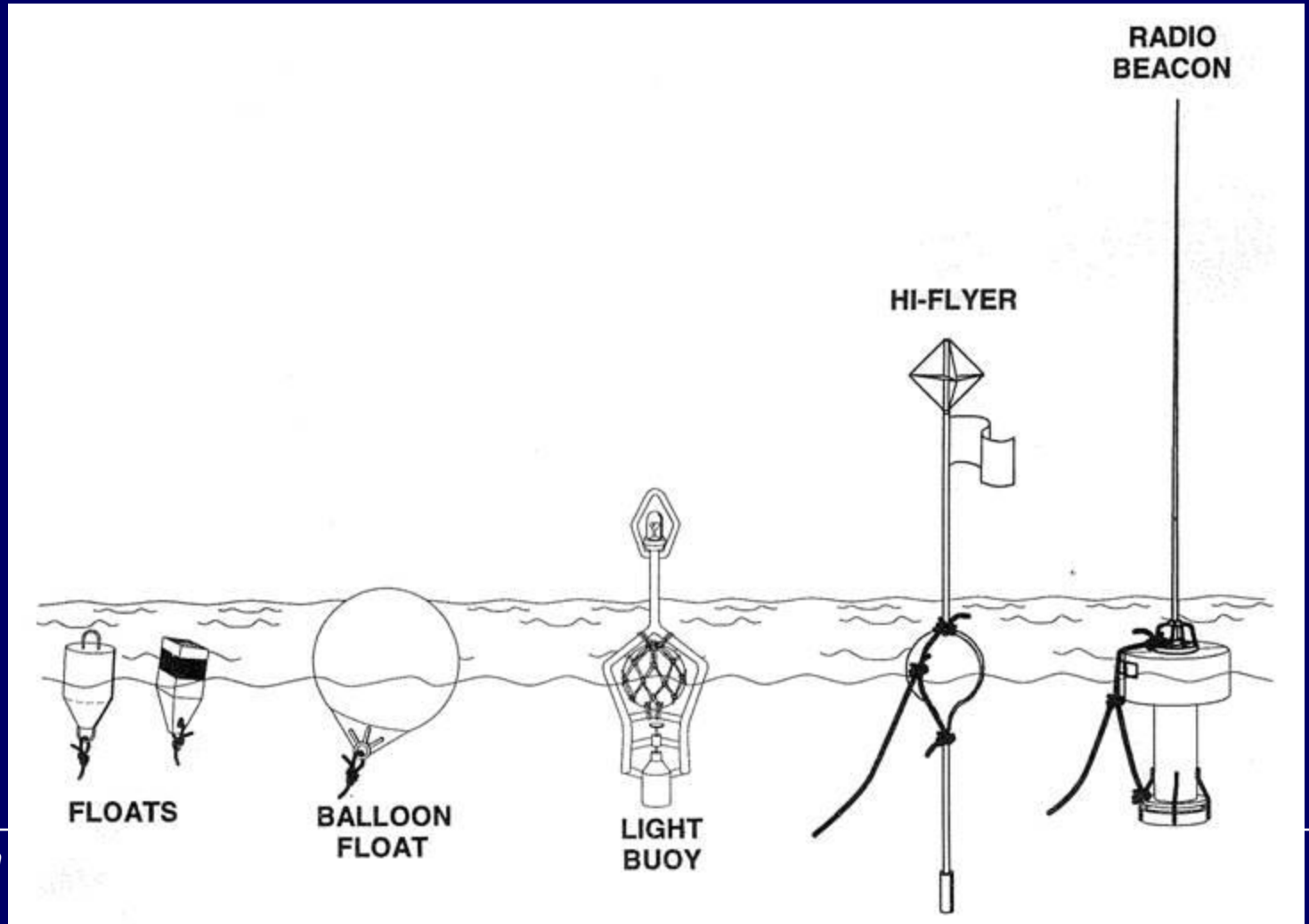


MARCO Circle Matic Baiter

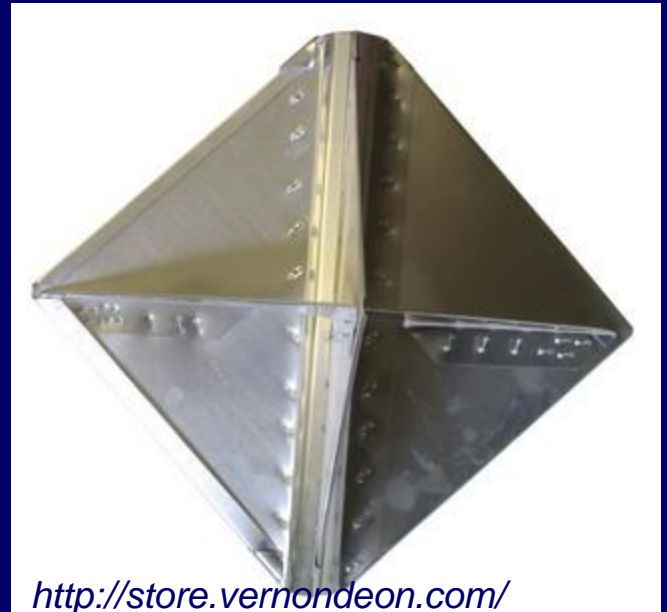
CLOSE ✕



Gear components – gear markers



*Drawing modified from
Hanrahan et al. 1997*



<http://store.vernondeon.com/>



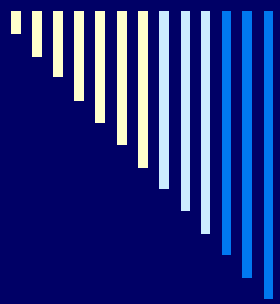
Concrete cylinders, Chilean longliner,
K. Dietrich 2010



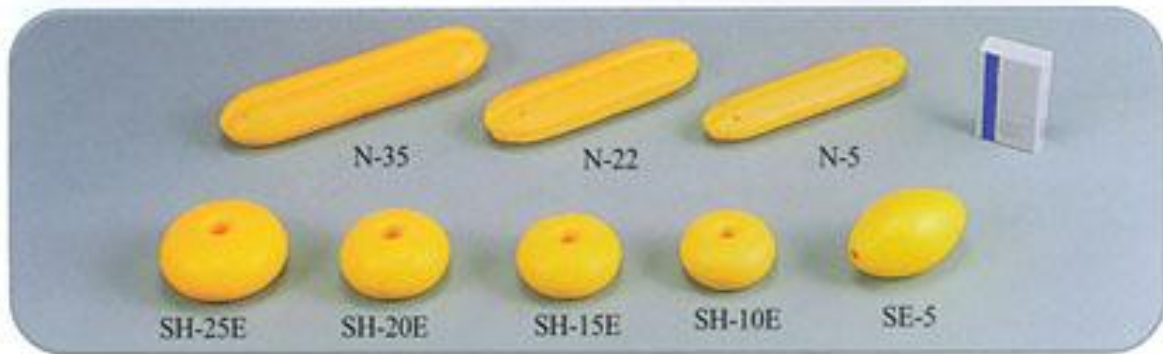
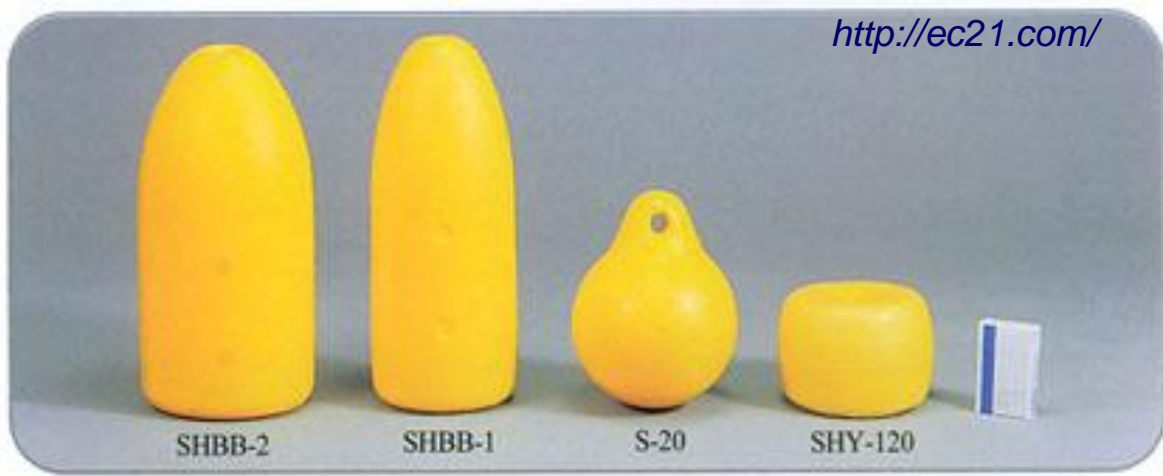
Lead sphere;
www.seamar.net



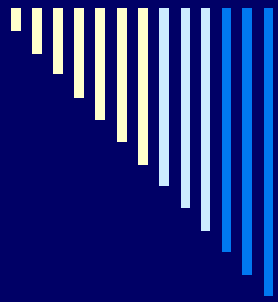
B. Richardson 2005



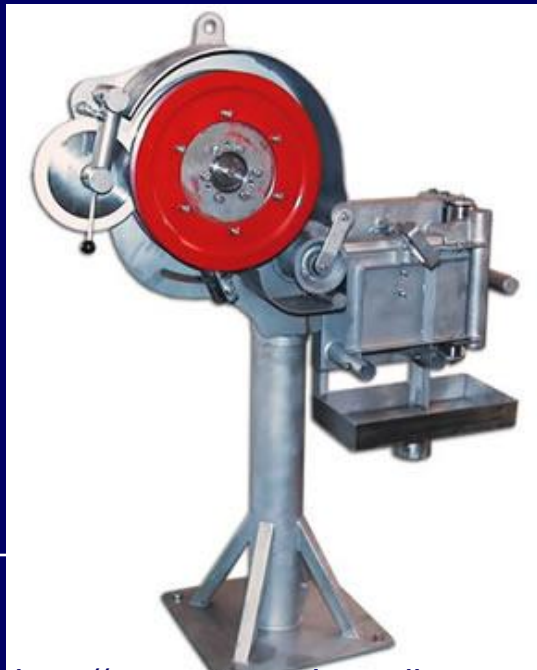
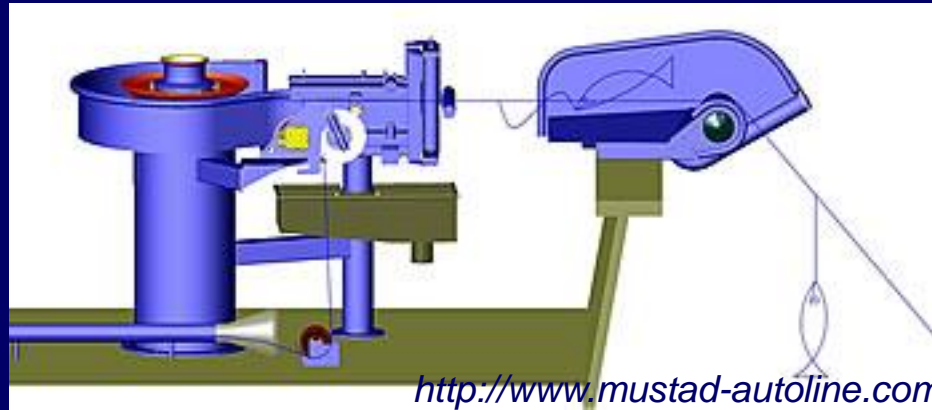
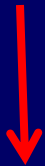
<http://ec21.com/>



Gear – hauling devices



□ Line hauler



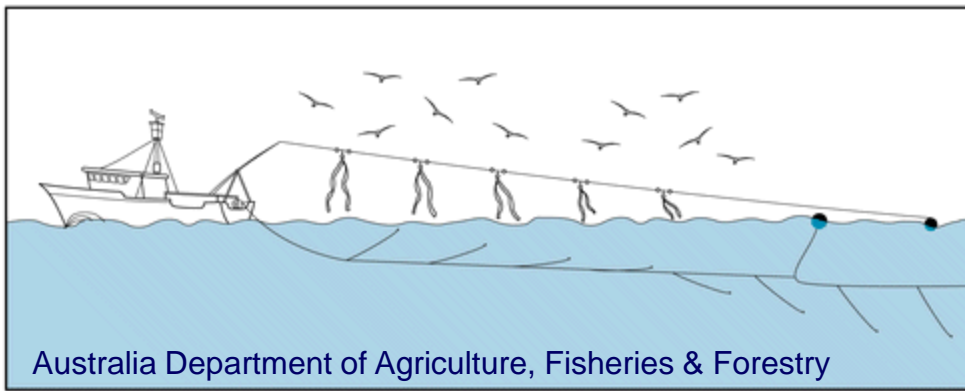
<http://www.mustad-autoline.com>

□ Groundline drum



<http://www.qmarine.com>

Gear – seabird mitigation



Australia Department of Agriculture, Fisheries & Forestry



Davit / tori pole

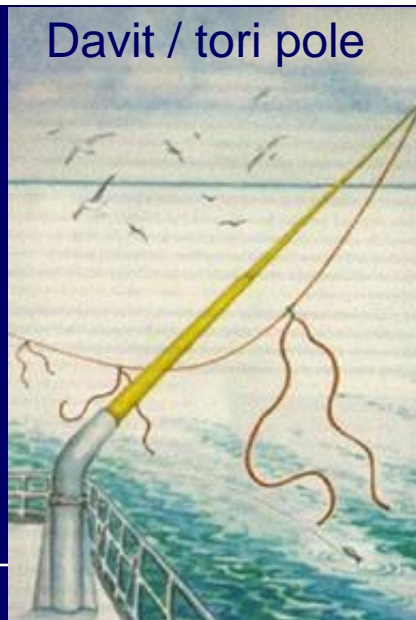
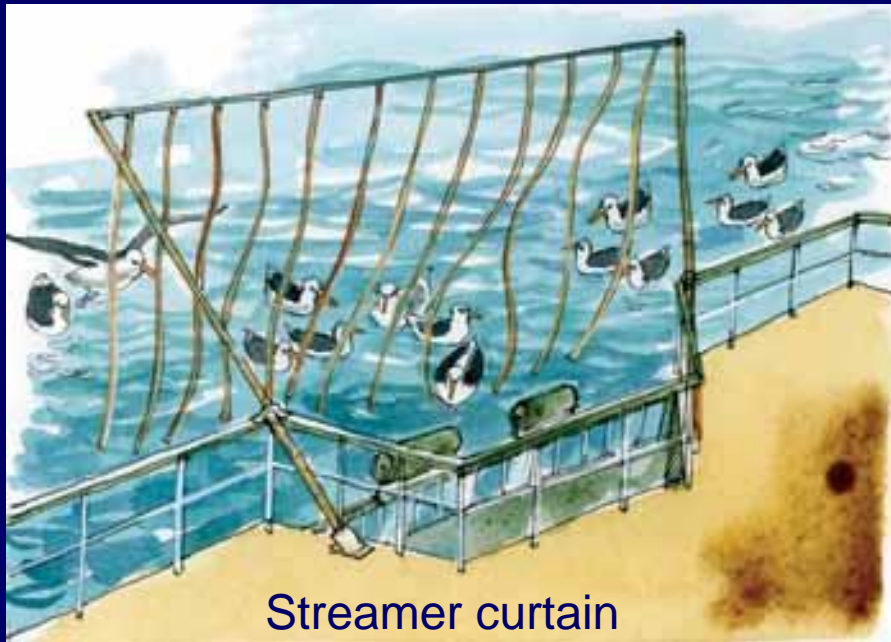


Photo: Washington Sea Grant

Gear – seabird mitigation



Gear Description Form

Gear Description - Demersal Longline

Observer code	Vessel code	Trip ID
---------------	-------------	---------

Lines	Type	Material	Diameter (mm)	Breaking strength (kg)	# strands	Color	Comments
Groundline	1						
Gangion	1						
Gangion	2						
Dropper	1						

Material Codes

- 1 Monofilament
- 2 Multifilament
- 3 Cotton
- 4 Steel wire
- 5 Other: _____

Color codes

- 1 White
- 2 Pink
- 3 Black
- 4 Green
- 5 Blue
- 6 Red
- 7 Clear
- 8 Orange
- 9 Yellow
- 10 Other
- 11 Multi-color

Hooks	Type	Manufacturer	Model/pattern	Size	Material	Offset
	1					
	2					
	3					

Model/pattern types



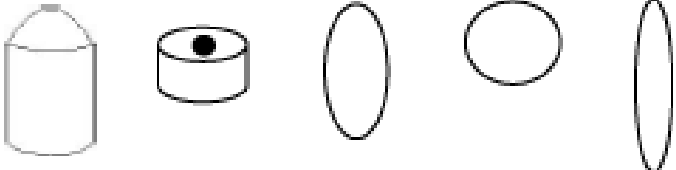
Gear Description Form

Floats

Type	Shape	Dimensions	Material
1			
2			
3			

Float shapes

Bullet
 Cylinder
 Oval
 Round
 Cigar
 Other
 (describe):



Weights

Type	Material	Weight (kg)
1		
2		
3		

Gear Deployment Location

Stem
 Stbd, distance from stern _____ m
 Port, distance from stern _____ m

Propeller up-wash
 Propeller down-wash



Gear Description Form

Other Equipment

	Y / N	Usage
Mainline hauler	Y / N	
Line shooter	Y / N	
Autobaiting machine	Y / N	
Setting tube	Y / N	
Weighing scales	Y / N	
Other:	Y / N	
Other:	Y / N	
Other:	Y / N	
Other:	Y / N	
Other:	Y / N	

Usage Codes

- 1 Used continuously during fishing
- 2 Used often during fishing
- 3 Used sometimes during fishing
- 4 Broken during this trip but used normally
- 5 Rarely used
- 6 Used only during transit
- 7 No longer used
- 8 Unknown



Gear Description Form

Seabird Mitigation

Describe all techniques and equipment to deter birds from hooks during the set (e.g. streamer lines) and haul (e.g. bird curtain). Include diagrams with measurements of streamer lines and other equipment as necessary.

Set

Haul



Gear Description Form

- Questions about gear or the gear form?
 - Practice exercise
 - Groups of 3-4
 - 10 minutes to complete Gear Description Form
 - Break – 10 minutes
 - Discuss exercise
-



Gear Description Form

- INSERT ANSWER SHEET [INCOMPLETE]
-



Summary

- Describe the difference between demersal & semi-pelagic longlining
 - What are the potential impacts of this fishery?
 - Describe 3 components of demersal longline gear
 - List 2 types of specialized equipment you may encounter on demersal longline vessels
-