

Marine Mammals Ashore

Quantifying and Interpreting Strandings



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Oregon Marine Mammal Stranding Network

Objectives

- Collect data from stranded marine mammals
 - first line of detection for marine animal and ocean health concerns; develop baseline information on disease prevalence
- Provide for the welfare of live stranded animals
 - ➔ reduce occurrences of harassment
 - ➔ disentanglement of pinnipeds and whales
- Minimize risks to public health and safety
- Report Level A Data to NMFS for inclusion in national database

Collecting Level A Data

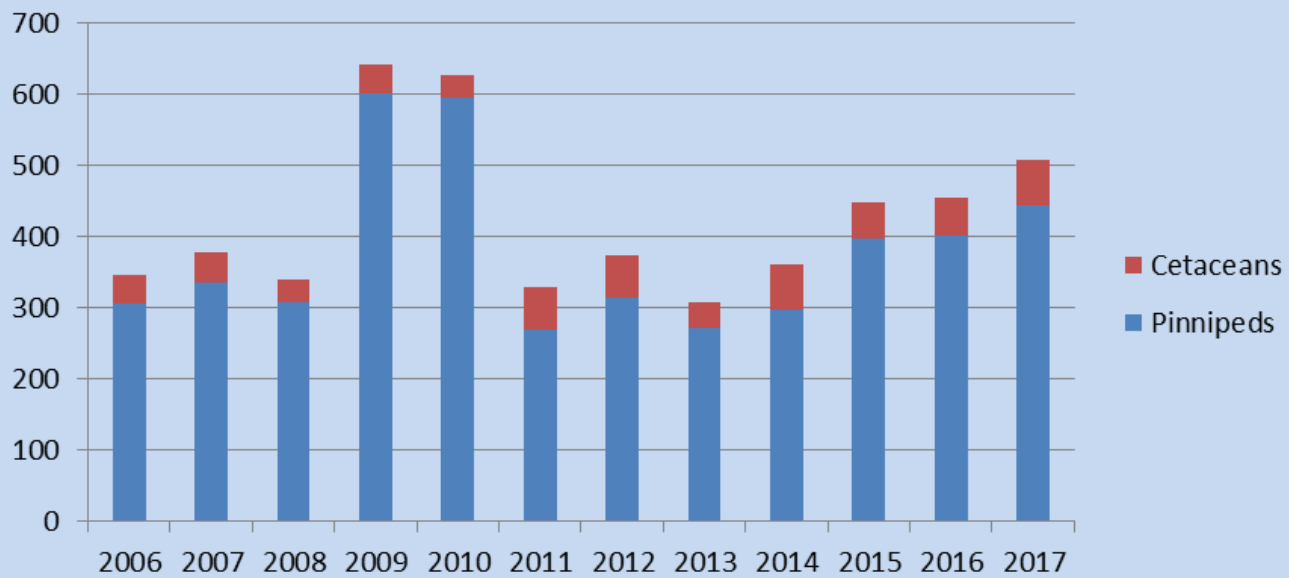
Level A Data are the basic types of information necessary to report a marine mammal stranding event to the National Marine Fisheries Service

They Include:

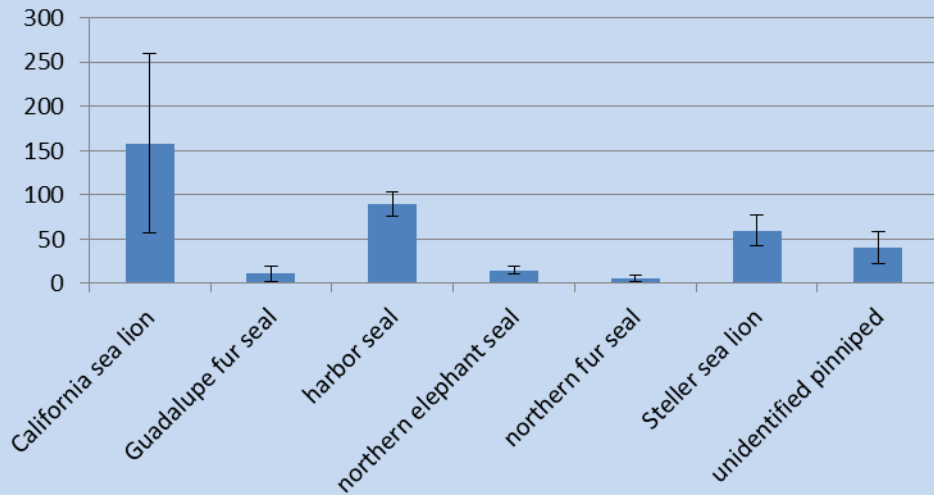
- Species Identification
- Location of Stranding (latitude/longitude)
- Age Class
- Sex
- Status of the animal - live, dead (fresh/decomposed)
- Description of any signs of human interaction (net entanglement, gunshot, ship strike)
- Presence / Description of tags or brands



Confirmed Strandings

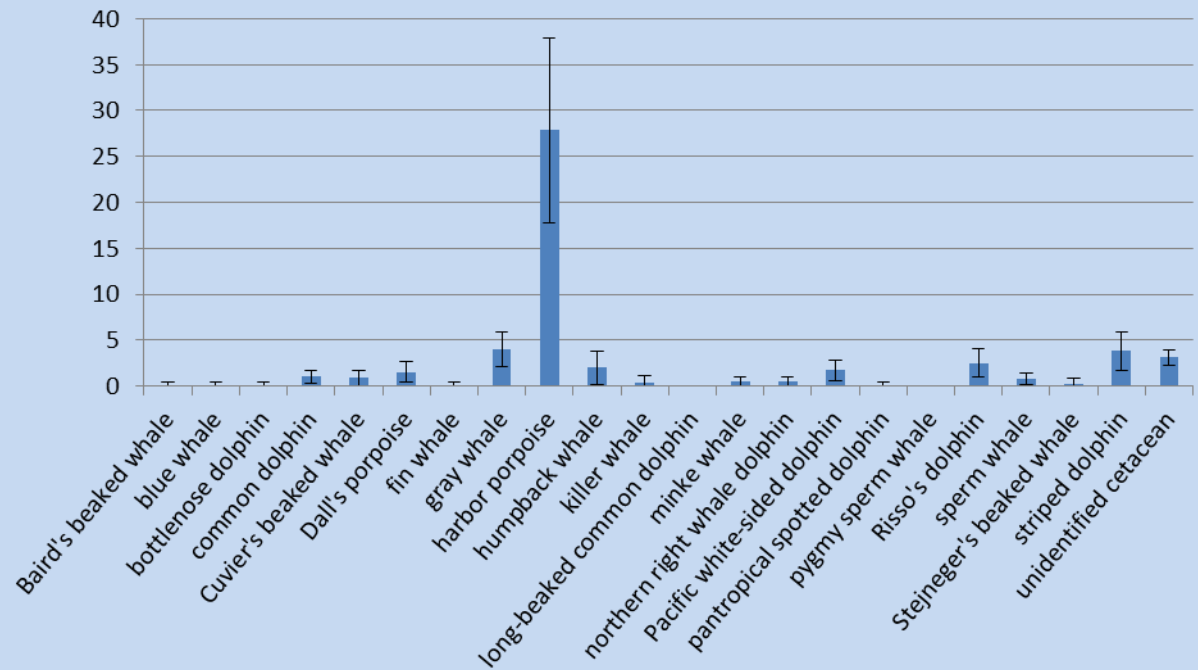


Annual Mean Number of Pinniped Strandings



2006-2017

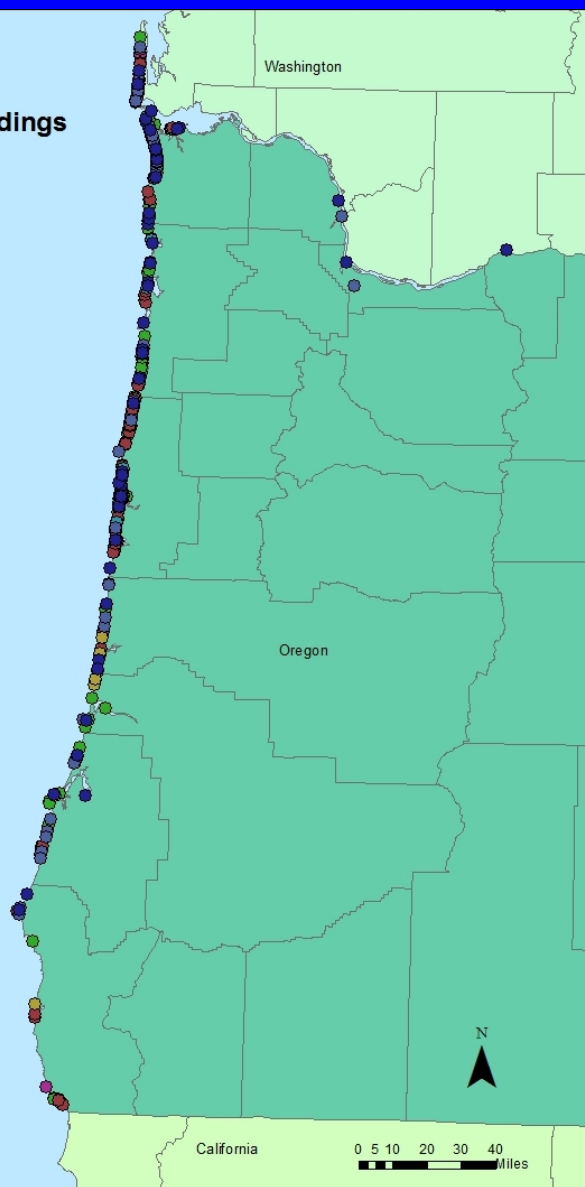
Annual Mean Number of Cetacean Strandings



2017 Pinniped Strandings n = 443

COMMONNAME

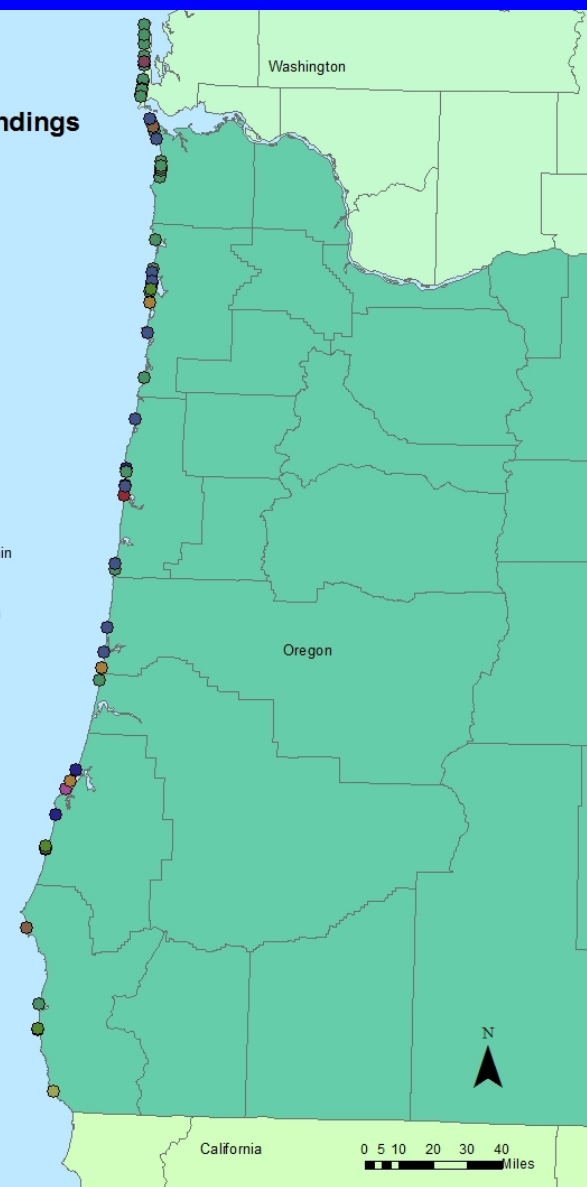
- California sea lion
- Guadalupe fur seal
- harbor seal
- northern elephant seal
- northern fur seal
- Steller sea lion
- unidentified pinniped



2017 Cetacean Strandings n = 64

COMMONNAME

- Dall's porpoise
- Pacific white-sided dolphin
- common dolphin
- gray whale
- harbor porpoise
- killer whale
- long-beaked common dolphin
- minke whale
- northern right whale dolphin
- pygmy sperm whale
- sperm whale
- striped dolphin
- unidentified cetacean



When Is a Marine Mammal Stranded?

When it's:

- Dead
- Alive and:
 - Can't get back to the water
 - Is critically injured or ill
 - Can't get back to its natural habitat



Sentinels of Ocean Health

- Our first line of detection for trends in marine mammal morbidity and mortality
- Performing surveillance of known and emerging pathogens
 - Developing baseline data on disease prevalence
- Documenting the toll of human interactions on marine mammals:
 - fishery takes, ship strikes, gunshot, debris entanglement



Working in close collaboration
with the OSU Veterinary
Diagnostic Laboratory

Pneumonia

- To date, pneumonia has been implicated in 233 mortalities, the most common pathology finding overall.
- Verminous (lung worm) and bacterial causes are most common.
- Disseminated protozoal infection (toxoplasma or sarcocystis) are often involved in harbor porpoise pneumonia.
- A few fungal causes have been found in harbor porpoises too.



Leptospirosis

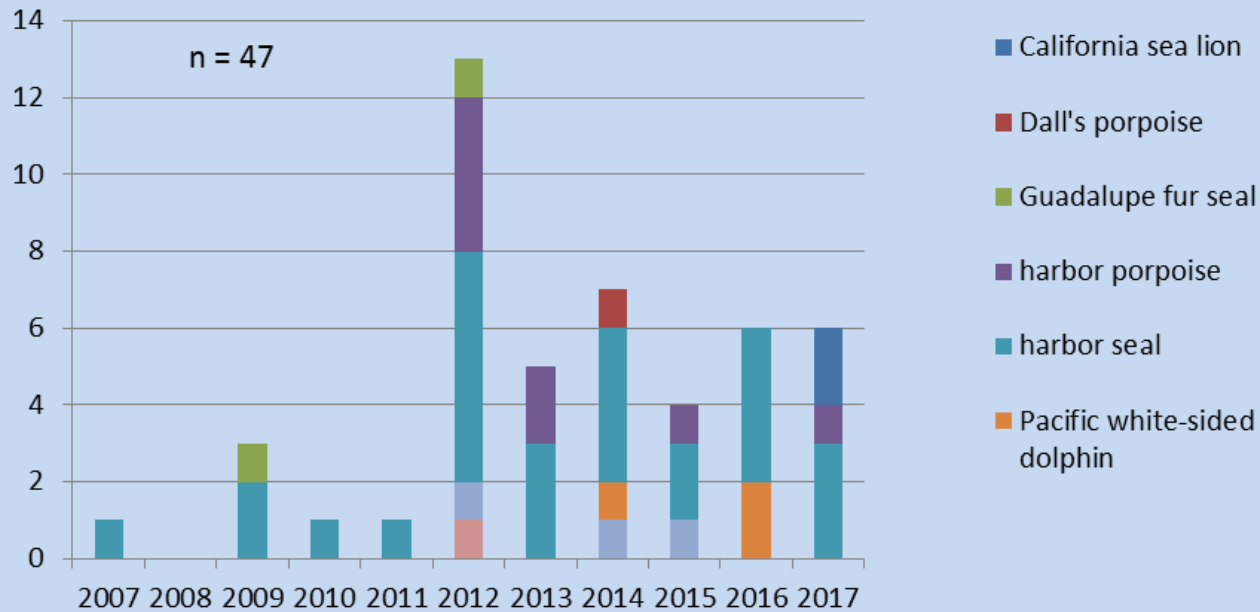
in California sea lions



- A kidney infection that impairs the animal's ability to concentrate urine
- Causes sea lions to become lethargic, dehydrated; neurological signs
- Often beach themselves near streams seeking fresh water
- Potentially reversible but often fatal
- Transmissible to humans and dogs – public health concerns

Protozoal Meningoencephalitis

Protozoal Meningoencephalitis Cases



Meningoencephalitis - Brucellosis

Brucella sp. was isolated from 6 dolphins from 2 separate “spates” of strandings by the National Veterinary Services Laboratories, Ames, IA.

December 5-12, 2012, 5 dolphins stranded on Oregon beaches along a 67 mile stretch of the Oregon coast, between Newport and Cape Meares: 2 striped and 1 Pacific white-sided dolphin

February 19 - 22 2014, four striped dolphins stranded along a 160 mile stretch of the Oregon coast between Gearhart and Reedsport.

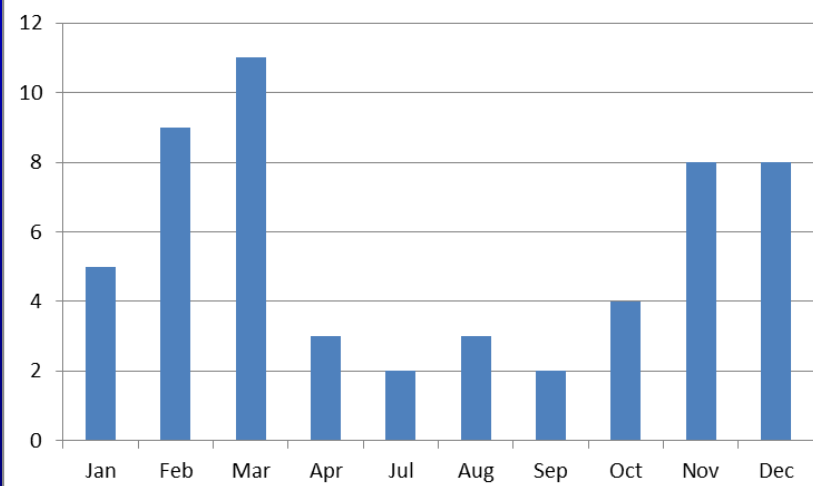
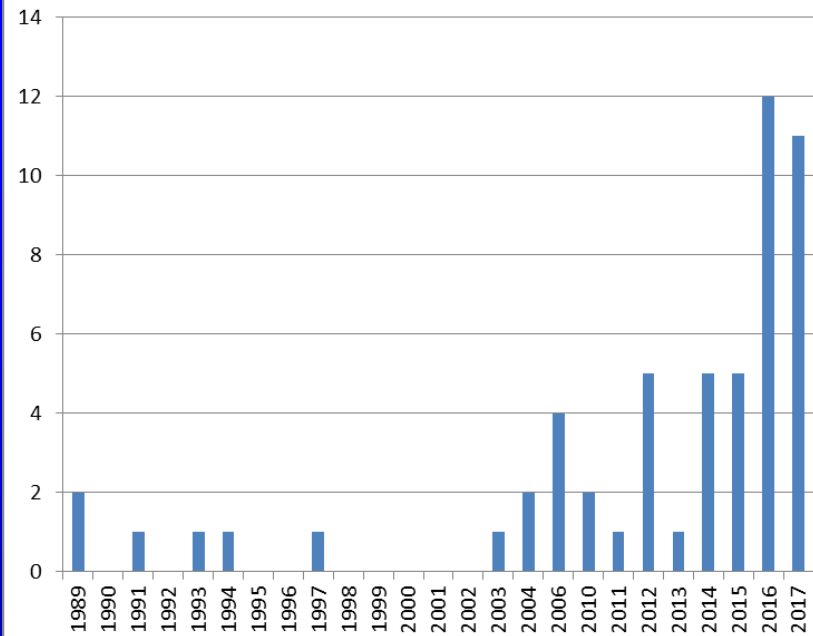
To date, 13 dolphins have been diagnosed with Brucellosis





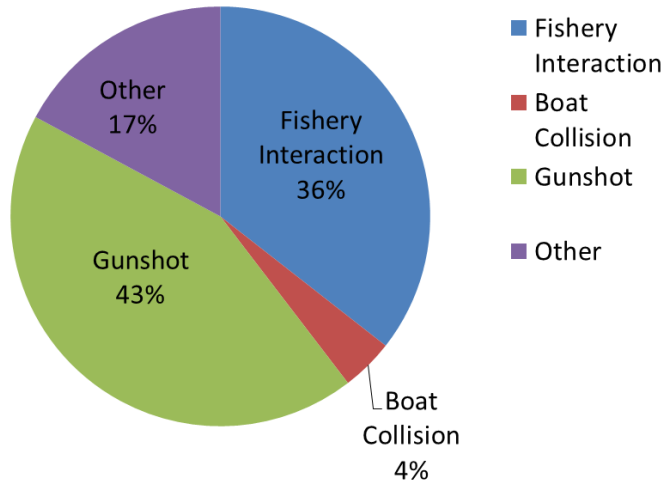
Striped Dolphin Strandings

n = 55



Strandings Involving Human Interactions

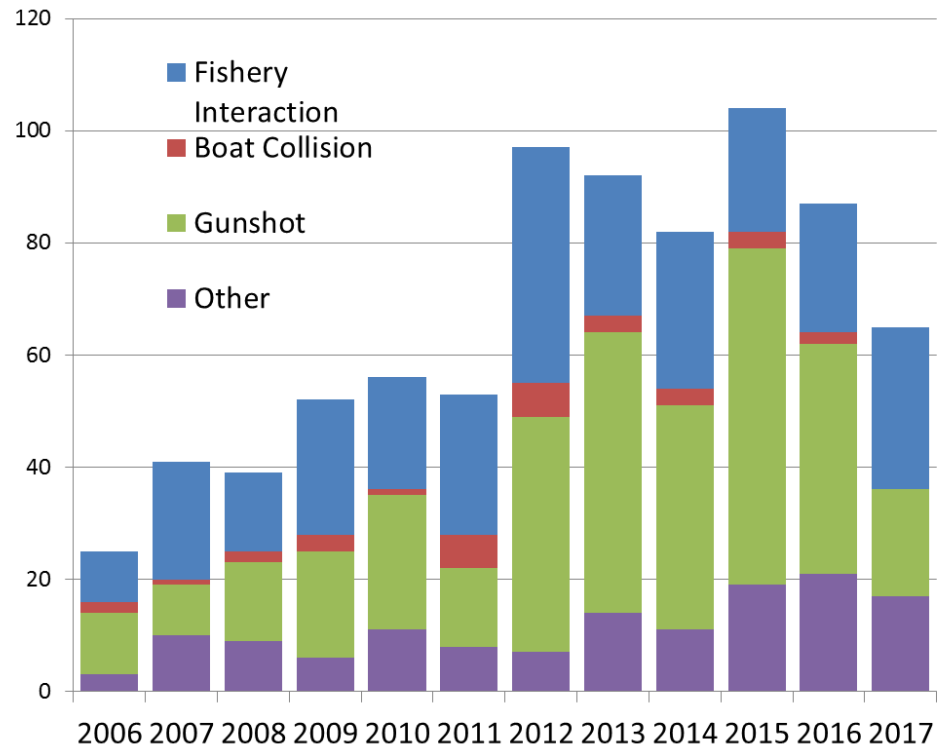
2006-2017 n = 793

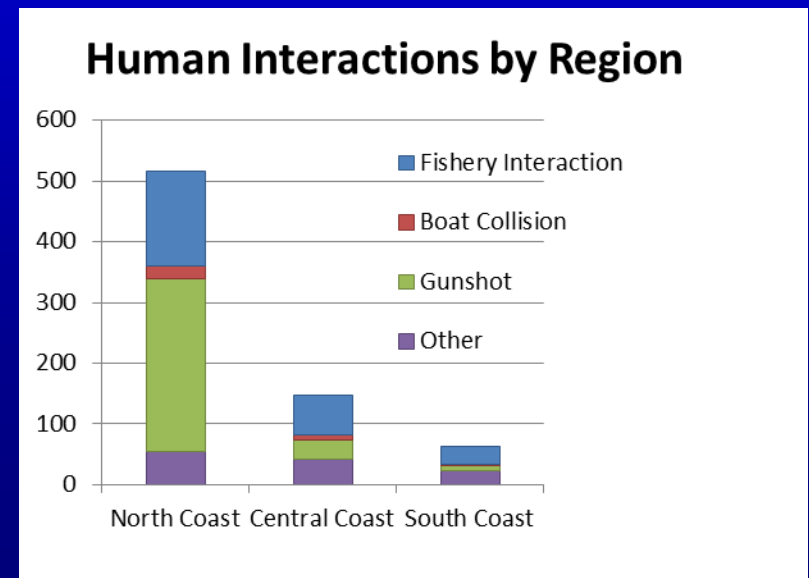
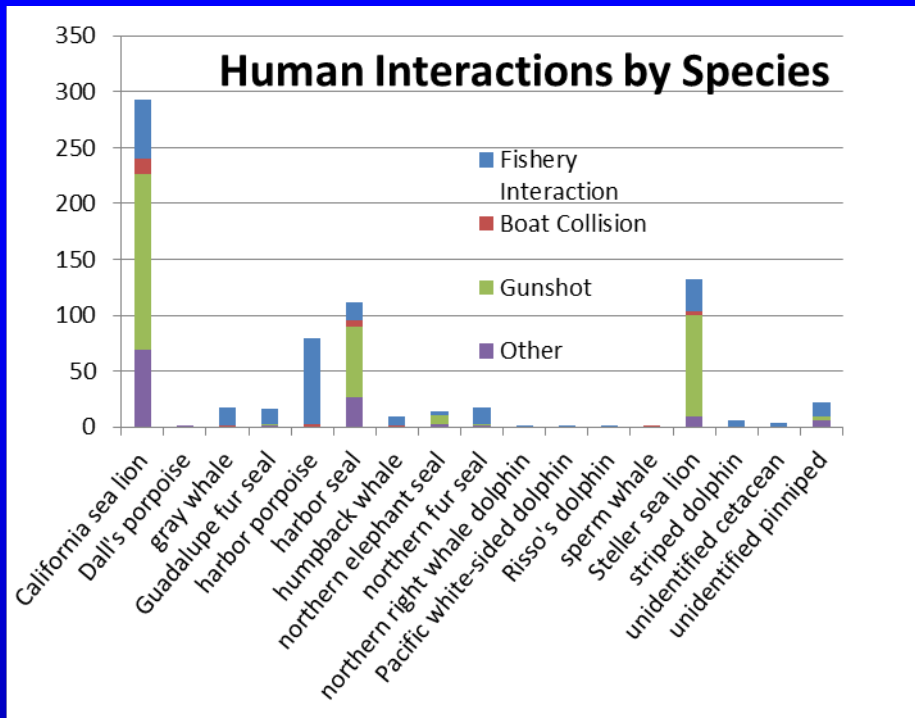


10% of all strandings involved some type of Human Interaction



Human Interactions by Year





Entangled Whales

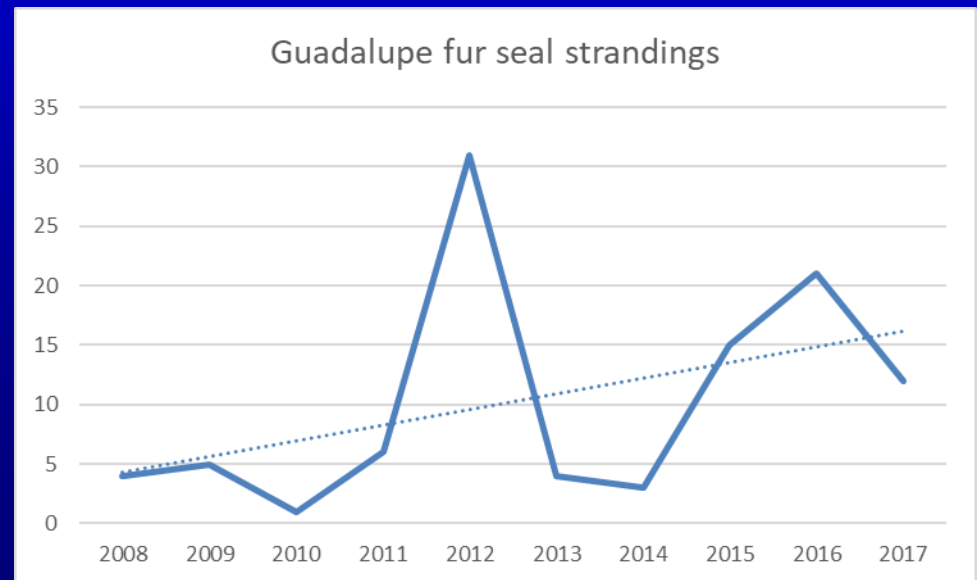


- Average of 3 entangled whales reported annually along Oregon coast
- Typically sighted by fishing vessels; often impossible to re-locate (alive)

Guadalupe Fur Seal

(*Arctocephalus townsendi*)

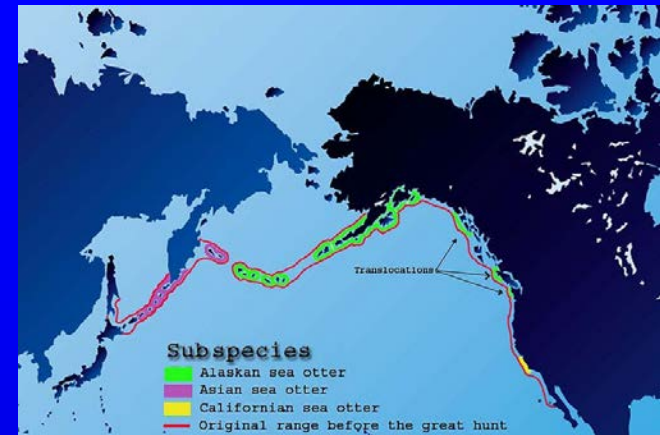
- Presumed extinct by end of 19th century
- Re-discovered in 1928
- 2006 -first confirmed Oregon stranding record.
- 2012 - total of 31 strandings
- Listed as *Threatened* under ESA



Sea Otter

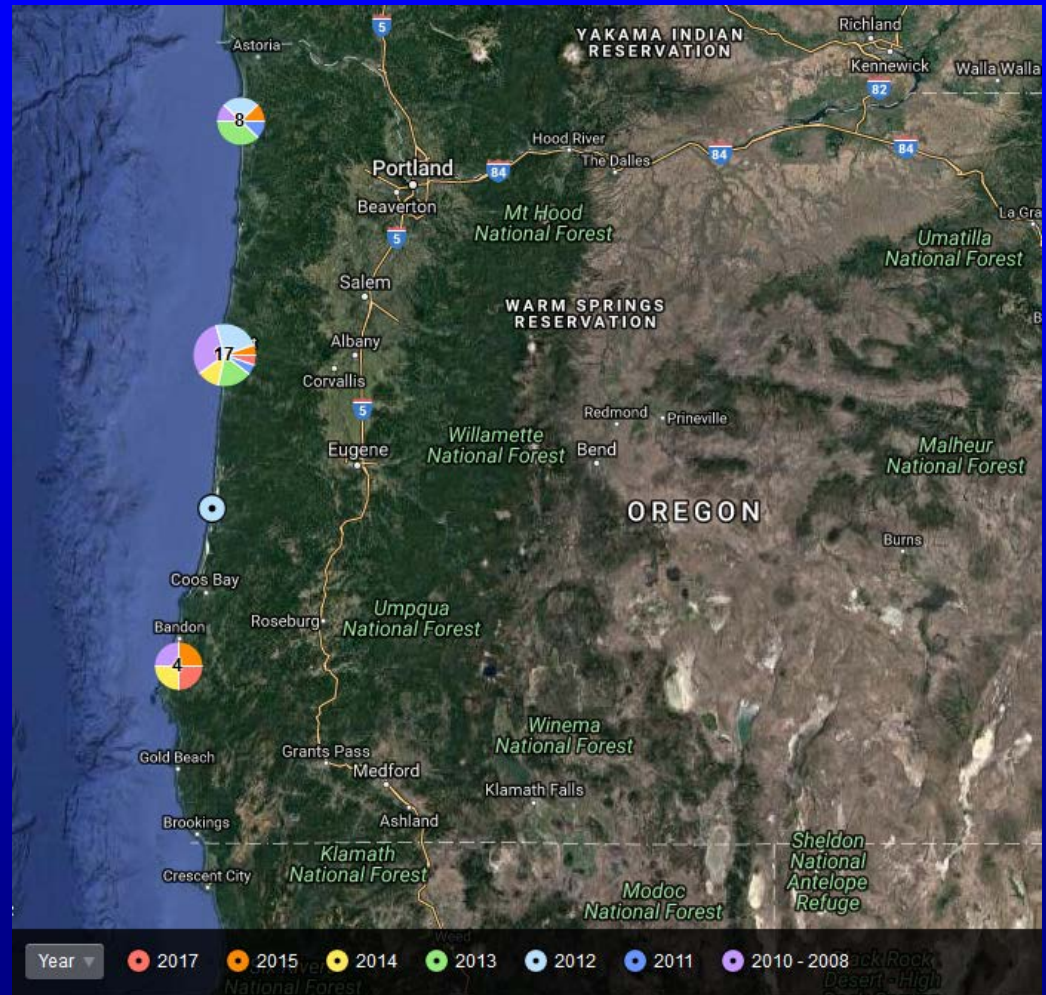
(*Enhydra lutris*)

- Populations in California, AK, and WA
- A “keystone species”; controls urchin populations, promotes kelp forest communities
- Often confused with Northern River Otter



Sea Otters in Oregon

30 sightings or strandings since 2008



OREGON MARINE MAMMAL STRANDING NETWORK

OMMSN

Marine Mammal Institute

Visit our Website

<http://mmi.oregonstate.edu/ommsn>



To report a stranding, call:

Oregon State Police 24-Hour
WildlifeTipline

1-800-452-7888

Stranding Network Office
541-867-0446

Stranding Cell Phone: **541-270-6830**

E-Mail: stranding@oregonstate.edu

