

Mother knows best: Killer whale culture and generational learning

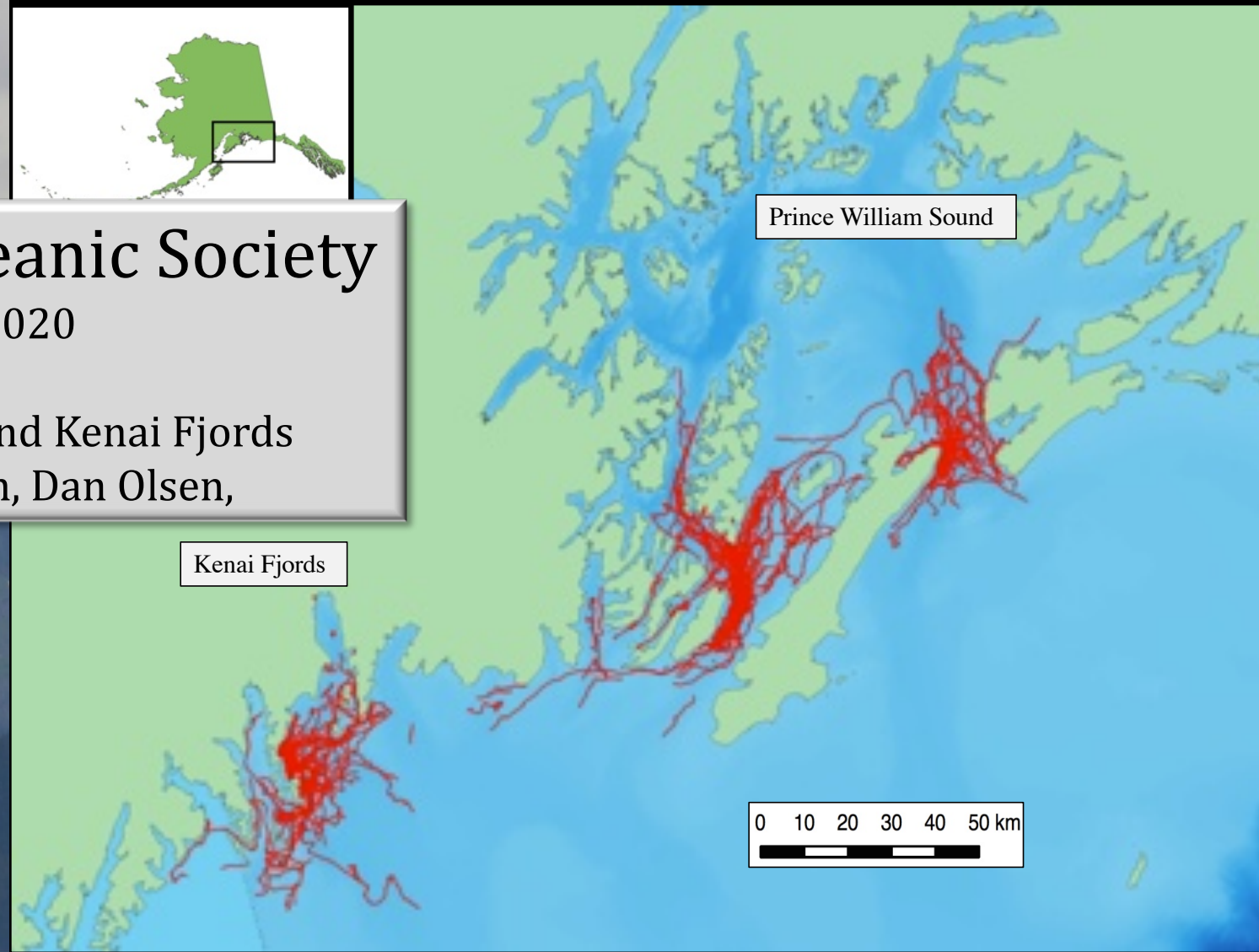
Dan Olsen
North Gulf Oceanic Society
MSc Fisheries Biology UAF



North Gulf Oceanic Society

1984-2020

Prince William Sound and Kenai Fjords
R/V Natoa, Craig Matkin, Dan Olsen,



Dan Olsen
North Gulf Oceanic Society
MSc Fisheries Biology UAF

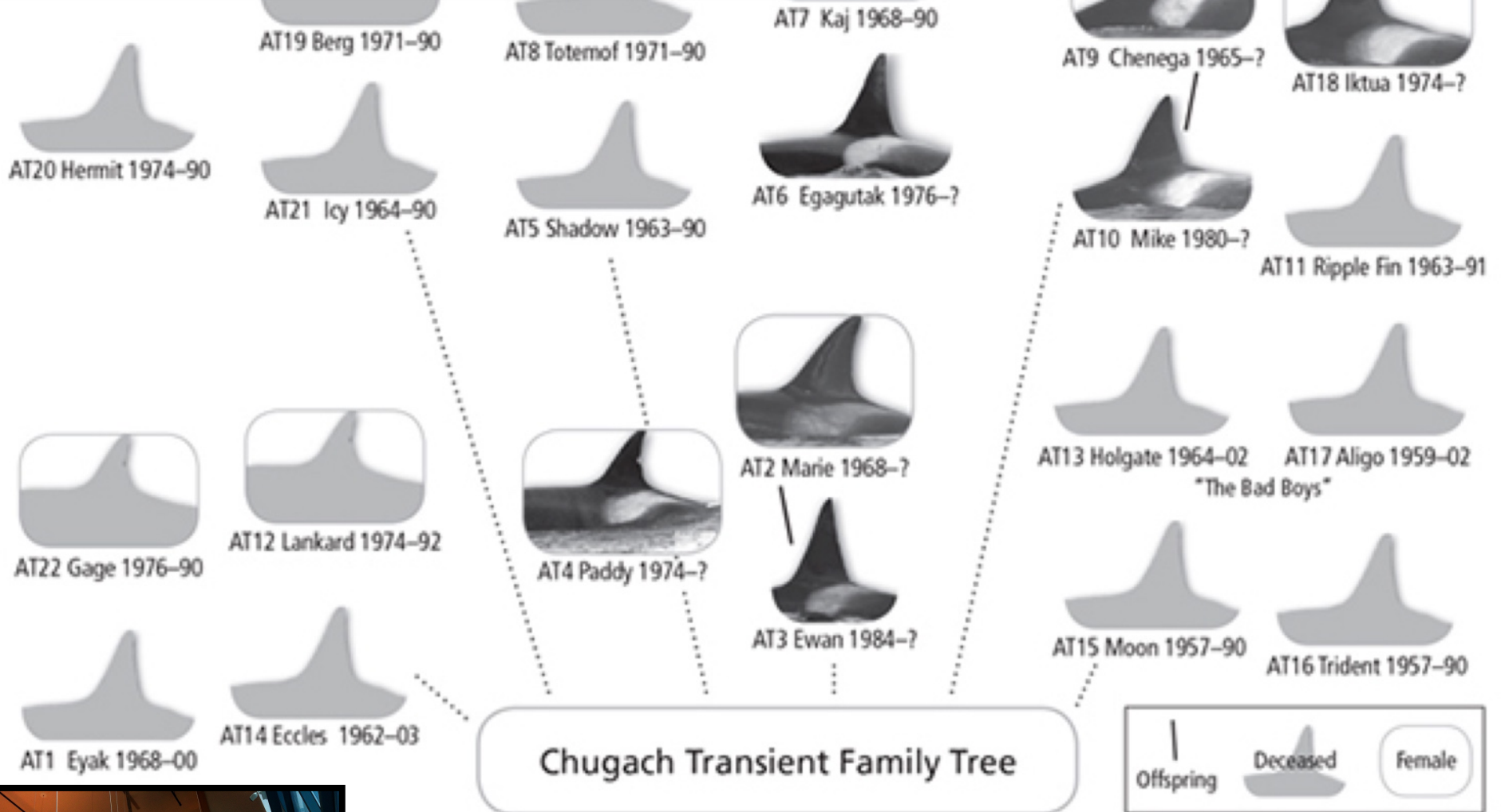


AT9, “Chenega”
Born est. 1965



Photos: NGOS, taken under NMFS permit #15616

AT1s, "Chugach Transients"



7 remaining from 22 whales pre-spill

Carey Rotundo

AT1 Transient Group

These three
animals alive
in 2015



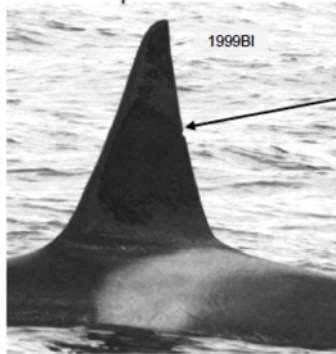
AT2 (1969)
Marie

AT4 (1974)
Paddy (female)



AT9, "Chenega" AT1s, "Chugach Transients"

AT3 (1984)
Ewan (male)



notch

AT1 TRANSIENT GROUP

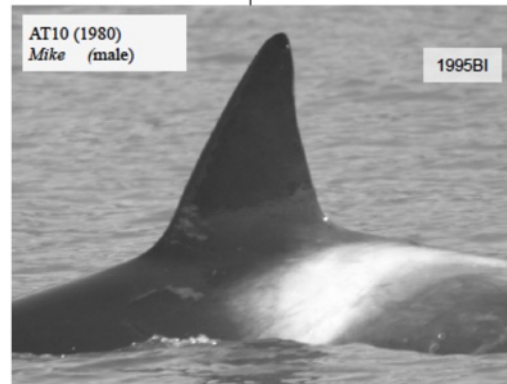
These four
animals
alive in 2015



AT9 (1965)
Chenega



AT18 (1974)
Iktua



AT10 (1980)
Mike (male)



AT6 (1976)
Egagutak (male)



Exxon Valdez Oil Spill 1989

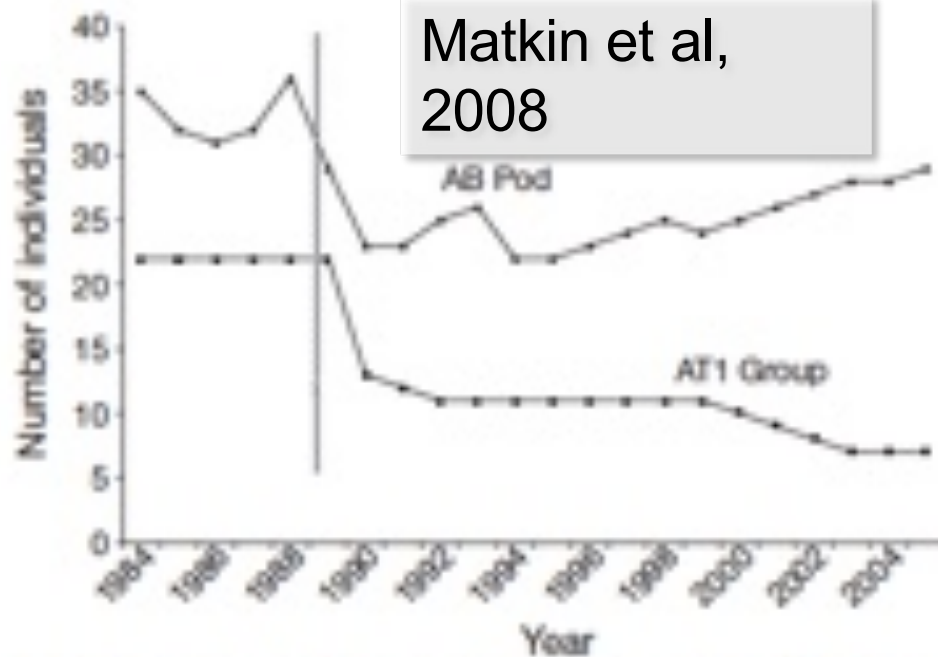


Fig. 4. *Orcinus orca*. Number of whales in AB Pod and AT1 Group 1984 to 2005 (vertical line: 'Exxon Valdez' oil spill)



Photo: LA Times

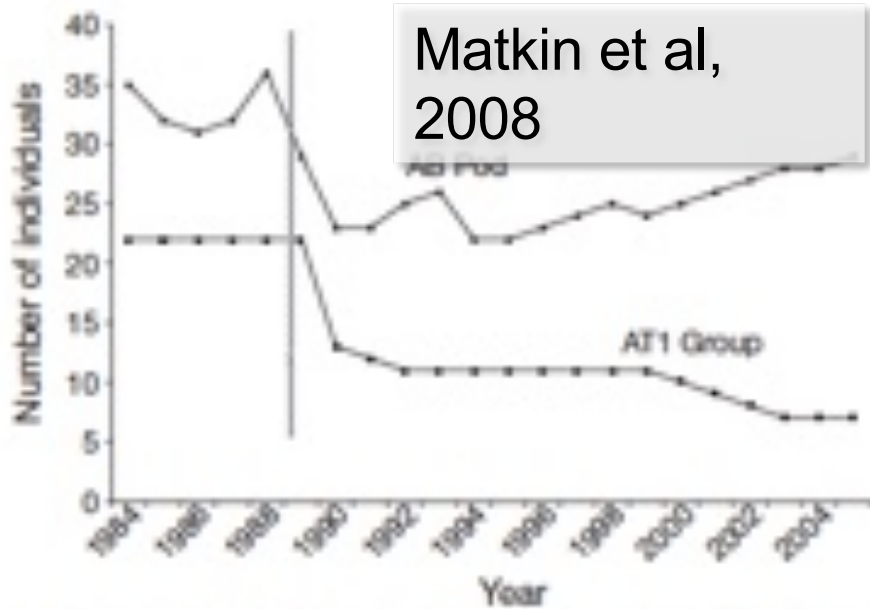


Fig. 4. *Orcinus orca*. Number of whales in AB Pod and AT1 Group 1984 to 2005 (vertical line: 'Exxon Valdez' oil spill)

AT9, "Chenega"
Born est. 1965
calls from
Resurrection Bay, August 13, 2004

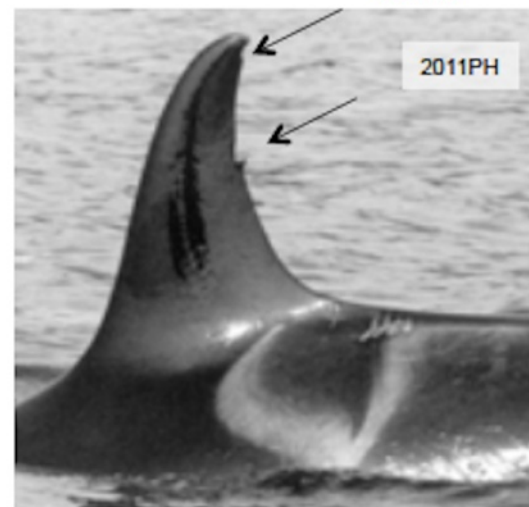


Photo Identification, 1980's
Mike Biggs

AB POD

20 members in 2012

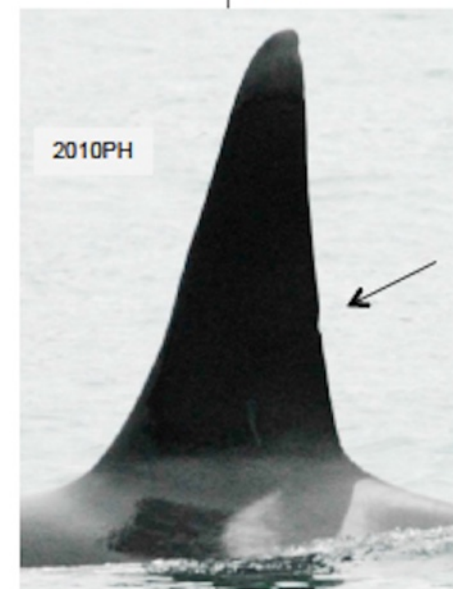
4614 (1955)
Galena



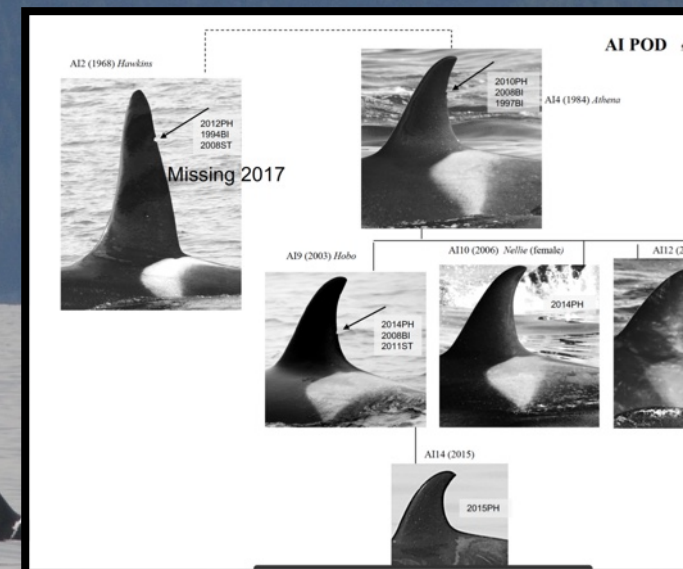
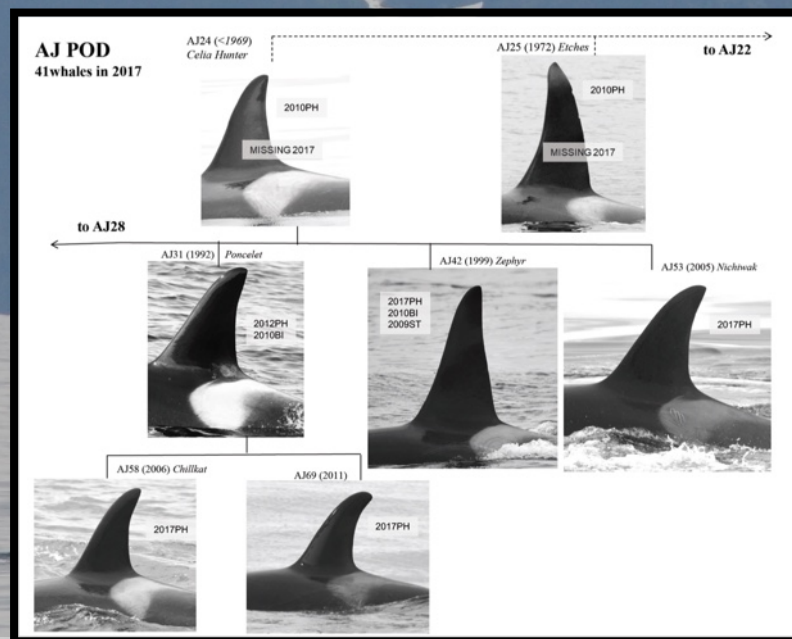
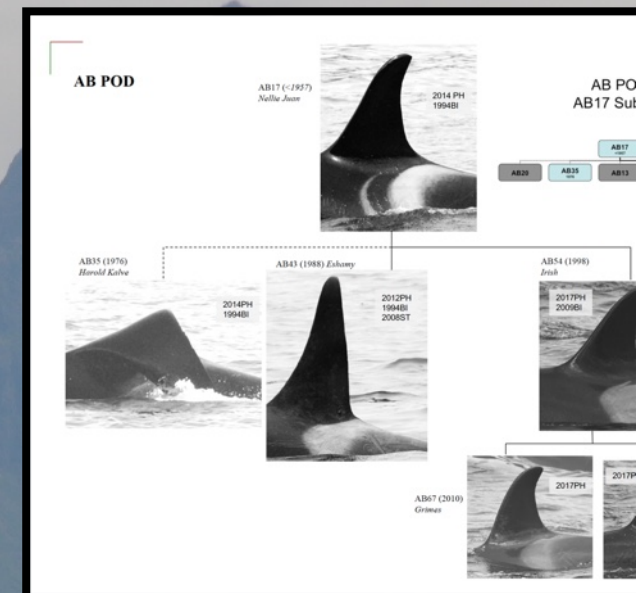
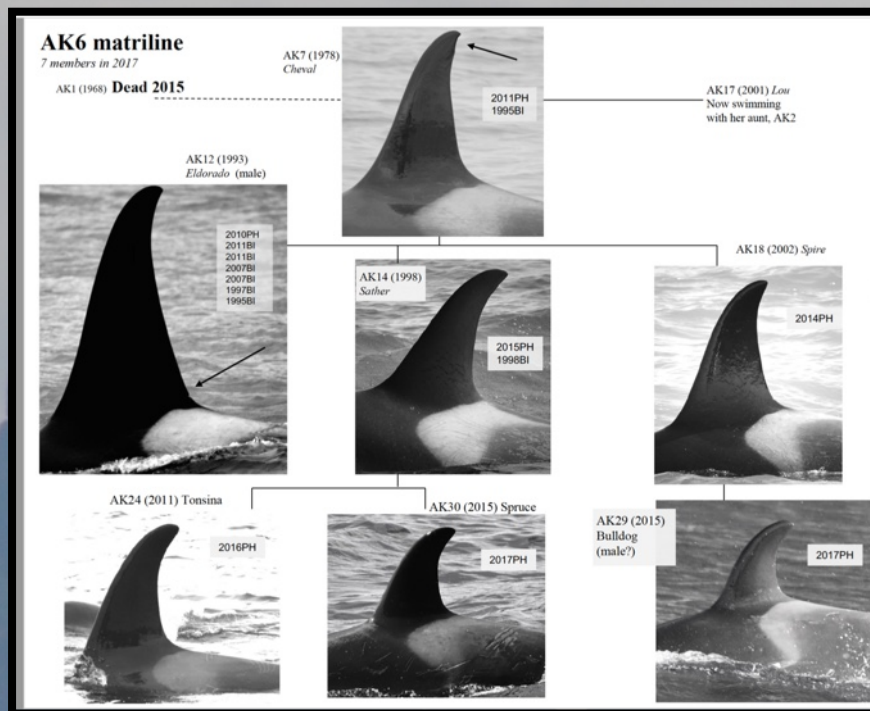
AB24 (1970)
Gilmore



AB40 (1988)
Sphinx



Photos: NGOS, taken under NMFS permit #15616



Residents, Transients, and Offshores



Resident



Transient, or Bigg's killer whale



Offshore

Salmon scales



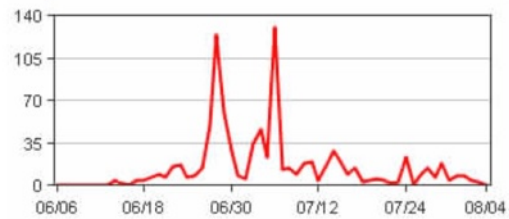
Salmon scales

Location: Species:

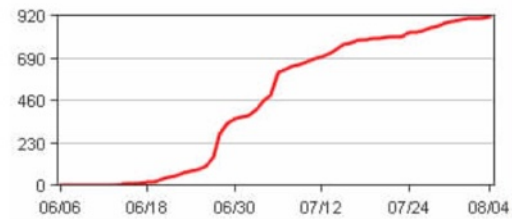
SITUK RIVER CHINOOK FOR 2013

Location: **Situk River**
Species: **Chinook**
Method: **Weir**

Daily Counts



Cumulative

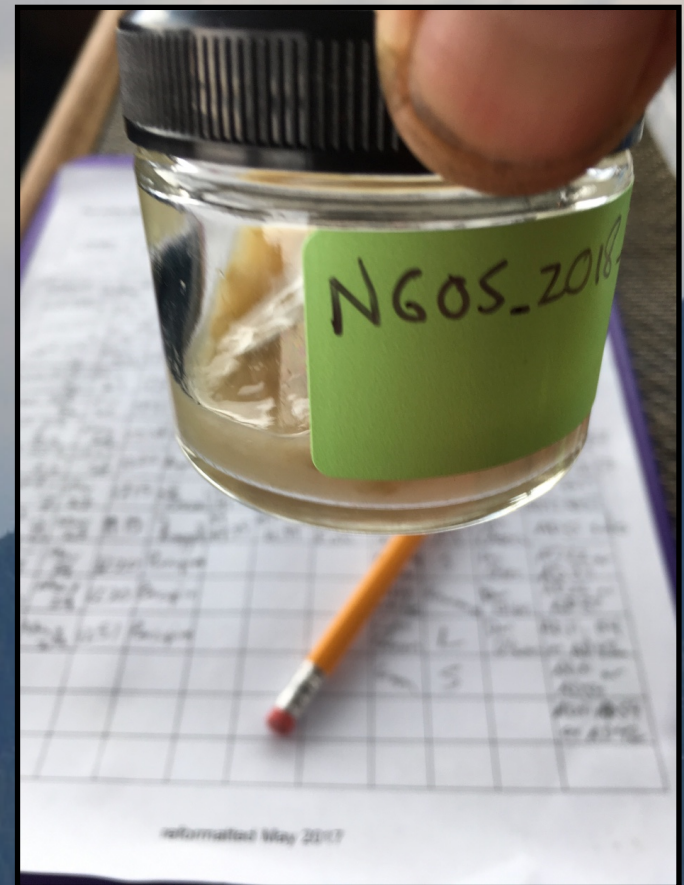


Situk River

Stikine River

2013

Chinook, coho, chum predominant



Chinook, chum, halibut, arrowtooth flounder predominant

More than one species???



Type A



Antarctic types,
Bob Pitman, John Durban



Type B



Type C



More than one species???



Acoustics: Cultural transmission of calls

Superpod, Prince William Sound
AK, AI, AJ, AB pods



Photos: Dan Olsen, taken under NMFS permit #15616

Echolocation

AJ pod, Resurrection Bay

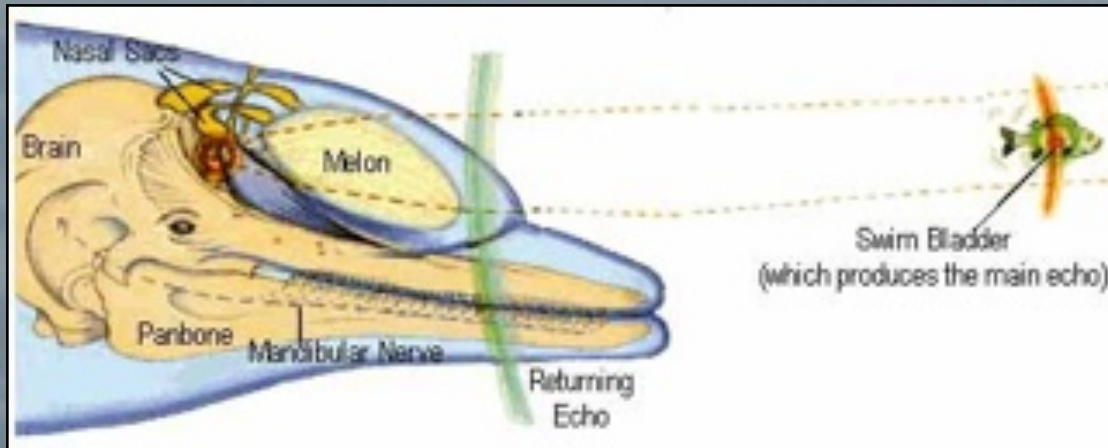
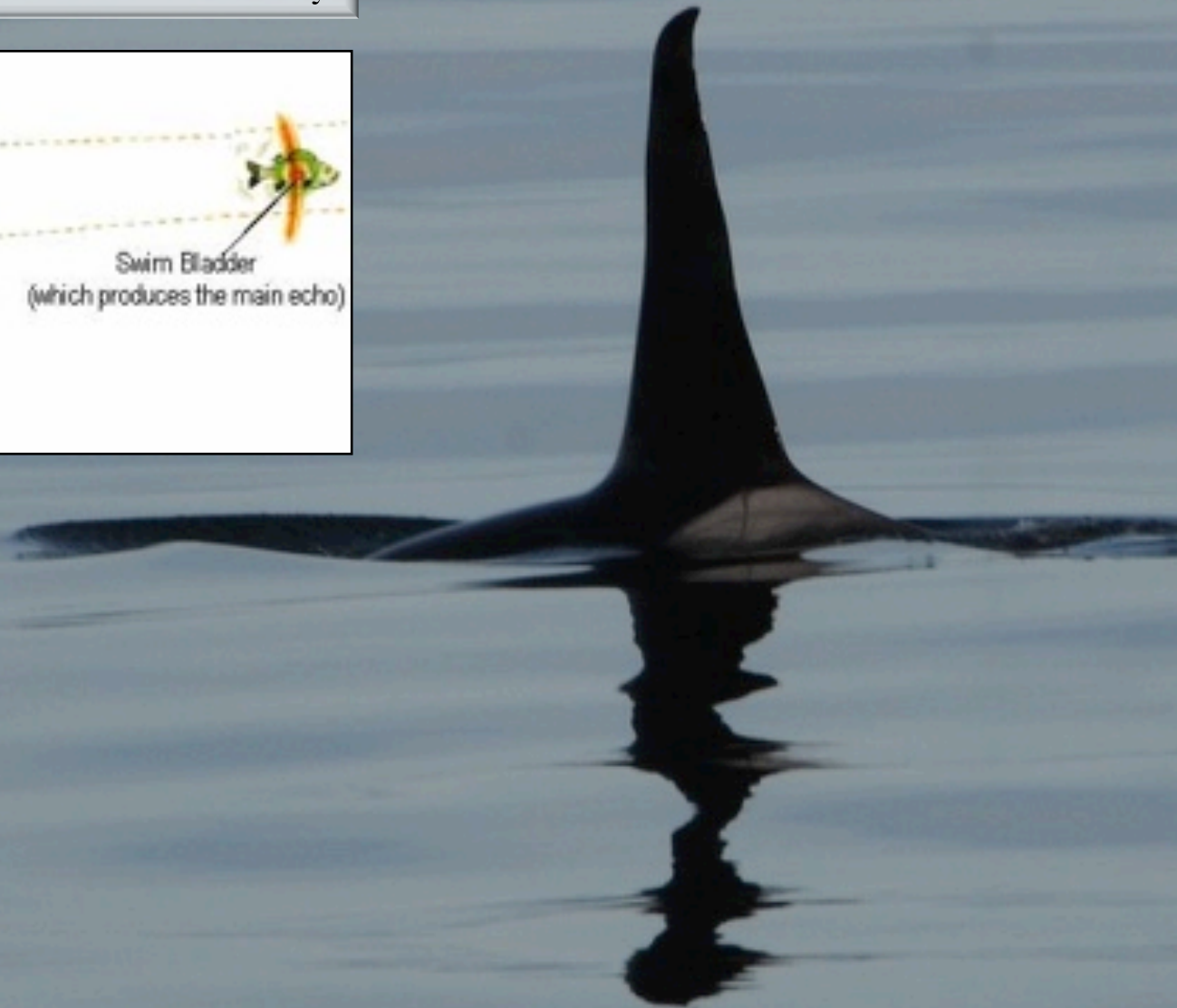
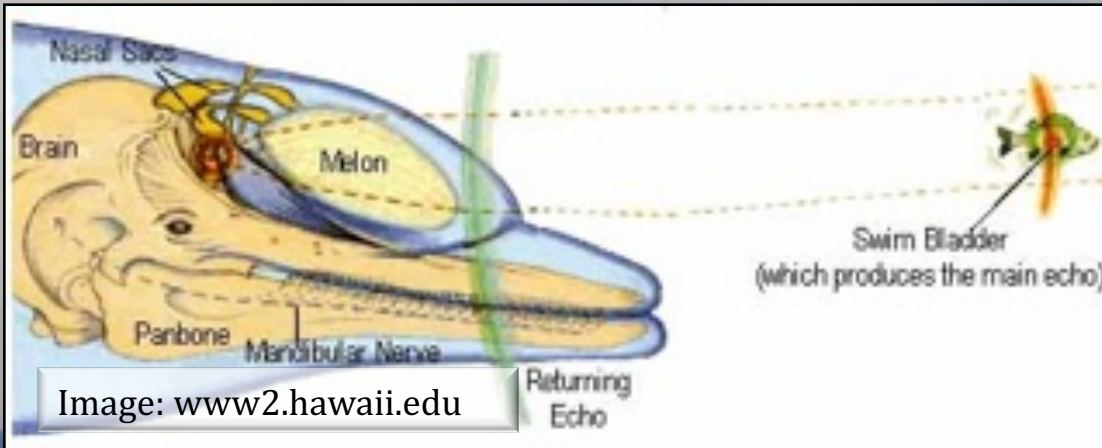


Image: www2.hawaii.edu



Photos: Dan Olsen, taken under NMFS permit #15616



Echolocation

Sperm Whale,
Hinchinbrook Entrance



Photos: Dan Olsen, taken under NMFS permit #15616

Mother's call repeated by calf



Photos: Dan Olsen, taken under NMFS permit #15616

Missing mother

AD18 (1979)
Aurora

2010PH

AD22 (1993)
Skaneateles

2010PH

AD98 (1998)
(male)

2010PH



AD42 Little Mary Lowell (2007)

2010PH

2010PH

AD47
Vereshbegan
(2011)

2010PH

➤ Biphonic calls, AG pod Lena Pt, May 7, 2013



Photo and Recording: Dan Olsen, North Gulf Oceanic Society

Challenges for the killer whale?

Oil!

DDTs, PCBs, PBDEs

Seismic noise

Boat noise

Health of wild salmon runs

Salmon bycatch

Questions?

Contributed photos:

Date, location, photographer

Send to:

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