

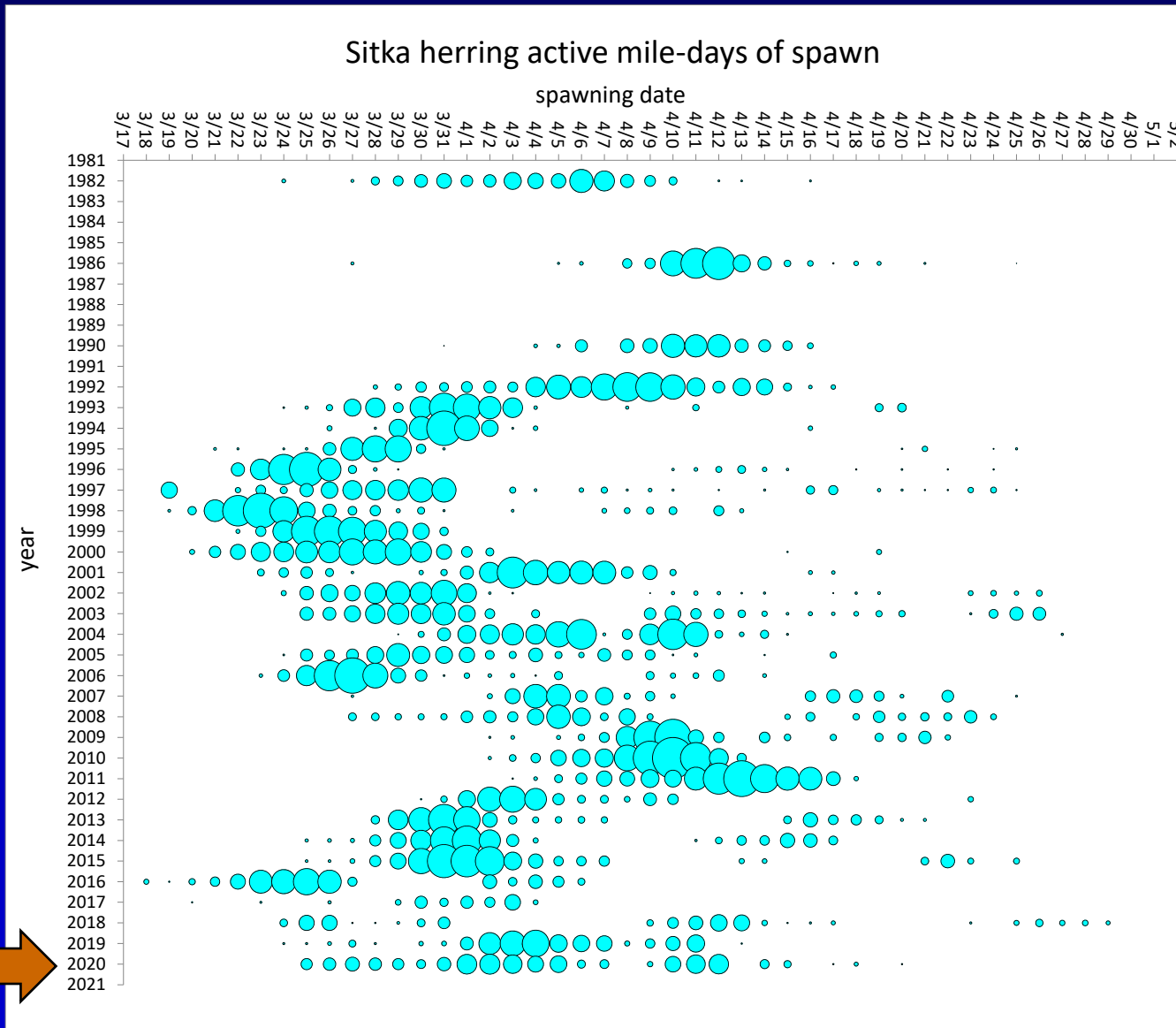
2019 and 2020 Herring Stock Assessment Surveys in Sitka Sound



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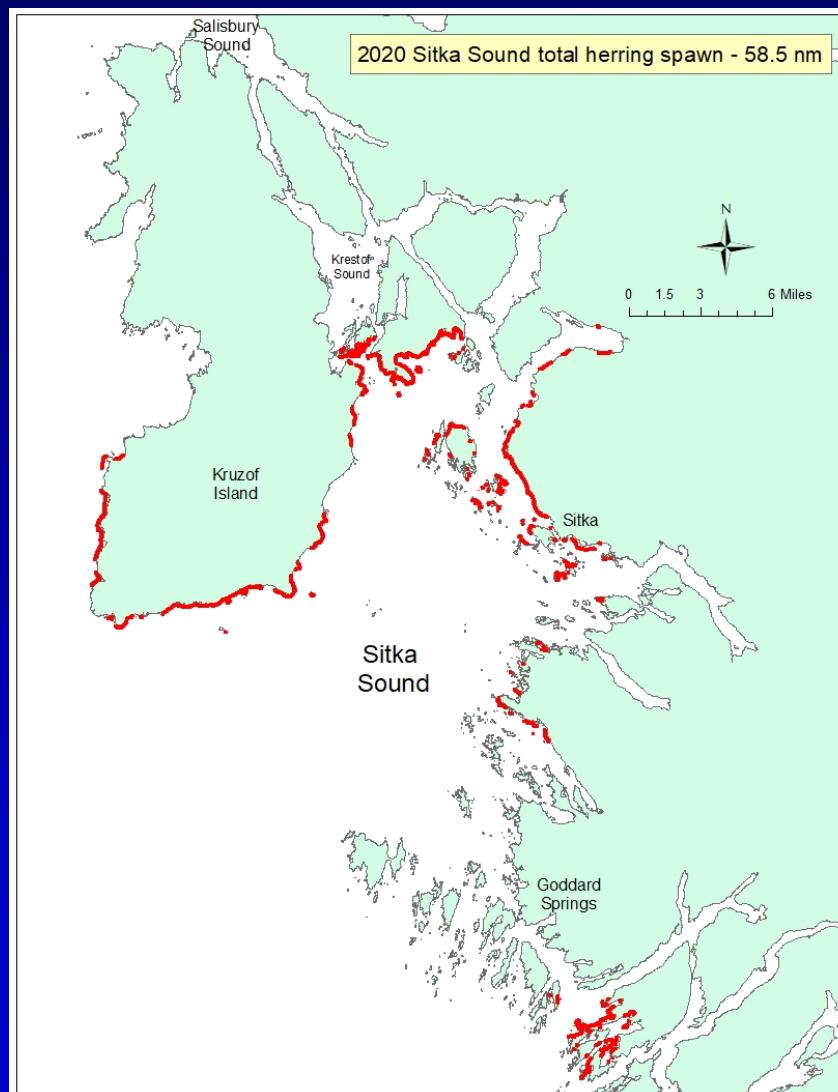
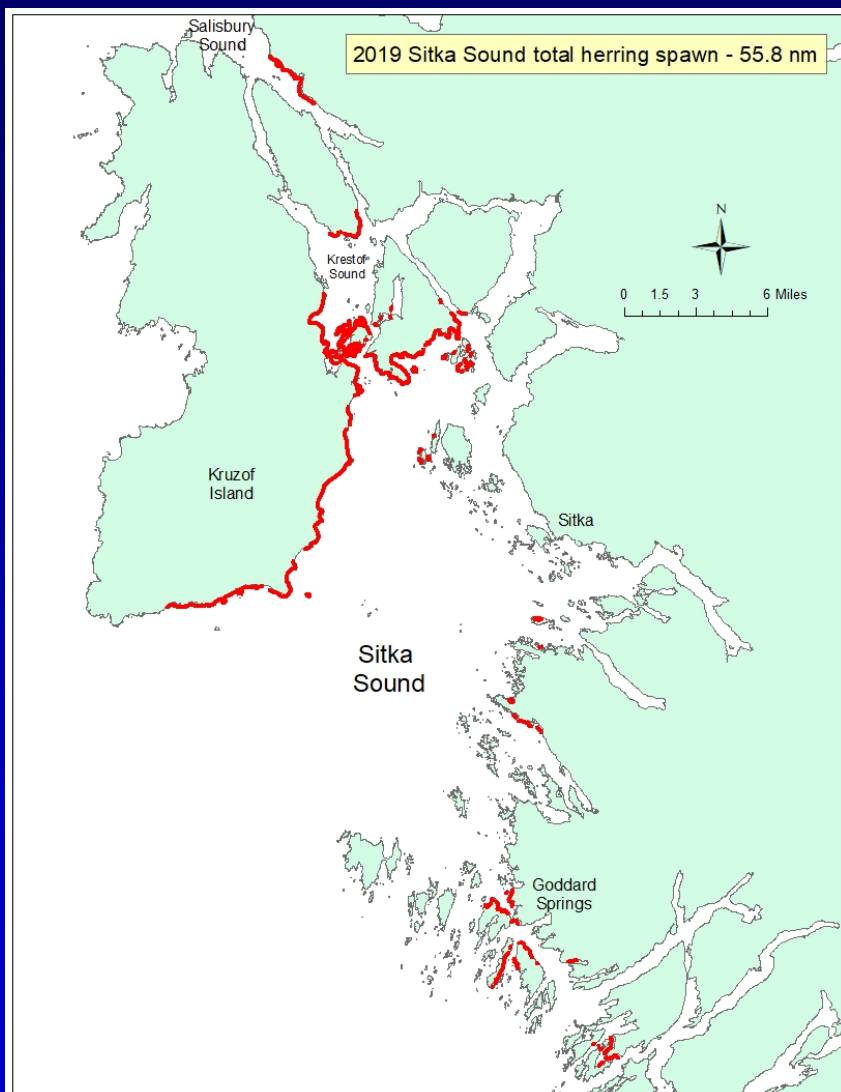
March 12, 2021

Spawn Timing



2019 Total Spawn
55.8 nm

2020 Total Spawn
58.5 nm



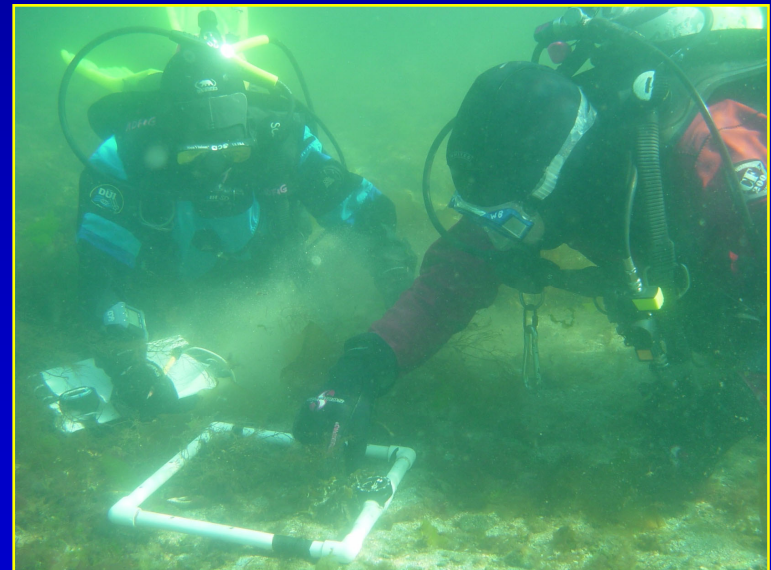
(mean 1980 - 2019 is 59.0 nm)

Egg Deposition Dive Survey



1st - Aerial survey
to map length of
spawn zone

2nd – Dive survey
to estimating width
of spawn zone and
eggs density

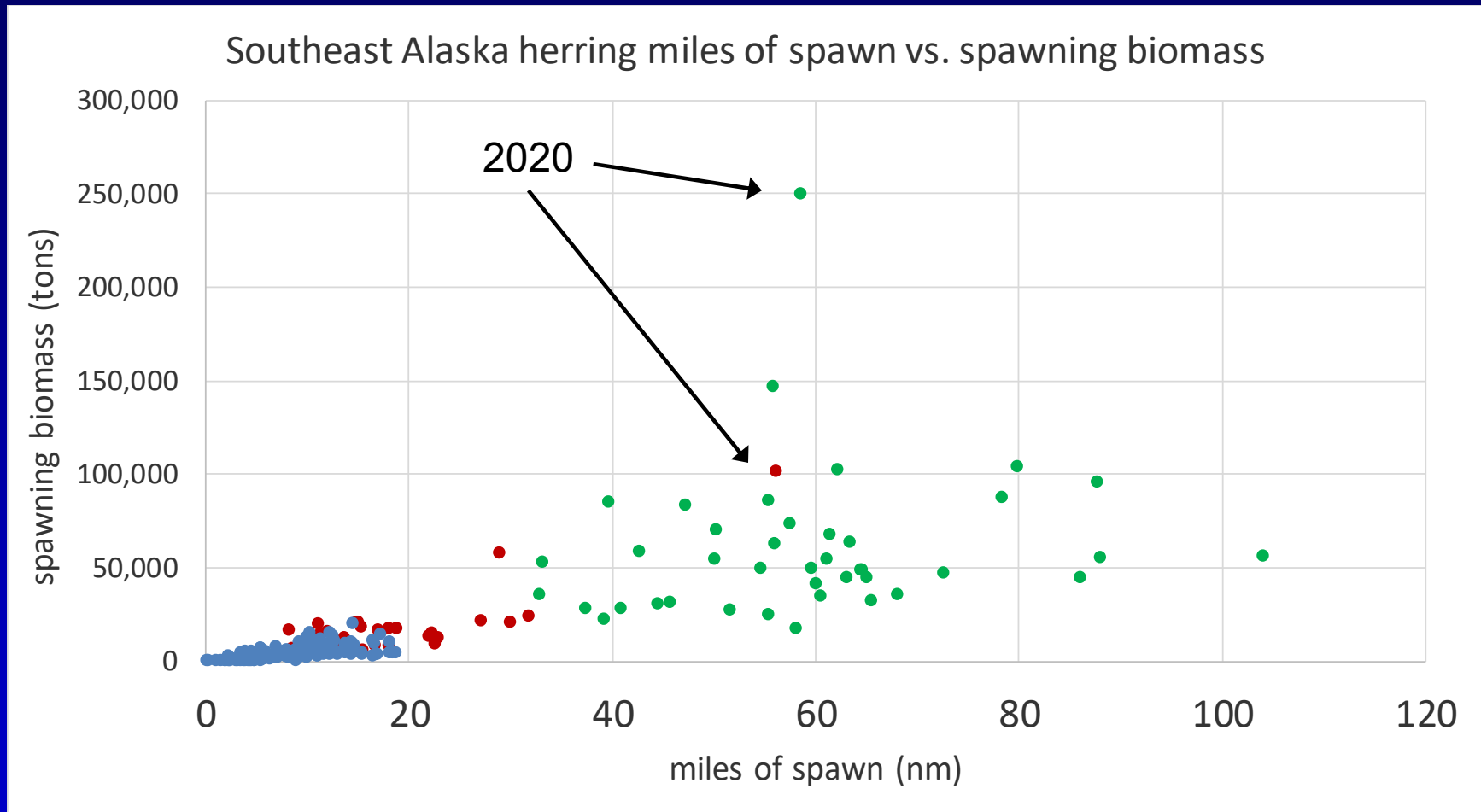


Dive Survey



Goal –
unbiased estimate
of total eggs in
Sitka Sound

Spawn Miles vs Biomass (Why dive surveys are so important)



Green - Sitka (ASA modeled)

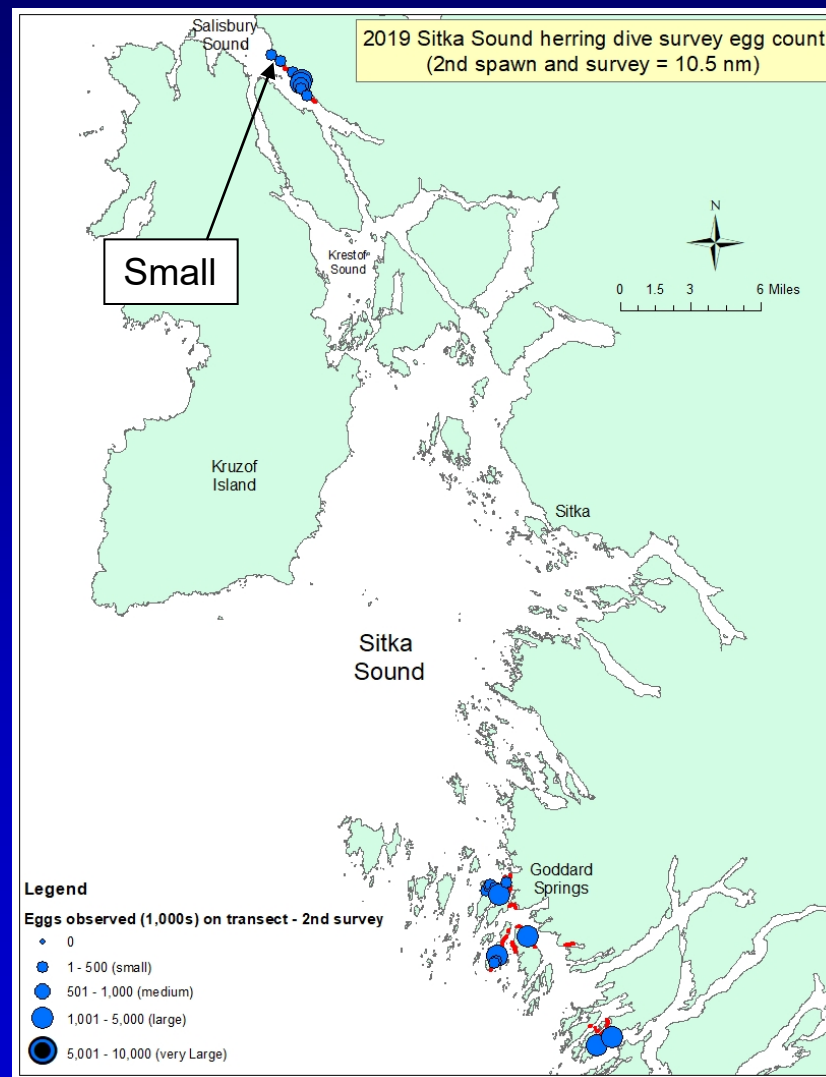
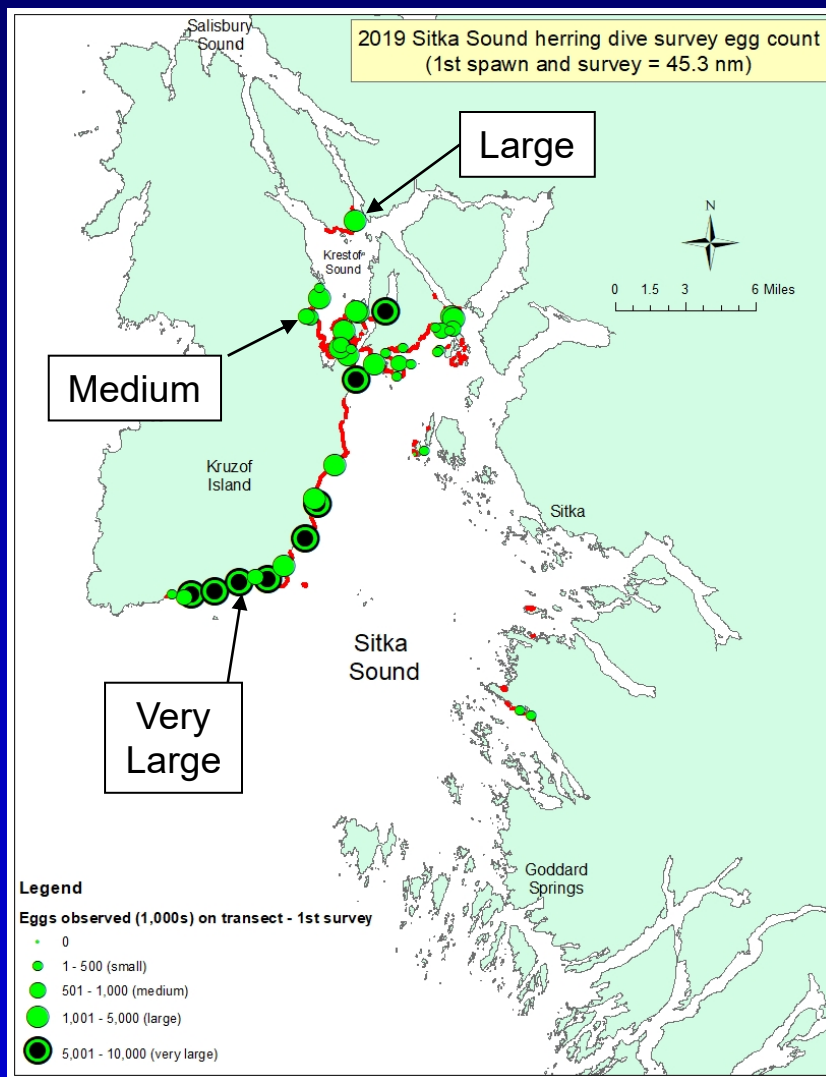
Red - Craig (ASA modeled)

Blue - All other SEAK stocks (spawn deposition estimate)

2019 Relative Egg Abundance

1st survey
49 transects

2nd survey
20 transects



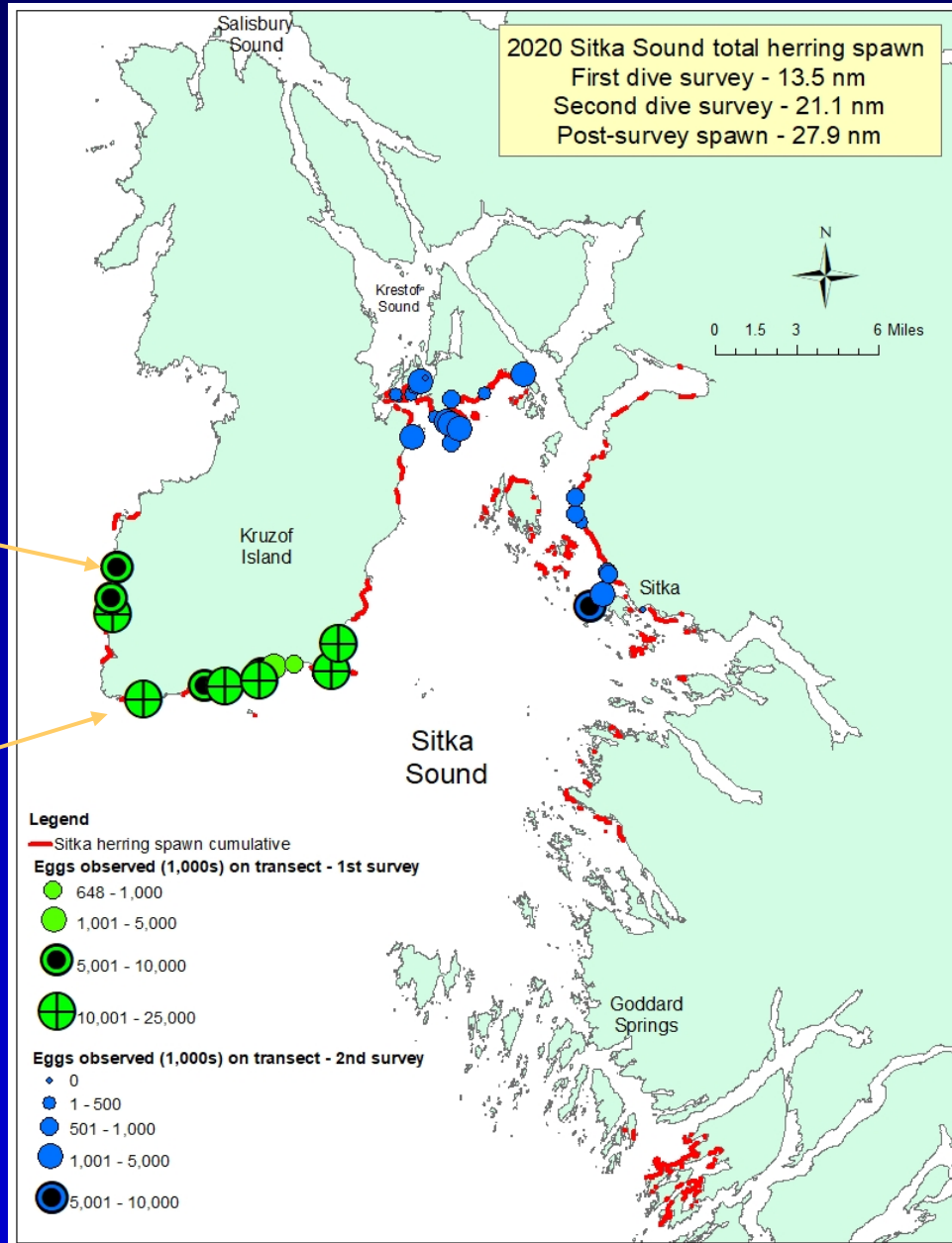
2020 Relative Egg Abundance

1st survey
15 transects

2nd survey
23 transects

Very Large

Unusually Large



Sitka Sound herring spawn metrics (last 10 years)

Year	spawn mileage (nm)	mean transect length (m)	spawn area (m ²)	egg density (eggs/m ²)	total egg deposition (trillions)
2011	78.3	79.4	11,513,921	1,021,360	13.067
2012	55.9	61.1	6,325,487	708,533	4.980
2013	61.3	76.0	8,629,698	852,680	8.330
2014	50.0	62.5	5,784,311	616,221	3.960
2015	87.9	43.9	7,142,409	578,850	4.594
2016	63.3	80.4	9,428,167	592,993	5.979
2017	62.3	48.7	5,810,652	508,433	3.618
2018	33.1	94.4	5,540,258	692,405	4.216
2019	55.8	90.0	9,339,573	737,051	8.195
2020	58.5	145.5	12,984,592	1,598,671	23.065
Average	60.9	70.7	7,723,831	700,947	6.326

Newest data point for ASA model

Age / Size Data

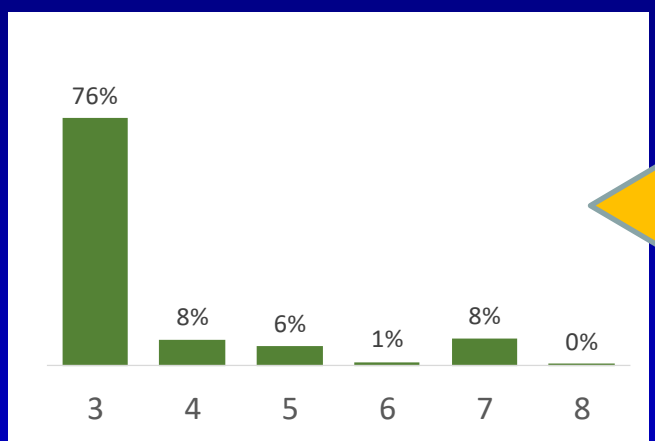
Spawning population
(cast net)



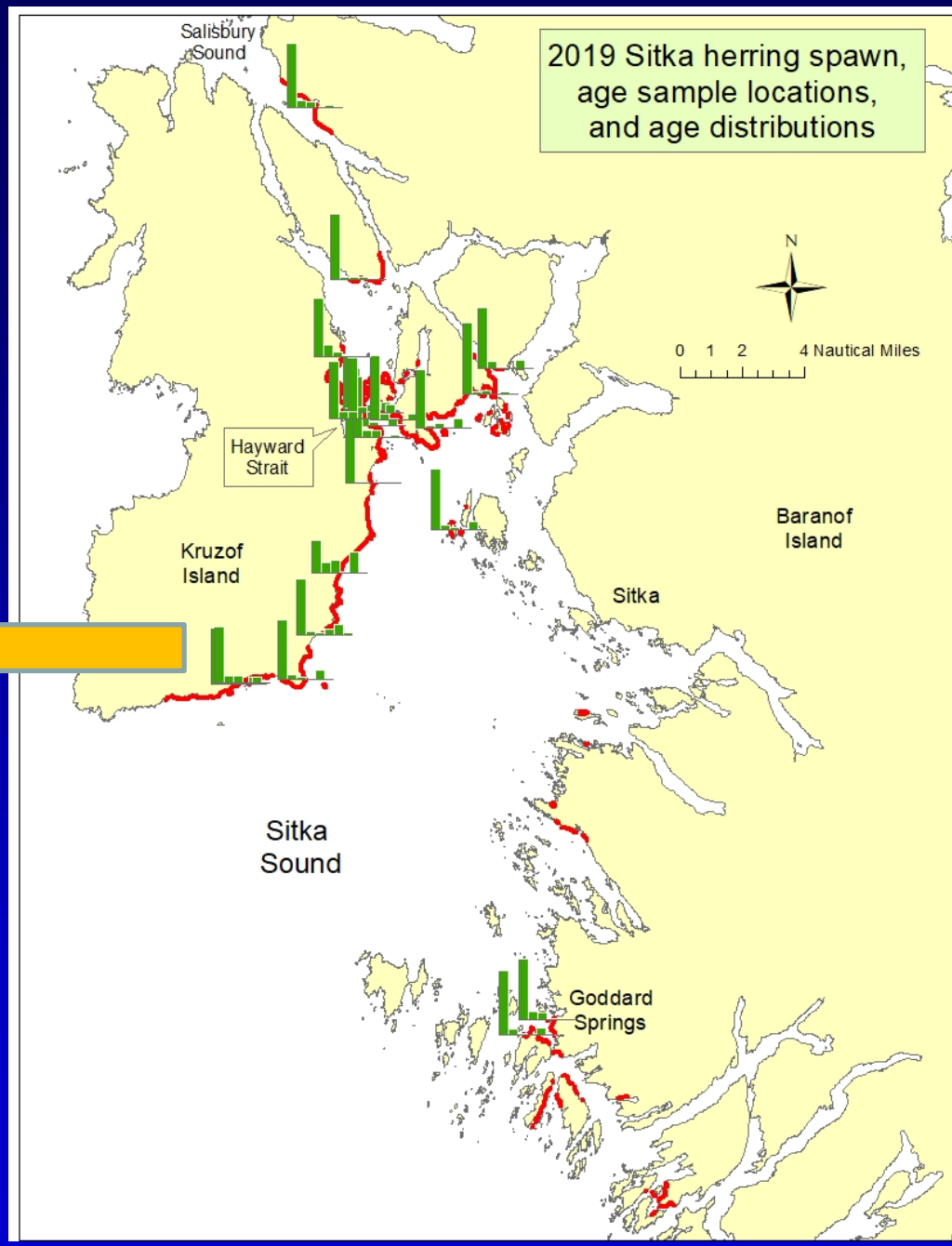
Commercial Catch
(from vessels)

No samples in
2019 or 2020

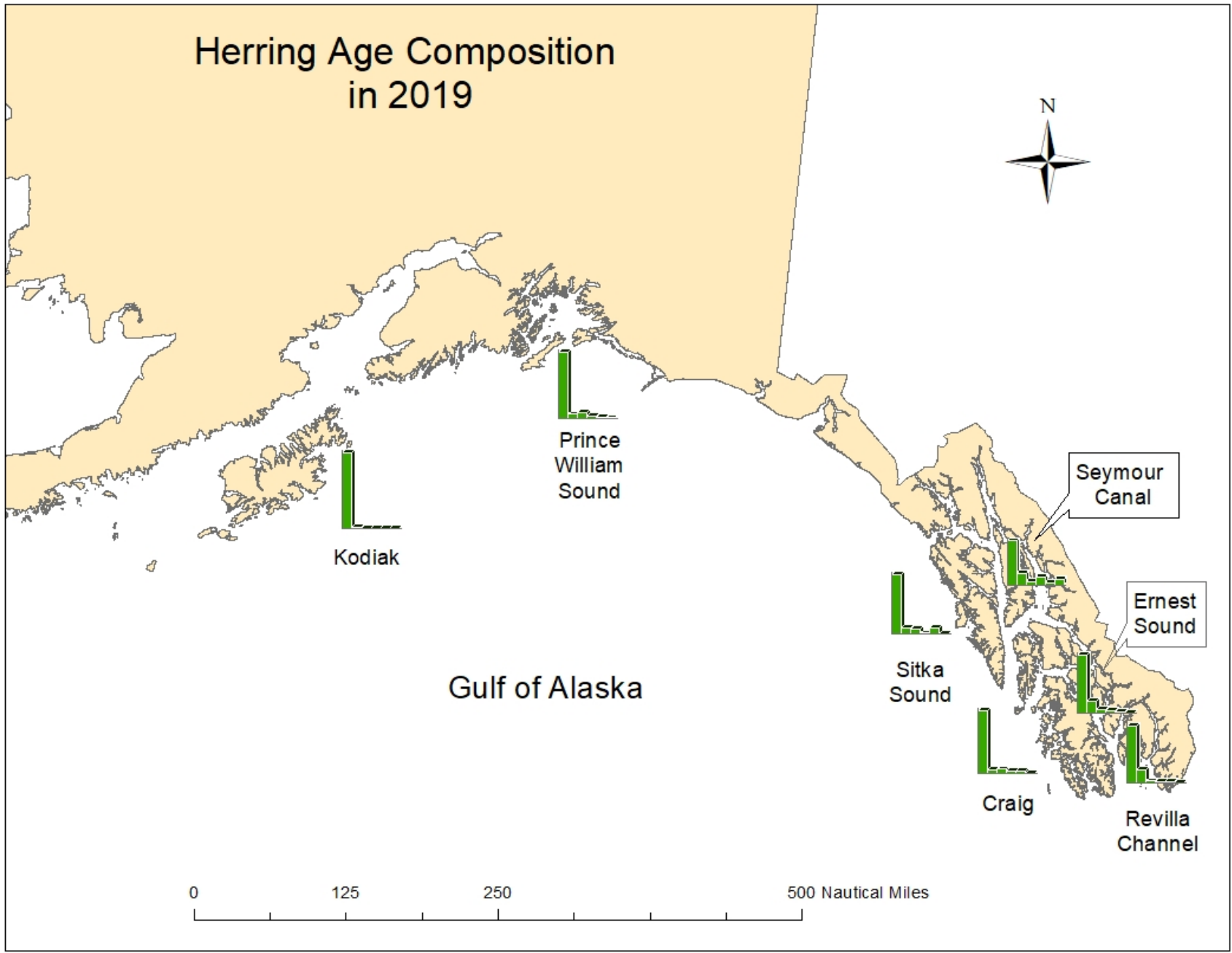
2019 spawner age composition of samples throughout Sitka Sound



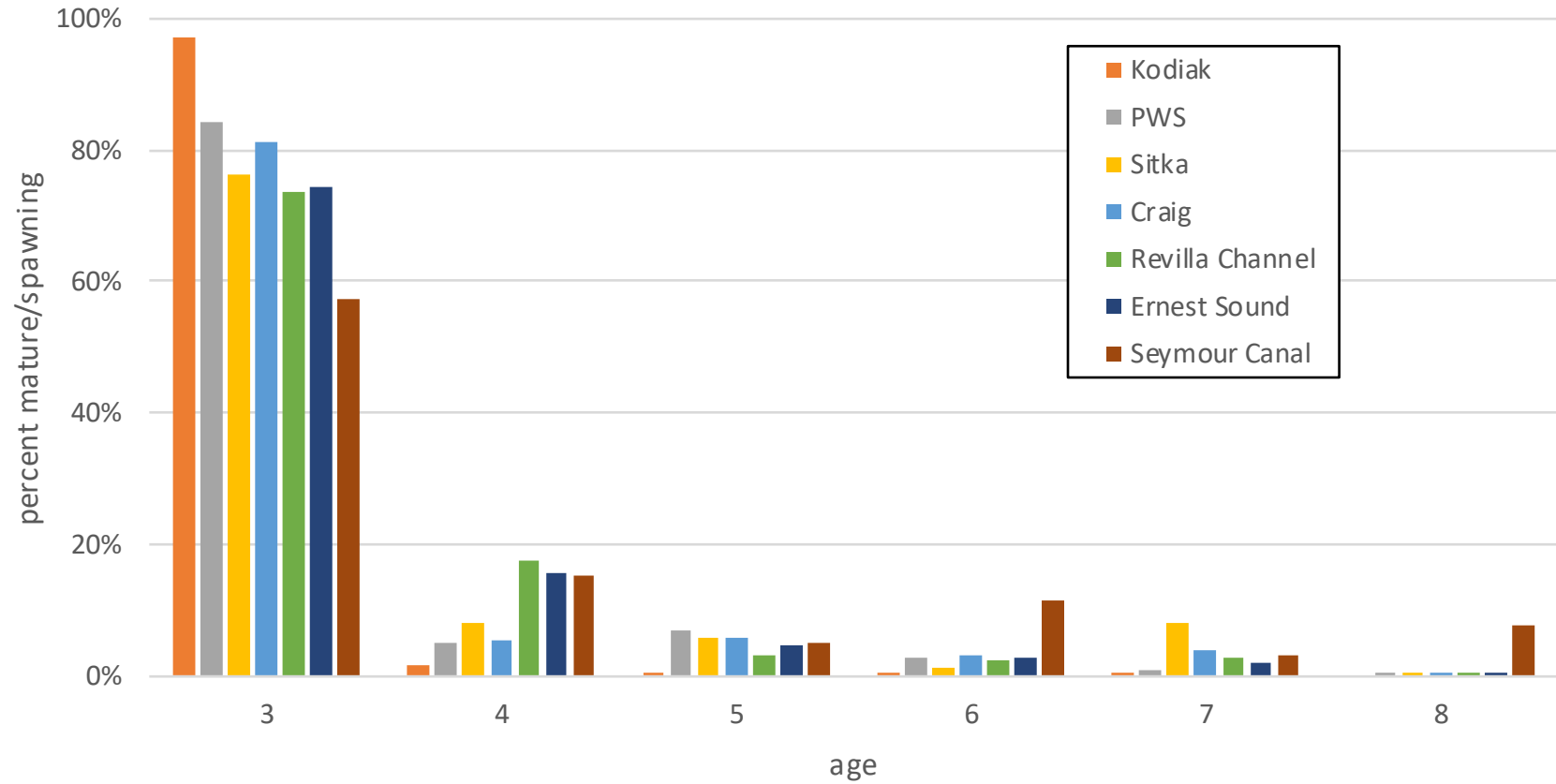
Overall age composition (shown as example)



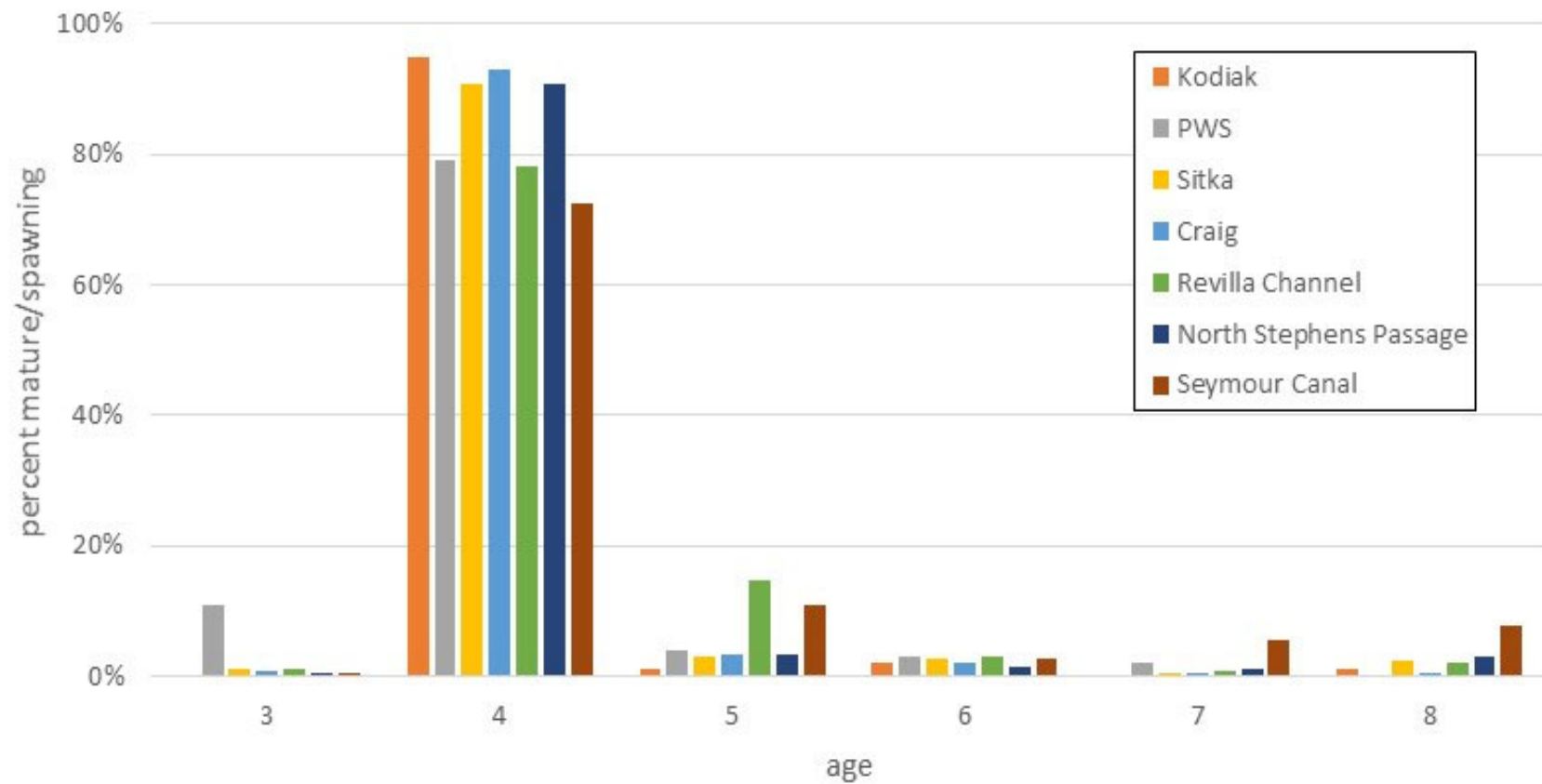
Herring Age Composition in 2019



Gulf of Alaska mature herring age composition in 2019

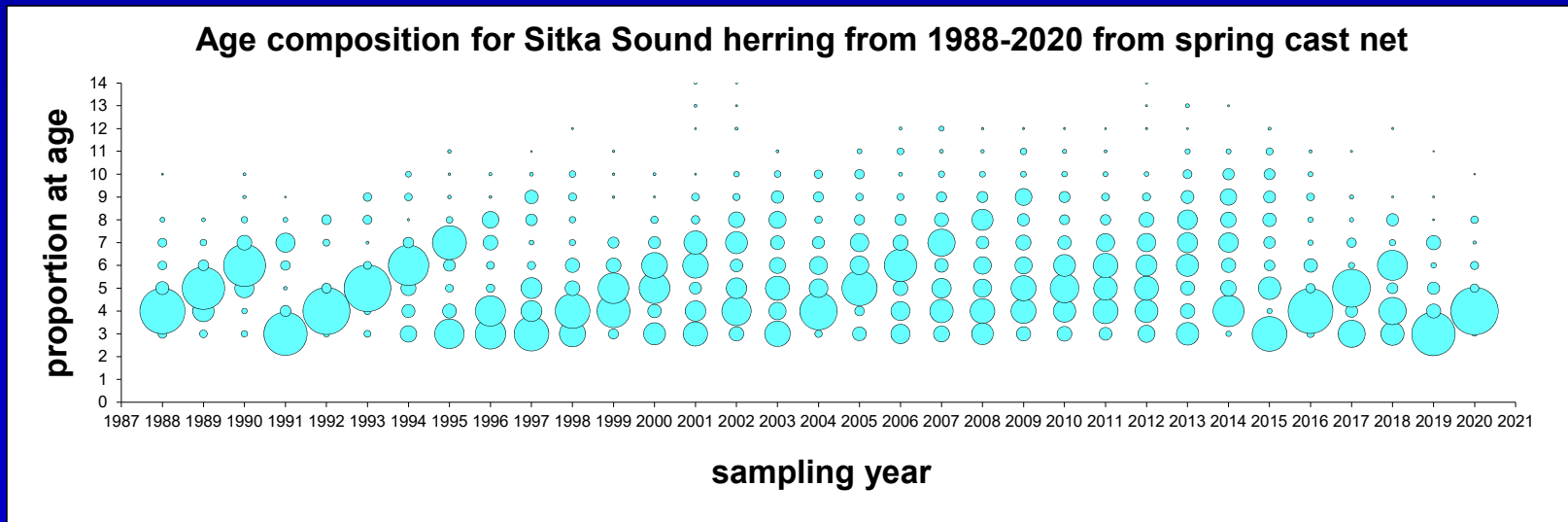
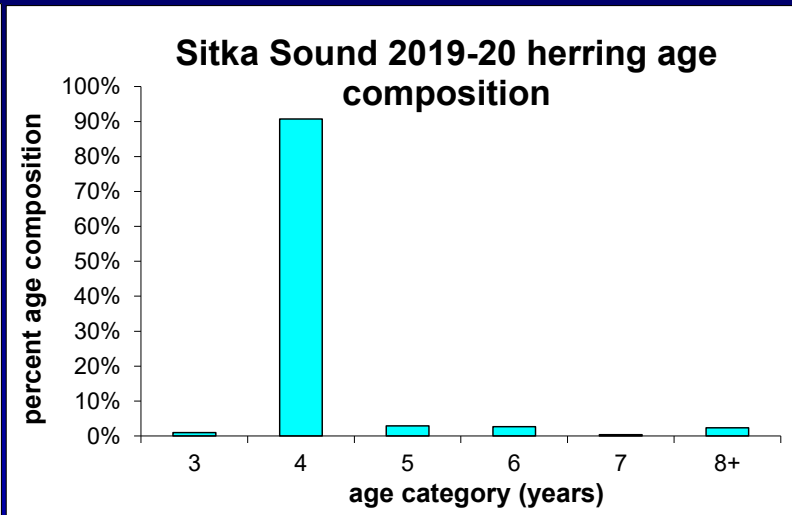
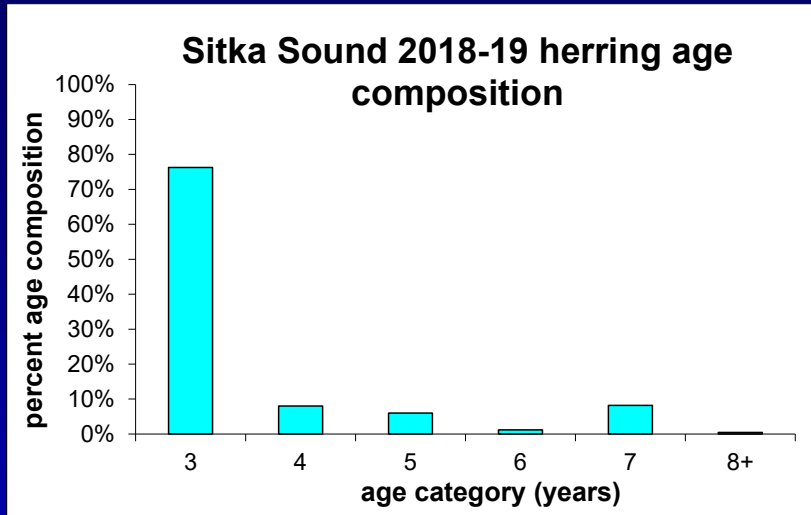


Gulf of Alaska mature herring age composition in 2020



Age composition

(observed, spawning population)



Size at age / Condition

Sitka Sound spawning population (cast net / observed)

