

Nearshore Ecosystem Monitoring in the GOA

- A monitoring program consisting of 9 protocols to sample nearshore habitats
- Geomorphology, algal and invertebrate abundance and size, marine bird and mammal abundance and distribution, diet, productivity, and mortality
- Black oystercatcher and sea otter focal vertebrates
- Designed for EVOS GEM program, adopted by NPS SW AK network of Parks for “Vital Signs” program
- Implemented in Katmai in 07, Kenai scheduled in 08
- Century time horizon

Marine Bird and Mammal Survey 2006

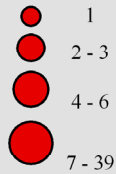
Sea Otter Pups

COUNT

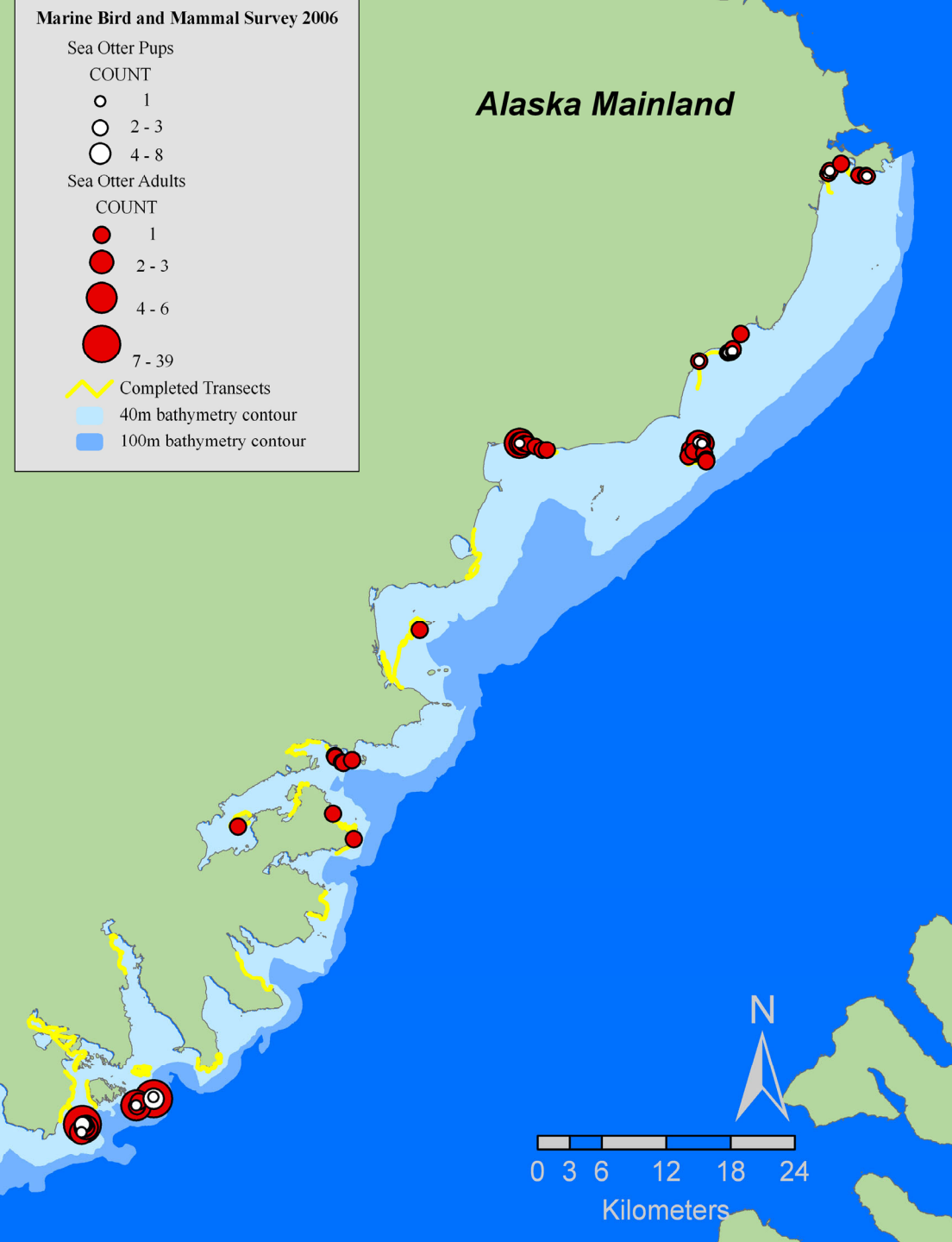
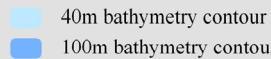


Sea Otter Adults

COUNT



Completed Transects



2006 sea otter abundance and distribution

24 systematically located coastal tx, 200 m wide (20% of ~637 km of coastline sampled)

➤ Mean length 6.5 km range 1.2-16.5 km

➤ Mean sea otter density = 6.2/km² (se = 2.8)

➤ Range = 0 – 51.4/km²

➤ 14 of 24 tx w/o sea otters

2006 sea otter carcass abundance and distribution

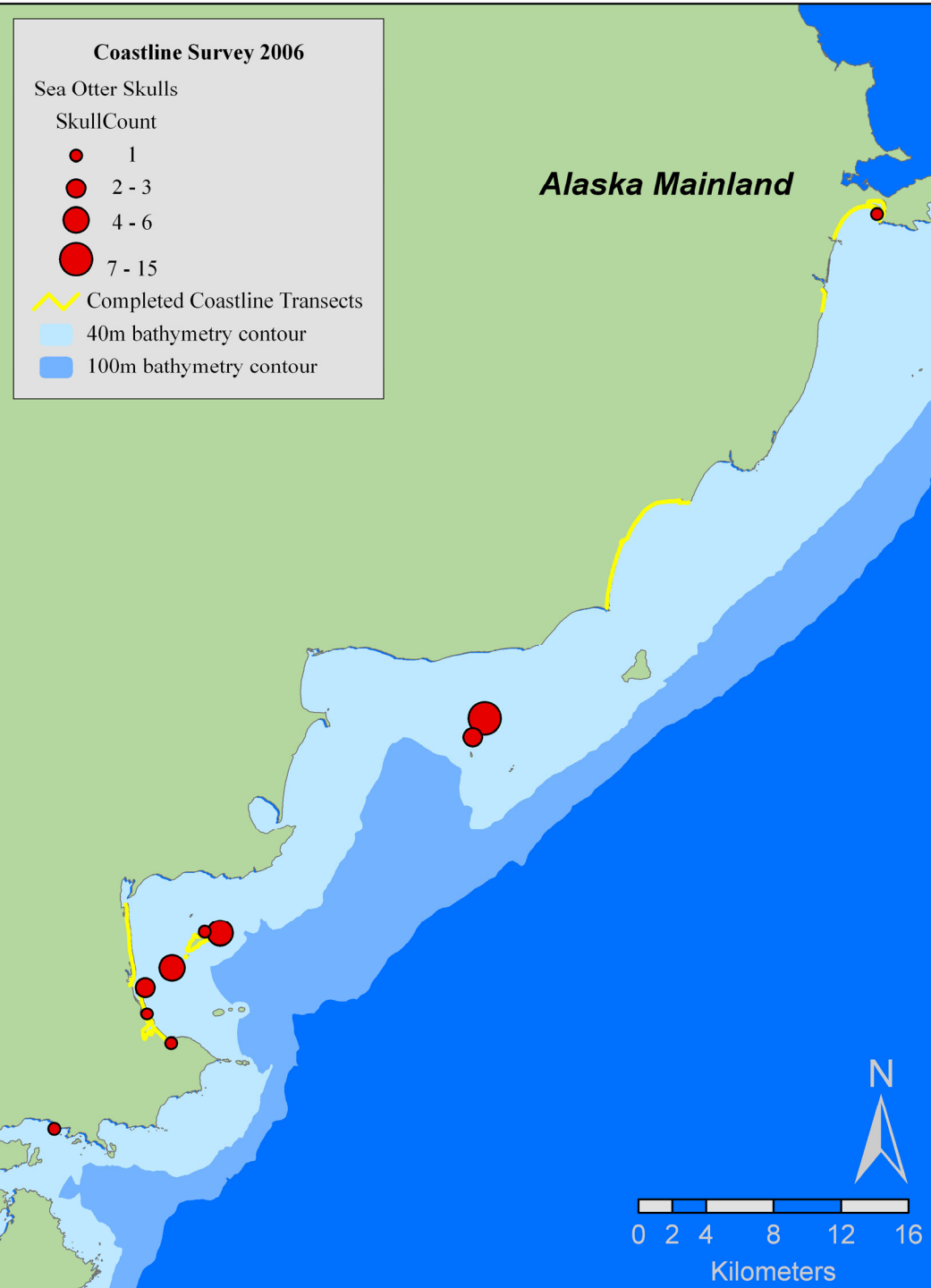
➤ 21 km of shoreline surveyed

➤ 37 sea otter carcasses recovered

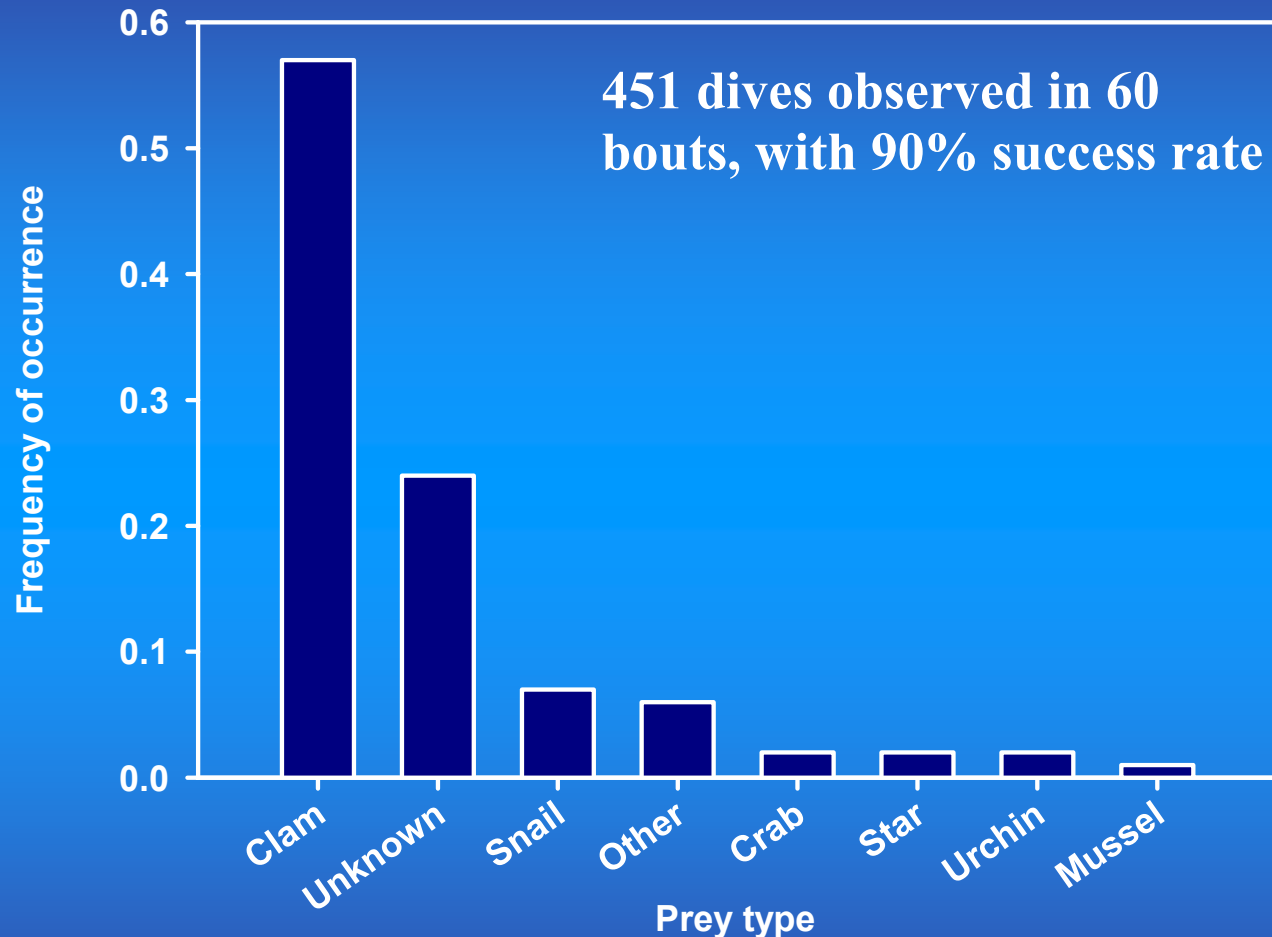
➤ 32 carcasses located on ~5 km of offshore island shoreline

➤ 5 carcasses on 16 km of mainland shoreline

➤ Mean carcass recovery rate
= 1.8 carcasses/km



Sea otter prey composition at Katmai coast, June 2006



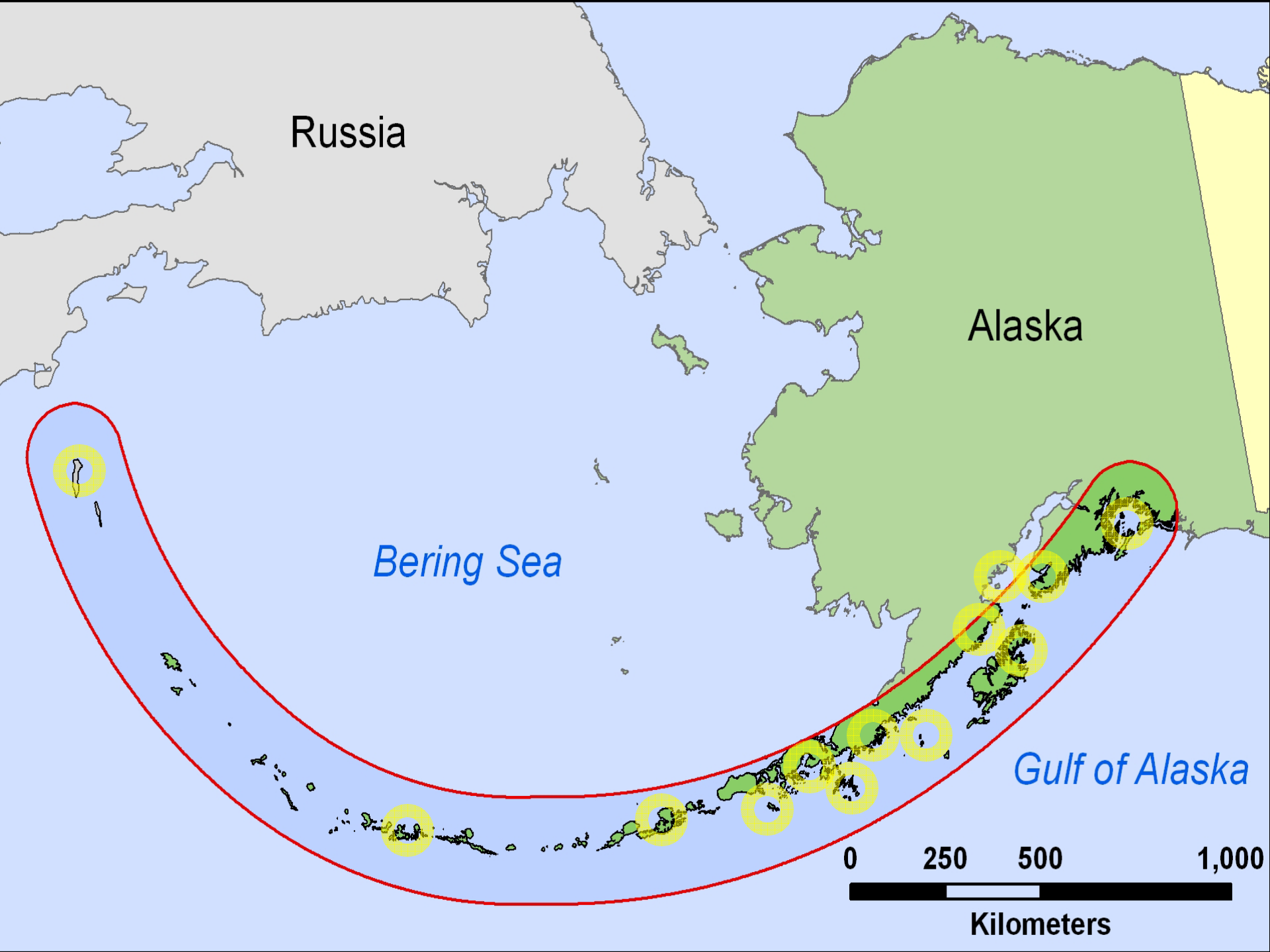
50% of clams were *Saxidomus*, and all crabs were *Telemssus*, identified snails were *Nucella*. Other prey includes 17 chitons (*Cryptochiton* and *Katharina*) and 7 *Octopus* sp.

Prey Number and Sizes from Katmai, June 2006

- Clams 2.1/d, Crab 1.2/d, All prey 2.3/d
- Mean clam size 52 mm (se=15.4)
- Mean crab size (se=19.2)
- Mean snail size 42 mm (se=17.8)
- Mean “other” size = 125 (se=41.8)

Delineating the geographic extent, cause, and constraints to recovery in the Threatened SW stock of sea otters in Alaska

- A Proposal to NPRB
- Concept: Use the characterization of the C/W Aleutian nearshore community (so density/dist, carcasses, diet, and benthic community structure) to delineate extent, similarity of cause, and constraints
- Phase one: Conduct intensive sampling of so population abundance/distribution (live and dead), diet, and benthic community structure at ~ 12 sites in 2007, including data from ongoing or recently completed work
- Phase two: Based on outcome of Phase one, select 3 sites for capture of individuals for assessment of condition, health, and disease in 2008



Russia

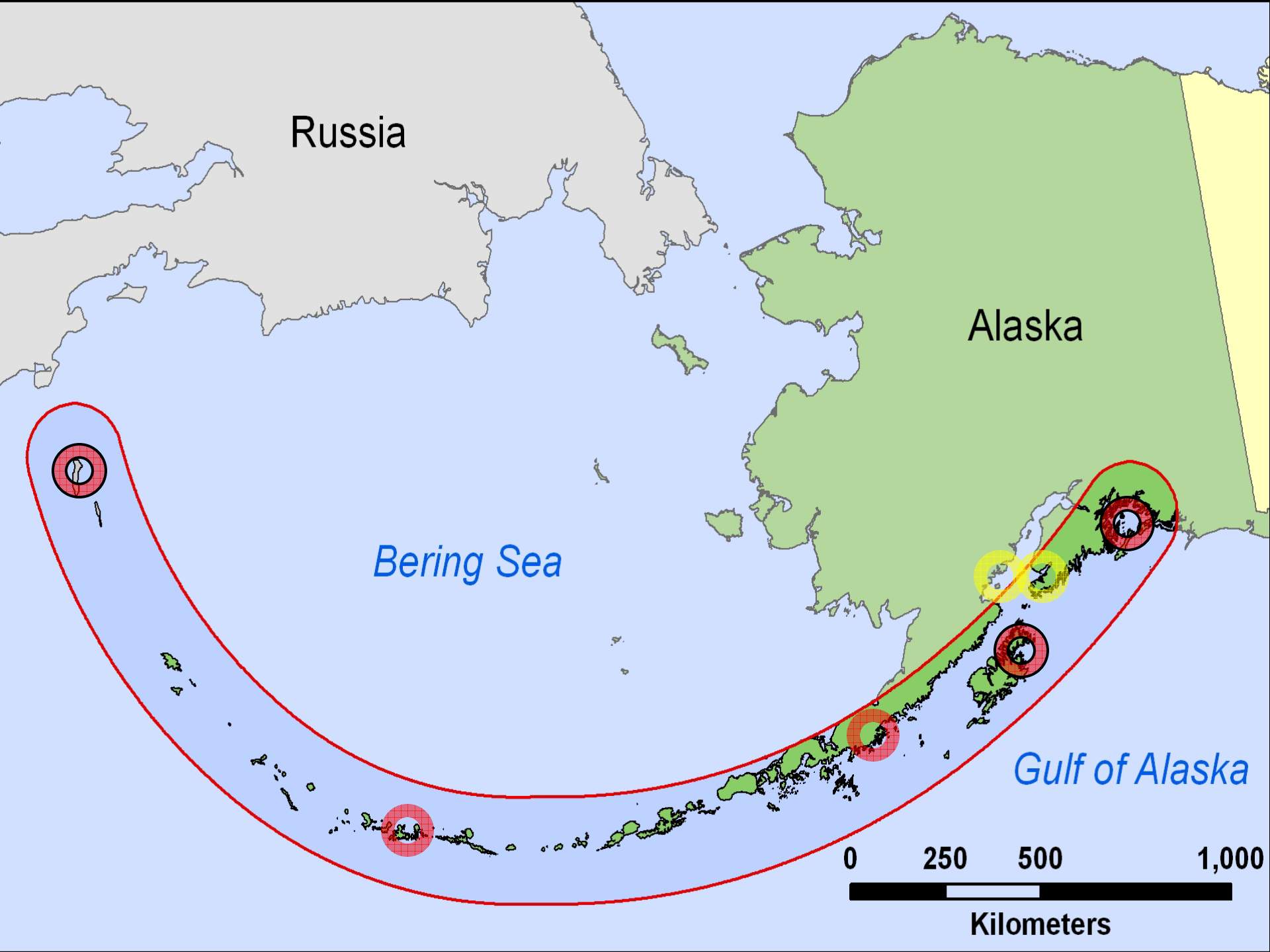
Alaska

Bering Sea

Gulf of Alaska

0 250 500 1,000

Kilometers



Locations and data collection protocols SW AK sea otters 2007/2008

	Bering	Cen. Aleut	Fox	Sanak	Pavlov	Shum	Chignik	Semidi	Kat	Kod	Kam	Kac	PWS
Density	X	X			X	X		X	X	X	X	X	X
Carcass	X	X							X		X		X
Prey	X	X											X
Energy		X							X	X			X
Disease	X	X								X			X