Polar bears and other ice-associated sea mammals in the Barents Sea

J. Aars, K.M Kovacs and C. Lydersen, Norwegian Polar Institute

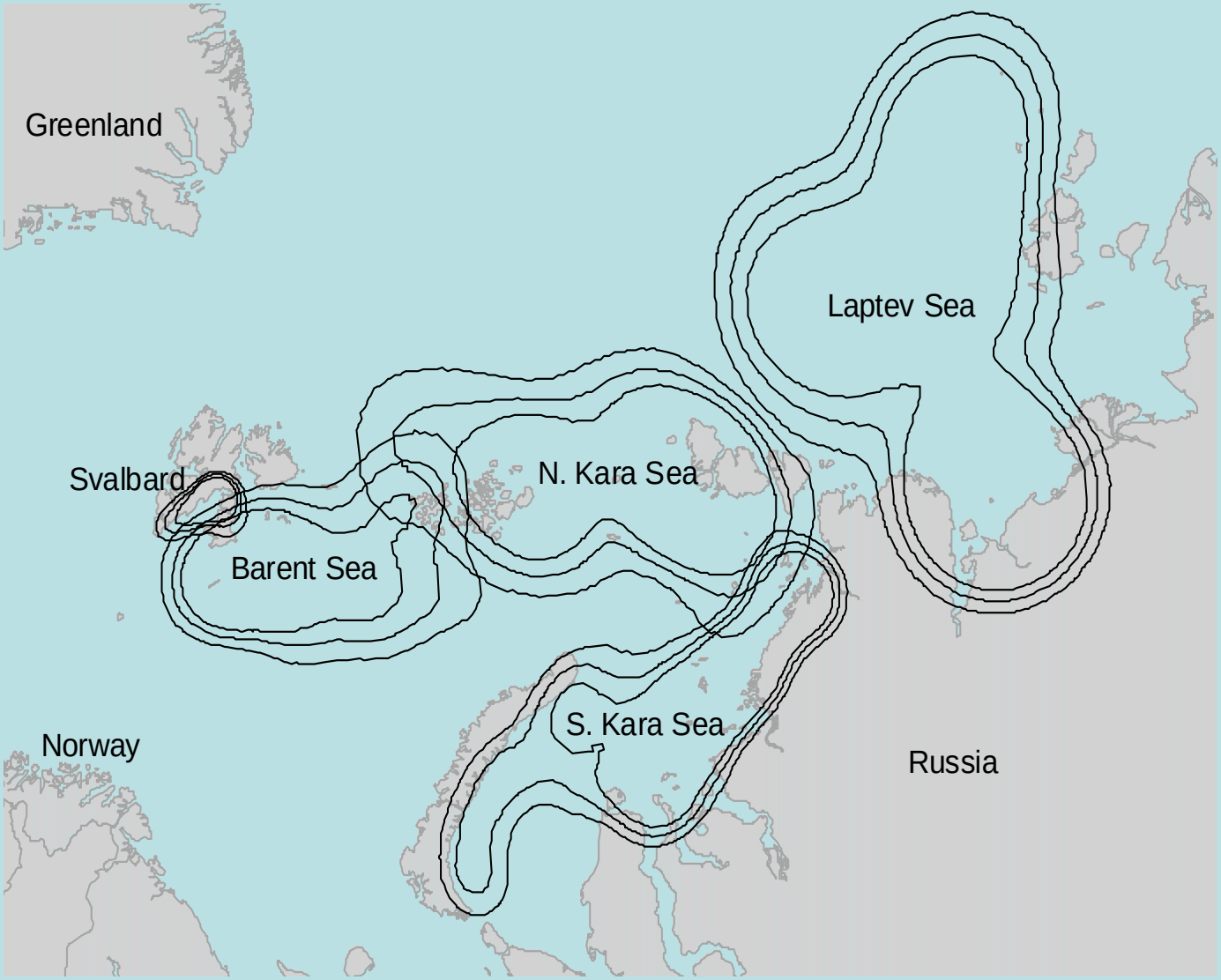
Studies on Norwegian – Russian populations

	Population estimate (Nor – Rus)	Genetic structure (Nor – Rus)	Movement (satellite tracking)
Polar bear	x	Performed	x
Walrus	Svalbard	Performed	x
Ringed seal	Svalbard Fjords	-	x
Beluga	-	Ongoing	Svalbard

Polar Bears

Female polar bear with GPS collar

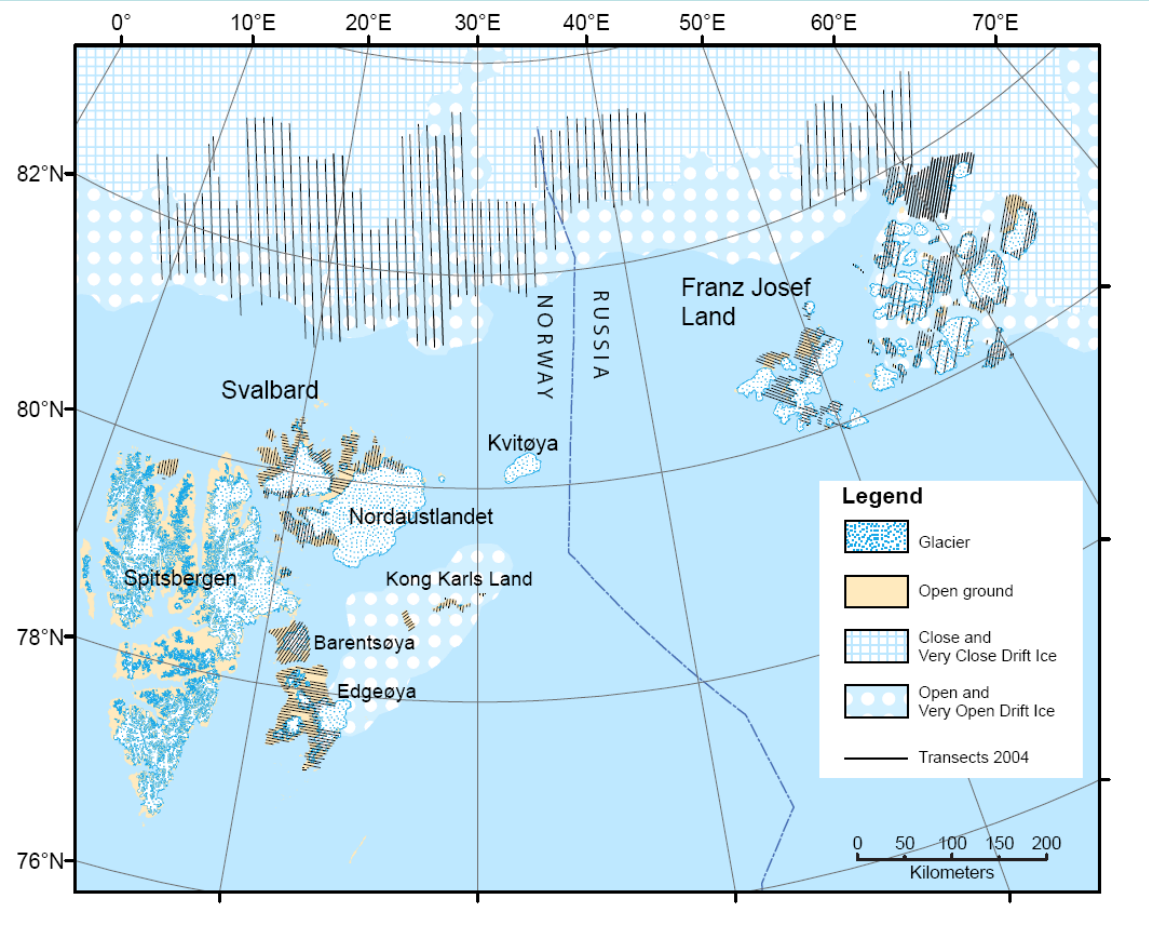
Polar bear subpopulations



Mauritzen et al. 2002

Polar bear line transect

(August 2004, 220 hrs with helicopter)

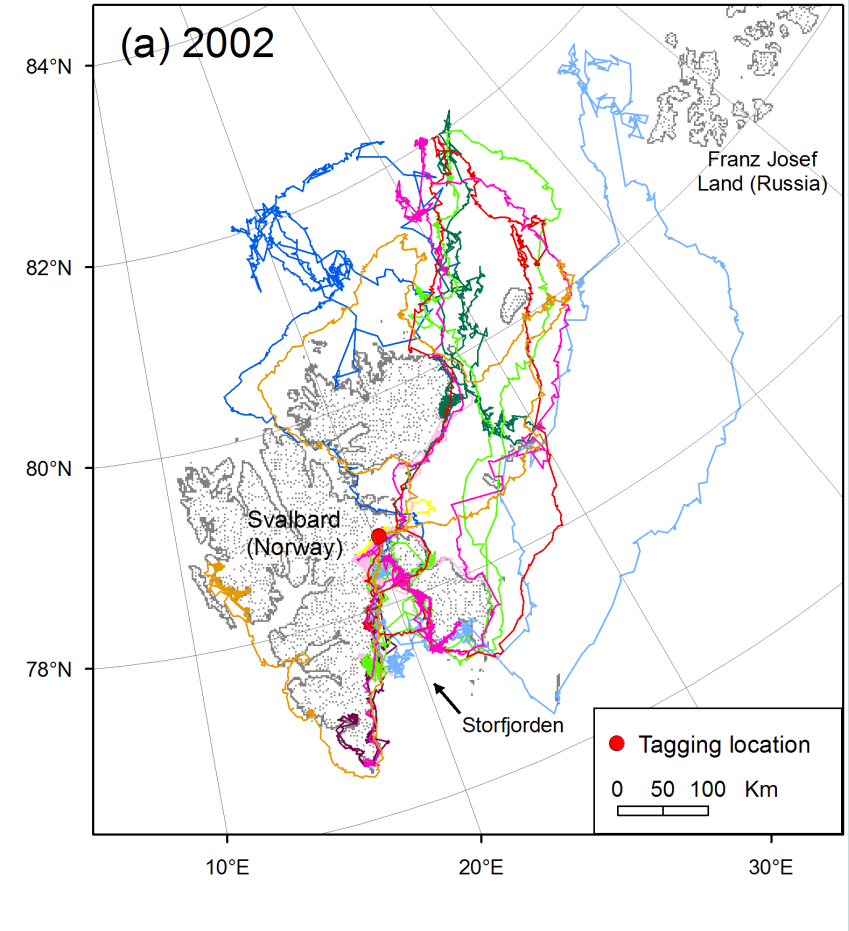


Barents sea polar bear subpopulation:

appr 3000 (2200 – 4000) polar bears

Ringed seal
Phoca hispida

Ringed seal movement, animals marked in Svalbard

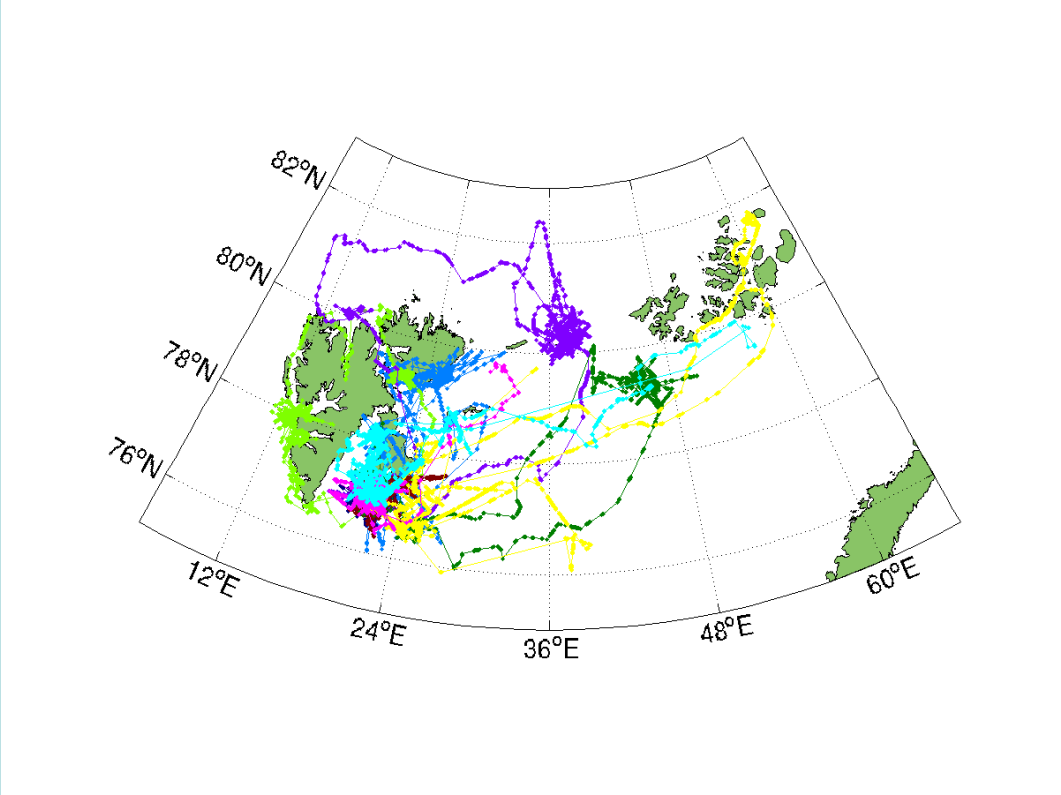


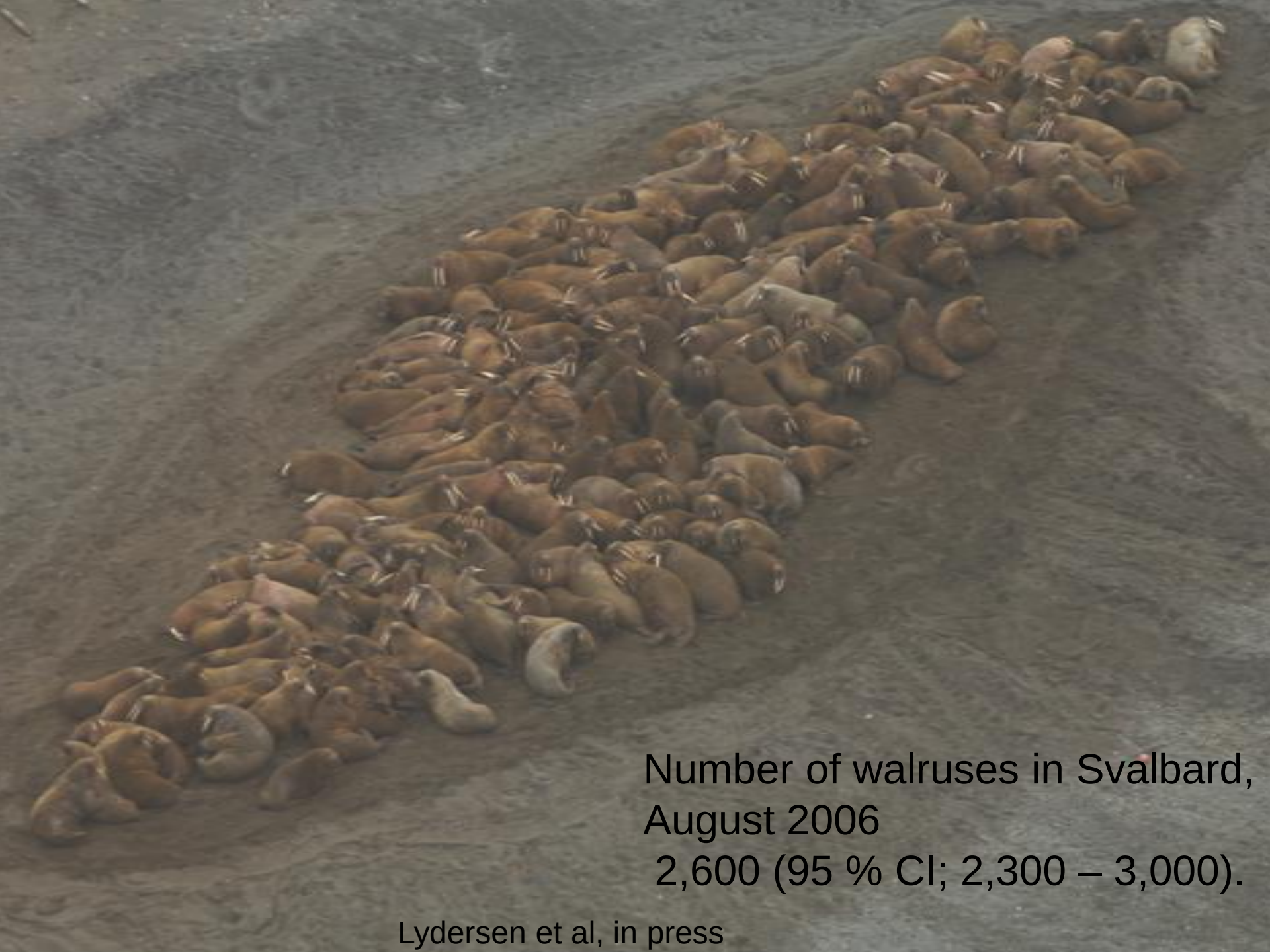
Freitas K. et al., manuscript

7,600 (95% CI 6,400-9,100)
Spitsbergen's fjords (moulting period)
Krafft et al. 2006

Walrus

Walrus track, male walruses move to Russian Arctic to mate



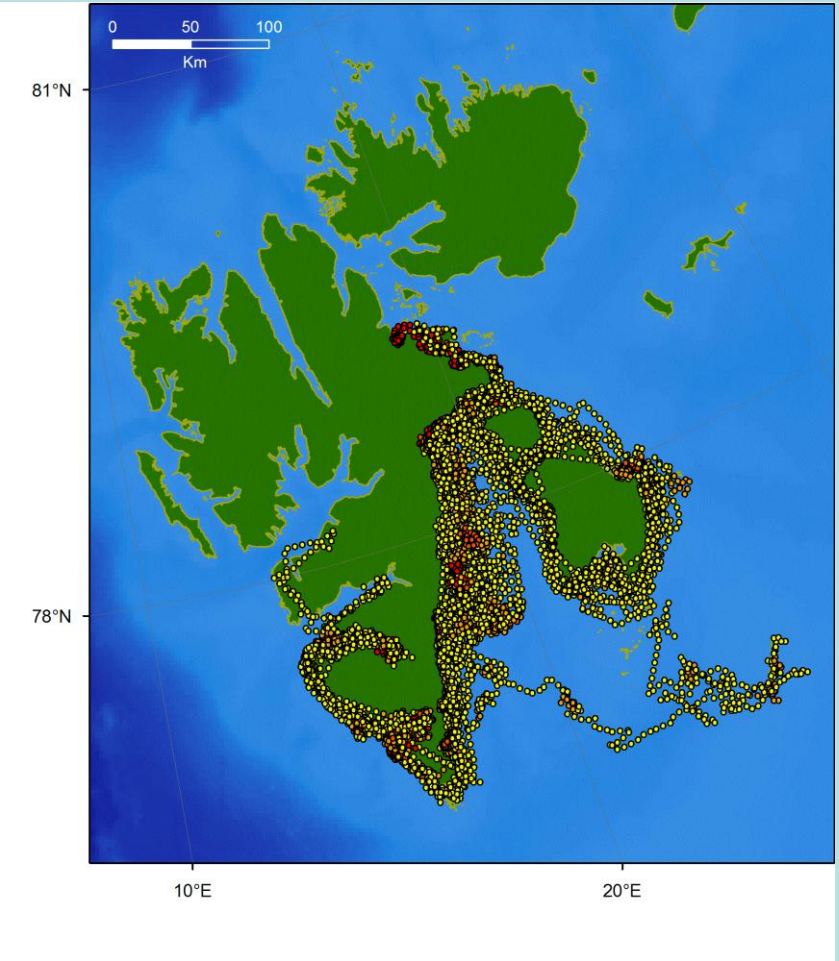


Number of walruses in Svalbard, August 2006
2,600 (95 % CI; 2,300 – 3,000).

Lydersen et al, in press

Beluga with satellite tag ready to get seaborn

Beluga, some months of tracks with very local movement



Some conclusion:

- Polar bear Barents Sea: regular movement Svalbard, Franz Josef Land, Ice edge, and overlap with Kara Sea area.
- Ringed Seal: Seals from Svalbard move over to Franz Josef Land and ice edge
- Walrus: males ”only” in Svalbard, mate with females at Franz Josef Land
- Beluga: Relative high structure?

What does genetics tell?

(Nor – Rus)

Polar bears: LOW structure (also to other areas)

Ringed seals: -

Walrus: LOW structure

Beluga: study ongoing