A landscape photograph showing a wetland area with a wooden structure, possibly a birdhouse or observation tower, and a body of water in the foreground. The structure is a conical frame made of wooden poles, with several small, dark, triangular openings. The water in the foreground is calm, reflecting the structure and the sky. The background is a flat, grassy plain under a clear sky.

Greetings from the land of four
loon species: trends, densities,
distribution and habitat use
of *Gavia adamsii*, *G. arctica*, *G.*
pacifica and *G. stellata* in West
Chukotka, Russia

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Loon & Diver Workshop, Tvarminne Finland, 21–22 September 2013

Study area



Methods

▶ Nesting period

- ✓ Nest density
- ✓ Breeding chronology
- ✓ Clutch size
- ✓ Nest success

▶ Post-nesting (brood rearing) period

- ✓ Densities along rivers, seacoast and in lake tundra
- ✓ Proportion of brood-rearing adults and of young

Nesting period 2002-13



Chaun Bay

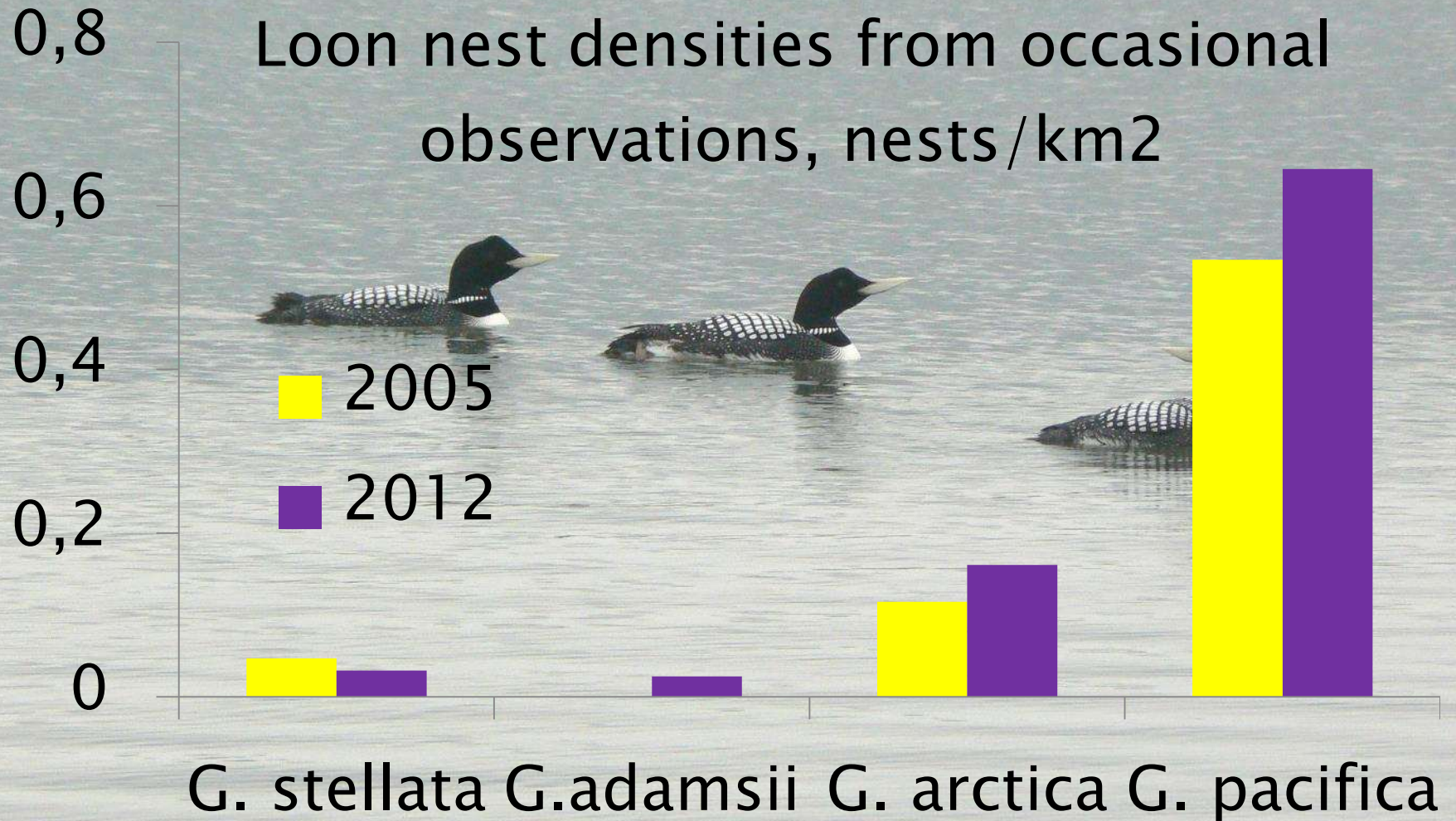
Ayopechan Isl. 90 km²,
40 nest search plots 1 km² each

Nesting period 2002-13

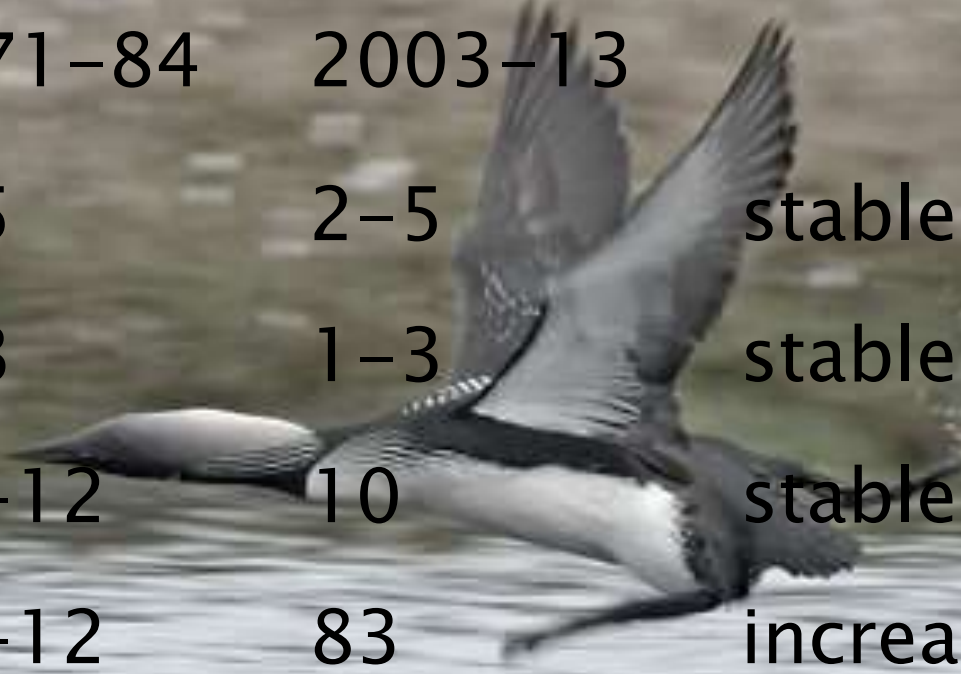


yopechan Isl. 90 km²,
10 nest search plots 1 km² each

Nest density dynamics, Ayopechan Isl.



Long-term trend



Species	# nests in 1971-84	# nests in 2003-13	trend
<i>G. stellata</i>	2-5	2-5	stable
<i>G. adamsii</i>	1-3	1-3	stable
<i>G. arctica</i>	10-12	10	stable
<i>G. pacifica</i>	10-12	83	increase

ARLO/PALO ratio

❖ 1971-84 - 1:1 (Krechmar et al 1991)

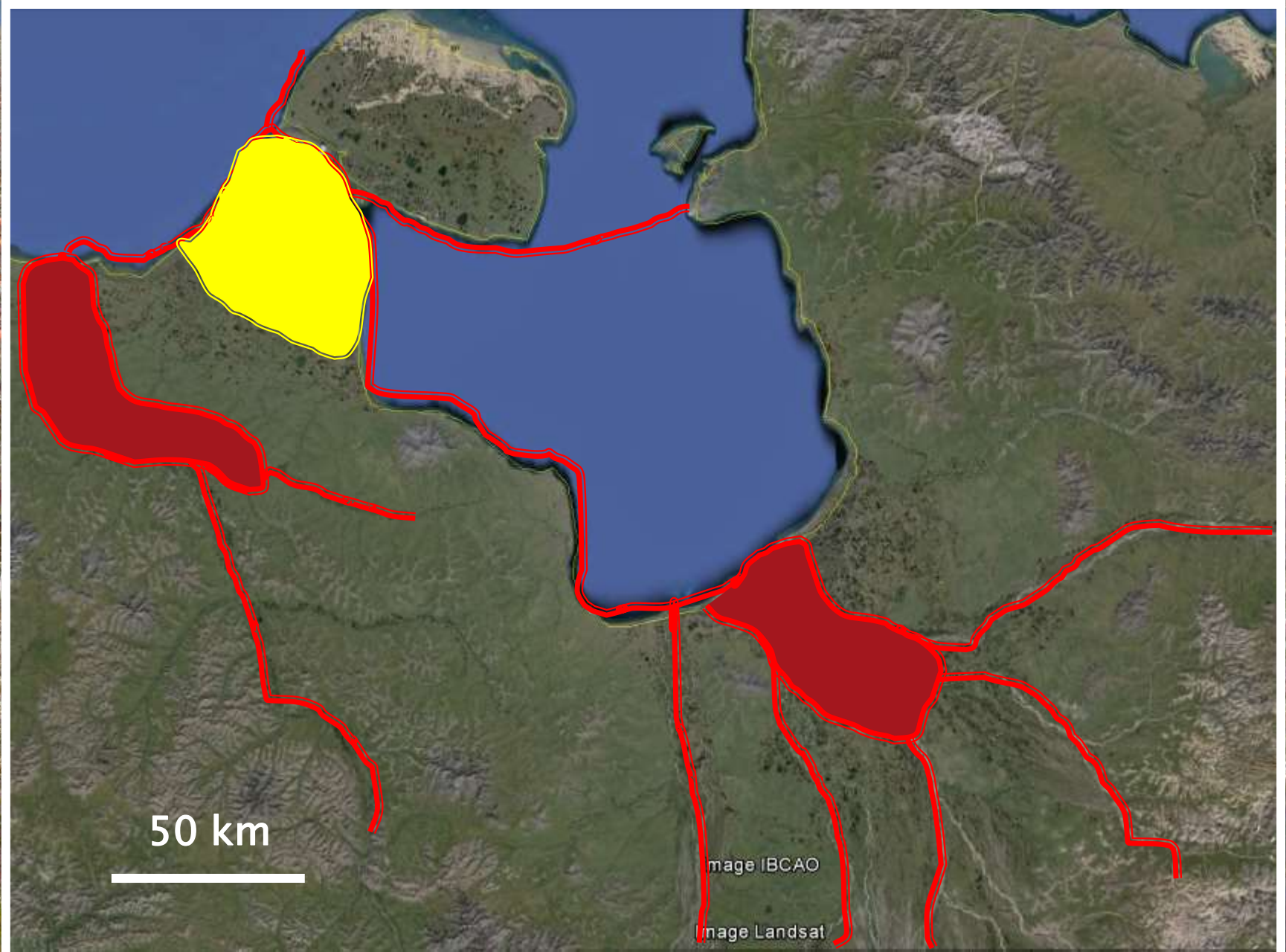
❖ 2003-13 - 1:6.3

Nest success on Ayopechan Isl.

Species	Period	Apparent nest success, %
G. adamsii	2008-13	40.0
G. arctica	2012-13	27.3
G. pacifica	2011-13	21.7
G. stellata	2003-13	12.5

Two loons are swimming in the water, their heads and backs visible above the surface. They are positioned in the lower middle of the frame, partially overlapping the text of the table.

Post-nesting period 2002-13



Density=0.436 birds/km²



Density=0.436 birds / km²



Image: IBCAO

Density=0.676 birds /km²



Density = 0.000 birds / km²



Image: IBCAO

Don't worry on Red-throats

- ▶ All mountain rivers
- ▶ Non-breeders and failed birds stay at sea



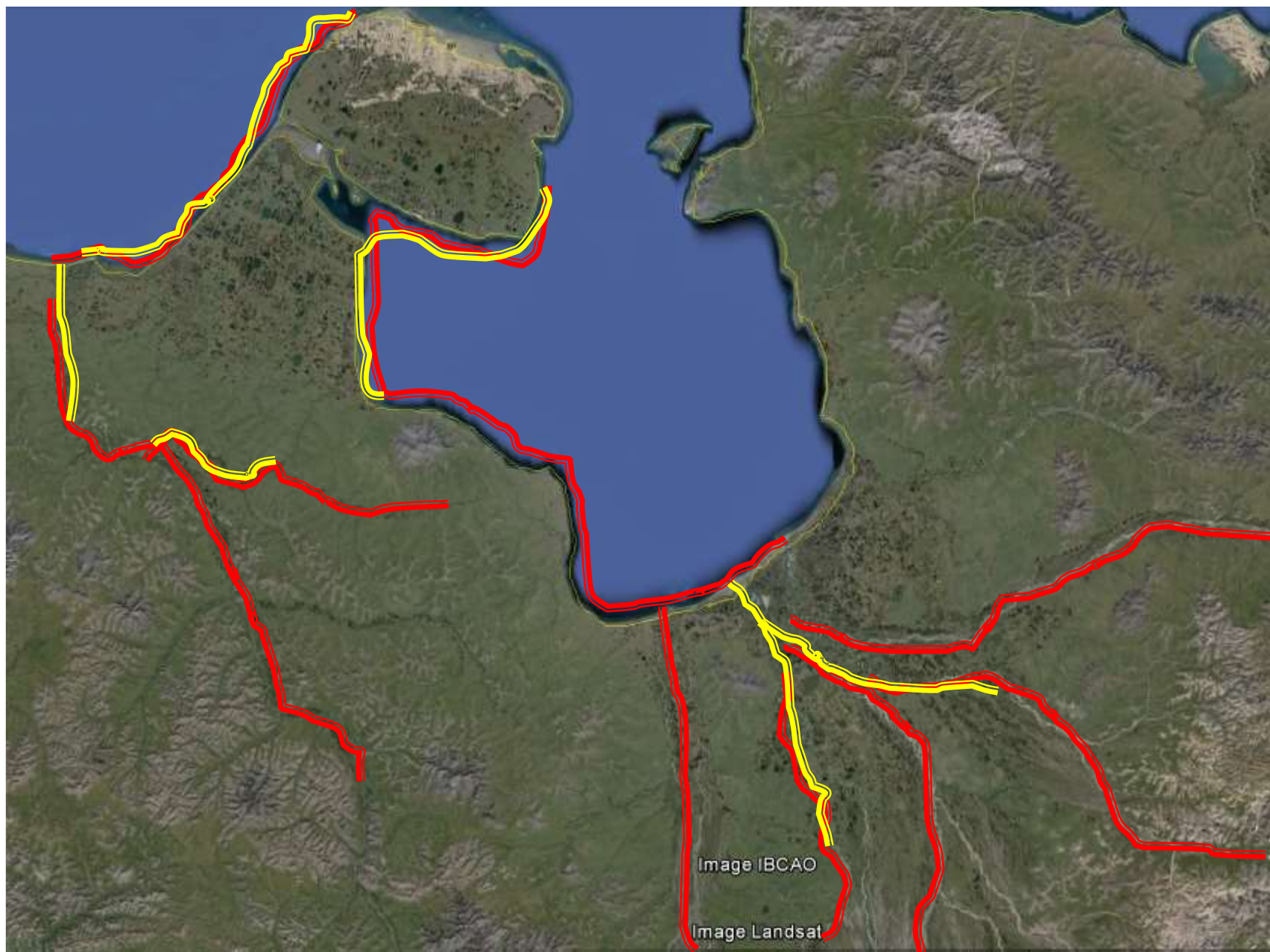


Image IBCAO

Image Landsat





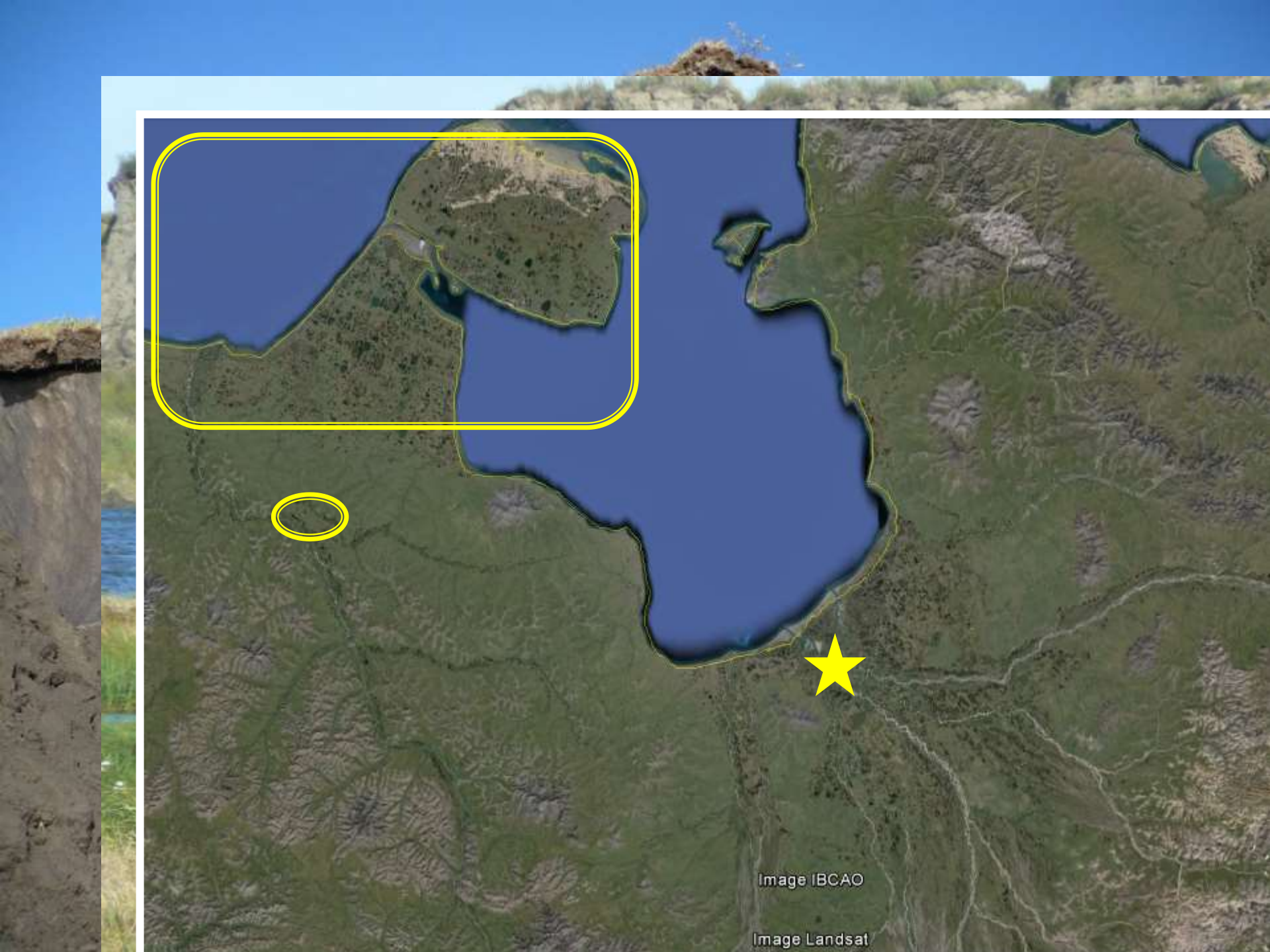


Image IBCAO

Image Landsat

Yellow-billed Loon post-breeding densities

Coastal plain, AK

0.07

Seward P, AK

0.058

Colville Delta, AK

0.17

Kent P, Can

0.16

Victoria Isl., Can

0.08

Kyttik P, Ru

0.988

Brood-rearing habitats

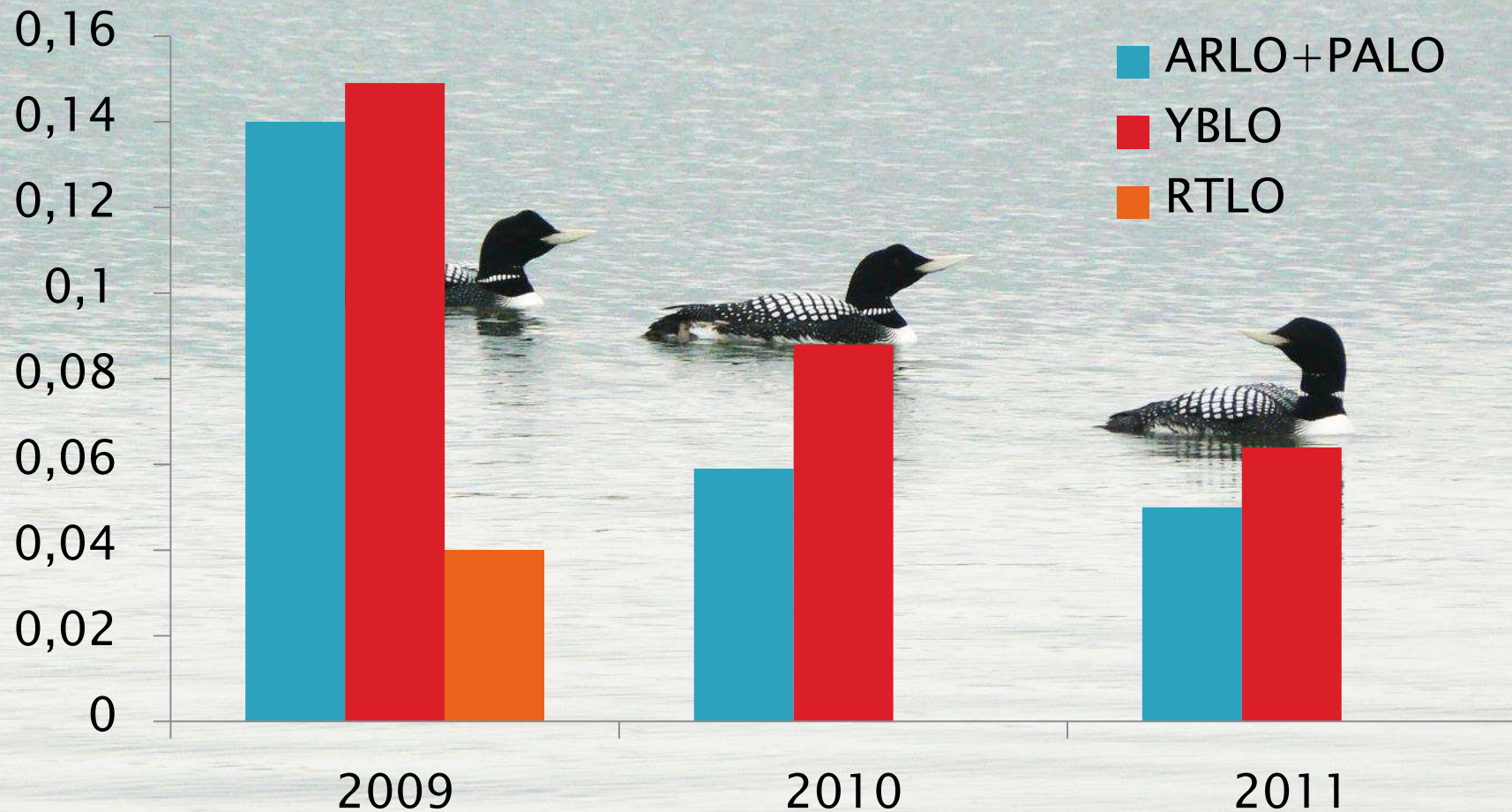
Species	Max lake dimension, km	SD max lake dimension	Significance
<i>G. adamsii</i>	0.958	0.264	ns
<i>G. arctica</i>	0.996	0.200	ns
<i>G. pacifica</i>	0.933	0.160	ns
<i>G. stellata</i>	0.096	0.013	<0.01

Brood-rearing on rivers:

RTLO – common, PALO – rare,

ARLO – extremely rare, YBLO – never

Dynamics of brood density on Kyttyk P, broods/km²



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Thank you for your attention

