

# Grey seals use their vision to locate buoys!

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## The aim

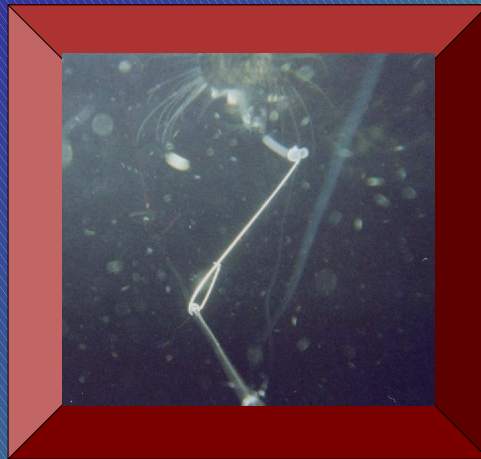
Grey seals (*Halichoerus grypus*) cause economic losses for professional fishermen when taking their catch and destroying their fishing gears<sup>1</sup>. Do grey seals use their vision to locate buoys, representing fishing gears? Do the buoy size and colour matter?

## Conclusion

- ✓ Grey seals use their vision to locate buoys!
- ✓ Size matter; larger buoys are more easily discovered by seals.
- ✓ Amount of precipitation also influences the detection of buoys.
- ✓ Colour of the buoy does not matter.

## Method

- In two areas in the Baltic Sea; Nävekvarn 29/6 - 25/8, 2004, and Skärså, 25/9 - 1/11, 2004.
- Four types of red buoys with different diameters, baited with fresh herring (*Clupea harengus*), were used.
- 1/3 of the buoys were equipped with a camera trap to verify that seals took the baits
- Buoys were checked once a day and moved if baits were taken.
- One buoy size was compared with white buoys<sup>2</sup>.
- The influence of other parameters were also tested



Grey seal taking bait

## Results

- Frequency of taken baits significantly increased with buoy size (Figure 1) according to a logistic regression ( $p=0.003$ ).
- Precipitation ( $p=0.0006$ ), amount of clouds ( $p=0.0184$ ) and the soak time for the buoy ( $p=0.0025$ ) had a significant effect on the frequency of taken baits
- Precipitation significantly correlated with amount of clouds ( $p=0.003$ )
- In figure 2 the binomial 95 % confidence intervals show that there is no difference between the two colours.

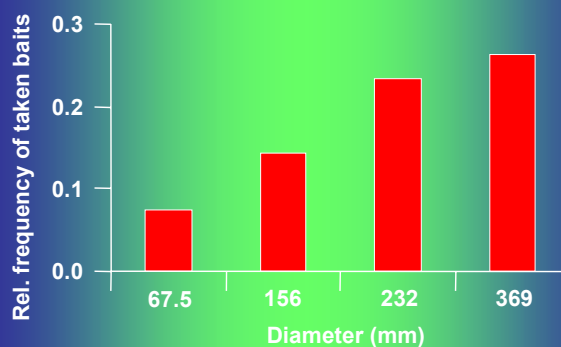


Figure 1. The relative frequency of taken baits vs. the buoy diameter

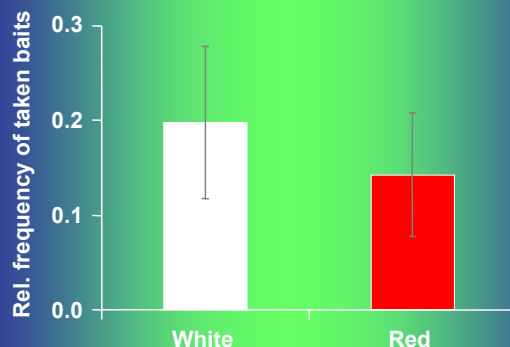


Figure 2. Red and white buoys of the same size and the 95 % confidence interval

<sup>1</sup>Westerberg H, Fjälling A & Martinsson A (2000) Salskador i det svenska fisket. (seal damage in the Swedish fishery) Fiskeriverket rapport 3, 4 – 38 (in Swedish with English summary)

<sup>2</sup>Beszczyniska M (2005) Do grey seals (*Halichoerus grypus*) use above water stimuli in foraging? Master of Science Thesis, Linköping University, Linköping, Sweden