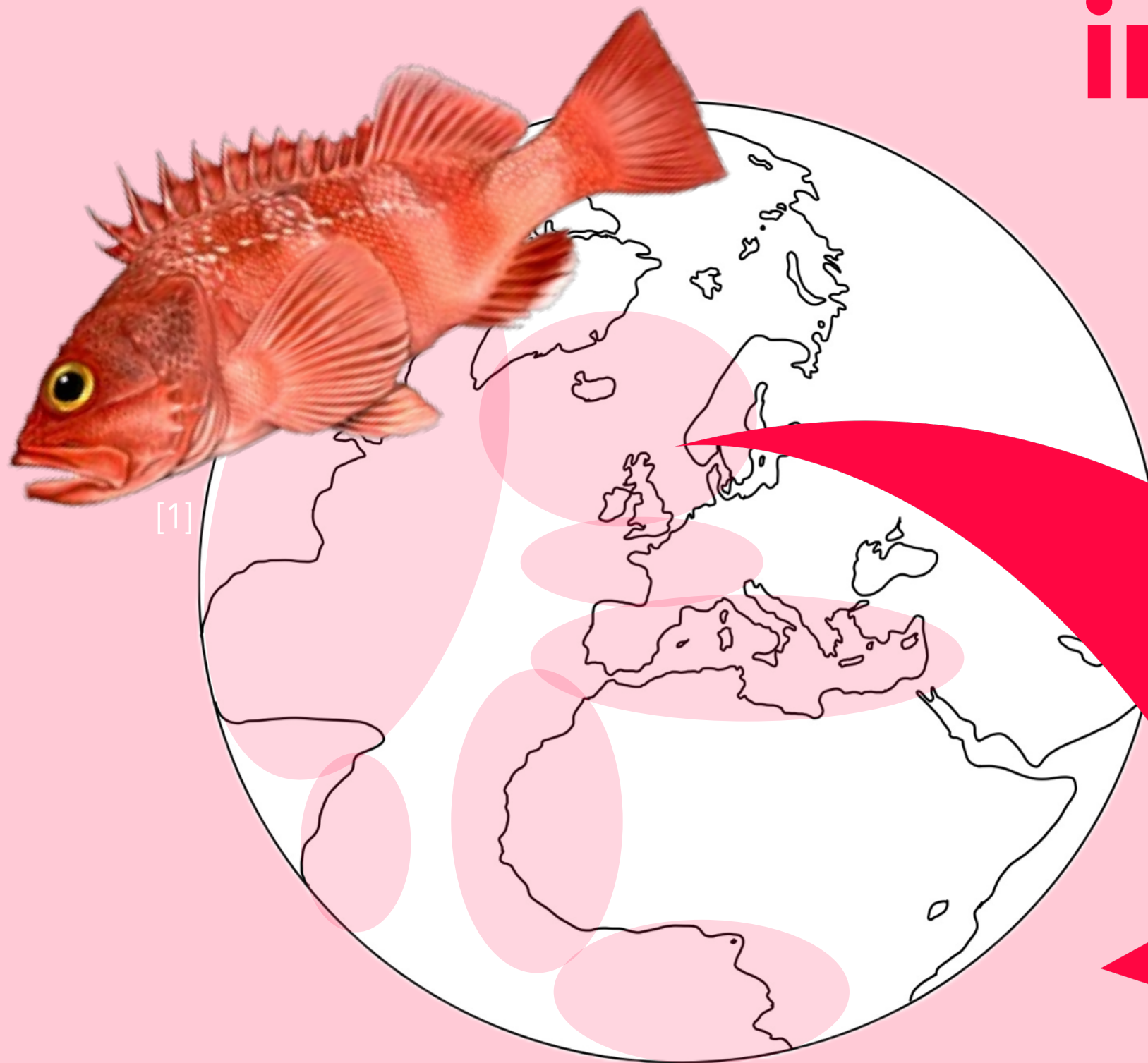


Bluemouth – needing an age-size relation in Norway



What we know

1

Bluemouth (*Helicolenus dactylopterus*) is a rock fish living in deeper coastal waters from Norway to Africa^[2]. This little studied fish is expected to expand its population in Norway along with the climate changes. Studies have found an age-size relation in more southern countries, but what about the Bluemouth that are living in our coastal waters?

1



Samples collected along the coast

2

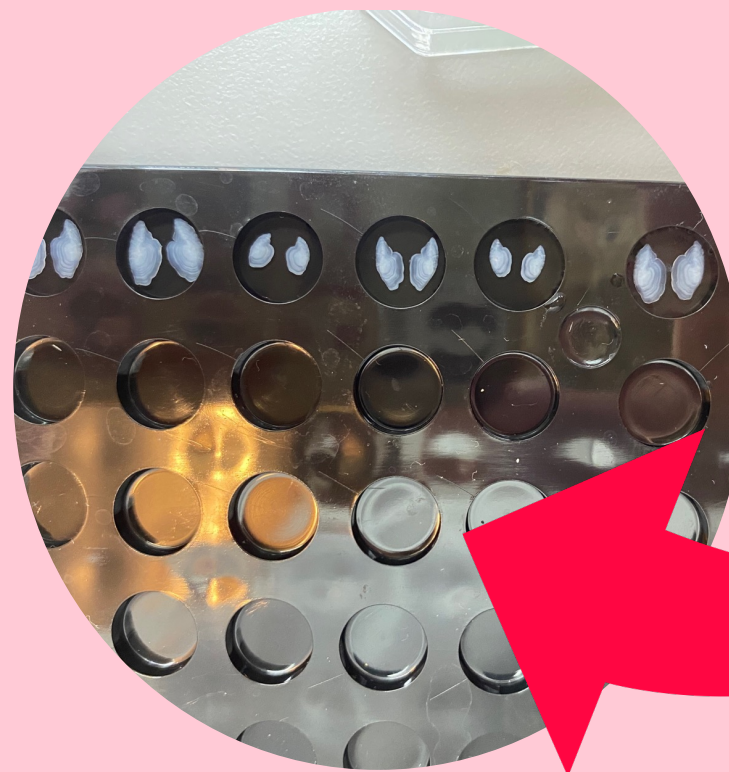
What we did

4



Take microscopic photos to determine age. Take dry weight of the otoliths

3



Measure length, weight, sex, gonad weight and extract otoliths

2



3

What did we find?

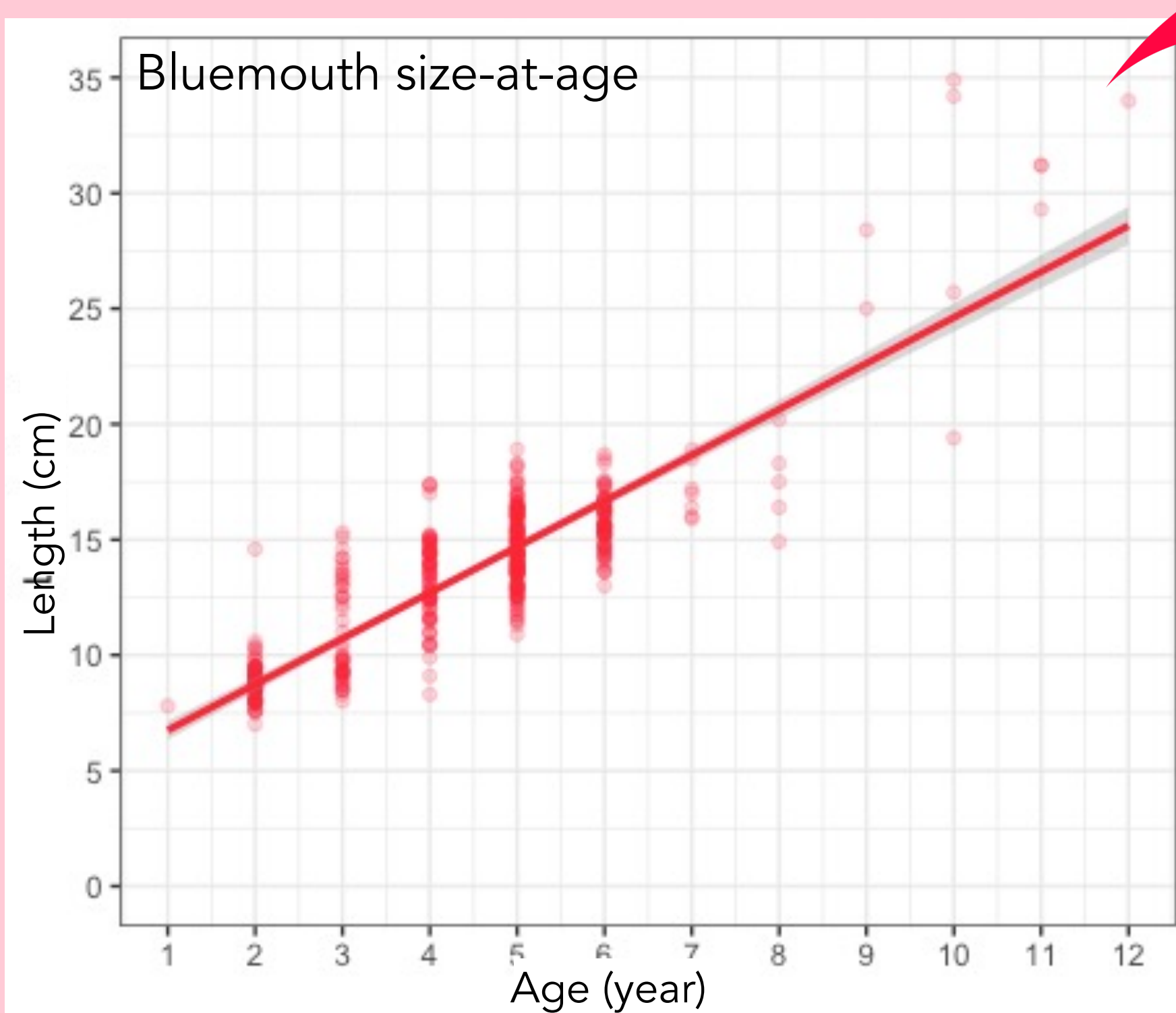


Fig. 1: Estimated size-at-age based on otolith age reading and measured length of 430 fish.

The results show that the Bluemouth living in coastal waters grow slower than the Bluemouth living in warmer waters like the Azores, Portugal^[3], or Carolina, USA^[4]. Indicating that this may be on the outer range of the species habitat.

The importance

4

The age-size relation found from these data, can help determine further growth of this species in the coastal waters in Norway. This can be important information for predicting the changes along our coast in the coming years. Especially in relation to the expected rise in ocean temperature.

References:

- [1] <https://www.fishbase.se/country/CountryList.php?ID=76&GenusName=Helicolenus&SpeciesName=dactylopterus>, read 10.11.22
 [2] Smith, & Heemstra, P. C. (1986). Smiths' sea fishes (6th ed., pp. xx, 1047). Springer. p. 463-478
 [3] Abecasis, Costa, A. R., Pereira, J. G., & Pinho, M. R. (2006). Age and growth of bluemouth, *Helicolenus dactylopterus* (Delaroche, 1809) from the Azores. Fisheries Research, 79(1), 148–154.
 [4] White, Wyanski, D. M., & Sedberry, G. R. (1998). Age, growth, and reproductive biology of the blackbelly rosefish from the Carolinas, U.S.A. Journal of Fish Biology, 53(6), 1274–1291.



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