

Beautiful carabids and where to find them

Mapping of carabid species in salt marshes along the western coast of Norway.

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1 Treasure hunting along the coast.

The Norwegian **salt marshes** are **hot-spot habitats** for biodiversity. On the hunt for the presumed extinct species *C.clathratus*, the BIO299 project opened the opportunity for further investigation of the understudied habitat. The locations we wanted to research were Brusand, Sola and Syre. Giving us the research question: **Which carabid species can be found in the salt marshes of Rogaland?**



2 Making a trap.

To collect an ideal amount of specimens, each location was provided with **pitfall traps** consisting of a 250mL cup filled with 70% ethanol and soap in **series of 10X3**. The traps were collected after **4 weeks** for species determination.

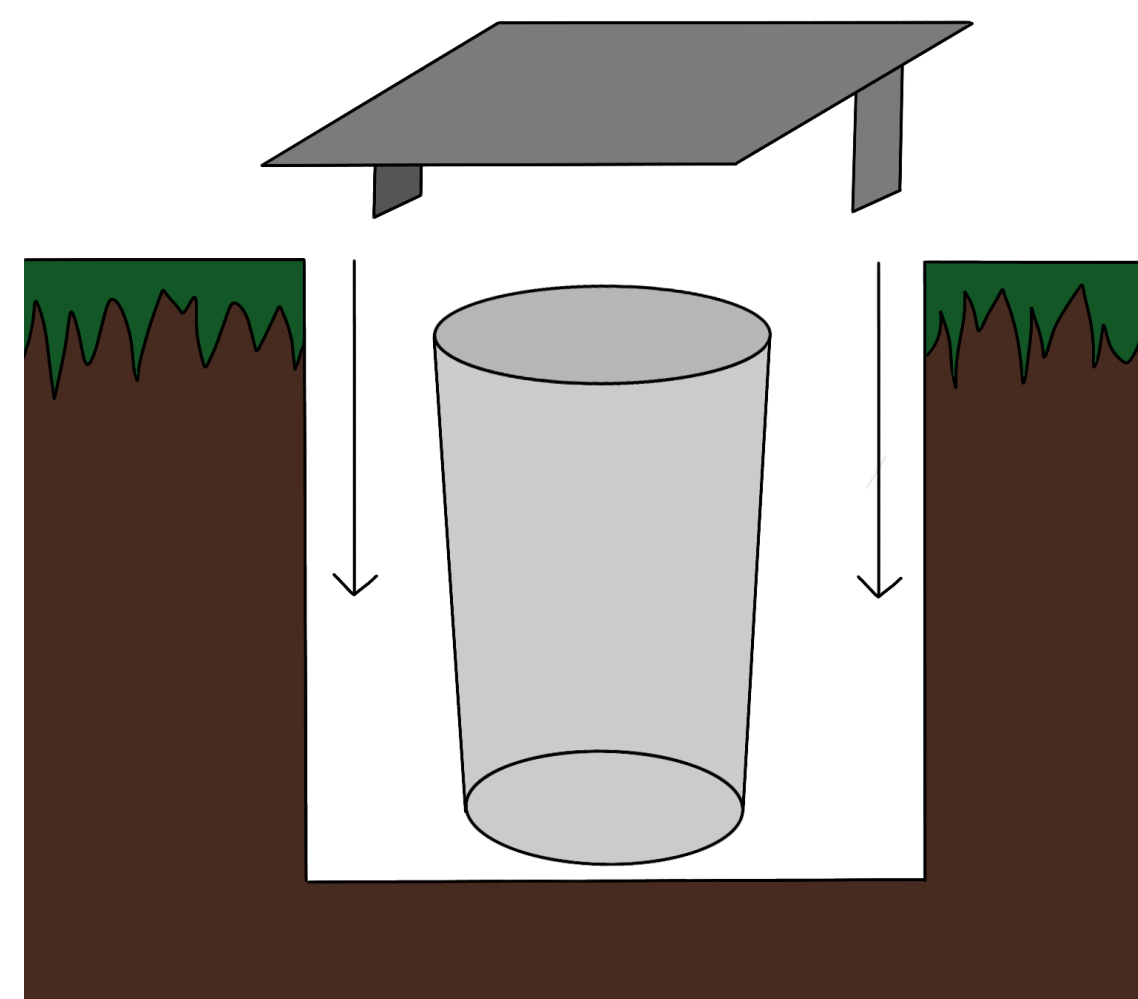


Fig. 1: Simple illustration of a pitfall trap used for specimen collection.

3 Analysing our results.

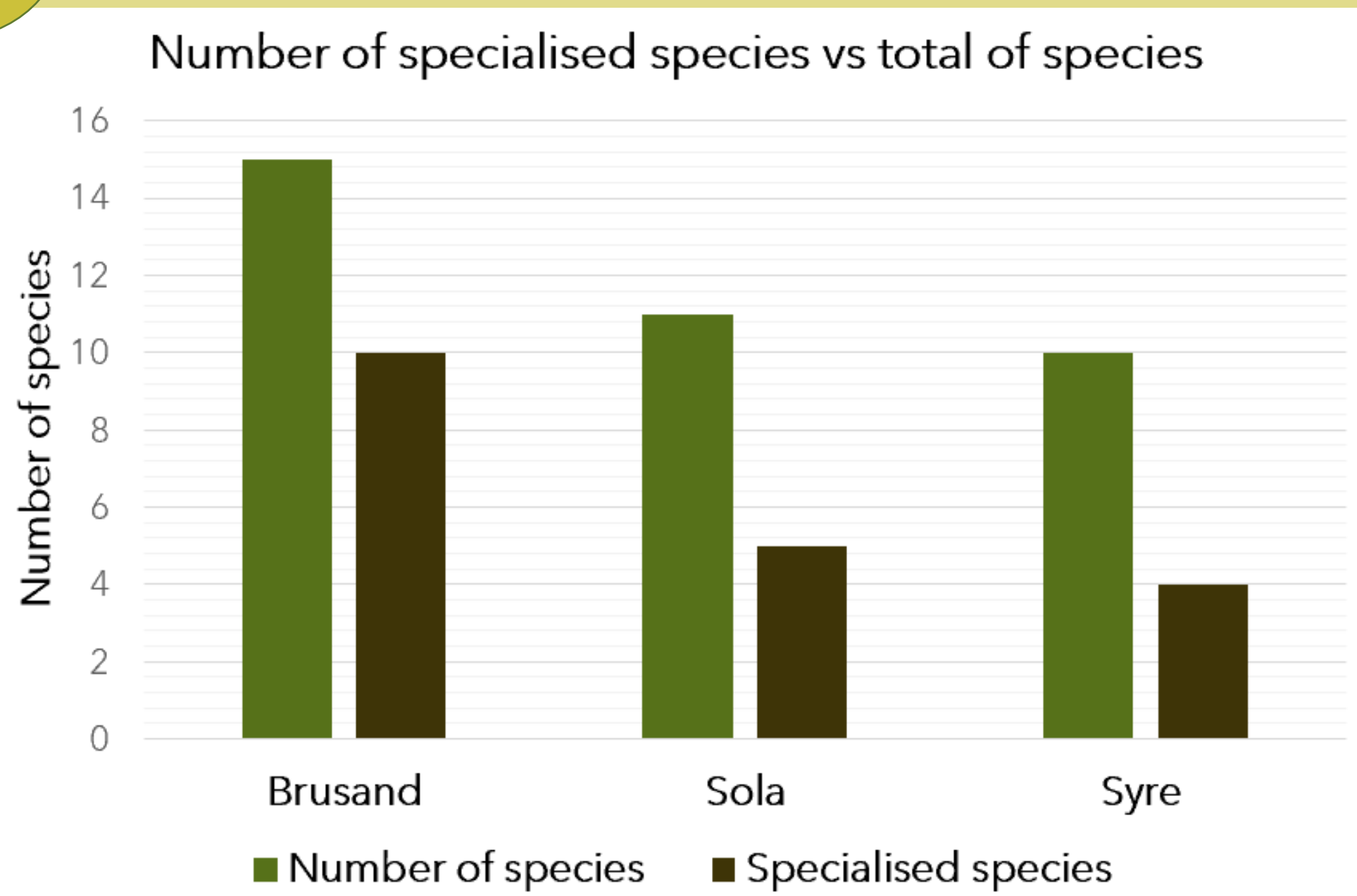


Fig. 2: Diagram illustrating the amount of species found per location vs how many of them were specialised to salt marshes or similar habitats.

Each location differs in diversity and abundance of individuals but they all have a relatively **high percentage of specialised species, up to as much as 66%**.

Some of the collected species were not specialists, but geographically isolated such as the **red listed species** *Amara spreta*.

The *Agonum* genus seem to be a characteristic genus for salt marshes. Out of all **locations Brusand turned out to be the most rich in biodiversity** with other very characteristic species such as *Blethisa multipunctata* and *Elaphrus cupreus*. No recorded sight of *C.clathratus*.

4 A take home message.

The results suggest that high percentages of the carabid population in salt marshes consists of **specialised species that depend on the habitat**. This knowledge, combined with the findings of geographically limited species, suggests that from an entomologic perspective, the **saltmarshes are habitats that we cannot afford to lose**. Further research on the correspondence between carabid diversity and changes in the salt-marsh habitats would be interesting to see in the future. Such studies could determine in which degree the salt marshes should be protected.

