

## Degree thesis project: Energy content in the diet of breeding seabirds

Common guillemots *Uria aalge* L. (Am. Eng.: Common Murre) are marine piscivorous top predators with a circumpolar Arctic distribution. Long-term studies have shown that they can be important indicators of changes in marine food webs and ecosystems. The largest Common guillemot colony in the Baltic Sea (~ 15 000 pairs) is at the island of Stora Karlsö. Since 1997, a long-term research program is following this colony and collects annual data on survival, reproduction and diet, among other things.

Obtaining high energy food is a prerequisite for successful breeding and survival in Common guillemots. Several studies have shown that the main food in the Baltic Sea is sprat *Sprattus sprattus*. New data however show that herring *Clupea harengus* can also be a significant part of the diet. The energy content of herring of different sizes, and the possible energy content differences between sprat and herring is today unknown. The knowledge is important for evaluating the conservation status of Common guillemots in the Baltic Sea and how much fish that must be left in the sea to ensure survival of seabirds.

The degree thesis focusses on analyzing the energy content of the prey fish of Common guillemots. The fish has already been collected by the Institute of Marine Research in Lysekil. The fish will be analyzed using a bomb calorimeter by the student. This work will take place in Ultuna, Uppsala. The data obtained will be analyzed statistically. The project is planned for Bachelors level (15 ECTS) but can be expanded into a Masters project as well (30 – 60 ECTS).

### Links

[www.balticseabird.com](http://www.balticseabird.com)  
[www.storakarlso.se](http://www.storakarlso.se)

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