

Eutrophication affects diversity of algae

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Phytoplankton provide the basis for the whole marine food chain. Credit: University of Gothenburg

Eutrophication of the seas may have an impact on genetic variation in algae, research at the University of Gothenburg shows.

Phytoplankton provide the basis for the whole [marine food chain](#). These microscopic organisms are common in coastal areas, all the way from the polar regions to the Equator, and multiply through cell division. If cells are present in the water mass in large numbers an algal bloom develops - a recurrent problem in Swedish seas and along Swedish coasts.

Causes of algal blooms

Researchers at the Department of Marine Ecology of the University of Gothenburg have long been interested in the development and causes of algal blooms. The doctoral student Karolina Härnström has focused in her thesis on diatoms, which are the largest single group of phytoplankton, and their occurrence in the eutrophicated Mariager Fjord in Jutland. The results show that different populations of a diatom species may have different growth and adaptability characteristics, and that the genetic variation of the algae may possibly be affected by eutrophication: the researchers found different types of populations during periods of heavy eutrophication in Mariager Fjord.

Little is known

"We know surprisingly little about the ecology of diatoms, about where the [cells](#) that give rise to blooms come from and whether it is the same populations that recurrently bloom in a particular location or whether it differs between seasons. My research may contribute to answering these questions, and perhaps increase knowledge of how [algal blooms](#) are affected by environmental changes and how the population dynamics of these [algae](#) appears in a microevolutionary perspective," says Härnström.

Source: University of Gothenburg ([news](#) : [web](#))

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