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Do *Nodularia spumigena* Blooms Force Back *Neogobius melanostomus* (the Round Goby) Invasion in the Gulf of Gdańsk?

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The degree to which fishes are affected by the toxin is difficult to predict, as it depends on the toxicity and duration of the toxic bloom. In spite of this fact it is possible to distinguish the possible risk: decreasing organism condition caused, to a great extent, by toxin accumulation in fish muscles, liver and gonads. In the Gulf of Gdańsk this problem seems to be even more emerging than in other open seas because cyanobacterial blooms often cover large areas of that sea.

The aim of the present study was to find out what is the impact of *Nodularia spumigena* on nonindigenous fish *Neogobius melanostomus* (the round goby) in the Gulf of Gdańsk. In the conducted laboratory experiments round goby individuals were treated with various concentrations of nodularin extracts.

The results show that in the group of fish exposed to nodularin longer than 24 hours, movement disorders were observed. The highest nodularin concentration was found in alimentary tract, gills, liver and gonads. The round gobies from all experimental sets had operculum and pectoral fin damage. Results obtained can be considered a possible factor limiting the expansion of the round goby in the Gulf of Gdańsk.

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