

Magnetic force microscopy of the ethmoid bones of migratory and non-migratory fishes

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For a long time it was believed that the biogenic magnetic nanoparticles (BMNs) in the ethmoid bones of fishes and birds are associated with navigation in the geomagnetic field. However, it was proven that BMNs don't affect the ability of migratory birds to orient in the Earth's magnetic field. It is relevant to check the presence of BMNs in organs of migratory and non-migratory fishes. The presence of BMNs was investigated in the samples of ethmoid bones of salmon, pike and silver carp by the method of magnetic force microscopy. As a result, the biological material of ethmoid bones of migratory and non-migratory fishes contain both separate BMNs and their chains, so BMNs in the ethmoid bone of fishes are not related to their ability to migrate in the geomagnetic field. This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 644348 (MagIC).

References:

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