THE UNIVERSITY of EDINBURGH

News Release

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Deep water coral reef faces growing threat from plastic pollution

Marine pollution, including fragments of fishing equipment and tiny pieces of plastic, has been found inside animals living on Scotland's only inshore deep-water coral reef.

The discovery, at the remote Mingulay Reef Complex off the west coast of Scotland, highlights how widespread ocean littering has become.

Tiny plastic fibres were found to have been eaten by animals living on the reef, including star fish and sea worms.

Plastic represents a new danger to the Mingulay reefs, a special area of conservation and a designated marine protected area, that is already threatened by climate change and habitat loss.

The discovery of microplastic particles and fibres in animals from this remote deep-water coral reef was made by a team of scientists from the University of Edinburgh, using preserved specimens from the last 16 years.

Levels of contamination identified in their findings will serve as a benchmark against which future studies can be compared. Their assessment would allow the EU to update its marine strategy and encourage similar audits of debris in nearby deep water areas.

Increased debris in the area could harm marine life, which may eat or become tangled in it. Plastic pollution may also cause habitat damage or introduce non-native species into the area.

The study, published in *Frontiers in Marine Science,* was carried out as part of a Masters degree at the University of Edinburgh, in collaboration with the University of Manchester and was supported by the ATLAS project, funded by the EU's Horizon 2020 programme.

Laura La Beur, a research student based in the University's School of GeoSciences, said: "It's really surprising to see the amount and range of microplastics in these deep reefs. We don't yet know what impact small microfibres will have on the deep oceans, but caution is needed to prevent putting the seas under more stress."

Professor Murray Roberts, added: "It's staggering to find our plastic waste has spread so far, to this remote and stunningly beautiful place. We need to not treat the ocean as our junkyard, and work to better understand what effect these tiny plastic fragments are having on marine life."

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