Marine migration routes of North-western European silver eel (Anguilla anguilla L.)

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The marine spawning migration of the European eel (Anguilla anguilla L.) is one of the most challenging biological questions to date. Despite extensive research on the complex life cycle of this critically endangered species, many questions still remain. One of these knowledge gaps is the eel migration route from the European coastline to their spawning ground in the Sargasso Sea. Experts generally agree on the British Isles hypothesis: eels from North-Western Europe are assumed to use the residual current and migrate north in the North Sea and pass north of the British Isles to reach the Atlantic Ocean, where they take a southwest-to-westward course to their spawning grounds. This hypothesis is based on findings of a few eels from the German Bight and the Baltic Sea. The aim of this study was to validate the British Isles hypothesis by acoustic tracking of European silver eel from North-Western Europe. We found striking evidence that eel from some parts of north-western Europe migrate in a counter-current direction through the English Channel to reach the spawning grounds. These results not only will provide more insight into the general migration behaviour of North-Western European eel, but can also contribute to more efficient global conservation of the species.

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