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Editorial

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Author for correspondence: Jane Lewis, E-mail: Jane.Lewis@uhi.ac.uk Metals in the marine environment

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The impact of metals in the sea are important to understand at a variety of scales and functions – from their role in normal biological activity as well as in the role of marine pollutants. When I was an undergraduate I clearly remember doing project work on trace metal pollution in the marine environment. One of the key journals I referred to was the *Journal of the Marine Biological Association of the United Kingdom* (JMBA) and I became familiar with Restronguet Creek in Cornwall, UK, even though (at that time), I had never visited it. The industrial history of mining in Cornwall has had a long-lasting impact on several estuaries in the area but unusually these sites have endured few other anthropogenic interventions. In his review Rainbow (2020) highlights the opportunities this unique situation presents for ecotoxicological research and the potential use of Cornish estuaries (including the Carnon estuary and Restronguet Creek) as living laboratories.

Over the years the JMBA has presented research investigating the different roles and functions of metals in the marine environment, including descriptions of the metal content of various marine organisms (for example in shellfish – Boyden, 1977). I particularly liked the notion of polychaetes possessing jaws strongly reinforced with metals (Bryan & Gibbs, 1980). The effects these metals had on organisms was also documented (for example on hydroids – Stebbing, 1976) and their tolerance to metals was also explored (for example in *Nereis diversicolor* – Bryan & Hummerstone, 1971). Simkiss (1983) reported on the behaviour of metals in the marine environment and their role in the growth of marine phytoplankton was tested by Johnstone (1964).

My degree was too many years ago to dwell on but the concerns related to the impact of metals in the marine environment and how to monitor them remain an ongoing issue (for example Jahan & Strezov, 2019). Their role in the productivity of marine phytoplankton is especially topical (Baeyens *et al.*, 2018; Ellwood *et al.*, 2020). There remains plenty still to be discovered and reported on in this fascinating field and the JMBA will continue to welcome the publication of such material.

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