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Editorial

Cite this article: Lewis J (2019). The importance of marine larvae. *Journal of the Marine Biological Association of the United Kingdom* **99**, 1025. <https://doi.org/10.1017/S0025315419000596>

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The image on our cover reveals the devastating and unexpected consequences of sedimentation and subsequent infection of benthic suspension feeders on the sea bed (Topçu *et al.* 2019). 'Before' and 'after' photographs starkly reveal what are probably the unseen consequences of construction on land, highlighting the need for careful environmental evaluation and planning for such activities. We can only hope that, in time, this present bleak scenario will be mitigated by the recolonization of the area by new communities. This is not a forlorn hope as many marine phyla have larval stages in their life cycle as a consequence of their evolution (Neilsen 1998). However, the nature of any recolonization will depend on the quality of surrounding habitats and larval supply as highlighted in recent articles by Roth *et al.* (2018) and Kinninmonth *et al.* (2018).

Understanding the ecology and life cycles of marine organisms is therefore vital to our understanding and protection of the sea. Life cycle research can be painstaking and difficult and for some species very little is known of the life cycle detail let alone their ecology. In particular, appreciating the dispersal of organisms is essential in many areas of marine management from fisheries to conservation and is needed at all scales of marine life from microalgae to fish. In this issue are four papers dealing with different aspects of the larval life style. In their review article Montgomery *et al.* (2019) provide an analysis of ciliated larval mobility across five phyla, challenging previous assumptions about the behaviour of larval forms with planktotrophic versus lecithotrophic feeding habits. Swimming speeds varied predominantly with phylogeny as well as adult lifestyle, with nutritional lifestyle of the propagule being of relevance within a group rather than a more general indicator of behaviour.

Linking life cycle stages to species is now more straightforward with the use of molecular techniques and Genis-Armero *et al.* (2019) describe for the first time the decapodid stage of *Scyllarus subarctus* by this means. Understanding this morphological link allowed them to investigate and extend the known distribution of this species from historical specimens. The brush clawed shore crab (*Hemigrapsus takonoi*) is an invasive species of European coasts. In their paper, Landeira *et al.* (2019) describe the larval stages of *H. takonoi* in detail, with a key to allow early identification in plankton samples, to facilitate detection of its spread. Finally, the eggs and larvae of anchovies of the eastern Adriatic were investigated by Zorica *et al.* (2019) revealing shifts in spawning grounds in this area in relation to upwelling features.

The Journal of the Marine Biological Association has published more than 700 papers on many aspects of larval biology with a wide diversity of implications as illustrated by the papers above. They continue a long tradition of communicating research about larval stages which we look forward to continuing in the future.

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