Gibbons, M. J. & Richardson, A. J. (2013). Beyond the jellyfish joyride and global oscillations: advancing jellyfish research.
Journal of Plankton Research, 35(5): 929 – 938
https://doi.org/10.1093/plankt/fbt063

Beyond the jellyfish joyride and global oscillations: advancing jellyfish research

Mark J. Gibbons and Anthony J. Richardson

Abstract

There has been debate in the literature recently about increases in jellyfish populations in response to anthropogenic change, and this has attracted widespread media interest. Despite an international collaborative initiative [National Center for Ecological Analysis and Synthesis (NCEAS) working group on jellyfish blooms] to investigate trends in global jellyfish numbers, interpretations from the data remain ambiguous. Although this is perhaps to be expected given the diversity of potential drivers, the debate has not been helped by a general lack of rigorous data and loose definitions. There is a need for the community to refocus its attention on understanding the implications of jellyfish blooms and managing them, because regardless of global trends, jellyfish are a problem in some coastal marine ecosystems. Here, we provide recommendations for advancing jellyfish research. These include directing research toward better managing jellyfish impacts, expanding research into socio-economic consequences to grow the money available for research, building more operational and ecosystem models for tactical and strategic management, filling in the gaps in our biological knowledge for supporting models, improving surveillance using observing systems and making jellyfish research more rigorous. Some vehicles to address these recommendations include international standardization of methods, a discipline-specific journal for jellyfish research and an international science program on the global ecology and oceanography of jellyfish.

Introduction

Copepods play an undeniably important role in the trophic functioning, biogeochemistry and (indirectly) socio-economics of most marine ecosystems, and consequently the number of publications on each has risen year-on-year (Fig. 1). Yet the increase in the number of publications concerning copepods fails to match those for studies on jellyfish, especially in recent times (Fig. 1). And this is a group of animals that is common only in some coastal systems, for some of the time, and which is eaten by few things of any “value” to us.

hydrozoan *Aequorea aequorea* (Forskål, 1775) in the northern Benguela ecosystem. *Hydrobiologia*, 451, 275–286.

Uye, S.-I. and Ueta, U. (2004) Recent increases of jellyfish populations and their nuisance to fisheries in the Inland Sea of Japan. *Bull. Jap. Soc. Fish. Oceanogr.*, 68, 9–19 (in Japanese with English abstract).