Marine bioluminescence

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Some living organisms have the amazing ability to emit light; this phenomenon, called bioluminescence, is mainly found in the marine environment. The phyletic distribution of marine bioluminescence is wide with observations of luminous representatives from bacteria to fishes. The emission of light seems to be essential in intra/interspecific communications. Although bioluminescence reaches an extraordinary degree of expression in the mesopelagic zone and below, much remains to be discovered to understand the role of this light emission in deep-sea organisms.
Recently, there has been an increase of interest to understand the implication of this phenomenon in its entirety, numerous recent studies have been conducted on: i) the diversity of taxa capable of emitting light (i.e. bacteria, sponges, ctenophores, cnidarians, sharks, fish, etc.), ii) the biochemical basis of bioluminescence in different taxa - indeed, the discovery, evolution and appearance of luciferins/luciferases is a key point in the study of these bioluminescence systems - , and finally, iii) the different ecological roles of such functional trait, and potential impacts that it can have in ecosystems, at large.
Bioluminescence is a major trait in the deep-sea, where there is almost total darkness. We will welcome all kind of studies that will show the growing interest in bioluminescence as an entity to be taken into account in the deep-sea community.