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The Role of Large Jellyfish in the Pelagic Food Web in China Coastal Waters

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In recent decades, the ecological role of the macro-zooplankton e.g. jellyfish and ctenophores in the global marine ecosystems has become an increasing attention, which bring jellyfish studies a global hotspot. This hotspot is largely the result of jellyfish and ctenophore increasing that may intrinsically be linked to over-fishing, eutrophication, climate change, and species invasions. Not always regionally increasing in recent decades, jellyfish have globally been rising and falling that was linked to global oscillations. As another regional increasing case, jellyfish have just been locally increasing in recent decades in East Asia waters including China coastal water, the Japan Sea, and Korea coastal sea. To better understand the mechanisms for such a prominent increase of jellyfish blooms in China coastal water and to assess their ecological and economic impacts on the marine ecosystem, Chinese marine scientists participated in one national level research projects on jellyfish. “The Key Processes, Mechanisms and Ecological Consequences of Jellyfish Blooms in China Coastal Waters” which was conducted from 2011 to 2015 by the Ministry of Science and Technology, China. Although some detailed scientific contributions from these projects have been published elsewhere (e.g., Oceanol. Limnol. Sin. Vol. 43, 2012; Hydrobiologia Vol. 754, 2015), this presentation will provide a brief overview of the major progress on the relationship between large jellyfish and the pelagic food web in China coastal waters, e.g. How large jellyfish affects the fishes, other jellyfishes, plankton and benthos, and conversely how these pelagic food web main body influence the large jellyfishes.

Key words: Jellyfish bloom; macrozooplankton; Yellow Sea; East China Sea