

ICES/PICES 6 ZPS 2016/+S6

**Inter-annual variation on growth of giant jellyfish *Nemopilema nomurai*
(Scyphozoa: Rhizostomeae) and influencing factor in China coastal waters**

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Jellyfish population explosion was observed in many marine ecosystems. No exception in the East Asia waters. *Nemopilema nomurai* (Cnidaria: Scyphozoa: Rhizostomeae), as one of the largest jellyfish species in the world, is distributed mainly in the East Asian marginal seas, and it have formed increasingly outbreaks during summer and fall since the end of the 1990s. *N. nomurai* population explosion may be the results of the increment caused by yearly sex and asexual reproduction under favorable environmental conditions, but also caused by the fast exponential growth during spring-summer season. In addition, to quantify the effects of blooming forming species *N. nomurai* on lower tropic level of by top-down control when they massively outbreak by predation in China coastal marine ecosystem. The bell diameter frequency and actual wild specific growth rate of *N. nomurai* during spring-summer (population explosion) season in 2009, 2012, 2013 and 2014 in China coastal sea was measured by this paper. The results showed that the average bell diameter and the average growth rate of this species in May, June and August in different years was variable. The influencing factors including the corresponding food availability (standing stock and production of zooplankton), the environmental factors (temperature and salinity) and the abundance of *N. nomurai* in different year was analyzed and discussed.

Key words: Jellyfish bloom; The Yellow Sea; East China Sea; Feeding