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Corrigendum: Review of the impact of whale fall on biodiversity in deep-sea ecosystems

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Review of the impact of whale fall on biodiversity in deep-sea ecosystems

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In the original article, there was an error; a citation (Smith et al., 2015) was not cited in the article.

A correction has been made in the Section “**The Characteristics and Distribution of Whale Fall**,” paragraph three:

“Over the past 200 years, whaling has severely reduced the population of large cetaceans, especially between 1860 and 1986. The number of all large whales has decreased sharply, and some species have vanished or are facing extinction (e.g., the North Atlantic gray whale). Whaling has dramatically changed the probability and geographic distribution of whales sinking into the deep sea (Butman et al., 1995, 1996). The decline in whale falls has reduced species diversity and may have contributed to the extinction of species in deep sea ecosystems ranging from whale falls to hydrothermal vents (Hecker, 1985; Mclean, 1985; Craddock et al., 1995). It is estimated that whaling in the 19th and 20th centuries has reduced whale fall habitats by as much as 95%, potentially exterminating up to half of marine basin species that feed on whale carcasses. Some insight into the impact of fluctuations in whale carcass numbers can be gained by studying whale fall ecology and biogeography. However, even such studies fail to shed light on the characteristics of species endangered by whaling. If we hope to explore deep sea wonders that understand ecology and evolution, it is essential to explore distant and unknown deep sea ecosystems to further reduce the impact of anthropogenic factors on marine ecosystems, such as pollution and overfishing. The distribution of currently known whale falls is shown in Figure 1. As seen in the Figure, whale falls are mainly

distributed in the Atlantic Ocean and the Pacific Ocean. Among the oceans, the Atlantic Ocean has the largest number of whale falls including natural whale falls, implanted whale falls, and fossil whale falls. And the inset shows that the distribution of whale falls in the Atlantic Ocean has a significantly higher number of fossil whale falls than the others; in the Pacific Ocean, the number of whale falls of all three properties is approximately the same, with a higher number of natural whale falls; while the number of whale falls in the Indian Ocean is low, and so far there is no report of whale fall in the Arctic Ocean. With the progress of science and technology, whale falls have been discovered continuously (Smith et al., 1989, 2015; Mclean, 1992; Baco and Smith, 2003; Smith and Baco, 2003; Goffredi et al., 2004; Braby et al., 2007; Lundsten et al., 2010a,b; Smith C. R. et al., 2014; Smith K. E. et al., 2014; Alfaro-Lucas et al., 2017). At the same time, scientists have also implanted whale carcasses

to study the community ecology and phylogenetics of the whale fall to further investigate the species supported by whale falls and their impact on deep-sea ecosystems.”

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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