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Biodiversity of museum and bulk field samples compared: The Eocene Chiampo sponge fauna, Lessini Mountains, Italy

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The sponge body fossils from the Lutetian (Eocene) of Chiampo Valley in north-eastern Italy, Lessini Mountains, exhibit a high diversity. The fauna, comprising 32 species, was recently described in a systematic study based on museum material. Here we compare diversity measures and rank-abundance distributions between the museum material and new material from random surface collection at the original sampling site. Not surprisingly, we find that selectively collected museum material tends to have greater diversity and evenness than bulk field samples. Nevertheless, abundance rank- orders are maintained between samples. Bulk field sampling revealed hexactinellids to be strongly dominant over lithistids, which suggests a deep-water setting of greater than 200 m water depth.

Key words: Demospongiae, Hexactinellida, field sampling, museum collection, diversity, Eocene, Italy, Lessini Mountains.

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