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Dwarfism of irregular echinoids from Poland during the Campanian-Maastrichtian Boundary Event (CMBE)

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The Campanian-Maastrichtian Boundary Event (CMBE) was one of the major climate perturbations in the Cretaceous that was characterized by a long-lasting negative carbon isotope excursion and cooling [1,2]. Its effect on marine organisms remains poorly understood. Here we analyse a body size trend of echinoid genus *Echinocorys* which is one of the dominant irregular echinoid in the Cretaceous of Poland. Our analysis shows that these echinoids underwent dwarfism in the early Maastrichtian. This reduction in body size was likely an ecological response to CMBE, consistent with the fact that cold temperatures and food limitations are among the major factors decreasing growth rates in modern echinoids [3,4]. Until now, the so-called 'Lilliput Effect' in echinoids has been only recognized in the early Danian (early Paleogene) heart urchins (*Atelostomata*) [5]. Our study thus shows that the 'Lilliput Effect' in echinoids was a more common biotic response to environmental stress than previously thought.

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