



Insights into global brittle star diversity using a targeted exon capture approach.

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Ophiuroids, commonly known as brittle stars, are a class of marine invertebrates with over a quarter-billion-year-old evolutionary history. They are globally distributed, occurring from intertidal regions down to the abyssal sea floor. These attributes make them an ideal system to examine evolutionary processes and biogeographic patterns. Our initial phylogenomic work used transcriptomes to develop an exon capture system that targeted 1552 exons and captured approximately 90% of loci across all major lineages of Ophiuroidea. We have now expanded our dataset to include 2143 individuals, comprising 50% of described species. This vast amount of data has allowed us to refine the taxonomy of brittle stars and explore global patterns of diversification. Notable findings include contrasting rates of speciation at different depths and low genetic diversity within species that span from pole to pole.

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