



**TEXT-FIG. 1.** A conceptual view of the macroecological differences between the pre-Ediacaran and post-Ediacaran marine biospheres, and the transitional Ediacaran. The disparity curve is derived from acritarch data and estimated number of cell types (McShea 1996; Huntley *et al.* 2006), and ecosystem stability from estimated rates of evolutionary turnover (Sepkoski 1984; Knoll 1994). The spikes in ecosystem stability following Phanerozoic mass extinctions are inferred from observed and modelled recovery times (Solé *et al.* 2002). Biomass spectrum very broadly tracks disparity through this interval (see Bell and Mooers 1997) except during mass extinctions, which are characterized by the loss of large organisms but not cell types. Also shown are the age ranges of pre-Ediacaran eukaryotes discussed in the text, and the Cryogenian and Ediacaran glaciations (triangles). Note that the Ediacaran/Cambrian boundary as depicted here (at the base of the Tommotian; *c.* 530 Ma) differs from the IUGS-ratified position, which corresponds to the base of the preceding Nemakit-Daldyn Stage (*c.* 542 Ma). Vertical scale for all curves is qualitative only.

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