

Appendix 3. Erosional surface between Doushantuo and Dengying Formations (Songlin section, Guizhou province)

In Songlin section, Guizhou province, the coarse-grained, cross-strated dolomitized limestones of Dengying Formation erode the thin-bedded, thinly laminated black shales of Doushantuo Formation. The erosional surface (Fig. A) may be formed in two different depositional environments:

- A shallow-water protected environment (as such a back-rim shelf), where suspension settling dominate the sedimentation. The rise of the sea level provided coastal currents able to eroded the underlain shales and to deposited the Dengying Formation grainstone.
- A deep-water basin dominated by suspension settling sedimentation. The drop of sea level deposited the shallow-water Dengying Formation grainstones. Thus, a large part of the intermediary facies that should be deposited during the regression is missing.

In the first case, the black shales represent the end of the regression, while, in the second case, the black shales represent the maximum of flooding, as interpreted by Wang et al. (1998).

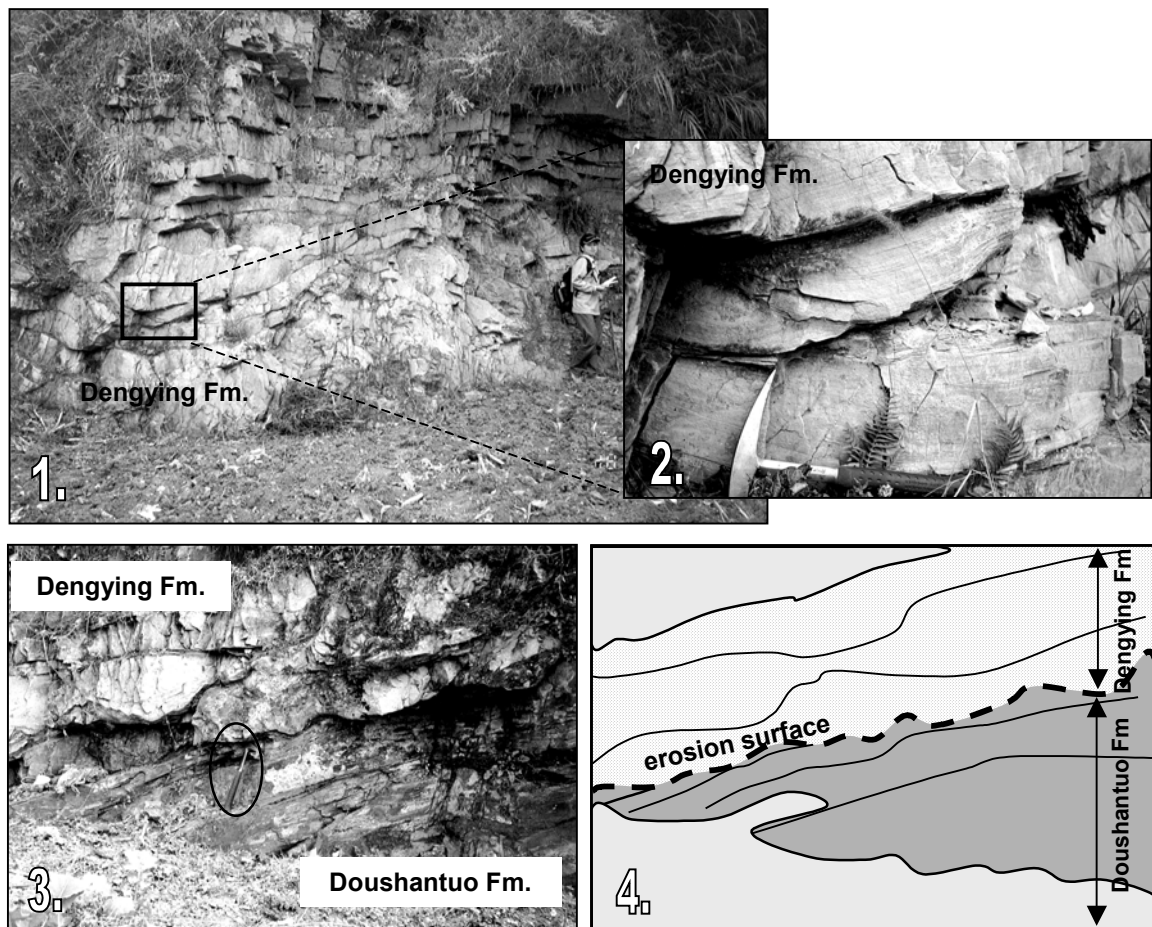


Fig. A. 1 and 2. Outcrop photographs showing the shallow-water facies of Dengying Formations limestones. 3 and 4. Outcrop photograph and interpretative drawing showing the erosional contact between the Doushantuo and the Dengying Formations. Hammer (circled) for scale.

