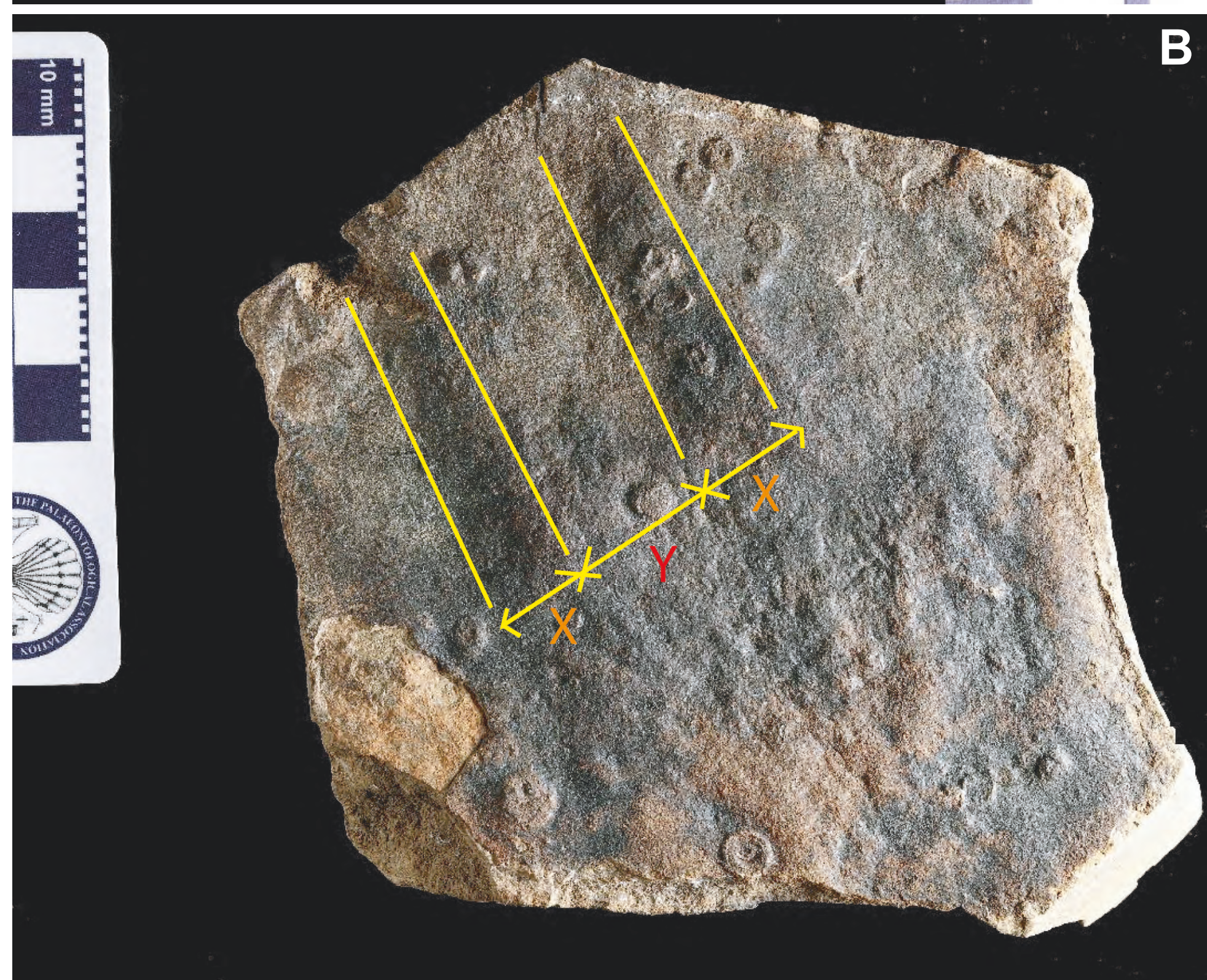
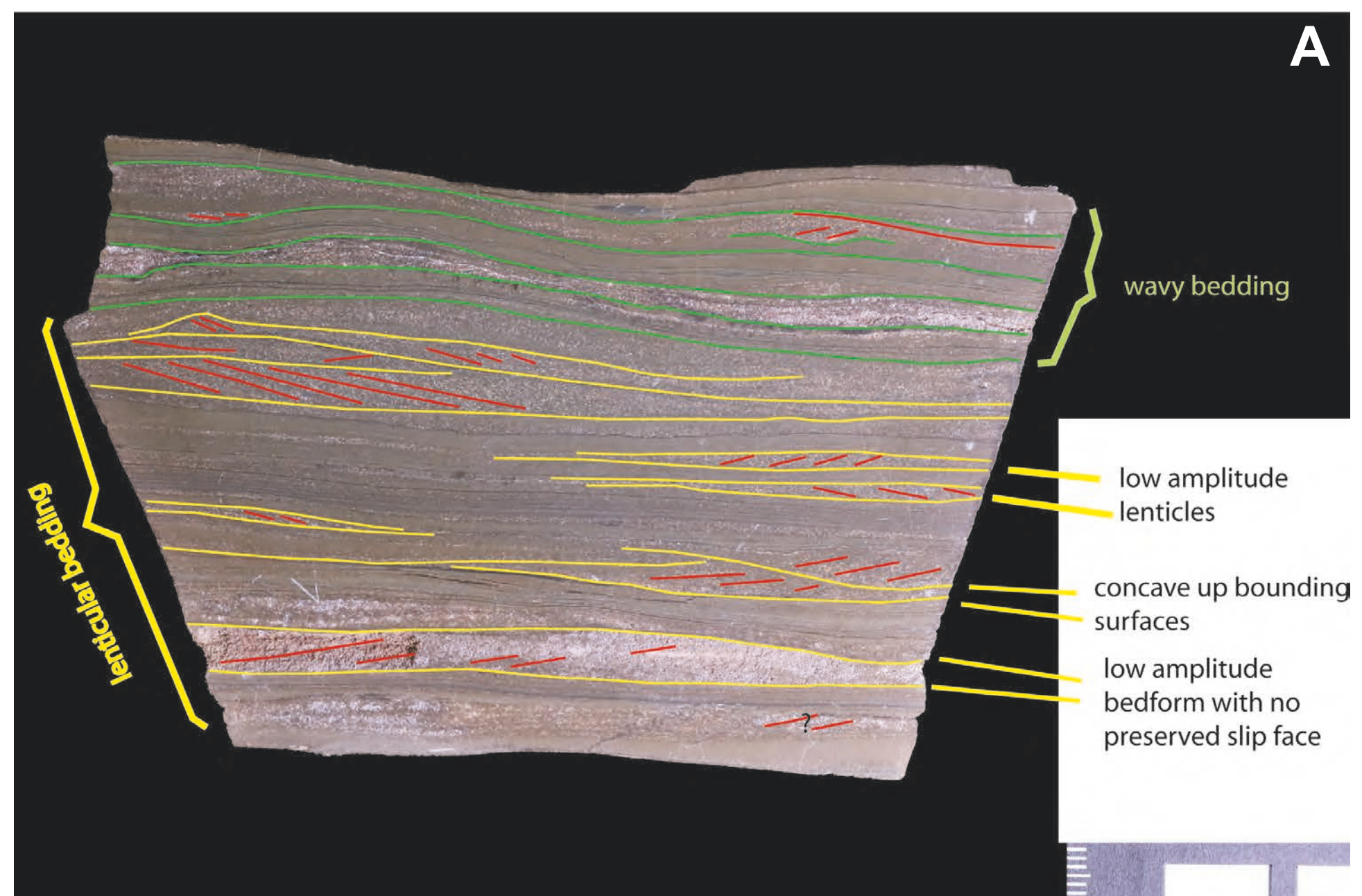


Appendix 2. Sedimentary Structures from the Coed Cochion Volcaniclastic Member



A) Cross sectional view of a typical rock specimen to show a range of small-scale bedforms in a strongly heterolithic bedset. Some of the main bedform bounding surfaces are indicated in yellow and green, and foreset laminae in red. The preserved bedforms are all low-amplitude in nature, with only one apparent well-defined crest. Basal bounding surfaces are curvilinear to wavy, with some concave upwards geometry highlighted. There are no obvious oscillatory ripples. The style of stratification displayed is typical of combined flow bedforms (oscillation/wave and current) with small scale, low amplitude bedforms and "washed-out" morphologies rather than strongly defined ripple crests. The lamina-sets are lenticular in the basal part and wavy in the upper part. Foreset lamination shows herringbone structures. The mudstone laminae and also the mud/silt within sandstone lenticles may have inhibited the creation of strongly defined/crested ripples. This sample is deposited under: NMW 76.16G.R.1

B) Bedding plane view showing frequency of discoïd fossils and showing straight crested low amplitude bedforms. The difference in measured distance between X and Y appears to indicate bedform asymmetry, indicating a probable unidirectional current component to genesis. NMW 76.16G.R.2

Figures A & B have been selected to show some observed depositional features. The heterolithic lenticular/wavy bedding with a combined flow genesis indicates probable shallow water. The fossils (in comparison with other localities worldwide) would suggest a marine environment, but a lacustrine setting cannot be ruled out. The frequency of mudstone laminae could reflect flocculation in a coastal setting with a freshwater input. It seems possible that there are instances of muddy drapes to some foreset laminae. Such structures are present on modern tidal flats, within tidal channels, and subaqueous reaches of flats/channels. They present similarities to examples from the Wenlock Series Gray Sandstone Formation of Pembrokeshire (SW Wales) that is interpreted as the product of prodelta and tidal channel deposits.