

[7] Were Neolithic rice paddies ploughed? -- Usewear analysis of plough-shaped tools from Pishan (4000-3300 BC), Zhejiang

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In recent years several Neolithic sites in the lower Yangzi River area (the Songze and Liangzhu cultures; 4000-2300 BC) have revealed large triangular-shaped stone implements, commonly described by archaeologists as ploughs used for rice cultivation. The current study attempts to investigate such a plough hypothesis. We conducted a ploughing experiment with a stone tool, and then examined 22 plough-shaped tools from a Songze culture site at Pishan in Zhejiang. By comparing the microscopic usewear patterns from the experimental plough with those from five Pishan tools, we conclude that the Pishan tools examined are multi-functional implements, but none of them shows usewear traces resembling a plough. We question the assumption that Neolithic rice paddies were prepared with such stone ploughs, suggesting that more functional study on Neolithic stone tools is needed.