**Learning from experiment: *Unio* freshwater mussel shells in fifth-millennium bc Romania**

**Monica Mărgărit, Valentin Radu and Valentina Voinea**

**Supplementary Materials**

***Table S1.*** *Species identification of the freshwater mussel valves from the Cheia settlement.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Taxa** | **Quantity** | **Left valve** | **Right valve** | **Measurable valves** |
| *Anodonta* sp. | 1 |  | 1 |  |
| *Unio tumidus* | 40 | 17 | 23 | 30 |
| *Unio pictorum* | 5 | 2 | 3 | 5 |
| *Unio crassus* | 1 |  | 1 |  |
| *Unio* sp. | 54 | 11 | 23 |  |
| **Total** | **101** | **30** | **51** | **35** |

**Supplementary Material 2**

a: Processing of fresh vegetal matter;

b: *Unio* valve morphology after use;

c: valve structure on the interior face after use;

d: external face structure after use;

e–f: working edge morphology after thirty minutes of use (localized use-wear without striations not extending to the internal side);

g–h: working edge morphology after sixty minutes of use (use-wear characterized by shallow and longitudinal striations, arranged transversely to the active edge).

**Supplementary Material 3**

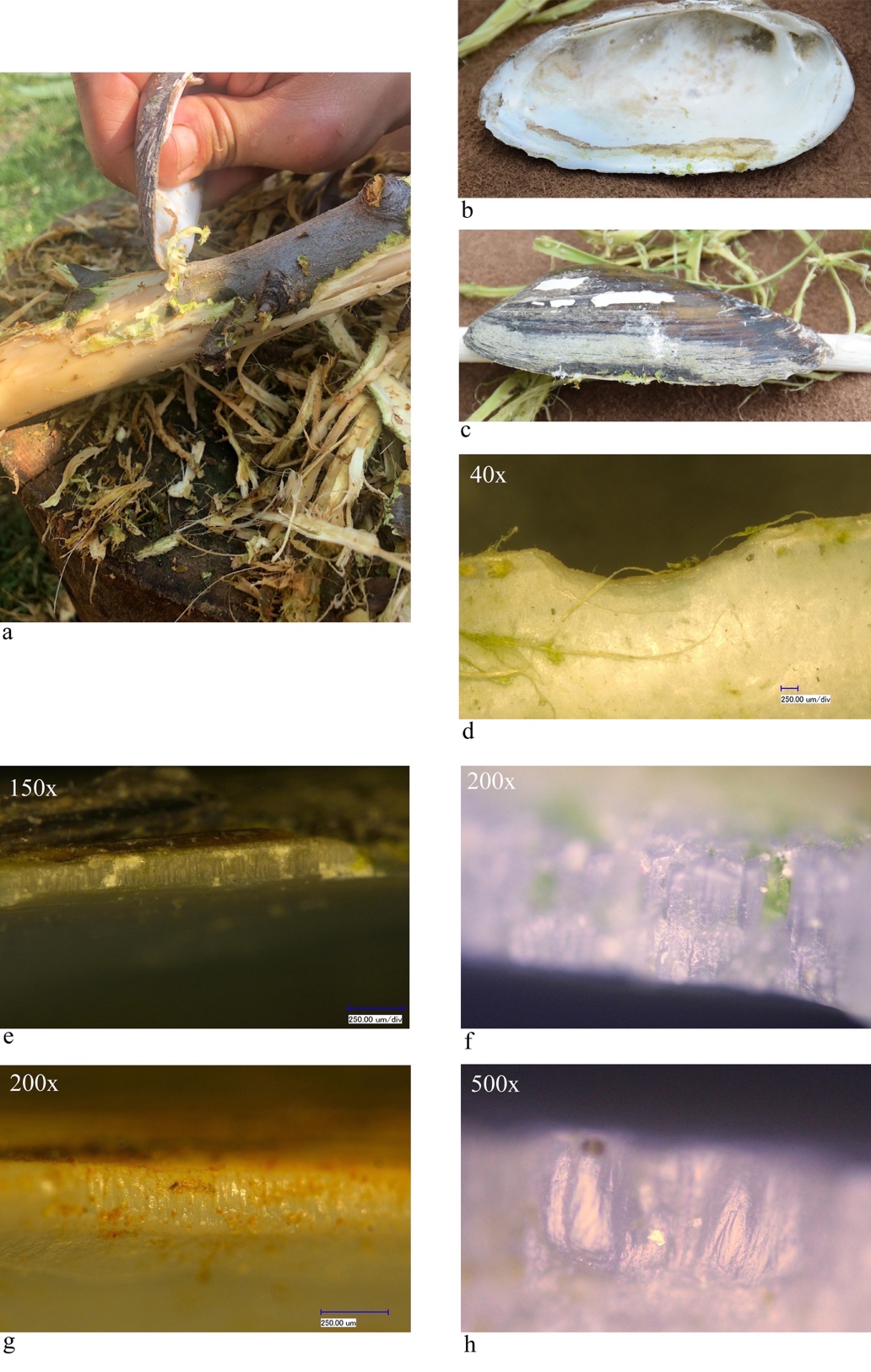
a: Processing of fresh wood;

b–c: *Unio* valve morphology after use;

d: valve structure on the internal face after use;

e–f: working edge morphology after twenty minutes of use (use-wear polish is present, but functional striations have not yet developed);

g–h: working edge morphology after fifty minutes of use (rounded and smoothed micro-reliefs, with discontinuous and superficial striations).



**Supplementary Material 4**

a: Processing of dry wood;

b: *Unio* valve morphology before use;

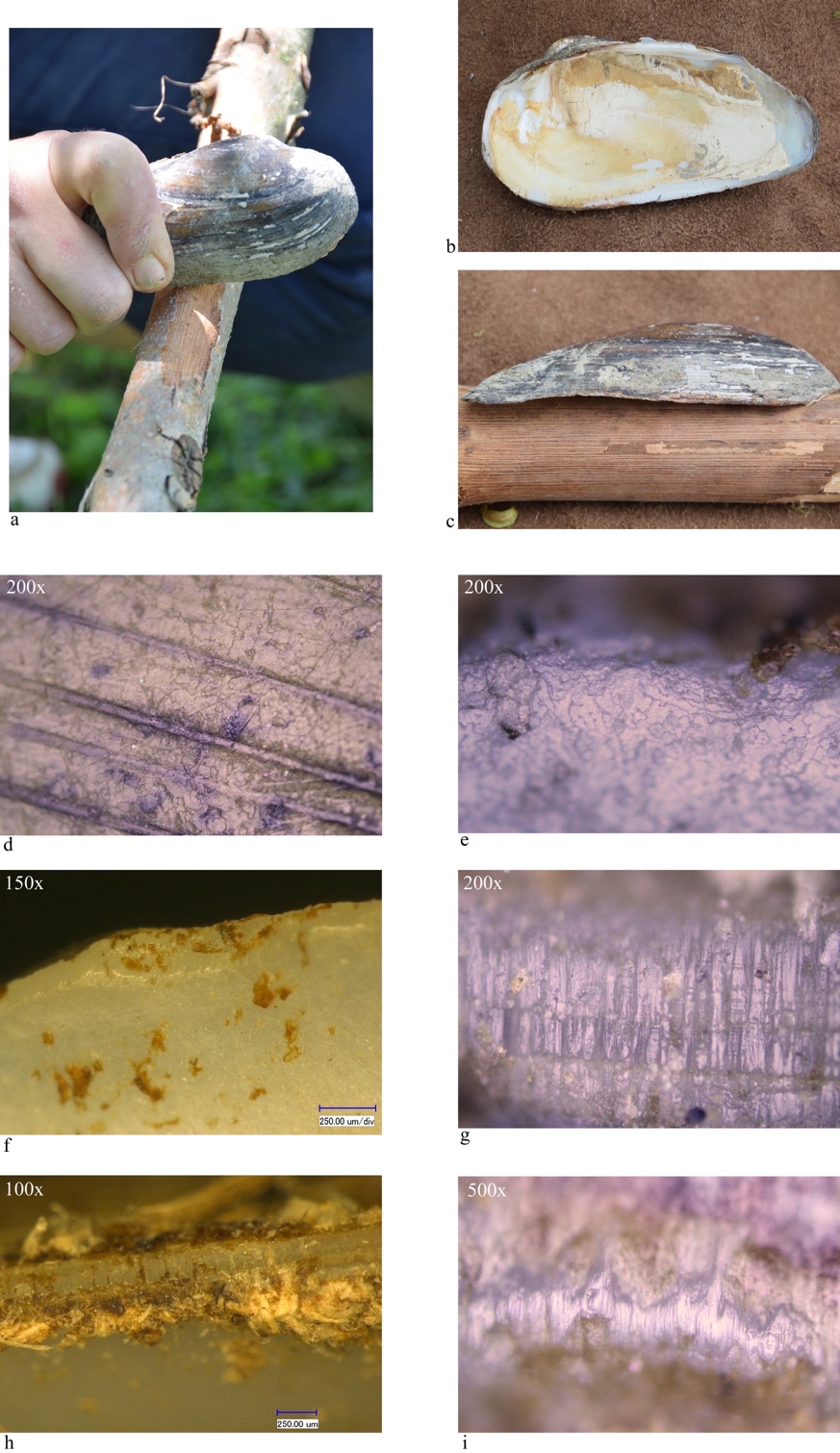
c: *Unio* valve morphology after use;

d: structure of the external side after use;

e: valve structure on the internal side after use;

f–g: working edge morphology after twenty minutes of use (lamellar structure is eliminated, developing deep and parallel striations);

h–i: ventral edge morphology after forty minutes of use (micro-topography of the active edge shows a continuous micro-relief on the median line).



**Supplementary Material 5**

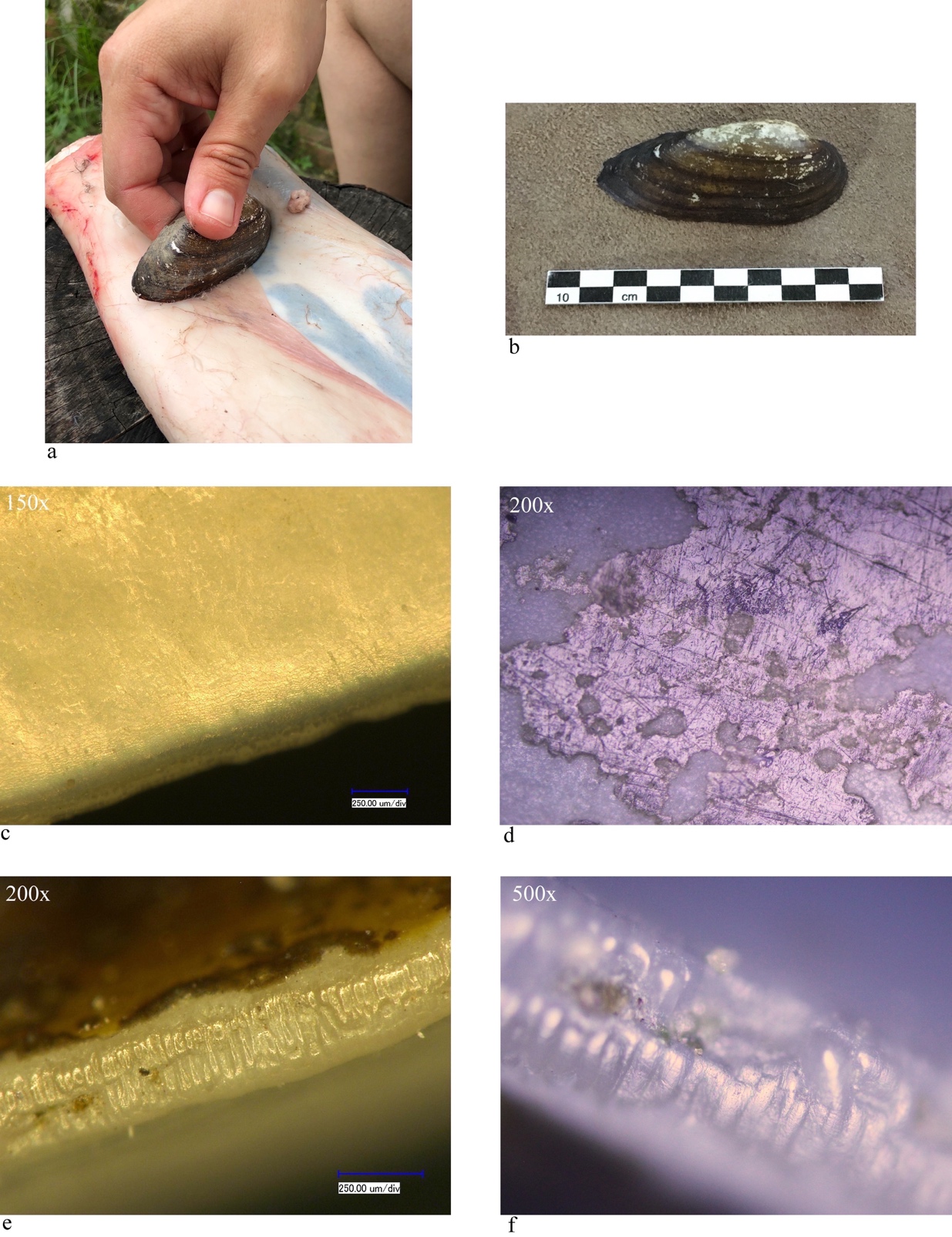
a: Processing of fresh skin;

b: *Unio* valve morphology after use;

c: valve structure on the internal side after use;

d: structure of the external side after use;

e–f: ventral edge morphology after forty minutes of use (lamellar structure is still evident with fine functional striations).



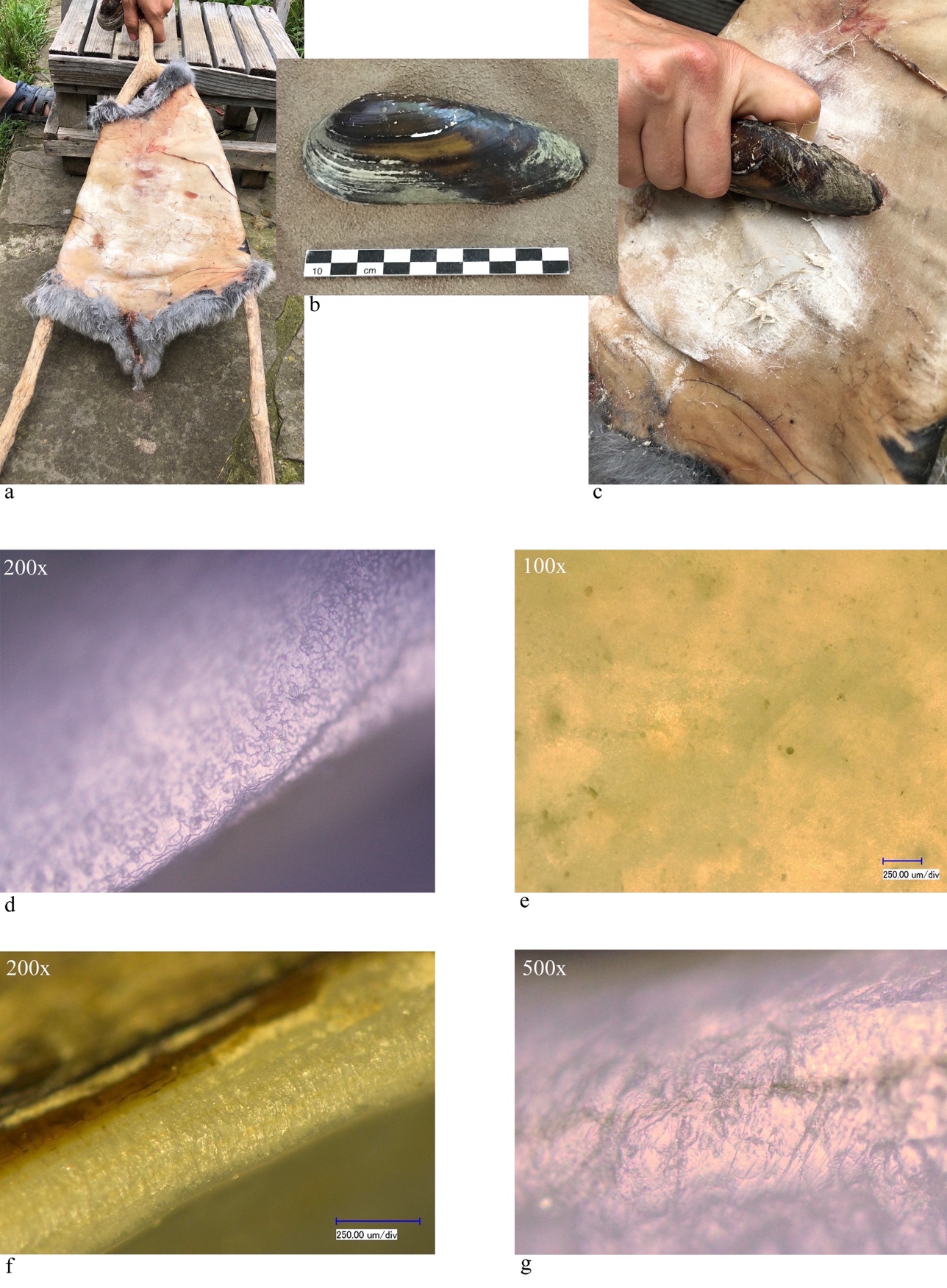
**Supplementary Material 6**

a, c: Processing of dry skin;

b: *Unio* valve morphology after use;

d–e: valve structure on the internal side after use;

e–f: working edge morphology after thirty minutes of use (homogeneous micro-topography characterized by the presence of functional striations).



**Supplementary Material 7**

a: Processing of fresh bone;

b: *Unio* valve morphology after use;

c: valve structure on the external side after use;

d–e: working edge morphology after fifteen minutes of use (micro-reliefs associated with micro-pits, discontinuous functional striations).



**Supplementary Material 8**

a: Processing of dry bone;

b: *Unio* valve morphology after use (the arrow shows the edge fracture);

c–d: working edge morphology after fifteen minutes of use (rounded micro-reliefs with polish and deep transverse striations).



**Supplementary Material 9**

a: Processing of fish;

b: *Unio* valve morphology after use;

c–d: working edge morphology after thirty minutes of use (micro-reliefs in combination with micro-pits, without functional striations).

