

Fig. S1. SEM images of the unworn part of the radula oriented in accordance with video footage, functional rows are highlighted grey, transverse/ontogenetic row is highlighted in black: a-b. *Lepidochitona cinerea*, c-d. *Rochia conus*, e-f. *Astralium calcar*, g-h. *Clithon corona*. Scale bars: a = 100  $\mu\text{m}$ , b, d, f = 30  $\mu\text{m}$ , c = 400  $\mu\text{m}$ , e, g = 200  $\mu\text{m}$ , h = 60  $\mu\text{m}$ . Coloured frames link to Fig. 4-7. CT = central tooth, DT = dominant lateral tooth, LT = lateral tooth, LTs = lateral teeth, MT = marginal tooth, MTs = marginal teeth.

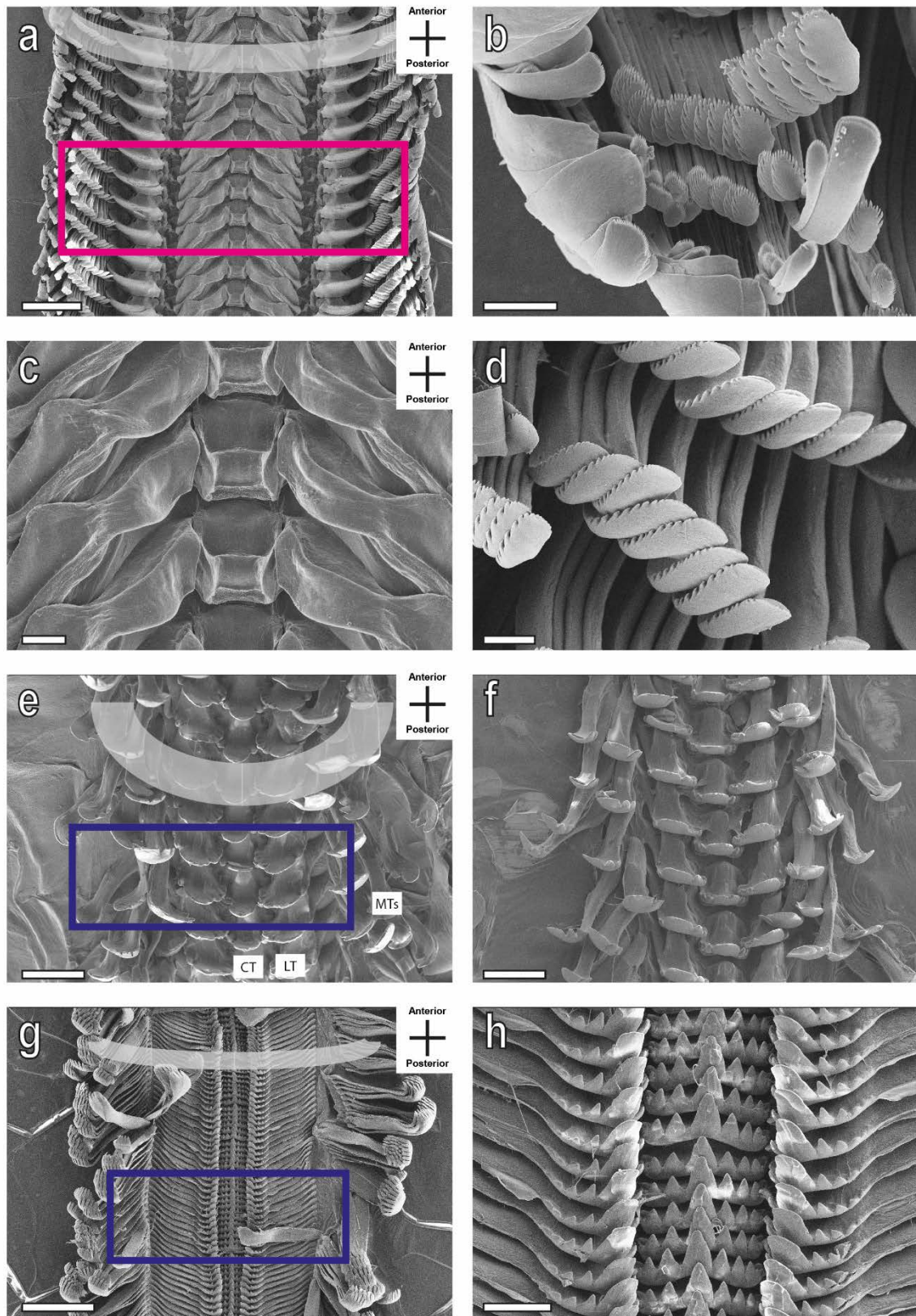


Fig. S2. SEM images of the unworn part of the radula oriented in accordance with video footage, functional rows are highlighted in grey: a-d. *Vittina turrita*, e-f. *Stenomelania torulosa*, g-h. *Thiara cancellata*. Scale bars: a, g = 200  $\mu\text{m}$ , b, d = 20  $\mu\text{m}$ , c, h = 40  $\mu\text{m}$ , e, f = 100  $\mu\text{m}$ . Coloured frames link to Fig. 4-7. CT = central tooth, LT = lateral tooth, MTs = marginal teeth.

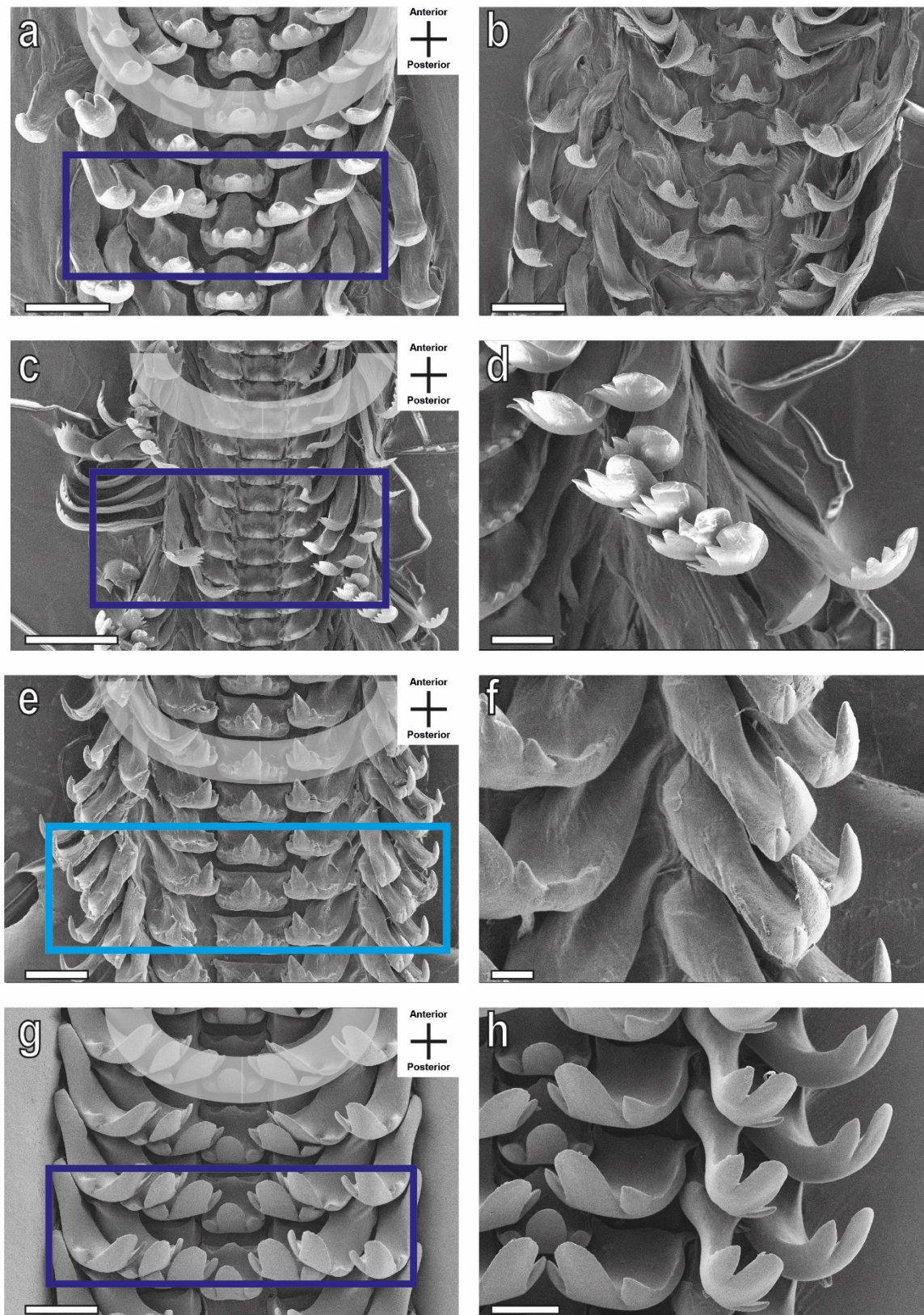


Fig. S3. SEM images of the unworn part of the radula oriented in accordance with video footage, functional rows are highlighted in grey: a-b. *Brotia herculea*, c-d. *Faunus ater*, e-f. *Marisa cornuarietis*, g-h. *Monetaria annulus*. Scale bars: a, b, c, e = 200  $\mu$ m, d, f, h = 40  $\mu$ m, g = 100  $\mu$ m. Coloured frames link to Fig. 4-7.

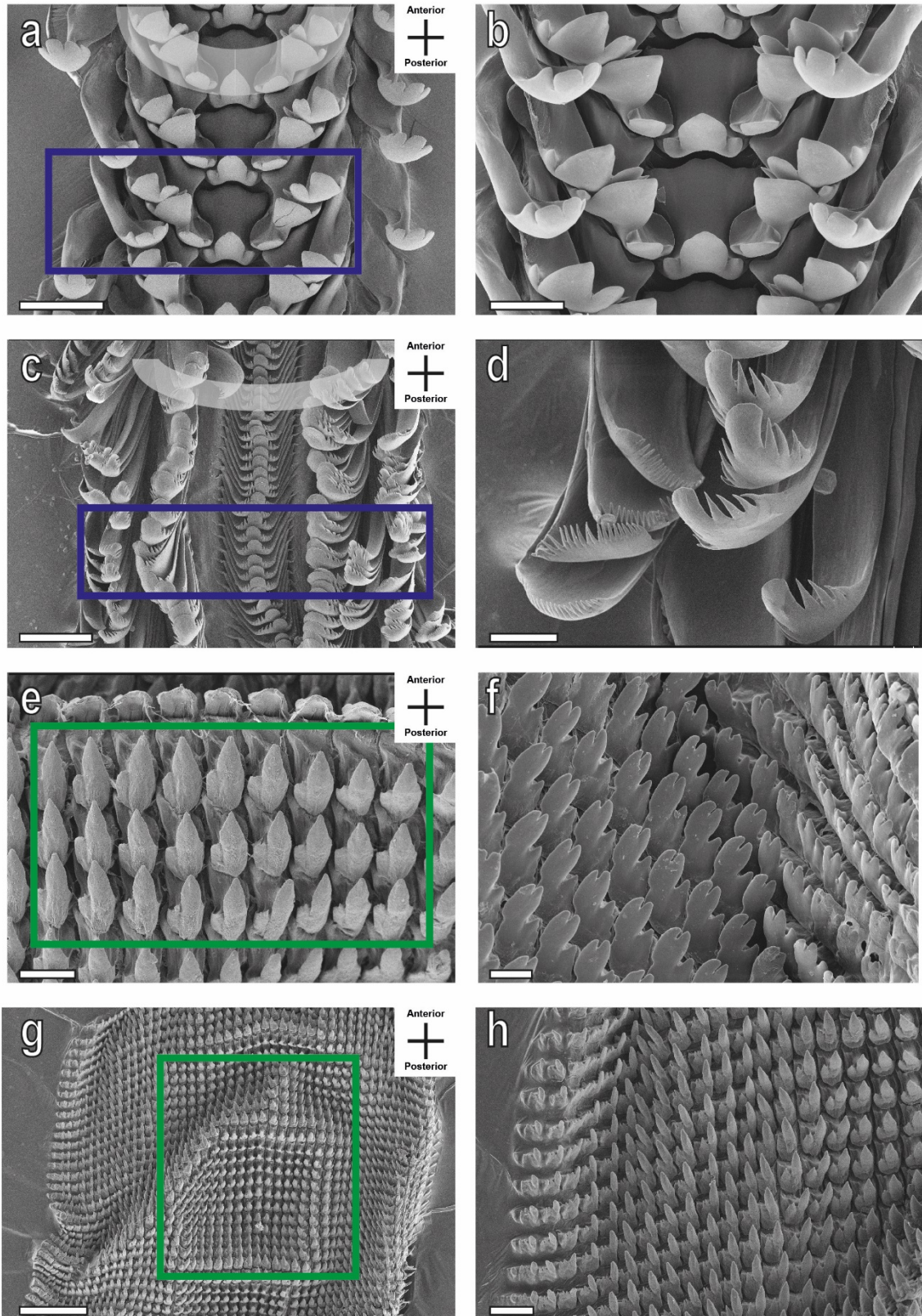


Fig. S4. SEM images of the unworn part of the radula oriented in accordance with video footage, functional rows are highlighted in grey: a-b. *Littorina littorea*, c-d. *Taia naticoides*, e-f. *Cornu aspersum*, g-h. *Trochulus villosulus*. Scale bars: a = 80  $\mu\text{m}$ , b, d, e = 40  $\mu\text{m}$ , c = 200  $\mu\text{m}$ , f, h = 20  $\mu\text{m}$ , g = 100  $\mu\text{m}$ . Coloured frames link to Fig. 4-7.

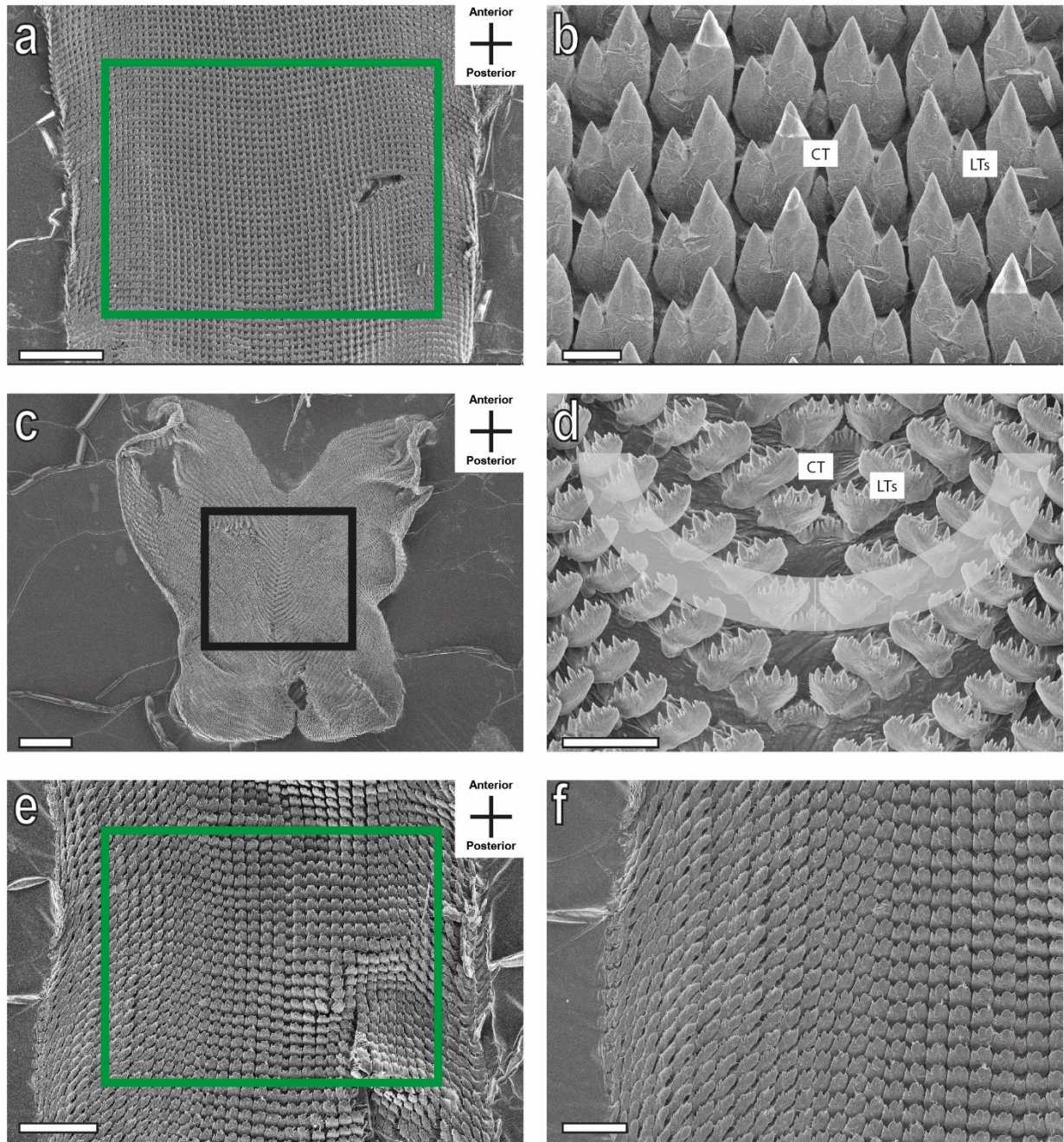


Fig. S5. SEM images of the unworn part of the radula oriented in accordance with video footage, functional rows are highlighted in grey: a-b. *Lymnaea stagnalis*, c-d. *Stenophysa marmorata*, e-f. *Planorbella duryi*. Scale bars: a = 400  $\mu\text{m}$ , b, d = 20  $\mu\text{m}$ , c = 200  $\mu\text{m}$ , e = 100  $\mu\text{m}$ , f = 40  $\mu\text{m}$ . Coloured frames link to Fig. 4-7. CT = central tooth, LTs = lateral teeth.



Movie 1