

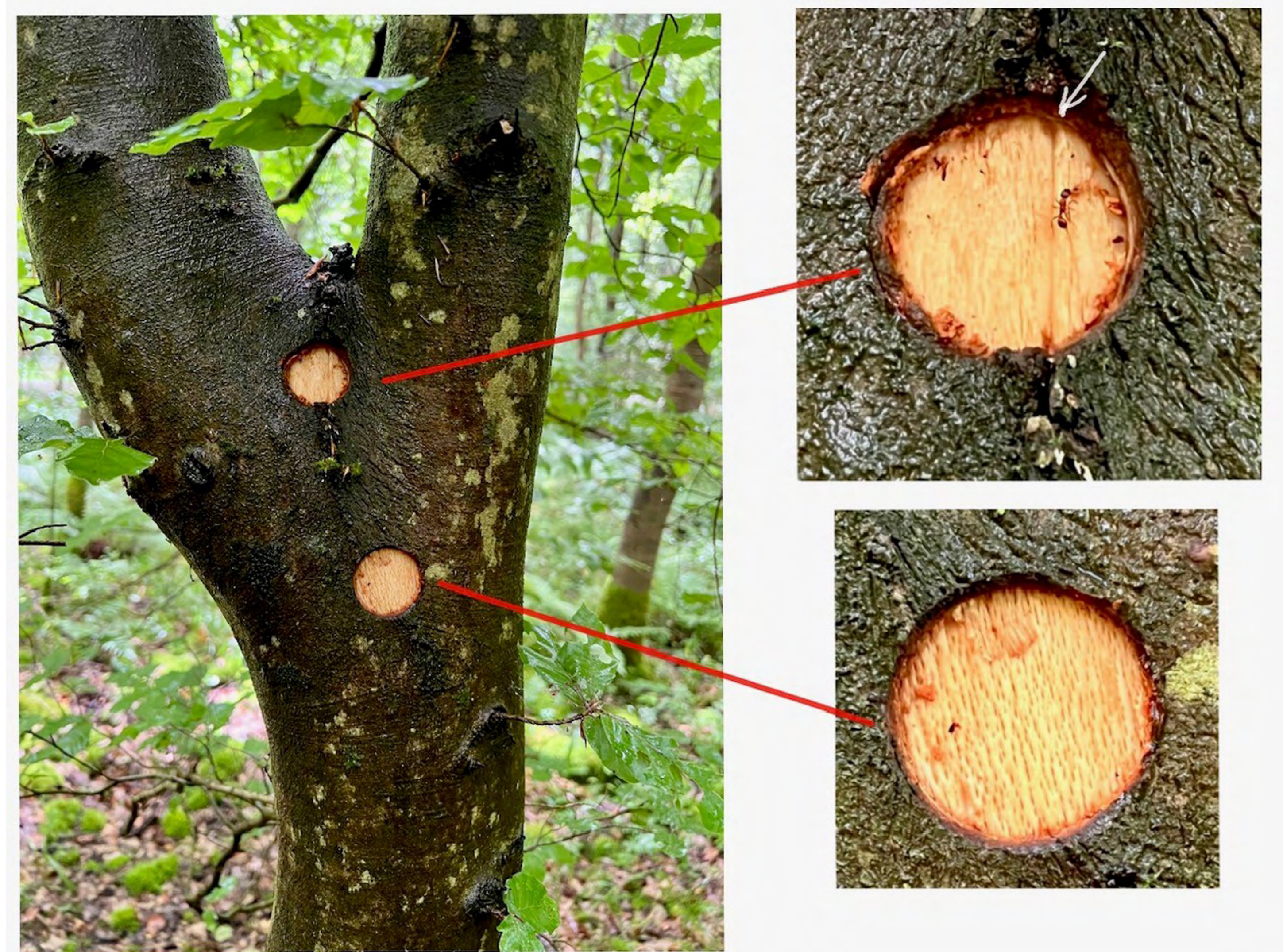
Punching atlas - Detailed examination of the local fiber orientation with punching iron

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A punching technique for evaluating the internal optimization of trees assesses the fiber flow and associated risks. The procedure is presented here using examples.



Well-integrated branch, possibly with beginning shedding collar - no lateral fiber accumulation!



Lateral fiber accumulation at branch connection of the thicker branch to the thinner trunk, no good branch attachment to the trunk. Visual indication: Rising Chinese moustache!



No dramatic fiber anomalies in the bulge wood life belt, which compensates for fiber compression.



Fiber orientation on the harp tree, strangulation of the old leading shoot is to be expected.



Crack behind growth strip next to older rib.
Plenty of water leakage after punching!



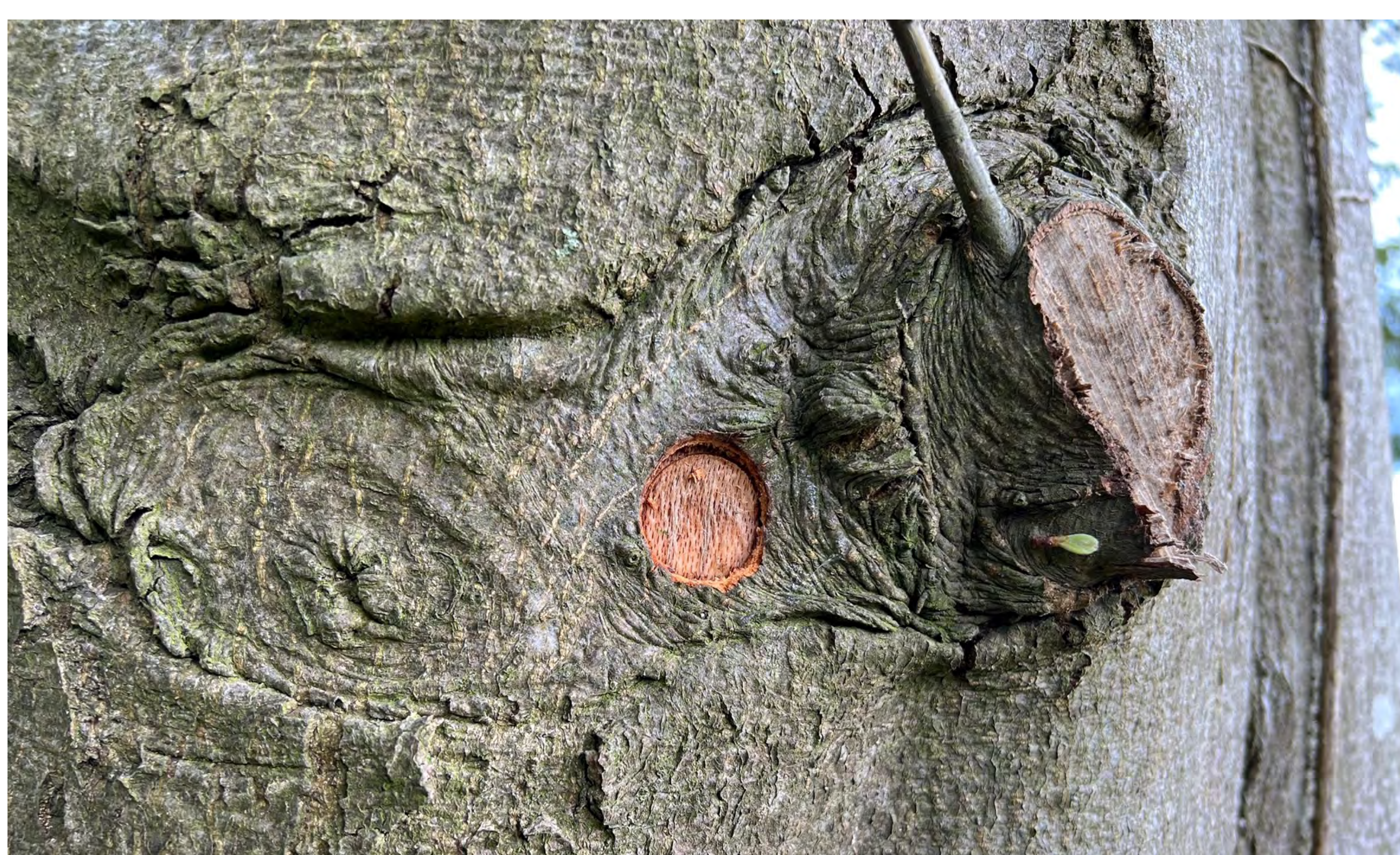
Proof of fibers transverse to the trunk axis with a high risk of breakage.



Fork seam in the upper punched hole is clearly visible.



Strangler root integrated from the trunk with vertical fiber in the direction of the stem axis, no further strangulation to be expected.



Strangler branch integrated from the trunk.

Conclusion: Punching technology can help, to avoid accidents caused by unfavorable fiber orientation. Not only deviations from the optimum tree shape, but also disturbances of the internal optimization of the tree (fiber orientation) harbor a risk of failure.