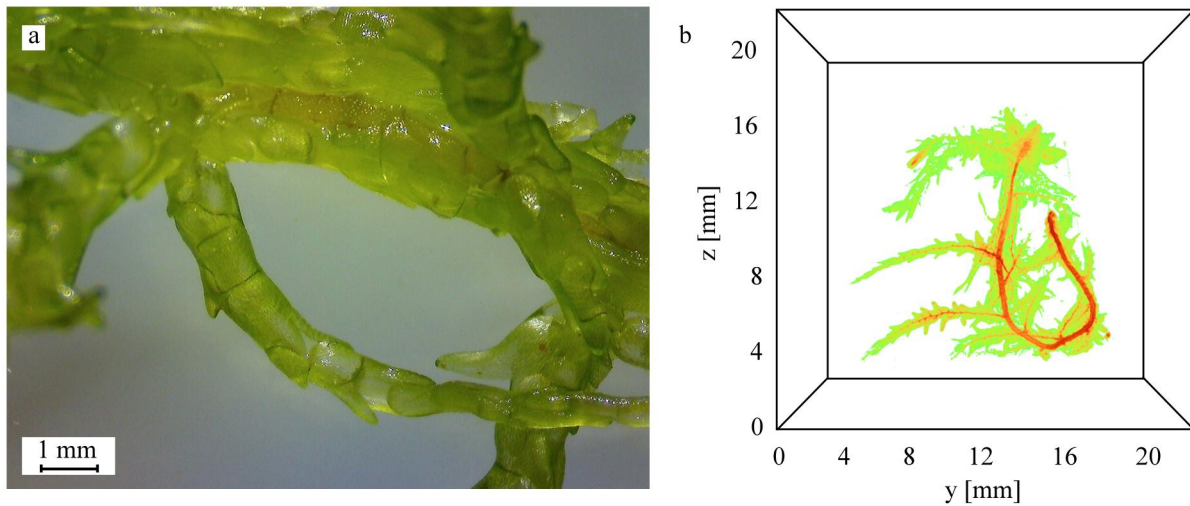




Supplementary Figure 3: Structure of the side branches of a *Sphagnum* gametophyte. The MR Image shows the leaves in green and the inner part of the stem in red because of the higher signal intensity, details on the color-mapping in Materials and Methods. To make it visible, the voxels with lower intensity (here in green) are made slightly transparent. (a) Side branches, especially those above the waterline, have tightly packed leaflets. This forms a thin gap between stem cuticula and leaves allowing capillary transport of water. Also, adult gametophytes in the bog show this feature. (b) The segmented 3D MRI data shows the stem, lateral branches with attached leaves, and innovations. The branches typically do not show capitula. The regular pattern of the plant is clearly visible.