

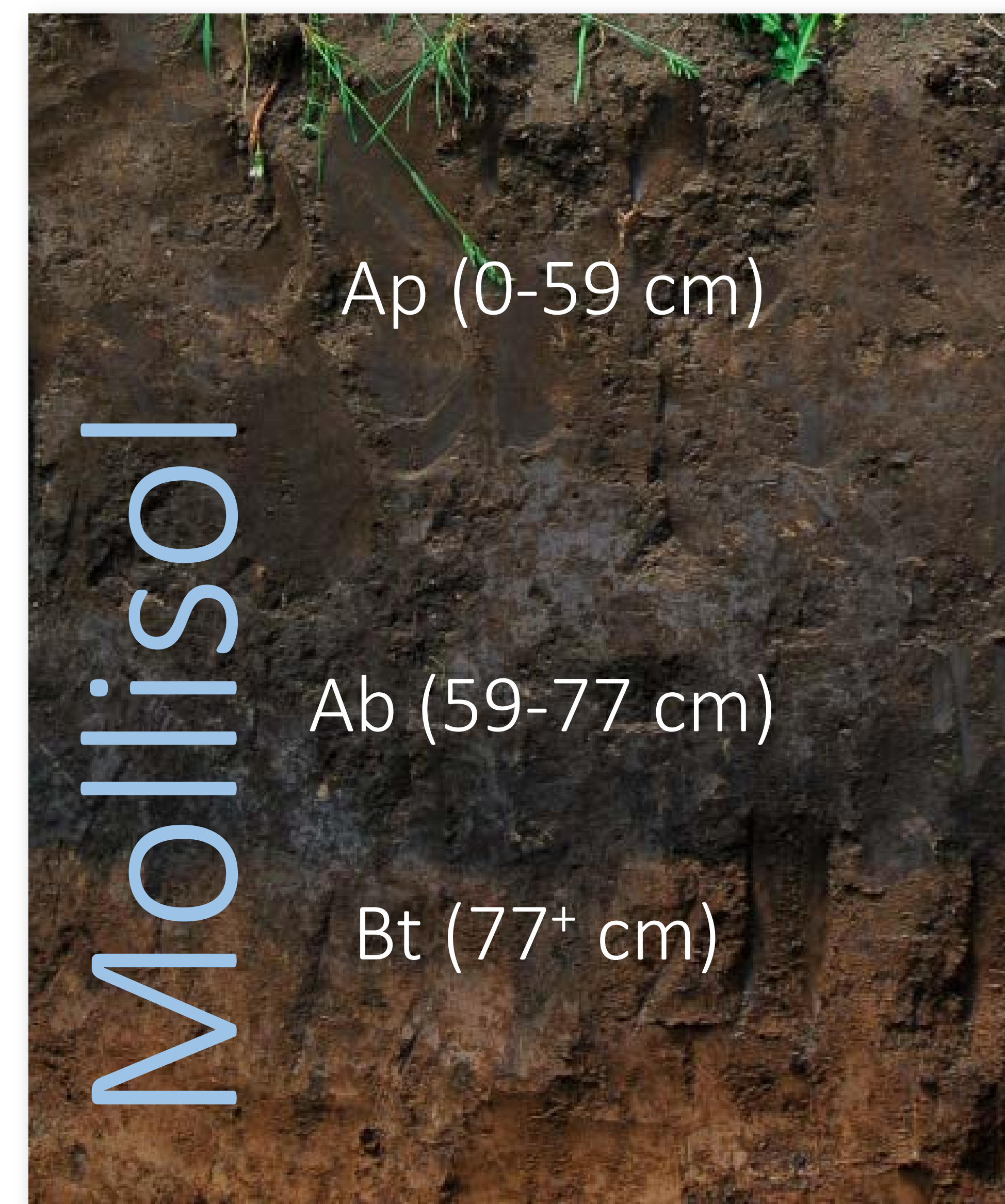
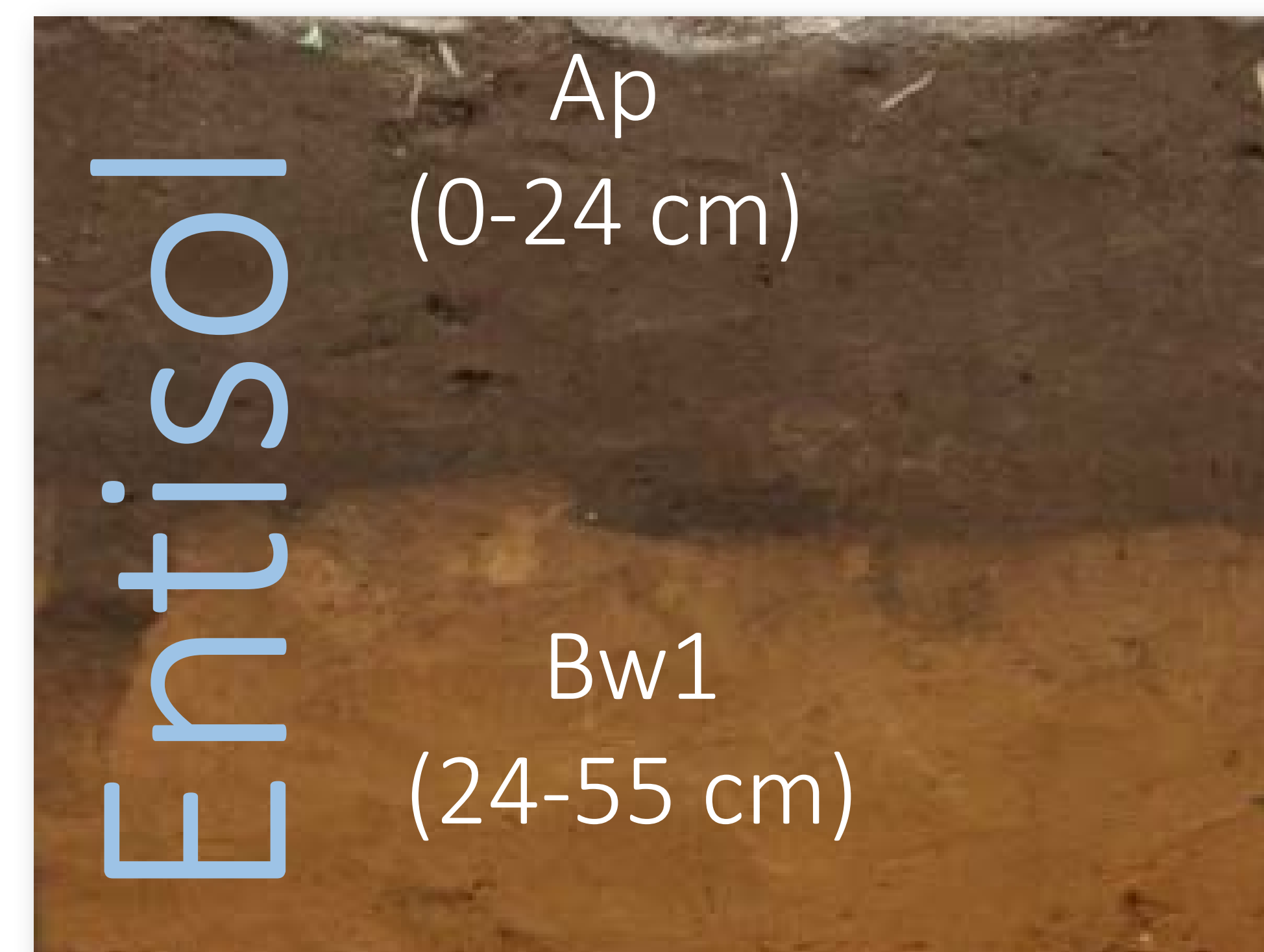
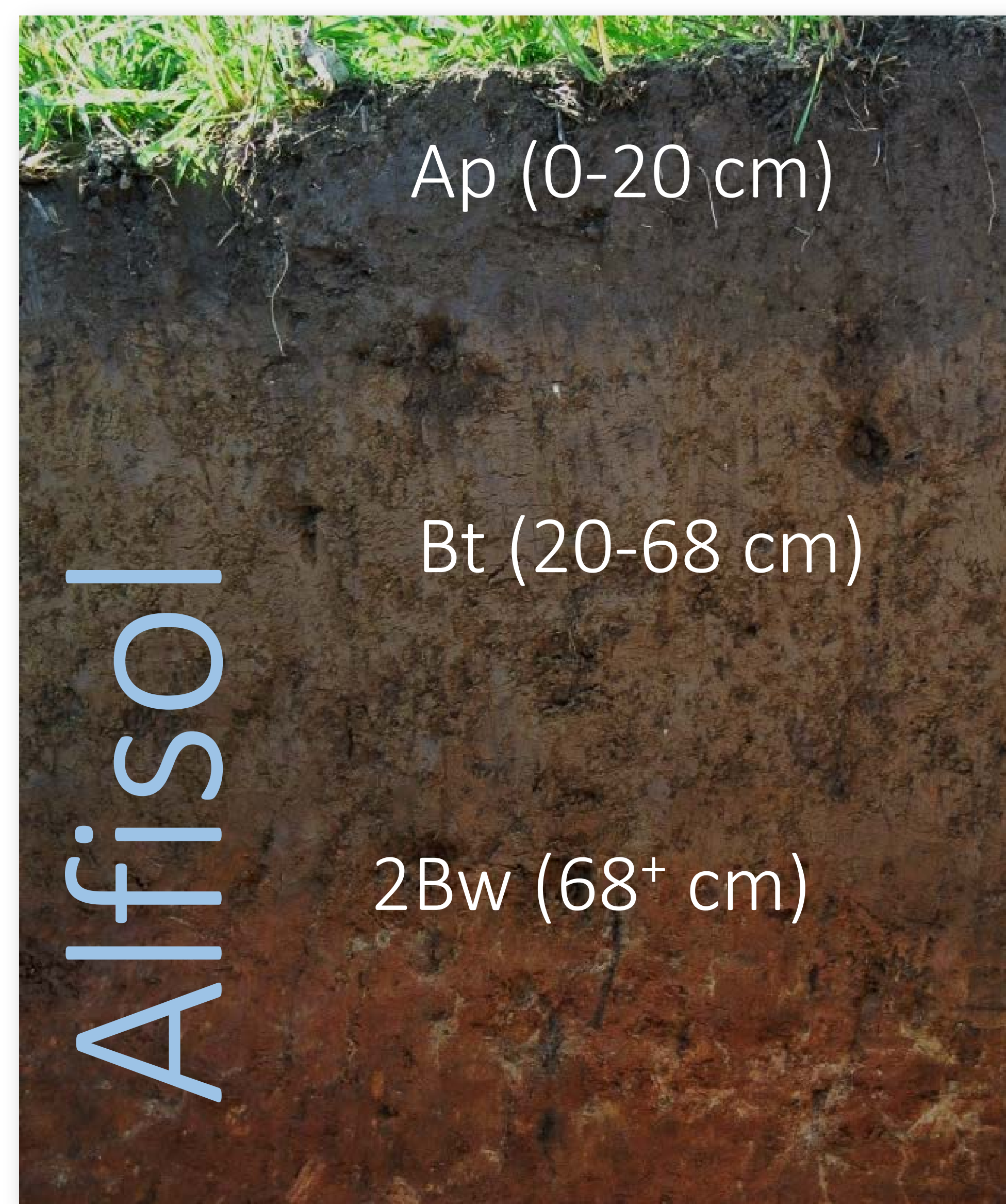
Variation of soil property depth functions

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Every soil property has its own vertical distribution pattern that can be expressed as a depth function. These functions reflect the anisotropic character of the soil.

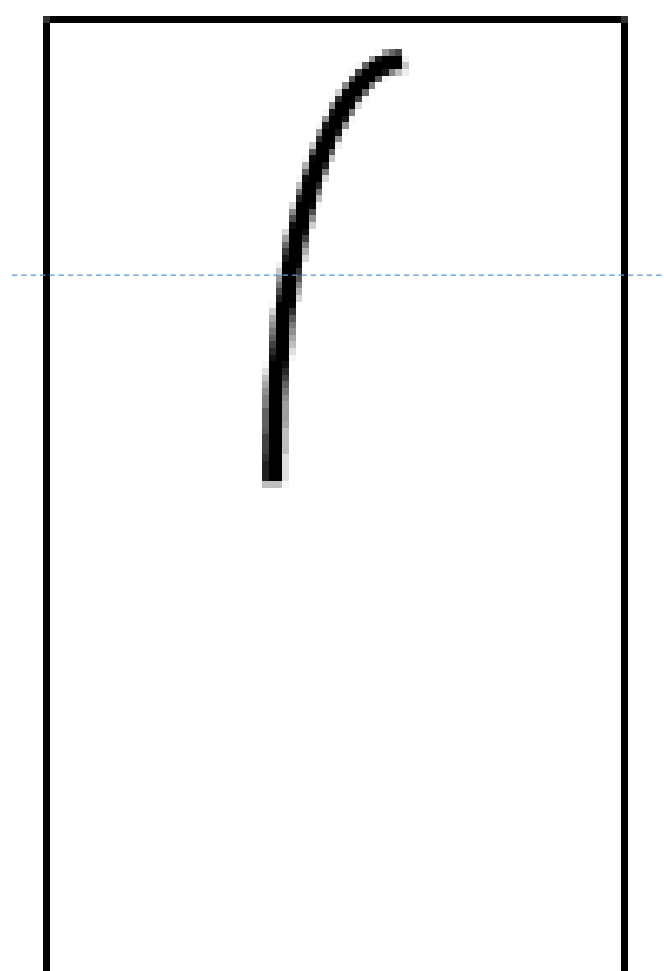
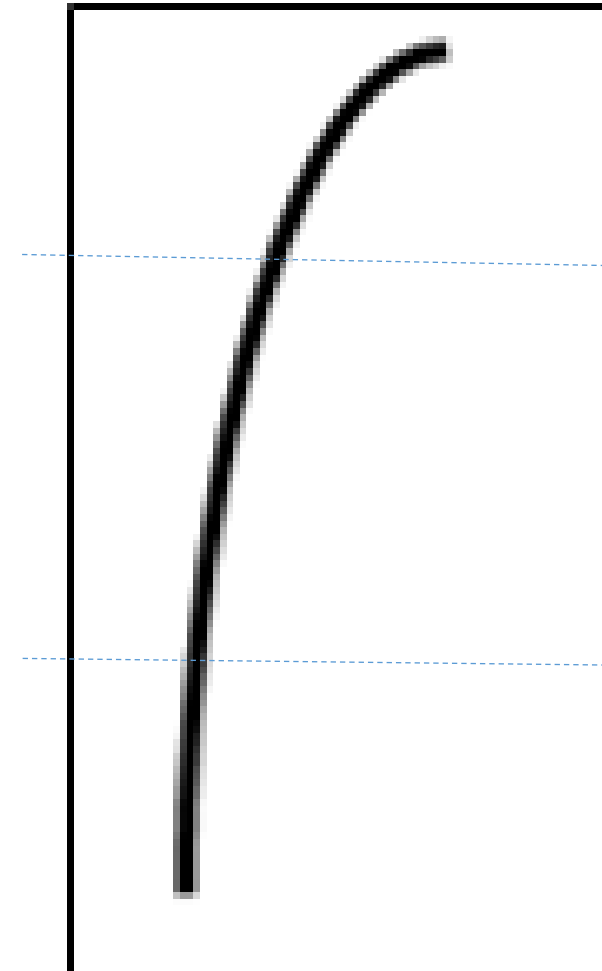
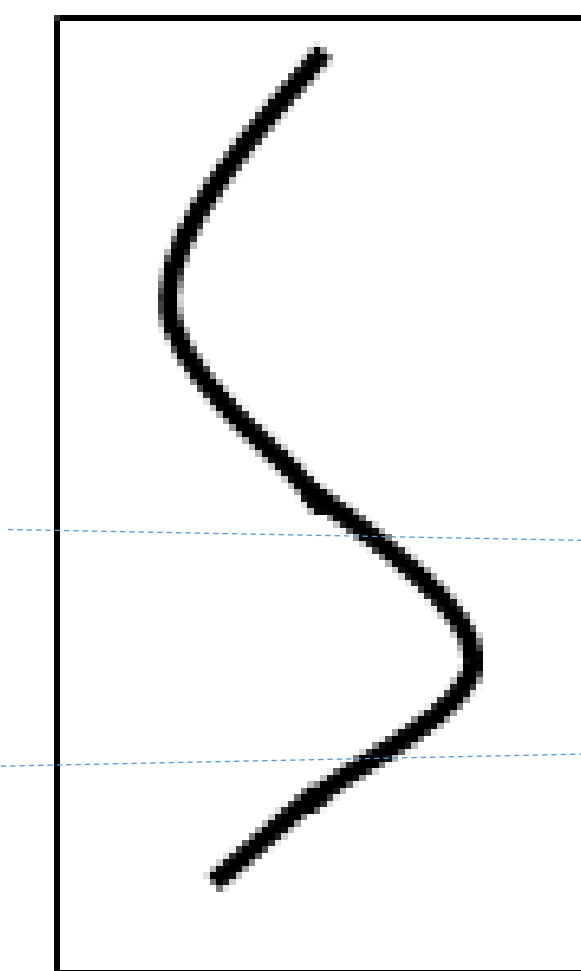
Depth functions are a key research area in digital soil morphometrics.

We constructed depth functions using 10 cm interval sampling in 3 soils.

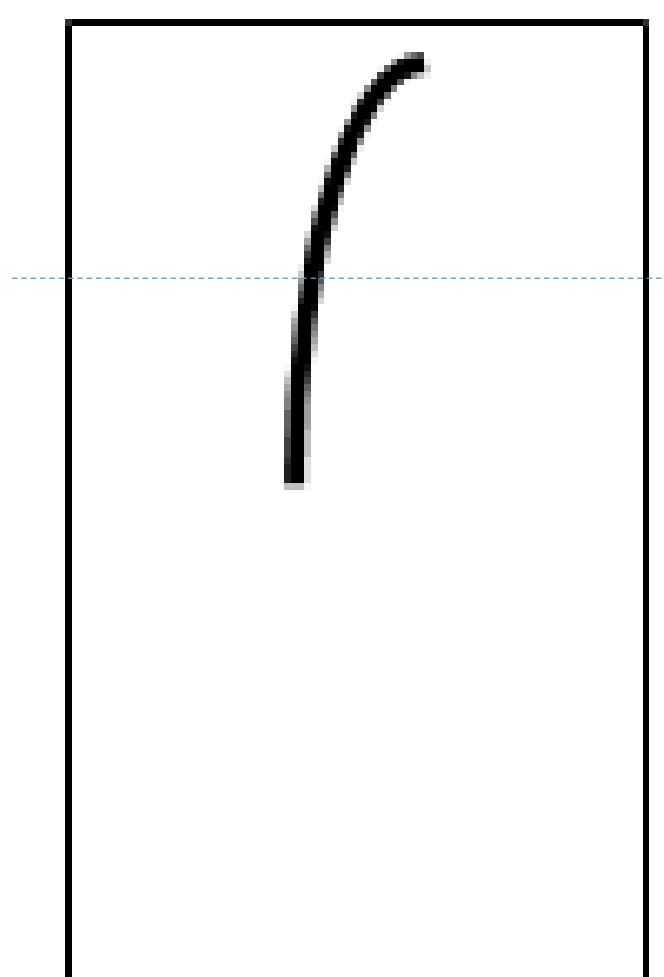
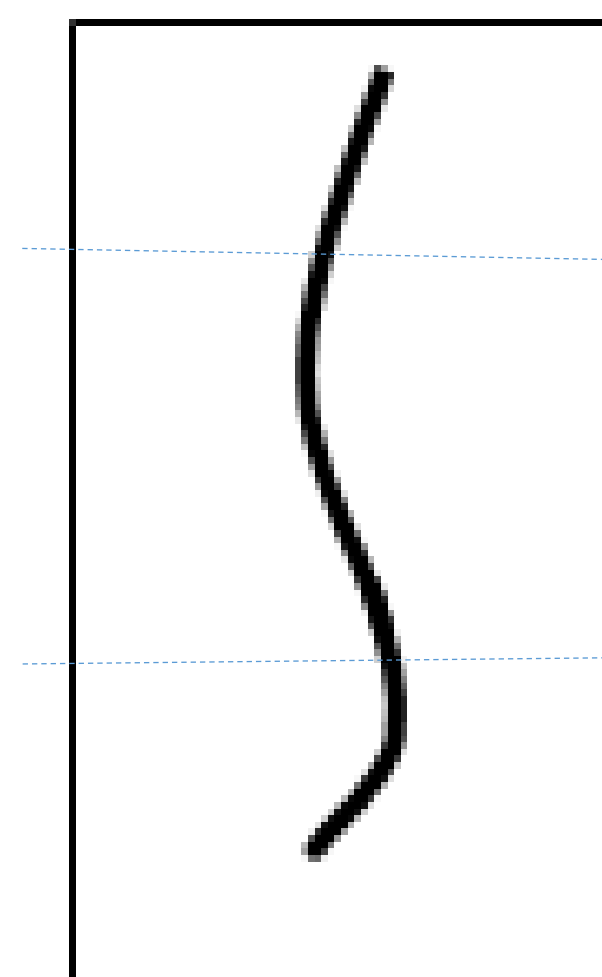
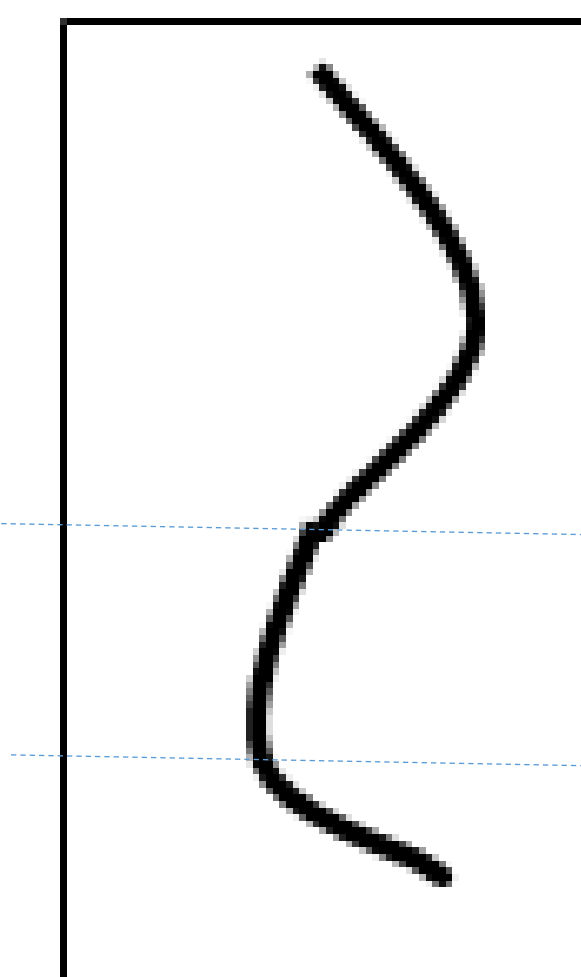


Mollisol 0-100 cm Alfisol 0-100 cm Entisol 0-50 cm

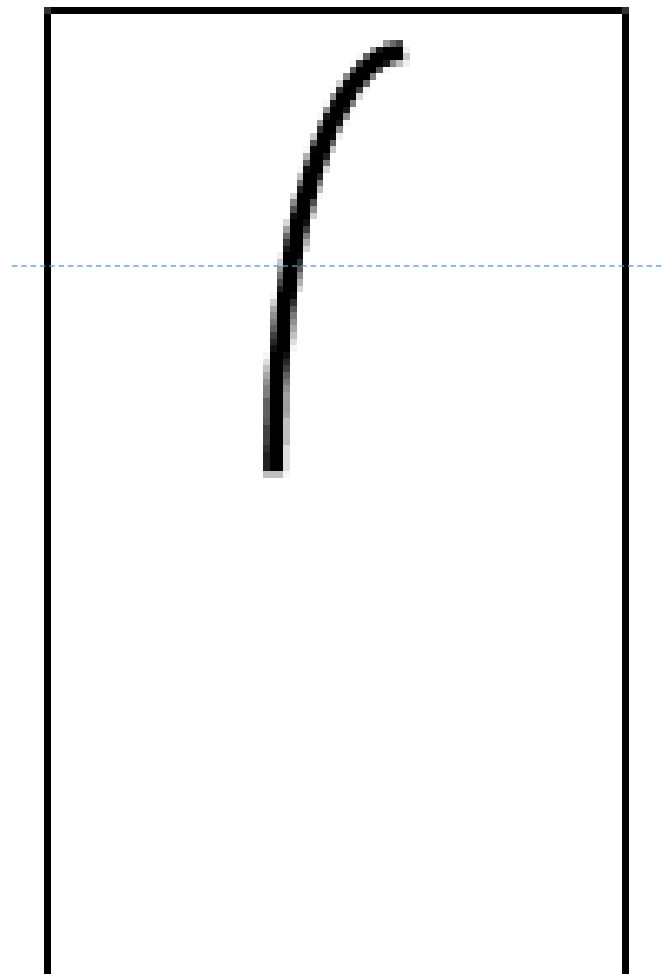
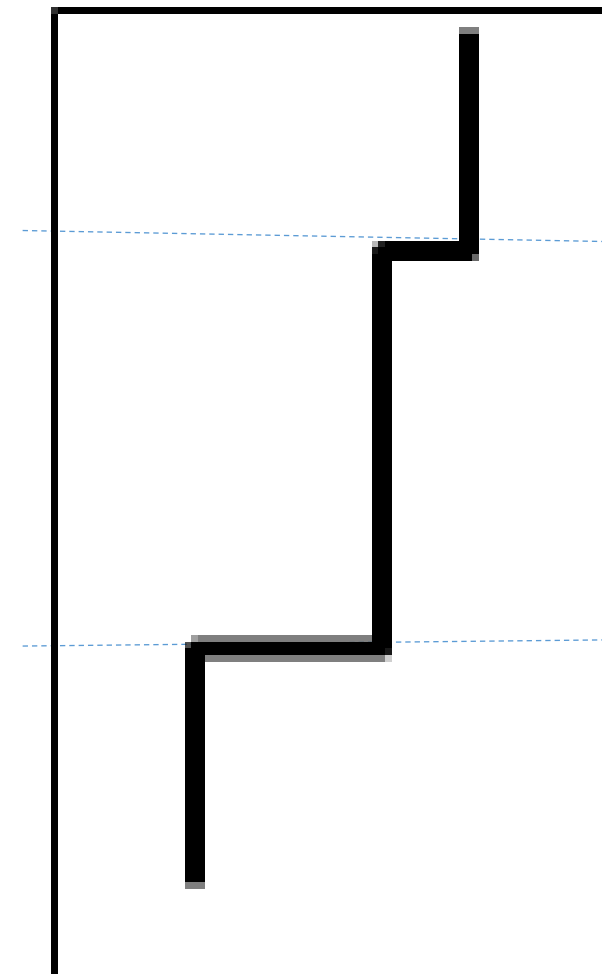
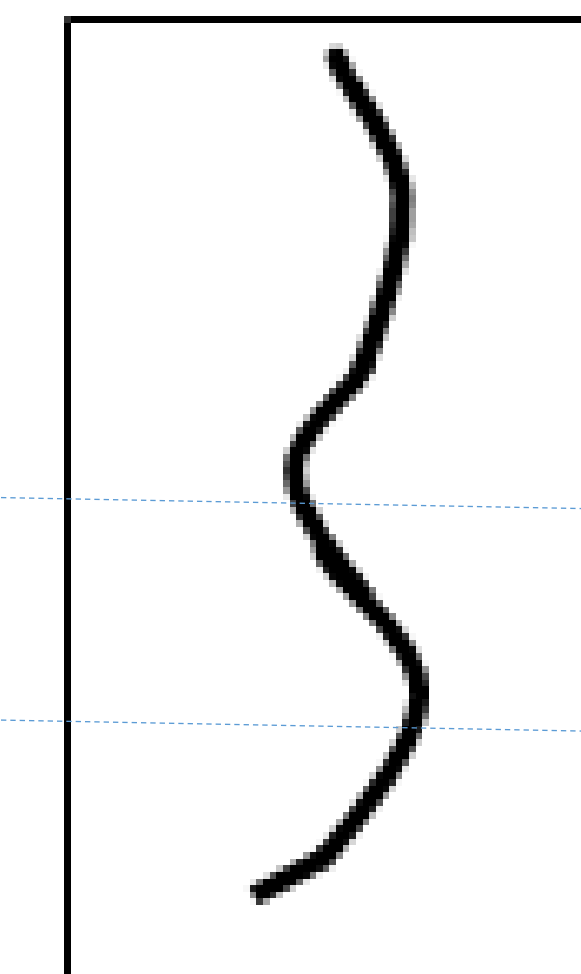
SOC



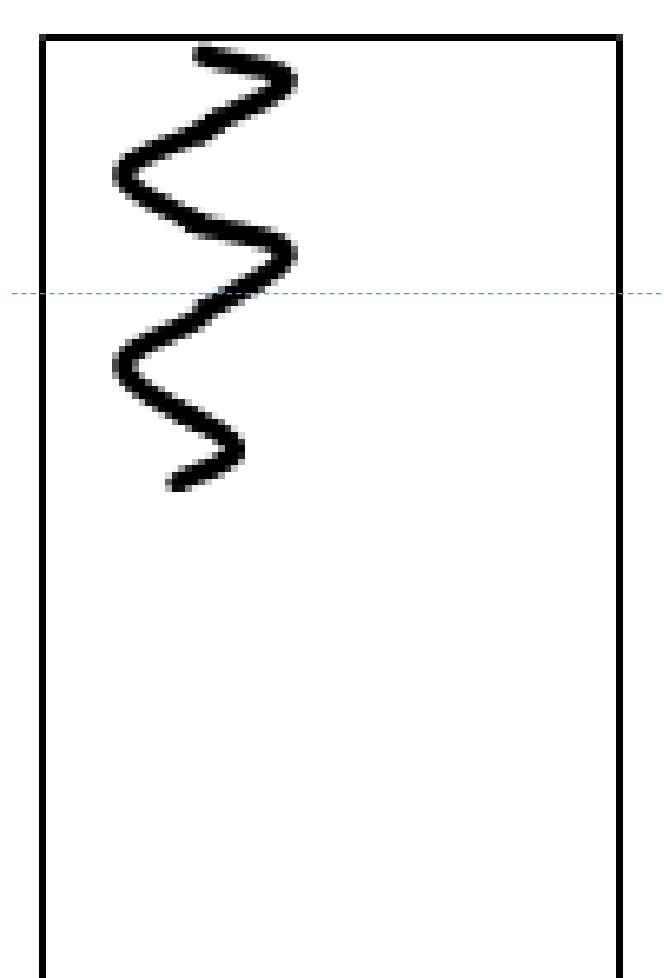
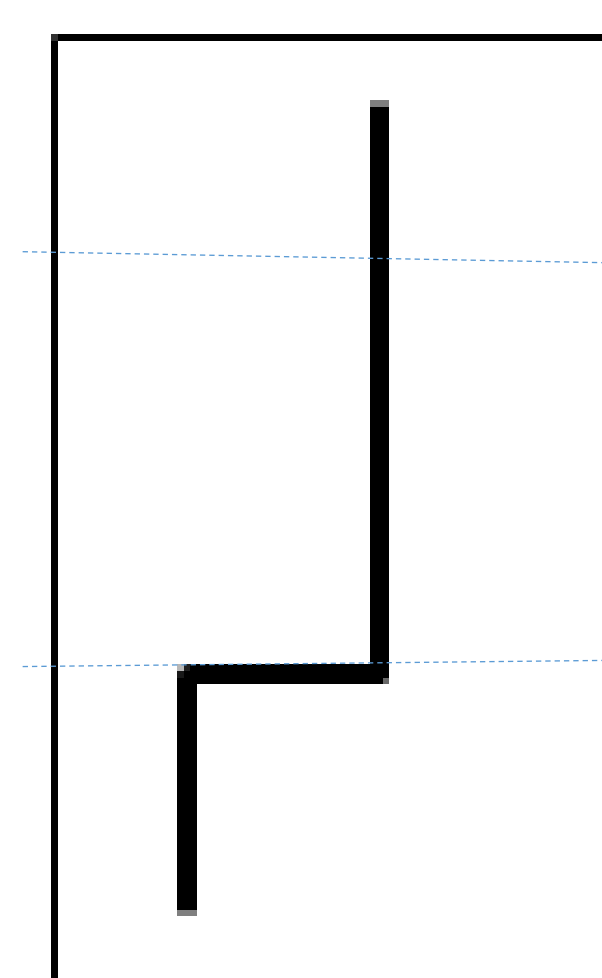
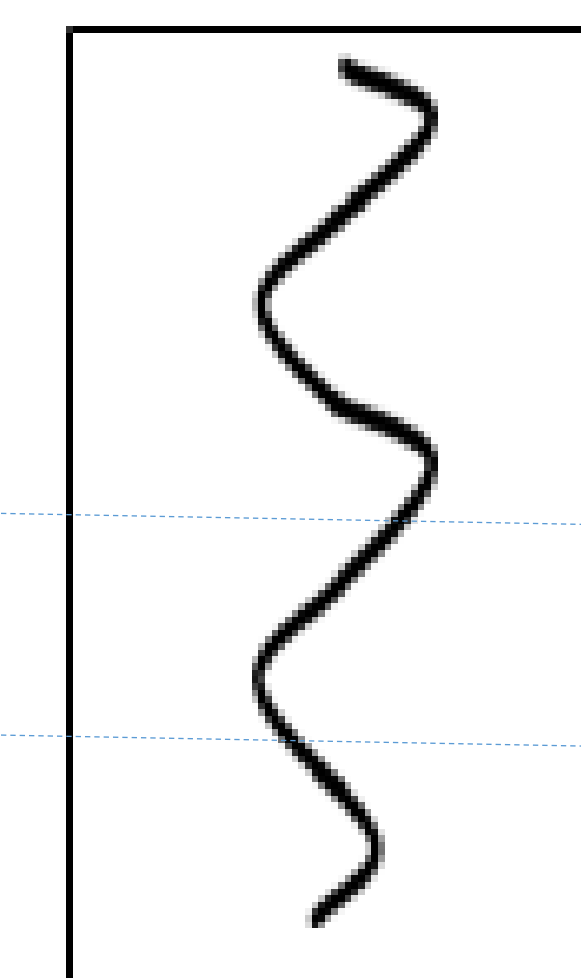
pH



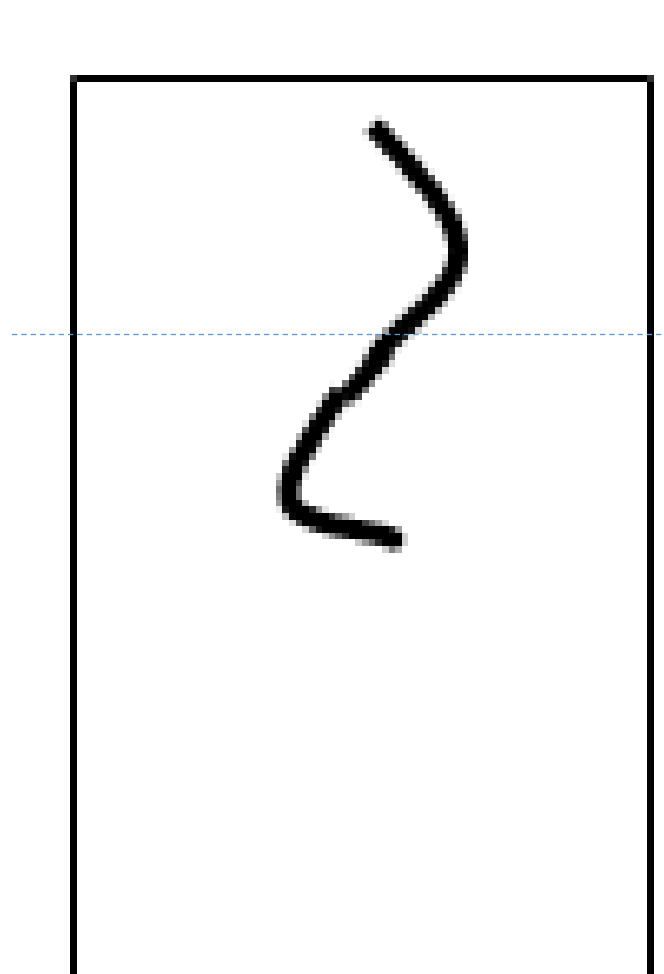
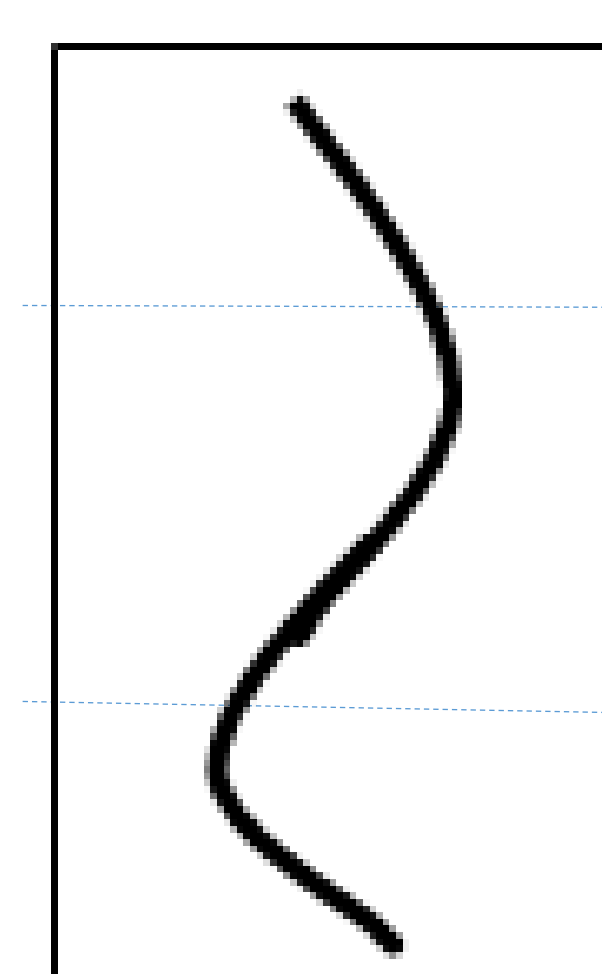
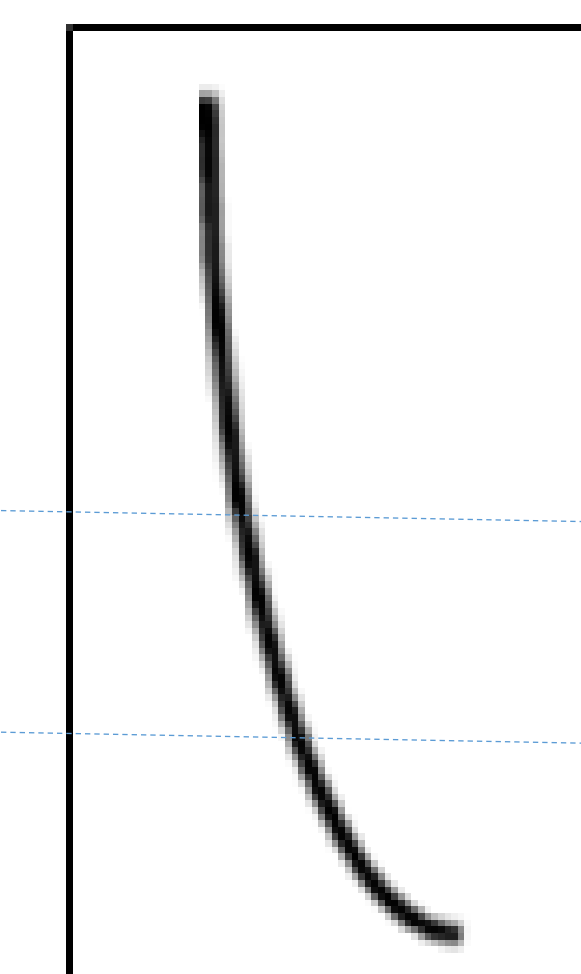
Ca



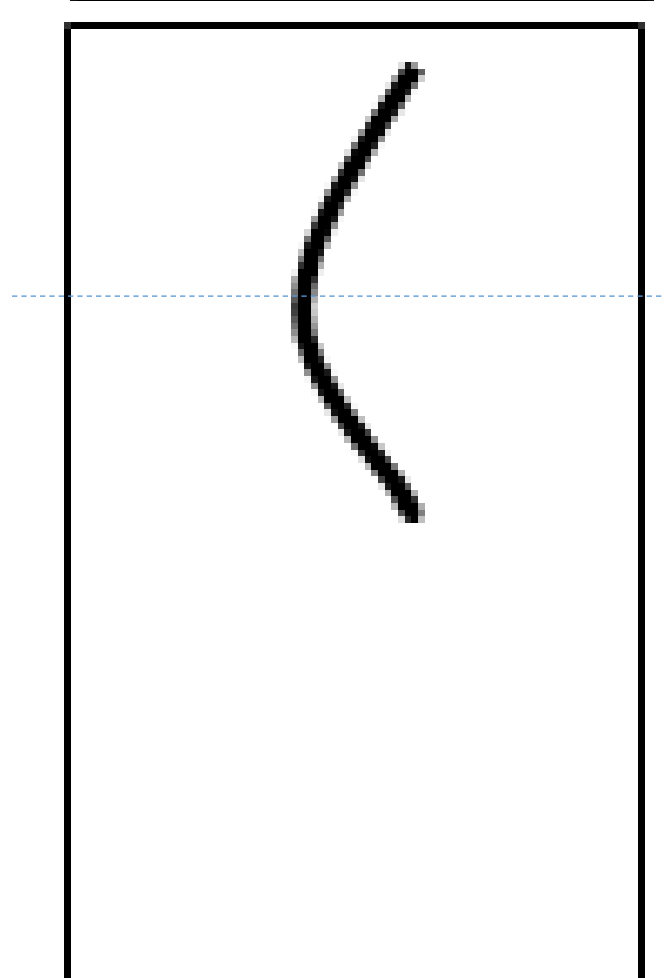
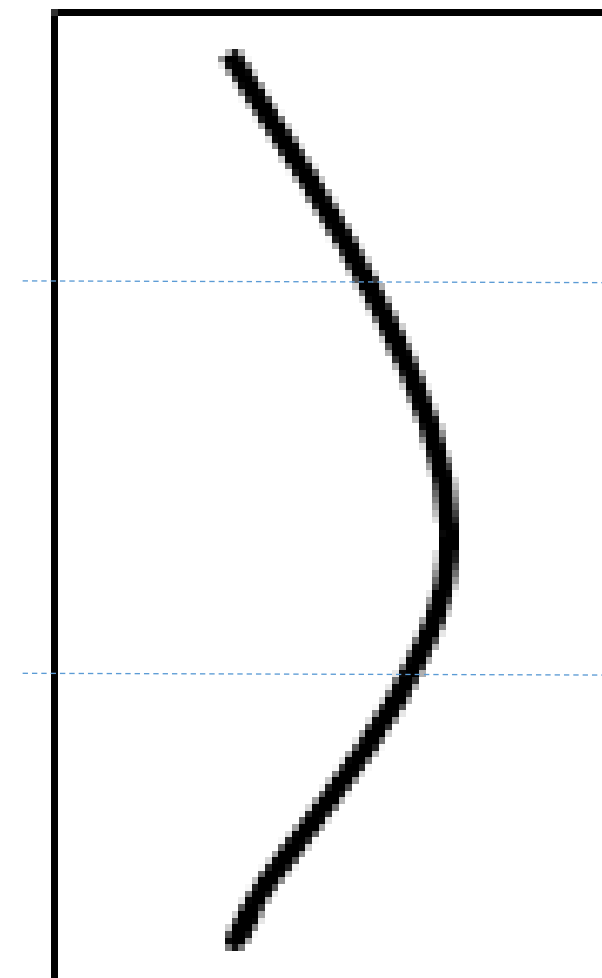
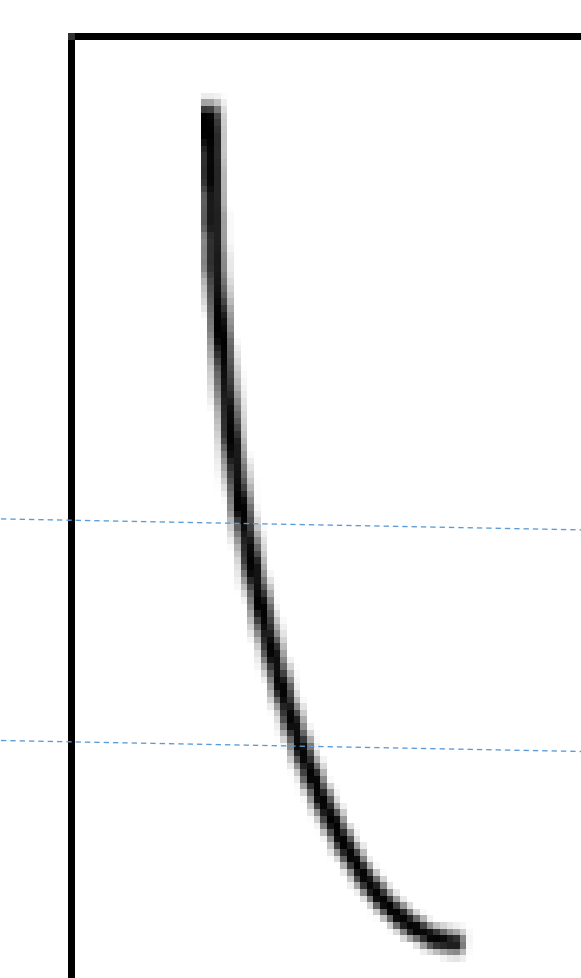
Ti



Al



Fe



- The depth functions of Ca in the Alfisol and SOC in the Mollisol match horizon boundaries.
- In the Alfisol, the Ti depth function reflected the change in parent material.
- Other depth functions showed continuous changes with depth that did not overlap with horizons boundaries.
- There is potential for linking depth functions to soil processes.