

Interactive comment on “Soil lacquer peel DIY: simply capturing beauty” by Cathelijne R. Stoof et al.

Anonymous Referee #2

Received and published: 18 January 2019

Stoof et al. Soil lacquer peel DIY: simply capturing beauty.

General comments

This is a neat paper that concisely describes a methodology to preserve and display soil profiles of sandy soils using a simple lacquer peel approach. These peels are an alternative to monoliths and reveal the often unseen soil profile and are useful tools in teaching, outreach or extension. The step-by-step methodology in the paper provides the opportunity for non-specialists to also create these visual copies of soil profiles. The video is a great supplement that clearly illustrates the methodology. You could also highlight the benefit of monoliths or peels to increase the accessibility of studying soil profiles for people or students with disabilities that prevent them from observing soil in situ (e.g. insert some text around line 10). Some additional text on other kinds of

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data or interpretations to select a site would be useful to ensure that the methods can truly be undertaken by non-specialists. Some suggestions are detailed in the minor comments.

Minor comments

P1 line 27 replace 'capture soils' with 'capture soil profiles'

P2 line 16 change 'where the soil is impregnated:' to 'where the soil is impregnated with a fixing agent:'

P3 line 10 add 'handled when' after 'frequently'

P3 line 13 add 'previous' before 'fixation'

P3 line 14 You haven't evaluated the expert vs non-expert outcomes so alter this sentence to 'The methods can be easily deployed by those who have received no training'

P4 eq. 2 x is not defined – should this be multiply?

P4 line 24 First sentence- whilst this statement may be true is it necessary to 'find a good location'?

P5 line 8 Also include a concluding statement soil texture should be determined for the final identified location – either by consulting more detailed maps or data or by determining soil texture directly in the field. This ensures compliance with the texture criteria and greater success for the peel. This is particularly important if you are encouraging non-specialists to use the methods as they may use the coarse scale data to derive a suitable site location that locally has different properties.

P5 line 10 Data from hydrological monitoring may be available for specific sites but would not necessarily guide whether high groundwater would be present at the site when searching for suitable locations. Perhaps you can include in another sentence other datasets that can indicate high groundwater e.g. different soil types (e.g. Fluvisols) or landforms (e.g. river terraces, floodplains, former wetlands) that would likely

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have high groundwater and should be avoided.

P5 line 18 Replace 'elevation difference' with 'exposure'. It is a vertical section of soil rather than an elevation (which is a height above a datum) that is required here.

P5 line 24 I'm not sure that consulting a DEM would be useful for locating sites to find suitable exposures. Satellite imagery may be more useful to identify fluvial landforms and quarries.

P5 line 27 Could you also comment on co-production of the peels with landowners? The landowner may also like to be involved in co-creating the soil peel and that it may also be a useful resource for them too? Showing examples or sending pictures of peels helps to communicate the process of creating a peel. Also make sure that the landowner is included in any acknowledgements of material produced from the peels.

P6 First paragraph. Did you take any soil moisture measurement at the time of the peels? This might provide useful 'rule-of-thumb' moisture contents to produce the best results (e.g. maximum moisture contents above which peel efficacy is reduced)

P6 line 16 replace 'bold' with 'bald'

P8 line 13 replace 'away from' with 'behind'

P8 line 16 replace '...Step 5' with 'Step 5 section 2.6'

P8 line 20 replace '..and holds the top of...' with '..that supports.'

P9 line 20 Add sentence e.g. Retain strips to test of additional fixing agents (Section 2.7, Step 2)

P10 line 7 replace 'bleak' with 'weak'

P10 line 23 change '...and it much easier than people would think' to '..can be achieved by non-specialists'.

Figure 2 c) use 'prepare' instead of 'prep'

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Interactive comment on SOIL Discuss., <https://doi.org/10.5194/soil-2018-27>, 2018.

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