

Cutting the plywood board and wood frame.



Applying “Bond” glue on the plywood and pasting the soil monolith specimen.



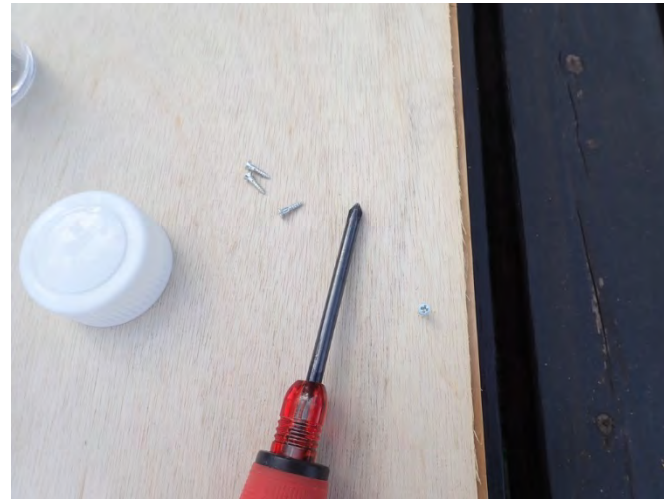
Fixing the soil monolith on the plywood.



Wood frames are attached and fixed.



Plywood and frames were fixed with wood screws.



Completed soil
monolith.



Soil monolith prepared in 2018 (1)



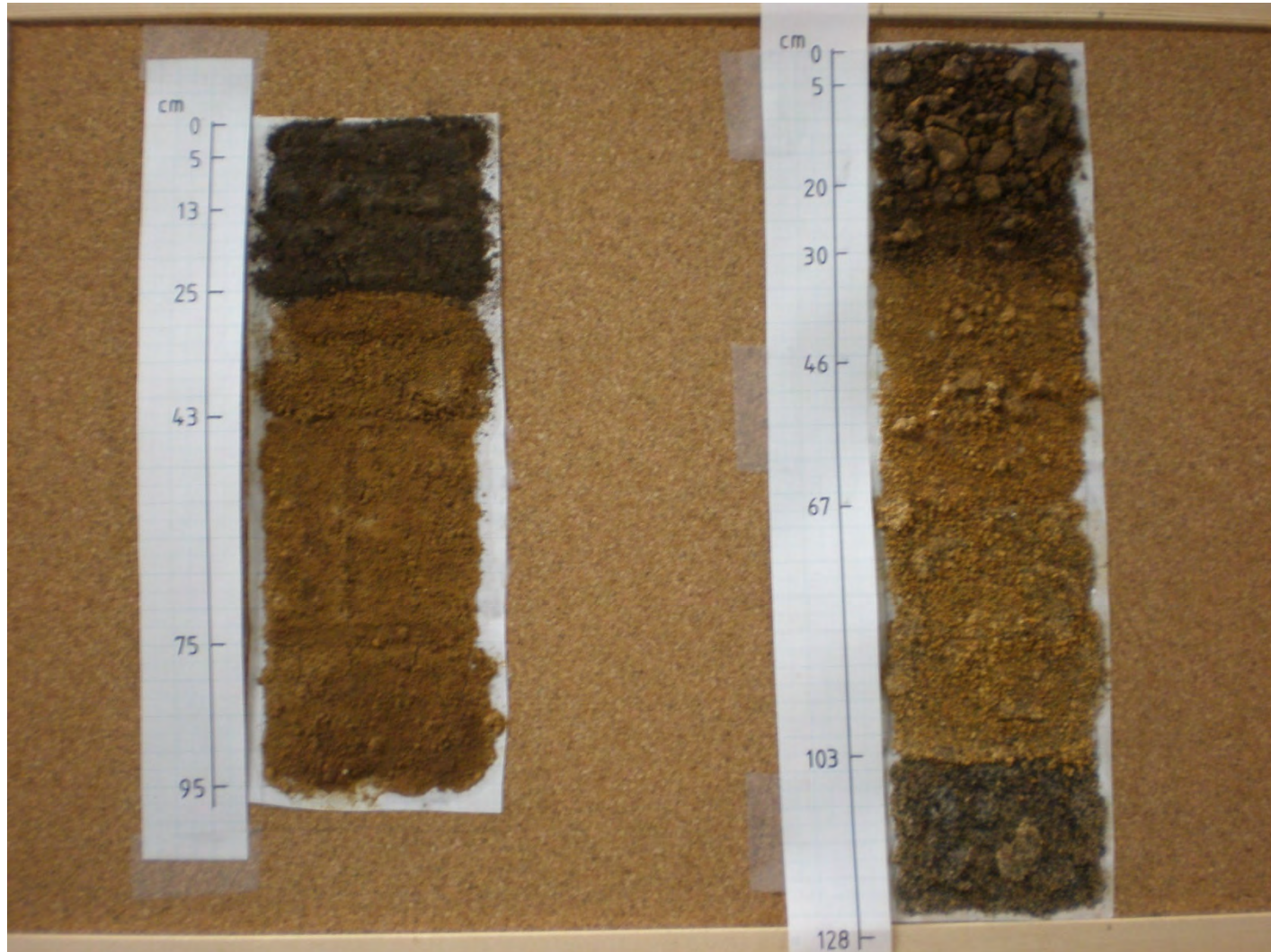
Soil monolith prepared in 2018 (2)



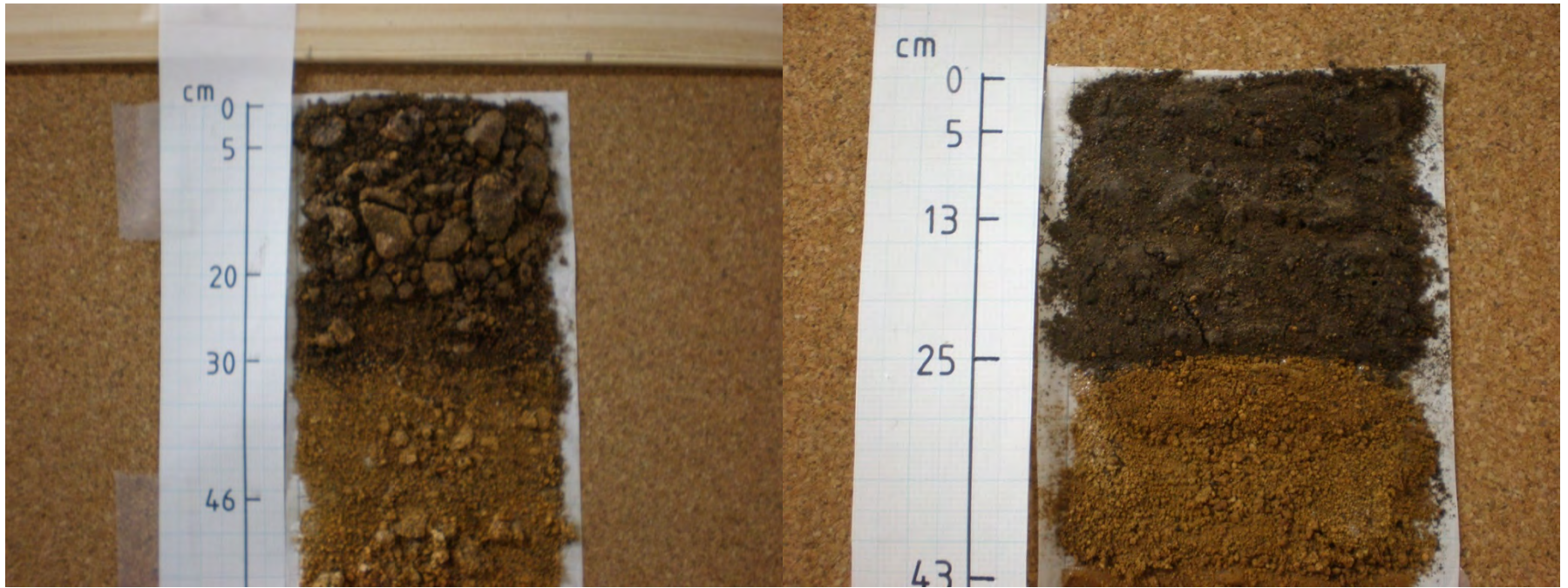
Preparation of mini soil monolith (1)



Preparation of mini soil monolith (2)



Preparation of mini soil monolith (2)



“Bond” glue is applied on section paper, plywood, or cork board layer by layer. Soil samples are placed on glue carefully. After one layer is dried, the next layer is applied. After all layers were applied and dried, the surface is coated with water soluble transparent varnish to represent the wet color.

Preparation of mini soil monolith in 2018



Preparation of mini soil monolith in 2018



Completed mini soil monolith in 2018



Lack film method for soil monolith preparation as carried out by K. Tsutsuki

- 1) Dig soil pit of width 1 m, depth 1-1.5 m, length 2 m with steps. Surface of soil profile is made flat.
- 2) Tomac NS-10 is applied on the surface of profile using a brush.
- 3) Meshed cloth is attached on the surface and fixed with bamboo sticks. Tomac NS-10 is applied further on the cloth.
- 4) Leave the soil profile for more than one day.
- 5) Hardened thin film specimen of the soil profile is peeled off from the soil pit using knife, spade and scissors.
- 6) Transport the thin film to safe place suitable for further works.

Lack film method for soil monolith preparation as carried out by K. Tsutsuki

- 7) Extra soil and stones are removed by brush. It can also be done washing with water without problem.
- 8) Water soluble transparent varnish is diluted two times with the special solvent and applied on the soil surface with a brush.
- 9) Repeat the varnish treatment confirming all surface has been treated.
- 10) Dry the varnish by leaving the specimen for one night.
- 11) Plywood board is cut into the size of width 45cm and length 180 cm.
- 12) Wood frames are made by cutting the lumbers with width 3 cm, thickness 5 mm, and length 180 cm.
- 13) Both sides and base of the soil monolith are cut in size to fix it on the plywood with frames. Width of the specimen will be 38 – 39 cm considering the width of the frame.

Lack film method for soil monolith preparation as carried out by K. Tsutsuki

- 14) Plywood is cut to the size of +8 cm longer than the length of the soil monolith.
- 15) “Bond CH-18” is applied on the plywood.
- 16) Lumbers for frames are attached on the peripherals of the plywood. Then the soil monolith is placed within the space surrounded by the frames.
- 17) Many rag cloths are placed on the soil monolith. Another plywood is placed on them, and heavy things such as buckets filled with water are placed on the plywood to help fix the soil monolith.
- 18) Frames and plywood are fixed with double clips.
- 19) Leave 3 days until the glue is dried.
- 20) Frames and plywood are fixed with wood screws from the back side.
- 21) After completed, it is displayed in a proper place.

Reference literatures

- Walter Hähnel, Hamburg. Die Lackfilmmethode zur Konservierung geologischer Objekte. Der Präparator - Zeitschrift für Museumstechnik. 7(4), (1961)
- 浜崎忠雄・三土正則 土壌モノリスの作製法 農技研資B 18, 1-27 (1983)
- 浜崎忠雄・三土正則・小原洋・中井信、土壌モノリスの作製法改訂版 (2002),
<http://www.naro.affrc.go.jp/archive/niaes/inventory/soil/Document/method.pdf>
- 三恒商事、遺跡断面等の剥ぎ取り転写セット 説明書

My internet home page

- Powerpoint of this lecture is uploaded in the form of pdf file on my home page.
<http://timetraveler.html.xdomain.jp/lecfile.html>
- Briefing of soil monolith specimens.
- <http://timetraveler.html.xdomain.jp/special.html#special65>
- Display of soil monolith
- <http://timetraveler.html.xdomain.jp/special.html#special53>