Photo 8.- Clay containing diffuse iron sulfide, core 4, 51 cm depth, scale 0.2 mm.

Photo 9.- Sporogon of the moss growing in and on the sandy to gravelly material. Phase contrast.

Photo 10 .- Stomach of the soil animal of photo 1 filled with moss tissue. Phase contrast.

Photo 11 .- Initial soil plasma consisting of droplets of the soil mesofauna. Note also the diatom.

Photo 12 .- Air-dried sample of lake sediment, disturbed throughout by shrinkage.

Photo 13 .- Freeze-dried sample of the same layer, microstructure well preserved, especially the framboids.

Photo 14 .- Round framboids with small and with thicker net-like grains, phase contrast.

Photo 15 .- Framboids with different infillings in a hole between organic remnants.

Photo 16 .- Silver grains (white reflecting) in the stripping film over an organic remnant.

Photo 17 .- Silver grains demostrating the activity of ^{14}C-PCB bound to an organic remnant.

Photo 18 .- The same framboid as seen in photo 3, between crossed plars.

SUMMARY

The use of freeze-drying for conserve weak organic structures, and impede dislocation effects is demonstrated in three examples.

1. The incipient plant cover of a recultivated, sandy area was consisting in mosses. Some photographs present the initial food chain. Leaf tissues have been found in the stomach of a small animal.

2. Bore-cores of lacustric soils may be prepared using freeze-drying. It is true that the pores have changed their form; but principally the structure is well visi

ble. Most attention is called to the different forms of f r a m b o i d s . After freeze-drying, even colloid globes with a very small content of sulfide or sulphur are conserved.

3. The distribution of ^{14}C-labelled PCB in a soil column is studied by a u t o r a d i o g r a p h i c technics. During desiccation, dislocation of the soil solution is prevented by means of freeze-drying. Strong concentration of PCB in organic remnants suggests that rot products of microscopic size may be more important than diffused colloids, at least in the used Hapludalf soil.

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