

## SUMMARY

The micromorphology of four pedons forming a drainage sequence on marine clays with pyrite, were investigated show the changes induced upon drainage. The most obvious field changes was a progressive increase in the depth at which jarosite mottles occurred and a simultaneous increase in the amount and size of sesquioxidic mottles.

In thin sections, the plasmic fabric showed a better development in the better drained members as in the others, humified organic matter tended to mask the optical properties of the plasma. In the Sulfaquepts, organic matter also complexed iron and ferri-organans are abundant in the upper parts of these pedons. Diatoms are present in all the pedons and seems to be a characteristic feature of the marine clays in Malaysia.

SEM micrographs of pyrite, jarosite, ferri-organans, fungal mycelia, gypsum and diatoms are presented.