

SUMMARY

Travertines are generally a good parent material for soils formations. Beside large CaCO_3 content reaching up to 80 %, they contain certain amount of organic matter as well as admixture of clayey, silty and sandy fractions. In respect of their mechanical and physicochemical properties, travertines are carbonate calcareous rocks of high porosity and ready susceptibility to weathering processes. The most soil profiles formed out of them have the morphology of rendzinas.

In pedological literature there are only a few studies dealing with travertine rendzinas, because of their local occurring and importance. Therefore, the main task of the present study was:

- to examine the micromorphological properties of some travertine rendzinas;
- to demonstrate the relation between morphology and physicochemical features of these soils.

The object of detail examinations were travertine rendzinas sporadically met in lower, moist sites of the area with loess and boulder loam formations occurring in the forest region of Henryków within the Strzelinskie Hill /geographical unit 332/. The profiles have represented shallow rendzina, and medium-deep rendzina on subfossil chernozemic soil. The examination results validate the following conclusions:

- /1/ The soils derived from travertines possess all the features of chernozemic rendzinas in as physicochemical respects. They distinguish themselves by special domain of plasmic fabric high biological activeness, neutral or alkaline reaction, high saturation with bases and high content of non-hydrolizing carbon.

RENDZINAS DERIVED FROM TRAVERTINES

- /2/ The characteristic domain of plasmic fabric in travertine rendzinas is crystic with variable content of masepic. In the A₁ horizon of shallow rendzina predominates crystic, while in the medium-deep one it is accompanied with masepic fabric. In the A₁/C horizon the amount of crystic fabric considerably increases.
- /3/ In the micromorphological composition of humus predominating are humicol and argillahumicol - /mullicol/with a slight admixture of humiskel . The content of humic acids bounded with calcium is considerable in the investigated soils.
- /4/ The subfossil soil underlying the medium-deep travertine rendzina shows the micromorphology of secondary chernozemic rendzina. In this soil crystic fabric prevails over masepic. The A_f-horizon contains most of carbon of humic acids bounded with calcium as well as of ready-hydrolyzing one.