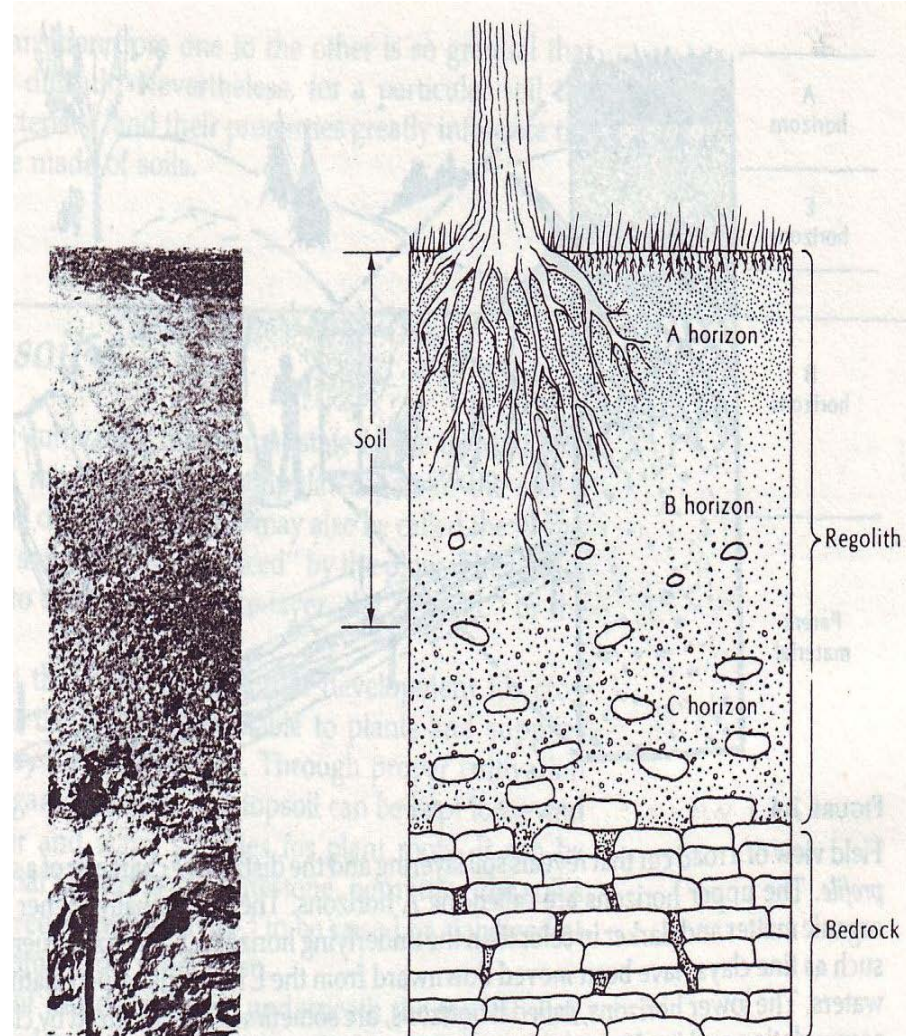


Apakah Tanah itu?

- Tanah adalah akumulasi tubuh alam bebas, terdapat di permukaan bumi yang mampu menumbuhkan tanaman, dan memiliki sifat heterogen akibat pengaruh iklim dan jasad hidup yang bertindak terhadap bahan induk dalam keadaan relief tertentu selama jangka waktu tertentu pula.



Faktor apa yang menyebabkan tanah terbentuk?

- Tanah terbentuk karena dua faktor utama:
 - faktor bahan induk
 - faktor lingkungan
- $S = f (cl, o, r, p, w)$
 - Tanah (S)
 - iklim (cl)
 - organisme (o)
 - relief (r)
 - bahan induk (p)
 - waktu (w)

HAKEKAT TANAH DAN KONSEP PEDON

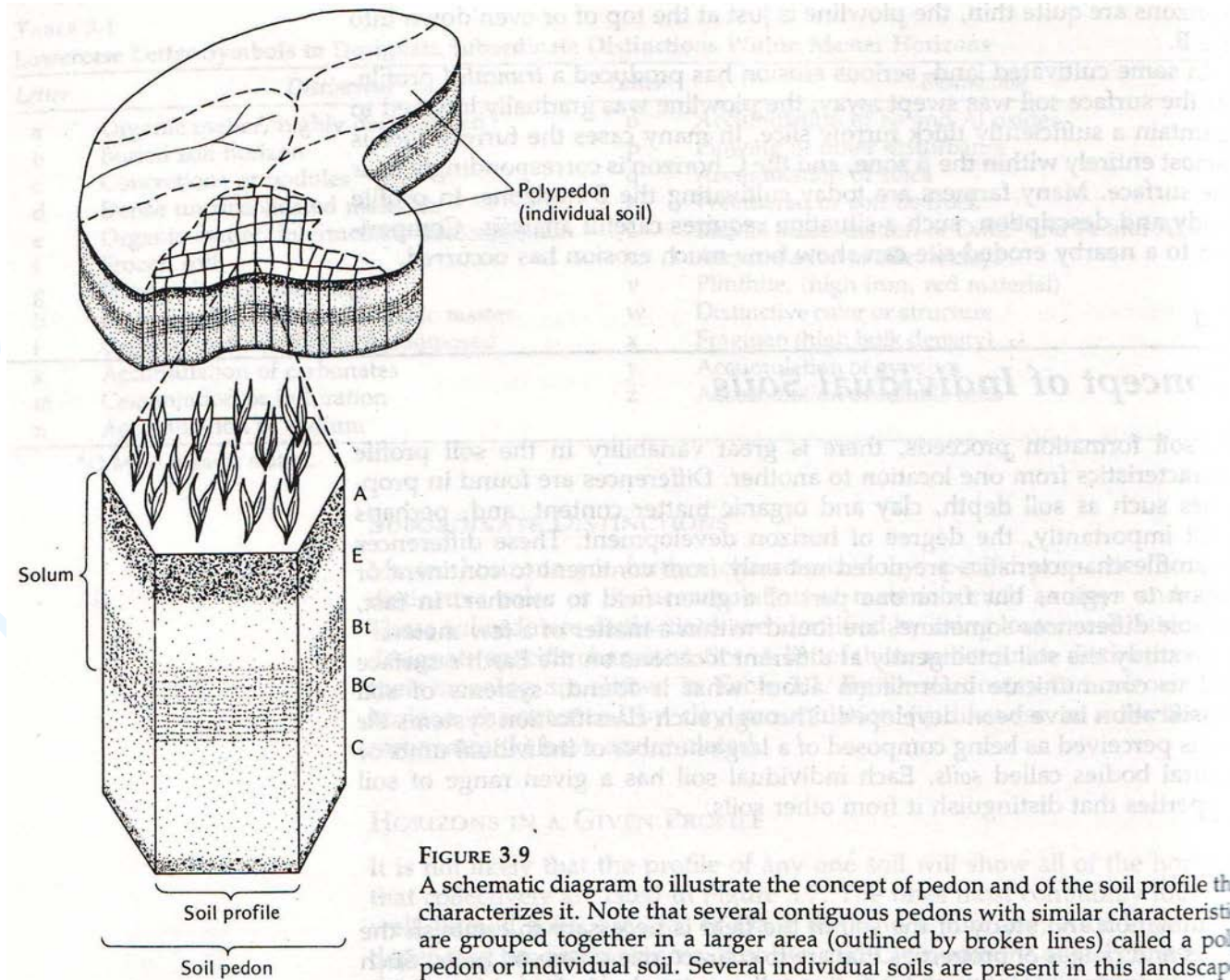


FIGURE 3.9

A schematic diagram to illustrate the concept of pedon and of the soil profile that characterizes it. Note that several contiguous pedons with similar characteristics are grouped together in a larger area (outlined by broken lines) called a polypedon or individual soil. Several individual soils are present in this landscape

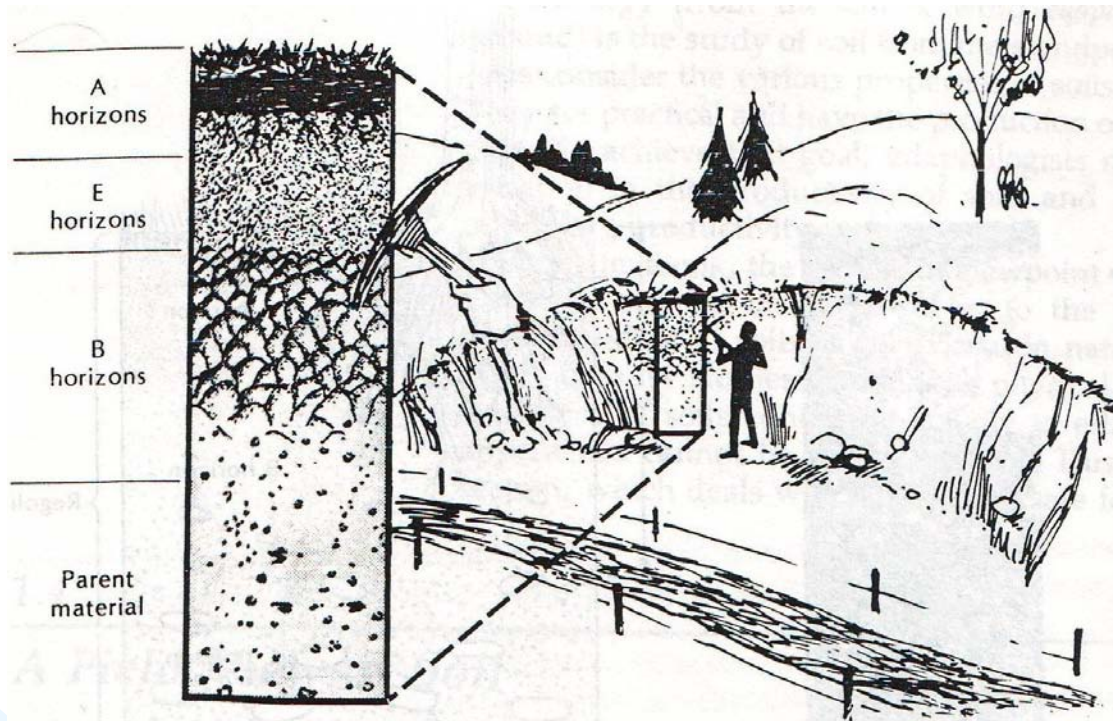
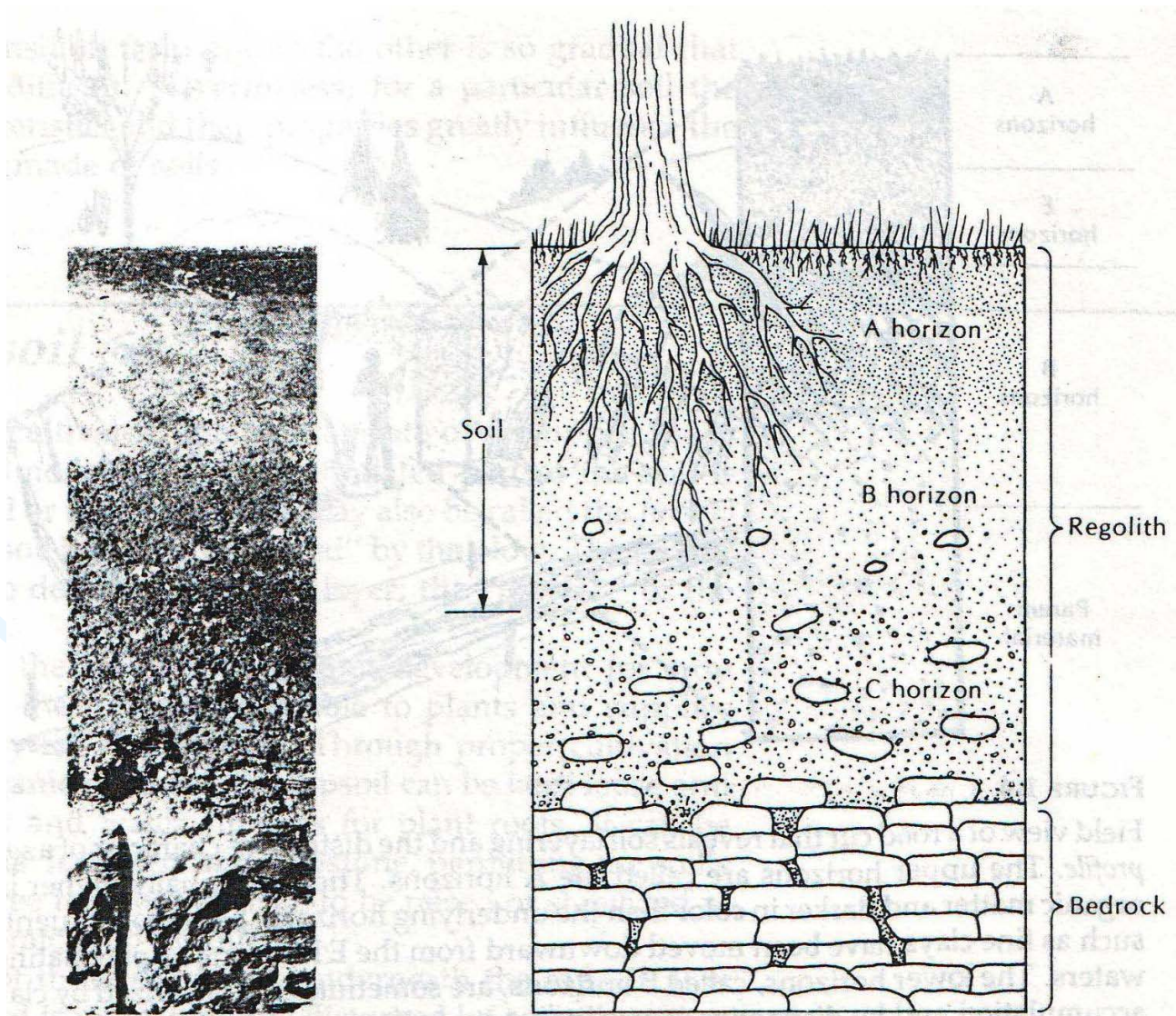
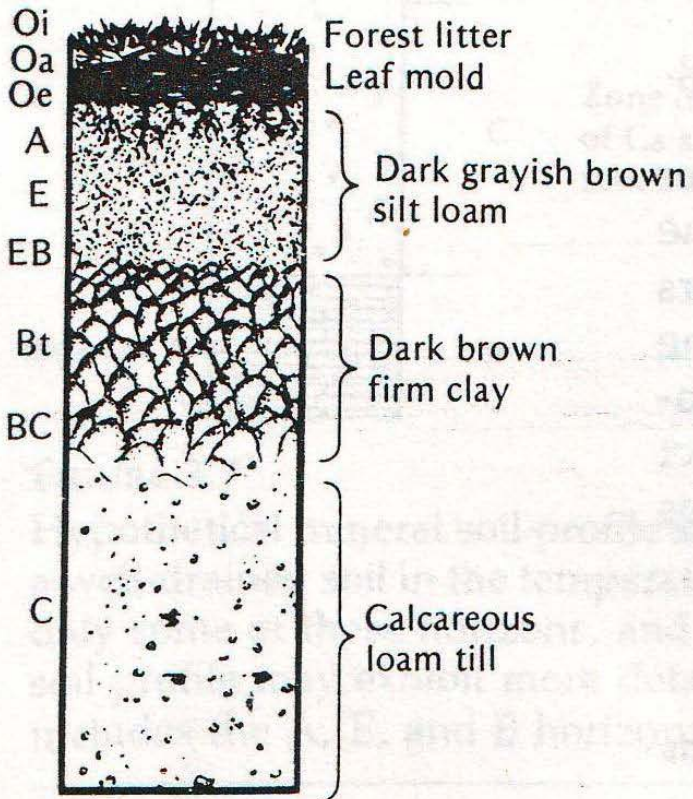


FIGURE 1.4

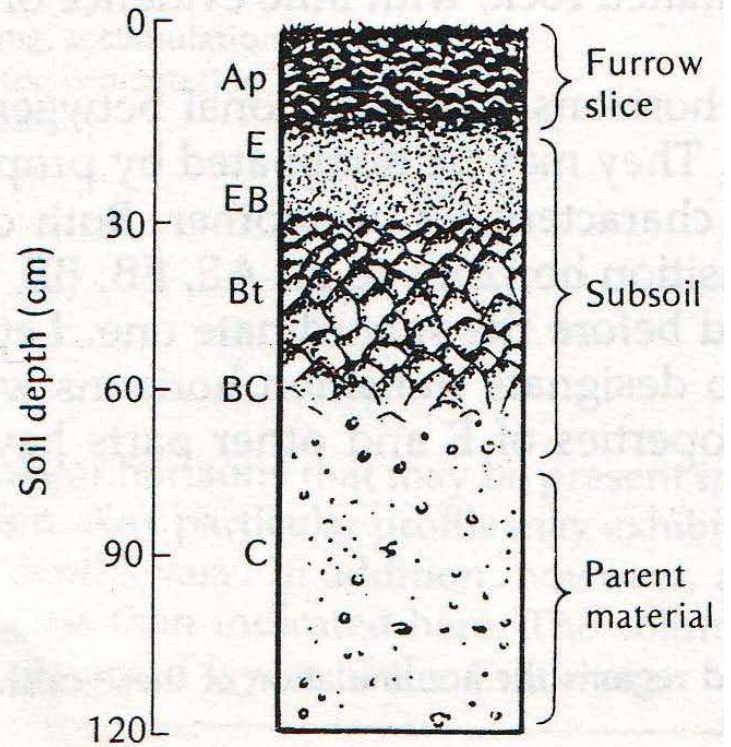
Field view of a road cut that reveals soil layering and the distinctive character of a *soil profile*. The upper horizons are called the A horizons. They are usually higher in organic matter and darker in color than the underlying horizons. Some constituents such as fine clays have been moved downward from the E horizons by percolating waters. The lower horizons, called B horizons, are sometimes characterized by clay accumulation and by distinctive structures such as shown at the point of the pick. The A, B, and E horizons comprise the *solum*, which is distinct from the parent materials below. The presence and characteristics of different horizons differ sufficiently from soil to soil that it is possible to differentiate one soil from another.



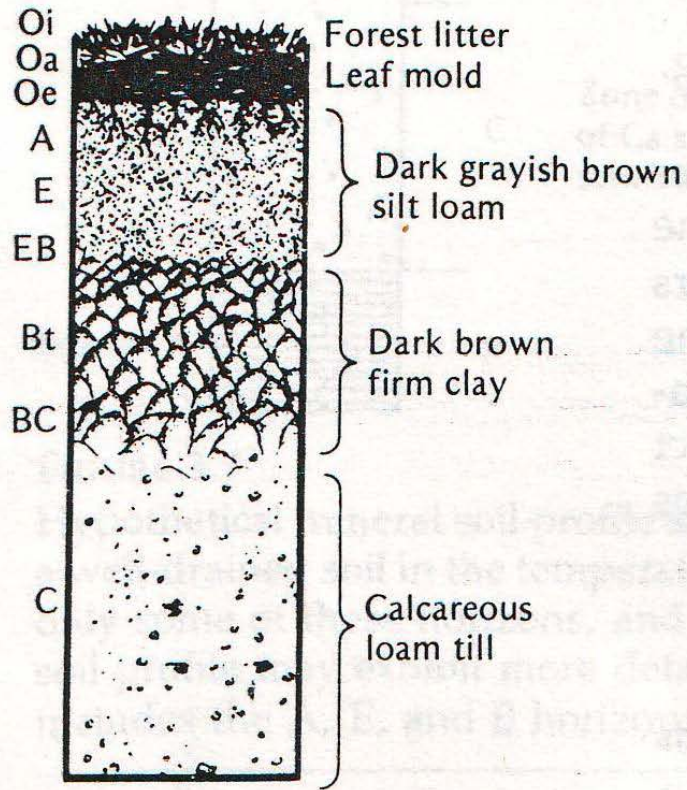
Miami silt loam
Virgin forest



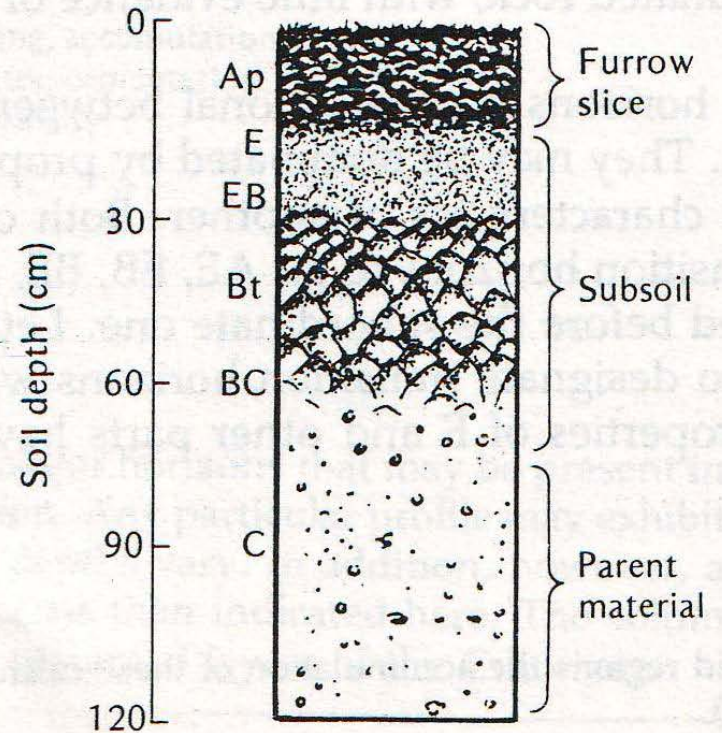
Miami silt loam
Arable soil



Miami silt loam
Virgin forest



Miami silt loam
Arable soil



Monolith Tanah

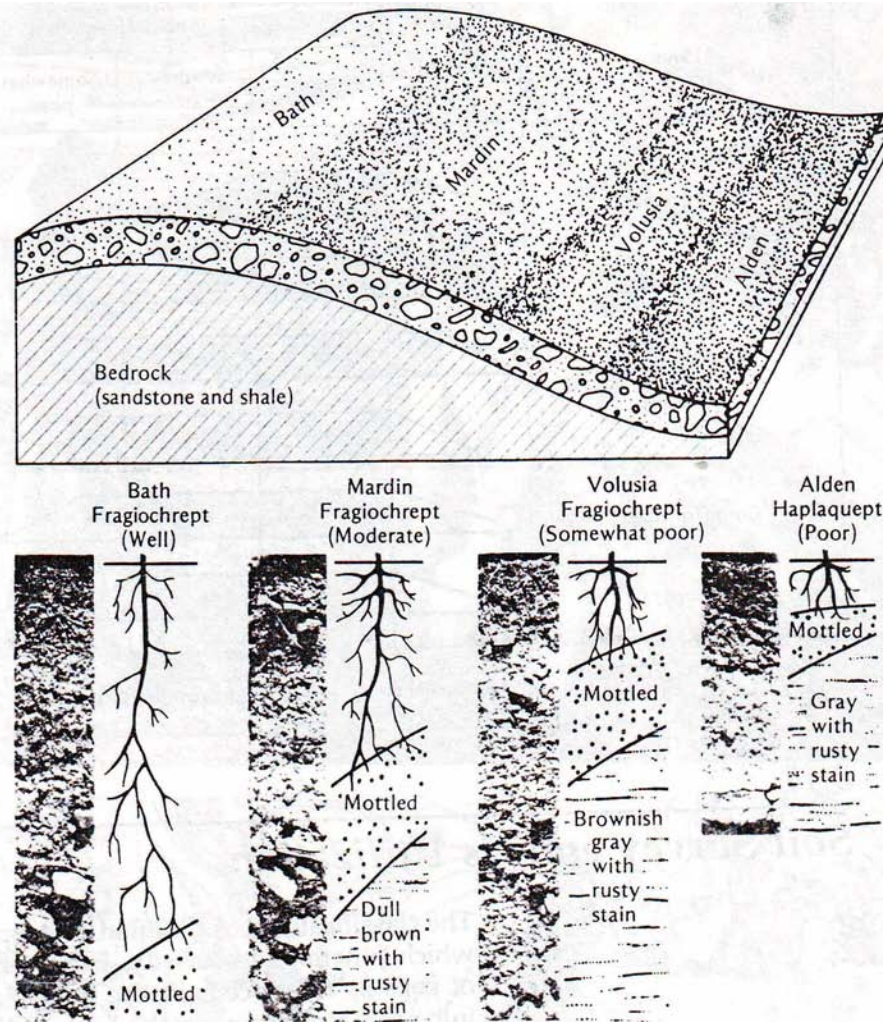


FIGURE 3.18

Monoliths showing four soils of a drainage catena (below) and a diagram showing their topographic association in the field (above). Note the decrease in the depth of the well-aerated zone (above the mottled layers) from the Bath soil (left) to the Alden (right), which remains poorly aerated throughout the growing season. These soils are all developed from the same parent material and differ only in drainage and topography. The Volusia soil as pictured was cultivated, while the others were located on virgin sites. Note that all four soils belong to the Inceptisols order.

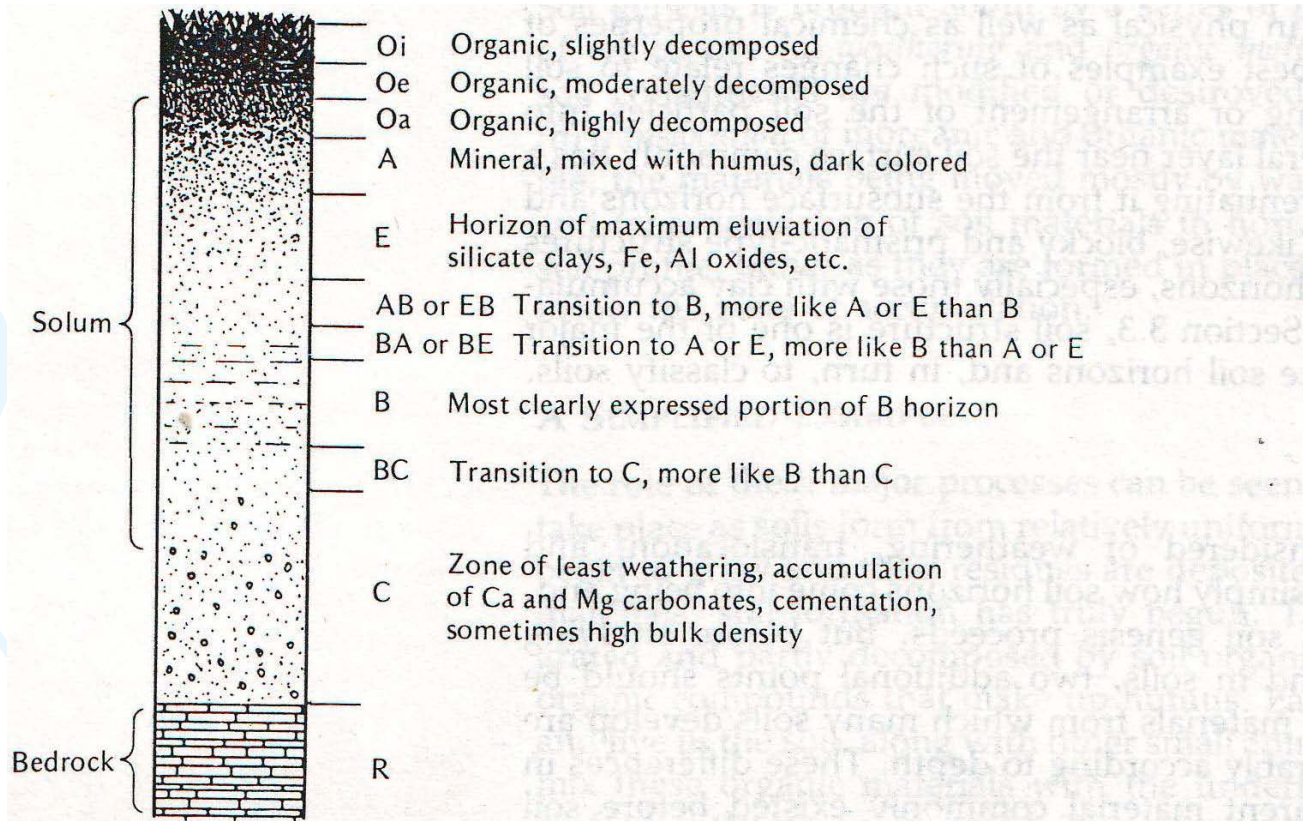
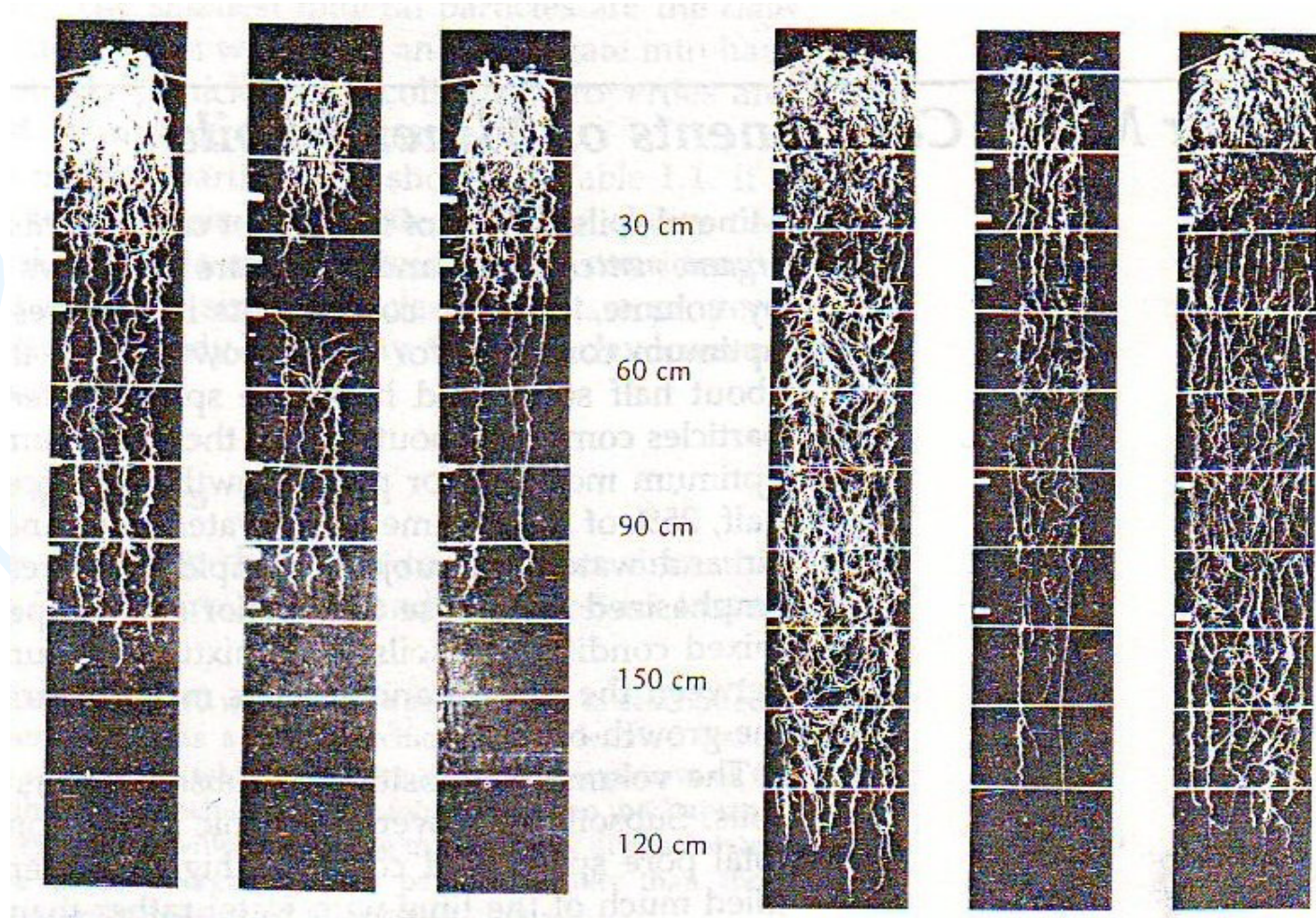


FIGURE 3.7

Hypothetical mineral soil profile showing the major horizons that may be present in a well-drained soil in the temperate humid region. Any particular profile may exhibit only some of these horizons, and the relative depths vary. In addition, however, a soil profile may exhibit more detailed subhorizons than indicated here. The solum includes the A, E, and B horizons plus some cemented layers of the C horizon.

Kedalaman Efektif



Asosiasi Tanah

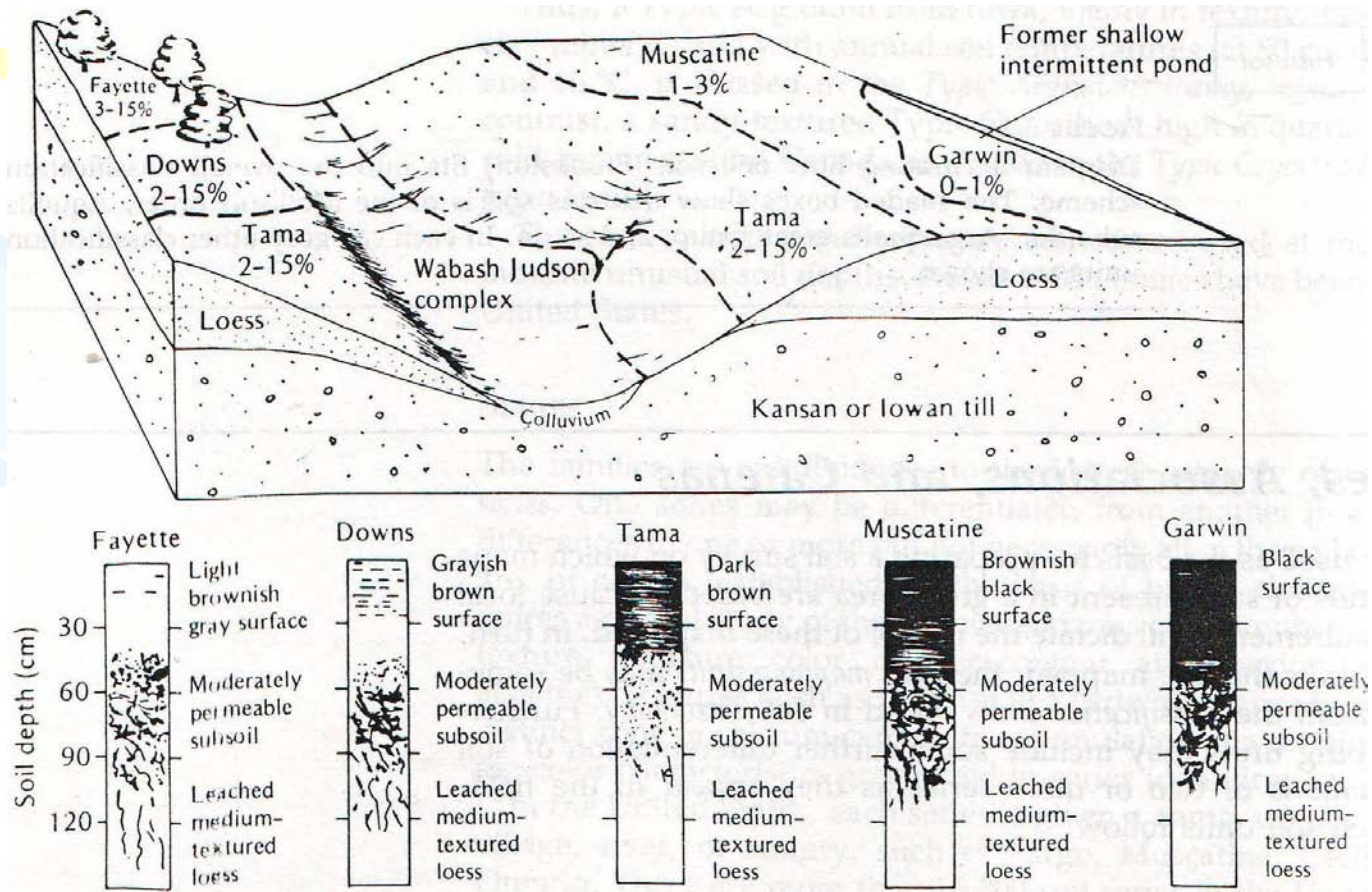


FIGURE 3.17

Association of soils in Iowa. Note the relationship of soil type to (1) parent material, (2) vegetation, (3) topography, and (4) drainage. Two Alfisols (Fayette and Downs) and three Mollisols (Tama, Muscatine, and Garwin) are shown. [From Riecken and Smith (1949)]