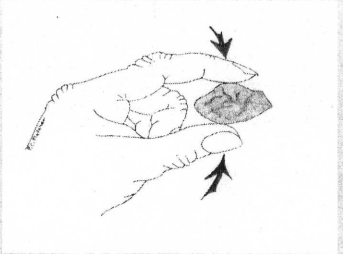
## Soil Consistence

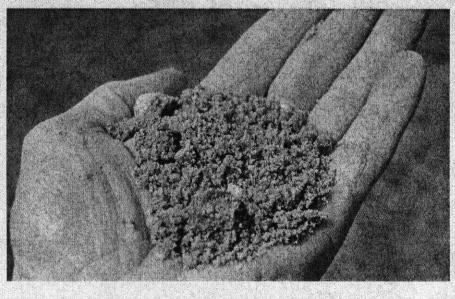
The resistance of a clod of soil to being crushed



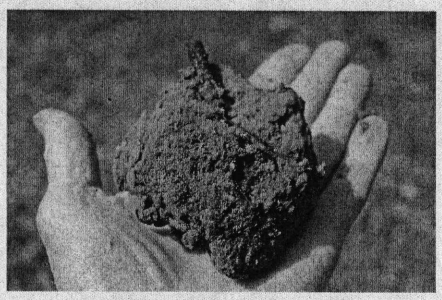
## Terms used to describe Soil Consistence

- Loose
- Very friable
- friable
- Firm
- Very firm
- Extremely firm

- **Loose:** Soil falls apart when removed from the pit face, sands and gravelly

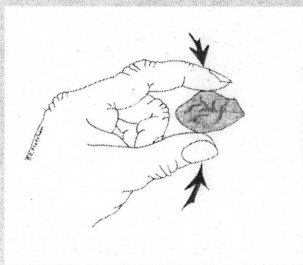


**Very Friable:** A clod of soil crumbles under very slight pressure



**Friable:** A clod of soil crumbles under slight to moderate pressure

When squeezed between one's thumb and index finger -



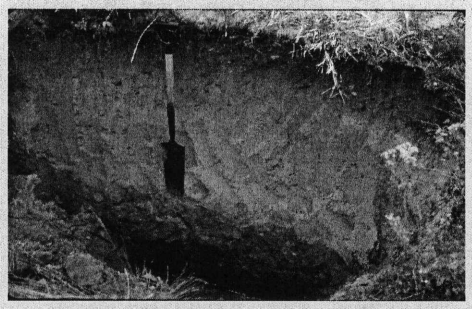
- **Firm**: There is noticeable resistance to crushing
- **Very Firm**: Strong force is needed to crush the soil
- **Extremely Firm**: Cannot be crushed using one's fingers and both hands are needed

## Cemented Soil

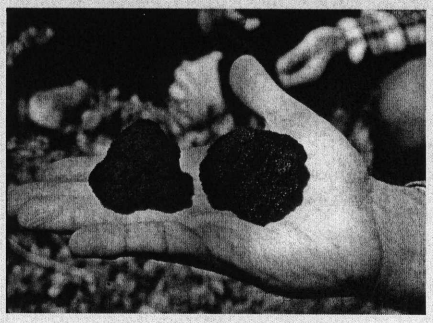
- Hard or very hard mass of soil
- Accumulation of Iron and manganese oxides that fills the pores between soil particles and cements the soil particles together.

## Bog Iron or Iron Pan

a continuous layer

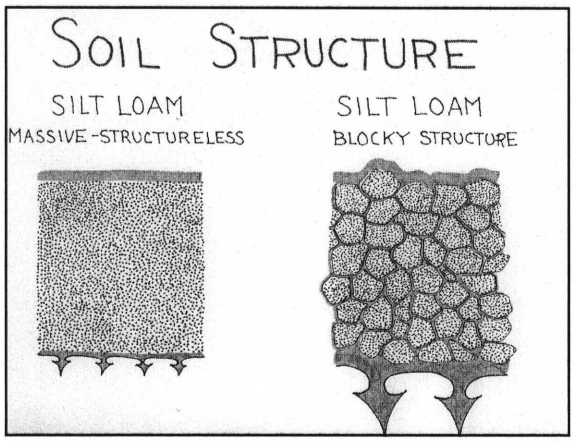


Nodules and/or Concretions
cemented areas within the soil

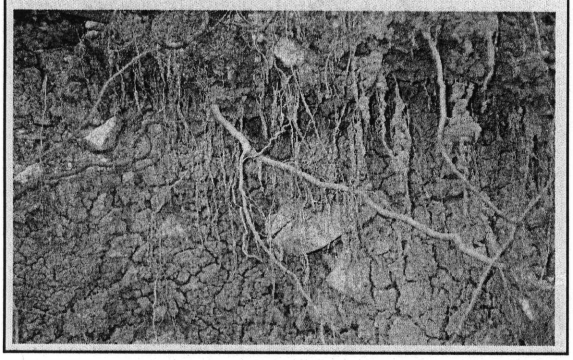


## Soil Structure

The natural arrangement of individual soil particles into larger aggregates of soil particles.



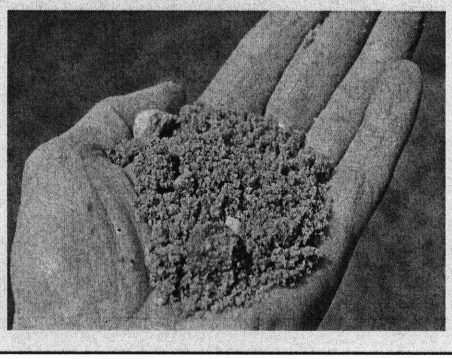
## Blockly Structure



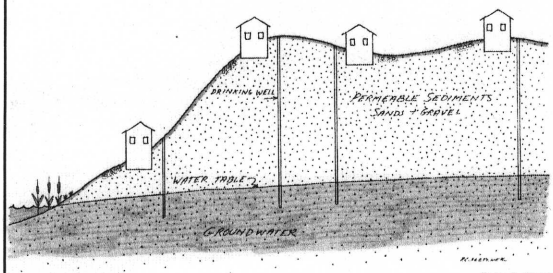
## Structureless soils

Soils that do not have structure are either single grain or massive.

## Single Grained Soil



## Unconfined Groundwater System

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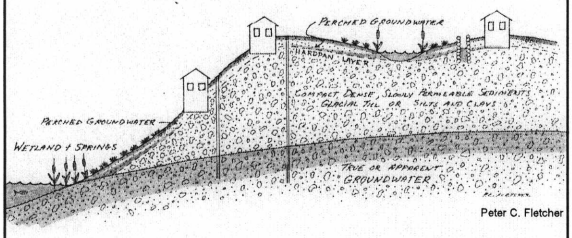
## Perched Groundwater System

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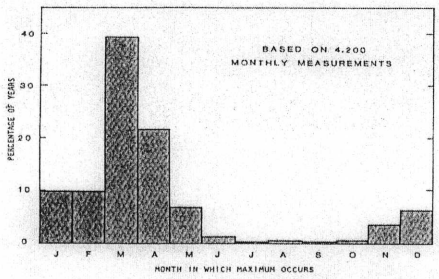
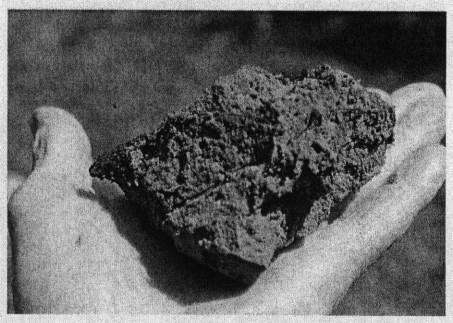
## Season of the Year



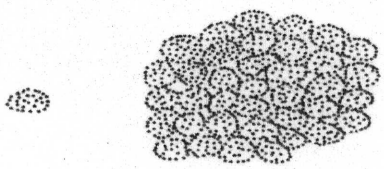
## Massive Soil



## Describing Soil Structure

- Shape
- Size
- Grade (degree of distinctness)

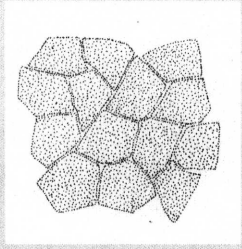
## Granular Structure



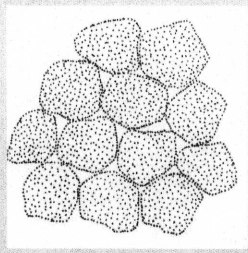
Rounded in shape and typically 1/8 to 1/4 inch in diameter

## Granular Structure

## Blocky Structure

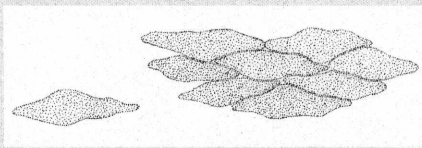


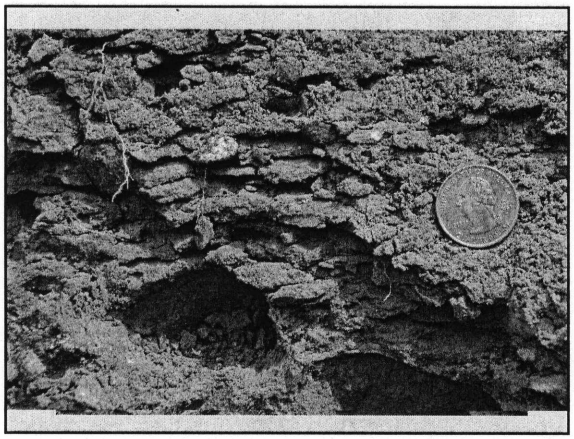
Angular Blocky

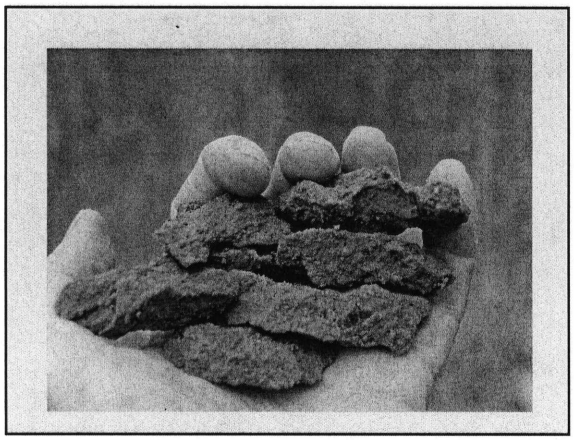


Subangular Blocky

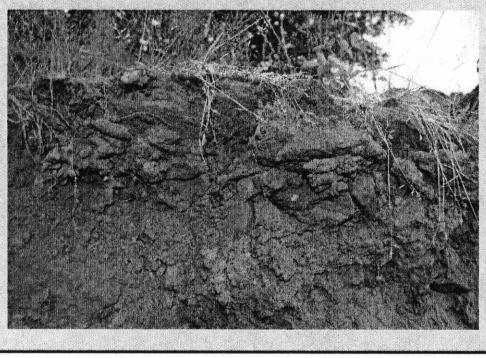
## Platy Structure



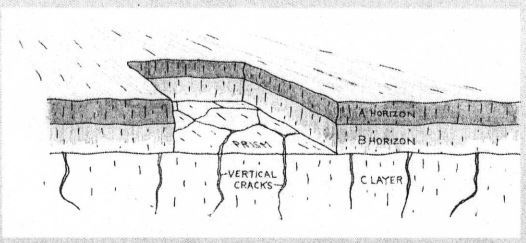


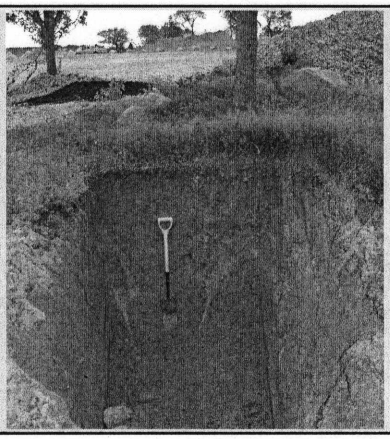


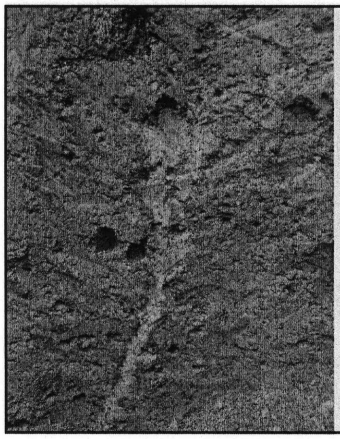
## Platy Structure Caused by Mechanical Compaction (heavy equipment)



## Prismatic Structure





Vertical cracks often occur in the substratum of compact till, and in marine and lacustrine silts and clays.