

SOIL



Soil

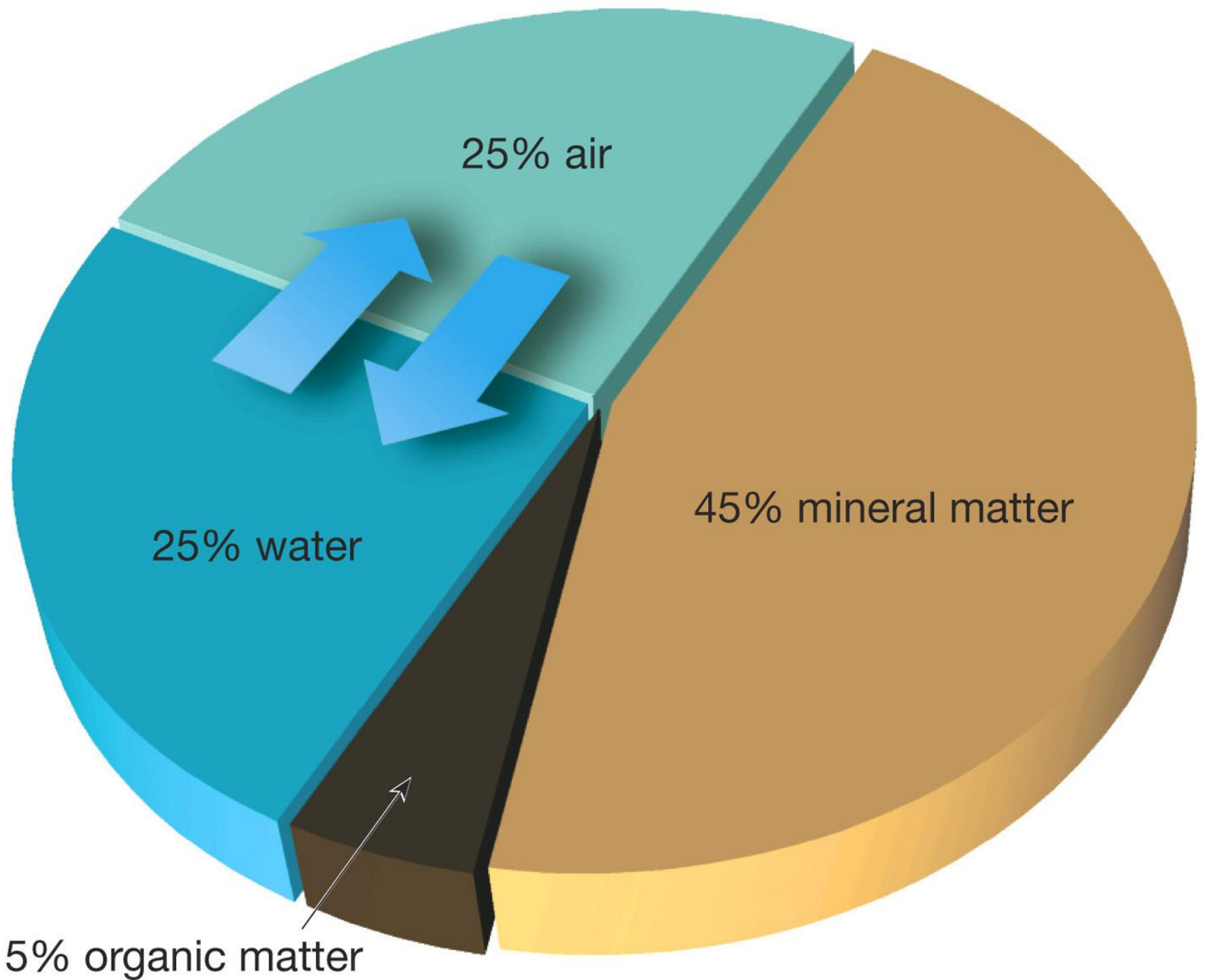
the upper layer of earth in which plants grow, a black or dark brown material typically consisting of a mixture of organic remains, clay, and rock particles.

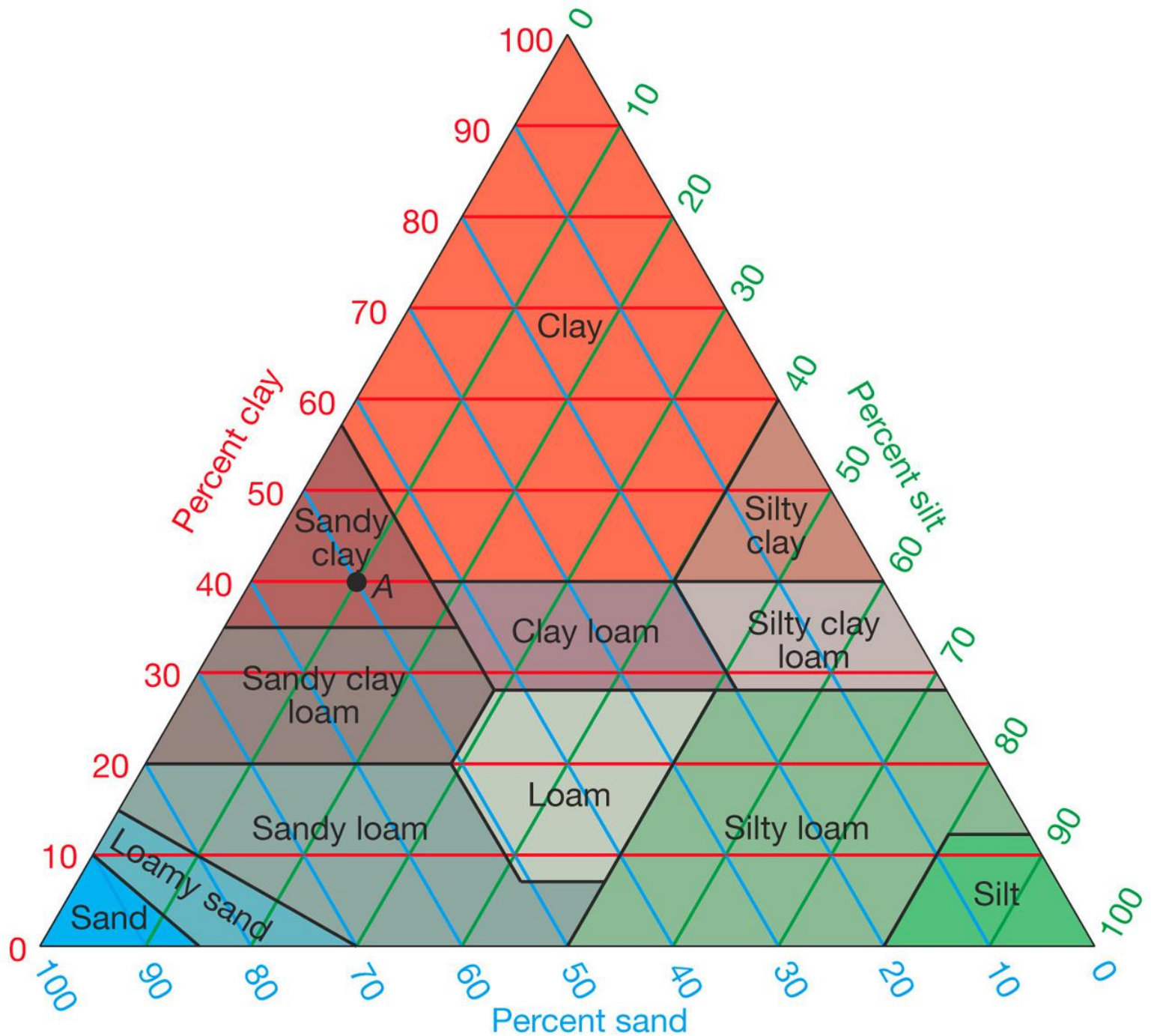












Sediments are classified by their sizes

Pebble



Sand

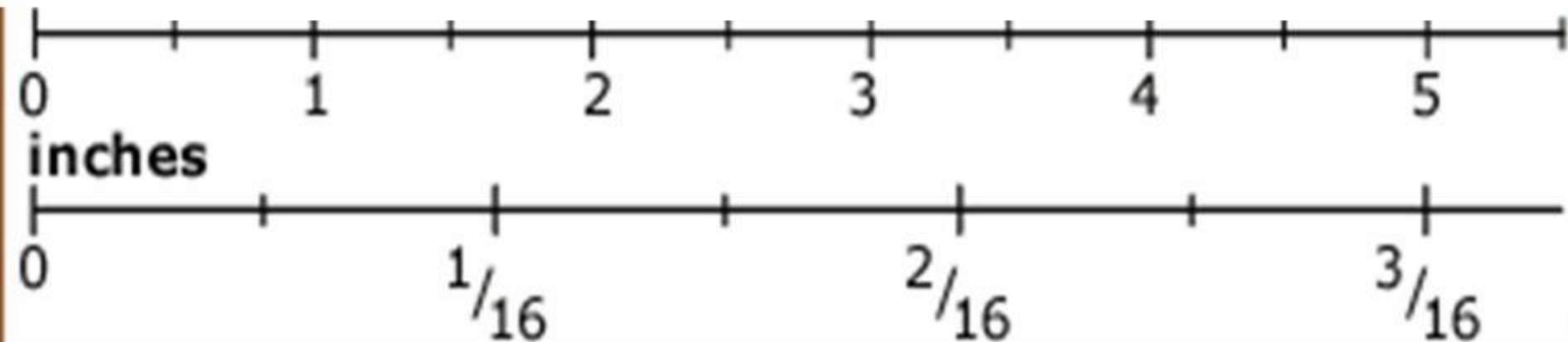


Silt



Clay

Invisible
at this scale



Baltimore series
(MO site a)



Baltimore series
(MO site b)



Wymore Series
(NE)



Pacolet series
(GA)



Sampson series
(NC)



Exper. 1 MOa
Residual soil



Exper. 1 MOb
Residual soil



Exper. 1 Wymore
Residual soil



Exper. 1 Pacolet
Residual soil



Exper. 1
Sampson Residual soil





Biomass

O Horizon (loose organic materi

A Horizon (Mineral and humus, with beneficial organisms)

E Horizon (zone of elluviation)

B Horizon (zone of accumulation)

C Horizon (Partially altered pare material)

Unaltered parent material

Solum or "true soil"

Topsoil
O horizon
 Loose and partly decayed organic matter

A horizon
 Mineral matter mixed with some humus

E horizon
 Light colored mineral particles. Zone of eluviation and leaching

Subsoil
B horizon
 Accumulation of clay transported from above

C horizon
 Partially altered parent material

Unweathered parent material













Soil Erosion



Ten ways to conserve soil

Plant trees



Terraces



No-till farming



Contour ploughing



Crop rotation



Soil pH



Water the soil



Salinity management



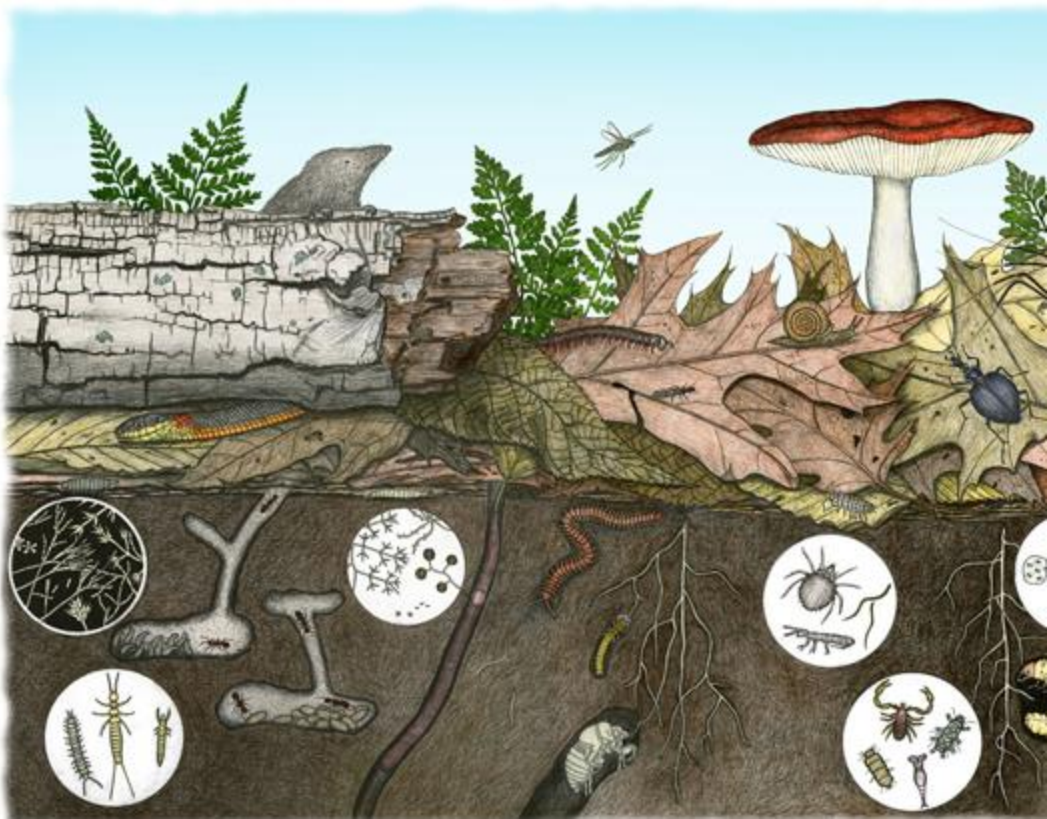
Soil organisms



Indigenous crops



- **70,000** Different types of soil in the U.S.
- **1** Tablespoon of soil has more organisms in it than there are people on earth
- **500** Minimum years it takes to form one inch of topsoil
- **5,000** Different types of bacteria in one gram of soil
- **.01** Percent of the earth's water held in soil
- **15** Tons of dry soil per acre that pass through one earthworm each year
- **1,400,000** Earthworms that can be found in an acre of cropland
- **20,000** Pounds of total living matter in the top six inches of an acre of soil
- **10** Percent of the world's carbon dioxide emissions stored in soil
- **4,000** Gallons of water soil needs to produce one bushel of corn
- **11,000** Gallons of water soil needs to produce one bushel of wheat



Source: Audubon Website