

Soil Color

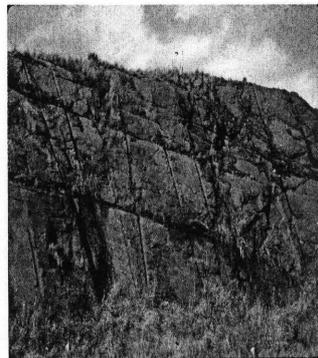
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Being able to interpret soil colors and color patterns is a powerful tool

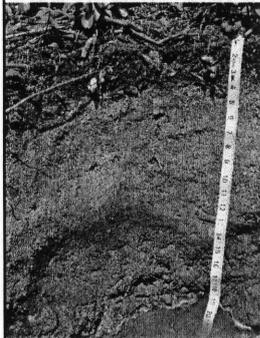
Soil Coloring Agents

- Organic matter: brown to black color
- Iron: yellow, orange, and red colors
- Manganese: purplish black color
- Color of the mineralogy of the individual soil particles.



Mineralogy of the Soil can influence the soil color

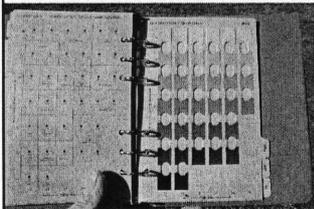
Red Mesozoic sediments within the Connecticut River Valley



Many of the soils within
New England have a
dominant quartz mineralogy.

If the soil coloring agents are
stripped from the sand and silt
particles, these soils have a
light gray color.

Munsell Soil Color System



About 350
individual, standardized
soil color chips

Munsell System uses three
elements of color: hue, value
and chroma.

10YR 5/6

Hue refers to the dominant spectral color:

**R (red),
Y (yellow),
YR (yellow-red),
etc.**

Value, different shades of gray

Value of 1 is black and a value of 10 is white. Values of 2 through 9 are different shades of gray.

Chroma is the strength or intensity of the color and ranges from:

0 (neutral, having no color) to 10 with the maximum amount of color.

Gley Pages

- Gray , bluish gray, and greenish gray colors associated with soils that formed under prolonged periods of soil saturation and reduction.
- Two gley color pages at the front of the color book.

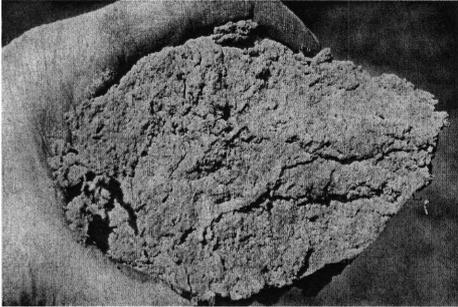
Determining Soil Colors in the Field

- Moisture content (moist)
- Quality of light (sunlight)
- Soil surface (broken face)
- Individual's ability to read colors

Documenting Soil Colors

- Matrix color is the dominant soil color of the soil horizon.
- Where there are multiple soil colors, the matrix color is typically greater than 50% of the area.
- The less colors are often redoximorphic colors.

Multiple Colors
Matrix color verses lesser color



For those new to soil colors:

- Start on the 10YR hue page, many upland soil colors are on this page.
- Compare soil sample to several adjacent color chips.
- Decide on best match.
- Double check color on adjacent hue pages.

Seldom a perfect match

- Less than 5% of the time does your soil sample make a perfect match with the color chip. Most of the time you are reading between color chips and deciding on the best match. For this reason, do not spend a lot of time procrastinating.

Reading soil colors is not an exacting science.

Under field conditions, measurements of color are reproducible by different individuals within 2.5 units in hue, and 1 unit of value and chroma
