Sols emblématiques aux États-Unis

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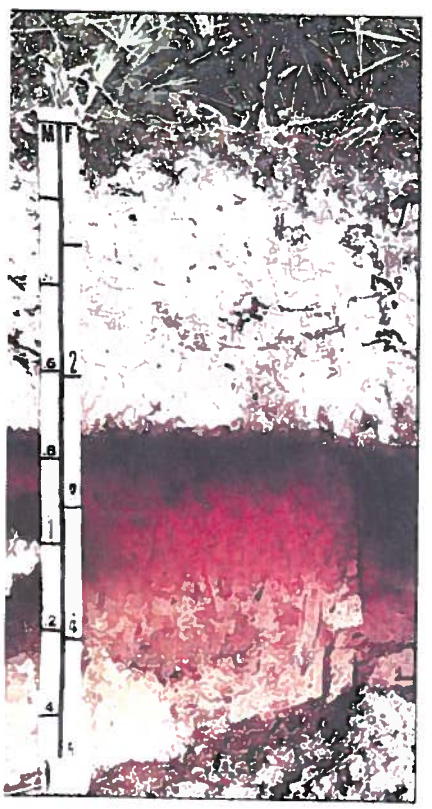


Above: Typical flatwoods, Martin County, Florida
Left: Florida's state soil Myakka Fine Sand

State Soils of the United States

by Loyal A. Quandt and Frank C. Watts

Since the beginning of Soil Survey in 1899, more than 20,000 different soil series have been recognized in the United States. Each soil series has a set of soil properties from which soil interpretations can be made for specific land uses. The computerized information allows soil survey interpretations to be more readily available for agricultural and urban planners.

Soils are named after a town or community, a county, or a stream in the vicinity in which the soils are first identified. For example, one of the first soils to be named as a state soil was "Holdrege," named for a small town in south-central Nebraska. The dominant surface texture of this soil is silt loam.

Why have a state soil?

Soil is one of our most valuable natural resources. We get our food and much of the materials used for our clothing and shelter from the plants that grow in the soil. In the past, we have not taken good care of this resource that is so important to the livelihood and well-being of the people in our nation. In a number of states, the primary industry is agriculture, and the importance of soil has been acknowledged by state legislatures by the designation of a state soil.

Since the 1970s, soil scientists across the country have been advocating that soils should be recognized in the states, along with birds, flowers, animals, trees, and other natural entities. As shown in Table 1, ten states have a state soil established by legislation. Fourteen states, as shown in Table 2, have state soils selected by soil scientists within the state for approval by the legislature. Some state soils may be established by a proclamation of the Governor.

Nature and classification of soils

The very nature of soil is mostly concealed below the surface. However, soil is the medium that absorbs rainfall and stores and releases moisture for plant growth, is the area of biological activity and decomposition of organic materials, and stores many essential nutrients. It is also the medium that supports roads and streets and buildings. Soil scientists have described the soil properties from the surface downward and defined soil horizons. This information, along with soil maps, laboratory data, and interpretive tables, are published in soil survey reports and made available in computer databases.

Plants and animals have been identified

Left: Harney soil landscape, Kansas
Above: State Soil of Kansas–Harney Silt Loam

and recognized with scientific names for many years. Soils also have both a common and scientific name. For example, in Table 1, Holdrege is a local common name and Typic Argiustolls is a major part of the scientific name. The common names are local usage, whereas the scientific names are more often used in technical reports and in national and international communications. Published soil survey reports have both common and scientific names of soils. Soil scientists use soil taxonomy (Soil Survey) for the scientific classification of soils using different criteria for soil properties and climatic conditions.

Why are soil resources so important?

It takes thousands of years for the formation of many of our soils. In the past, some people thought soils were unlimited as a natural resource. This mistake led to mismanagement and severe degradation of the soils in many areas of the United States. A constant reminder of the value of the soil is needed to prevent recurrence of misuse or abuse of the soil, especially as the urban population increases. Designating a state soil will help educate landowners and users about the nature and properties of key soils in their state and the need for good stewardship of the soils.

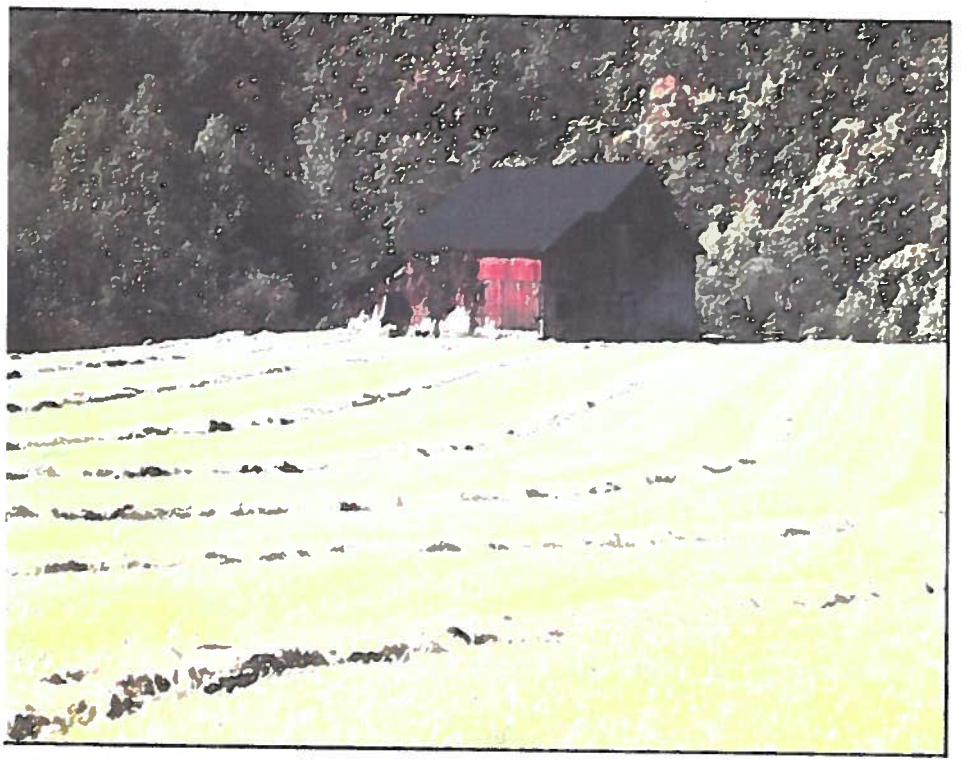
The degradation of soil and water by erosion or by other abuses will have severe consequences for present use of these resources, as well as for use by future generations. We are all responsible for the maintenance of the quality and health of these vital resources.

Centennial of Soil Survey

The Centennial of Soil Survey will be observed in 1999. A Centennial Committee is working to encourage all states to select a state soil before that time. State soils selected for Florida, Kansas, and West Virginia are featured in figures 1, 2, and 3. These color soil profile and landscape pictures were selected by the

Table 1. State soils established by legislation

State	Mo/Yr	Soil name and classification
Nebraska	June 1979	Holdrege silt loam (fine-silty, mixed, mesic Typic Argiustolls)
Wisconsin	Sept. 1983	Antigo silt loam (coarse-loamy over sandy or sandy-skeletal, mixed Typic Glossoboralfs)
Vermont	Mar. 1985	Tunbridge series (coarse-loamy, mixed, frigid Typic Haplorthods)
Oklahoma	Apr. 1987	Port silt loam (fine-silty, mixed, thermic Cumulic Haplustolls)
Florida	May 1989	Myakka fine sand (sandy, siliceous, hyperthermic Aeric Alaquods)
South Dakota	Feb. 1990	Houdek series (fine-loamy, mixed, mesic Typic Argiustolls)
Kentucky	Apr. 1990	Crider series (fine-silty, mixed, mesic Typic Paleudalfs)
Kansas	Dec. 1990	Harney silt loam (fine, montmorillonitic, mesic Typic Argiustolls)
Michigan	Dec. 1990	Kalkaska sand (sandy, mixed, Typic Haplorthods)
Massachusetts	May 1991	Paxton series (coarse-loamy, mixed, mesic Oxyaquic Dystrochrepts)



West Virginia's State Soil--Monongahela Silt Loam

Table 2. State soils selected for legislation

State	Soil and classification
Connecticut	Windsor series (mixed, mesic Typic Upidsamments)
Illinois	Drummer series (fine-silty, mixed, mesic Typic Endoaquolls)
Indiana	Miami silt loam (fine-loamy, mixed, mesic Typic Hapludalfs)
Iowa	Tama series (fine-silty, mixed, mesic Typic Argiudolls)
Minnesota	Lester series (fine-loamy, mixed, mesic Mollic Hapludalfs)
Mississippi	Natchez series (coarse-silty, mixed, thermic Typic Eutrochrepts)
Montana	Scobey series (fine, montmorillonite, Aridic Agriborolls)
Nevada	Orovada series (coarse-loamy, mixed, mesic Durixerollic Camborthids)
New York	Honeoye series (fine-loamy, mixed, mesic Glossoboric Hapludalfs)
North Dakota	Barnes series (fine-loamy, mixed Udic Haploborolls)
Ohio	Miamian series (fine, mixed, mesic Oxyaquic Hapludalfs)
Oregon	Jory series (clayey, mixed, mesic Xeric Palehumults)
Rhode Island	Narragansett series (coarse-loamy over sandy or sandy-skeletal, mixed, mesic Typic Dystrochrepts)
West Virginia	Monongahela silt loam (fine-loamy, mixed, mesic Typic Fragiudults)

L.A. Quandt, National Soil Survey Center Staff, NRCS, USDA, Lincoln, Nebraska; F.C. Watts, Soil Survey Project Leader, NRCS, USDA, Callahan, Florida

Florida Association of Professional Soil Classifiers and the Florida Chapter of the Soil and Water Conservation Society, Kansas Association of Professional Soil Classifiers, and the West Virginia Association of Professional Soil Scientists.

The members of the State Soil Committee, with areas of responsibility, are as follows:

Loyal A. Quandt—Chairperson—National Soil Survey Center, Lincoln, Nebraska

Ronnie L. Taylor—Northeast—State Soil Scientist, Somerset, New Jersey

Frank C. Watts—South—Project Leader, Callahan, Florida

Dennis K. Potter—Midwest - Soils Specialist, Columbia, Missouri

Charles N. Gordon - West - Soils Specialist, Great Falls, Montana

REFERENCES CITED

Soil Survey Staff, 1994. Keys to Soil Taxonomy. 6th ed. USDA-SCS, Lincoln, NE

United States Department of Agriculture
NRCS Natural Resources Conservation Service

Soils

State Soils

Click here to go directly to the list of states.

What is a State Soil?

A state soil is a soil that has special significance to a particular state. Each state in the United States has selected a state soil, twenty of which have been legislatively established. These "Official State Soils" share the same level of distinction as official state flowers and birds. Also, representative soils have been selected for Puerto Rico and the Virgin Islands.

Areas with similar soils are grouped and labeled as soil series because their similar origins, chemical, and physical properties cause the soils to perform similarly for land use purposes. A soil series name generally is derived from a town or landmark in or near the area where the soil was first recognized.

Each series consists of soils having major horizons that are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the soil profile. A soil profile is the sequence of natural layers, or horizons, in a soil. It extends from the surface downward to unconsolidated material. Most soils have three major horizons, called the surface horizon, the subsoil, and the substratum.

The surface layer has the maximum accumulation of organic matter and is the horizon of maximum leaching of clay minerals and of iron and aluminum oxides. Some soils have a subsurface layer below the surface layer.

The subsoil, which underlies the surface layer or subsurface layer, is the horizon of maximum accumulation of clay minerals, iron and aluminum oxides and other compounds. These compounds may have been leached from the surface layer and redeposited in the subsoil, or may have formed in place. Most likely, they occur as a result of a combination of both of these processes. The subsoil commonly has blocky or prismatic structure and generally is firmer and lighter in color than the surface layer.

The substratum is below the surface layer and subsoil. It consists of material that has been somewhat modified by weathering but is relatively unchanged by soil-forming processes.

Representative and State Soils

These publications require Acrobat Reader.

Alabama - Bama (PDF; 398 KB)

Alaska - Tanana (PDF; 634 KB)

Arizona - Casa Grande (PDF; 391 KB)

Arkansas - Stuttgart (PDF; 74 KB)

California - San Joaquin (PDF; 136 KB)

Nebraska - Holdrege (PDF; 341 KB)

Nevada - Orovada (PDF; 102 KB)

New Hampshire - Marlow (PDF; 87 KB)

New Jersey - Downer (PDF; 96 KB)

New Mexico - Penistaja (PDF; 129 KB)

Colorado - Seltz (PDF; 101 KB)

Connecticut - Windsor (PDF; 104 KB)

Delaware - Greenwich (PDF; 364 KB)

District of Columbia - Sunnyside (PDF; 975 KB)

Florida - Myakka (PDF; 89 KB)

Georgia - Tifton (PDF; 89 KB)

Hawaii - Hilo (PDF; 74 KB)

Idaho - Threebear (PDF; 94 KB)

Illinois - Drummer (PDF; 69 KB)

Indiana - Miami (PDF; 86 KB)

Iowa - Tama (PDF; 403 KB)

Kansas - Harney (PDF; 68 KB)

Kentucky - Crider (PDF; 75 KB)

Louisiana - Ruston (PDF; 102 KB)

Maine - Chesuncook (PDF; 87 KB)

Maryland - Sassafras (PDF; 85 KB)

Massachusetts - Paxton (PDF; 87 KB)

Michigan - Kalkaska (PDF; 81 KB)

Minnesota - Lester (PDF; 123 KB)

Mississippi - Natchez (PDF; 90 KB)

Missouri - Menfro (PDF; 83 KB)

Montana - Scobey (PDF; 376 KB)

New York - Honeoye (PDF; 91 KB)

North Carolina - Cecil (PDF; 338 KB)

North Dakota - Williams (PDF; 85 KB)

Ohio - Miamian (PDF; 91 KB)

Oklahoma - Port (PDF; 394 KB)

Oregon - Jory (PDF; 329 KB)

Pennsylvania - Hazleton (PDF; 93 KB)

Puerto Rico - Bayamon (PDF; 88 KB)

Rhode Island - Narragansett (PDF; 192 KB)

South Carolina - Lynchburg (PDF; 361 KB)

South Dakota - Houdek (PDF; 87 KB)

Tennessee - Dickson (PDF; 97 KB)

Texas - Houston Black (PDF; 398 KB)

Utah - Mivida (PDF; 91 KB)

Vermont - Tunbridge (PDF; 315 KB)

Virgin Islands - Victory (PDF; 97 KB)

Virginia - Pamunkey (PDF; 115 KB)

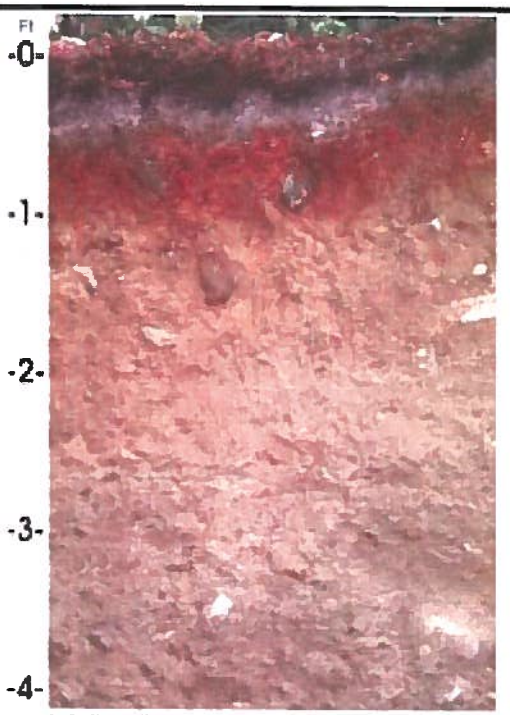
Washington - Tokul (PDF; 123 KB)

West Virginia - Monongahela (PDF; 86 KB)

Wisconsin - Antigo (PDF; 385 KB)

Wyoming - Forkwood (PDF; 129 KB)

CHESUNCOOK -- MAINE STATE SOIL



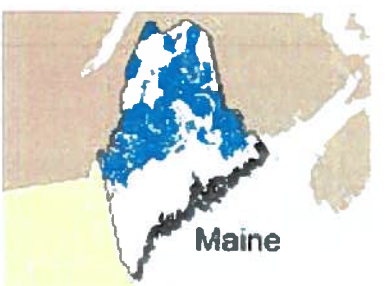
Chesuncook Soil Profile
Surface layer: black, friable highly decomposed plant material
Subsurface layer: pinkish gray, very friable silt loam
Subsoil - upper: dark reddish brown, very friable silt loam
Subsoil - upper middle: reddish brown, very friable silt loam
Subsoil - lower middle: dark yellowish brown, very friable silt loam
Subsoil - lower: light olive brown, mottled, friable gravelly loam
Substratum: light olive brown, mottled, very firm gravelly loam

The Chesuncook soil series is a classic Spodosol that typifies the northern temperate and cool forested regions of Maine. It consists of very deep, moderately well drained soils on till plains, hills, ridges, and mountains.

Chesuncook soils produce wood fiber used in paper production, saw logs for lumber, and timber for wood products, such as furniture. These soils have a high woodland productivity rating. The most common tree species are red spruce, balsam fir, yellow birch, American beech, sugar maple, white ash, and red maple.

These soils are considered prime farmland where slopes are less than 8 percent and where surface stones have been removed. Small areas are used for potatoes, oats, barley, hayland, pasture, or low-density urban development. It is estimated that Chesuncook soils occur on more than 150,000 acres in Maine. The soils are named after Chesuncook Lake, in northern Maine.

On April 16, 1999, Governor Angus S. King, Jr., signed Legislative Document 592 into law, making Chesuncook Maine's Official State Soil.



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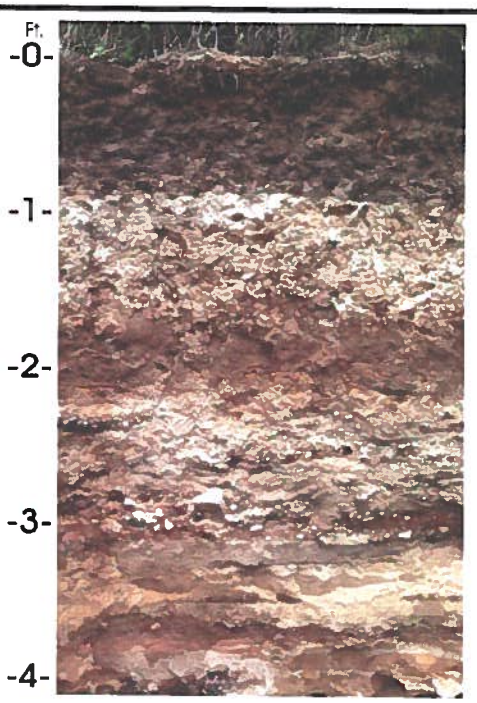
ANTIGO -- WISCONSIN STATE SOIL



Antigo Soil Profile
Surface layer: dark grayish brown silt loam
Subsurface layer: brown silt loam
Subsoil - upper: dark yellowish brown & brown silt loam
Subsoil - lower: dark yellowish brown loam & brown very gravelly sandy loam
Substratum: brown, stratified coarse sand & gravelly coarse sand

Antigo soils are among the most extensive soils in Wisconsin. They occur on about 300,000 acres in the northern part of the State. They are very productive soils for corn, small grain, and hay. In some areas potatoes or snap beans are important crops. The steeper areas are used for pasture or for timber production.

In 1983, the Wisconsin Legislature designated the Antigo series as the official State soil. The series was named after the city of Antigo, Wisconsin.

Antigo soils are well-drained and formed in loess and loamy sediments over stratified sandy outwash. The average annual precipitation ranges from 28 to 33 inches, and the average annual air temperature ranges from 39 to 45 degrees F.

For more information about the series, see *http://www.wi.nrcs.usda.gov/soil/antigo.asp*.

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