PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 2 2016
Describer: Mike Jones
NEON Plot ID: ORNL_001

Site ID: S2016TN001001

Pedon ID: S2016TN001001

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0495

Soil Name as Described/Sampled: Shady
Classification: Fine-loamy, mixed, subactive, thermic Typic Hapludults

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Hamblen, Montevallo, Pettyjon, Waynesboro
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area: 

Local Physiographic Area: 
Geomorphic Setting: on toeslope of tread of stream terrace on river valley
Upslope Shape: concave
Cross Slope Shape: concave
Particle Size Control Section: 14 to 34 cm.
Description origin: NASIS

Diagnostic Features: ochric epipedon 2 to 14 cm.
argillic horizon 14 to 34 cm.

Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CL1 -- Clinton, Tennessee
Map Unit: MvD -- Montevallo channery silt loam, 12 to 20 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9321111
Std Longitude: -84.2701944

Latitude: 35 degrees 55 minutes 55.60 seconds north
Longitude: 84 degrees 16 minutes 12.70 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 746271 meters
UTM Northing: 3979863 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: fine-loamy alluvium derived from limestone, sandstone, and shale
Bedrock Kind: Shale and siltstone
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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<th>Aspect (deg)</th>
<th>MAAT (C)</th>
<th>MSAT (C)</th>
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<th>Frost-Free Days</th>
<th>Drainage Class</th>
<th>Slope Length (meters)</th>
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<td>1,524</td>
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</table>

Oi--0 to 2 centimeters (0.0 to 0.8 inches); slightly decomposed plant material; . Lab sample # 17N02576

A--2 to 5 centimeters (0.8 to 2.0 inches); dark brown (10YR 3/3) broken face loam; weak fine granular structure; soft, nonsticky, nonplastic; few medium roots throughout and many fine roots throughout; 10 percent nonflat subrounded indurated 2 to 75-millimeter Quartzite fragments; abrupt wavy boundary. Lab sample # 17N02577

AB--5 to 14 centimeters (2.0 to 5.5 inches); brown (10YR 4/3) broken face gravelly loam; weak fine subangular blocky, and weak medium subangular blocky structure; soft, nonsticky, slightly plastic; many medium roots throughout and common medium roots throughout; 25 percent nonflat subrounded indurated 2 to 75-millimeter Quartzite fragments; gradual wavy boundary. Lab sample # 17N02578

Bt--14 to 34 centimeters (5.5 to 13.4 inches); brown (7.5YR 4/4) broken face sandy clay loam; weak medium subangular blocky structure; soft, slightly sticky, nonplastic; few medium roots throughout and ; many very fine moderate-continuity tubular pores; 35 percent faint clay films on all faces of peds; 10 percent nonflat subrounded indurated 2 to 75-millimeter Quartzite fragments; diffuse wavy boundary. Lab sample # 17N02579

BC--34 to 100 centimeters (13.4 to 39.4 inches); yellowish brown (10YR 5/4) broken face gravelly loam; weak fine subangular blocky structure; soft, nonsticky, slightly plastic; few very fine roots throughout; 35 percent faint clay films on all faces of peds; 20 percent nonflat subrounded indurated 2 to 75-millimeter Quartzite fragments. Lab sample # 17N02580
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 3 2016
Describer: Mike Jones
NEON Plot ID: ORNL_003

Site ID: S2016TN001003

Pedon ID: S2016TN001003

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0496
Soil Name as Described/Sampled: Montevallo
Classification: Loamy-skeletal, mixed, subactive, thermic Typic Dystrudepts

Soil Name as Correlated:
Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Apison, Armuchee, Coile, Sunlight, Townley
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 4 to 44 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 4 to 12 cm.
cambic horizon 12 to 44 cm.
paralithic contact 44 to 69 cm.

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<th>Restriction Hardness</th>
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Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: AoD2 -- Armuchee channery silty clay loam, 12 to 20 percent slopes, eroded
Pit Location:
Quad Name:
Std Latitude: 35.9656388
Std Longitude: -84.2309444

Latitude: 35 degrees 57 minutes 56.30 seconds north
Longitude: 84 degrees 13 minutes 51.40 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 749707 meters
UTM Northing: 3983683 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: skeletal loamy residuum weathered from shale and siltstone
Bedrock Kind: Sandstone and shale
Bedrock Depth: 44 centimeters
Bedrock Hardness: moderately cemented
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
Slope (°) | Elevation (meters) | Aspect (degree) | MAAT (°C) | MSAT (°C) | MWAT (°C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters)
---|---|---|---|---|---|---|---|---|---|---
21.0 | 262.0 | 265 | 12.0 | | | 1,524 | 217 | well |

Oi--0 to 4 centimeters (0.0 to 1.6 inches); slightly decomposed plant material; . Lab sample # 17N02581

BE--4 to 12 centimeters (1.6 to 4.7 inches); yellowish brown (10YR 5/4) broken face channery silt loam; moderate fine subangular blocky structure; soft, nonplastic; few medium roots throughout and many fine roots throughout and few coarse roots throughout; 20 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; clear wavy boundary. Lab sample # 17N02582

Bw--12 to 44 centimeters (4.7 to 17.3 inches); yellowish brown (10YR 5/6) broken face very channery silt loam; moderate fine subangular blocky, and moderate medium subangular blocky structure; soft, nonplastic; few medium roots throughout and few fine roots throughout and few coarse roots throughout; 45 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; abrupt wavy boundary. Lab sample # 17N02583

Cr--44 to 69 centimeters (17.3 to 27.2 inches); moderately cemented Sandstone and shale bedrock; .
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Sep 21 2016
Describer: David Moore
NEON Plot ID: ORNL_009

Site ID: S2016TN001009

Pedon ID: S2016TN001009

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0497
Soil Name as Described/Sampled: Montevallo
Classification: Loamy-skeletal, mixed, subactive, thermic, shallow Typic Dystrudepts
Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Apison, Armuchee, Coile, Sunlight, Townley
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge
on backslope of side slope of valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 25 to 33 cm.
Description origin: NASIS

Diagnoistic Features: ochric epipedon 0 to 20 cm.
cambic horizon 20 to 38 cm.
paralithic contact 38 to 63 cm.

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<td>38</td>
<td>63</td>
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Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: MvE -- Montevallo channery silt loam, 20 to 35 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9742500
Std Longitude: -84.2278611

Latitude: 35 degrees 58 minutes 27.30 seconds north
Longitude: 84 degrees 13 minutes 40.30 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 749958 meters
UTM Northing: 3984646 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: skeletal loamy residuum weathered from shale and siltstone
Bedrock Kind: Sandstone and shale
Bedrock Depth: 20 centimeters
Bedrock Hardness: moderately cemented
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
### Site Information

- **Site ID:** S2016TN001009
- **Pedon ID:** S2016TN001009

### Pedon Data

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<th>Drainage Class</th>
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<td>1,524</td>
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<td>well</td>
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### Soil Profiles

A--0 to 8 centimeters (0.0 to 3.1 inches); dark brown (10YR 3/3) broken face very channery loam; weak fine granular structure; soft, nonsticky, nonplastic; 20 percent flat angular moderately cemented 2 to 150-millimeter Acid shale fragments and 20 percent flat angular indurated 2 to 150-millimeter Sandstone fragments; strongly acid, pH 5.5; pH indicator solutions; abrupt smooth boundary. Lab sample # 17N02584

BE--8 to 20 centimeters (3.1 to 7.9 inches); yellowish brown (10YR 5/4) broken face extremely channery loam; weak fine subangular blocky structure; soft, nonsticky, nonplastic; many very fine roots throughout and common fine roots throughout; 30 percent flat angular indurated 2 to 150-millimeter Sandstone fragments and 35 percent flat angular moderately cemented 2 to 150-millimeter Acid shale fragments; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 17N02585

Bw--20 to 38 centimeters (7.9 to 15.0 inches); brown (7.5YR 5/4) broken face extremely channery loam; weak fine subangular blocky structure; soft, nonsticky, nonplastic; 35 percent flat angular moderately cemented 2 to 150-millimeter Acid shale fragments and 35 percent flat angular indurated 2 to 150-millimeter Sandstone fragments; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 17N02586

Cr--38 to 63 centimeters (15.0 to 24.8 inches); bedrock; .
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 24 2016
Describer: David Moore
NEON Plot ID: ORNL_012

Site ID: S2016TN001012

Pedon ID: S2016TN001012

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0498
Soil Name as Described/Sampled: Sunlight
Classification: Loamy-skeletal, mixed, semiactive, thermic Inceptic Hapludults

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series

Associated Soils: Apison, Armuchee, Coile, Sunlight, Townley
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on summit of crest of ridge
on summit of crest of valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 18 to 22 cm.
Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 18 cm.
argillic horizon 18 to 22 cm.
paralithic contact 22 to 47 cm.

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<th>Top Depth (cm)</th>
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<td>Moderately cemented</td>
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Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: ApE -- Armuchee-Montevallo complex, 25 to 60 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9528888
Std Longitude: -84.2486111

Latitude: 35 degrees 57 minutes 10.40 seconds north
Longitude: 84 degrees 14 minutes 55.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 748153 meters
UTM Northing: 3982223 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: skeletal loamy residuum weathered from shale and siltstone
Bedrock Kind: Shale and siltstone
Bedrock Depth: 22 centimeters
Bedrock Hardness: moderately cemented
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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<th>Drainage Class</th>
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<td>1,524</td>
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<td>well</td>
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</table>

A--0 to 7 centimeters (0.0 to 2.8 inches); very dark grayish brown (10YR 3/2) broken face channery silt loam; weak fine granular structure; soft, nonsticky, nonplastic; many very fine roots throughout and common medium roots throughout and common fine roots throughout; common fine moderate-continuity tubular pores; 25 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; moderately acid, pH 6.0, pH indicator solutions; abrupt wavy boundary. Lab sample # 17N02587

BA--7 to 18 centimeters (2.8 to 7.1 inches); 88 percent dark yellowish brown (10YR 4/4) broken face very channery silt loam; 12 percent medium faint irregular (10YR 5/2) mottles; weak fine subangular blocky structure; soft, nonsticky, nonplastic; common fine roots throughout; common fine moderate-continuity tubular pores; 45 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; strongly acid, pH 5.5, pH indicator solutions; clear wavy boundary. Lab sample # 17N02588

Bt--18 to 22 centimeters (7.1 to 8.7 inches); 88 percent yellowish brown (10YR 5/8) broken face extremely channery silty clay loam; 12 percent medium faint irregular (10YR 5/4) mottles; weak medium subangular blocky structure; soft, nonsticky, nonplastic; few very fine roots throughout; 65 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; very strongly acid, pH 5.0, pH indicator solutions; clear wavy boundary. Lab sample # 17N02589

Cr--22 to 47 centimeters (8.7 to 18.5 inches); moderately cemented Shale and siltstone bedrock; .
Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: AoD2 -- Armuchee channery silty clay loam, 12 to 20 percent slopes, eroded
Pit Location:
Quad Name:
Std Latitude: 35.9648888
Std Longitude: -84.2380833

Latitude: 35 degrees 57 minutes 53.60 seconds north
Longitude: 84 degrees 14 minutes 17.10 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 749066 meters
UTM Northing: 3983581 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: skeletal loamy residuum weathered from shale and siltstone
Bedrock Kind: Acid shale
Bedrock Depth: 20 centimeters
Bedrock Hardness: moderately cemented
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

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Oi--0 to 4 centimeters (0.0 to 1.6 inches); slightly decomposed plant material; abrupt smooth boundary. Lab sample # 17N02590

Bw--4 to 20 centimeters (1.6 to 7.9 inches); dark brown (7.5YR 3/4) broken face very channery silty clay loam; weak fine subangular blocky structure; soft, nonsticky, nonplastic; few medium roots throughout and common fine roots throughout; 55 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; clear wavy boundary. Lab sample # 17N02591

Cr--20 to 35 centimeters (7.9 to 13.8 inches); moderately cemented Acid shale bedrock; .
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 2 2016
Describer: Mike Jones
NEON Plot ID: ORNL_018

Site ID: S2016TN001018

Pedon ID: S2016TN001018

Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys

Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: MnC -- Minvale silt loam, 5 to 12 percent slopes

Pit Location:
Quad Name:

Lab Source ID: KSSL
Lab Pedon #: 17N0500
Soil Name as Described/Sampled: Series Not Designated
Classification: Loamy-skeletal, siliceous, subactive, thermic Typic Hapludults

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: family

Associated Soils: Minvale

Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on summit of side slope of stream terrace on river valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 12 to 32 cm.
Description origin: NASIS

Diagnostic Features: ochric epiedon 2 to 12 cm.
argillic horizon 12 to 32 cm.
<table>
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<tr>
<th>Slope (%)</th>
<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
<th>MAAT (°C)</th>
<th>MSAT (°C)</th>
<th>MWAT (°C)</th>
<th>MAP (mm)</th>
<th>Frost-Free Days</th>
<th>Drainage Class</th>
<th>Slope Length (meters)</th>
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<td>1,524</td>
<td>217</td>
<td>well</td>
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</tbody>
</table>

Oi--0 to 2 centimeters (0.0 to 0.8 inches); slightly decomposed plant material; Lab sample # 17N02592

A--2 to 12 centimeters (0.8 to 4.7 inches); very dark grayish brown (10YR 3/2) broken face very gravelly loamy sand; weak fine granular structure; very friable, nonsticky, nonplastic; many very fine roots throughout and many fine roots throughout; 20 percent nonflat subrounded indurated 2 to 75-millimeter Sandstone fragments and 25 percent nonflat subrounded indurated 2 to 75-millimeter Quartzite fragments; clear smooth boundary. Lab sample # 17N02593

Bt--12 to 32 centimeters (4.7 to 12.6 inches); dark yellowish brown (10YR 4/4) broken face extremely gravelly loamy sand; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout; 30 percent nonflat subrounded indurated 2 to 75-millimeter Quartzite fragments and 30 percent nonflat subrounded indurated 2 to 75-millimeter Sandstone fragments; gradual wavy boundary. Lab sample # 17N02594

C--32 to 100 centimeters (12.6 to 39.4 inches); yellowish brown (10YR 5/4) broken face extremely gravelly sand; loose, nonsticky, nonplastic; common medium roots throughout and common fine roots throughout and few coarse roots throughout; Lab sample # 17N02595
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Sep 16 2016
Describer: David Moore
NEON Plot ID: ORNL_021

Site ID: S2016TN001021

Pedon ID: S2016TN001021

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0501
Soil Name as Described/Sampled: Minvale
Classification: Fine-loamy, siliceous, subactive, thermic Typic Paleudults

Soil Name as Correlated:
Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Bodine, Fullerton, Pailo
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province

Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on valley
Upslope Shape: convex
Cross Slope Shape: concave
Particle Size Control Section: 26 to 76 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 26 cm.
argillic horizon 26 to 100 cm.

Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: FoD -- Fullerton-Pailo complex, 12 to 20 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9552777
Std Longitude: -84.2213888

Latitude: 35 degrees 57 minutes 19.00 seconds north
Longitude: 84 degrees 13 minutes 17.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 750602 meters
UTM Northing: 3982558 meters

Primary Earth Cover: Grass/herbaceous cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation:
Parent Material: fine-loamy colluvium derived from chert
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
### Soil Profile Data

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</tr>
</tbody>
</table>

Ap--0 to 13 centimeters (0.0 to 5.1 inches); dark yellowish brown (10YR 4/4) broken face gravelly silt loam; weak fine granular structure; soft; many very fine roots throughout; common very fine moderate-continuity tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 25 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; clear smooth boundary. Lab sample # 17N02596

BA--13 to 26 centimeters (5.1 to 10.2 inches); 88 percent brown (7.5YR 4/4) broken face gravelly silty clay loam; 12 percent medium distinct irregular (7.5YR 5/6) mottles; weak fine granular, and weak fine subangular blocky structure; soft; common very fine roots throughout; common very fine moderate-continuity tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 30 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions; clear smooth boundary. Lab sample # 17N02597

Bt1--26 to 51 centimeters (10.2 to 20.1 inches); yellowish red (5YR 4/6) broken face gravelly silty clay loam; moderate medium subangular blocky structure; slightly hard; common very fine roots throughout; common very fine moderate-continuity tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 25 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02598

Bt2--51 to 100 centimeters (20.1 to 39.4 inches); 88 percent red (2.5YR 5/6) broken face very gravelly silty clay loam; moderate medium subangular blocky structure; moderately hard; few very fine roots throughout; common very fine moderate-continuity tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 40 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions. Lab sample # 17N02599
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 4 2016
Describer: Mike Jones
NEON Plot ID: ORNL_027

Site ID: S2016TN001027

Pedon ID: S2016TN001027

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0502
Soil Name as Described/Sampled: Waynesboro
Classification: Fine, kaolinitic, thermic Typic Paleudults

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Dewey, Etowah, Fullerton, Holston, Minvale
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:
Local Physiographic Area:
Geomorphic Setting: on tread of stream terrace on river valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 20 to 70 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 20 cm.
argillic horizon 20 to 100 cm.

Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: WbD -- Waynesboro loam, 12 to 20 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9161944
Std Longitude: -84.2631111

Latitude: 35 degrees 54 minutes 58.30 seconds north
Longitude: 84 degrees 15 minutes 47.20 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 746960 meters
UTM Northing: 3978115 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: clayey alluvium derived from interbedded sedimentary rock
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
A--0 to 4 centimeters (0.0 to 1.6 inches); dark yellowish brown (10YR 3/4) broken face loam; moderate fine granular structure; very friable; many very fine roots throughout and common medium roots throughout and many fine roots throughout; 5 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments and 5 percent nonflat subrounded indurated 5 to 20-millimeter Quartzite fragments; abrupt smooth boundary. Lab sample # 17N02600

Bt1--4 to 20 centimeters (1.6 to 7.9 inches); yellowish red (5YR 4/6) broken face clay loam; weak fine subangular blocky, and moderate medium subangular blocky structure; friable; few medium roots throughout and common fine roots throughout and few coarse roots throughout; common fine moderate-continuity tubular pores; 45 percent distinct clay films on all faces of peds; 1 percent fine distinct spherical iron-manganese masses with clear boundaries On surfaces along pores and 1 percent fine distinct spherical iron-manganese masses with clear boundaries On faces of peds; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments and 1 percent nonflat subrounded indurated 5 to 20-millimeter Quartzite fragments; clear smooth boundary. Lab sample # 17N02601

Bt2--20 to 100 centimeters (7.9 to 39.4 inches); red (2.5YR 4/6) broken face clay; moderate medium subangular blocky structure; slightly hard; few medium roots throughout and common fine roots throughout; common fine moderate-continuity tubular pores; 60 percent distinct clay films on all faces of peds; 1 percent fine distinct spherical iron-manganese masses with clear boundaries On faces of peds and 1 percent fine prominent spherical iron-manganese concretions with sharp boundaries Throughout; 1 percent nonflat subrounded indurated 2 to 5-millimeter Quartzite fragments and 1 percent nonflat subrounded indurated 5 to 20-millimeter Quartzite fragments. Lab sample # 17N02602
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 26 2016
Describer: David Moore
NEON Plot ID: ORNL_029

Site ID: S2016TN001029

Pedon ID: S2016TN001029

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0503
Soil Name as Described/Sampled: Barfield
Classification: Clayey, vermiculitic, thermic Lithic Hapludolls

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series

Associated Soils: Colbert, Gladeville, Lyerly
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:

Geomorphic Setting: on footslope of side slope of ridge
on footslope of side slope of valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section:
Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 6 cm.
argillic horizon 6 to 35 cm.
lithic contact 35 to 60 cm.

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<th>Restriction Hardness</th>
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<td>bedrock, lithic</td>
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Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: CID -- Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9575000
Std Longitude: -84.2616666

Latitude: 35 degrees 57 minutes 27.00 seconds north
Longitude: 84 degrees 15 minutes 42.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 746961 meters
UTM Northing: 3982701 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: clayey residuum weathered from argillaceous limestone
Bedrock Kind: Argillaceous limestone
Bedrock Depth: 35 centimeters
Bedrock Hardness: indurated
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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<th>MWAT (°C)</th>
<th>MAP (mm)</th>
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<th>Drainage Class</th>
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A--0 to 6 centimeters (0.0 to 2.4 inches); very dark grayish brown (10YR 3/2) broken face silty clay loam; strong coarse granular, and moderate medium subangular blocky structure; very hard, slightly sticky, slightly plastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout and few coarse roots throughout; many fine moderate-continuity dendritic tubular pores; slightly acid, pH 6.5, pH indicator solutions; abrupt smooth boundary. Lab sample # 17N02603

Bt1--6 to 15 centimeters (2.4 to 5.9 inches); 88 percent dark brown (10YR 3/3) broken face silty clay; 12 percent medium distinct irregular (10YR 4/3) mottles; strong medium, and strong coarse subangular blocky structure; very hard, slightly sticky, slightly plastic; common very fine roots throughout and common medium roots throughout and common fine roots throughout and few coarse roots throughout; many very fine moderate-continuity tubular and few fine moderate-continuity tubular pores; 40 percent distinct clay films on all faces of peds; slightly acid, pH 6.5, pH indicator solutions; clear smooth boundary. Lab sample # 17N02604

Bt2--15 to 35 centimeters (5.9 to 13.8 inches); 76 percent dark yellowish brown (10YR 4/4) broken face silty clay; 12 percent medium distinct irregular (10YR 4/6) and 12 percent medium distinct irregular (7.5YR 4/6) mottles; very hard, slightly sticky, slightly plastic; neutral, pH 7.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 17N02605

R--35 to 60 centimeters (13.8 to 23.6 inches); indurated Argillaceous limestone bedrock; .
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Sep 18 2016
Describer: David Moore
NEON Plot ID: ORNL_031

Site ID: S2016TN001031

Pedon ID: S2016TN001031

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0504
Soil Name as Described/Sampled: Etowah
Classification: Fine-loamy, siliceous, semiactive, thermic Typic Paleudults

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Dewey, Fullerton, Minvale, Shady, Waynesboro
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province

Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on tread of terrace on river valley
Upslope Shape: convex
Cross Slope Shape: concave
Particle Size Control Section: 36 to 86 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 36 cm.
argillic horizon 36 to 100 cm.

Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: DwD -- Dewey silt loam, 12 to 20 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9483333
Std Longitude: -84.2219444

Latitude: 35 degrees 56 minutes 54.00 seconds north
Longitude: 84 degrees 13 minutes 19.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 750574 meters
UTM Northing: 3981786 meters

Primary Earth Cover: Grass/herbaceous cover
Secondary Earth Cover: Other grass/herbaceous cover
Existing Vegetation:
Parent Material: fine-loamy alluvium derived from sedimentary rock
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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Ap—0 to 18 centimeters (0.0 to 7.1 inches); dark brown (7.5YR 3/4) broken face gravelly silt loam; weak fine granular structure; soft, nonsticky, nonplastic; many very fine roots throughout and many fine roots throughout; common very fine moderate-continuity tubular and common fine moderate-continuity dendritic tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Sandstone fragments and 0 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 5 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments and 15 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments; slightly acid, pH 6.5, pH indicator solutions; clear smooth boundary. Lab sample # 17N02606

AB—18 to 36 centimeters (7.1 to 14.2 inches); reddish brown (5YR 4/3) broken face gravelly silt loam; soft, nonsticky, nonplastic; 0 percent nonflat subangular indurated 75 to 250-millimeter Sandstone fragments and 0 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 10 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments and 15 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments; moderately acid, pH 6.0, pH indicator solutions; clear smooth boundary. Lab sample # 17N02607

Bt1—36 to 64 centimeters (14.2 to 25.2 inches); yellowish red (5YR 4/6) broken face gravelly silty clay loam; weak medium subangular blocky structure; soft, slightly sticky, slightly plastic; 30 percent distinct clay films on all faces of peds; 10 percent very fine prominent spherical iron-manganese nodules with sharp boundaries Throughout; 0 percent nonflat subangular indurated 75 to 250-millimeter Sandstone fragments and 5 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments and 10 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 15 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments; moderately acid, pH 6.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02608

Bt2—64 to 100 centimeters (25.2 to 39.4 inches); 88 percent dark red (2.5YR 3/6) broken face silty clay loam; 12 percent medium distinct irregular (2.5YR 4/8) mottles; moderate medium subangular blocky structure; soft, slightly sticky, slightly plastic; 40 percent distinct clay films on all faces of peds; 20 percent fine prominent spherical iron-manganese nodules with sharp boundaries Throughout; 0 percent nonflat subangular indurated 75 to 250-millimeter Sandstone fragments and 0 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 5 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments and 5 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments; strongly acid, pH 5.5, pH indicator solutions. Lab sample # 17N02609
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Sep 7 2016
Describer: David Moore
NEON Plot ID: ORNL_033

Site ID: S2016TN001033
Pedon ID: S2016TN001033
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0505
Soil Name as Described/Sampled: Montevallo
Soil Name as Correlated:

Classification: Loamy-skeletal, mixed, subactive, thermic Typic Dystrudepts

Soil Name as Described/Sampled:
Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series

Associated Soils: Apison, Armuchee, Coile, Montevallo, Sunlight, Townley
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province

Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on backslope of side slope of valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 8 to 20 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 8 cm.
cambic horizon 8 to 20 cm.
paralithic contact 20 to 45 cm.

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<th>Bottom Depth (cm)</th>
<th>Restriction Kind</th>
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<td>bedrock, paralithic</td>
<td>Moderately cemented</td>
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Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN001 -- Anderson County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit:

Pit Location:
Quad Name:
Std Latitude: 35.9616666
Std Longitude: -84.2269444

Latitude: 35 degrees 57 minutes 42.00 seconds north
Longitude: 84 degrees 13 minutes 37.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 750080 meters
UTM Northing: 3983252 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Intermixed conifers and hardwoods
Existing Vegetation:
Parent Material: skeletal loamy residuum weathered from shale and siltstone
Bedrock Kind: Shale and siltstone
Bedrock Depth: 20 centimeters
Bedrock Hardness: moderately cemented
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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</table>

A--0 to 8 centimeters (0.0 to 3.1 inches); brown (10YR 4/3) broken face very channery loam; weak medium granular structure; soft, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout and few coarse roots throughout; 40 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; very strongly acid, pH 5.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 17N02610

Bw--8 to 20 centimeters (3.1 to 7.9 inches); 88 percent dark yellowish brown (10YR 4/4) broken face very channery loam; 12 percent medium faint irregular (10YR 4/6) mottles; weak medium subangular blocky structure; soft, nonsticky, nonplastic; many very fine roots throughout and common medium roots throughout and many fine roots throughout; many very fine moderate-continuity dendritic tubular and many fine moderate-continuity dendritic tubular pores; 40 percent flat subangular moderately cemented 2 to 150-millimeter Acid shale fragments; very strongly acid, pH 5.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 17N02611

Cr--20 to 45 centimeters (7.9 to 17.7 inches); moderately cemented Shale and siltstone bedrock; .
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 16 2016
Describer: David Moore
NEON Plot ID: ORNL_040

Site ID: S2016TN001040

Pedon ID: S2016TN001040

Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0506
Soil Name as Described/Sampled: Salacoa
Classification: Fine-loamy, mixed, active, thermic Typic Hapludalfs

Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series

Associated Soils: Apison, Armuchee, Coile, Montevallo, Sunlight, Townley
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 15 to 65 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 15 cm.
argillic horizon 15 to 100 cm.

Country: United States
State: Tennessee
County: Anderson
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: SfD -- Salacoa silt loam, 12 to 20 percent slopes
Pit Location:
Quad Name:
Std Latitude: 35.9755734
Std Longitude: -84.3036560

Latitude: 35 degrees 58 minutes 32.80 seconds north
Longitude: 84 degrees 18 minutes 13.50 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 743109 meters
UTM Northing: 3984624 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Conifers
Existing Vegetation:
Parent Material: fine-loamy colluvium derived from sandstone and shale
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
A--0 to 7 centimeters (0.0 to 2.8 inches); dark yellowish brown (10YR 3/4) broken face gravelly loam; weak medium granular structure; soft, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and common fine roots throughout; 3 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments and 3 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 10 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments; strongly acid, pH 5.5, pH indicator solutions; abrupt smooth boundary. Lab sample # 17N02612

BA--7 to 15 centimeters (2.8 to 5.9 inches); dark yellowish brown (10YR 4/4) broken face gravelly loam; weak medium subangular blocky structure; soft, nonsticky, nonplastic; few very fine roots throughout and few fine roots throughout; 3 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments and 3 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 10 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments; strongly acid, pH 5.5, pH indicator solutions; clear smooth boundary. Lab sample # 17N02613

Bt1--15 to 36 centimeters (5.9 to 14.2 inches); strong brown (7.5YR 4/6) broken face gravelly clay loam; moderate medium subangular blocky structure; soft, nonsticky, nonplastic; few very fine roots throughout; 25 percent distinct clay films on all faces of peds; 3 percent nonflat subangular indurated 2 to 5-millimeter Sandstone fragments and 3 percent nonflat subangular indurated 20 to 75-millimeter Sandstone fragments and 10 percent nonflat subangular indurated 5 to 20-millimeter Sandstone fragments; strongly acid, pH 5.5, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02614

2Bt2--36 to 60 centimeters (14.2 to 23.6 inches); channery clay loam; moderate medium subangular blocky structure; soft, nonsticky, nonplastic; 35 percent distinct clay films on all faces of peds; 20 percent flat subangular moderately cemented 2 to 150-millimeter Shale fragments; strongly acid, pH 5.5, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02615

2Bt3--60 to 100 centimeters (23.6 to 39.4 inches); gravelly clay loam; moderate medium subangular blocky structure; soft, nonsticky, nonplastic; 40 percent distinct clay films on all faces of peds; strongly acid, pH 5.5, pH indicator solutions. Lab sample # 17N02616
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 4 2016
Describer: Mike Jones
NEON Plot ID: ORNL_004

Site ID: S2016TN145004

Pedon ID: S2016TN145004
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0507

Soil Name as Described/Sampled: Bodine
Classification: Loamy-skeletal, siliceous, semiactive, thermic Typic Paleudults
Soil Name as Correlated:

Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series

Associated Soils: Fullerton, Minvale, Pailo
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on shoulder of side slope of ridge on valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 23 to 44 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 23 cm.
argillic horizon 23 to 44 cm.

Country: United States
State: Tennessee
County: Roane
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: NOTCOM -- No Digital Data Available
Pit Location:
Quad Name:
Std Latitude: 35.9066944
Std Longitude: -84.2758611

Latitude: 35 degrees 54 minutes 28.02 seconds north
Longitude: 84 degrees 16 minutes 31.24 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 745838 meters
UTM Northing: 3977029 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: skeletal loamy creep deposits derived from chert over skeletal loamy residuum weathered from dolomite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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</table>

Oe--0 to 5 centimeters (0.0 to 2.0 inches); moderately decomposed plant material; gradual smooth boundary. Lab sample # 17N02617

Bt1--5 to 23 centimeters (2.0 to 9.1 inches); yellowish brown (10YR 5/4) broken face gravelly clay loam; soft; many medium roots throughout and many fine roots throughout and few coarse roots throughout; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 10 percent nonflat angular indurated 5 to 20-millimeter Chert fragments and 15 percent nonflat angular indurated 2 to 5-millimeter Chert fragments; diffuse smooth boundary. Lab sample # 17N02618

Bt2--23 to 36 centimeters (9.1 to 14.2 inches); 5/4 5/4) broken face gravelly clay loam; soft; few medium roots throughout and very few fine roots throughout; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 25 percent nonflat angular indurated 5 to 20-millimeter Chert fragments and 30 percent nonflat angular indurated 2 to 5-millimeter Chert fragments; gradual smooth boundary. Lab sample # 17N02619

Bt3--36 to 44 centimeters (14.2 to 17.3 inches); extremely gravelly clay loam; soft; few fine roots throughout; 15 percent distinct clay films on rock fragments and 15 percent distinct clay films on vertical faces of peds; 15 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 30 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 30 percent nonflat angular indurated 5 to 20-millimeter Chert fragments. Lab sample # 17N02620
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 3 2016
Describer: Jennifer Mason
NEON Plot ID: ORNL_007

Site ID: S2016TN145007

Pedon ID: S2016TN145007
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0508
Soil Name as Described/Sampled: Bodine
Classification: Loamy-skeletal, siliceous, semiactive, thermic Typic Paleudults
Soil Name as Correlated:
Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Fullerton, Minvale, Pailo
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on valley
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section: 36 to 86 cm.

Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 36 cm.
argillic horizon 36 to 100 cm.

Country: United States
State: Tennessee
County: Roane
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: NOTCOM -- No Digital Data Available
Pit Location:
Quad Name:
Std Latitude: 35.9255280
Std Longitude: -84.3300120

Latitude: 35 degrees 55 minutes 31.00 seconds north
Longitude: 84 degrees 19 minutes 48.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 740895 meters
UTM Northing: 3978955 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: skeletal loamy creep deposits derived from chert over skeletal loamy residuum weathered from dolomite
Bedrock Kind: Argillaceous limestone
Bedrock Depth:
Bedrock Hardness: indurated
Bedrock Fracture Interval:
Surface Fragments: 10.0 percent nonflat angular indurated 76- to 250-millimeter Chert fragments
Description database: KSSL
### A--0 to 18 centimeters (0.0 to 7.1 inches)
Dark brown (10YR 3/3) broken face extremely gravelly silt loam; weak fine granular structure; soft; many very fine roots throughout and few medium roots throughout and few fine roots throughout and few coarse roots throughout; common very fine moderate-continuity dendritic tubular and few medium moderate-continuity tubular and common fine moderate-continuity tubular pores; 65 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; diffuse smooth boundary. Lab sample # 17N02621

### BA--18 to 36 centimeters (7.1 to 14.2 inches)
Dark yellowish brown (10YR 4/4) broken face extremely gravelly silt loam; weak medium subangular blocky structure; soft; many very fine roots throughout and few medium roots throughout and common fine roots throughout; few fine low-continuity tubular pores; 65 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; diffuse smooth boundary. Lab sample # 17N02622

### Bt1--36 to 60 centimeters (14.2 to 23.6 inches)
Brown (7.5YR 4/4) broken face extremely gravelly silty clay loam; weak medium granular, and weak fine subangular blocky structure; soft; 10 percent faint clay films on rock fragments and 10 percent faint clay films on all faces of peds; 80 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; diffuse smooth boundary. Lab sample # 17N02623

### Bt2--60 to 100 centimeters (23.6 to 39.4 inches)
Strong brown (7.5YR 4/6) broken face extremely gravelly silty clay loam; weak fine subangular blocky structure; soft; 30 percent faint 7.5YR 4/4), moist, clay films on rock fragments and 30 percent faint 7.5YR 4/4), moist, clay films on all faces of peds; 80 percent nonflat angular indurated 7 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions. Lab sample # 17N02624

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PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Aug 3 2016
Describer: Jennifer Mason
NEON Plot ID: ORNL_008

Site ID: S2016TN145008

Pedon ID: S2016TN145008
Site Note: 
Pedon Note: 
Lab Source ID: KSSL
Lab Pedon #: 17N0509
Soil Name as Described/Sampled: Minvale
Classification: Fine-loamy, siliceous, subactive, thermic Typic Paleudults

Soil Name as Correlated:
Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Bodine, Dewey, Fullerton, Pailo
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area: 

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on valley
Upslope Shape: linear
Cross Slope Shape: concave
Particle Size Control Section: 17 to 67 cm.

Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 23 cm. argillic horizon 23 to 100 cm.

Country: United States
State: Tennessee
County: Roane
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: NOTCOM -- No Digital Data Available
Pit Location:
Quad Name:
Std Latitude: 35.9328520
Std Longitude: -84.3327370

Latitude: 35 degrees 55 minutes 58.26 seconds north
Longitude: 84 degrees 19 minutes 57.85 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 740625 meters
UTM Northing: 3979789 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: fine-loamy colluvium derived from chert over fine-loamy residuum weathered from dolomite
Bedrock Kind: Dolomite
Bedrock Depth: 
Bedrock Hardness: indurated
Bedrock Fracture Interval: 
Surface Fragments: 5.0 percent nonflat angular indurated 76- to 250-millimeter Chert fragments
Description database: KSSL
A--0 to 10 centimeters (0.0 to 3.9 inches); dark olive brown (2.5Y 3/3) broken face extremely gravelly loam; weak fine granular structure; soft; many very fine roots throughout and few medium roots throughout and many fine roots throughout; few medium moderate-continuity dendritic tubular and common fine moderate-continuity dendritic tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 75 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; moderately acid, pH 6.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02625

E--10 to 23 centimeters (3.9 to 9.1 inches); light olive brown (2.5Y 5/3) broken face extremely gravelly loam; weak medium granular structure; soft; few medium roots throughout and many fine roots throughout; few medium moderate-continuity dendritic tubular and common fine moderate-continuity dendritic tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 75 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; moderately acid, pH 6.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02626

BE--23 to 36 centimeters (9.1 to 14.2 inches); yellowish brown (10YR 5/4) broken face gravelly loam; weak fine subangular blocky structure; soft; many very fine roots throughout and common medium roots throughout and common fine roots throughout; few medium moderate-continuity dendritic tubular and common fine moderate-continuity dendritic tubular pores; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 20 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02627

Bt1--36 to 61 centimeters (14.2 to 24.0 inches); 88 percent strong brown (7.5YR 5/6) broken face gravelly clay loam; 12 percent medium faint irregular (5YR 5/6) mottles; weak medium subangular blocky structure; soft; few very fine roots throughout and few medium roots throughout and few fine roots throughout; few fine moderate-continuity irregular pores; 35 percent distinct 2.5YR 4/8), moist, clay films on all faces of peds; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 20 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions; diffuse smooth boundary. Lab sample # 17N02628

2Bt2--61 to 100 centimeters (24.0 to 39.4 inches); 88 percent yellowish red (5YR 5/8) broken face gravelly silty clay loam; 12 percent fine distinct irregular (7.5YR 5/4) mottles; moderate medium subangular blocky structure; soft; few very fine roots throughout; few fine moderate-continuity irregular pores; 35 percent distinct 2.5YR 4/8), moist, clay films on all faces of peds; 0 percent nonflat subangular indurated 75 to 250-millimeter Chert fragments and 20 percent nonflat subangular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions. Lab sample # 17N02629
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018  
Description Date: Aug 4 2016  
Describer: Jennifer Mason  
NEON Plot ID: ORNL_010

Site ID: S2016TN145010

Pedon ID: S2016TN145010  
Site Note:  
Pedon Note:  
Lab Source ID: KSSL  
Lab Pedon #: 17N0510

Soil Name as Described/Sampled: Sunlight  
Classification: Loamy-skeletal, mixed, semiactive, thermic Inceptic Hapludults

Soil Name as Correlated:  
Classification:  
Pedon Type: confirmation description  
Pedon Purpose: research site  
Taxon Kind: series  
Associated Soils: Apison, Armuchee, Coile, Montevallo, Townley

Physiographic Division: Appalachian Highlands  
Physiographic Province: Valley and Ridge Province  
Physiographic Section: Tennessee section  
State Physiographic Area:  
Local Physiographic Area:  
Geomorphic Setting: on backslope of side slope of ridge on valley  
Upslope Shape: convex  
Cross Slope Shape: convex  
Particle Size Control Section: 25 to 33 cm.  
Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 15 cm.  
argillic horizon 15 to 33 cm.  
paralithic contact 33 to 58 cm.

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Country: United States  
State: Tennessee  
County: Roane  
MLRA: 128 -- Southern Appalachian Ridges and Valleys

Soil Survey Area: TN145 -- Roane County, Tennessee  
6-CLI -- Clinton, Tennessee

Map Unit: NOTCOM -- No Digital Data Available  
Pit Location:  
Quad Name:  
Std Latitude: 35.9530555  
Std Longitude: -84.3322222

Latitude: 35 degrees 57 minutes 11.00 seconds north  
Longitude: 84 degrees 19 minutes 56.00 seconds west

Datum: WGS84  
UTM Zone: 16  
UTM Easting: 740610 meters  
UTM Northing: 3982032 meters

Primary Earth Cover: Tree cover  
Secondary Earth Cover: Hardwoods  
Existing Vegetation:  
Parent Material: fine-loamy residuum weathered from interbedded sedimentary rock

Bedrock Kind: Sandstone and shale  
Bedrock Depth: 33 centimeters  
Bedrock Hardness: strongly cemented  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL
Cont. Site ID: S2016TN145010  
Pedon ID: S2016TN145010

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A--0 to 8 centimeters (0.0 to 3.1 inches); brown (10YR 4/3) broken face very channery loam; weak fine granular structure; soft; many very fine roots throughout and few medium roots throughout and many fine roots throughout and few coarse roots throughout; many very fine moderate-continuity tubular and many fine moderate-continuity dendritic tubular pores; 20 percent flat subangular very strongly cemented 2 to 150-millimeter Shale fragments and 20 percent flat subangular indurated 2 to 150-millimeter Sandstone fragments; very strongly acid, pH 5.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02630

BE--8 to 15 centimeters (3.1 to 5.9 inches); yellowish brown (10YR 5/4) broken face very channery loam; weak fine subangular blocky structure; soft; common very fine roots throughout and few medium roots throughout and common fine roots throughout; common very fine moderate-continuity tubular and common fine moderate-continuity dendritic tubular pores; 20 percent flat subangular very strongly cemented 2 to 150-millimeter Shale fragments and 20 percent flat subangular indurated 2 to 150-millimeter Sandstone fragments; very strongly acid, pH 5.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02631

Bt--15 to 33 centimeters (5.9 to 13.0 inches); 88 percent yellowish brown (10YR 5/6) broken face extremely channery clay loam; 12 percent fine distinct irregular (10YR 5/6) mottles; moderate medium subangular blocky structure; soft; common very fine roots throughout; few fine moderate-continuity tubular pores; 40 percent faint 10YR 4/6), moist, clay films on all faces of peds; 37 percent flat subangular very strongly cemented 2 to 150-millimeter Shale fragments and 38 percent flat subangular indurated 2 to 150-millimeter Sandstone fragments; very strongly acid, pH 5.0, pH indicator solutions; diffuse smooth boundary. Lab sample # 17N02632

Cr--33 to 58 centimeters (13.0 to 22.8 inches); strongly cemented Sandstone and shale bedrock; .
Country: United States
State: Tennessee
County: Roane
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: NOTCOM -- No Digital Data Available

Latitude: 35 degrees 56 minutes 23.78 seconds north
Longitude: 84 degrees 17 minutes 20.26 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 744553 meters
UTM Northing: 3980684 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: creep deposits derived from chert over clayey residuum weathered from dolomite
Bedrock Kind: Argillaceous limestone
Bedrock Depth:
Bedrock Hardness: indurated
Bedrock Fracture Interval:
Surface Fragments: 2.0 percent nonflat angular
indurated 76- to 250-millimeter Chert fragments
Description database: KSSL
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<th>Slope (%)</th>
<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
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<th>MSAT (C)</th>
<th>MWAT (C)</th>
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<th>Drainage Class</th>
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<td>1,524</td>
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A--0 to 10 centimeters (0.0 to 3.9 inches); dark brown (10YR 3/3) broken face very gravelly silt loam; weak fine granular structure; soft; many very fine roots throughout and many fine roots throughout; many fine moderate-continuity dendritic tubular pores; 0 percent nonflat angular indurated 75 to 250-millimeter Chert fragments and 40 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; neutral, pH 7.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02633

BA--10 to 30 centimeters (3.9 to 11.8 inches); 88 percent yellowish brown (10YR 5/8) broken face very gravelly silt loam; 12 percent medium faint irregular (7.5YR 5/8) mottles; weak medium subangular blocky structure; soft; common very fine roots throughout and few medium roots throughout; common fine moderate-continuity dendritic tubular pores; 0 percent nonflat angular indurated 75 to 250-millimeter Chert fragments and 40 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; diffuse smooth boundary. Lab sample # 17N02634

Bt1--30 to 43 centimeters (11.8 to 16.9 inches); 88 percent yellowish red (5YR 4/6) broken face silty clay loam; 12 percent medium distinct irregular (2.5YR 5/) mottles; moderate medium subangular blocky structure; soft; few very fine roots throughout and few medium roots throughout; few fine moderate-continuity irregular pores; 10 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02635

Bt2--43 to 100 centimeters (16.9 to 39.4 inches); 88 percent red (2.5YR 4/6) broken face gravelly clay; 12 percent medium distinct irregular (5YR 5/8) mottles; strong medium subangular blocky structure; soft; few very fine roots throughout and few medium roots throughout; few fine moderate-continuity irregular pores; 35 percent distinct 7.5YR 4/6), moist, clay films on all faces of peds; 20 percent nonflat angular indurated 2 to 75-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions. Lab sample # 17N02636
PEDON DESCRIPTION -- NEON Site ORNL

**Print Date:** Apr 2 2018  
**Description Date:** Aug 4 2016  
**Describer:** Jennifer Mason  
**NEON Plot ID:** ORNL_032

**Site ID:** S2016TN145032

**Pedon ID:** S2016TN145032  
**Site Note:**  
**Pedon Note:**  
**Lab Source ID:** KSSL  
**Lab Pedon #:** 17N0512  
**Soil Name as Described/Sampled:** Etowah  
**Classification:** Fine-loamy, siliceous, semiactive, thermic Typic Paleudults  
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** confirmation description  
**Pedon Purpose:** research site  
**Taxon Kind:** series  
**Associated Soils:** Dewey, Hamblen, Minvale, Waynesboro  
**Physiographic Division:** Appalachian Highlands  
**Physiographic Province:** Valley and Ridge Province  
**Physiographic Section:** Tennessee section  
**State Physiographic Area:**

**Local Physiographic Area:**  
**Geomorphic Setting:** on backslope of side slope of stream terrace on river valley  
**Upslope Shape:** concave  
**Cross Slope Shape:** convex  
**Particle Size Control Section:** 20 to 70 cm.  
**Description origin:** NASIS  
**Diagnostic Features:** ochric epipedon 0 to 20 cm.  
argillic horizon 20 to 100 cm.

**Country:** United States  
**State:** Tennessee  
**County:** Roane  
**MLRA:** 128 -- Southern Appalachian Ridges and Valleys  
**Soil Survey Area:** TN145 -- Roane County, Tennessee  
6-CLI -- Clinton, Tennessee  
**Map Unit:** NOTCOM -- No Digital Data Available  
**Pit Location:**  
**Quad Name:**  
**Std Latitude:** 35.9251943  
**Std Longitude:** -84.3299847

**Latitude:** 35 degrees 56 minutes 40.00 seconds north  
**Longitude:** 84 degrees 19 minutes 36.00 seconds west  
**Datum:** WGS84  
**UTM Zone:** 16  
**UTM Easting:** 741138 meters  
**UTM Northing:** 3981090 meters

**Primary Earth Cover:** Tree cover  
**Secondary Earth Cover:** Conifers  
**Existing Vegetation:**  
**Parent Material:** fine-loamy alluvium derived from interbedded sedimentary rock over colluvium derived from interbedded sedimentary rock  
**Bedrock Kind:** Argillaceous limestone  
**Bedrock Depth:**  
**Bedrock Hardness:** indurated  
**Bedrock Fracture Interval:**  
**Surface Fragments:**  
**Description database:** KSSL
A--0 to 8 centimeters (0.0 to 3.1 inches); dark brown (10YR 3/3) broken face silt loam; moderate medium granular structure; soft; many very fine roots throughout and few medium roots throughout and common fine roots throughout; many medium moderately continuity dendritic tubular pores; slightly acid, pH 6.5, pH indicator solutions; gradual wavy boundary. Lab sample # 17N02637

BA--8 to 20 centimeters (3.1 to 7.9 inches); brown (7.5YR 4/3) broken face silt loam; 12 percent fine distinct irregular (5YR 4/6) mottles; weak medium subangular blocky structure; soft; few very fine roots throughout and few very fine roots throughout and few medium roots throughout; common medium moderately continuity dendritic tubular pores; moderately acid, pH 6.0, pH indicator solutions; gradual wavy boundary. Lab sample # 17N02638

Bt1--20 to 40 centimeters (7.9 to 15.7 inches); 88 percent yellowish red (5YR 4/6) broken face silt loam; 12 percent fine faint irregular (5YR 4/3) mottles; soft; few very fine roots throughout and few fine roots throughout; 15 percent faint 5YR 4/4), moist, clay films on all faces of peds; 15 percent medium prominent spherical moderately cemented 5YR 2.5/1), moist, iron-manganese nodules with sharp boundaries Throughout; very strongly acid, pH 5.0, pH indicator solutions; diffuse wavy boundary. Lab sample # 17N02639

Bt2--40 to 70 centimeters (15.7 to 27.6 inches); 88 percent yellowish red (5YR 4/6) broken face silty clay loam; 12 percent medium faint irregular (2.5YR 4/6) mottles; moderate medium subangular blocky structure; soft; 35 percent faint 5YR 4/4), moist, clay films on all faces of peds; 15 percent medium prominent spherical moderately cemented 5YR 2.5/1), moist, iron-manganese nodules Throughout; 2 percent nonflat rounded indurated 2 to 76-millimeter Sandstone fragments; very strongly acid, pH 5.0, pH indicator solutions; diffuse wavy boundary. Lab sample # 17N02640

Bt3--70 to 100 centimeters (27.6 to 39.4 inches); 88 percent yellowish red (5YR 5/6) broken face silty clay loam; 12 percent medium distinct irregular (7.5YR 5/6) mottles; strong medium subangular blocky structure; soft; 45 percent faint 5YR 4/6), moist, clay films on all faces of peds; 25 percent medium prominent spherical moderately cemented 5YR 2.5/1), moist, iron-manganese nodules with sharp boundaries Throughout; 2 percent nonflat rounded indurated 2 to 76-millimeter Sandstone fragments; very strongly acid, pH 5.0, pH indicator solutions. Lab sample # 17N02641
**PEDON DESCRIPTION -- NEON Site ORNL**

**Print Date:** Apr 2 2018  
**Description Date:** Sep 7 2016  
**Describer:** David Moore  
**NEON Plot ID:** ORNL_035

**Site ID:** S2016TN145035

**Pedon ID:** S2016TN145035  
**Site Note:**  
**Pedon Note:**  
**Lab Source ID:** KSSL  
**Lab Pedon #:** 17N0513

**Soil Name as Described/Sampled:** Bodine  
**Classification:** Loamy-skeletal, siliceous, semiactive, thermic Typic Paleudults  
**Soil Name as Correlated:**

**Classification:**  
**Pedon Type:** confirmation description  
**Pedon Purpose:** research site  
**Taxon Kind:** series  
**Associated Soils:** Bodine, Dewey, Minvale, Pailo  
**Physiographic Division:** Appalachian Highlands  
**Physiographic Province:** Valley and Ridge Province  
**Physiographic Section:** Tennessee section  
**State Physiographic Area:**

**Local Physiographic Area:**  
**Geomorphic Setting:** on backslope of side slope of ridge on valley  
**Upslope Shape:** convex  
**Cross Slope Shape:** convex  
**Particle Size Control Section:** 26 to 45 cm.  
**Description origin:** NASIS  
**Diagnostic Features:** ochric epipedon 0 to 26 cm. argillic horizon 26 to 45 cm.

**Country:** United States  
**State:** Tennessee  
**County:** Roane  
**MLRA:** 128 -- Southern Appalachian Ridges and Valleys  
**Soil Survey Area:** TN145 -- Roane County, Tennessee 6-CLI -- Clinton, Tennessee  
**Map Unit:** NOTCOM -- No Digital Data Available  
**Pit Location:**  
**Quad Name:**  
**Std Latitude:** 35.9744444  
**Std Longitude:** -84.3502777

**Latitude:** 35 degrees 58 minutes 28.00 seconds north  
**Longitude:** 84 degrees 21 minutes 1.00 seconds west  
**Datum:** WGS84  
**UTM Zone:** 16  
**UTM Easting:** 738917 meters  
**UTM Northing:** 3984361 meters  
**Primary Earth Cover:** Tree cover  
**Secondary Earth Cover:** Conifers  
**Existing Vegetation:**  
**Parent Material:** skeletal loamy creep deposits derived from chert over skeletal loamy residuum weathered from dolomite  
**Bedrock Kind:**  
**Bedrock Depth:**  
**Bedrock Hardness:**  
**Bedrock Fracture Interval:**  
**Surface Fragments:**  
**Description database:** KSSL
A--0 to 15 centimeters (0.0 to 5.9 inches); brown (7.5YR 4/4) broken face extremely gravelly silt loam; weak medium granular structure; soft; common very fine roots throughout and few medium roots throughout and common fine roots throughout and few coarse roots throughout; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 5 percent nonflat angular indurated 75 to 250-millimeter Chert fragments and 20 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 20 percent nonflat angular indurated 5 to 20-millimeter Chert fragments; very strongly acid, pH 5.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02642

BA--15 to 26 centimeters (5.9 to 10.2 inches); 88 percent brown (7.5YR 4/4) broken face extremely gravelly silt loam; 12 percent fine faint irregular (7.5YR 4/6) mottles; weak fine subangular blocky structure; soft; few very fine roots throughout and few medium roots throughout and few fine roots throughout; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 20 percent nonflat angular indurated 75 to 250-millimeter Chert fragments and 25 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 30 percent nonflat angular indurated 5 to 20-millimeter Chert fragments; very strongly acid, pH 4.5, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02643

Bt--26 to 45 centimeters (10.2 to 17.7 inches); 88 percent yellowish red (5YR 5/6) broken face extremely gravelly silty clay loam; 12 percent fine faint irregular (7.5YR 5/4) mottles; moderate medium subangular blocky structure; soft; few fine roots throughout; 35 percent distinct clay films on all faces of peds; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 20 percent nonflat angular indurated 75 to 250-millimeter Chert fragments and 30 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 30 percent nonflat angular indurated 5 to 20-millimeter Chert fragments; very strongly acid, pH 4.5, pH indicator solutions. Lab sample # 17N02644
PEDON DESCRIPTION -- NEON Site ORNL

Print Date: Apr 2 2018
Description Date: Sep 8 2016
Describer: David Moore
NEON Plot ID: ORNL_068

Site ID: S2016TN145068

Pedon ID: S2016TN145068
Site Note:
Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 17N0514
Soil Name as Described/Sampled: Fullerton
Classification: Fine, kaolinitic, thermic Typic Paleudults

Soil Name as Correlated:
Classification:
Pedon Type: confirmation description
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Bodine, Dewey, Minvale, Pailo
Physiographic Division: Appalachian Highlands
Physiographic Province: Valley and Ridge Province
Physiographic Section: Tennessee section
State Physiographic Area:

Local Physiographic Area:
Geomorphic Setting: on backslope of side slope of ridge on valley
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 17 to 100 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 17 cm.
argillic horizon 17 to 100 cm.

Country: United States
State: Tennessee
County: Roane
MLRA: 128 -- Southern Appalachian Ridges and Valleys
Soil Survey Area: TN145 -- Roane County, Tennessee
6-CLI -- Clinton, Tennessee
Map Unit: NOTCOM -- No Digital Data Available
Pit Location:
Quad Name:
Std Latitude: 35.9261111
Std Longitude: -84.4269444

Latitude: 35 degrees 55 minutes 34.00 seconds north
Longitude: 84 degrees 25 minutes 37.00 seconds west
Datum: WGS84
UTM Zone: 16
UTM Easting: 732144 meters
UTM Northing: 3978813 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: creep deposits derived from chert over clayey residuum weathered from dolomite
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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<th>Aspect (deg)</th>
<th>MAAT (C)</th>
<th>MSAT (C)</th>
<th>MWAT (C)</th>
<th>MAP (mm)</th>
<th>Frost-Free Days</th>
<th>Drainage Class</th>
<th>Slope Length (meters)</th>
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A--0 to 11 centimeters (0.0 to 4.3 inches); dark yellowish brown (10YR 3/4) broken face gravelly silt loam; weak fine granular structure; soft; many very fine roots throughout and few medium roots throughout and many fine roots throughout and common coarse roots throughout; common fine moderate-continuity tubular pores; 5 percent nonflat angular indurated 5 to 20-millimeter Chert fragments and 10 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 15 percent nonflat angular 20 to 75-millimeter Chert fragments; moderately acid, pH 6.0, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02645

BA--11 to 17 centimeters (4.3 to 6.7 inches); 88 percent dark yellowish brown (10YR 4/4) broken face gravelly silt loam; soft; many very fine roots throughout and common medium roots throughout and many fine roots throughout; common medium moderate-continuity tubular and common fine moderate-continuity tubular pores; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 10 percent nonflat angular indurated 5 to 20-millimeter Chert fragments and 12 percent nonflat angular indurated 2 to 5-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; gradual smooth boundary. Lab sample # 17N02646

Bt1--17 to 60 centimeters (6.7 to 23.6 inches); cobbly silty clay; strong medium subangular blocky structure; soft; common very fine roots throughout and few fine roots; common fine moderate-continuity tubular pores; 30 percent distinct clay films on all faces of peds and 30 percent distinct clay films on rock fragments; 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 5 percent nonflat angular indurated 5 to 20-millimeter Chert fragments and 5 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 20 percent nonflat angular indurated 76 to 250-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions; diffuse wavy boundary. Lab sample # 17N02647

Bt2--60 to 100 centimeters (23.6 to 39.4 inches); 76 percent yellowish red (5YR 4/6) broken face cobbly silty clay; 12 percent medium distinct irregular (10YR 5/4) and 12 percent medium faint irregular (7.5YR 4/6) mottles; moderate medium subangular blocky structure; soft; few very fine roots throughout; 30 percent distinct clay films on all faces of peds and 30 percent distinct clay films on rock fragments; 5 percent nonflat angular indurated 2 to 5-millimeter Chert fragments and 5 percent nonflat angular indurated 5 to 20-millimeter Chert fragments and 5 percent nonflat angular indurated 20 to 75-millimeter Chert fragments and 20 percent nonflat angular indurated 76 to 250-millimeter Chert fragments; strongly acid, pH 5.5, pH indicator solutions. Lab sample # 17N02648