

Soil Name as Described/Sampled: Limpia-smectitic

Description Date: 1/20/2017 12:00:00 AM
Describer: David Jalali, Will Juett, and Lynn Loomis

User Site ID: S2017-TX243-0015 User Pedon ID: S2017-TX243-0015
Taxon Kind: taxadjunct

Location Information:
County: Jeff Davis
Quad Sheet Name: Blue Mountain, Texas
State: Texas
MLRA: 42 -- Southern Desertic Basins, Plains, and Mountains
Soil Survey Area: TX243 -- Jeff Davis County, Texas
8-MAF -- Marfa, Texas

Location Coordinates:
Latitude: 30 degrees 32 minutes 37.09 seconds north
Longitude: 104 degrees 1 minutes 35.42 seconds west
Datum: WGS84
UTM Zone: 13, UTM Easting: 593378 meters UTM Northing: 3379430 meters

Physiographic Division: Intermontane Plateaus
Physiographic Province: Basin and Range Province
Physiographic Section: Mexican Highland

Geomorphic Setting: fan remnant
Slope: 8.2 percent Aspect: 235 (deg)
Elevation: 5417 feet, 1,651.1 meters

Diagnostic Features:

	Top	Bottom	Top	Bottom
Kind	Depth (in)	Depth (in)	Depth (cm)	Depth (cm)
mollic epipedon	0	75	0	75
argillic horizon	23	90	23	90

A--0.0 to 9.1 inches, (0 to 23 cm); dark brown (7.5YR 3/3), very gravelly sandy clay loam, very dark brown (7.5YR 2.5/2), moist; 50 percent sand; 31 percent clay; moderate medium subangular blocky structure parts to moderate fine subangular blocky structure parts to strong very fine subangular blocky structure; friable, slightly hard, moderately sticky, moderately plastic; moderate excavation difficulty; many fine roots and common medium roots and common very fine roots; 3 percent faint clay films on rock fragments; 10 percent nonflat subangular indurated 20- to 75-millimeter rhyolite fragments and 30 percent nonflat subrounded indurated 2- to 20-millimeter rhyolite fragments; noneffervescent, by HCl, 1 normal; gradual smooth boundary.

Bt1--9.1 to 29.5 inches, (23 to 75 cm); dark reddish brown (5YR 3/3), very gravelly sandy clay loam, dark reddish brown (5YR 3/2), moist; 50 percent sand; 39 percent clay; moderate medium subangular blocky structure parts to moderate fine subangular blocky structure parts to strong very fine subangular blocky structure; friable, slightly hard, moderately sticky, moderately plastic; moderate excavation difficulty; common fine roots and common medium roots and common very fine roots; 5 percent faint clay films on rock fragments; 10 percent nonflat subangular indurated 20- to 75-millimeter rhyolite fragments and 15 percent nonflat subangular indurated 75- to 250-millimeter rhyolite fragments and 30 percent nonflat subrounded indurated 2- to 20-millimeter rhyolite fragments; noneffervescent, by HCl, 1 normal; clear smooth boundary.

2Bt2--29.5 to 35.4 inches, (75 to 90 cm); yellowish red (5YR 5/8), very gravelly clay, yellowish red (5YR 4/6), moist; 30 percent sand; 45 percent clay; ; very sticky, very plastic; 5 percent nonflat subangular indurated 75- to 250-millimeter rhyolite fragments and 5 percent nonflat subangular indurated 20- to 75-millimeter rhyolite fragments and 30 percent nonflat subrounded indurated 2- to 20-millimeter rhyolite fragments; very slight effervescence, by HCl, 1 normal; clear smooth boundary.

2Btk--35.4 to 39.4 inches, (90 to 100 cm); reddish yellow (5YR 6/8), gravelly clay, yellowish red (5YR 5/6), moist; 30 percent sand; 51 percent clay; ; prominent carbonate coats on rock fragments; 25 percent nonflat subrounded indurated 2- to 20-millimeter rhyolite fragments; violent effervescence, by HCl, 1 normal.

Ecological Site: Gravelly, Mixed Prairie (R042XE275TX)

Vegetation Plot Plant Inventory:

Plant Symbol	Scientific Name	National Vernacular Name	Plant Type Group	Canopy Cover %	Vegetation Strata Level
ARLU	Artemisia ludoviciana	white sagebrush			
ASMO7	Astragalus mollissimus	woolly locoweed			
BUSC	Buddleja scordioides	escobilla butterflybush			
CITE2	Cirsium texanum	Texas thistle			
CROTO	Croton	croton			
CRYPT	Cryptantha	cryptantha			
DECO2	Desmanthus cooleyi	Cooley's bundleflower			
DICA8	Digitaria californica	Arizona cottontop			
DICOC	Digitaria cognata var. cognata	Carolina crabgrass			
ELBA	Elionurus barbiculmis	woolyspike balsamscale			
ERIN	Eragrostis intermedia	plains lovegrass			
EVOLV	Evolvulus	dwarf morning-glory			
GNAPH	Gnaphalium	cudweed			
LEDU	Leptochloa dubia	green sprangletop			
LYPH	Lycurus phleoides	common wolfstail			
MAPI	Machaeranthera pinnatifida	lacy tansyaster			
NOTE	Nolina texana	Texas sacahuista			
OPIM	Opuntia imbricata	tree cholla			
OPPH	Opuntia phaeacantha	tulip pricklypear			
PAHA	Panicum hallii	Hall's panicgrass			
PAHAF	Panicum hallii var. filipes	Hall's panicgrass			
PRGLT	Prosopis glandulosa var. torreyana	western honey mesquite			
RHMI3	Rhus microphylla	littleleaf sumac			
SATR12	Salsola tragus	prickly Russian thistle			
SEBA3	Senna bauhinioides	twinleaf senna			
SEFLF	Senecio flaccidus var. flaccidus	threadleaf ragwort			
SPHAE	Sphaeralcea	globemallow			
TRCA8	Trixis californica	American threefold			
ARPUW	Aristida purpurea var. wrightii	Wright's threeawn			
ARTE3	Aristida ternipes	spidergrass			
BOCU	Bouteloua curtipendula	sideoats grama			
BOER4	Bouteloua eriopoda	black grama			
BOHI2	Bouteloua hirsuta	hairy grama			
ERHE3	Eryngium heterophyllum	Wright's eryngo			
ZINNI	Zinnia	zinnia			
BOBA3	Bothriochloa barbinodis	cane bluestem			
BOGR2	Bouteloua gracilis	blue grama			
OPIM	Opuntia imbricata	tree cholla			

Soil Name as Described/Sampled: Mainstay-md paralithic

Description Date: 1/20/2017 12:00:00 AM
 Descriptor: David Jalali, Will Juett, and Lynn Loomis

User Site ID: S2017-TX243-0016 User Pedon ID: S2017-TX243-0016
 Taxon Kind: taxadjunct

Location Information:
 County: Jeff Davis
 Quad Sheet Name: Blue Mountain, Texas
 State: Texas
 MLRA: 42 -- Southern Desertic Basins, Plains, and Mountains
 Soil Survey Area: TX243 -- Jeff Davis County, Texas
 8-MAF -- Marfa, Texas

Location Coordinates:
 Latitude: 30 degrees 32 minutes 35.39 seconds north
 Longitude: 104 degrees 1 minutes 28.54 seconds west
 Datum: WGS84
 UTM Zone: 13, UTM Easting: 593561 meters UTM Northing: 3379379 meters

Physiographic Division: Intermontane Plateaus
 Physiographic Province: Basin and Range Province
 Physiographic Section: Mexican Highland

Geomorphic Setting: high hill
 Slope: 23.4 percent Aspect: 266 (deg)
 Elevation: 5547 feet, 1,690.6 meters

Bedrock Kind: tuff
 Bedrock Hardness: moderately cemented

Site Restrictions:

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
63	200	bedrock, paralithic	moderately cemented

Diagnostic Features:

Kind	Top Depth (in)	Bottom Depth (in)	Top Depth (cm)	Bottom Depth (cm)
mollic epipedon	0	41	0	41
argillic horizon	18	63	18	63
paralithic contact	63	63	63	63
paralithic materials	63	200	63	200

A--0.0 to 7.1 inches, (0 to 18 cm); dark brown (7.5YR 3/3), extremely gravelly clay, very dark brown (7.5YR 2.5/2), moist; 31 percent sand; 42 percent clay; moderate fine subangular blocky structure parts to strong very fine subangular blocky structure; very friable, soft, very sticky, very plastic; high excavation difficulty; 15 percent nonflat angular indurated 75- to 250-millimeter rhyolite fragments and 50 percent nonflat angular indurated 2- to 75-millimeter rhyolite fragments; noneffervescent, by HCl, 1 normal; gradual wavy boundary.

Bt--7.1 to 16.1 inches, (18 to 41 cm); dark brown (7.5YR 3/3), very gravelly clay, very dark brown (7.5YR 2.5/2), moist very gravelly clay; 48 percent clay; moderate medium subangular blocky structure parts to moderate fine subangular blocky structure parts to strong very fine subangular blocky structure; friable, slightly hard, very sticky, very plastic; high excavation difficulty; 5 percent distinct clay films on all faces of peds; 5 percent nonflat subangular indurated 75- to 250-millimeter rhyolite fragments and 50 percent nonflat subrounded indurated 2- to 75-millimeter rhyolite fragments; noneffervescent, by HCl, 1 normal; clear smooth boundary.

Bt/Cr --16.1 to 24.8 inches, (41 to 63 cm); Bt part red (2.5YR 4/6), clay, dark red (2.5YR 3/6), moist, 50 percent clay; friable, slightly hard, very sticky, very plastic; high excavation difficulty; noneffervescent, by HCl, 1 normal. Cr part pale red (2.5YR 7/2), moderately cemented tuff bedrock, weak red (2.5YR 5/2), moist; moderately cemented; high excavation difficulty; noneffervescent, by HCl, 1 normal.

Cr--24.8 to 78.7 inches, (63 to 200 cm); pale red (2.5YR 7/2), moderately cemented tuff bedrock, weak red (2.5YR 5/2), moist; moderately cemented; high excavation difficulty; 20 percent nonflat angular indurated 75- to 250-millimeter rhyolite fragments; noneffervescent, by HCl, 1 normal.

Ecological Site: Igneous Hill & Mountain, Mixed Prairie (R042XE277TX)

Vegetation Plot Plant Inventory:

Plant Symbol	Scientific Name	National Vernacular Name	Plant Type Group	Canopy Cover %	Vegetation Strata Level
BAPT	Baccharis pteronioides	yerba de pasmo			
BOCU	Bouteloua curtipendula	sideoats grama			
CITE2	Cirsium texanum	Texas thistle			
CROTO	Croton	croton			
ELBA	Elionurus barbiculmis	woolyspike balsamscale			
ERHE3	Eryngium heterophyllum	Wright's eryngo			
GAURA	Gaura	beeblossom			
GNAPH	Gnaphalium	cudweed			
LYPH	Lycurus phleoides	common wolfstail			
OPENE	Opuntia engelmannii var. engelmannii	cactus apple			
OPIM	Opuntia imbricata	tree cholla			
PRGLT	Prosopis glandulosa var. torreyana	western honey mesquite			
ZINNI	Zinnia	zinnia			
ARTE3	Aristida ternipes	spidergrass			
DICOC	Digitaria cognata var. cognata	Carolina crabgrass			
ERIN	Eragrostis intermedia	plains lovegrass			
NOTE	Nolina texana	Texas sacahuista			
SCSC	Schizachyrium scoparium	little bluestem			
YUTO	Yucca torreyi	Torrey's yucca			
BOGR2	Bouteloua gracilis	blue grama			
BOBA3	Bothriochloa barbinodis	cane bluestem			