

Karst ecosystems of Middle Timan: Soils, Plant Communities, and Soil Invertebrates

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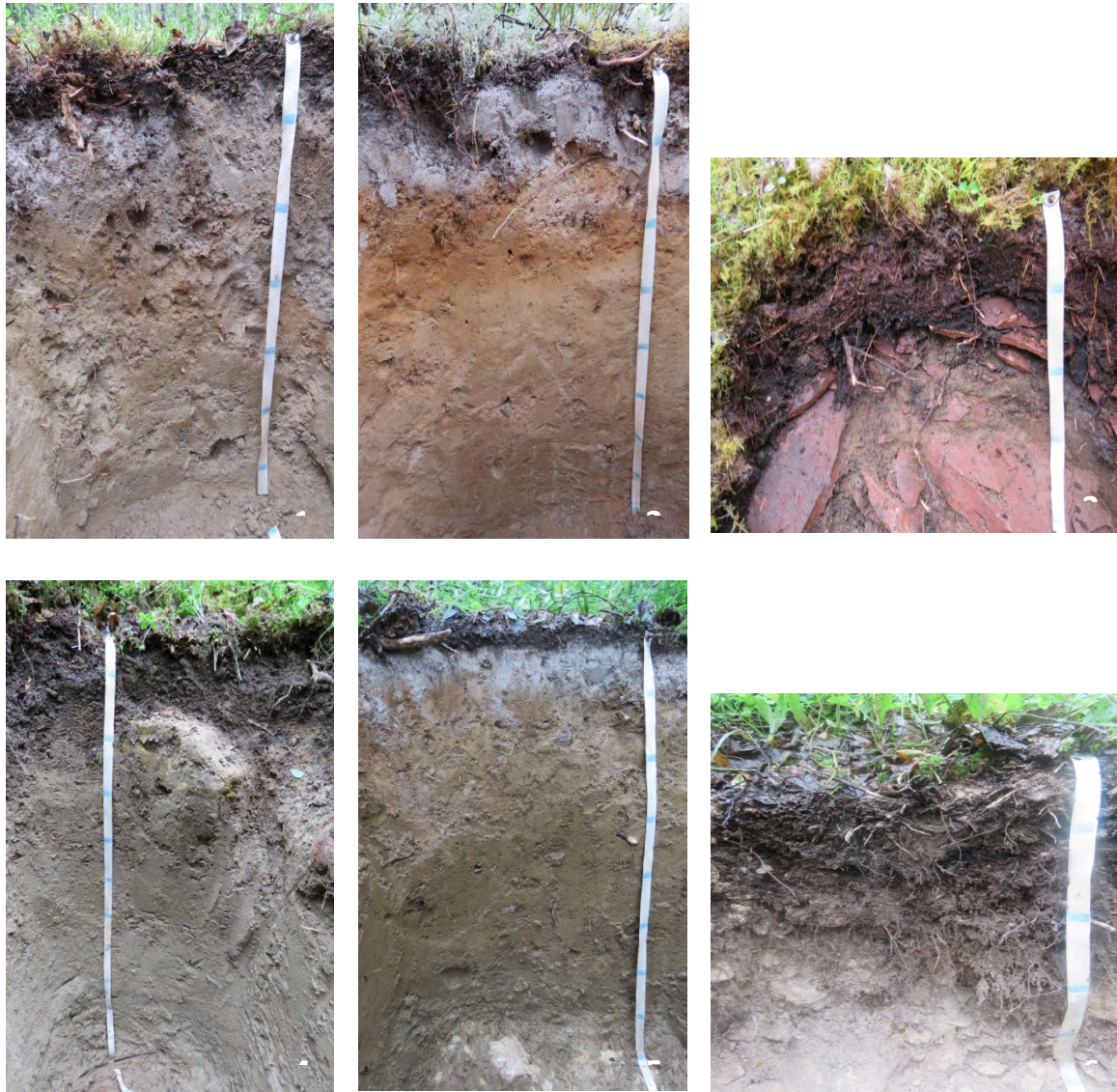


Figure S1. Soil profiles of the main observation sites in karst landscapes of the Middle Timan

(Photo by S.V. Deneva).

1 - Site 2. Blueberry-green moss pine forest on a low watershed. Soil - iron-illuvial contact-gley podzol (Stagnic Albic Rustic Podzol (Arenic)).






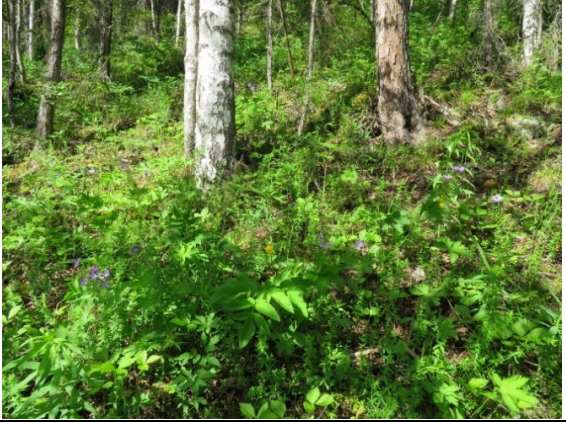
2 - Site 3. Upper slope of karst crater. Dwarf-lichen-green moss mixed forest. Soil - iron-illuvial podzol (Albic Rustic Podzol (Arenic)).



3 - Site 4. Middle slope of the karst crater. Herbaceous-green moss mixed forest. Soil - mucky-peaty peat-lithozem (Dystric Rendzic Folic Leptosol).



4 - Site 5. Lower slope of a karst crater. Green moss-herbal spruce forest. Soil - gleyic gray-humus stratozem (Pantocolluvic Skeletic Stagnic Regosol (Abruptic, Ochric)).

5 - Site 6. Upper gentle slope in the Ukhta river valley. Dwarf-herbaceous post-fire mixed forest. Soil - gray-humus raw-humus podzolized residual-calcareous (Dystric Calcaric Skeletic Cambisol (Ochric, Nechic)).

6 - Site 7. Lower steep slope in Ukhta river valley. Herbaceous thin mixed forest. Soil - mucky-dark-humus carbolithozem (Calcaric Mollic Folic Leptosol).

	
<p>(1) Site 1. Sedge wetland community in a runoff trough.</p>	<p>(2) Site 2. Pine shrub-green moss forest.</p>
	
<p>(3) Site 3. Upper part of the karst crater slope. Mixed herbaceous forest.</p>	<p>(4) Site 3. Grass cover under the canopy of mixed herbaceous forest. The photo shows *Venus slipperwort (<i>Cypripedium calceolus</i> L.).</p>
	
<p>(5) Site 4. Middle part of the karst crater slope. Mixed herb-grass-strawberry forest. Grasses include woodruff (<i>Angelica sylvestris</i> L.), common bramble (<i>Rubus saxatilis</i> L.), narrow-leaved willow-</p>	<p>(6) Site 4. Grassland under the canopy of mixed grass-greengrass forest. The photo shows woodruff (<i>Angelica sylvestris</i> L.), common bramble (<i>Rubus saxatilis</i> L.), northern clematis</p>

herb (<i>Epilobium angustifolium</i> L.), and wood geranium (<i>Geranium sylvaticum</i> L.).	(<i>Galium boreale</i> L.), *dremlik dark red (<i>Epipactis atrorubens</i>).
	
(7) Site 5. Lower part of the karst sinkhole slope. Spruce green-moss forest.	(8) Site 5. Continuous cover of clumps of green mosses: <i>Pleurozium schreberi</i> (Brid.) Mitt. and <i>Ptilium crista-castrensis</i> (Hedw.) De Not. under canopy of spruce green-moss forest.
	
(9) Site 6. Upper part of the slope in the Ukhta River valley. Mixed shrub-grass-broadleaf forest.	(10) Site 6. Grass-bush layer under the canopy of mixed shrub-grass forest.

	
<p>(11) Site 7. Lower part of the slope in the Ukhta River valley. Sparse mixed mixed herbaceous forest.</p>	<p>(12) Site 7. Herbaceous-shrub layer of sparse mixed mixed herbaceous forest. In the photo: common sleepy-grass (<i>Pulsatilla patens</i> (L.) Mill.), Sussureaalpina (<i>Saussureaalpina</i>(L.) DC.), common bramble (<i>Rubus saxatilis</i> L.), European meadowsweet (<i>Trollius europaeus</i> L.), and meadow-grass (<i>Lathyrus pratensis</i> L.).</p>

Note. Calciphilic plants are marked with (*).

Figure S2. Vegetation communities surveyed in karst landscapes of the Middle Timan.
(Photo by V.A. Kanev).