



## **Soils of Sub-Antarctic tundras: diversity and basic chemical characteristics**

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Antarctic peninsula is known as specific part of Antarctica, which is characterizes by humid and relatively warm climate of so-called sub Antarctic (maritime) zone. Annual precipitation and long above zero period provides the possibility of sustainable tundra's ecosystem formation. Therefore, the soil diversity of these tundra landscapes is maximal in the whole Antarctic. Moreover, the thickness of parent material debris's is also highest and achieves a 1 or 2 meters as highest. The presence of higher vascular plants *Deshampsia antarctica* which is considered as one of the main edicators provides the development of humus accumulation in upper solum. Penguins activity provides an intensive soil fertilization and development of plant communities with increased density. All these factors leads to formation of specific and quite diverse soil cover in sub Antarctic tundra's. These ecosystems are presented by following permafrost affected soils: Leptosols, Lithosols, Crysols, Gleysols, Peats and Ornhitosols. Also the post Ornhitosols are widely spreaded in subantarctic ecosystems, they forms on the penguin rockeries during the plant succession development, leaching of nutrients and organic matter mineralization. "Amphibious" soils are specific for seasonal lakes, which evaporates in the end if Australian summer. These soils have specific features of bio sediments and soils as well. Soil chemical characteristic as well as organic matter features discussed in comparison with Antarctic continental soil in presentation.