



Soils of the Galindez Island, Argentine archipelago, Western Antarctica

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Antarctic Peninsula is a part of Antarctica which is characterized by increased soil diversity, caused by specific of parent materials and diversity of non-vascular and vascular plants. Soils of Galindez Island have been investigated during the 18-th Ukrainian Antarctic Expedition 2013/14. This Island situated in Argentine archipelago (coastal part of Antarctic Peninsula). Soils of Galindez Island presented by following types: Leptosols, Lithosols, Histic Lithosols and Leptosols and some Gleyic soils, located in lowlands and coastal parts. An average solum profile thickness is 3-19 cm which result from the small depth of debris's, underplayed by massive crystallic rocks. The permafrost layer is located within the massive rock, but not in coarse friable parent material. The soils with bird influence are widely spread both in coastal and central part of Island. In the coastal parts we can find typical Ornithosols in the penguin rockeries areas. The main aim of our investigation was characterization of soils formed under vegetation, exactly under *Deschampsia antarctica* Desv. localities. Argentine Islands is the central part of *D. antarctica* spreading area in region of Antarctic peninsula. Probably, these islands colonized by hairgrass mainly due to ornithogenic activity. So, coastal population appearance related with *Larus dominicanus* nest areas and feeding activity. Thus, we found typical post ornithogenic soils here. This kind of soils we also observed in population of hairgrass of Galindez mainland where it was connected with the other Antarctic bird - *Catharacta maccormicki* activity. Thus, the soil diversity and soil geochemistry of the Galindez Island are closely related to the activity of birds. The spatial pattern of soils, their chemistry and organic matter quality is discussed in relation with distribution of bird nesting and feeding activity.