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PRELIMINARY MAPPING OF GLACIERS AND GLACIAL LANDFORMS OF MOUNT AĞRI DAĞI (ARARAT), EASTERN ANATOLIA - TURKEY

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The Ağrı Dağı Mount, also known as Ararat, is a volcanic compound located in eastern Anatolia (Turkey) near the borders to Iran, Armenia and Azerbaijan; it covers an area of c. 1100 km². The massif highest peaks, the Buyuk Ağrı (Greater Ararat) reaches an elevation of 5137 m a.s.l. Moreover, Ağrı Dağı represents the most important glacierized mountains in the Middle East and presents the sole ice cap of this region. In spite of a few previous geological and glaciological studies, no geomorphological detailed investigations have been conducted in this area. In this contribution, we present the first attempt of mapping glacial landforms and a preliminary glacier inventory of Mount Ararat. Geomorphological and glaciological mapping of the area was carried out by means remote sensing study of the surface and field control of evidence, performed during a scientific-alpinist expedition under the umbrella of the Central Scientific Committee of the Italian Alpine Club (CAI). The total glacier coverage is quantified in c. 6.23 km² (year 2014), which suggests a significant areal decrease of about -20% since '70s, when the glacierized surface was c. 7.98 km² (year 1976). Moreover, we noticed that two of the Mount Ağrı Dağı glaciers correspond to actual debris-covered glaciers. One of them, the Parrot glacier, which is located in the North-Western flank of the volcano, reaches the lowest altitude and its snout is at c. 3500 m a.s.l. A further debris-covered glacier is along the northern side of Ağrı Dağı; therein we observed a relict glacier in the Ahora Gorge, a deep valley originated as a consequence of a lateral landslide in the 1840. On the basis of remote sensing and field data we compiled a geomorphological map of the region, which keys mostly rely on the recommendations proposed by AIGeo for the new legend of the Italian National Geomorphological Map.

