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Pot-holes of Anguillaja and Fatonero's ditches

<i>location</i>	
region	Tuscany
province	Lucca
municipality	Stazzema
sector	Sumbra
toponym/locality	Anguillaja e Fatonero
<i>interest</i>	
scientific interest	geomorphology epigean karst phenomena
contextual interest	hiking landscape botanical
interest evaluation	representative
level of interest	regional
<i>conservation status</i>	
characteristic/condition	good
risk of natural deterioration	non-existent
risk of anthropogenic deterioration	non-existent

***geological and environmental description***

The ditches of Anguillaja and Fatonero are Tùrrite Secca's left tributaries, flowing down along the southern slope of Mt. Sumbra (1765 m) and Mt. Fiocca (1709 m), at a linear distance of about 650 m. The two streams are intermittent. During heavy rains they temporarily flow over a substrate mainly constituted by Marbles *s.s.* and (in a lower proportion) cherty Limestones. In the streambed, channelled and whirling water dug large, quite regular pot-shaped cavities, known as "Giants' pot-holes", with extremely smooth walls and a cap-shaped bottom.

Anguillaja and Fatonero's pot-holes have been moulded directly into the rock and their dimensions may vary from a few centimetres until reaching a diameter of 6.6 m and a deepness of 1.6 m. Quantifying them is not easy, not least because sometimes smaller pot-holes are contained in larger ones. Considering only the latter, thirty is probably the total number in both streams.

"Giants' pot-holes" are often formed as a consequence of the abrasive action of rotating pebbles. Many factors, not least the stream whirling movement and a consistent and homogeneous rock substrate (as Marble in Mt. Sumbra's southern side), contribute to their development. Anguillaja and Fatonero's pot-holes seem to follow this traditional model, as presumably demonstrated by the regular signs left by mechanical erosion on the internal borders of a number of these pot-shaped cavities. In certain cases, their formation might have been favoured at first by chemical leaching (superficial karst phenomena), but then the hydrodynamic action was either prevalent or exclusive.

However, other Authors hypothesised that the pot-holes formed as a consequence of water forcedly flowing through subglacial tunnels, which were probably found under the glaciers formed during the last Glaciation. Indeed, Sumbra and Fiocca's southern side is characterised by spread forms of glacial, glaciokarst and cryonival origin, which testify to the presence of glacial masses during Würm and of small ephemeral ice and snow masses during Late-Glacial and Post-Glacial.

description of the level of interest

Despite the diffusion of these erosion products in the Apuan Alps' gorges, especially on a outcropping carbonate substrate, the Anguillaja and Fatonero's geosite stands out for the unique density, regular form and dimensions of the pot-holes, not found elsewhere at regional level. The place is a frequent destination for excursions and climbing along the riverbeds.