236 Levigliani's Mine (Hg)

location	
region	Tuscany
province	Lucca
municipality	Stazzema
sector	Corchia
toponym/locality	Levigliani

interest	
scientific interest	mineralogy
contextual interest	historical
	cultural
interest evaluation	representative
level of interest	national

conservation status	
characteristic/condition	good
risk of natural deterioration	non-existent
risk of anthropogenic deterioration	medium

geological and environmental description

The mercury mines of Levigliani are situated in Riseccoli, to the hydrographic left of the channels Canale del Bosco-Canale delle Volte, at 500-550 m of altitude. In the same valley to the west, near Cansoli, there is a similar but smaller mine.

Levignani's mineral resources are encased in the Paleozoic basement of the Apuan Alps Metamorphic Complex, where they are disseminated or incorporated in quartz-carbonate veins. The veins, narrow but continuous along the entire deposit, are parallel to the axial-plane schistosity (or main metamorphic foliation). There is an interesting and rare paragenesis of mercury sulphides, zinc, iron and bismuth. Mercuriferous minerals (cinnabar, metacinnabar, sphalerite, etc.) are completely incorporated in Ordovician volcano-sedimentary rocks (green phyllites associated with metabasites), metamorphised during the Hercynian and Alpine orogenesis. The diffusion in the deposit of native mercury, easily findable in metallic drops along quartz veins, is particularly significant.

Furthermore, other rare, if not unique, minerals are found here; e.g. leviglianite (a zinciferous variety of messelite) and especially calomel (a mercury chloride, which rendered the mine famous). A new mineral species was recently discovered: grumiplucite, a mercury and bismuth sulfosalt mineral, found in the form of metallic grey coloured and longitudinally striped prismatic acicular crystals.

The date when mining activity started in Levigliani is uncertain, though it probably occurred in the Middle Ages. Certainly, the extraction of "minium" or cinnabar, used to make pigments for the miniatures found in Florentine handwritten codes, started toward 1470. Thereafter, the history of Levigliani's mines alternates between tentative exploitations and hasty abandonments, either for exploiters' inability or for the scarce quantity of mineral obtained. Unsuccessful attempts were made by Cosimo III de' Medici at the beginning of the 18th cent. and by several foreign entrepreneurs during the 19th cent. (Morel de Beauvine, Ponyatowscki, Rogerius). Extractions continued in a discontinuous way until 1970. Today, the mines are geoturistic resources and frequent destinations for scholars and researchers.

description of the level of interest

The geosite is appreciated because it offers the opportunity to observe rare minerals along mining tunnels, thanks to the conservation and recovery works in the underground mineral complex. The presence of different mineral elements, which are rare or absent elsewhere in Italy, confers to the geosite an interest of national level; an example is native mercury, anciently called "*quicksilver*" for its colour and fluidity during its liquid state.