Surveying an eroded and wooded Mediterranean karst landscape – case study of Vrsar area

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STUDY AREA: Municipality of Vrsar, Istria, Croatia

Land surface area: 37,92 km²

Administrative center Vrsar (Orsera) situated on a hilltop 50 m a.s.l. – prehistoric settlement
Intensive PEDESTRIAN SURVEY
2015-2016
LATE PREHISTORIC HILLFORTS

Areas visible from top of hillfort. Higher colour intensity indicates multiple coverage. Background map overlayed 2m DEM from resampled LiDAR data.
GLAVICA
3454-3345 cal BP
(1505-1396 cal BC, 95.4%)
MUKABA - MONCALVO
3481-3367 cal BP
(1532-1418 cal BC, 94.5%)
LATE PREHISTORY - TUMULI
ROMAN AGE
Geomorphology

Inhomogeneous territory

Typical karstic morphology
Geomorphology

Five main physiographic units

- **Steep valley sides**
- **Plateau/low hills, dense small-size dolinas**
- **Smooth isolated hills**
- **Polygonal sinks**
- **Karst plateau (partly bedeckte Karst)**
Geomorphology

Corresponding roughly to lithotypes (not very surprisingly)

- Terra rossa soils and colluvia
- Thickly layered limestone and dolostone
- Thickly layered limestone or clayey limestone (Biancone), locally breccias and conglomerates
- Massive or thickly layered limestone, locally calcarenite or calcirudite
Soil survey

Soil augering along
- two main E-W transects
- two N-S transects
and in other specific locations
143 cores altogether, covering the whole area with medium detail
Soil & Sediment Survey

1. Top of hills
   - karstified limestone outcrops
   - no or thin soil (rendzina)/sediment cover
   - high denudation rates

2. Hillsides (upper part)
   - karstified limestone outcrops
   - thin soil (cambisol)/colluvium cover, common coarse skeleton
   - medium denudation rates, gravitational transport

3. Hillsides (lower part)
   - thin to medium soil (cambisol)/sediment cover(matrix-rich scree
   - medium colluvium rates

4. Bottom of sinks
   - very thick soil (cambisol/alfisol)/sediment cover
   - very few coarse skeleton
Geoarchaeo Sounding

In-depth sounding

WNW of Monte Ricco hillfort/Roman villa

Area with prehistoric remains (Neolithic?)
Geoarchaeo Sounding

No colluvium

Colluvium
Geoarchaeo Sounding

1524-1362 cal BP (426-588 cal AD, 74.8%)
1520-1456 cal BP (430-494 cal AD, 19.7%)
1422-1328 cal BP (528-622 cal AD, 95.4%)

Which means 2.5 m colluvium in 1500 years

Late Roman amphora
ARCHAEOCULTOUR

The Archaeological Landscape in a Sustainable Development of Cultural Tourism in the Municipality of Vrsar
2018-2021