Ankara University
Faculty of Languages and History-Geography
Department of Geography

(GGR324) Karst Geomorphology

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READINGS / REFERENCES

1. Ford, D. and Williams, P. 2007. Karst Hydrogeology and Geomorphology. John Wiley & Sons Ltd.
2. Pekcan, N. 2019. Karst Jeomorfolojisi (3. Baskı). Filiz Kitapevi, İstanbul
3. Erinç, S., 2001, **Jeomorfoloji II**, Der Yayınları, İstanbul.
4. Huggett, R.J., 2013. **Fundamentals of Geomorphology**. Third edition.
5. Huggett, R.J., 2015, **Jeomorfolojinin Temelleri** (Çeviri Editörü: Prof. Dr. Uğur Doğan), Nobel Akademik Yayınları, Ankara.

Course Contents

1. **Introduction to Karst Geomorphology**
2. Karst Rocks / Soluble Rocks and Karst Processes
3. Karst Hydrology, Karst Drainage System
4. Karst Landforms: Karren
5. Karst Landforms: Doline, sinkhole and blind valley
6. Karst Landforms: Swallow hole, karst spring
7. Karst Landforms: Polje
8. Speleology, caves, speleothem
9. Gypsum Karst
10. Psödokarst, Termokarst (kryokarst)
11. Karst Hazards

1. Origin of Karst Term

a. Kras : Slovene

b. Karst : German

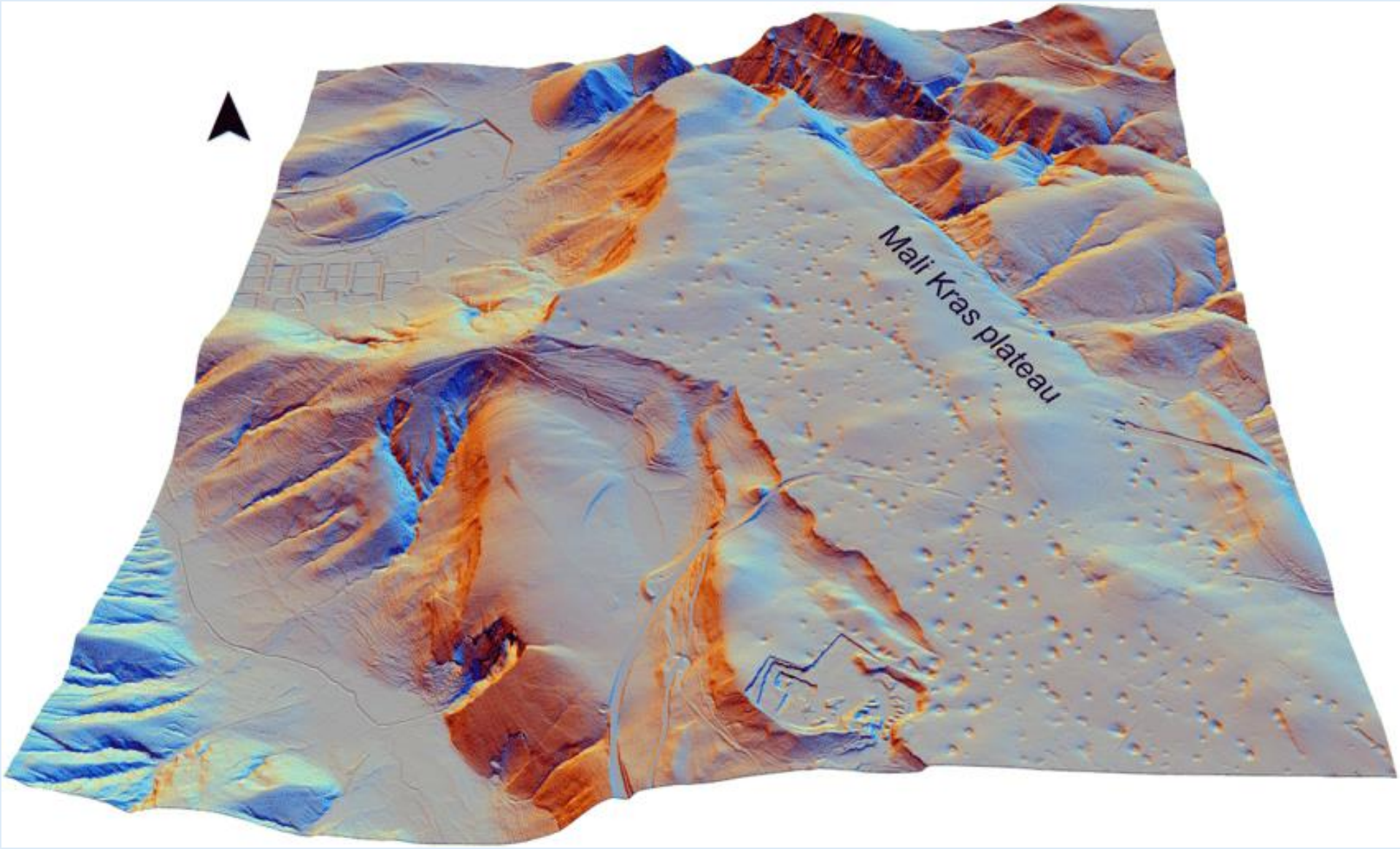
c. Carso : Italian

d. Karsti : Albanian

https://www.pdfprof.com/PDF_Image.php?idt=90594&t=39

The term "karst" has ancient roots predating the Indo-European languages, originating from "karra/gara," meaning stone. The 'Classic Karst' / Karst Plateau lies in the north-western Dinaric Karst, spanning two-thirds in Slovenia and one-third in Italy. In Slovenia, "kar(r)a" evolved linguistically to "kras," denoting stony, barren terrain *'taşlık arazi'* and becoming the regional name for the hinterland of Trieste. Under the Roman Empire, it appeared as Carsus and Carso, while under the Austro-Hungarian Empire, it was germanized as the Karst. Its technical usage emerged in the late 18th century, firmly establishing by the mid-19th century.

1. Origin of Karst Term



https://www.researchgate.net/publication/343188849_Protohistoric_pastoral_landscape_in_northern_Istria_revealed_by_airborne_LiDAR_hill_forts_enclosures_and_long_linear_walls_in_the_Mali_Kras_plateau_southwestern_Slovenia/figures?lo=1&utm_source=google&utm_medium=organic

1. Origin of Karst Term

Karst can be defined as terrain characterized by unique hydrology and landforms resulting from a combination of high rock solubility and well-developed secondary (fracture) porosity. These areas typically exhibit **sinking streams**, **caves**, **enclosed depressions**, **fluted rock outcrops**, and **large springs**. However, significant rock solubility alone does not suffice to create karst. Rock structure and lithology also play crucial roles: dense, massive, pure, and coarsely fractured rocks tend to develop the most pronounced karst features.

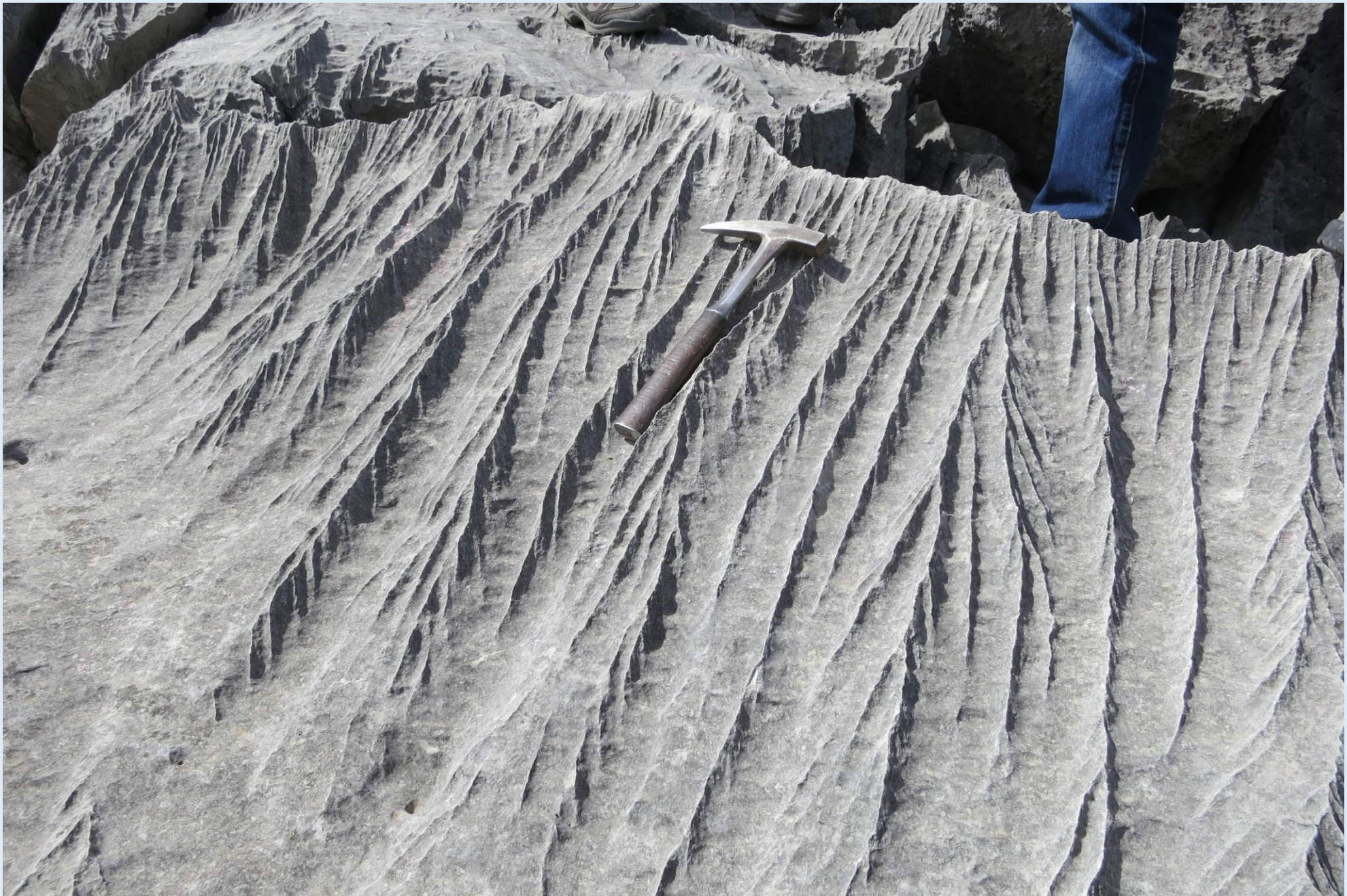
Soluble rocks with extremely high primary porosity (30–50%) generally exhibit poorly developed karst formations. Conversely, soluble rocks with minimal primary porosity (<1%) that have subsequently developed significant secondary porosity support exceptional karst environments. The key to karst's expression lies in the evolution of its unique subsurface hydrology, which is propelled by the hydrological cycle – the driving force behind karst processes. The distinctive surface and subterranean characteristics associated with karst stem from the dissolution of rock by natural waters following pathways provided by the geological structure.

1. Origin of Karst Term

https://en.wikipedia.org/wiki/Limestone

1. Origin of Karst Term

Karst Landform



Karst Landform

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