A scenic view of a mountain valley. In the foreground, a large, multi-story white building with a dark roof is situated on a rocky slope. The building has several windows and a central entrance. To the left, a road or path winds through the valley. In the background, majestic snow-capped mountain peaks rise against a clear blue sky. The overall scene is a high-altitude alpine environment.

STANFORD ALPINE ARCHAEOLOGY PROJECT 1994-2011

NATIONAL GEOGRAPHIC HANNIBAL EXPEDITION 2007-2008

HANNIBAL EXPEDITION 2010-2012

# TRACKING HANNIBAL

INSIGHT-SCIENTIFIC AMERICAN

BRIGHT HORIZONS RHINE CRUISE APRIL 2012

DR. PATRICK HUNT

STANFORD UNIVERSITY

Hannibal's  
Crossing  
of the Alps

218 BCE



DEADLIEST  WARRIOR

# HANNIBAL

ROME VS CARTHAGE



**PATRICK HUNT**

© 2005 Warner Bros. Entertainment Inc. All Rights Reserved. X-Box Game Pass

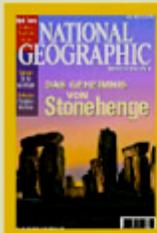


# ARCHAEOLOGY

January  
2007



COURTESY ULRICH BOSER



**Die Themen des aktuellen Hefts:**

- Wenn diese Steine sprechen könnten
- Ab nach Sibirien!
- Die Mythen der Bibel (III): Sodom und Gomorra
- Ein Paradies für Hale
- König ohne Reich
- mehr...

**Weiterführende Informationen der Hamburger Redaktion**

**Geschichte: "Unde venisti, Hannibal?"**

Es war einer der gewaltigsten Märsche der Militärgeschichte: der Zug des afrikanischen Feldherrn Hannibal aus Karthago. 218 v. Chr. zog er mit 50 000 Soldaten und Kriegselefanten vom heutigen Frankreich aus durch die Alpen. Zwar überlebte, soweit man weiß, nur ein Elefant den Treck. Dennoch schaffte es Hannibal im Zweiten Punischen Krieg, dem Römischen Reich verheerende Niederlagen zuzufügen. Über welche Pässe der Karthager damals zog, ist nicht überliefert; das herauszufinden haben sich der von NATIONAL GEOGRAPHIC geförderte Historiker **Patrick Hunt** von der **Universität Stanford** und sein Kollege Geoffroy de Galbert zur Aufgabe gemacht. "Unde venisti - woher bist du gekommen, Hannibal", das fragt sich Hunt seit 15 Jahren. So lange sucht er in den Alpen schon nach Spuren der Expedition. Inzwischen glaubt er, die Route gefunden zu haben. In diesem Sommer ist der Col de Clapier zwischen Frankreich und Italien sein Ziel. "Der Pass sieht so aus, wie es der Geschichtsschreiber Polybios damals geschildert hat", sagt Hunt. "Hier auf die Reste eines antiken Heerlagers zu stoßen, das wäre mein Traum."



Foto: Linda Cicero, Stanford University

**Von wo nach wo zog Hannibal mit seinen Elefanten über die Alpen gen Rom? Ein amerikanischer Historiker ist der Antwort auf der Spur - hier mit seiner Expeditionsgruppe am Col du Clapier in den französischen Alpen, auf einer Höhe von 2503 Meter.**

**Archiv-Tipps:** Lesen Sie auf der Internetseite von NATIONAL GEOGRAPHIC DEUTSCHLAND unsere Serie über das Römische Reich:

- **Das Römische Reich (I): Aufstieg einer Weltmacht**
- **Das Römische Reich (II): Wie Rom unsere Welt prägt**
- **Das Römische Reich (III): Kampf um Germanien**

**DVD-ROM-Tipp:** Unternehmen Sie eine virtuelle Tour durch die berühmtesten römischen Bauwerke - mit der NATIONAL GEOGRAPHIC-DVD-ROM **Das alte Rom 2.0.**



**Reiseführer-Tipp:** Besuchen Sie die französischen Alpen mit dem NATIONAL GEOGRAPHIC TRAVELER **Frankreich.**



Stanford Alpine Archaeology Project 2006



Stanford Alpine Archaeology Project 2007 Session II Col du Clapier

# Roman Silver Coin Hoard Treasure 2003



## Major Assumptions:

218 BCE =  $\pm 2228$  y.a.

- 1 Hannibal was honest
- 2 Accuracy of Polybius and his informant[s]
- 3 Alpine topography is virtually consistent
- 4 Paleoclimatology is deducible

## Major Sources:

Polybius *History* III 22-55 150 BCE

Livy *History* 20-31& ff. 1st c. CE

# Mediterranean World 3rd Century BCE



Mediterranean World 3rd Century BCE

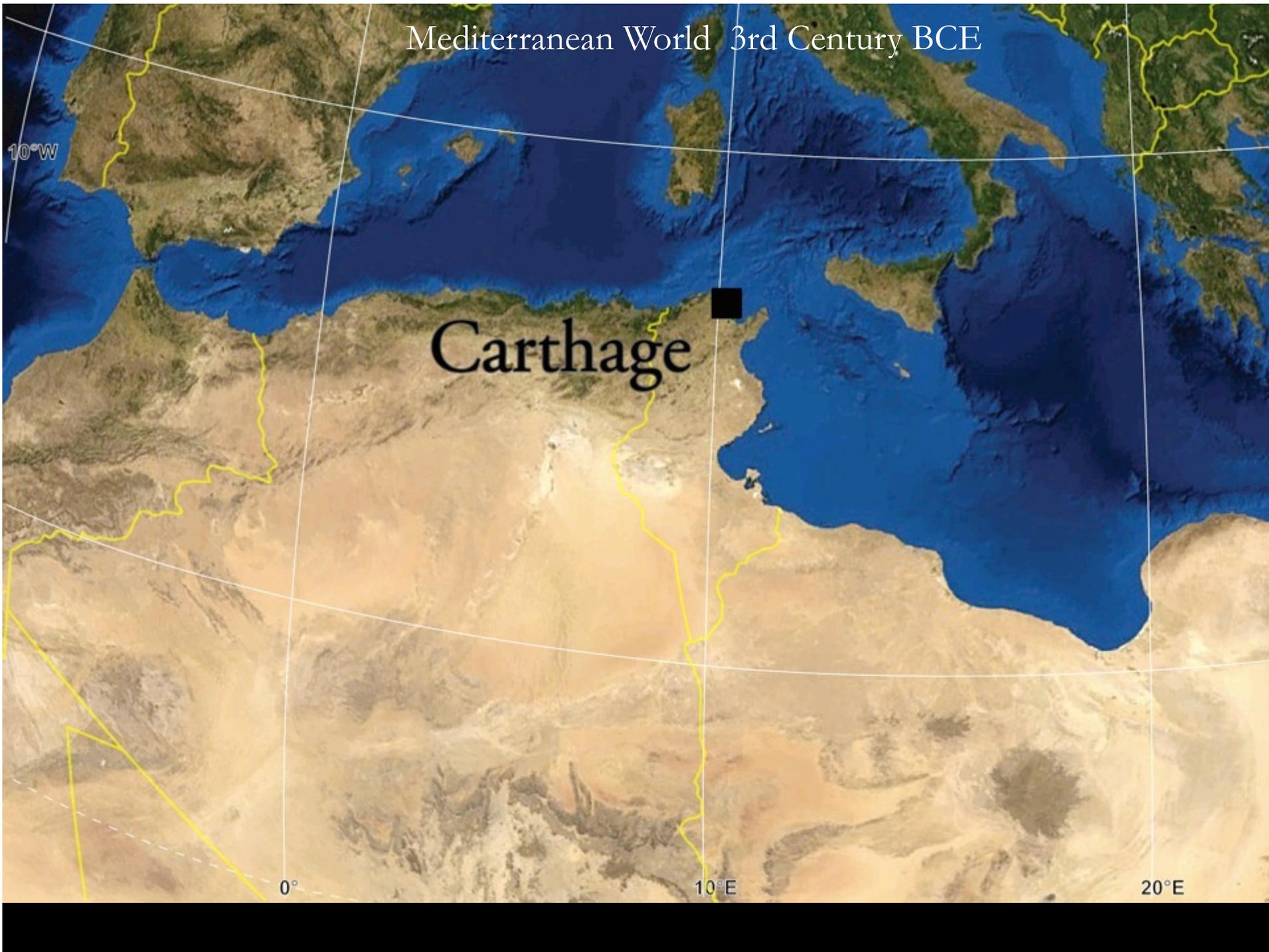
10°W

Carthage

0°

10°E

20°E





Carthage 2008

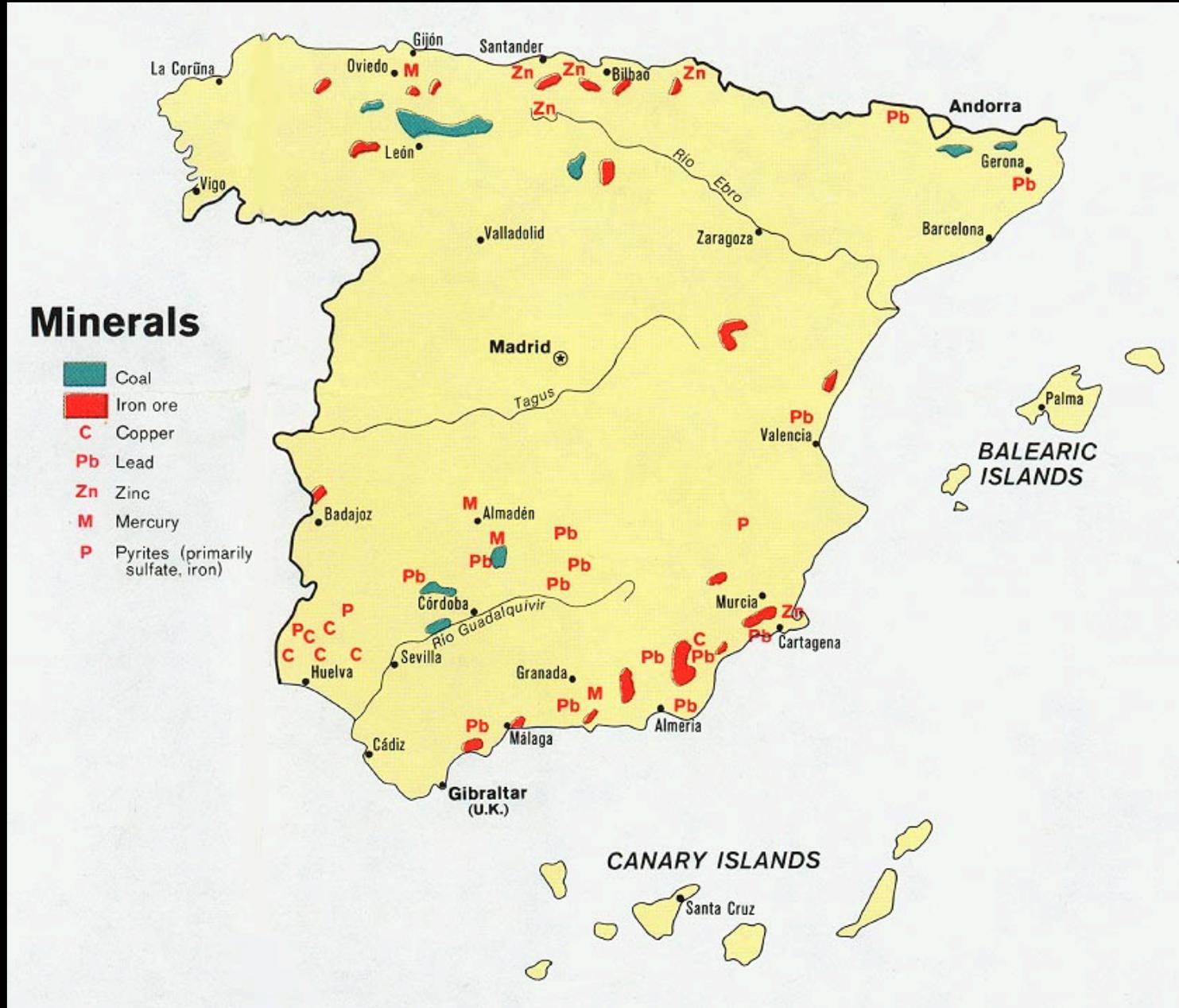


© 2003 Map-of-Spain.co.uk



Map of Spain

# Mineral Resources of Iberia



# Rio Tinto - High Fe



# POBLAMIENTO EN EL ÁREA ORIENTAL DE GARTAGENA (siglos I a.C. - I d.C.)

 Instalaciones o asentamientos mineros

 Complejos metalúrgicos / escoriales

 Asentamientos agropecuarios

 Factorías de salazón de pescado



Cartagena, Spain



Harbor of Cartagena, Spain



Near Cartagena, La Union mine tailings

© 2003 Map-of-Spain.co.uk



Map of Spain



Sagunto, Spain

© 2003 Map-of-Spain.co.uk



Map of Spain



Dertosa  
(Tortosa)



Ebro River

© 2003 Map-of-Spain.co.uk



Map of Spain



Perthus Pass, Pyrenees, Spain



Perthus Pass, Pyrenees, France



Banyuls-sur-Aspres Celtic pottery

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Map of Spain



From Avignon to Pont-St-Esprit by bicycle 2008

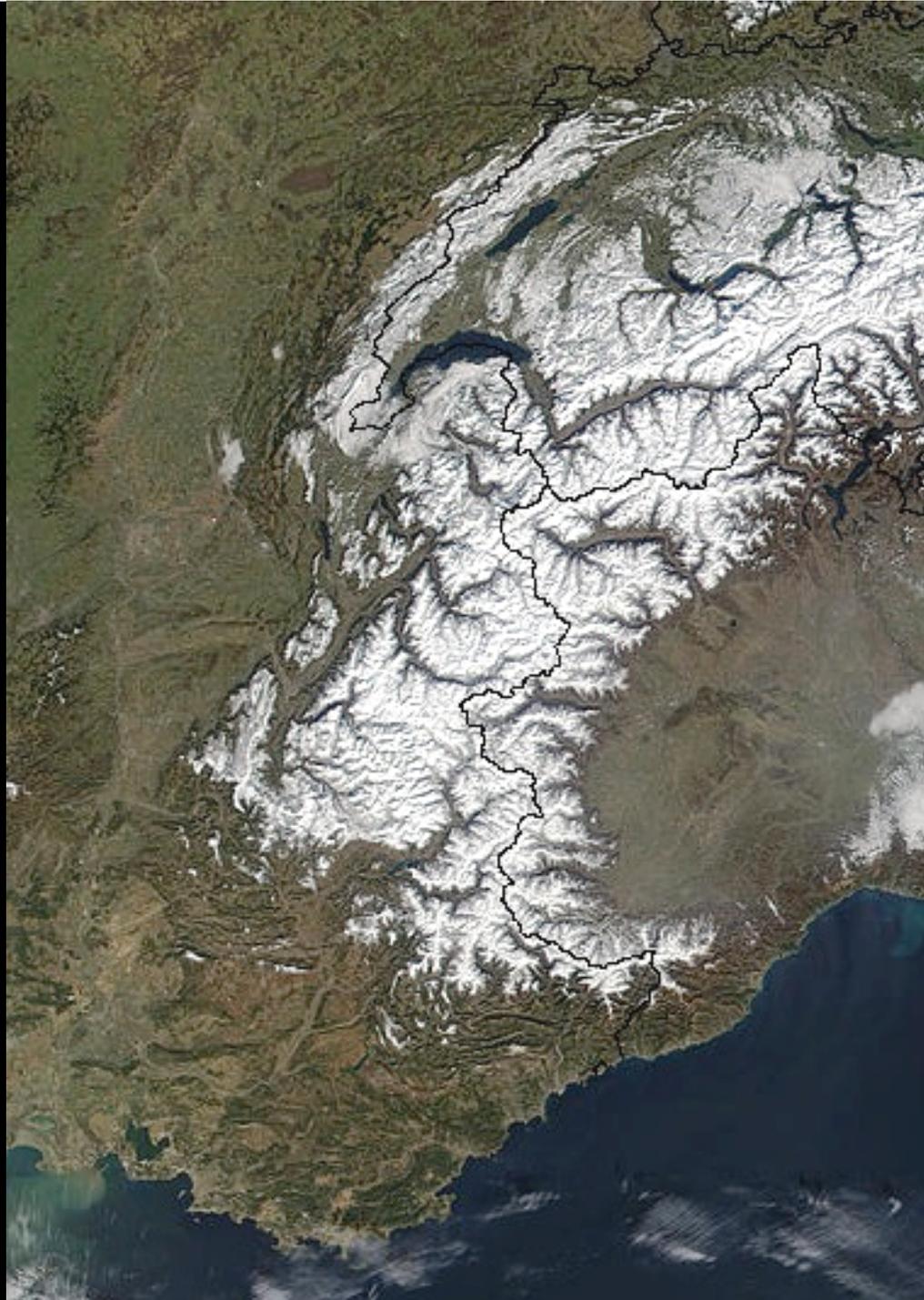


Isère Valley - Hannibal Expedition, Stanford Alpine Archaeology Project 2009



Isère River 2010

Alps in  
Late October  
Early  
November





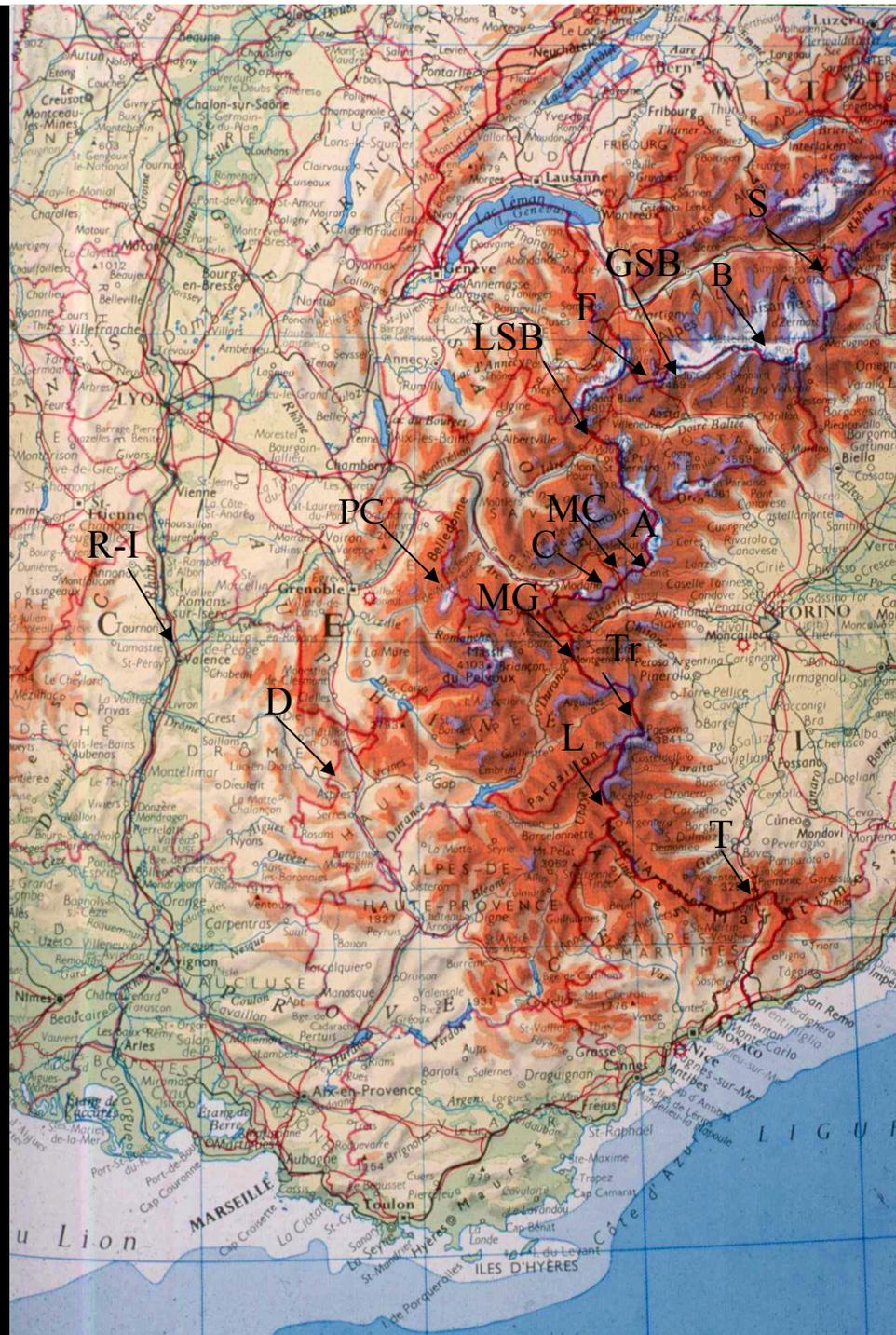
“The dreadful vision was now before their eyes: the towering peaks, the snowclad pinnacles soaring to the sky, the people with their wild and ragged hair.” Livy *History* XXI.32

# Tracking Hannibal's Crossing of the Alps

218 BCE

1994-2011

- Clapier
- Clapier-Savine Coche
- Grand-St-Bernard
- Mont-Cenis
- Mont-Genèvre
- Traversette
- Larche
- Maddalena
- Tende
- Little-St-Bernard
- Simplon
- Frejus
- Galibier
- Ambin
- Petit-Mont-Cenis
- Fenetre de Ferret
- Romanche-Lautaret
- Pas de la Coche
- Croix du Fer
- Autaret
- Drome



Stanford  
Alpine  
Archaeology  
Project

- National  
Geographic  
Society  
Hannibal  
Expedition

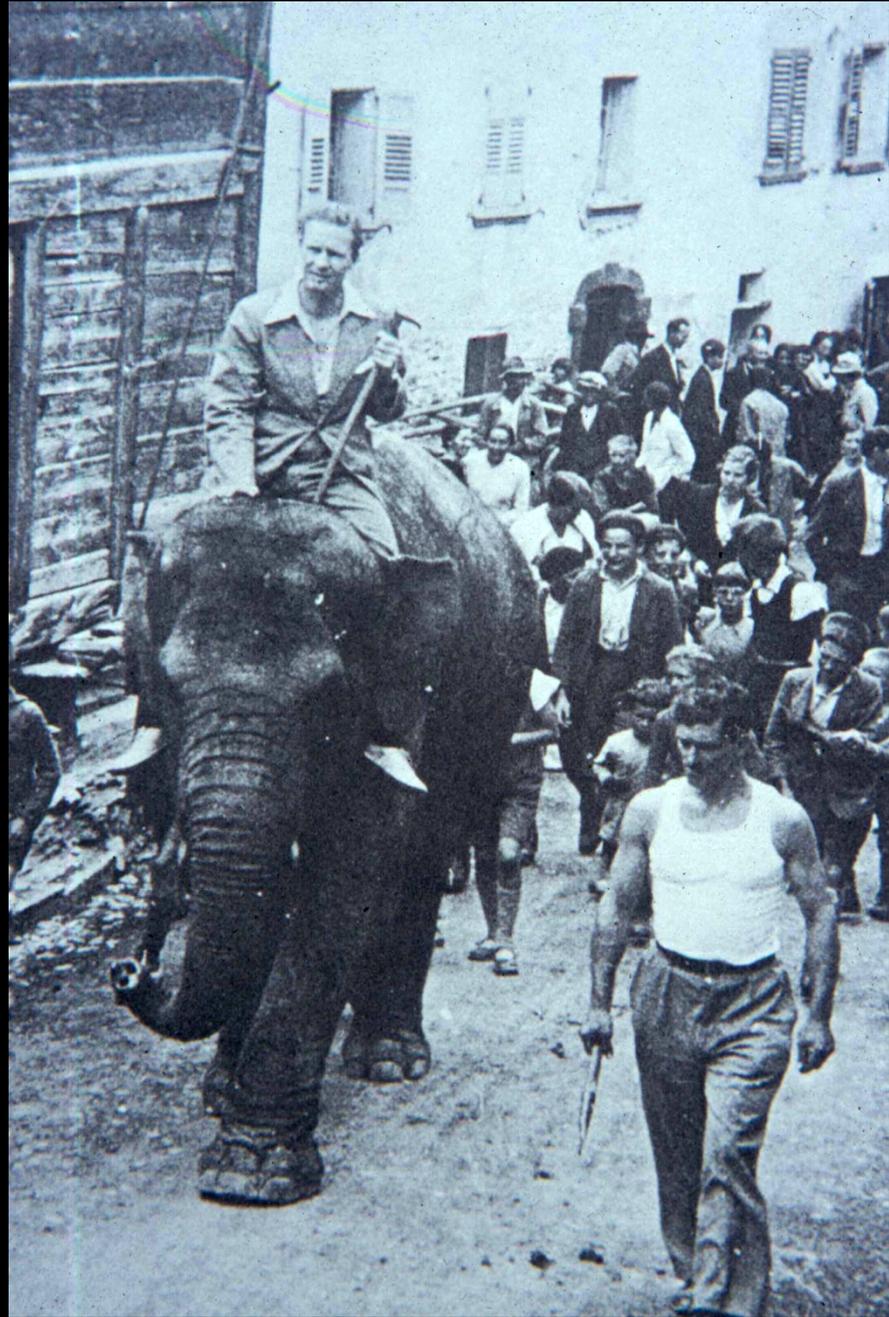
2007-2008

Richard Halliburton

& Dolly

Grand-St-Bernard

1935





John Hoyte and Richard Jolly 1959



COURTESY JOHN HOYTE

1959



Singing by the campfire with Jumbo

# Hannibal Studies

Lavis-Trafford, 1943 **Clapier**  
de Beer, 1952 **Traversette**  
Walbank, 1956 **contra Traversette**  
Hoyte, 1956-59 **Clapier-Savine Coche**  
Mungo, 1979  
Zeuner, 1982  
Meyer, 1986 **Savine Coche**  
Prevas, 1995-2006 **Traversette**  
Lancel, 1998 **Clapier-Savine Coche**  
Mahaney, 1996-2009 **Traversette**  
Hunt, 1994-2011 **Clapier-Savine Coche**

# Conditions for Hannibal's Pass

*(Assuming information accuracy and topographic continuity)*

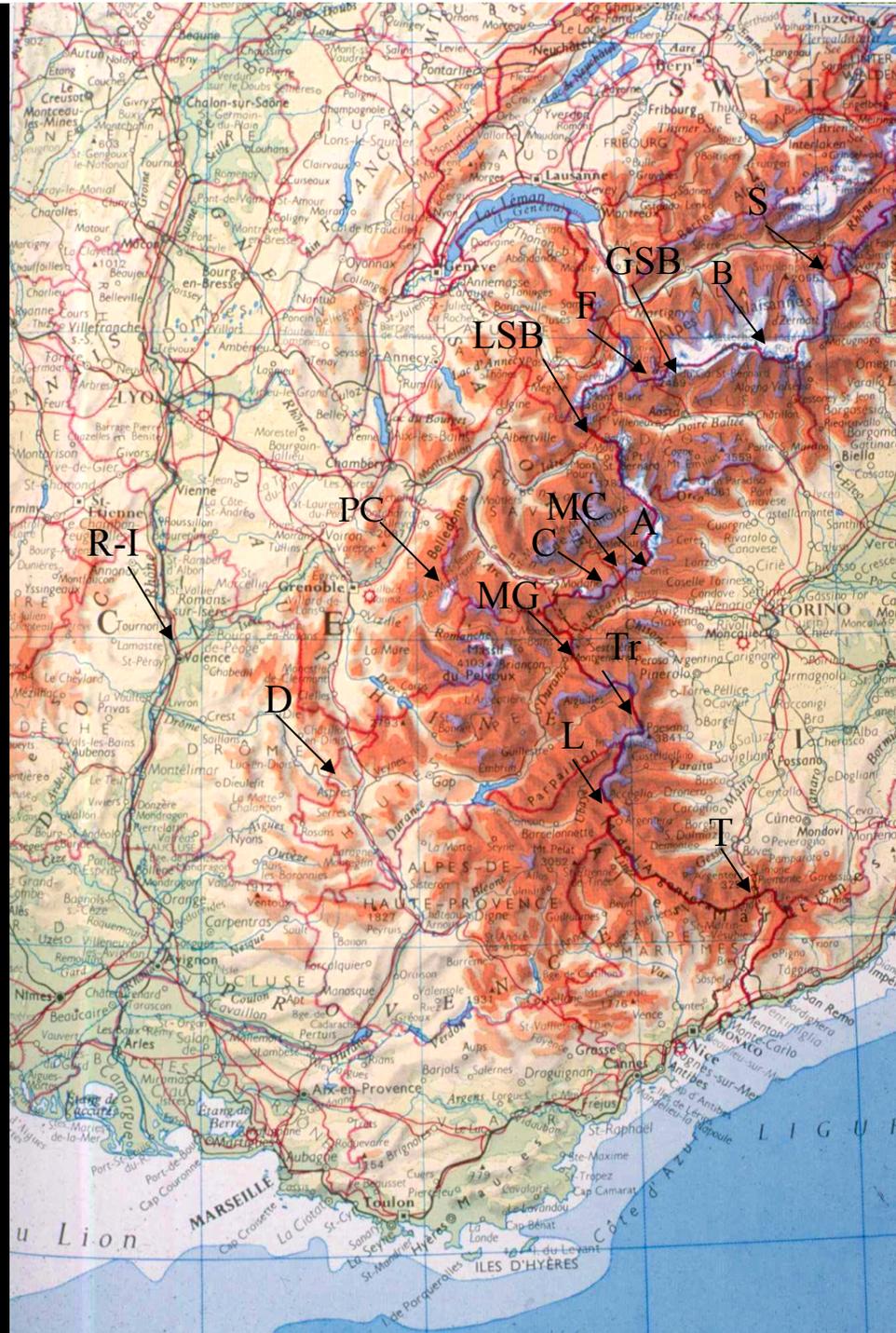
- 1 Must turn east after crossing 600 stades north from Rhone ford  
*(“six days march from the sea, four days north after crossing”)*
- 2 Should start around the Isere-Rhone river confluence  
*(“Skara-Isara” in Polybius; “Isola” in Livy and “Rbodanus” in both)*
- 3 Must start in hostile territory of the Allobroges tribe
- 4 Must have several places for Celtic ambush  
*(summit one day's march from “white rock” (leukopetron) ambush)*
- 5 Should have sufficient water near summit
- 6 Must be large enough at summit to camp an army  
*(± 25,000 soldiers and 5,000 pack animals)*
- 7 Must be high enough for previous winter snow (but not too high)  
*(minimum altitude at summit around 8000 ft or 2400 m)*
- 8 Must have a very steep gradient descent into Italy
- 9 Must have excellent view of Plain of Italy and Po Valley (*Padana*)
- 10 Must be 3-5 days march from Turin (*Taurini*)

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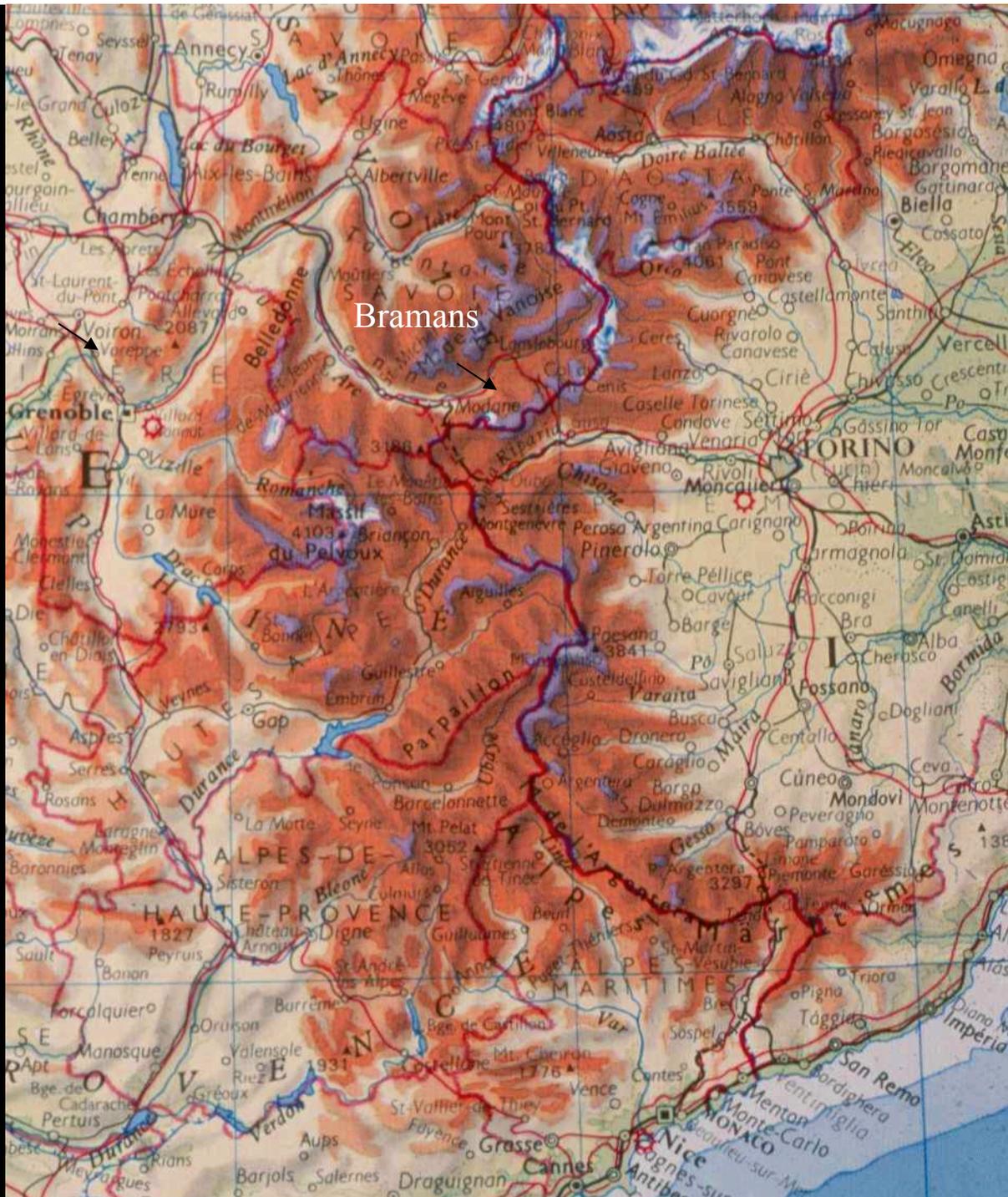
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Archaeology  
Project

- National  
Geographic  
Society  
Hannibal  
Expedition

2007-2008

Voreppe

Bramans





Voreppe at “Gateway to the Alps”



Pointer 45°13'19.59" N 5°42'58.33" E elev 500 m

Streaming ||||| 100%

Eye alt 33.27 km

Voreppe and its Celtic oppidum

View of Isere valley above Voreppe

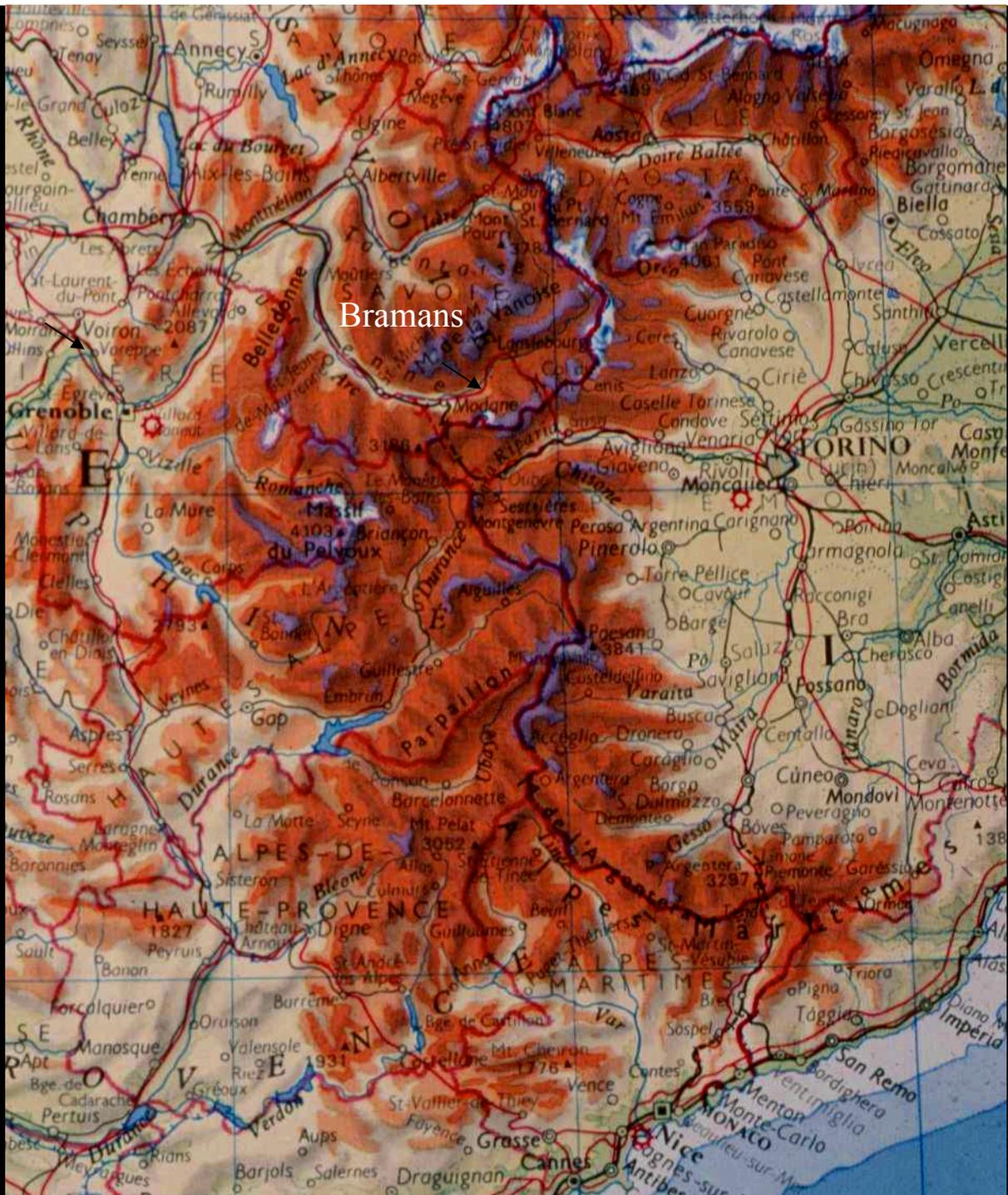


Celtic  
oppidum at  
Voreppe



Voreppe

Bramans



Bramans  
Gorge

*leukopetron*





Bramans Gorge 4600 ft.



Stanford Alpine Archaeology Project - National Geographic Society Hannibal Expedition 2008  
Hiking the route to the Col du Clapier- Savine Coche (L.A. Cicero photo)

Babar at  
St..Moritz

Jean de  
Brunhoff

1930' s



“Hannibal, Here we come!”

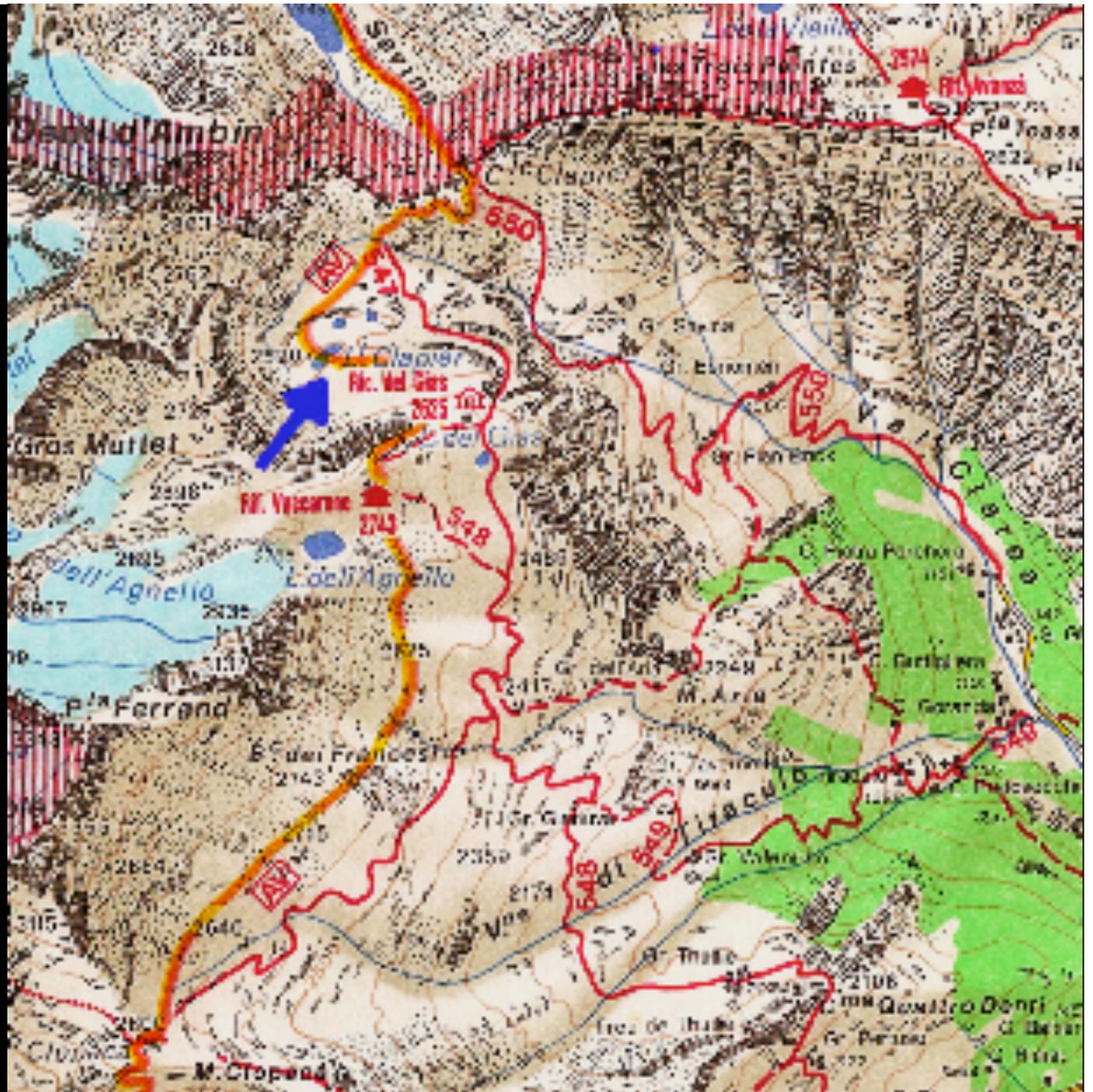
Crossing  
at the end  
of a  
blizzard

1996



Clapier -  
Savine Coche  
Summit Area

2500 m  
8500 ft





National Geographic Society Hannibal Expedition 2007

# 2007 Survey of Alpine Plain - Hannibal's Campground?



Studying  
Alpine  
Maps  
2007



Archaeology  
Tools  
2007

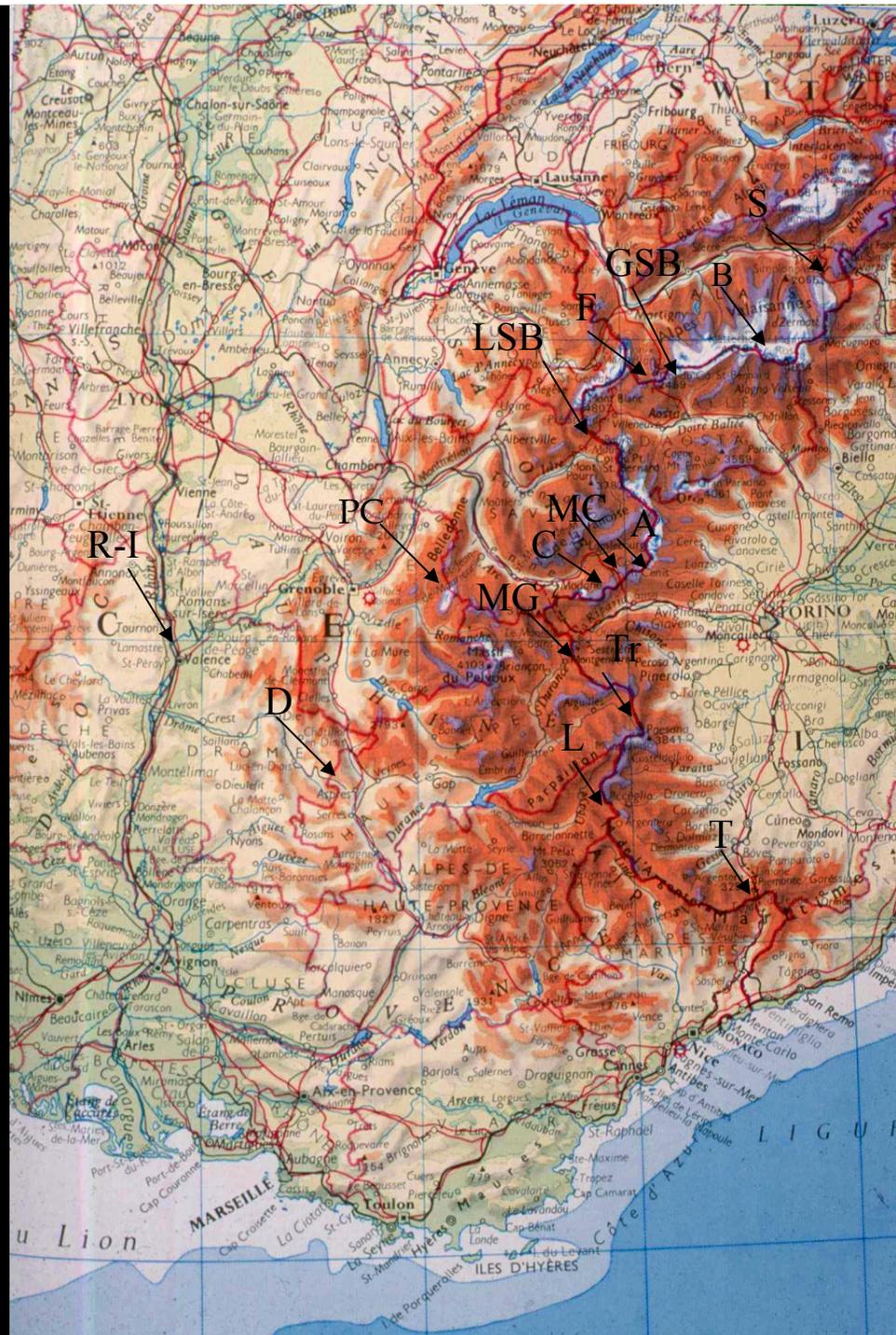


# Tracking Hannibal's Crossing of the Alps

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Society  
Hannibal  
Expedition

2007-2008



Val d' Ambin - Col d' Ambin  
2008



Clapier Summit 2500 m



Paduana and Plain of Italy from Clapier Summit 1996



Clapier descent looking west



Clapier descent 2006

Savine-  
Clapier

2008

Pass saddle  
on Italian-  
French  
border

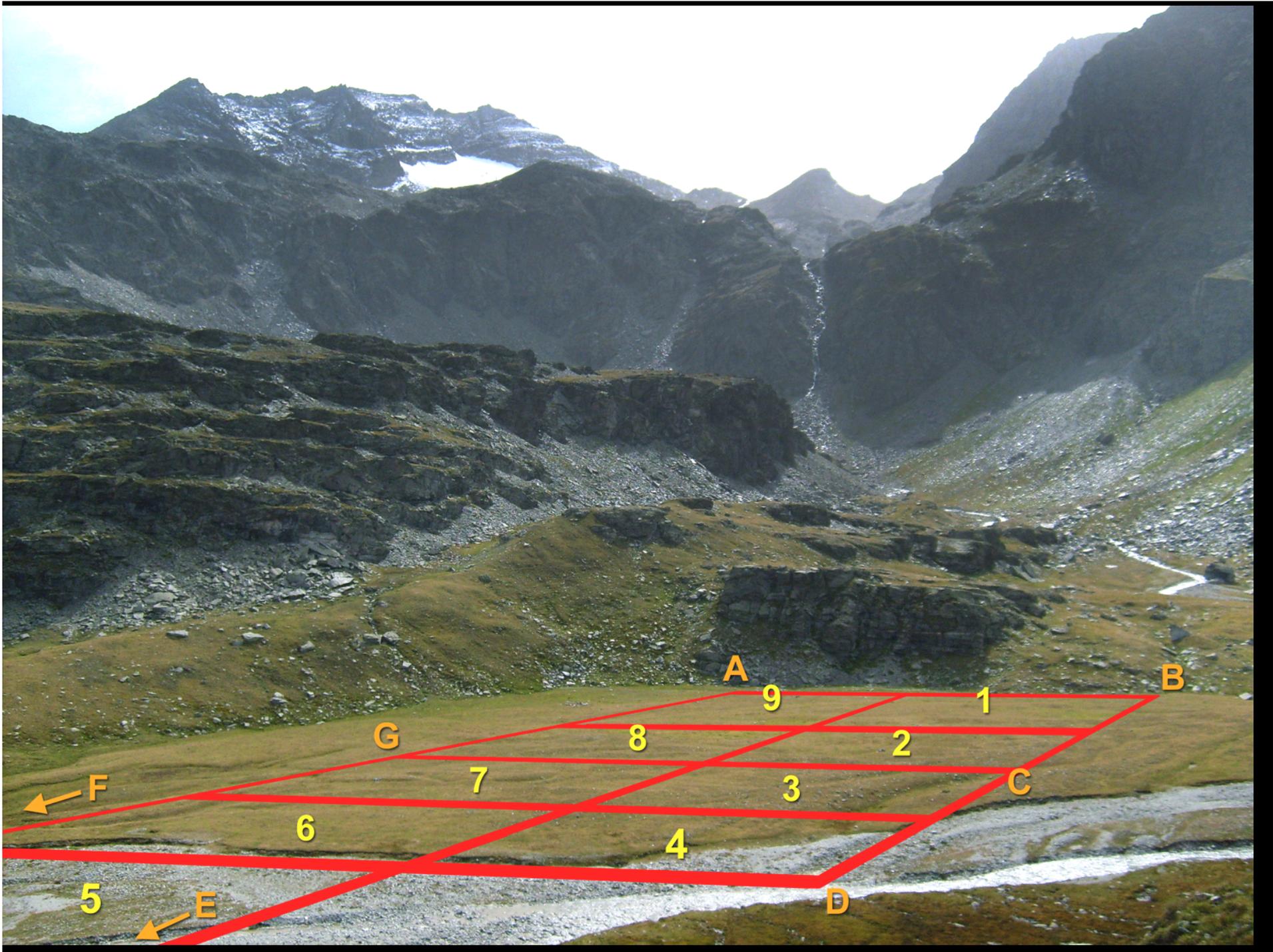
2512 meters

(8780 ft)  
altitude





Savine Coche Valley 2400 m/8200 ft.





# ENTS D'AMBIN

es Rochers pénibles

Col Clapier ou de Savine

Pt. front. 23A

Bne. front. 24

Pt. front. 24D

Pt. front. 24c

Pt. front. 24B

Pt. front. 24A

2409

B	C	D	E
2	3	4	
9	8	7	6
A	G		F

3050

2520

Rif. del Gias

Rif. Vaccarone

L. del Gias

2297

Gr. Sa

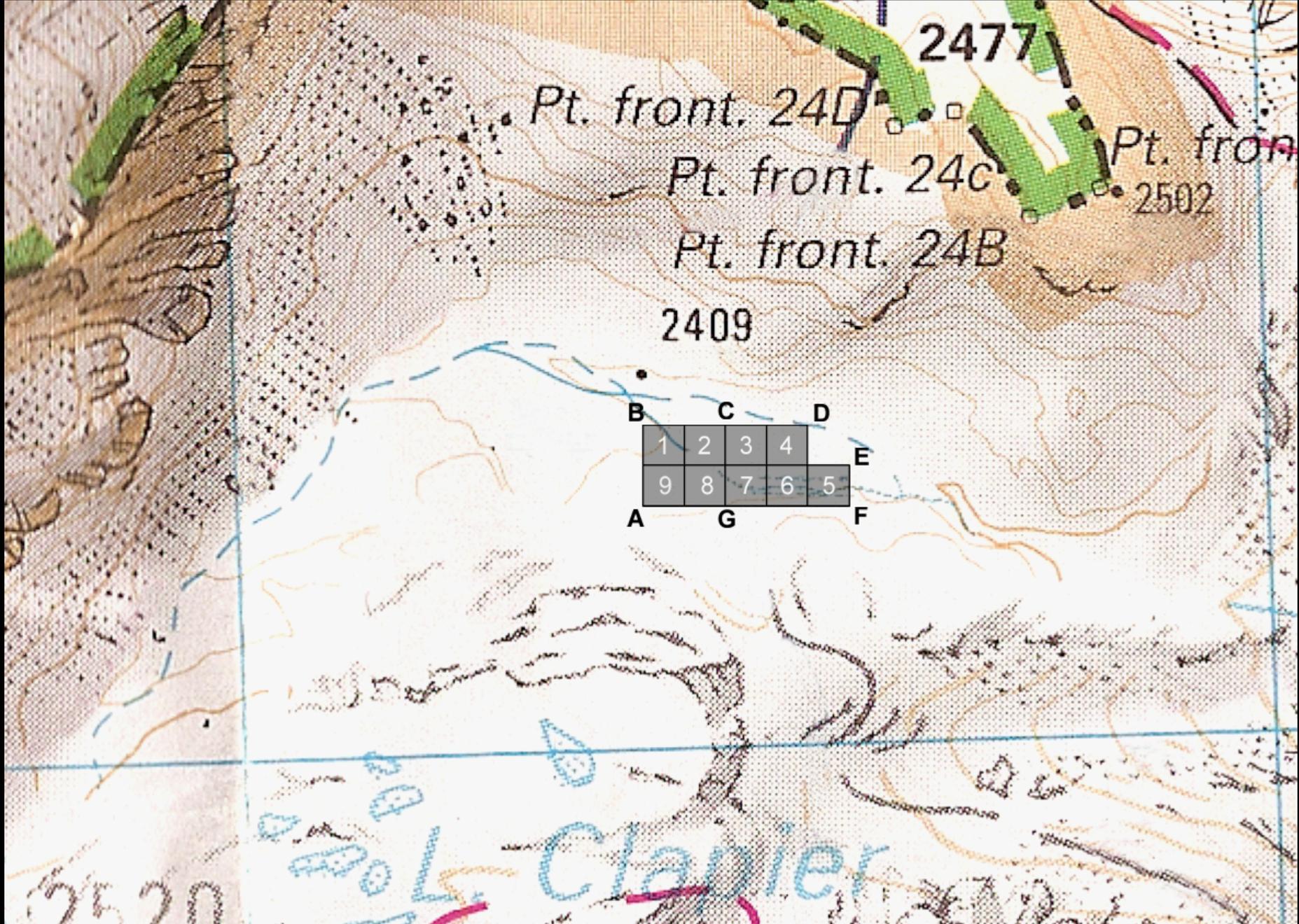
Col de la V

Bne front

Glacier de Savinè

Lac de Savine

Moutet





Walking ground survey at Savine Coche 2008



John and Jonathan [Hoyte] - Hannibal Campground? Savine Coche valley floor survey



Liz and Jessica - Soil Chemistry pH geosol testing



A1 - Auger coring to 20 cm depths



Examining surface features and anomalies

Dane  
and Pedro

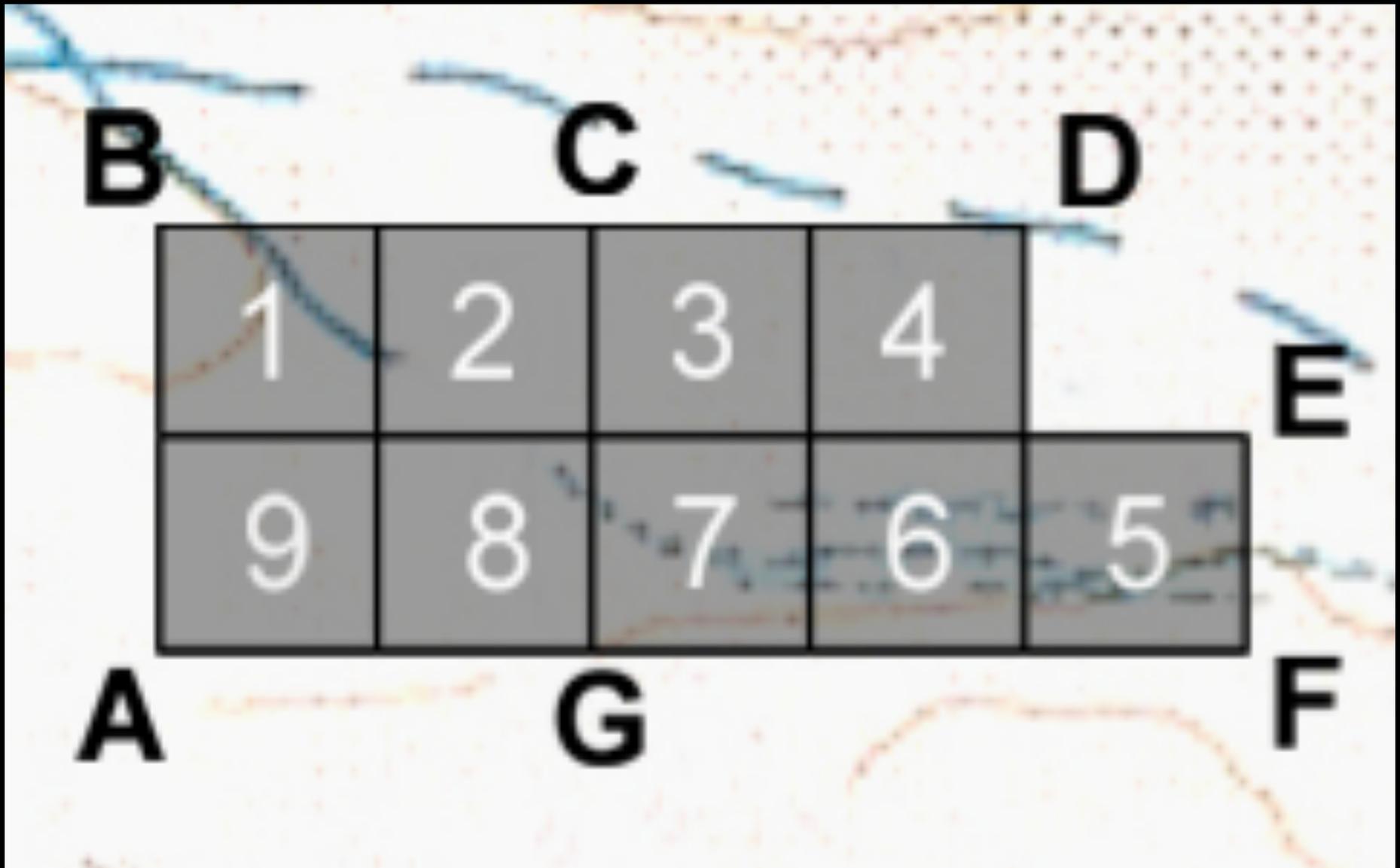
Auger coring



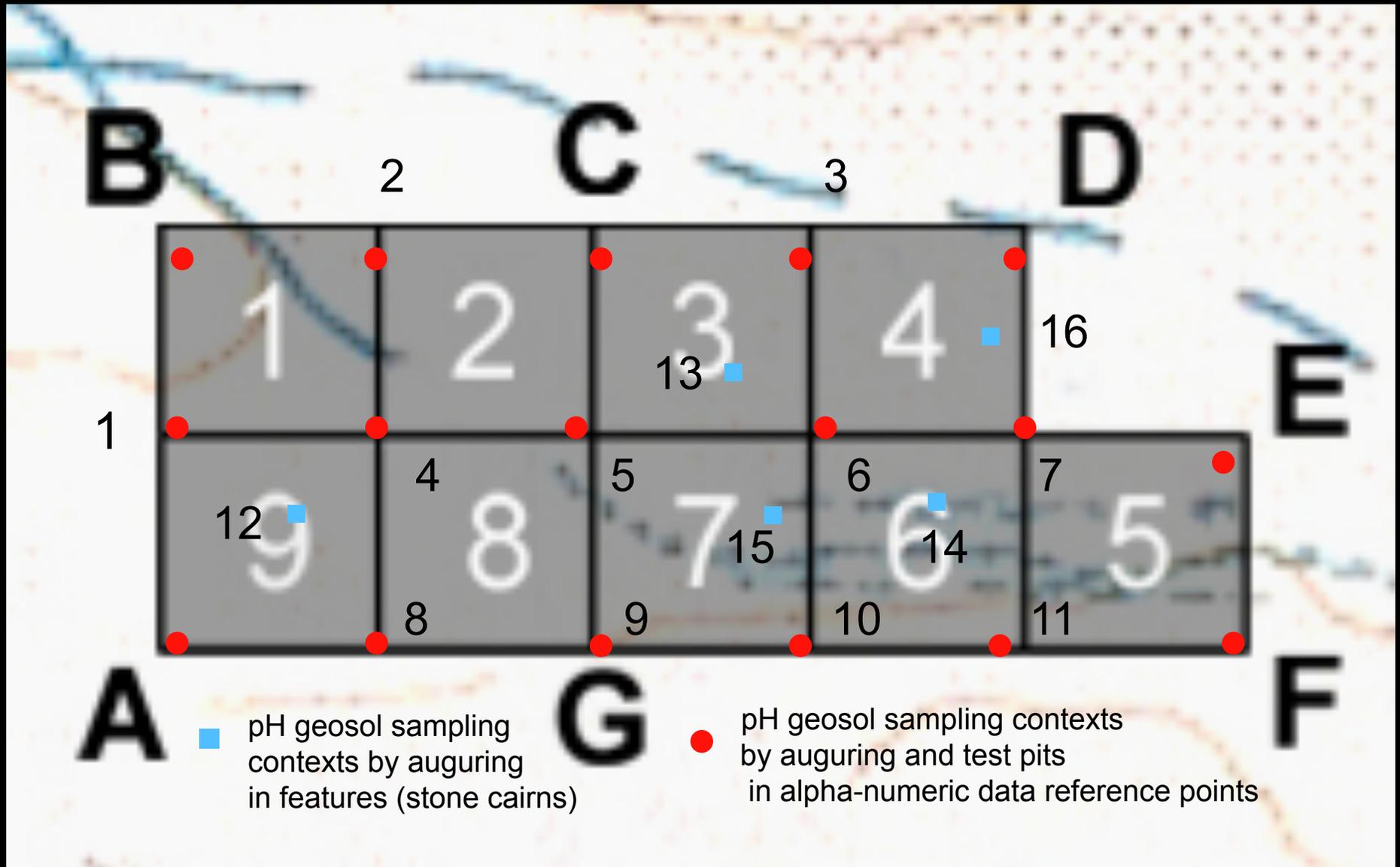


Anna and David sampling epiglacial soil strata

Savine - Coche 2008 Survey, Test Pits and Auguring



# SAVINE - COCHE 2008 SURVEY, Test Pits and Auguring in Numbered Sectors 1-9





Alyssa Sontag - Labeling geosol pH soil chemistry and ash samples for 14C

Jenna  
(Classics)  
conducting

Soil Chemistry  
pH testing





Testing a campground for 25,000 soldiers in 2008

Test Pit  
at the  
Savine  
Coche  
Saddle

2009





Matt, Emily, Cameron, Helen excavating in 2009



Vallon du Savine  
2009

Test pit #14



Thaddeus and Mikal (elephant crossing) 2009

Val Savine  
2010





Val d' Ambin 2010



Col du Clapier 2010





Val  
Savine

2010

Sondage 2

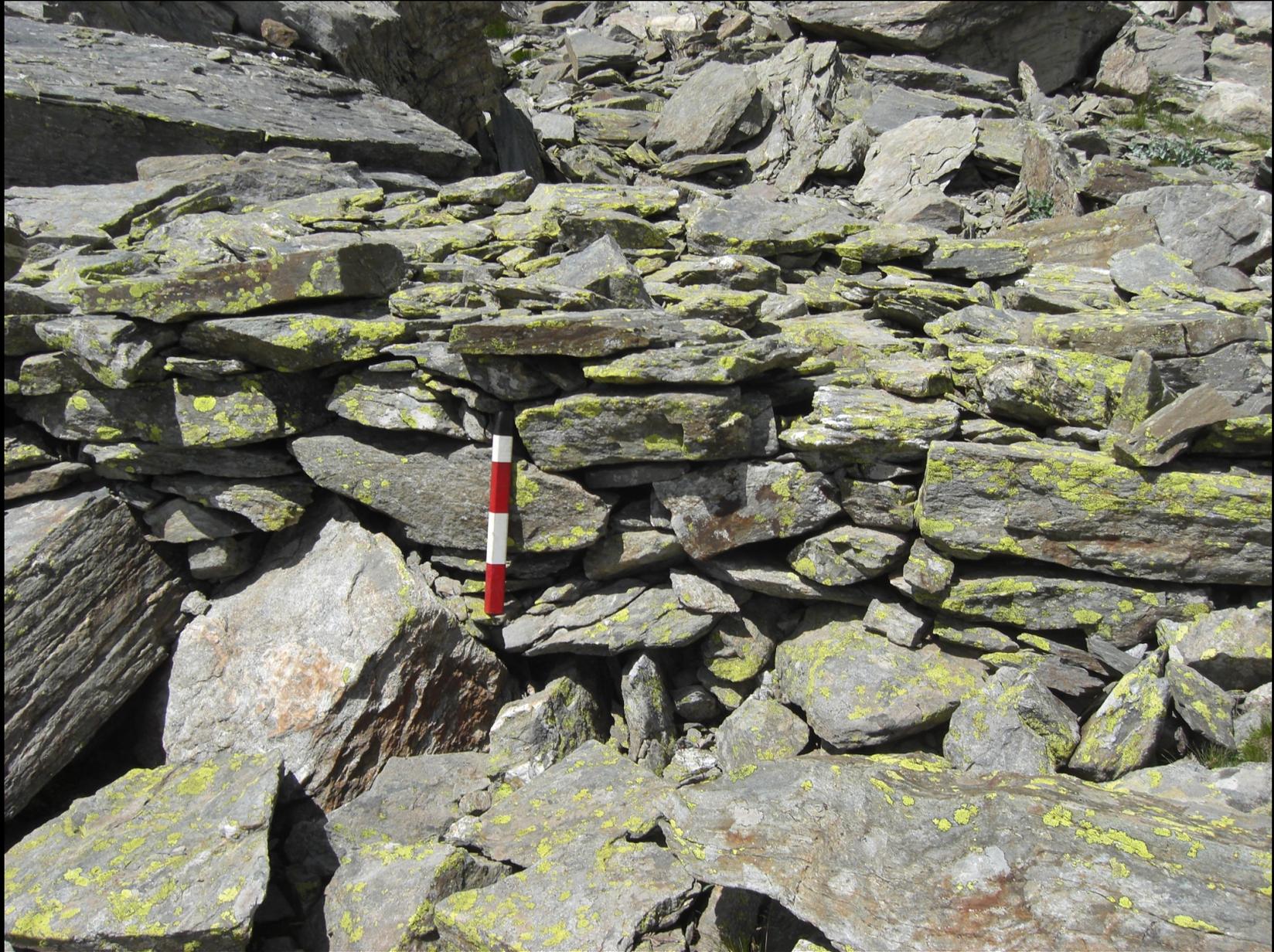




Val Savine-Coche 2010







Long-term lichenization as chronometer

Sondage 4

SAAP 2010





SAAP 2010 Sondage 4c



2011



2011

2011







*Punic Coin*

*Punic Tomb*



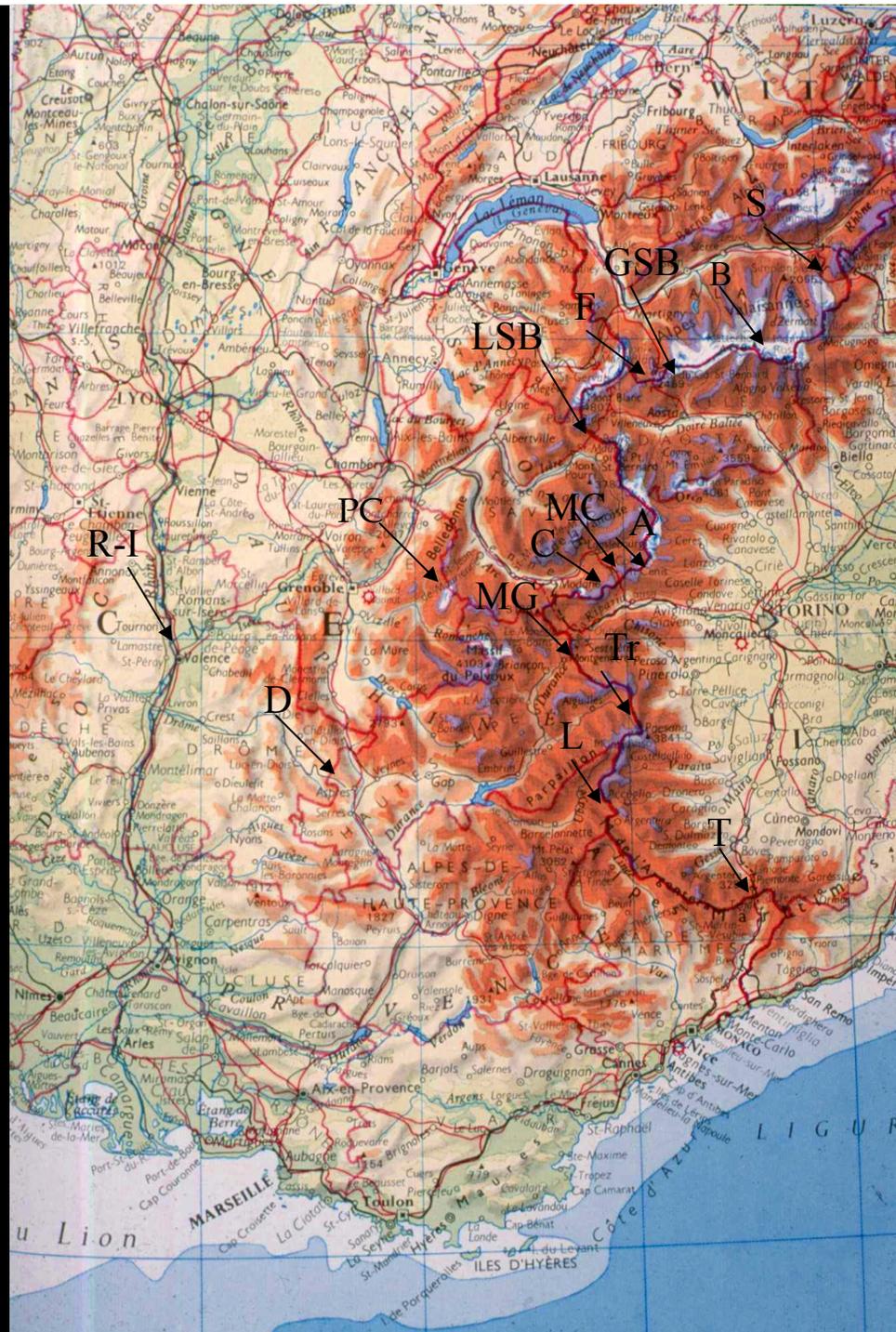
Barcid Punic Coin, silver double shekel circa 230 BCE, Mogente Hoard

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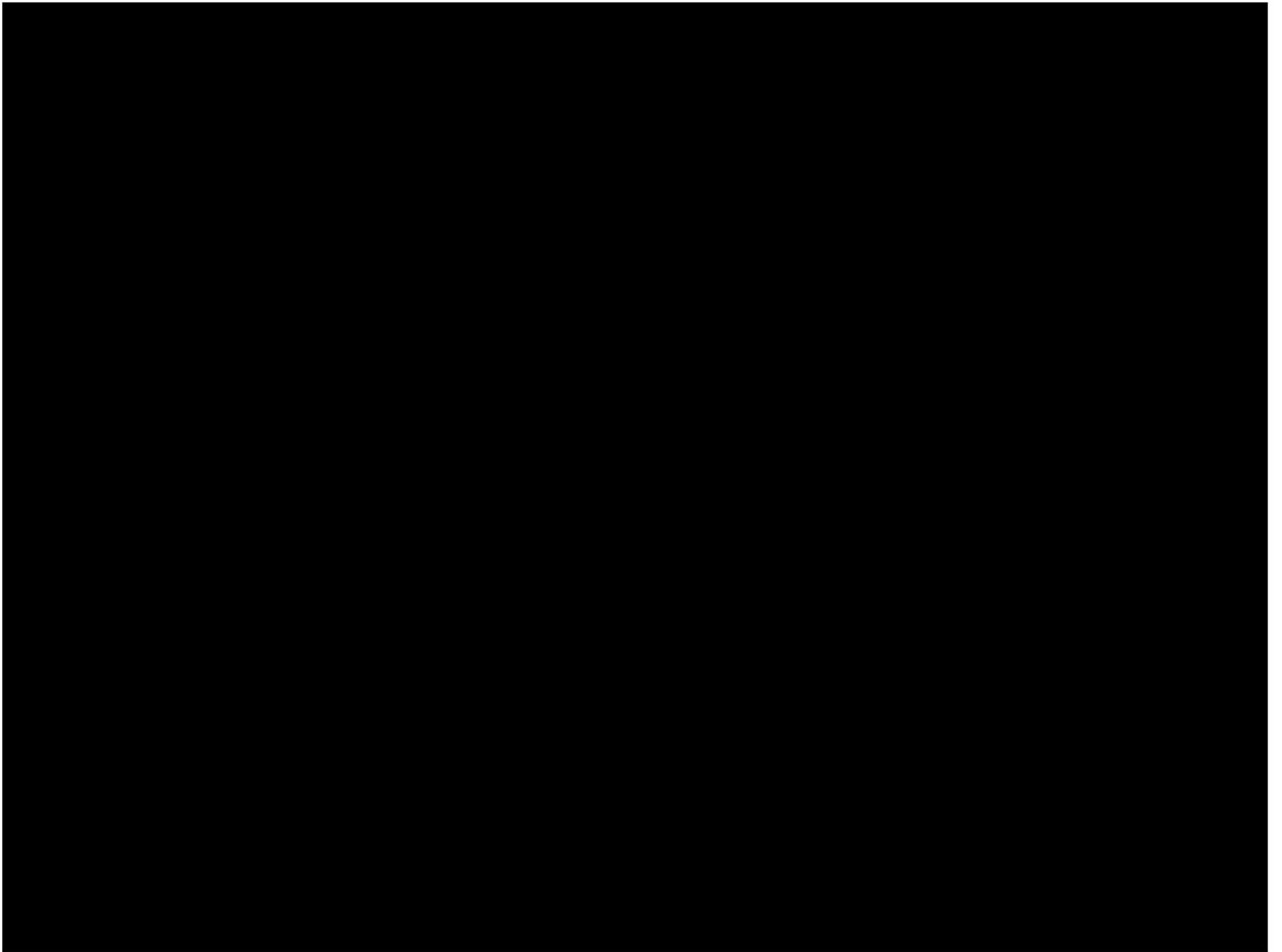
- National  
Geographic  
Society  
Hannibal  
Expedition

2007-2008



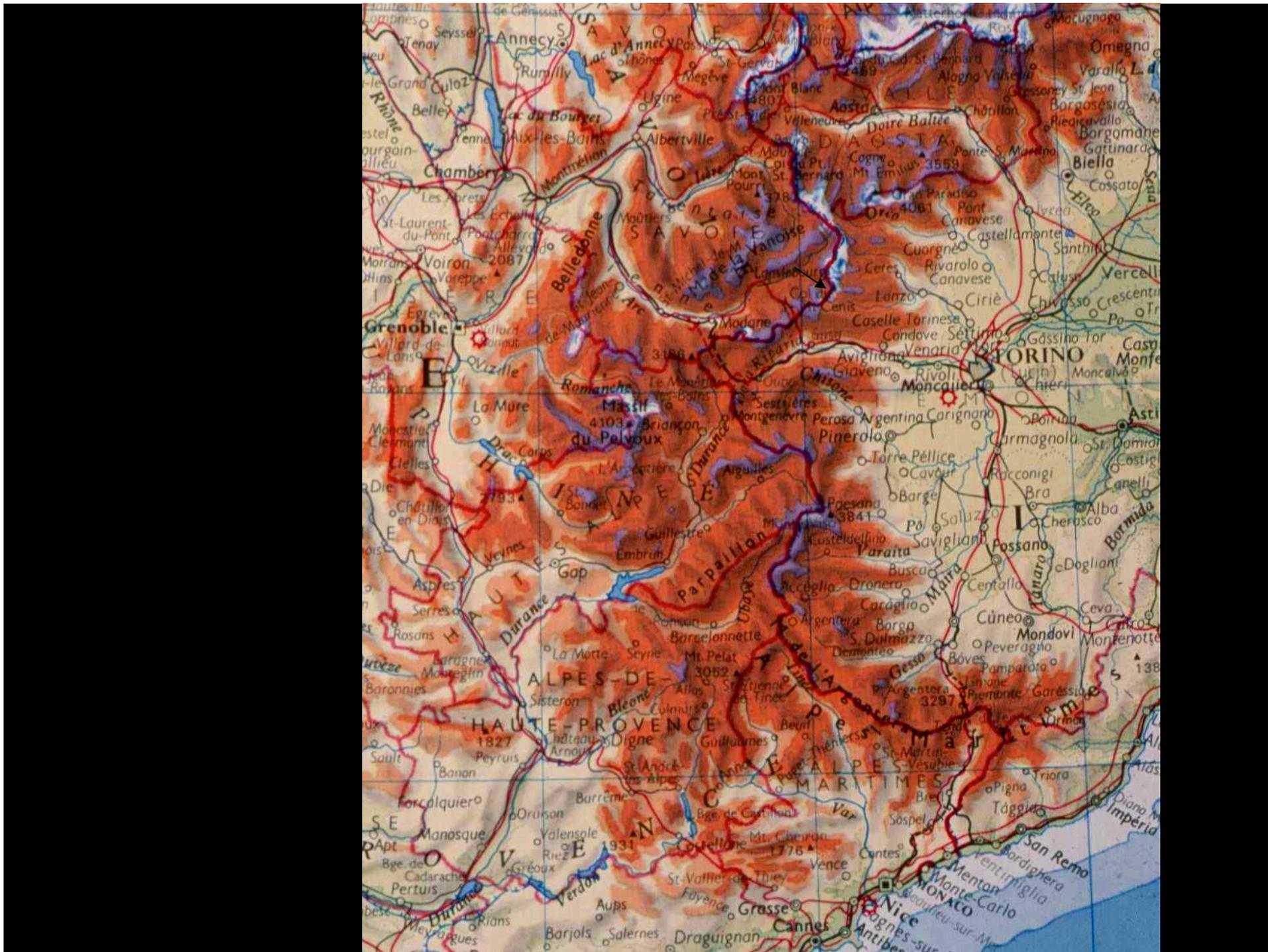
Kira, Thaddeus, Cameron

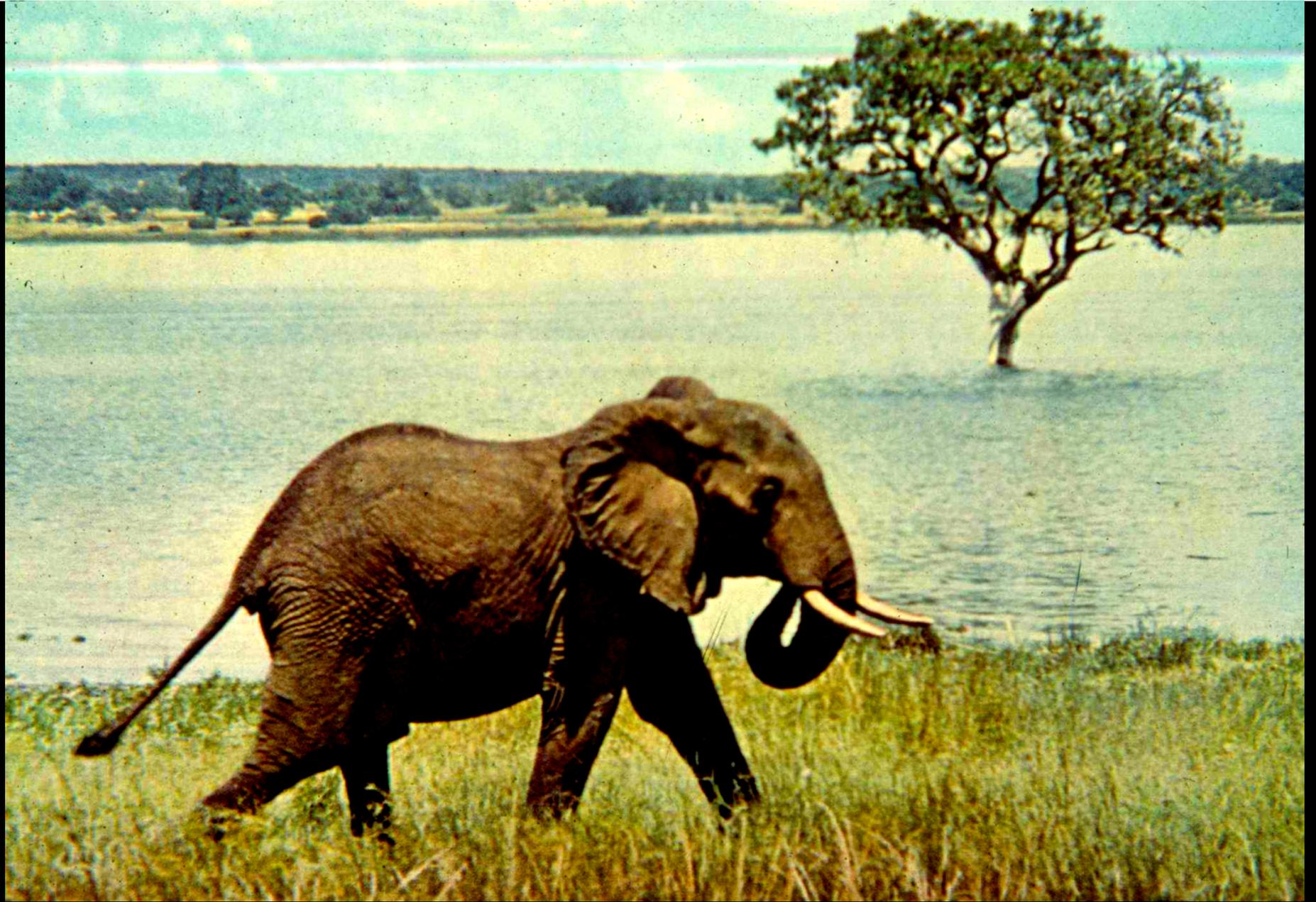




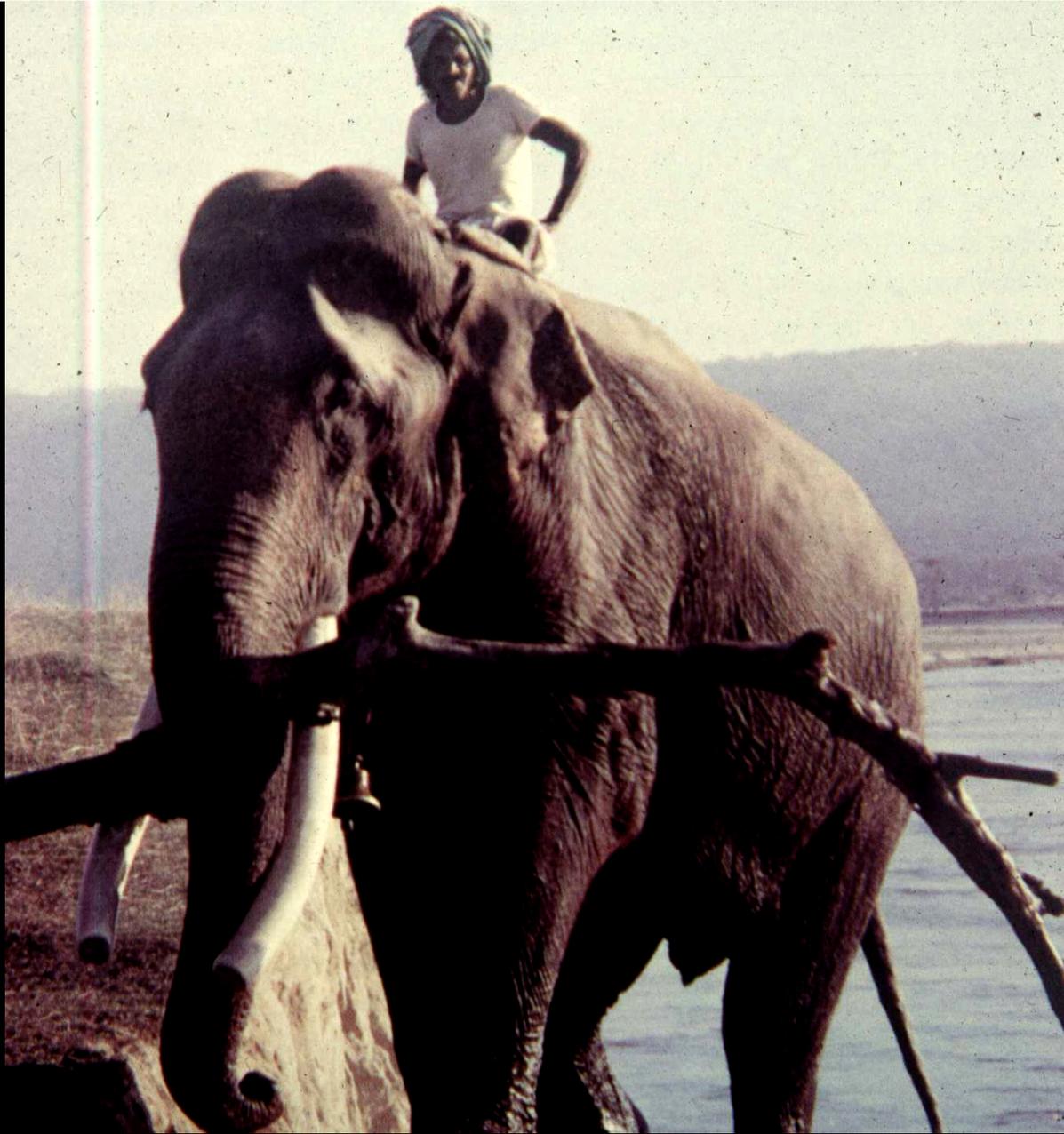
# Peutinger Map 13th c. Roman Copy





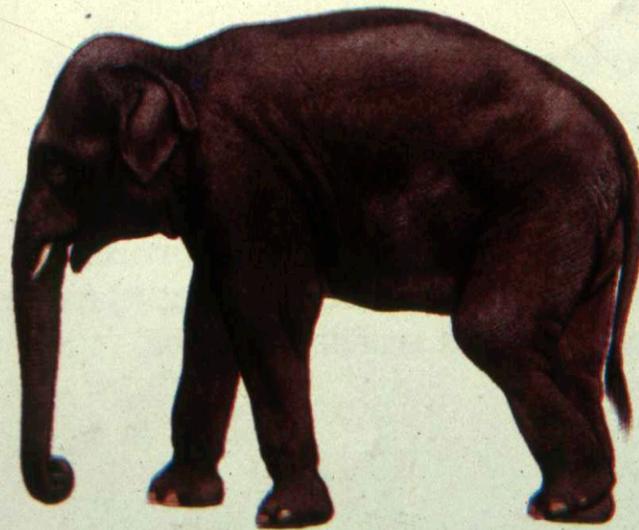
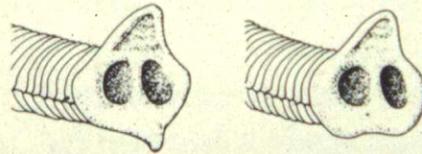
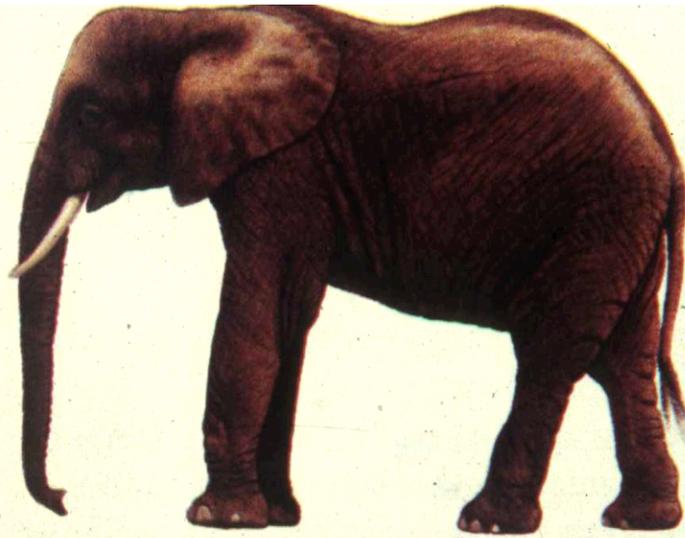


African elephant



Asian elephant





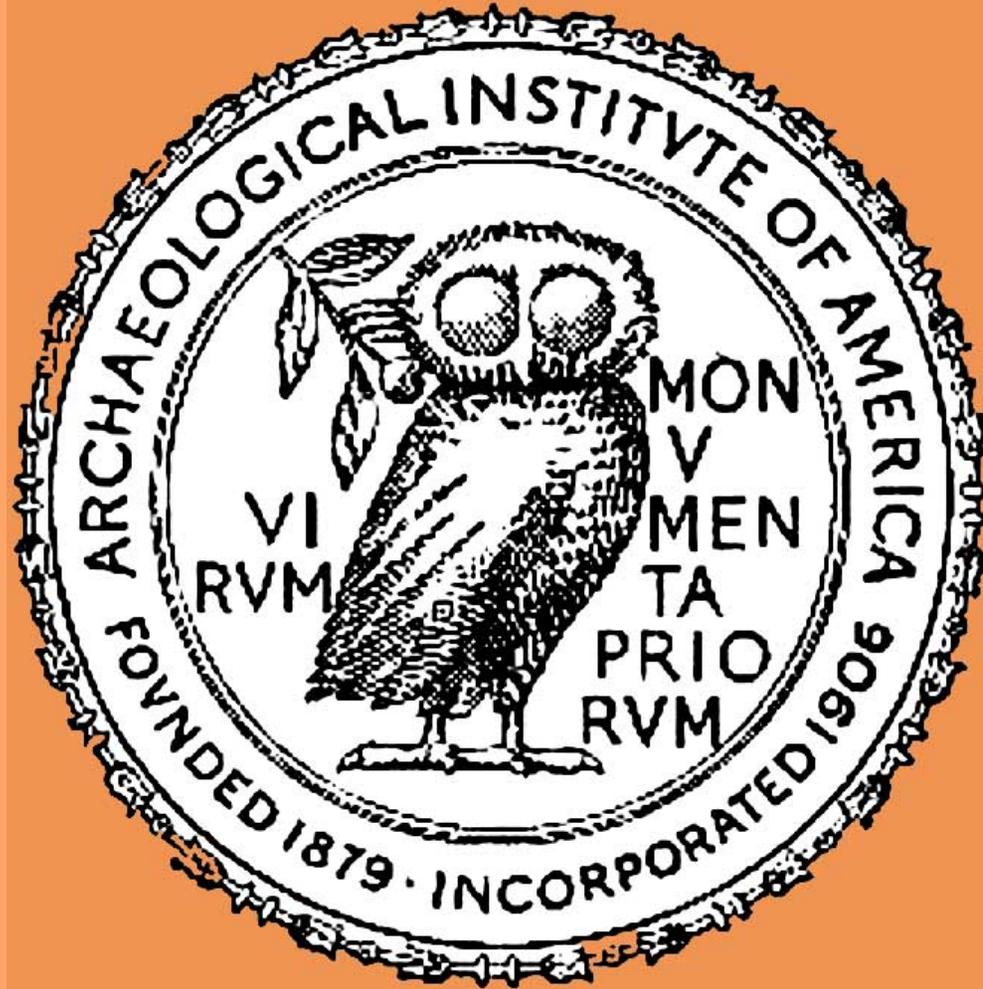
▲ The Asian elephant (bottom) is smaller than the African and has smaller ears. It has a single lip, not two, at the trunk tip.

# ARCHAEOLOGICAL INSTITUTE OF AMERICA



LONG ISLAND SOCIETY

# ARCHAEOLOGICAL INSTITUTE OF AMERICA



EXCAVATE ~ EDUCATE ~ ADVOCATE