

A photograph of a geological field site. A person's hand is visible, holding a geological hammer with a wooden handle and a metal head. The hammer is positioned to strike a rock face. The rock is light-colored and appears to be part of a soil profile or a rock outcrop. The background shows dark, moist soil with some green vegetation at the top left. The overall scene suggests a geological investigation or field study.

POLANER SELECTIONS

Can you taste terroir?

Ph.D. Pedro Parra

- ✓ Master Degree in Precision Agriculture. Montpellier, France (97-98)
- ✓ Ph.D on terroir. Paris (2001-2004)
- ✓ More than 25.000 descriptions of wine soils in 14 years.
- ✓ Tasting of base wines v/s parent rock : more than 500 wines made.
- ✓ Search & Selection of Micro terroirs.
- ✓ Since 2007: wine producer, partner at Aristos, Clos de Fous and Altos las Hormigas



TERROIR

BASIC FACTS

GEOLOGY

(One way of vine-growing)

-Piemont –Burgundy -Ste Emilion -Loire
-Rioja Alta-Alavesa–Priorat –Douro

Etc....

GEOMORPHOLOGY

(Another way of vine-growing)

-Medoc –Pomerol -Crozes Hermitage -Chateauneuf du Pape
-Uco Valley –Flat Napa

Etc...

TERROIR

BASIC FACTS

The essential point are the rocks: fractures and alteration stage.

Important facts:

- Genetic of the parent rock
- Fractures of the rock
- Fertility of the soil (surface)
- Importance of the environment: sensitive to weather, sunlight, rainfall.

GEOLOGICAL TERROIR



TERROIR

BASIC FACTS

LIMESTONE

- Piemont
- Burgundy
- Ste Emilion
- some Loire
- Rioja Alta, Alavesa
- Gigondas-Vaqueyras
- Altamira-Gualtallary
- Ribera del duero



LIMESTONE

- Sedimentary rock
- Is like the soil of the sea, but heterogenous soil
- Active limestone and alteration/alterite system of the rock is key
- Many “kind” of limestones.
- In general, horizontal fractures. Mix with Clay is important.

WINE : VERTICAL-Tongue, very long, chalk sensation, fresh.

TERROIR BASIC FACTS



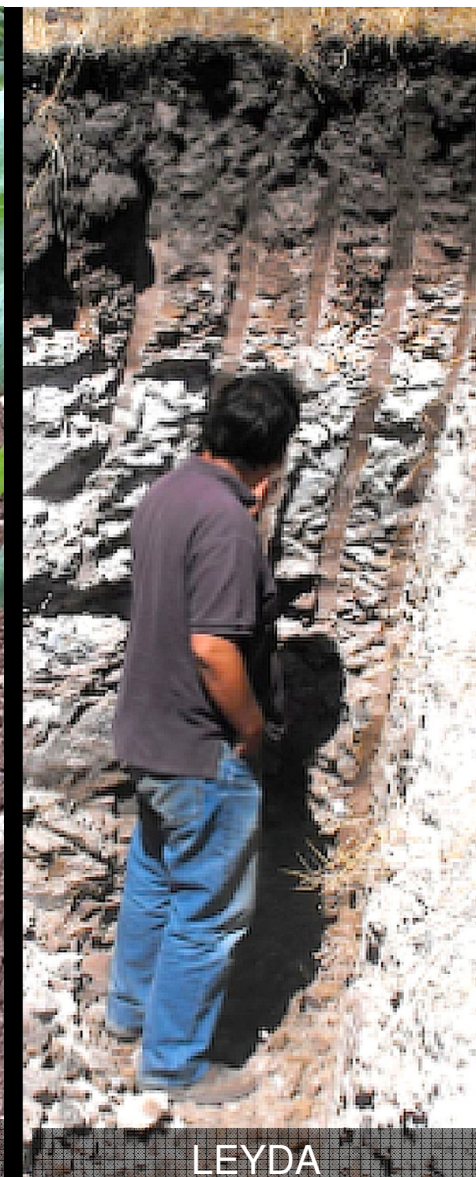




RIOJA ALTA



CHABLIS



LEYDA



PIEMONTE

TERROIR

BASIC FACTS

GRANITES

- Douro
- Bierzo
- Ribera Sacra
- Cote Rotie
- Monterrei
- Corbieres
- Bio Bio
- Alsace

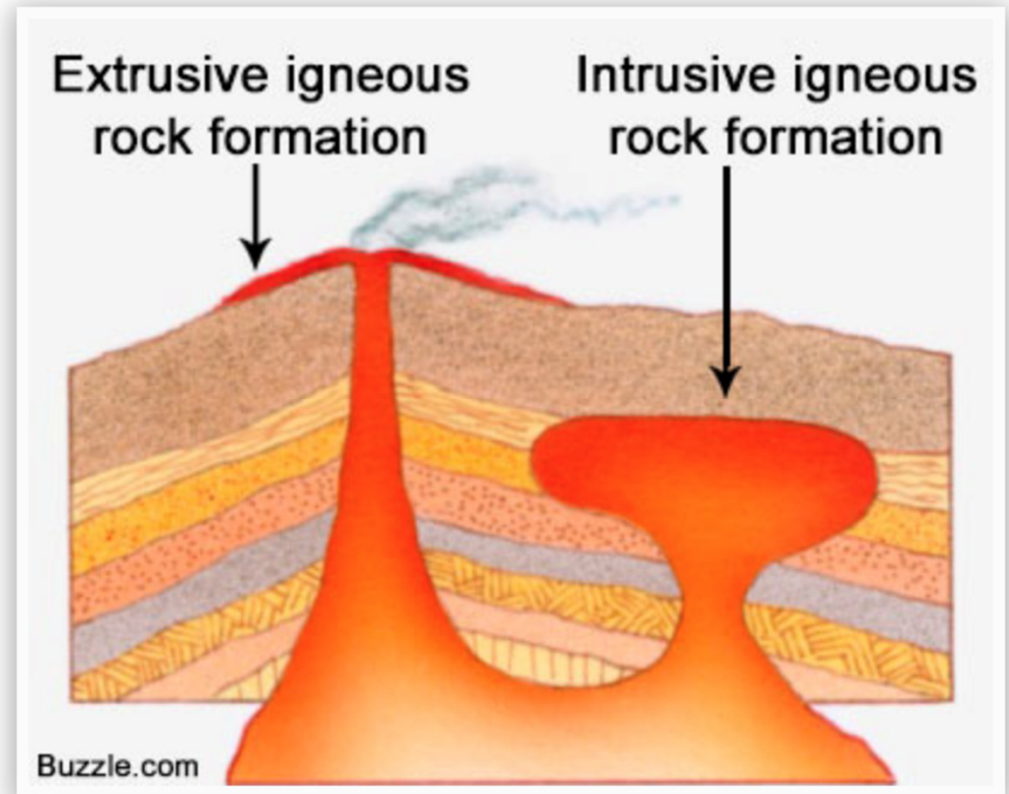


GRANITES

- Intrusive rock
- Quartz is the main mineral
- Size of Quartz is relevant
- Many “kind” of Granites.
- In general, vertical fractures. Very deep roots

WINE : Frontal “rustic” energy, can go very easy to dry tannins. Get more round with Clay and more powerful with big Quartz size.

TERROIR BASIC FACTS





ITATA



HERMITAGE

TERROIR

BASIC FACTS

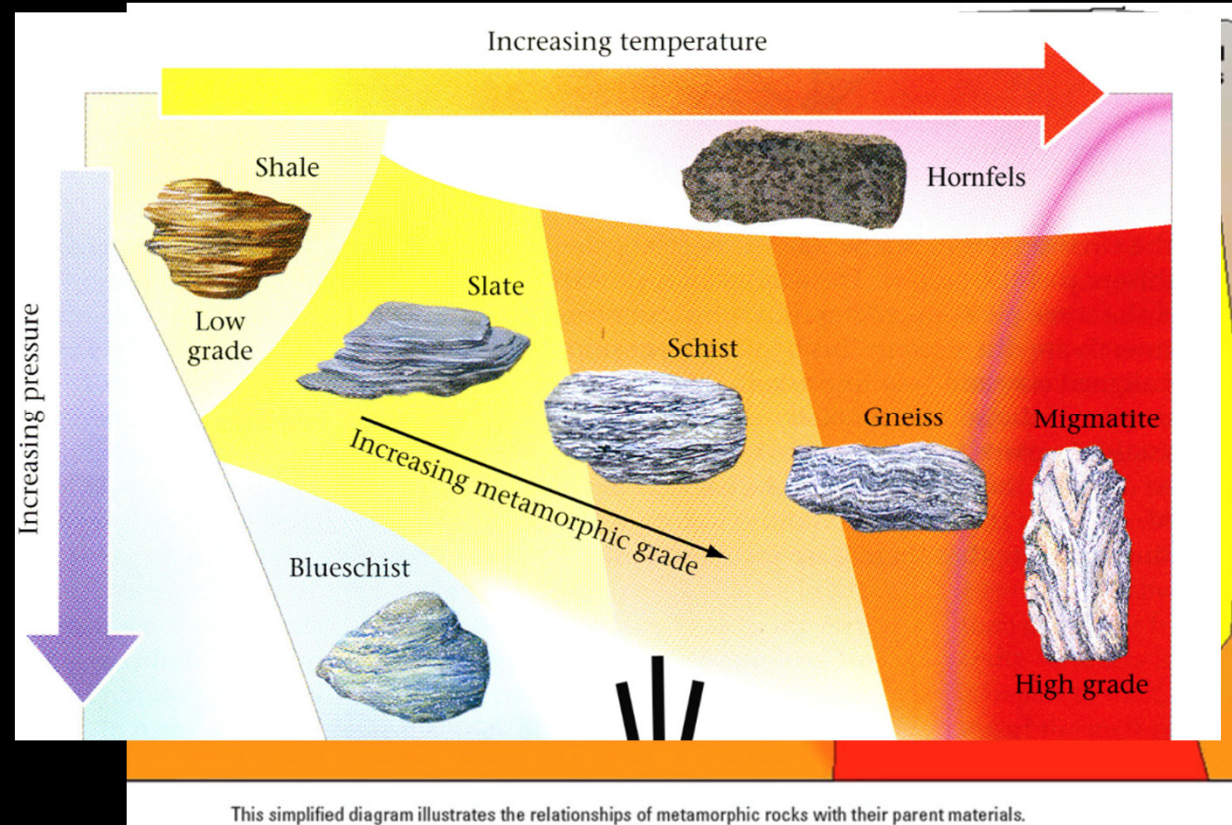
SCHIST

- Douro
- Bierzo
- Ribera Sacra
- Cote Rotie
- Monterrei
- Corbieres
- Bio Bio
- Central Otago
- Alsace



SCHIST

- Metamorphic rock (heat)
- Metamorphosis of Shale or Igneous rocks
- Not slate (low Temp), Schist has coarser foliation
- Fractures are horizontal rather than vertical.
- Long roots in the fractures. Maximum mineral



*WINE : Powerfull “mineral” energy,
more round than Granites.*



TERROIR

BASIC FACTS

COMPLEX GRAVELS

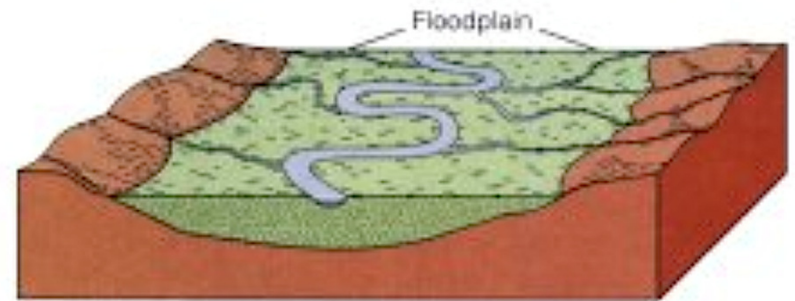
- Medoc
- Uco Valley
- Chateauneuf du Pape
- Rioja Alta
- Alto Maipo, Alto Cachapoal
- Okanagan Valley
- some Sonoma
- Ribera del Duero



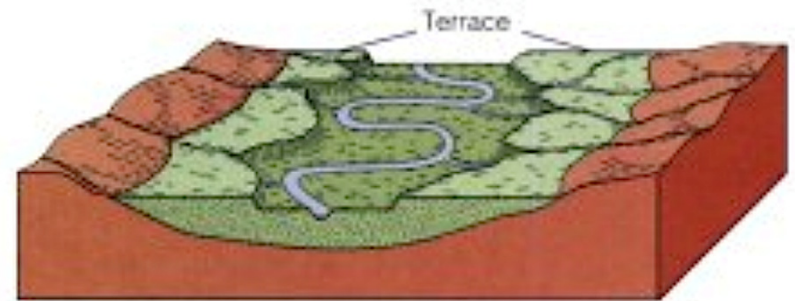
COMPLEX GRAVELS

- Complex because of chemical associations
- In general, complex = the oldest ones
- New terraces = too much drainage and coarse sand-----
--too simple
- Very small “water holding capacity”. Irrigation?

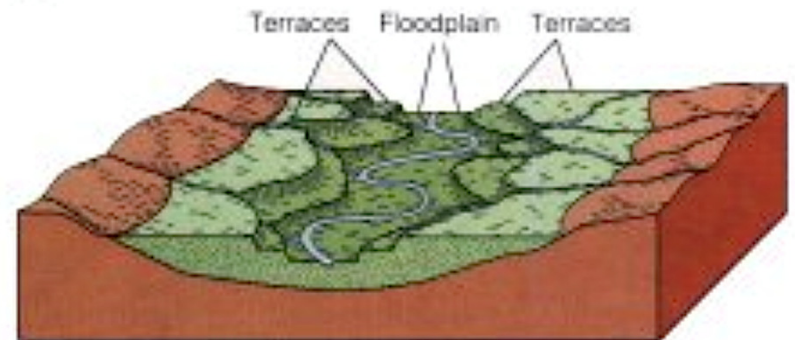
WINE : “Chamaleon” in the mouth. Soft mineral tannins. More easy to drink in general.



(a)



(b)



(c)



MAIPO



RIOJA ALTA



MARGAUX T3

MARGAUX T2

ST.ESTEPHE

GUALTALLARY

LA CRAU

TERROIR

BASIC FACTS

SPACIAL ANALYSIS

(where to cut)

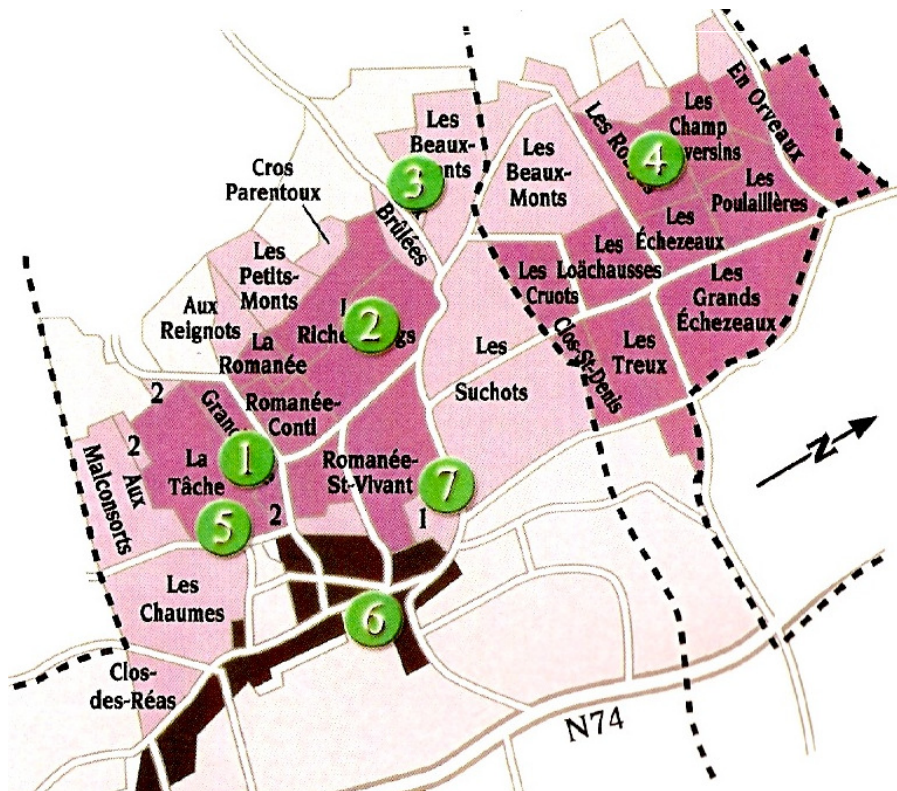
0,2 HAS or 2 has ?

5 MTS



Evolution
des sols le long du coteau



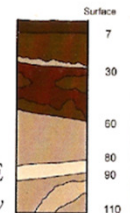


haut
du coteau

milieu
du coteau

- MILIEU DU COTEAU**
- ① LAMARCHE La Grande Rue
 - ② GRIVOT les Richebourgs
 - ③ CLAVELIER aux Brulées
 - ④ NAUDIN-FERRAND Echézeaux
- BAS DU COTEAU**
- ⑤ DRC la Tache
 - ⑥ LIGER BELAIR Clos du Chateau
 - ⑦ JJ CONFURON Romanée St. Vivant

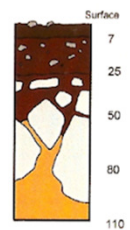
①
de VOGÜE
Musigny
roche type marne



②
ROUMIER
Bonnes Mares
éboulis complexes



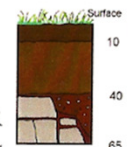
③
PERROT-MINOT
Combe d'Orveau
éboulis complexes



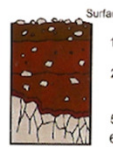
④
de VOGÜE
Musigny
roche fissurée



⑤
MUGNIER
les Amoureuses
roche en plaquettes



⑥
AMIOT
les Charmes
roche fissurée

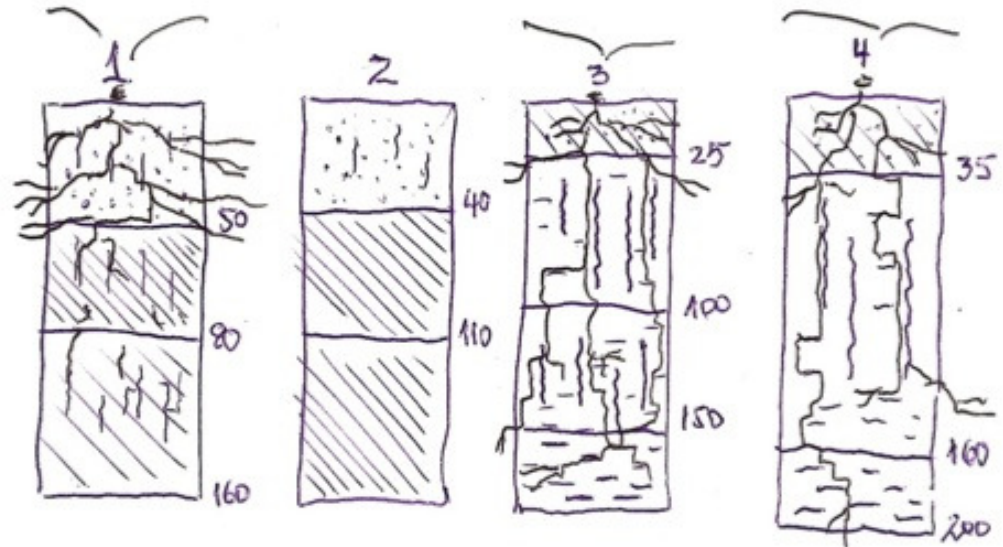
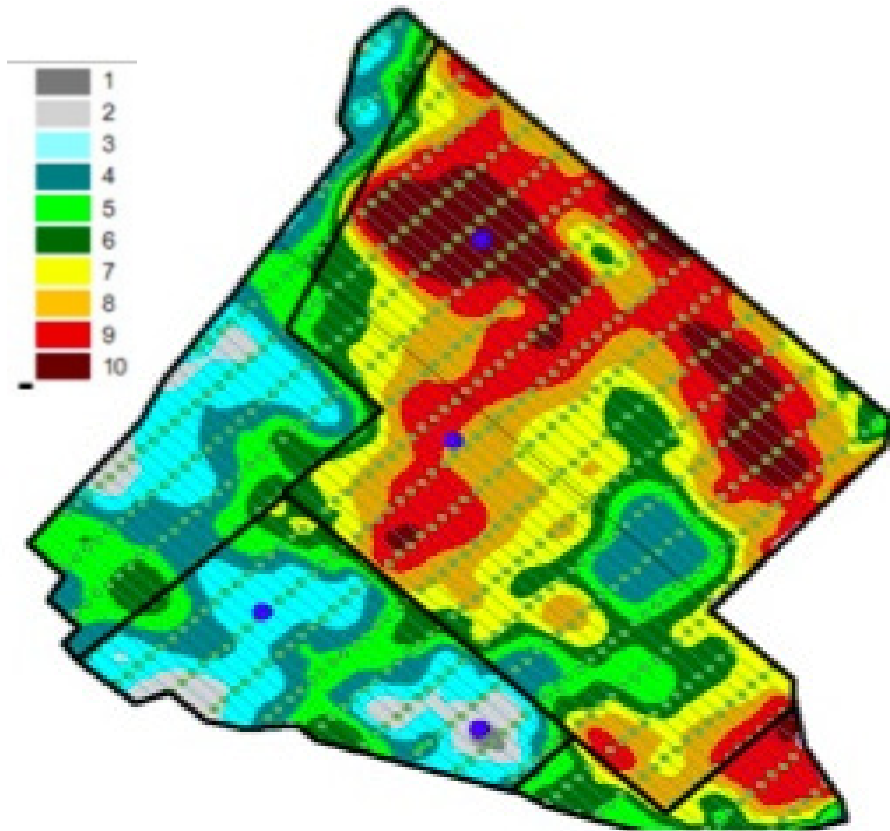


SONOMA COAST

Mike Benziger

Pinot noir (2, 2 has)

5.000 p/ ha – 1,2 kg/pl



	Plastic clays with good porosity
	Compact plastic clays, very low porosity, some cracks, poor roots development
	Plastic clays, some cracks present, medium porosity with some roots
	Compact clays with no cracking, very like a stone in dry years
	Deep crack grey clays
	Clays on layers on the bottom of the pit

The Wines

SCHIST

RIBEIRA SACRA

SPAIN



ALGUEIRA
PIZARRA, 2012



GRANITE

MORGON
FRANCE

MICHEL GUIGNIER
MORGON VV 2013





GRANITE

DAO

PORTUGAL

NIEPOORT

ROTULO DAO 2012

LIMESTONE
GEVREY CHAMBERTIN
FRANCE

DOMAINE TRAPET
GEVREY CHAMBERTIN 2012

GEVREY CHAMBERTIN

HAUT DU COTEAU

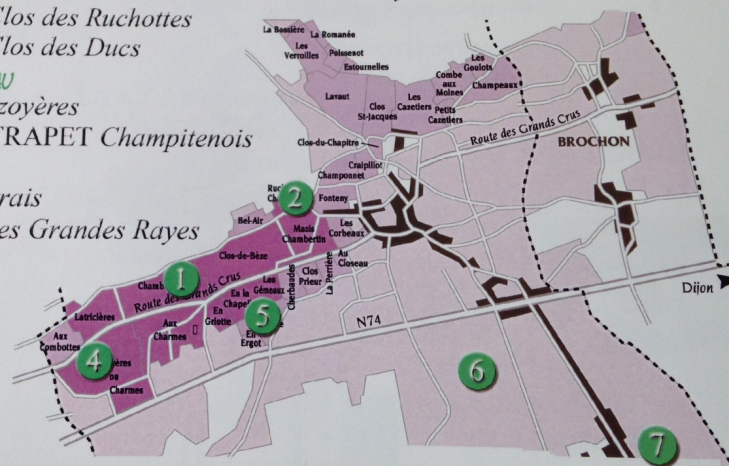
- 1 TRAPET Chambertin
- 2 ROUSSEAU Clos des Ruchottes
- 3 LAVENANT Clos des Ducs

MILIEU DU COTEAU

- 4 RICHARD *Mazoyères*
5 ROSSIGNOL TRAPET *Champitenois*

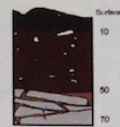
BAS DU COTEAU

- 6 SERAFIN *les Crais*
7 HERESZTYN *les Grandes Rayes*

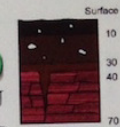


LES VINS DE BOURGOGNE - THE WINES OF BURGUNDY - Sylvain Pitiot & Jean-Charles Servant - Collection Pierre Poupon - F 21200 Beaune-Vignoles

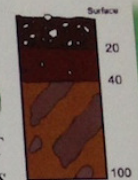
- TRAPET
Chambertin
roche en plaquettes



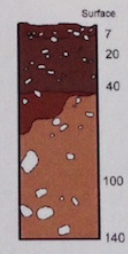
- 2
ROUSSEAU
Clos des griottes
roche en plaquettes



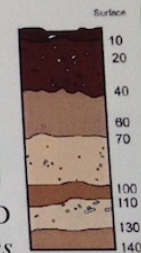
- 3
LAVENANT
Clos des Ducs
éboulis complexes



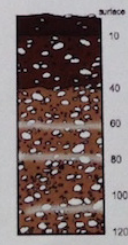
- 4
ROSSIGNOL-TRAPET
Champitenois
éboulis complexes



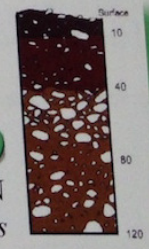
- 5
RICHARD
Mazoyères
roche type marne



- 6
SERAFIN
les Crais
alluvions des Hts Côtes



- 7
HERESZTYN
les Grandes Rayes
alluvions des Hts Côtes



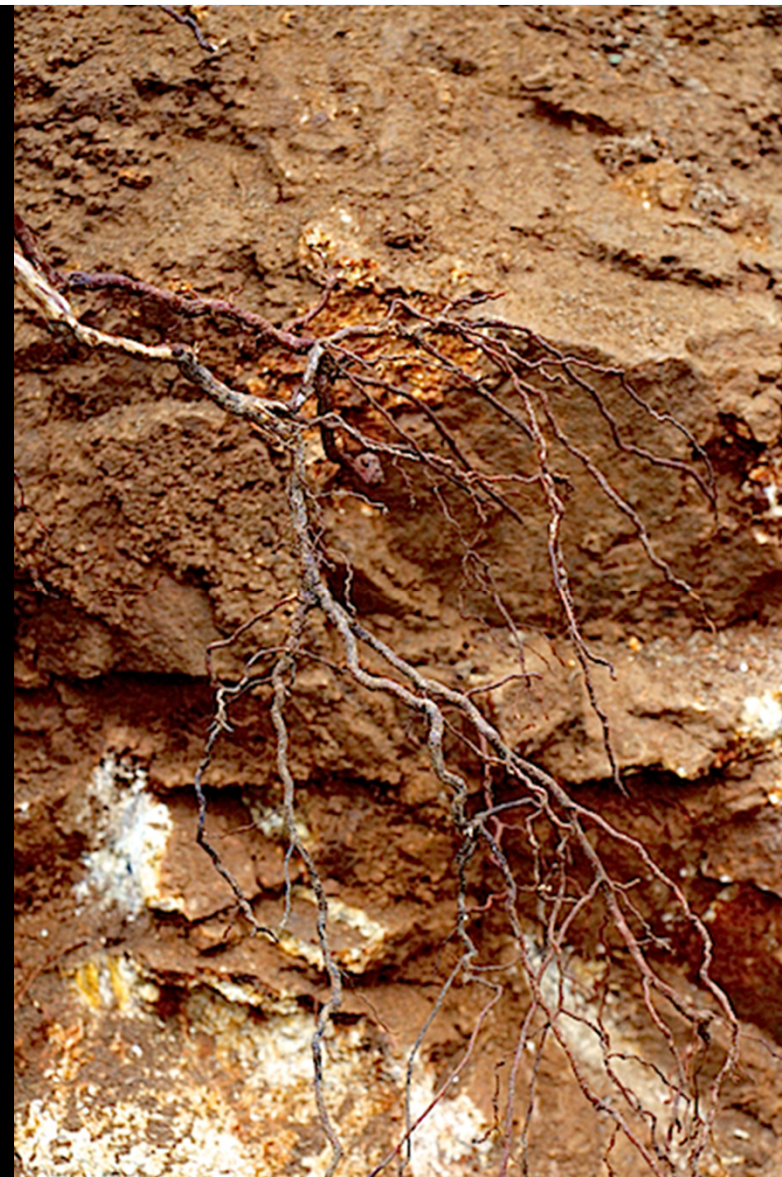




GRANITE

ITATA – CAUQUENES
CHILE

CLOS DES FOUS
TOCAO 2012



A sepia-toned photograph of a person climbing a steep, rocky mountain slope. The person is wearing a light-colored shirt and dark pants, and is using a rope to ascend. The background shows a vast, hazy landscape with distant mountains and a body of water.

SCHIST
BIERZO
SPAIN

DESCENDIENTES DE
J.PALACIOS
CORULLON, 2012





Fontels



GRANITE

CORNAS
FRANCE

VINCENT PARIS
GRANITE 30 2013

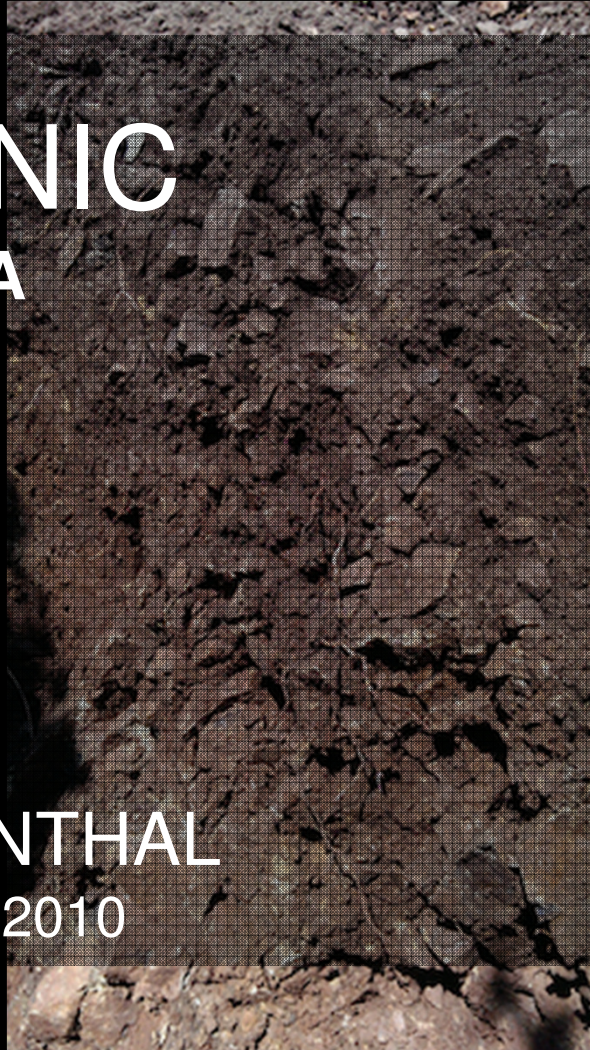


VOLCANIC

ACONCAGUA

CHILE

VON SIEBENTHAL
CARABANTES, 2010



A man with a beard and mustache, wearing a blue shirt, is holding a large, irregular piece of light-colored limestone. He is standing in a vineyard with green grapevines in the background. Another person is partially visible behind him. The image has a dark, textured overlay on the left side where the text is located.

LIMESTONE

PIEMONTE
ITALY

RINALDI
BRUNATE 2009





VOLCANIC

BASILICATA
ITALY

MUSTO CARMELITANO
SERRE DEL PRETE AGLIANICO
DEL VULTURE 2011





GRACIAS
POLANER