

## Chapter 5. The volcanic relief

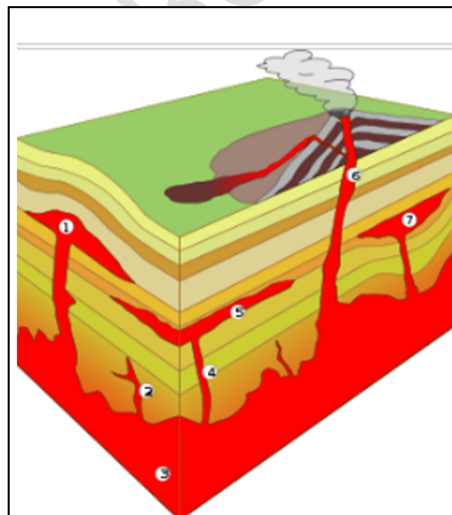
Magmatic rocks come from the cooling of magma. They are classified as volcanic (or extrusive) when formed during eruptions at the Earth's surface, or as plutonic (or intrusive) when they cool and crystallize at depth.

### 1. **Intrusive igneous rocks:** deep magma cooling

A batholith is an allochthonous pluton formed when magma is trapped and cooled within the Earth's crust.



**PLUTON**



**1: Laccolite:** concordant magmatic rock structure with flat lower surface and convex upper surface.

**2 and 4: Dyke:** magmatic rock intersects surrounding rocks

**3: Batholith:** large magmatic rock mass that cuts through the surrounding rock

**5: Sill:** magmatic rock is parallel to surrounding rocks (concordant)

**6: volcanic chimney**

**7: Lopolite:** concordant magmatic rock structure in the shape of a flat bowl.



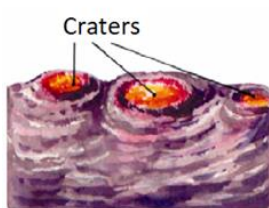
An inselberg

An inselberg or monadnock is an isolated relief that significantly dominates a subhorizontal plain or plateau.

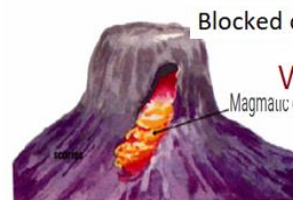
These reliefs (often) are granitic

## 2. Extrusive igneous rocks: Cooling of magma at the surface

### Volcano types



Hawaiian-type



Blocked chimney

Volcanian type

Magmaic casting



Crater

Magmaic casting

Strombolian type



Solidified acid  
lava needle

Pelean type



## Hoggar in South Algeria

