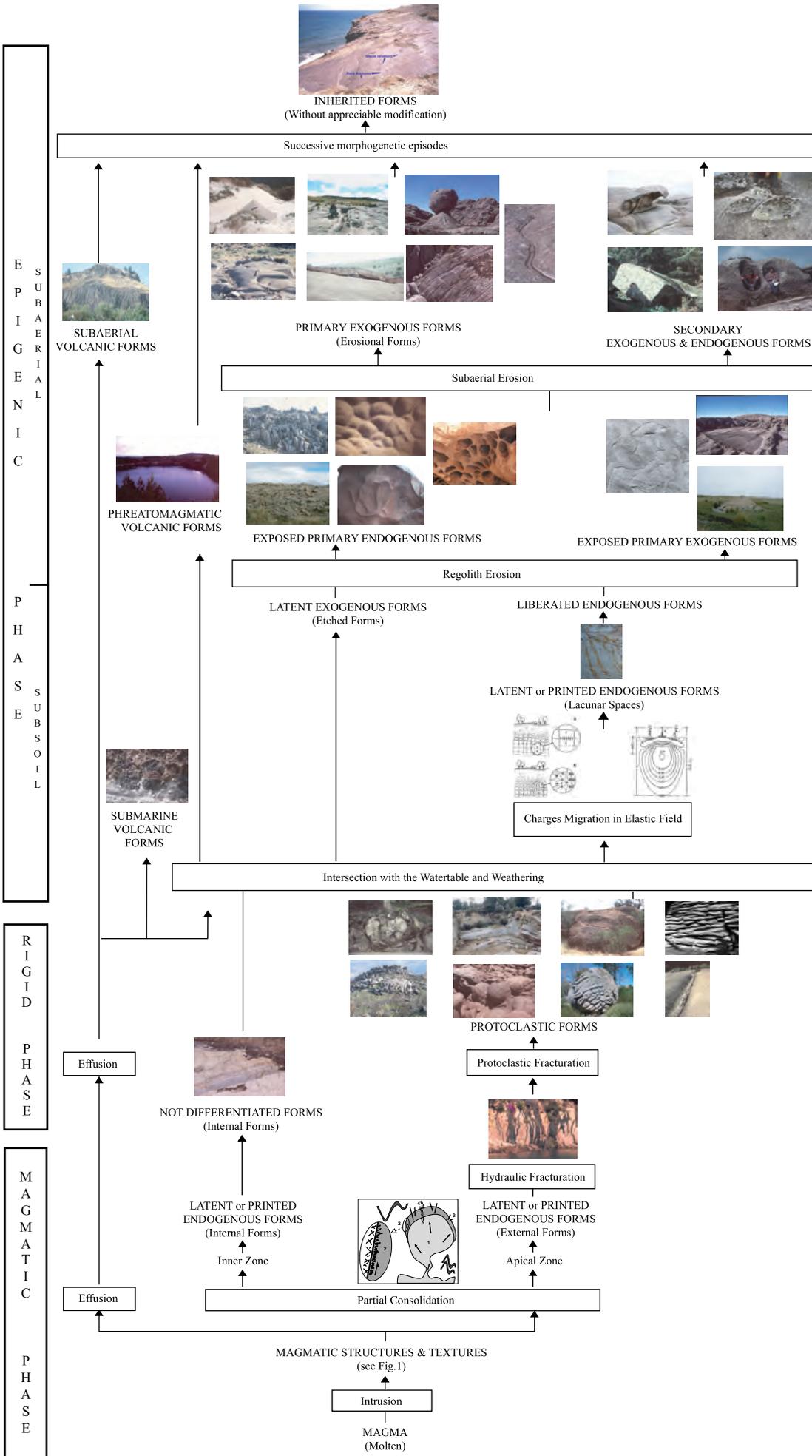




ROCK OF AGES

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Abstract
 Granite is emplaced deep in the Earth's crust. It cools and crystallises and is subjected to thermal and magmatic events, and to recurrent stresses. It develops textures or fabrics as well as strain patterns which, as erosion brings the rock mass near the surface, find expression in various fracture sets and systems.

Fractures are avenues of weakness exploited by moisture when the rock mass intercepts the groundwater zone (particularly in the zone 700-800 m below the land surface). The patterns of these fractures are imposed on the shape of the land surface at various scales. Subsurface weathering patterns are determined by fracture density and at the mesoscale find expression, for example, in barnhardts and at the micro in clefts or slots. Once exposed to epigene weathering and erosion barnhardts may, depending on climate and degree of exposure, be transformed into rubbings or kopjes. Ancient strains and fabrics are exploited to produce gutters, basins, and lineations. Tectonism continues so that new scarps and pop-ups develop. Climatic changes leave behind relic features alien to their new environment.

Thus granite forms can be assigned different ages: a genetic age where morphology is related to past tectonic, thermal or magmatic events; a pre-exposure age where developed by subsurface weathering; an epigene age where shaped at the land surface; an inherited age where shaped by processes related to previous climatic regimes. Thus many landforms are multistage. The events to which they owe their morphology can in some instances be traced back far into Earth chronology. (250 words).

Conclusions
 The first problem in order to understand the relief developed on granitic rocks is to determine whether the forms are based on exogenous or endogenous origin features totally or partially. It is also important to know the rate at which various exogenous erosive agents responsible for the forms (water, air, ice) act. The age of the forms gives the age of the surface over which they develop, as there will be found older forms, obviously, over the oldest surfaces, though all the forms may disappear if the degrading of the surface bearing them is intense enough and long in time. So, it is understood that there exists a great uncertainty in geologically defining value, age, origin and meaning of a surface if we backed on the forms developed over it. Anyway, the oldest age of a form should be logically inferred from the petrographical-structural history of the rock. The other ages, which may be given, correspond to the different phases later to the exposure of the rock in surface.

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