

STANDARDISATION OF THE NOMENCLATURE OF COMMERCIAL DIMENSION STONES

Granites have long past moved away from a mere geological identity as a rock formation used only for stratigraphic or penological purposes in academic and scientific studies to more mundane economic purposes. Today it is a stone (in practical sense) next only to precious or semi-precious stones in commercial circles. No doubt the abundance of the former is in total contrast to the latter. The term granite is employed here in broad connotation to include gneisses and black granites (dyke rocks) as well.

Karnataka in Peninsular India, has a huge repository of granites and their cohorts the gneisses and the accompanying dyke rocks. Granite industry today is a major industry in terms of volume of trade, technology and human resource deployment. But the availability of the material as a natural product, the value additions of cutting and polishing notwithstanding, sets it apart from other manufacturing industries. Study of any product of nature, granites included, in view of their unlimited varieties always suffer the infirmity of subjectivity of those who study them and thus renders itself to personal bias. The reference here is to the nomenclature of granites in the ornamental stone market. Visit to any granite exhibition, particularly the biannual 'STONA' Expo, is a feast to the eye of any connoisseur and also the common man. That there are so many varieties of the rock type may indeed be an education even to a field geologist.

No commodity or commercial resource which has more than one identity characteristic can be designated by a singular or exclusive name. Granites are no exceptions. With colour, texture/structure, grain size, mineral composition variations, there are scores and scores of rock varieties and they need to be systematically designated and identified, so that the name or nomenclature reflects a given variety of rock. It is the entrepreneurship and skill of the commercial or market forces which has successfully pioneered and spearheaded the establishment of a sound granite industry. Accordingly the market forces have evolved their own nomenclature for the different varieties. These, however, need to be standardized under specific genetic groupings under brand names.

The State of Karnataka with more than 60% of its geographic area (in excess of more than one lakh square kilometers) under occupation by granites and gneisses has a host of varieties, with more and more coming to light due to the toils of geologists.

A scan of the different commercial names however,

leaves a feeling that, though they satisfy the producers and consumers, the geological/scientific aspect is totally ignored. But they could be made more reasonable and friendly to the science of their study, if the nature and genetic or geological aspect is also indicated in the nomenclature.

There appears to be a strong feeling among some geologists, that nomenclature of granite is a forte of quarry owners and traders alone, and for professional geologists, granite nomenclature is a forbidden fruit.

Even animals, both wild and domestic, pets and birds, agricultural and horticultural plants are referred to by their zoological/botanical names in addition to commercial names while referring to them in scientific literature. That is what scientific etiquette demands. Rocks are similar natural products, except that they are not cultivable. There is no valid reason why generic or geological brand names of the different varieties of granites should not be circulated along with commercial names. People who use granite as ornamental material are generally those who are well off educationally, economically and socially and will not certainly grudge if the scientific names are made known to them.

A study of the different varieties of granite and the prevailing commercial nomenclature indicates that emphasis in nomenclature has been principally based on the dominant colour and the locality of occurrence. It would appear more pertinent if the other textural parameters of the rocks like gneissosity, particularly grain size variations, colour variations which are readily available for direct observation are also made use of for designating the various varieties. This will automatically identify granite from gneiss. It would also help in further differentiating the granite and gneiss varieties.

It would be scientifically desirable, if a newly located and identified granite variety is first identified with a geological generic name, before it enters the market, on the same lines as agricultural/horticultural scientists name the newly evolved varieties or strains of food grain like paddy, cash crops like cotton, sugarcane etc. and fruits like mango etc. before they are released for cultivation. The commercial or trade name may be subsequently pre-fixed or suffixed.

The term Universal is suggested for the most common medium to coarse grained grey granite, in case of the pink variety, the colour connotation may be pre-fixed or suffixed like Pink Universal or Universal Pink. Fine grained variety

may be referred to as Universal Pearl or Universal Pink Pearl, as the case may be. The term flower can be used to refer to all porphyritic varieties for e.g. grey flower for grey porphyritic granite, pink flower for pink porphyritic granite etc. The density of phenocrysts in the porphyritic granites may be suitably indicated by names like petals, island etc. If the phenocrysts dominate over the groundmass the rock may be called 'petal' granite. If the groundmass dominates and phenocrysts are subordinate, the rock may be called 'island granite'. The colour of the phenocrysts may be indicated by names like pink petal or pink island, in case of pink porphyries, and white island or iceberg in case of white porphyries. The depth or intensity of the pink colour in pink granites may be indicated by using prefixes like, imperial pink, plasma pink and standard pink or pink.

In the case of granite gneisses or gneissic granites, the gneissic banding being the distinguishing characteristic, if the rock is a grey granite gneiss, it may be designated 'universal gneiss', if there are pink and grey alternating bands, then the familiar name 'multi-colour gneiss' may be retained. If the bands are coloured and wavy, the rock may be called rainbow gneiss. However, the most commercially important gneisses are the diorite gneiss, popularly known

'Himalayan blue'. In these rocks the dark ferromagnesian mineral bands, are rarely straight, they are usually folded into various shapes, the most common being serpentine shapes with widening at the fold closures, like the hood of a cobra, such gneisses can be designated 'cobra gneiss' or black 'cobra gneiss'. Quite often in these rocks the colour bands do not conform to any shape, they are torn, dragged, refolded and faulted. A given mural of this kind looks like a painted canvas, often described as modern art, such gneisses may be described as Michelangelo gneiss or canvas gneiss.

The dyke rocks or black granites may generally be designated as new moonstone granites, because of their black colour with suitable prefixes or suffixes to suit individual needs.

The above designations are only qualitative and suggestive and certainly not exhaustive. Only a workshop or seminar exclusively focused on this issue will help to bring out more ideas and evolve a standard commercial nomenclature.

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PHYSICAL VOLCANIC FEATURES IN THE DECCAN VOLCANIC PROVINCE

I was indeed happy to go through the paper on Arterial System of Lava Tubes and Channels within Deccan Volcanics of Western India by K.S. Misra which appeared in the Journal (*JGSI*, v.59, pp. 115-124).

The paper, extensively illustrated with maps, sketches and beautiful colour photographs, brings out to light the role played by lava tubes/channels in transport and spreading of the lava flows, especially the 'compound flows' over the vast span of the Deccan Volcanic Province (DVP) forming one of the most prominent and spectacular Continental Flood Basalt Provinces of the world.

The similarity between the physical volcanic features of the Hawaiian lavas and the compound lava flows of the Deccan Volcanic Province, brought out in this paper is astonishing, in view of the difference in age, but is so convincing that the hitherto debated riddle on the mode of transport and distances covered appears well addressed.

The author of the paper has evoked 'multi-central activity' with numerous effusive centers, in the area

covered by him, is more logical and appropriate, as against 'Monocentral Eruption' of Michell and Widdowson (1991). For quite some time I have been trying to understand the phenomenon with field observations. I have also described way back, for the first time, since the International Conference on Flood Basalts held at Saugar, India, in 1968, a lot many years before Duraiswami et al. (2001), a number of physical volcanic features occurring around Pune, including pressure ridges/tumuli, lava tunnels, ropy structures, reddened tops, squeeze-ups, pipe amygdales at the base of flow units, etc. commonly associated with *pahoehoe* lavas of the western DVP (Phadke and Sukhtankar, 1971; Phadke and Ghatge, 1976; Phadke and Apte, 1995) and have tried to bring out the similarity between the Hawaiian flows and the compound flows of the DVP. But so far I could not arrive at more logical and convincing suggestions and conclusions, as done by Misra (2002). It is no doubt a collective team work of the Geological Survey of India (GSI), Pune (Operation Maharashtra,