SW). They have further reported that the contact between the metasediments of the Delhi and the Aravalli Supergroups in the map area is marked by prominent and well-defined mylonitic foliation in the Gogunda quartzite, presence of several quartz veins in the proximity of the shear/thrust zone, and pseudotachyllite occurrences along and across the pervasive foliation of the Jharol Phyllite at the contact zone. Near Modi, abrupt truncation of a quartzite band of the Jharol Group against the Gogunda Group of rocks is an added evidence in favour of the shear/thrust contact.

It is interesting to note that the observations of the authors do not supplement any new data, but are only a repetition of the already established field facts by earlier workers. This is again substantiated by the statement of the authors themselves[1], 'Our map pattern has brought out truncation of NNE trending Aravalli quartzite (*sic*) against NE trending Delhi quartzite (*sic*). This angular relationship was also shown in Heron's map which is reproduced in figure 3 for comparison'.

3. The observation by the authors that the rocks of the Aravalli Supergroup show lower amphibolite facies in contrast to middle greenschist facies of metamorphism of the rocks of the Delhi Supergroup, is not tenable because on the basis of isolated occurrences of staurolite and chlorite, metamorphic facies or grade is not demarcated. A substantial assemblage representing contrast in facies is warranted in this case which is, of course, lacking. Sahu *et al.* have suggested greenschist facies of metamorphism for the pelitic rocks of the Aravalli Supergroup in this area, besides indicating a gradation from chlorite–biotite to biotite–garnet–staurolite zone within the Aravallis near the ASG–DSG shear/thrust zone contact, probably due to inverted metamorphism.

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*Response:*

1. Maps given in our paper have been reduced from 1 : 25,000 scale.

Data shown wrongly are reprographical mistakes (drafting errors) and it is regretted.

2. We have quoted the works of Heron and others while dealing with the angular relationship and have never claimed them as our original findings.

The photogeological map is definitely an added information in this respect as has been acknowledged by Guha.

The map pattern shows that there is truncation of the lithologies of Aravalli Supergroup against the Delhi Supergroup over a large area, but the contact has never truncated any folded parts of the lithologies. This proves that shearing is a feature which suggests large-scale movement. Such truncation can occur along the basement–cover interface because of large rheological difference between the two, and does not suggest any large-scale movement. Because of this, we would like to suggest that this contact may represent a tectonic angular unconformity only.

Our paper is a result of field work over a large area (i.e. covering more than four toposheets 45H/6, 7, 8 and 9) along the contact of ASG and DSG. The lower amphibolite facies of metamorphism in the rocks of the Aravalli Supergroup and middle greenschist facies of metamorphism of the Delhi Supergroup is based on the findings of staurolite and chlorite throughout the mapped area and not based on the isolated occurrences of staurolite and chlorite. Moreover, the finding of Sahu and co-workers of biotite–garnet–staurolite zone within the Aravalli Supergroup of rocks near the contact of ASG–DSG also supplements our observation of metamorphism of the Aravalli Supergroup.

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*A portion of the following letter was inadvertently left out in the 'Correspondence' Section of the issue dated 25 June 2007. The entire letter is printed below.*
*—Editors*

# Tropical dry evergreen forests

Ranjit Daniels *et al.*[1] have presented an interesting analysis of the tropical dry evergreen forests.

The supposed myth would not have remained so, had a commercially important species taken hold of this kind of forest. Deciduous forests, dry or moist, find a ready-made classification because of the dominance of a single planted species like teak, sal or pine in the case of subtropical forests.

A point that one cannot miss in the analysis of Ranjit Daniels *et al.*[1] is that the original author of the classification of forest types of India, Champion[2] does not get due recognition for his pioneering magnum opus, which he had so thoughtfully titled 'A preliminary survey of forest types'. A slightly revised treatise with the addition of more examples of sites but with little change in the nomenclature of types, published 32 years later[3] in 1968 hogs the limelight, probably because the original edition of 1936 is not easily available for consultation.

Among the climatic factors determining the tropical dry evergreen-type, Champion has missed a critical factor, viz. the regime, i.e., the season of occurrence of rainfall. Along the Coromandel and Circar coastal areas of Tamil Nadu, Andhra Pradesh and Orissa where this forest type prevails, the main rainy season lasts from October to December. These rains are brought by depressions and cyclones originating in the Bay of Bengal (popularly termed northeast or retreating monsoon). This pattern of rainfall results in a dissymmetry, hence dissymmetric regime. As opposed to this, over a major part of the Peninsula, rains occur from June to September/October, maintaining a symmetric pattern: this is termed as typical tropical regime under which deciduous forest is the rule, whereas the dissymmetric regime corresponds to the dry evergreen forest. A transect from the east coast (Puducherry–Marakkanam) towards the west coast passing through Chengam, Hosur, Bangalore, Chikkanahalli, Mysore, Hunsur to Murkal reveals the gradual changes from the dissymmetric-type (Puducherry) to the typical tropical-type (Murkal), with corresponding changes in the percentages of species having affinity to the dry evergreen-type or the deciduous forest[4]. This perhaps establishes the individuality of the dry evergreen-type rather than its derivation from the deciduous-type, the secondary stages of which are floristically distinct from the dry evergreen-type. Palaeo–Palynological investigations in the plains of Coromandel could probably throw further light on this issue.

At this juncture, a word regarding the classification used by Gadgil and Meher-Homji[5] would not be out of context. The only alternative to Champion's[2,3] is the classification formulated by Gaussen *et al.*[6] for the vegetation maps of the Peninsula. Their system lays stress on the notion of 'plesioclimax', i.e. what could be the potential natural vegetation of an area without the interference of man for a century, under given climatic (amount of rainfall, regime, length of dry season, mean temperature of the coldest month) and soil conditions. Currently, 95% of the potential area under the dry evergreen-type is under cultivation, 4.5% under thickets (scrub-jungles) and barely 0.5% under scrub-woodlands[7]. This 5% group has been placed under *Albizia amara* plesioclimax community with several sub-communities and transitions[8].

This concept of plesioclimax provides a more practical solution than the theoretical notion of climax vegetation. The latter changes with climate, and the pluvial (rainier) phases of the Quaternary may not provide a clue to the original climax vegetation of this millennium in which Ranjit Daniels *et al.*[1] are interested. For practical purpose, the plesioclimax is defined as the most developed formation, physiognomically and floristically, encountered in an ecological region.

The French Institute–ICAR maps of vegetation and environmental conditions[6,9] and the approach followed by Gadgil and Meher-Homji[5] may provide guidelines for delineating the ecological zones on the lines of agroclimatic regions.


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