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Report to the Bombay High Court as per Order dated 4th May 2012 in Contempt Petition
190/2008.

Re: Re- routing of Horse Track on Panchgani Tableland.

Site visit undertaken on 8th May 2012

Executive Summary

Introduction:

The Asia Plateau or **Tableland** is located in the Mahabaleshwar-Panchgani Ecosensitive Zone. It is a fine example of ferricrete (=lateritic plateau) habitat of the Northern Western Ghats. Plant and animal diversity of this habitat shows many special ecological features owing to their evolution in extreme environmental conditions prevalent on the plateau. This has led to very high percentage of endemism in biota, and especially of narrow-niche endemics i.e. plants and animals adapted to thrive in highly specific microhabitats such as boulders, crevices or shallow temporary water pools.

The plateau has attracted scientific attention for more than 100 years. Botanists and zoologists from India and abroad have described new species of flowering plants, ferns, lichens, invertebrate animals and medicinal plants. Ecologists studied endemics and identified threat status of the endemic species.

This is a biological heritage site and thus requires special protection Given below is the scientific study justifying the above mentioned statement.

A brief summary of the special biodiversity is given below

1. **Endemic flowering plants:** 44 species .

Six of these were first described from Panchgani Tableland for which this is TYPE LOCALITY) endangered :One flowering species has already been lost from the tableland- presumably extinct in TYPE LOCALITYⁱ

7, critically endangered: 2, vulnerable: 3 and data deficient : 1
as per recent assessment of threatened plants of Maharashtra by the Botanical survey of Indiaⁱⁱ

2. **Endemic ferns:** 3 species

(TYPE LOCALITY of two, One has been assessed as Endangered B1ab(iii)+2ab(iii) ver 3.1 by IUCN Redlist (2011)

3. **Freshwater Ostracods:** 1 species

TYPE LOCALITY (present status unknown)

4. **Lichens:** Around 20 reported, present threat status unknown

5. **Endemic bird:** 1 sp. Malabar Lark

Nesting does not take place any more

6. **Other:**

Endemic Geckos other ground dwelling reptiles, caecilians, fish typical of plateaus and have not been reported in recent past due to the continued disturbance. Threat status unknown

Vegetation types typical of the rocky plateau are severely degraded and only small populations seen in the areas away from tourist disturbance

General Observations

As an ecologist I have been researching rocky plateau ecosystem of Western Ghats for more than a decade and have gained knowledge of global rock outcrop habitat management methods from international experts on this issue. I have documented ecology of Panchgani tableland since 2003 as a part of research project.

Ecosystem processes such as nutrient cycling, water cycling, germplasm exchange, competition and symbiotic associations in this area are all highly specialized and fundamentally different from the forest habitats.

Owing to this, the management of the habitat needs to be carried out using norms created for "Rock Outcrop Habitat" (a globally recognized habitat category in which ferricretes are included). Applying the habitat management norms created for forest management (as are used by the forest department in India) is neither advisable nor sufficient for the management of this plateau.

Tourism has been the single biggest threat to the tableland habitat, its species, microhabitat diversity and ecosystem processes. In the past, inaccessibility limited the tourism to dry season, thus giving respite during the most critical growth and reproductive period of the animals and nutrient build up period for the ecosystem.

However, recent rise in the numbers and especially in the high impact recreational activities like horse riding has been disastrous. This has caused large scale destruction of endemic species' populations, seed banks, biofilm, habitat fragmentation, microhabitat loss and disruption of ecosystem processes.

Fortunately, the intervention by NGOs, Citizens, Civil regulatory bodies and court have arrested the damage at the moment and further action needs to be taken for damage control as well as impact mitigation.

It is my opinion that although the conditions of Panchgani tableland and its biodiversity and ecology have steadily worsened over the last 4-5 years, they have not reached the critical "point of no return"!

Management intervention, sensitive to special biodiversity, strict imposing of regulations along with cognizance of social, cultural, recreational issues associated with tableland can arrest the damage and restore the valuable biodiversity.

Recommendations:

In the present case, my opinion has been sought mainly about rerouting of horse track on the tableland. It is impossible to give a direct answer to this question, without reviewing the entire context of the conservation and management of tableland.

However, in view of the legal requirements of this case an abbreviated answer to this question is that :

"To allow horse riding or horse cart driving track on the tableland is an ecological disaster".

-Till now, riding horses, horse carts and all the associated recreational activities (including landscaping measures in and around the proposed track) have proved extremely damaging to the microhabitat diversity, associated flora and fauna and ecosystem processes.

The present plan submitted to the court by the council **does not in any way prove or even argue**, that the ecological damage done till now will be sufficiently mitigated or even curtailed and will not spread to the remaining less affected areas and their sensitive biodiversity.

Having said this, I do understand that in addition to the ecological dimension, there are many social, cultural, economic and recreational dimensions to the issue of horses and carts on the tableland. Technically it is not in my purview to take cognizance of these dimensions, (mine being restricted strictly to ecology), but these issues are interrelated and directly affecting the ecology of the tableland and natural heritage and hence do feature (although secondarily) in my considerations.

The **driving of horse-cart on** tableland is extremely high impact, requiring a different type of road and a much wider track which will effectively fragment the already small, fragile and sensitive habitat irreversibly. Hence, in my opinion horse cart should **certainly not be allowed**.

Before allowing an further activity on the Tableland, recommendations are being split into short term and long term for the preservation, conservation and restoration of Tableland.

Hence it is suggested that a track only for horses be conditionally allowed and **horse carts should be BANNED**

The following Short Term Measures to be undertaken immediately:

The conditions being:

1. A detailed conservation micro-plan needs to be drawn up and eco-restoration processes which is time intensive, if not cost-intensive has to be started on an **URGENT** basis. The present status of ecology can only be truly assessed after reviewing the conditions during the growth and reproductive period of monsoon. Hence a monsoon season study involving ecologists and multi-taxa specialist should be carried out to aid in conservation planning.
2. A management micro-plan should be prepared and submitted by the concerned authorities on how the environmental damage caused by horse riding can be "limited on short-term basis" and theoretical framework is set up for it to be "eliminated on long-term basis"
3. Detailed statement from authorities about how the regulations will be imposed on horse riders (local guides and tourists) and horse owners to abide by the plan set up for ecological damage control and mitigation.
4. Detailed statement from the authorities about how the above conditions will be followed at the same time abiding by the principles set up by the Prevention of Cruelty to Animals Law and conditions set up by the Animal Right's Advisor to the court.

¹Type Locality : The place from where first known specimen of the species was collected and scientifically named for the first time

²Mishra, D.K. & Singh, N.P. 2001. Endemic and threatened flowering plants of Maharashtra. Botanical Survey of India, Calcutta.

Report submitted by



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- Co-ordinator of Project "Networking and information support for conservation of rocky plateaus in the Sahyadri-Konkan corridor"(CEPF-ATREE WGhats initiative)
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