

PANCHGANI GROUP OF PLATEAUS, Satara District

Panchgani group of plateaus includes a group five distinct plateaus in Satara district. stretching from 17°54'12.08"N, 73°50'45"E to 17°55'29.98"N, 73°48'12.57"E. The elevation varies between 1200-1340m ASL. The most famous among them is the Asia Plateau or Panchgani tableland located in Panchgani hill station, and the nearest town is Wai. Panchgani tableland and Ambral can be accessed by jeepable roads upto the base of the tableland. Footpaths lead to Khingar, Rajapuri and Dandeghar plateaus.

Panchgani is included in the Mahabaleshwar-Panchgani Ecosensitive Zone. All the 5 tablelands around Panchgani are Conservation Zones. Panchgani tableland is a Natural Heritage Site.

Geology, geomorphology, flora and fauna of Panchgani tableland has been studied for more than a century. It was a popular summer tourism spot since British period. Winter tourism and monsoon tourism to this area is a recent phenomenon. The other plateaus although well known are not as famous as the Panchgani tableland.

The hill slopes surrounding the tablelands are gently sloping with mostly scrub vegetation due to excessive grazing and fuelwood collection. Those around Khingar and Ambral are in RF category. Slopes around Rajapuri are cultivated while those around the Panchgani tableland have shanties, bungalows, town market and institutes with large playing grounds. Good regeneration of trees is seen in campus of Moral Rearmament Institute at the northern side of the Tableland. But the eastern and western slopes have degraded scrub which has been planted with *Eucalyptus*, Silver Oak for more than half century.

Panchgani group	Area (sq. kms)	Disturbance
Panchgani tableland	0.3933	Excessive tourism
Khingar	0.2492	Tourism
Dandeghar	0.1908	local pressures
Ambral	0.1325	Plantation
Rajapuri	0.0157	Tourism
Total	0.9815	



Ecosystem services:

Many hill streams originate from these plateaus. They feed into Dhom and two smaller dams. The Panchgani tableland has large pond which retains water till the beginning of winter. Additionally several small ephemeral pools form during monsoon on all the plateaus. Some amount of grazing by goats and cattle from local villages and dhangars happens on all plateaus.

Biodiversity Profile

The Panchgani tableland has been floristically explored by the botanists for more than a century. It is **type locality** of six flowering plants (of which one is presumable extinct locally) and 2 freshwater fern species (*Isoetes* spp.) all of which are endemic to Western Ghats. It is also **type locality** of a freshwater Ostracode (an invertebrate), but its present status at the locality is unknown. It is also **type locality** of one lichen species and has around 20 lichen species, of which many are Western Ghat endemic. Most recently Lekhak and Yadav (2012) have documented floristic richness of this plateau.

A systematic ecological survey of the tableland has been done since 2003. 47 endemic species angiosperms and ferns are seen here of which 7 are Endangered, 2 are Critically Endangered, 3 are Vulnerable. Malabar Lark an endemic bird is seen but does not nest on the plateau.

Tourism related activities have taken a severe toll on these species. The populations of all the plants are impoverished and healthy growth is limited to the extreme corners and edges where tourists do not visit. The parking, central portion and the viewing points are completely devoid of lichens, mosses and algae due to excessive trampling over the years.

The small ephemeral pools so characteristic of the rocky plateaus have been destroyed by dumping of soil to create flat ground. This has led to loss of most freshwater fauna. The tadpole shrimps are now limited to few undisturbed pools away from the tourism area. Most severely affected is all the ground dwelling fauna. Hardly any amphibians, snakes or geckos are seen on the tableland. Removal of boulders over the years by local

people has led to destruction of a critical microhabitat of ground dwelling fauna.



Tadpole shrimp ©Aparna Watve

In 1909, Rev. E. Blatter one of the greatest botanists of the Western Ghats wrote about the Panchgani tableland:

“ The whole is covered with grass into which there are woven the loveliest of tiny flowers. Most of the characteristic plants prefer a gregarious life; there are smaller and bigger patches of a papilionaceous plants (*Smithia hirsuta*) or of the white delicate ‘*Eriocaulon*’, locally called ‘hat-pin’, or again, miniature little forests of the purple ‘*Dysophylla stellata* var. *gracilis*’, and whole carpets of the ‘Blue Bonnets’ (*Utricularia*) . . . ”

The beauty described in 1909 has never been seen since 2003, owing to the extreme disturbance of the land. But a glimpse of this was seen during 2012 Monsoon monitoring. After 8 month long restrictions on horse cart riding, the disturbed portions were re-colonized by the endemic vegetation.



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The less disturbed areas were dominated by typical lateritic plateau communities with *Utricularia* spp., *Eriocaulon* spp. and *Smithia* spp. in abundance along with *Rotala* spp.

Indigofera dalzellii, *Habenaria panchganiensis*, *H. heyneana*, *Glyphochloa spp.*, *Jansenella griffithiana*.

A grass, *Dichanthium panchganiensis*, an orchid *Habenaria panchganiensis*, a succulent *Euphorbia panchganiensis* and lichen *Diorygma panchganiensis* have been named after Panchgani and have put the tableland on the global biodiversity map.

Underground caves, typical of lateritic plateaus are present on the Panchgani and Rajapuri plateaus. One of the caves on Panchgani tableland was a roosting place of bats. This has been taken over by a restaurant. The disturbance by tourists has driven away the original bat colony of this cave. Now bats are seen only during monsoon when tourism is low. The second cave has dense growth of ferns and lichens and is also visited by tourists.

Current and potential threats

Tourism related activities pose a serious threat to the tableland and surrounding areas since the past. Efforts have been going on to regulate them since the declaration of the MPESZ.

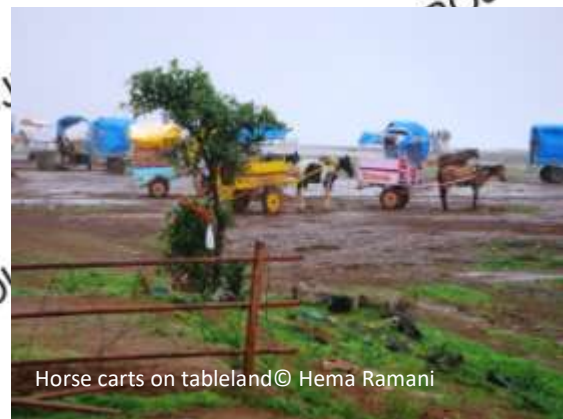
In the past, recreational activities including toy-trains, giant wheels, stalls, horse and horse cart riding, jeep driving, balloon rides were uncontrolled and were going on at the top of the Panchgani tableland. Riding of 2-wheelers and 4-wheelers was allowed till 2006. Parasailing was also allowed from the plateau.

An order by the Bombay High Court in 2006 moved many of these activities away from the plateau. The horse and horse cart riding has been banned during the monsoon (June-September). Monsoon tourism is very low, allowing some breathing space for the biodiversity. But the disturbance till now, which has been round the year has led to much destruction of a central part of the beautiful plateau. The Panchgani Municipal Council has been ineffective in stopping the horses and horsecart riding on main tableland, despite the Bombay High Court's clear order to do so. It has allowed many other activities under the name of landscape development. A pond has been created and soil upheaval and soil dumping has been carried out. A part of the

tableland has been converted into parking space. A portion traditionally used as a football ground is extremely impoverished.

Panchgani tableland is visited by tourists from all over India. Mahabaleshwar region is one of the most famous hill stations of India, popularized by many Hindi film shootings at this location. The tourism so far is entirely recreational and no effort has been done to promote awareness of nature or ecotourism.

In March 2012, due to an accident where a horsecart fell off the cliff and led to death of a girl and a horse, the High Court Orders were activated and horses and horsecart banned from plying on main tableland. An ecological review of the tableland area was carried out by Dr. Aparna Watve where a vision plan for conservation and eco restoration of the natural biodiversity of the plateau was submitted. The matter is still pending in court. Meanwhile efforts are being made to work along with the Panchgani Council towards developing an ecotourism approach for long-term benefit of the local people. An extremely promising vegetation recovery was seen in the year 2012 when horses and horse carts did not ply on the main tableland. This raises hope for the area which is a biological heritage site.



Horse carts on tableland© Hema Ramani



Football ground on tableland© Aparna Watve

Ambral, Dandeghar and Khingar are better protected from tourism as they are RF areas and have not been advertised. But plantation of exotics, digging was undertaken owing to ignorance about biodiversity values of the rocky plateaus.

Suggestions for Conservation:

- Implementing the provisions of the MPESZ with focus on biodiversity and ecology protection for the region
- Designing and implementing biodiversity and ecology conservation plan with regular monitoring of the sites
- Designing strategy for recovery of natural biodiversity (flora & fauna) and microhabitats of Panchgani tableland
- Creating Awareness amongst local government, people and visitors regarding biodiversity of tablelands and natural heritage.
- Regulating and reorienting tourism and related activities to promote nature awareness



Euphorbia panchganiensis © Aparna Watve

Based upon information provided by :

Hema Ramni, David Cardoz, Faroukh Wadia, Dr. J. Samant, Bombay Environmental Action Group; Mona Patrao, Redstone Eco Center; Panchgani Municipality Council; Dr. Hemant Ghate, Shri. Shiraj Jakhalekar, Siddharth Kulkarni, Sameer Padhye, Dept. of Zoology, Modern College, Pune; Vinaya Ghate, Dr. Gargee Pandit, Agharkar Research Institute; Dr. Aparna Watve, Yatish Lele, Apeksha Patil, Saniya Kirloskar, Anupriya Kariappadath, Biome Conservation Foundation



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