



EASTERN GHATS' TRAGEDY

If the mines don't get them... the dams will

This is not a happy story that **Vikram Aditya, Dr. T. Ganesh** and **Giridhar Malla** have to share with *Sanctuary* readers.

"We hunt the leopard. I can show you how we track them too," said the *Konda Reddi* tribal villager. We were at Villarthi village, in a remote forested stretch between the towns of Upper Sileru and Donkarayi in the northern Eastern Ghats of Andhra Pradesh's Visakhapatnam district. Across

the border lay Odisha. Historically this region supported a rich floral diversity, but in recent decades the Eastern Ghats have largely been ignored in favour of other hill regions across India. The rediscovery of the Indian golden gecko *Calodactylodes aureus* and the Jeypore ground gecko *Geckoella*

jeyporensis, earlier presumed locally extinct has caused some resurgence of public interest, but not enough to make a significant difference. Several researchers have begun to study the faunal diversity of this incredible region, but the hazards confronting this landscape seem almost insurmountable.

DAMMED FUTURE

We stopped at Villarthi, on the banks of the river Sileru (Machkund in Odisha) on an extensive trip across Andhra Pradesh's Eastern Ghats earlier this May to investigate the conservation challenges facing this fast-changing region. During a bicycle expedition in 2010 funded by the National Geographic Society, we spent three months following the Godavari river for 1,200 km. from its entry into Andhra Pradesh to its estuary at Antarvedi, a sizeable portion of which was along the Eastern Ghats. This time, we chose to follow the Sileru (Machkund in Odisha) river for two days, as it meandered down the hills to join the larger Sabari (Kolab in Odisha) river. Both rivers originate in the northern Eastern Ghats and flow west, merging at the tri-state junction of Andhra Pradesh, Odisha and Chhattisgarh, from where they flow together for a short distance until they unite with the Godavari. As we moved west down the Ghats along the Sileru, we passed three large dams on the river within a span of 100 km. Despite being a relatively short river with a total course of less than 300 km., the Sileru has been heavily dammed because of its rapid descent in elevation from 1,066 m. (3,500 feet) at its origin in the Eastern Ghats, giving rise to swift water flows. As many as four large dams (from east to west – Jalaput or Machhakunda, Balimela, Upper Sileru and Lower Sileru) have been constructed by the Odisha and Andhra Pradesh governments since 1950. The Sabari or Kolab, into which the Sileru converges and which forms the state boundary between Odisha and Chhattisgarh, has fared no better and nor has the Indravati, which also originates in the Eastern Ghats of Odisha and flows west through Chhattisgarh and Maharashtra. All these great rivers are lifelines for

southern Odisha, north coastal Andhra and Chhattisgarh's Bastar region and all flow west, before pouring into the Godavari.

Not surprisingly, these forested hills and rivers have long been the traditional homeland for indigenous tribal groups including the *Konda Reddis, Konda Doras, Samanths, Valmikis, Koyas* and *Khonds*. But their existence is now threatened by rapid change driven by deforestation and the commercial exploitation of forests, including pipeline construction, dams, bauxite mining and road widening. The dams in particular have been hugely destructive with massive impoundments that have submerged thousands of hectares, turning hilltops into islands and driving out wild species.

A HABITAT GOING DOWNHILL

As we drove across the highest motorable roads in the Ghats at around 1,200 msl near the town of Chintapalli, we came across bare plateaus and hilltops stripped of vegetation due to deforestation, and a sombre indication of the potential impact of mining. Bauxite mining and the associated road widening required to transport the ore to processing plants threaten several thousand hectares of fragile forests in these hills to the detriment not only of wild species, but of the water security of the region. Mining is promoted by the Andhra Pradesh and Odisha governments to capitalise on the mineral wealth of the region. Bauxite has been discovered in both states, and large tracts of forest land have been identified for mining. The Andhra Pradesh Mineral Development Corporation has actually signed agreements with international mining firms including JSW and Vedanta to process ore in smelting plants located near the base of the Ghats in the Visakhapatnam and Vizianagaram districts. This clearly

THE POLAVARAM PROJECT

The Polavaram project was initially conceptualised and surveyed in the 1940s when this region was under the Madras Presidency. The main stated objectives of this multipurpose project were to construct a multipurpose dam at Polavaram in West Godavari district of Andhra Pradesh at a height of 150 feet at FRL, through which to provide additional irrigation to 2,91,000 ha of agricultural land mainly in the coastal districts, provide water to the Visakhapatnam urban region for drinking water supply and industrial needs, generate hydropower of 960 MW, and to divert approximately 80 tmc of water to the water deficit Krishna delta. This last is being conceived as part of the Interlinking of Rivers programme. (Source: *Perspectives on Polavaram: A major irrigation project on Godavari*, Eds: Biksham Gujja et al., 2006, Academic Publications).

MAIN THREATS TO THE NORTHERN EASTERN GHATS

The main threats facing the northern Eastern Ghats include deforestation, hydropower projects, bauxite mining and road widening. The massive impoundments that dams and their reservoirs have formed between the Andhra Pradesh and Odisha borders have submerged thousands of hectares of forests. Mitigation of forest encroachments, restricting road traffic particularly during the nights on the roads traversing the Eastern Ghats and the Andhra-Odisha borders, and capacity building of local stakeholders will contribute to conservation of the northern Eastern Ghats region.

FACING PAGE *The Polavaram project in Andhra Pradesh is bound to affect small rivers such as the Pamuleru.*

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BIODIVERSITY

Little is known about the biodiversity of the northern Eastern Ghats and the Papikonda National Park in particular, as no comprehensive studies on species diversity have been conducted so far. The only known information is from occasional studies and British records. As of now, 376 bird species have been recorded from the entire Eastern Ghats region (<http://eptrienvs.nic.in/>), most of which are also found in Papikonda and the surrounding forests of the northern Eastern Ghats. Some of the rare birds found here include the Abbott's Babbler, and Little Spiderhunter. Some 528 tree species have been recorded in the Eastern Ghats including *Syzygium cumini*, *Terminalia tomentosa*, *Pterocarpus marsupium*, *Semecarpus anacardium*, *Cleistanthus collinus*, *Adina cordifolia*, *Hardwickia binata* as well as *Tectona grandis* in teak plantations. The mammalian fauna of the region includes the tiger, leopard, jungle cat, rusty spotted cat, sloth bear, Indian wild dog, jackal, palm civet, small Indian civet, gaur, sambar and chital. The most exciting news in recent times has been the discovery of the rare golden gecko, which inhabits rocky boulders in moist deciduous forest patches and the Jeypore ground gecko, which inhabits forests in the northern boundaries of Papikonda and from other areas in the northern Eastern Ghats region. The golden gecko had been previously known only from Seshachalam and Velikonda ranges of the southern Eastern Ghats of Andhra Pradesh, and from Arcot district of Tamil Nadu. The gecko has also been recently discovered in the Niyamgiri hills in the northern Eastern Ghats of Odisha.

violates the Schedule Five provisions of the Constitution, which regulate development and grant special powers to tribal communities. It also violates the *Forest Rights Act* of 2006, whose misuse has led to deforestation in some parts of the country.

Meanwhile, across the border in Odisha, things are no better, with land acquisition for mining being pushed in the Niyamgiri hills (See *Sanctuary* Vol. XXV No. 5, October 2005). Tribal people and local communities are rising up in protest against the capture and surrender of their traditional homelands and forests to multinational mining firms including POSCO, Vedanta and Jindal. In an ideal world they should have been working together with wildlife groups, but somehow in the past few years, this vital unity has been difficult to come by.

Toward the end of our not very cheerful trip, we drove south away

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from the Sileru river towards the Papikonda National Park, the only one in the northern Eastern Ghats. Papikonda was declared as a wildlife sanctuary covering an area of 591 sq. km. in 1998 and was upgraded as a national park with an area of 1,012 sq. km., by adding 421 sq. km. in December 2008. Straddling the Ghats and supporting some of the best-protected forests in the region, this forest is now a major tourist attraction due to its agreeable weather and the vistas of scenic sections of the Ghats and the Godavari river. But even here we saw

development's lethal touch. There is rampant cutting of bamboo, widening of the alignment through the park into a double lane road, and frequent forest fires. Vast swathes of forest on either side of the Godavari river had been cleared for the Indira Sagar Dam, which threatens to inundate thousands of hectares of land and displace 276 tribal villages.

"What are they doing to India?" we wondered as we reflected on the havoc wreaked upon the landscape. We saw degradation everywhere and the word 'insurrection' came to mind as we took in forest fires, encroachments, mining and even hunting. But even these paled into insignificance when compared to the impact of the Polavaram dam (see box) and its associated projects, which promise to deal the northern Eastern Ghats the ultimate ecological *coup de grace*. 🐸



Waste from the second stage of bauxite processing is pumped from the Vedanta plant into a dumpsite which was previously agricultural land in Lanjigarh, Orissa.



The rediscovered Indian golden gecko *Calodactylodes aureus* is found in Orissa, Andhra Pradesh and Tamil Nadu. Mining, logging and shifting agriculture are some of the major threats this species faces.