

Neyyar Wildlife Sanctuary

by A.J.T. Johnsingh

Vavattimalai (1676m) stood shrouded in translucent white clouds, which were occasionally painted with a tinge of gold by the sun playing hide and seek amidst rain clouds in the western sky. We were on our way from Athirumalai to Meenmutti in Neyyar Wildlife Sanctuary in Kerala, walking along the bridle path, and flanked by patches of golden yellow grasslands and evergreen forests. Bright red crowns of trees, possibly of *Mesua ferrea*, a species found in north-east India and in the Western Ghats, amidst the dark green canopy, indicated that spring was around the corner.



Mountains on the way to Meenmutti

-Dr. A.J.T. Johnsingh

As we rapidly descended towards Meenmutti often taking short cuts along the steep slopes, the forest composition gave way to semi evergreen forests where *Bacouria courtallensis* trees stood adorned with the reddish racemiform panicles densely crowded on the trunk. The moist deciduous forests were dominated by *Careya arborea*, which had a crop of small mango-like fruits in profusion, a favourite food of sambar deer. The forest floor was littered with its greenish white flowers. The air was imbued with the strong odour of the male cones of *Cycas circinalis*, a species of gymnosperm, which grew profusely on either side of the road.

There were tracks of sambar on the path, also old and new elephant dung. Gradually darkness descended, first in the valleys and then on the mountain slopes, and when it became pitch dark, we brought out our flashlights. When we reached Meenmutti forest bungalow, which is on the right bank of the Neyyar river, I was muscle stiff and bone weary after logging 27km that day. Watched by numerous twinkling stars and an equal number of fireflies, most of us went for a brief swim in the large pool of the Meenmutti waterfalls. The bath had a magical reviving effect on my weary body.

My walk to Meenmutti started around 0800 hrs one late February day of 2000, from Kannikatty (700m), which is about 10km from Agastyarmalai, 1866m (the other name is Pothigaimalai, the birth place of Tamil) the highest mountain in the southern Western Ghats, on the border of Kerala. Kannikatti is in the midst of the rainforest of the Kalakad-Mundanthurai Tiger Reserve (KMTR) in Tamil Nadu. I was accompanied by Mr. James Zacharias, the

wandering wildlife guardian of Kerala, Mr. Suresh Elamon, one of the leading naturalists of Kerala, and four wildlife staff of the Tiger Reserve. Our plan was to meet Mr. Pradeep Kumar, the energetic wildlife warden of Neyyar Wildlife Sanctuary, who a few months later became famous for arresting elephant poachers in Trivandrum, on the top of Agastyarmalai and go down to Neyyar. The weather, cloudy and rainy two days ago, fortunately cleared up, eliciting musical calls from different species of birds, prominent among them was the Malabar whistling thrush. Groups of Nilgiri langur, an endangered primate endemic to the Western Ghats, whooped from different parts of the forest as if to reply to the chorus of the birds.

Our team was led by a *Kani* tribal. He knew the terrain like the back of his palm, and could differentiate the narrow trail overgrown with dense vegetation in most places from the numerous elephant and sambar trails. Tracks of sambar and elephant were plentiful but sightings were a few although we walked as silently as possible. A 3kg monitor lizard was sunning itself on a heap of dry grass, a pit viper which looked like a coiled dry twig lay motionless on a wet rock near a stream, and an arboreal mammal vanished into the dense canopy before I could focus my eyes from the ubiquitous marauding leeches to the swaying branches. Two plants in the rank growth of vegetation attracted my attention. One was *Begonia floccifera* with lotus-like leaves, and flowers with coral-coloured ovary. The other was *Anaphyllum beddomei* with yellowish spatula and coral red berries.

An exhilarating scenery awaited us as we emerged from one of the extensive rainforests on the eastern slopes of the Western Ghats after a four hour walk. To begin with there was a profusion of pink flowers of *Sonerila versicolor* dancing to the tune of wind along the banks of a stream that came down merrily along a rock-face. The granitic mass of mountain to our right looked as if it had a vast coconut farm, due to an abundant growth of *Bentickia condapanna*, an endangered palm endemic to the southern Western Ghats. As the palm is relished by elephants it survives only in places where the elephant cannot reach. The moist patches of the valleys and slopes, which had a thin layer of soil, had a rank growth of reeds, another favourite food plant of the elephant. The green and brown patches of the mountain slopes looked like rose gardens, with the bright rose coloured flowers of *Osbeckia* sp. gently swaying in the breeze.



Flowers of *Osbeckia* sp. on way to Pongalparai

-Dr. A.J.T. Johnsingh

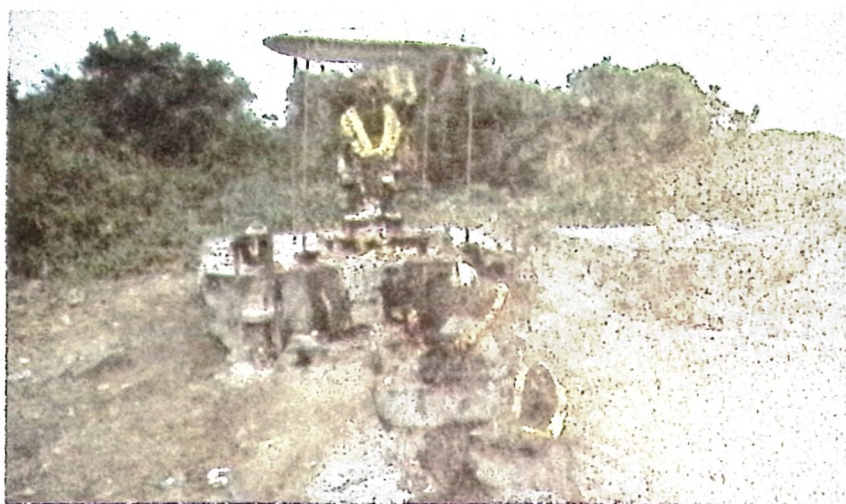
As we reached Pongalparai, the place where sweet rice is cooked to offer to Sage Agastya whose abode is the top of the Agastyar Peak, I heaved a sigh of relief thinking that the major walk for the day was over. Only later in the night did I realise that the toughest part of the walk only began at Pongalparai. Although the distance from Pongalparai, which is in the Tiger Reserve, to the top of Agastyarmalai is only about 1.5km, it is mostly a steep climb, in places across steep rock faces. I was thirsty, but had not taken a water bottle along, and I was afraid to drink from the springs around Pongalparai, as the place was littered with various types of garbage including occasional human filth. There was a string of visitors coming down and going to the top.

Yet the sight of Mr. Pradeep Kumar and his devoted staff standing atop Agastyarmalai and waving their hands, enthused me. I forged ahead with James leading the way. We frequently stopped, gasped for breath, admired the flowers and went ahead. The occasional mist drifting past was invigorating. Finally, after an hour or so, we reached the top. Fragrance from different flowers that had been offered to Sage Agastya and the burning incense sticks permeated the air around the temple, where lamps fluttered in the wafting mist. Most places around us were shrouded in the mist, but Ainthuthalai Pothigai (1862m, five-headed Pothigai) and Nagapothigai (snake-headed Pothigai) stood majestically above the dense layer of clouds.

Pradeep had suggested that we could go down to Athirumalai (1300m), seven kilometers away, for lunch, and having said that he went ahead of us with his team. Later we descended to Pongalparai, watched a black eagle as it soared low over a stunted forest looking for prey and crossed Tambiraparani, one of the major rivers of Tamil Nadu, as it came cascading down the western slope of Agastyarmalai. The 'river' here was a meter wide. Later, in the company of Pradeep and his staff, who were waiting for us, we descended along a narrow path, into the rainforest lower on the western slope of Agastyarmalai. Although the path was heavily used by pilgrims, the portion of the rainforest through which the path went was reportedly inhabited by a group of lion-tailed macaque, an endangered primate endemic to the Western Ghats. The path through the rainforest seemed endless, but gave us a unique opportunity to see a rare form of brilliantly coloured fungus *Polyporus* sp. growing on a dead and decaying giant of the forest.



Polyporus sp. indicating richness of the forest - Dr. A.J.T. Johnsingh



Agastyar Temple

- Dr. A.J.T. Johnsingh

In order to facilitate the visit of pilgrims, the Kerala Forest Department has built a large dormitory in Athirumalai, managed by the Ecodevelopment Committee of the Kanis of the Peppara Wildlife Sanctuary, which is just west of the Neyyar Wildlife Sanctuary. Every pilgrim with a permit to visit Agastyarmalai, can stay in the dormitory for Rs.50 a day. Tea and meals are served by the *Kanis* on payment. Lunch for example was Rs. 25 when I visited. The profits made are shared by the *Kani* community who are requested by the Forest Department to help in conservation. We had a simple lunch of rice, *dhal* and vegetables, enjoying the magnificent view of Agastyarmalai, and left for Meenmutti later in the afternoon.

Neyyar Wildlife Sanctuary is situated at the southern tip of Kerala, 30 km from Trivandrum, the capital city. This area was notified as a Wildlife Sanctuary in 1958 and protects the catchment of the Neyyar reservoir, the waters of which are used for irrigation. This Sanctuary covers an area of 128 sq km, and the Agastyarmalai ridge, which extends from Athirumalai to Varaiyattumudi (1416m), along the northeastern boundary of the Sanctuary, forms a formidable fortress between the Sanctuary and the Tiger Reserve. This 15-20 km ridge, with grasslands and steep rock faces on its southern slope, can be a veritable home for the endangered Nilgiri tahr, which is now largely confined to Varaiyattumudi and the hills east of it. Although the Sanctuary is small, it presents a remarkable diversity in vegetation, ranging from moist mixed deciduous to evergreen, because of its dramatic altitudinal range, 90 to 1868m. The Sanctuary, with its fascinating trekking routes, and being so close to Trivandrum, can be a haven for ecotourists who already through the serene and scenic Kerala, rightly called "God's own country". Limited sport fishing of murrel (*Ophiocephalus striatus*) can also be promoted in the Neyyar reservoir.

It is estimated that there are over 1000 species of flowering plants in the Sanctuary, of which about 12% are endemic to the region. A noteworthy feature of the vegetation is the preponderance of orchids. About 125 species have been recorded from the Sanctuary. Some of the endangered plants are *Bentickia condapanna*, *Poeciloneuron pauciflorum*, *Paphiopedilum druryi* and *Chiloschista glandulosa*.

The Sanctuary is home to most animals found in the Western Ghats – king cobra, Nilgiri langur, lion-tailed macaque, mouse deer, sambar, gaur, elephant, dhole, sloth bear, leopard and tiger. Barking deer is reported to be frequently seen here, while for reasons unknown, it is almost absent in the adjoining Tiger Reserve. Although the leaf-eating Nilgiri langur in Neyyar is largely confined to the evergreen forests around Athirumalai, habitat is favourable for it to extend its range throughout the Sanctuary. If this happens, its population could go up to 3000 animals and could form a valuable prey base for the leopard and the tiger. Similarly the small population of about 50 tahr largely confined to Varaiattumudi could extend its range westwards to the southern slopes of Agastymalai and the population could grow to between 300 and 500 animals.

Like most other protected areas in the country, this small Sanctuary is also subjected to biotic pressures. There are 14 *Kani* tribal settlements within the Sanctuary, and numerous non-tribal villages largely along the southern and southeastern boundary. Unrestricted poaching in the past may have been the reason for the restricted distribution and low number of Nilgiri langur and the tahr. Controlling poaching in this densely forested mountainous terrain only by patrolling is difficult. Anti-poaching measures should therefore have a mixture of strategies – gathering information about the plans of poachers in the villages and raiding their abodes, including caves in the forests when they are on their nefarious mission. The Sanctuary staff, under the leadership of Pradeep, is now geared for such arduous and adventurous tasks.

Two not-so-good decisions taken by the Management in the past now haunt the Sanctuary – one as an eye sore and the other as an ear sore. The eye sore is the crocodile farm established in 1977 near the administrative complex at Neyyar, where 100 or so marsh crocodiles (*Crocodylus palustris*) face an insecure future. They fight with one another and as a result many are mutilated. The adults desperately try to breed and often lay eggs in the limited area available to them covered by hard earth. Neyyar reservoir now has a fairly visible population of crocodiles (and otters), and therefore the crocodile farm has become redundant.

The ear sore is the frequent roaring of hybrid lions in a 4 ha lion safari on an island on the fringe of the Sanctuary. James queried with concern whether the roaring of lions would deter tigers frequenting Neyyar. I was of the opinion that, attracted by the pheromones and roar of the lion, the more aggressive tiger may seek out to challenge the lions in the safari area if it is close to a disturbance-free tiger habitat. It is desirable to shift both the safari and the crocodile farm out of the Sanctuary. But in the land-starved state of Kerala, it may not be that easy to find alternate sites.

We have learnt from recent conservation theories that survival chances of endangered species are much better at a landscape level, rather than in a small protected area. Neyyar Wildlife Sanctuary may be ecologically varied, but it alone cannot ensure the future of species such as lion-tailed macaque, tahr and tiger. Fortunately, in the Western Ghats it is still possible to plan conservation at a landscape level. One unit identified by international tiger experts is the Periyar-Kalakad Tiger

Conservation Unit. It spans from the Periyar Tiger Reserve in the north to KMTR in the south, and includes the various forest divisions in between and the protected areas of Grizzled giant squirrel sanctuary, Shendurny and Peppara. We could conveniently call this the Megamalai-Kalakad Tiger Conservation Unit, together with some excellent wildlife areas in Theni division north of the Periyar Tiger Reserve. The forest area of this Unit is around 5000 km², and if managed as a single unit by the collaborative efforts of the Tamil Nadu and Kerala Governments, it can be a veritable home for several critically endangered animals.

Problems in this tract are poaching for ivory and meat, *ganja* cultivation and the increasing biotic disturbances due to shrines such as Kannaki, Sabarimala and Agastya temples. Unplanned and unregulated tourism in the garb of ecotourism is another growing threat. Presently, as a result of road and railway track and human habitations along the Ariankavu Pass, this tract stands divided for species like elephant and lion-tailed macaque. It is possible to create corridor continuity across the Ariankavu Pass if there is concerted effort by the Forest Departments of Kerala and Tamil Nadu. Our objective should be to establish the corridor within the next five years and manage this area as one conservation unit, protecting it against poachers and unplanned development.

The morning I left Neyyar, in the dim light of the dawn, the reservoir water looked a deep blue where a solitary snake bird was hunting for its breakfast. Groups of little cormorants and little egrets, silhouetted against the grey sky, winged their way to feeding sites. As it has done for millions of years, the Agastymalai stood majestic over the reservoir, forests and other mountain peaks, as if guarding the area. A lion roared and greeted the morning, and I wished that a decade or two from now, a visitor like me would not hear the roar of the lion, which is totally unnatural to Neyyar, but may listen with rapt attention to the haunting *A-oongh A-oongh* of tigers at night.

Whale Rescue Operation in Kodiakarai

by Akash Deep Baruah

[Stranded of whales has often been reported from different parts of the world. However, in India, till date, no stranded whale had ever been successfully released back to sea. This article is an account of how a stranded Bryde's whale was released back to the sea, off the coast of Kodiakarai in Tamil Nadu].

On October 12th, 2000 the office of the Wildlife Warden, Nagapattinam received a message that two whales had been washed ashore near Kodiakarai, about 60 kilometers to south of Nagapattinam. The Wildlife Warden alongwith other forest officials rushed to the spot and one whale was found washed ashore in decomposed condition on the beach, south of Pt. Calimere Wildlife Sanctuary. The other whale was found alive near Pachakadu about 10 kilometers to west of Kodiakarai in the Palk Strait. Though stranding of whales in Kodiakarai has been