



Auroville Greenwork in the larger context of Bioregional Conservation

Auroville and the TDEF

Auroville is situated in the coastal region of south-eastern peninsular India which has a vegetation type defined as Tropical Dry Evergreen Forest – TDEF (Champion and Seth 1968). It has a narrow range, approximately 500 km long running north to south, and with a width no wider than 50km. In 2002 it was estimated that only 4% of this TDEF range was under forest cover, but the results of field studies carried out showed that only 5% of the remaining forest was actually pristine TDEF, with the other 95 % being highly disturbed, with a classification of degraded scrub. Therefore, it would be fair to state that only 0.2% of this range now exists as an ecosystem, and consequently making it a very rare forest type in India, if not the rarest due to its anyway limited range. The circumstances which have left this forest system in a fragile state are many, but mainly the high concentration of human population in this coastal belt and the impact that has on the environment.





The TDEF, like most tropical forests, contain large amounts of species and biodiversity, it is estimated that up to a 1000 different plant species make this forest type their home with 300 of these being woody. The forest type has adapted to being in cyclonic region, with a relative low canopy of 8 to 10 metres with the occasional emergent tree. The canopy is rich with inter linked lianas and the forest floor is a rich layer of biomass that is effectively recycled by plant feeder roots in the top 1cm of soil. The TDEF, like classical tropical forests hold its nutrient wealth in the canopy, thus once cut the soil becomes impoverished and quickly leached by the region's intense monsoon rains. A forest type is not only the flora, the plants that are present within the ecosystem, but also the fauna, the mammals, birds, reptiles and insects that survive and thrive in this habitat. In the past leopards and elephant herds would have roamed these regions, perhaps even tigers, but today the TDEF is home to smaller mammals, the mongoose, porcupine, Indian civet cat, jungle cat, and many more including the fruit bat which is an important vector for spreading seeds of the forest. The TDEF also is home to a large population of reptiles and a myriad of bird species that gain protection from the dense habitat the TDEF offers, but it also gives place for the insects to thrive, the pollinators, which are now proving to be key elements of any environment where be natural plant areas or manmade ones such as agriculture.



The Sacred Groves

The last remnants of the TDEF, which indicate a primary forest, exist in sacred groves that are found around temples, generally of the deity Ayyaner but not exclusively. These shrines situated outside villages and the with the religious cultural belief system that the god enjoyed hunting and being in the forest at night meant that pockets of forest around the temple were kept, protected and held sacred. These groves vary in size,



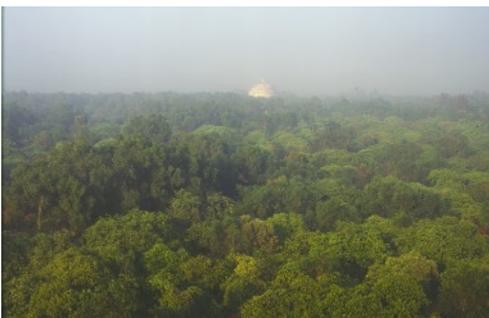


sometimes less than hectare but others up to 10 hectares, during our studies in the late 90's up 75 sacred groves were analysed and researched, and thus became the bio-resource, both in knowledge and seed source for the restoration and re-establishment of the TDEF within the Auroville community. This effort became the main focus of our environmental work here in Auroville, an effort to established protected pockets of this endangered forest type and the rich heritage of its biodiversity held within it.

Auroville's Greenwork

Auroville came into being in 1968, the plateau that was to become the city the earth needs was an eroded, barren landscape devoid of trees, other than some palmyras and a few banyans. The initial challenge for the community members was to create a hospitable environment to live and work in, at that point there was no large environmental wisdom or vision, it was basic human necessity, that water and shade were required and the effort started. Soil and water conservation measures were implemented and trees were planted in a passionate, though albeit haphazard way. As the decades progressed there soon emerged an Auroville forest, which was a mishmash of exotic and native species, the hardy ones that could survive those initial tough pioneer conditions. It was only in the mid to late 90's after the in-depth study of the indigenous vegetation, that the TDEF was introduced en masse within Auroville, utilising the shade and biomass the initial pioneer species offer. This became the single planting focus of the group involved in coordinating environmental work which has accumulated today in the planting of half a million TDEF saplings.

It is now apparent that the Auroville plateau contains the largest contiguous area of TDEF, though it is not old growth but a young forest, it is starting to mature, and to regenerate. The regenerating factor is a good indicator of protection, and also that from a limited genetic stock of



plants from our region, it is not only surviving but flourishing.

The status of the TDEF

Putting the Auroville area of TDEF into context with the whole zone doesn't really indicate the present day status of the forest. For this understanding there is presently a research project underway which aims at understanding what is the current status of TDEF. Part of this entailed revisiting the sacred groves that were studied 25 years ago with the view of doing a comparative study. Though this study is not complete and published, certain conclusions are clear; the nature of a sacred grove and their land status means that these areas have not increased in area, that about 25% of the groves are in fairly static state, well protected and have maintained a similar canopy cover, the remaining 75% it was observed that there is some level of disturbance which has led to a reduction in their canopy cover. From these findings it can be said that the status of the TDEF forest reference its spatial distribution across its range is still in decline.



Future partnership

As Auroville is now holding and protecting rare biodiversity material in its forests it means that this heritage is not lost. There is a clear will to understand the dynamics of how this status of the TDEF can not only be held in check but improved. This could mean using the seeds from plants within Auroville to create seedlings which can be spread back into the bioregion. Projects have already started to do this on a small scale and there is a will to now give back to the bioregion and thus not only protect the TDEF but to help it thrive and grow.



Prepared by Glenn Baldwin - Auroville Forest Group 14/12/2021