Arunachala Forest Baseline Photopoint Monitoring:

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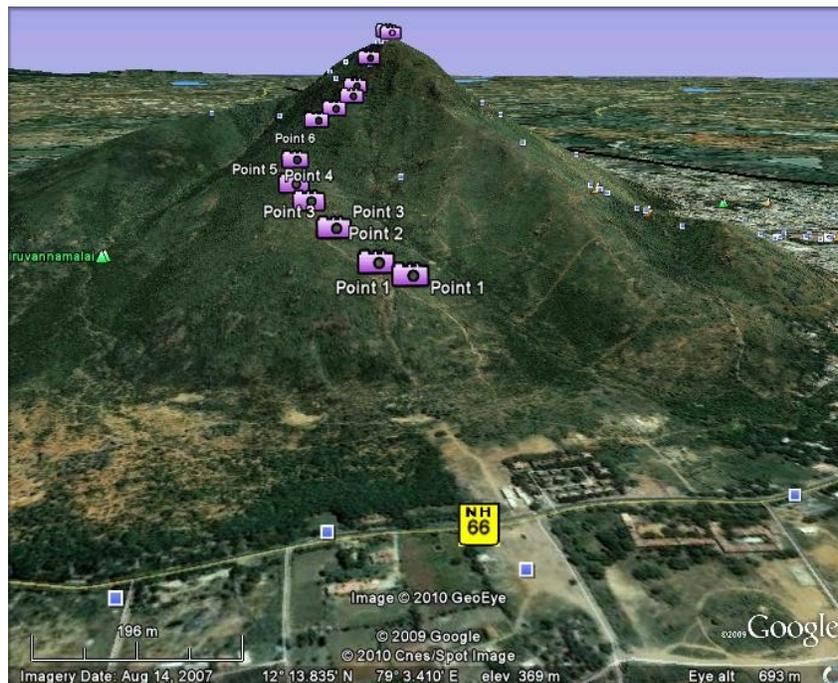ydbarness@gmail.com
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Tiruvannamalai, Tamil Nadu, India, January 2010
*http://www.treeoctopus.net/cvPost/Arunachala.zip*

Arunachala Mountain is a unique and important natural habitat in the heart of Tamil Nadu. Extensive efforts to replant and restore the forest of the mountain have been undertaken over the last six years, but no monitoring program had been established.

On Sunday, 17 January, 2010, Rajath Kedilaya, Govinda Bowley (The Forest Way), and YD Bar-Ness (www.treeoctopus.net) established a series of photomonitoring points on the southern slopes of Arunachala Mountain, Tiruvannamalai, Tamil Nadu, India.

We sought to begin a record of forest conditions on the mountain, to aid in The Forest Way's replanting and restoration. While we do not believe our points represent the entire range of conditions on the mountain, we hope that the process of taking, mapping, and packaging this information will spur future efforts. We encourage revisitation of these points at regular intervals, and we encourage the establishment of photopoints in other areas of the mountain.

At each point, we took photographs using a CANON Powershot G10 15mp digital camera in eight compass directions, and used a celphone GPS (Global Positioning System) to record our location. A photo was taken of the GPS screen to include with the images. Using Google Earth software, the locations of the photos were marked on a 3-d map of the mountain. The raw coordinates, latitude-longitude, are presented below. Picasa photo software was used to geotag each photo, i.e. to embed the Latitude/Longitude position on Earth within the JPG image. Picasa was additionally able to create clickable thumbnail maps for opening with Google Earth. Finally, the time-date stamp embedded within each file is available for use in comparing future images.
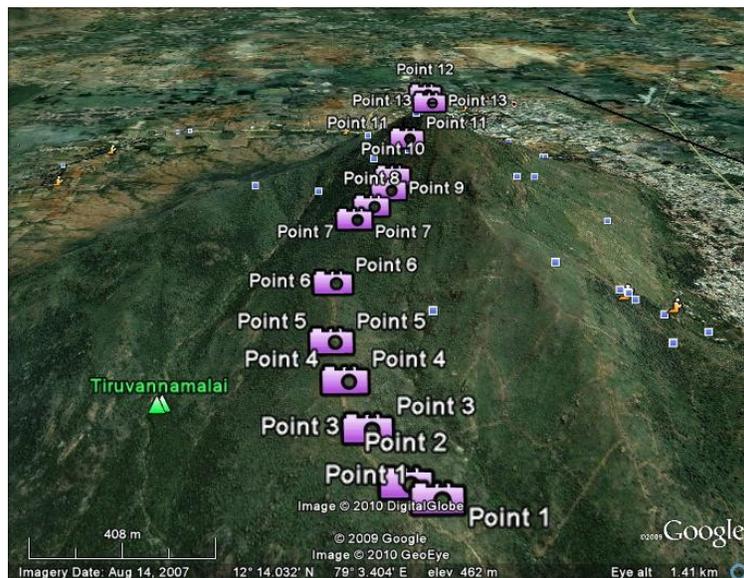
To continue with photomonitoring these points, a GPS and a digital camera are required. Enter the latitude longitude of the point and travel to that point, and repeat the methods of the above paragraph. Regular revisitation will allow for a visual portrait of environmental changes. At these locations, any additional observations may be recorded and "fixed" on the map for a specific time and date. These could include: nearby tree species; ground cover of grass-rocks-trees-shrubs-plastic-burnt

ghee; bird species encountered; temperature; or any other *measurable, repeatable, well-recorded* observation.

All materials are available at *http://www.treeoctopus.net/cvPost/Arunachala.zip*

To strengthen the usefulness and validity of this point collection, we recommend that additional points are established. In conjunction with forest scientists, please consider first, what concepts should be compared.

Photo monitoring is inherently a comparison of time, so as the regular intervals of photos are collected, there will be a comparison to this "year zero" baseline data. But establishing more points spatially will require careful thought as to their placement. Additionally, our path climbing up the ridge inherently represents a transect in elevation. Future efforts should include points at lower elevation.

Three major comparisons of concern are: 1) Aspect- ridge (Points 1-13), valley, and slopes; 2) Replanted vs. Unplanted; and 3) Burnt-unburnt. Choosing the exact locations can be aided by the use of Google Earth software, and should be done in conjunction by an experienced forest ecologist, someone with extensive local and historical knowledge of the mountains ecology, and the field technicians who will be performing the monitoring.

If revisited, maintained, and extended properly, the photo point network can be the seed of a invaluable resource for humans in their relationship with the mountain and its natural environment. Good luck!

Photo Point Coordinates

Arunachala PhotoPoint 1
Coordinates: Latitude, Longitude=79.05218333333333,12.22971666666667,0
Altitude (m) = 290

Arunachala PhotoPoint 2
Coordinates: Latitude, Longitude=79.0517,12.23013333333333,0
Altitude (m) = 311

Arunachala PhotoPoint 3
Coordinates: Latitude, Longitude=79.0514,12.2314,0
Altitude (m) = 353

Arunachala PhotoPoint 4
Coordinates: Latitude, Longitude=79.05136666666667,12.23266666666667,0
Altitude (m) = 386

Arunachala PhotoPoint 5
Coordinates: Latitude, Longitude=79.05148333333334,12.23391666666667,0
Altitude (m) = 404

Arunachala PhotoPoint 6
Coordinates: Latitude, Longitude=79.05225,12.23603333333333,0
Altitude (m) = 431

Arunachala PhotoPoint 7
Coordinates: Latitude, Longitude=79.05358333333334,12.236666666667,0
Altitude (m) = 515

Arunachala PhotoPoint 8
Coordinates: Latitude, Longitude=79.05415000000001,12.23806666666667,0
Altitude (m) = 543

Arunachala PhotoPoint 9
Coordinates: Latitude, Longitude=79.0548,12.23833333333333,0
Altitude (m) = 574

Arunachala PhotoPoint 10
Coordinates: Latitude, Longitude=79.05508333333333,12.2387,0
Altitude (m) = 602

Arunachala PhotoPoint 11
Coordinates: Latitude, Longitude=79.05598333333333,12.2397,0
Altitude (m) = 685

Arunachala PhotoPoint 12
Coordinates: Latitude, Longitude=79.0574,12.2414,0
Altitude (m) = 767

Arunachala PhotoPoint 13
Coordinates: Latitude, Longitude=79.0572,12.24066666666667,0
Altitude (m) = 762