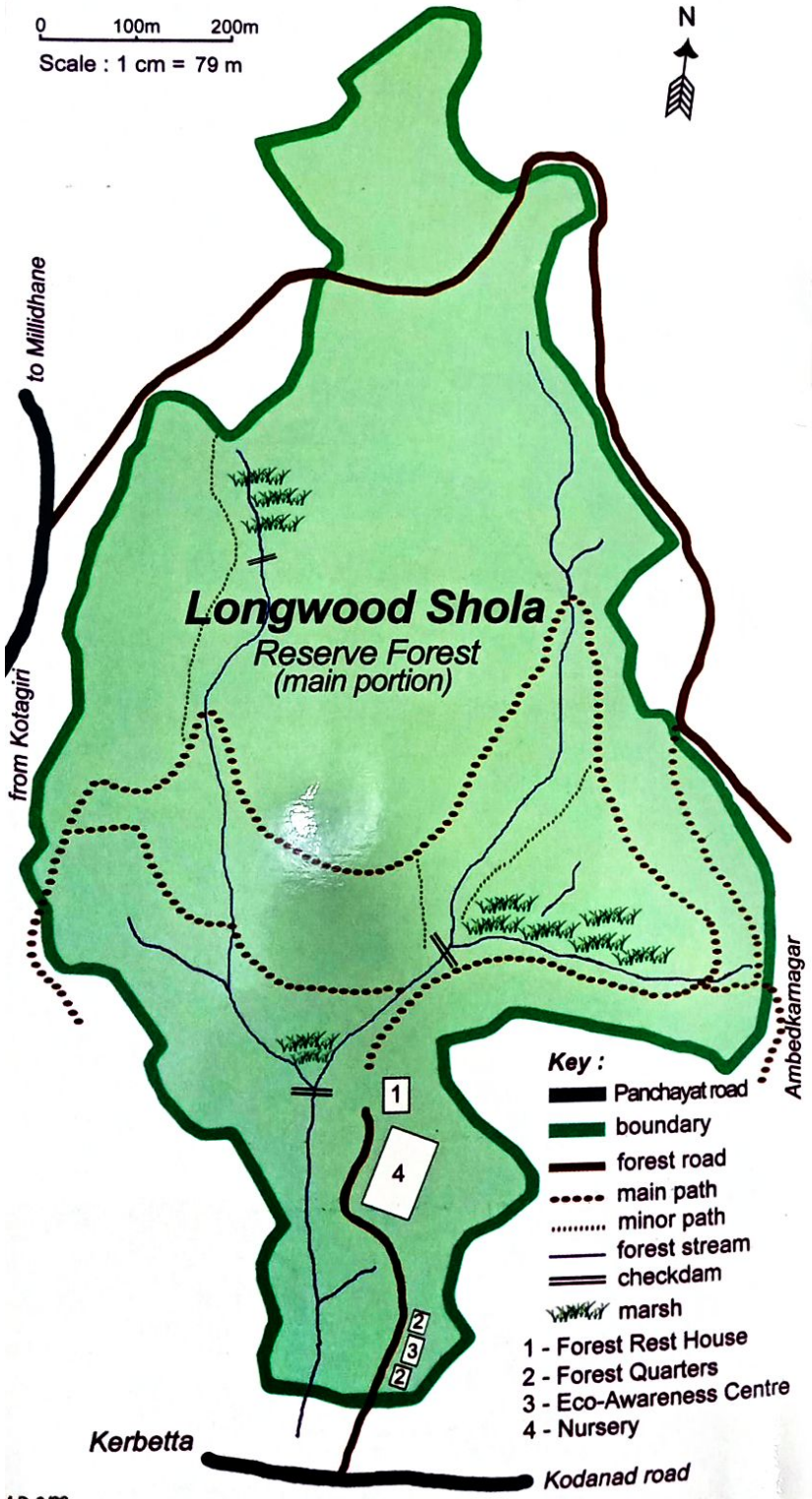
Longwood Shola (Kotagiri)

Its wealth of biodiversity, its preservation and its contribution to the environment

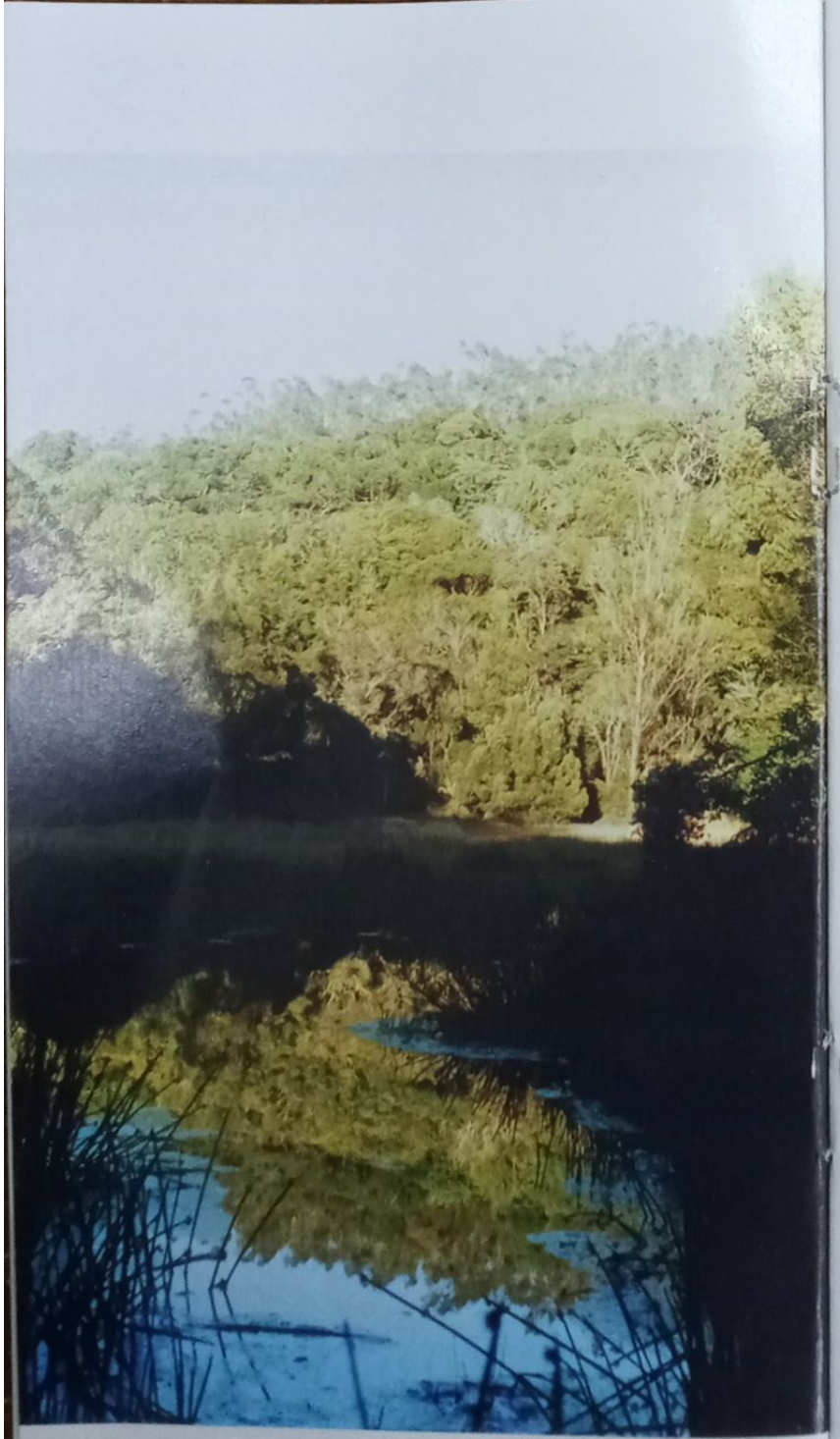


LONGWOOD SHOLA is the only major pocket of natural Shola forest left in the immediate vicinity of Kotagiri in the Nilgiris. Shola mountains, peculiar to the higher ranges of the Western Ghats, are evergreen tropical rain forests which have evolved for perhaps millions of years; their irreplaceable contribution to the environment is now recognized, and consequently the urgency to preserve them.

With an area of 116 hectares (including several hills to the east of the main portion), Longwood Shola is a relatively small forest, yet it is of great importance to the whole Kotagiri region. Not only is it a major water source to nearby villages and hamlets, but it plays a vital role in Kotagiri's microclimate, attracting and regulating rainfall. It also has a beauty of its own, which inspired the English poet James Cousins to compose a long poem in honour of this forest:

> *"... the shades of Longwood shola,*
> *Where the feet weigh scarce tola*
> *poised on pathways thickly strown*
> *With the leaves of seasons gone,*
> *Stirring from deciduous death*
> *Nature's vitalising breath..."*

Shola forests harbour a very wide variety of flora (see detailed list p. 12-16), the most conspicuous of which are of course trees. Many of them are endemic species, some specific to a particular altitude or even to a particular area. As a general rule, the higher the altitude, the smaller and the glossier



A view of the central marsh in Longwood Shola

A "cobra" plant in bloom

the leaves of the trees, because the trees require less foliage area to capture light. But a Shola is much more than trees: shrubs, flowers and ferns of many kinds, mosses, orchids (the last three found both as epiphytes and as ground varieties), lianas, bamboo reeds, creepers, many types of grass in the streams and swampy areas, and a large number of mushrooms and fungi — all vie for space and light. Each of these plants, from the biggest tree to the smallest moss or fungus, plays an important role in the ecological cycle of the forest.

Longwood Shola even today provides shelter to a varied fauna (see detailed list p. 10-12), in particular a rich bird life. A casual visitor can easily spot a few Nilgiri laughing thrushes, grey jungle fowl, golden-backed woodpeckers, as well as babblers, flycatchers and tits of various kinds; if he is lucky, a Nilgiri wood pigeon or an eagle owl may beckon him, perhaps a shikra or a

A couple of Nilgiri laughing thrushes

crow pheasant. He may also encounter some of the bigger inhabitants: the playful Indian Giant squirrel, the shy barking deer, the bold bonnet macaque, and in recent years, the majestic gaur. Nocturnal animals include wild boars, porcupines, hares, wild cats, mouse deer, and the rare Nilgiri marten.

Spotted munia

The observant eye may catch a glimpse of some of the smaller yet important animals, such as the small (and rare) jungle squirrel, bats, frogs, toads, snakes (very rare), and of course insects in their thousands. The latter range from stunning butterflies, impressive scarabs and beetles to bees, bugs, centipedes,

A barking deer on the edge of Longwood Shola

Giant Indian squirrel

and down to nearly invisible thrips.

Again, each of these animals plays a role in the forest life. Most birds, for instance, could not survive without both insects for food and trees for shelter. At the same time, along with squirrels and monkeys, they repay their debt to the forest by helping in the germination of the seeds which they eat and reject, while bees and butterflies help in cross-pollination.

A spectacular Moon moth

Longwood Shola's contribution to Kotagiri and surrounding villages

The most visible contribution of Longwood Shola to the area is water. Longwood Shola has three main perennial streams (with several smaller perennial tributaries, and a few seasonal ones). Two of the main streams join in the central swamp; the third joins them in the pond below the old Nursery. Together they supply many cubic metres of water downstream every day, even during drought. The main villages directly benefited are Kerbetta, Kerbetta Hosatti, Aravenu and Jackanarai, and several surrounding hamlets, about sixteen of them in all. Some remaining water can be seen to flow farther down as an open stream, and villages as far as Kottacombai and below use that water as well.

Water is however not the only benefit derived from Longwood Shola. Sholas (in fact all tropical rain forests) are known to attract the rain by sending a considerable amount of transpiration back into the air through their dense foliage; this transpiration acts as a catalyst for rain clouds. Longwood Shola's influence on Kotagiri's famous microclimate is therefore undeniable. Large-scale conversion of forests in the past has adversely affected rainfall in the Nilgiris, and the disappearance of Longwood Shola could only lead to worse climatic imbalance around Kotagiri.

One of the main streams in Longwood Shola

Sholas also contribute to the local climate by absorbing carbon dioxide, by breaking the force of rains and of the wind, and by lessening the effect of droughts. They act as an irreplaceable brake on natural calamities. Landslides, for example, used to be virtually unknown some decades ago. As is well known, erosion is in direct proportion to the disappearance of forests. Finally, Sholas hold a store of medicinal plants, many of which are still little known.

Preservation of Longwood Shola

Despite its importance, Longwood Shola has suffered much over the last thirty years. A number of villages and settlements, both big and small, are located all around it and have expanded considerably, subjecting it to intense population pressure, despite the chainlink fence erected in 1987. To help in its preservation, in May 1998 the Tamil Nadu Forest Department constituted an eight-member Longwood Shola Watchdog Committee consisting of concerned citizens of Kotagiri. In collaboration with the Forest Department, this Committee is keeping watch on the Shola's ground situation, conducts awareness camps and meetings in nearby villages to convey the importance of this forest, and brings schoolchildren into the forest. It will also study and suggest ways to provide the poorer among the villagers with alternative fuel. On 15 November 1998, an Eco-Awareness Centre was opened in the community hall built by the Forest Department (Longwood Shola's Kerbetta entrance) with a permanent photography exhibition on Longwood Shola, audiovisual equipment, and educational material on Shola forests. The Longwood Shola Watchdog Committee is making use of this Centre to conduct awareness camps, as well as training workshops for both teachers and schoolchildren. (On January 8, 1999, one such workshop gathered forty headmasters and headmistresses from all over the Nilgiris.)

If awareness continues to spread in this promising manner, and if the villagers' fuel needs can be taken care of, we may hope that the trend will be reversed and this beautiful Shola will yet recover its full glory.

A proud grey jungle fowl

LIST OF MAMMALS*

1. Gaur (Indian bison, *not resident)*
2. Leopard *(not resident)*
3. Wild boar
4. Barking deer
5. Wild cat *(seasonal)*
6. Porcupine
7. Bonnet macaque
8. Nilgiri marten
9. Giant Indian (or Malabar) squirrel
10. Mouse deer
11. Black Naped hare
12. Jungle squirrel
13. Bat

LIST OF BIRDS**

1. Black eagle
2. Grey jungle fowl
3. Pond heron *(migratory, March to July)*
4. Shikra
5. Jungle crow
6. Crow-pheasant
7. Painted bush quail
8. Hill myna
9. Jungle myna
10. Goldenbacked woodpecker
11. Spotted dove

* Mammals and birds are listed approximately from bigger to smaller size.

12. Blackbird
13. Slatyheaded scimitar babbler
14. Jungle babbler
15. Spotted babbler
16. Green barbet
17. Hoopoe
18. Nilgiri laughing thrush
19. Malabar whistling thrush
20. Blueheaded rock thrush
21. Redwhiskered bulbul
22. Pied flycatcher-shrike
23. Magpie robin
24. Tickell's blue flycatcher
25. Nilgiri verditer flycatcher
26. Greyheaded flycatcher
27. Yellow wagtail
28. Pied bush chat
29. Blue chat
30. Ashy wren-warbler
31. Thickbilled warbler
32. Tickell's leaf warbler
33. Tickell's flowerpecker
34. Black-and-orange flycatcher
35. Grey tit
36. Spotted munia
37. White-eye
38. Purplerumped sunbird
39. Small Sunbird

2. Rarer

40. Forest eagle owl
41. Sparrow hawk
42. Brown hawk owl
43. Woodcock
44. Jungle owlet
45. Kestrel
46. Imperial pigeon
47. Emerald dove
48. Nilgiri wood pigeon
49. Roseringed parakeet
50. Greyheaded bulbul
51. Chestnutheaded bee-eater
52. Scarlet minivet

LIST OF FLORA*

1. Trees

1. *Albizzia lophantha*
2. *Brassia capitata*
3. *Buchanaria angustifolia*
4. *Celtis tetrandra*
5. *Celtis wightii* (Kadalai)
6. *Cinnamomum wightii*
7. *Daphniphyllum glaucascens* (Neer Chappai)
8. *Elaeocarpus munroii*
9. *Elaeocarpus oblongus* (Vicki)
10. *Euonymus crenulatius*
11. *Eurya japonica*

* Botanical names in alphabetical order, followed by common Tamil names where available.

** This list is based on actual observations but subject to further verification by expert bird watchers. Note that many of the rarer birds may be migratory or seasonal, not permanently residing in the Shola.

12. *Evodia luna-ankenda* (Gambli)
13. *Excoecaria crenulata*
14. *Gloichidion nilgherrense*
15. *Gordonia obtusa*
16. *Hydnocarpus alpina*
17. *Ilex wightiana* (Vellodai)
18. *Isonandra candolleana*
19. *Ixora potoniana*
20. *Ligustrum perrottetii*
21. *Litsea wightiana*
22. *Mappia foetida*
23. *Meliosma arnottiana*
24. *Memecylon malabaricum*
25. *Michelia nilagirica* (Champak)
26. *Microtropis ovalifolia*
27. *Myrsine wightiana*
28. *Neolitsea zeylanica*
29. *Olea bournei*
30. *Phobe paniculata*
31. *Photinia lindleyana*
32. *Pittosporum nilgirense*
33. *Prunus puddum*
34. *Pygeum gardneri*
35. *Rhododendron nilagiricum*
36. *Symplocos foliosa*
37. *Symplocos spicata*
38. *Syzygium arnottianum* (lesser Naval)
39. *Syzygium montanum* (bigger Naval)
40. *Ternstroemia japonica*
41. *Turpinia nepalensis* (Nila)
42. *Vaccinium leschenaultii*
43. *Vaccinium nilgherrense*
44. *Vernonia monosis*

2. Shrubs

1. *Asparagus subulatus*
2. *Asystasia crispata*
3. *Canthium nilgherensis,*
4. *Cassia tomentosa*
5. *Cytisus scoparius*
6. *Dodonea viscosa*
7. *Elaeagnus latifolia*
8. *Heodyotis stylosa*
9. *Laportea terminalia*
10. *Lasianthus coffeoides*
11. *Maesa perrotettiana*
12. *Mahonia leschenaultii*
13. *Osbeckia wightiana*
14. *Phytolaca octandra*
15. *Plectanthus wightii*
16. *Pogostemon mollis*
17. *Pogostemon speciosus*
18. *Polygala arillata*
19. *Psychotria bisulcata*
20. *Psychotria congesta*
21. *Rhodomyrtus tomentosum*
22. *Rubus ellipticus*
23. *Rubus racemosus*
24. *Solanum indicum multiflora*
25. *Solanum laevae*
26. *Solanum verbascifolium*
27. *Solanum xanthocarpum*
28. *Strobilanthus kunthianus*
29. *Strobilanthus luridus*
30. *Strobilanthus wightianus*
31. *Webera corymbosa*
32. *Xanthoxylum tetraspermum*

3. Lianas and other climbers

1. *Atylosia rugosa*
2. *Brachylepis nervosa*
3. *Embelia viridiflora*
4. *Ficus sp.*
5. *Gardneria ovata*
6. *Gymnema hirsutum*
7. *Ipomea nil*
8. *Jasminum brevilobum*
9. *Jasminum sambac*
10. *Lonicera leschenaultii*
11. *Melothria perpusilla*
12. *Passiflora calcarata*
13. *Passiflora leschenaultii*
14. *Piper brachystachyum*
15. *Piper schemidtii*
16. *Senecio corymboso*
17. *Smilax aspera*
18. *Smilax wightii*
19. *Stephania hernandifolia*
20. *Tacsonia mollissima*
21. *Tetrastigma muricatum*
22. *Toddalia aculeata*
23. *Tragia bicolor*
24. *Tylophora tenius*
25. *Vitis anamalayana*

4. Epiphytes

1. *Aerides radicosum*
2. *Niphobolous fissus*
3. *Oberonia verticillata*
4. *Peperomia reflexa*
5. *Pleopeltis accedens*