



EDITORIAL

Considering that Sri Lanka is not a large island, about the size of Tasmania, its biological wealth is simply astonishing. Although the reptiles and amphibians of the island are increasingly well studied, our understanding of the mammals is lagging behind. In the days when Sri Lanka was a British colony, part of British India, there were a few British biologists who paid some attention to the mammals: notably Edward Blyth, curator of mammals in the Indian Museum in Calcutta, and a few taxonomists based in the British Museum (Natural History) in London: Oldfield Thomas, Martin Hinton, Robert Wroughton and Reginald Pocock. As far as I know, none of these scientists had ever actually visited Sri Lanka. Overwhelmingly, however, the basis for our understanding of the mammalian biodiversity of Sri Lanka is due to four people: Kelaart, Phillips, Osman Hill and Deraniyagala. These four had actually lived in Sri Lanka, and Deraniyagala of course was a native of the country. Whereas the outsiders were mainly concerned with differentiating Sri Lankan mammals from those of India, the four "insiders" were alive to the diversity of mammals within Sri Lanka itself, a reality which has imposed itself more and more on our consciousness over the years.

Edward Fredric Kelaart (1819-1860) was born in Sri Lanka and lived there for the whole of his life, mostly at Nuwara Eliya. In those days when it was possible for zoologists to have a grasp of almost the entire animal kingdom, he investigated and described animals as diverse as birds, sea slugs and flatworms. His work on mammals was fairly minor in relation to all this, but he was perhaps the first to appreciate that a species, or species-group, could be restricted to one of the specialised climatic zones of the island.

W. W. A. (Bill) Phillips (1882-1980) came to Sri Lanka to be a tea planter in 1911. As far as his work on mammals is concerned, his most productive years were in the 1930s, at his estate at Gammaduwa, at the northern end of the Knuckles Range (Dumbara). In a series of papers, and in his book *Mammals of Ceylon* (1933; second edition, *Mammals of Sri Lanka*, 1980), he emphasised the way in which species tended to be either restricted to a particular climatic zone, or to diversify notably if they were spread across two or all three zones. The location of Gammaduwa was in a way somewhat unfortunate, because it was not always clear whether particular specimens that he described had been obtained on his behalf from the surrounding lower montane forest, the nearby cloud forest, or the dry plains below.

William Charles Osman Hill (1901-1975) was especially interested in primates, and worked a good deal with Phillips, from whom he absorbed the lesson that there was astonishing biodiversity within the island, mainly but not entirely linked to climatic zones. With Phillips or by himself, he described in some depth the diversity of primates -- particularly lorises and langurs -- between and within the climatic zones. He discovered, for example, that purple-faced langurs were differentiated even within the wet zone, north and south of the Kalu Ganga. Osman Hill -- or was his name simply Hill? He treated "Osman" sometimes as if it was part of his surname, sometimes as if it was one of his given names -- returned to Britain, whence he had come, in 1944.

The last and most controversial of the four was Paul Edward Pieris Deraniyagala (1900-1976), the first actual Sri Lankan to make an impact on the field. In the mid-20th-century, he was often dismissed by vertebrate taxonomists as a compulsive splitter of species, and it is true that he would describe a new species (or, more usually, subspecies) on the slenderest of evidence, and some of his papers appear to have been so hurriedly written that it is difficult to tell what his new subspecies was intended to represent. Nonetheless, his scope of interests and understanding of the fauna of Sri Lanka were unrivalled, and in addition he was the first to seriously investigate the Pleistocene mammal fauna. Whether there really are two different subspecies of elephants in Sri Lanka, and whether macaques and langurs are as geographically diverse within the dry zone as within the wet zones, as he maintained, are perhaps less important than his legacy as a whole, which deserves to be reconsidered in the light of modern understandings of taxonomy.

The work of these four, in particular, has shown that mammals are as sensitive to Sri Lanka's main climatic zones as are lizards and frogs. Quite regularly, one finds that the basic division is between the wet zone, the dry zone, and the cloud forest: groups as diverse as lorises, giant squirrels, Golden palm-civets and mouse deer all seem to have different species (in former days they would be considered as subspecies, for no strong reason) in these three zones. We do not know whether the largest mammals -- elephant, sloth bear, leopard, sambar -- follow this rule, or whether they are simply too mobile. In some cases, there is diversity within one or more zones; we know something about this in the case of the wet zone, but we need to investigate it more thoroughly in case the natural vegetation of the wet zone disappears altogether. An important task for the future is to find out whether the cloud forest isolates of the Central Highlands, the Knuckles Range, Sinharaja and Namunukula have different taxa of, say, lorises and langurs, or whether they are all the same. The cloud forest of the Central Highlands is known to harbour a few endemic genera (the shrews *Feroculus* and *Solisorex*, and the rat *Srilankamys*), and we need to know whether they are restricted to the Central Highlands or extend to the other cloud forest isolates, perhaps as different species.

A further task is to compare the mammals of Sri Lanka with their Indian counterparts. The lorises of the dry zone of Sri Lanka barely differ from those of the equivalent climatic zone of south-eastern India, but those of the Sri Lankan lowland wet zone are dramatically different from those of the Western Ghats, suggesting that their wet forest adaptations are convergent. Is this the case for other mammals as well? We simply do not know. Were the cloud forest zones of Sri Lanka ever connected with those of the Western Ghats? There is no trace in Sri Lanka today of *Nilgiritragus*, the Nilgiri tahr, the largest endemic mammal of the Western Ghats, and we need to look further at Sri Lankan fossils to see whether it may perhaps have been there in the past; in 1997, the discovery of *Feroculus* in the Western Ghats was announced, and this needs to be carefully checked to see if it could perhaps be the first evidence of a former connection.

We think we know the mammals best of all animals, because most of them are easy to see -- but how little in fact we do know! And let us remember, too, that the mammals are flagship species for conservation, and often ecological keystone species, and try to persuade both governments and the community at large that this rich treasury of biodiversity must be preserved in perpetuity.

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