



Source: <http://www.primates.lk/gallery/>

The New Standard

for sustainable business and conservation in Sri Lanka



Convention on
Biological Diversity



BIODIVERSITY SRI LANKA

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FOCUS ON MAMMALS: PRIMATES

From the Editors

Primates are mammals belonging to the Order Primates, and include humans as species belonging to this group. Sharing our evolutionary heritage, non-human primates also play key roles in the ecosystems they inhabit, mostly the tropical and sub-tropical regions of the world. Not only are they indicator species for ecosystem health and functionality, primates have complex social systems and inter-specific associations. Inspired by a presentation made recently by Dr. Wolfgang Dittus on behalf of the Wildlife and Nature Protection Society, and also by the work being carried out to conserve various primate species by our member organizations, we thought of focusing our attention on these important yet vulnerable species through this issue of The New Standard (TNS).

Dr. Dittus, who has carried out extensive research on the primates of Sri Lanka, obliged us by answering some pertinent questions through our Expert Q&A section. Dr. Jinie Dela – a primatologist in the country also provided us with the main feature for this edition of TNS. We are happy to bring you updated information on the conservation projects being carried out by our Patron Members - Jetwing Hotels Ltd. and Nation's Trust Bank PLC - to protect and sustain healthy populations of the Grey Slender Loris and the Purple-faced Leaf Monkeys in the vicinities of Sigiriya and Hiyare, respectively.

As the first species-specific themed newsletter being brought to you by BSL, we sincerely hope you enjoy the read and as usual encourage you to let us know your thoughts/comments/questions which we would be happy

Expert Q&A

Dr. Wolfgang Dittus is Chairman of the Association for the Conservation of Primate Diversity and is a Research Associate at the Smithsonian Conservation Biology Institute, Conservation Ecology Center, Washington DC, USA. He directs the Smithsonian Primate Biology Programme with Polonnaruwa as his base and is also a visiting scientist at the Institute of Fundamental Studies in Sri Lanka.



1. In a global context, how important is the conservation of primates for the overall preservation of biodiversity?

The Order Primates (lemurs, lorises, monkeys, apes and humans) includes about 400 species plus 229 subspecies. Among the 2209 living species of mammals, the proportion of primate species (18%) is outnumbered only by the mostly smaller body-sized rodents (40%) and bats (20%). On the regional scale, Sri Lanka exhibits the highest biodiversity of primates with 5 species and 12 subspecies, representing 23% of all primate taxa in an area of land that is only 1.3% of the South Asian landmass. Sri Lanka's rich heritage in primate diversity is a gift of nature that strongly appeals for conservation

to address and provide answers to. We invite you to write to us at info@biodiversitysrilanka.org and also let us know if you would have any interesting news/articles which we could highlight through our upcoming issues of the TNS in future.

Secretariat of Biodiversity Sri Lanka

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Expert Q&A Contd.

in the national and global contexts.

2. What are the key threats faced by primates in Sri Lanka?

For primates, as for most wildlife, the loss of natural habitat through human activity is the main threat. Sri Lankan primates benefit from a culture of respect for animal life, and generally are not hunted commercially, as is common in some countries. Notwithstanding, Sri Lankans' tolerance towards wildlife is being tested soundly by a failure to implement reasonable measures to promote a peaceful co-existence. Pest monkeys have developed through poor human habits. Primates are often killed as pests and translocating them serves only to exacerbate human-monkey conflict and their demise.

3. Why is it important for Sri Lankans to know more about and conserve our primates?

The conservation of primates means protecting their natural habitats: all flora and fauna benefit from this. Whether you conserve or not is a matter of personal choice. You can promote development (all too often a euphemism for destroying Sri Lanka's rich natural heritage – acre by acre), and accumulate ever more trappings of luxury; or, you can choose to invest also in a different “good life” by setting aside some natural areas for current and future generations to expand their mental, spiritual, emotional and intellectual horizons. The first path alone will lead to an impoverished environment where deprived citizens can appreciate their former natural heritage only on the TV history channel.

4. What are some significant aspects of primates that are important in terms of sustaining vital ecosystem services?

Conservation IS the vital ecosystem service that sustains human development. Primates play a significant part in its implementation. Let's face it, nature conservation is a tradeoff, it costs: it requires that we allocate economically contested land area so that other organism too can survive. But that cost is amply rewarded – if you care to look. It is my conviction that people will only sacrifice for something that they love, they will love only what they know and understand, and they will only understand what they are taught. It is therefore a role of scientists, such as myself, to teach. Documentary films, based on our studies, are intended to achieve that end globally. “Glamour species” like primates serve as an alluring vehicle for teaching because we humans see ourselves in their faces and antics,

and humans do love themselves.

5. How can the private sector contribute to ensure the survival of endangered primates in Sri Lanka?

All sectors of society can contribute to development by acknowledging some basic biology. Animal and plant species have evolved highly specific physical and biotic characteristics and needs (ecological niches) that differ among species; hence their biodiversity. Arid forest areas, which are unsuited for agriculture (most of Sri Lanka's National Parks), are too unproductive to sustain primates and many other life forms. Plants and animals are most diverse in the highlands where they are the most threatened with extinction. Do something NOW to prevent the destruction of highland forests! Seemingly erudite “biodiversity offset” schemes can mislead! A natural area will be removed for economic profit, but, in the end, there will be nothing of biological value to trade back. Reforesting degraded areas is good as a second measure, but first and foremost we should prevent degradation and preserve natural habitats (animal niches) that still exist. Animal ecology and conservation do not follow the simple rules of currency trading.

Sri Lanka's Primates and Their Conservation Status

Contributed by Dr. Jinie D. S. Dela - Principal Investigator of the Western Purple-faced Langur Research and Conservation Project, Waga

Early records of primates in Sri Lanka from the chronicles of Robert Knox, and various temple paintings, suggest that monkeys have been part of the human landscape in this country for centuries. Sri Lanka is indeed fortunate to have five primate species — two species of loris, and three species of monkey — in this small island. The Toque Macaque (*Macaca sinica*), Purple-faced Langur (*Semnopithecus vetulus*), and the Red Slender Loris (*Loris tardigradus*) are also endemic and found only in Sri Lanka. The seemingly ubiquitous macaque has three subspecies: *M. sinica sinica* found in most parts of the dry zone; *M. sinica aurifrons* in the lowland and midland wet zone; and the more rare *M. sinica opisthomelas* in the montane areas. The Grey Langur, also found in the Indian subcontinent, is represented here by the subspecies *Semnopithecus entellus thersites*, which is widespread in the dry zone. The Purple-faced Langur has five very distinct subspecies, four of which are well known: the Southern (Wet zone) Purple-faced Langur (*S. vetulus vetulus*) found south of the Kalu Ganga and ranging into the foothills of the central mountains; the Western Purple-faced Langur (*S. vetulus nestor*) confined to the wet western lowlands; the Northern Purple-faced Langur (*S. vetulus philbricki*) found in some parts of the dry zone; and the Montane Purple-faced Langur (*S. vetulus monticola*) ranging in the cloud forests of the central highlands. Little is known of *S. vetulus harti*, partly due to the 30 year armed conflict which made its possible geographic range inaccessible for research. Sri Lanka also has four subspecies of loris: the Western Red Slender Loris (*Loris tardigradus tardigradus*), the extremely rare

Montane Slender Loris (*L. t. nycticeboides*), the Highland Grey Slender Loris (*L. lydekkerianus grandis*), and the Northern Grey Slender Loris (*L. l. nordicus*), but the number may increase. The various subspecies among the macaques, purple-faced langur and the two loris species show visible morphological variation, and live in non-overlapping geographic ranges, although intermediates often occur between adjacent ranges of subspecies.

Primates are an integral component of Sri Lanka's biodiversity. It is also believed that arboreal colobine monkeys, such as the purple-faced langur, are indicator species that reveal the status of their habitats. Although primates have been abundant in Sri Lanka for centuries, their forest habitats have been shrinking. The most serious loss dates back to colonial times in the 19th century when a significant area of rainforests in the wet zone was cleared to establish plantation agriculture and human settlements. This clearly diminished the forest habitats of the wet zone subspecies of toque macaque, purple faced langur and loris. In the 1970s and 1980s, adverse forest policies, expansion of agriculture, large scale irrigation projects and human settlements in the dry zone, coupled with logging in wet zone rainforests, had serious impacts on most non-human primate species. Forest quality also declined in small wet zone lowland forests released for agriculture in the 1970s. Although logging in natural forests is now banned, the negative impacts of past policies and actions continue to exert pressure on our primates.

The most visibly affected is the highly arboreal Western Purple-faced Langur (WPFL). Over the years it had overcome the lack of sizeable forests in its range by adapting successfully to live in forest analogue home gardens and rubber plantations. This started to change in the late 1990s, with increasing fragmentation of home garden habitats and the resultant loss of large trees. Coupled with the lack of forest habitats, this effect caused the WPFL to be listed as Critically Endangered, and recognized as one of the 25 most threatened primates in the world! With time, diminishing canopy connectivity has led to monkeys getting pocketed in small areas with tree cover. In addition to the resultant loss of food and threat of genetic erosion, this leads to an increase of monkey-human conflict, due to competition for fruit and damage to tiled roofs when monkeys march across them to cross gaps in arboreal pathways. The Northern, Southern and Montane subspecies of purple-faced langurs are also listed as Endangered due to habitat loss. The Red Slender Loris and the Toque Macaque too are now listed as globally Endangered by IUCN (2015).

Today, the macaque, the grey langur and the purple-faced langur are all considered pests in various parts of their geographic ranges, but the macaque is considered the most serious and widespread problem. Poor garbage management and access to human food in religious places, hotels and other tourist sites have made the problem worse and have spawned "streetwise" macaques that fight aggressively to get such food. These macaques also enter buildings in search of food and even attack people. Crop raiding monkeys are also a serious issue in many parts of the island. Communities near wet zone

forests complain that lack of food in small forest patches in the western lowlands is the prime cause of macaques and purple-faced langurs raiding adjacent village gardens. To make matters worse, authorities have been pressurized to translocate problem monkeys (mainly macaques) on a large scale without considering their taxonomic distinctiveness or natural ranges. Looking at it from the human point of view, having monkeys destroy one's roof or crops is a very serious business. On the other hand, monkeys are subjected to increasing threats from humans that affect their future survival. Obviously, something has to be done and soon, to prevent further harm to the monkeys and to give relief to the people that are affected — without jeopardizing the conservation status of the primates concerned.

Fortunately, action is finally being taken. The Sri Lanka Red Cross Society and the National Science Foundation held a well-attended workshop to address the problem of monkey-human conflict. They are now going ahead to facilitate the next steps by the responsible key state agencies. Clearly this is not a problem to be solved by one agency alone. Even more important is that long-term studies are continuing at primate research sites in Polonnaruwa, Kaludiyapokuna and Waga, and at Panadura and Hiyare to support conservation of our monkeys. Research on the loris is carried out at several sites. The Department of Wildlife Conservation has confirmed publication of two Conservation Action Plans for the lorises, and the Western Purple-faced Langur, prepared by long time researchers on these species, and they were presented publicly on 3rd March 2016 on World Wildlife Day. The Forest Department is actively joining local primate researchers to pilot test innovative means to conserve the Western Purple-faced Langur and its forest habitats at Waga. But, much more needs to be done. Lack of public support and dedicated young people are major constraints. This opens up excellent opportunities for the business sector to support the primate cause and provide motivation and support for relevant state agencies and primate researchers to restore primate habitats, reduce monkey-human conflict, and encourage greater public participation in the difficult and often back-breaking work that is synonymous with primate research and conservation.

The Western Purple-faced Langur Research and Conservation Project at Indikada Mukalana forest, Waga, is currently carried out by Dr Jinie Dela and Dr. U. K. G. K. Padmalal, in collaboration with the Forest Department and Dr. Siril Wijesundara, with financial support mainly from the National Science Foundation, Sri Lanka and Primate Conservation Incorporated, USA.

Catch the action behind the scenes of



featuring Dr. Wolfgang Dittus and Dr. Jane Goodall at
<https://www.youtube.com/watch?v=QM3Ll8co6Og>

Member Focus:
Jetwing Hotels Ltd.



Loris Conservation at Jetwing Vil Uyana

Jetwing Vil Uyana, a former abandoned agricultural land transformed into a man-made wetland is a bustling hive of flora and fauna. Nature-friendly and luxurious by design, the property has revolutionized the tourism industry of Sri Lanka.

Amongst the sprawling 28 acres, a special area marks the Loris Conservation Site, the first of its kind. Home to the Grey Slender Loris – a reclusive primate - there have been sightings in abundance within the forest of the site.

The loris was first heard by the resident naturalist, Chaminda Jayasekera, in late 2011 whilst on a walk in the grounds of Jetwing Vil Uyana. To him, the animal's cry in such close proximity was nothing short of startling; previously having to travel quite a distance on loris watching excursions with hotel guests. Upon further exploration and over the next few months, Chaminda discovered more and more primates habituating within a certain section of the property.

In order to preserve their home, Jetwing decided to demarcate this particular area as a Loris Conservation Site, essentially foregoing any future construction or industrial activity within or around the site. The loris is free to flourish, and the company hopes to encourage visitors to experience a loris watch whilst visiting in order to raise awareness and educate them on the behaviour, appearance, and activities of this rare species. Since 2011, a total of 13 lorises have been spotted within the premises.

The Loris Conservation Site and Conservation Center is wholly managed and looked after by Jetwing Vil Uyana, with no external organizations involved. However, the site is open to wildlife enthusiasts and publications, along with academics in order to further knowledge about the loris. In addition, a Loris Conservation Fund was set up in 2014, with a third of proceeds from the excursions going towards research and awareness building amongst school children regarding the loris.



Loris with baby spotted at Jetwing Vil Uyana premises



Loris conservation site and information centre

Member Focus:
Nations Trust Bank PLC



Southern Purple-faced Leaf Monkey Conservation Project

The Purple-faced Leaf Monkey (*Semnopithecus vetulus*) is one of the endemic and threatened primate species found in Sri Lanka. However, four subspecies of the purple-faced leaf monkeys, namely Western purple-faced leaf monkey (*Semnopithecus vetulus nestor*), Southern purple-faced leaf monkey (*Semnopithecus vetulus vetulus*), Bear Monkey (*Semnopithecus vetulus monticola*), and Northern purple-faced leaf monkey (*Semnopithecus vetulus philbrincky*) have recently been recognized.

Of the four subspecies of monkeys, the western purple-faced leaf monkey and the southern purple-faced leaf monkey are under severe threat as their range includes the most densely populated south-western areas of the country where forest habitats have been intensively exploited for several decades. Due to the rapid expansion of the human population, habitat shrinkage has adversely affected the preferred habitat and sources of food for these two species.

Nations Trust Bank PLC with the support of the Wildlife Conservation Society - Galle identified this issue many years back and initiated a project titled 'Southern purple-faced monkey conservation project' in the year 2007.

Key actions of the project include:

- Increasing awareness on the southern purple-faced langur amongst the forest fringing schools and the communities of Galle and Matara districts, to minimize the human-monkey conflict.
- Planting of most preferred food plants of southern purple-faced langur around the forest edges in Galle and Matara districts.
- Printing and circulating an information booklet on the southern purple-faced langur.
- Minimizing electrocution accidents by improving the canopy continuation for urban troops.
- Rescue and release of injured or abandoned individuals of Southern purple-faced langur to their natural habitat.



Above left: WCSG veterinary surgeon treating an adult PFLM

Below right: WCSG members feeding an infant PFLM



How Three Women Known as the “Trimates” Revolutionized the Field of Primatology

Source: <http://www.iflscience.com/editors-blog/how-three-women-known-trimates-revolutionized-field-primatology>

Breaking down the rigid barriers established by the male-dominated academic institutions of the 1960s, three pioneering female researchers showed the world that real science requires guts. In many ways, their relative exclusion from the self-congratulatory domain of male “armchair anthropologists” is what gave them the freedom to go against the grain and – in spite of some stiff opposition – eventually convince their colleagues that in order to learn about man’s closest relatives, they’d have to woman up.

In the mid-20th century, very little was known about the behavior of hominids, a taxonomic group that includes chimpanzees, gorillas, orangutans and bonobos, as well as humans. The world’s leading primatologist at the time was a Kenyan-born anthropologist named Louis Leakey, who wanted to put together a research team to uncover some of the mysteries of these great apes, yet found no suitable candidates among his peers. Fortunately for him, he was approached by three intrepid women who recognized that studying these animals can only be achieved by abandoning the safety of the lecture theater and completely immersing oneself in some of the world’s most inhospitable jungles for decades at a time.

Living among their respective study species, Jane Goodall, Dian Fossey, and Biruté Galdikas – collectively known as the Trimates – not only reshaped the way that humans understand their own behavior, but revolutionized the entire scientific method behind primatology.

Please refer to the provided link for the full article.

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Loss of Monkeys and Birds in Tropical Forests Driving Up Carbon Emissions

Source: http://www.theguardian.com/environment/2015/dec/18/carbon-emissions-loss-of-monkeys-and-birds-in-tropical-forests?CMP=share_btn_fb

Large fruit-eating monkeys and birds in tropical forests have been revealed as surprising climate change champions, whose loss to over-hunting is driving up carbon emissions. This is because their seed-spreading plays a vital role in the survival of huge, hard-wooded trees.

Tropical forests store 40% of all the carbon on the Earth’s surface and the slashing of trees causes about 15% of the greenhouse gases that drive global warming.

Long-lived, thick and hard-wooded trees are especially good carbon stores, but they have large seeds that can only be dispersed via defecation by large animals. These big creatures have suffered huge losses from subsistence hunters, meaning hardwood trees are being replaced with softwood trees, which have smaller seeds but store less carbon.

“In much of the tropics these [large] animals are pretty much gone, outside of protected areas and sometimes even inside protected areas,” said Prof. Carlos Peres, at the University of East Anglia, UK, one of the international team behind the new study. “[Hardwood trees] require these big beasts to disperse their seeds. This is what is being lost.”

“Policies to reduce carbon emissions from tropical countries have primarily focused on deforestation,” Peres said. “But our research shows that a decline in large animal populations poses a serious risk for the maintenance of tropical forest carbon storage.”

The new research was led by scientists at São Paulo State University in Brazil and published in Science Advances. It focused on the Atlantic rainforest of Brazil, where 95% of all trees rely on animals to disperse seeds, and analyzed the interactions between 800 animal species and 2,000 tree species.

It found losses of large animals like woolly spider monkeys, tapirs and toucans leads to the loss of hardwood trees. These are replaced by softwood trees, whose smaller seeds (less than 12mm long) are spread by small fruit-eating marsupials, bats and birds which are not the target of hunters. The scientists estimated that 10-15% of the carbon stored in the original mixed forest is lost.

Peres said the same effects were likely to apply to other tropical forests, including the Amazon. “This is a fairly universal process,” he said. “It is happening across the tropics, in Africa, southeast Asia, everywhere there are these species-rich forests.”

Please refer to the provided link for the full article.