

An Ethnoprimateological Approach to Conserving Sri Lanka's Critically Endangered Western Purple-Faced Langur

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Abstract: In 2006, the western purple-faced langur (*Semnopithecus vetulus nestor*) was listed as among the world's 25 most endangered primates. A field survey conducted the following year indicated that its population was threatened by human activities, especially deforestation. To address this threat, meetings were held with the community leaders of Waga, a village in the species' range. They revealed that communities in the area were poor, and that they were not interested in helping to prevent the langur's decline unless they were relieved of their difficulties due to conflicts with the monkeys. Consequently, the SPEARS Foundation, a non-governmental organization committed to wildlife conservation, sponsored a program to enhance people's livelihoods; and thereby alleviate their stress and overcome their lack of interest in protecting the imperiled langur. The benefits people derived from the activities had a remarkable effect on their attitudes towards the langur and the "outsiders," who were conducting the program. We provide details of the program's activities and describe the long-term commitment of the SPEARS Foundation to help fulfil an official responsibility of the understaffed and underfunded Department of Wildlife Conservation (DWC). This commitment was useful, but was not without problems. The most valuable lesson learned from it was that the partnership between the SPEARS Foundation and Waga residents could help conserve the langur and other wildlife by enhancing people's livelihoods and promoting environmental awareness. Furthermore, such partnerships could compensate for the difficulties faced by Sri Lanka's government agencies to promote wildlife conservation. We, therefore, urge international agencies to support conservation partnerships between people and private organizations in Sri Lanka. Such partnerships have already shown their effectiveness in promoting wildlife conservation in many other countries.

Keywords: Ethnoprimateology, conservation partnerships, Buddhist philosophy, Community Conservation Areas, sustainable development

Introduction

The news that the western purple-faced langur (*Semnopithecus vetulus nestor*) had been listed among the world's 25 most endangered non-human primates (Dela and Rowe 2006) triggered a field survey to discover the reasons for its decline (Rudran 2007). The survey indicated that human activities, mainly deforestation, were the reason for the decline. Discussions with the people of Waga, a community within the range of the species, showed that they were not interested in protecting the langurs unless they were relieved of difficulties they were facing caused by their conflicts with this monkey. They

also indicated that the tightly-knit rural community did not trust the motives of outsiders, and therefore were indifferent to pleas to conserve the endangered monkey. To resolve this, the SPEARS Foundation, raised funds to conduct a community development program to enhance the people's livelihoods, so as to alleviate their stress and overcome their disinterest in protecting the langur. This program promoted the concept of people sharing space with the monkey, and adopted an ethnoprimateological approach to protecting the langur (Fuentes and Hocking 2010; Fuentes 2012).

The community development initiative was greatly appreciated by the local people and helped to change their attitudes

towards well-meaning outsiders who were then able to garner support for the langur's protection. The community's willingness to actively participate in promoting the langur's survival led to the notion of establishing a type of protected area new to Sri Lanka—a Community Conservation Area (CCA). CCAs would be sites where people could derive financial benefits by conducting sustainable development activities while protecting monkeys and other wildlife under the supervision of the Department of Wildlife Conservation (DWC). This idea was subsequently discussed during several workshops sponsored by the DWC, and became the centerpiece of its strategic plan to conserve and coexist with monkeys (Department of Wildlife Conservation 2016; Rudran and Kotagama 2016). In this paper, we present the activities that succeeded in encouraging people to coexist peacefully with the endangered langur, and support the conservation of wildlife. We hope this presentation will encourage other private organizations in Sri Lanka to partner with local communities to help the country enhance its ability to conserve wildlife. We also urge international organizations to invest in developing and sustaining such partnerships in Sri Lanka because they have already shown their effectiveness in promoting wildlife conservation in India (IUCN 2019) and many African and South American countries (Roe 2014; Lee 2018; Hocking 2019).

Methods

The SPEARS Foundation established a field station at Waga in 2008 to launch its community development initiative and to continue its field investigations on the western purple-faced langur. The community development initiative addressed the needs of children, adults and seniors, as well as all ethnic and religious groups that lived in the area. The children's program included an environmental conservation curriculum that filled an inexplicable void in Sri Lanka's science education system for primary and secondary schools. The program for adults consisted of workshops that helped unemployed or underemployed community members to engage in various income-generating opportunities with the assistance of the SPEARS Foundation. For seniors, the program provided health clinics that dealt with old-age problems, such as diabetes, hypertension, arthritis and visual impairment.

The activity that was conducted most often was the schools' education initiative. It consisted of classroom lectures and nature walks presented to primary, secondary and Sunday school children of different religious and ethnic groups. These activities were conducted by a group of young Biology graduates who possessed considerable teaching and field experience. Since Sri Lanka's primary and secondary education system did not have an environmental conservation curriculum, schools lacked teachers to teach this subject. The SPEARS Foundation, therefore, donated books and posters on wildlife conservation-oriented topics, as reference materials to the library of the schools that participated in lectures and nature walks. The school children's program also

included art exhibitions to inform the public about young people's growing interest in protecting Mother Nature.

We organized health clinics for elders and conducted workshops on income generating opportunities for adults, mostly at the request of the stakeholders. One particular income generating opportunity arose when large numbers of foreigners began visiting Sri Lanka when its 26-year ethnic war ended in 2009, and the SPEARS team began training local youth to address the interests of nature loving tourists.

The health clinics for elders were conducted in collaboration with HelpAge, a local non-governmental organization that was devoted to senior care. Prior to the clinics the SPEARS team conducted interviews to identify people, 55 years or older, who had health issues. During the clinics, the team assisted qualified medical doctors to conduct health examinations of seniors. After the clinics, the SPEARS team distributed prescription glasses donated by HelpAge, and also provided transport and other forms of assistance to those who had to visit nearby hospitals for medical treatment and cataract surgery. In addition to the community development program, the SPEARS Foundation investigated the diet of the western purple-faced langur (Rudran *et al.* 2013). The project's objective was to discover this langur's most important food plants, so that their saplings could be collected and used later in a program to increase forest cover.

Implementing the above activities required financial support that the Sri Lankan government could not provide. The SPEARS Foundation, therefore, raised funds from other sources for about twelve years to support its research investigation and community development initiative.

Results

The Community Development Program – Children's Education Initiative

During the 9-month school year, the SPEARS team visited 6 to 8 schools located in the range of the western purple-faced langur, and discussed, with about 1100 children, problems and solutions to this monkey's survival (Fig. 1). The team also gave lectures on ecological principles and environmental conservation. After each lecture, students took a quiz on the topics discussed, and about one-quarter of them were selected to accompany local experts on nature walks. While outdoors, the students learned interesting facts about plants and animals and the ecological processes that help to sustain life on earth (Fig. 2).

Four children's art exhibitions have been held so far (Fig. 3) and, to attract media coverage for these events, cabinet ministers and other well-known dignitaries were invited to be chief guests. The dignitaries awarded prizes for the best artwork and encouraged the next generation's environmental stewards in their efforts to protect Mother Nature. The media coverage and newspaper articles about the exhibitions helped to promote environmental awareness throughout the island.



Figure 1. Classroom Lectures.



Figure 4. Dressmaking Workshop.



Figure 2. Nature Walk with Expert Naturalists.



Figure 5. Recipients of pepper plants.



Figure 3. Children's Art Exhibition.



Figure 6. Nature Guide Training.

The theme of the first three exhibitions focused on the conservation of the Critically Endangered western purple-faced langur. They were held at locations within its range. The theme of the fourth exhibition was global warming and climate change, and it was held in Colombo, the country's capital, in March 2019. Children from schools throughout

the island were invited to submit artwork, and from more than 3,000 pieces received about 350 were selected for a week-long exhibition. Plans were underway after the exhibition to make placards of the award-winning artwork and have them displayed by children marching to music of their school bands during an 8-km parade through Colombo's busy streets.

The parade was scheduled to take place when delegates from 183 countries would be in Sri Lanka to attend the 18th Conference of Parties (CoP 18) to the Convention on International Trade on Endangered Species (CITES). However, the church bombings on Easter Sunday of 2019 resulted in the CoP 18 meeting being moved to Geneva, Switzerland, and the children's street parade was cancelled.

The Community Development Program – Income generating opportunities for youth and adults

One such initiative was a home gardening project that permitted women, who were otherwise house-bound by child caring responsibilities, to satisfy their family's nutritional needs and also earn extra income by selling excess produce at village fairs. Another initiative trained young women to make children's school uniforms, cloth bags and formal wear for ladies (Fig. 4).

Yet another activity trained about 25 local residents to cultivate pepper—a cash crop that grows well around Waga, and fetches a good price in local and foreign markets. After the training session, the SPEARS team distributed pepper plants to the trainees to grow in their home gardens (Fig. 5). More recently, the SPEARS team established a micro-finance project that provided interest-free loans to local entrepreneurs to make food, clothing and ornaments for sale in their communities, to local people and to foreigners visiting nearby tourist attractions, such as the picturesque waterfalls and the recently established Sitawaka Botanical Gardens. The latter site features the species-rich diversity of Sri Lanka's endangered lowland rainforest ecosystem, which is part of the Western Ghats Biodiversity Hotspot (Myers *et al.* 2000; Brooks *et al.* 2002). Moreover, it is only 1.5 hours away from the Capital City, Colombo, and had the potential to attract nature loving local residents and foreign visitors and create a tourism-based economy to benefit communities around Waga. This opportunity generated a program to train about 15 local youths as nature guides (Fig. 6). The training ended abruptly because tourist traffic to Sri Lanka plummeted due to the Easter Sunday bombings. It would, however, be revived when tourist traffic to Sri Lanka recovers from its slump.



Figure 7. A community elder after cataract surgery.

The Community Development Program – Health clinics for seniors

So far, three health clinics have been held at different localities around Waga. Each clinic provided about 80 seniors with medicines for diabetes, hypertension, arthritis and other old-age maladies. The clinics also tested the eyesight of seniors and provided most of them with spectacles and some with cataract surgery free of charge (Fig. 7).

Scientific Research

The project to discover the diet of the western purple-faced langur was conducted over 13 months of dawn to dusk observations of the feeding behavior of two social groups (Rudran *et al.* 2013). Although the two groups obtained their diet from a large number of trees, more than 70% of their leafy diet was derived from a handful of species. Saplings of these species were collected from the wild and some were distributed to recipients of pepper plants to grow in their home gardens. Others were maintained in a nursery established by the SPEARS team. The nursery plants were later transferred to sites along streams to increase forest cover. This effort was not very successful because of floods, droughts, and herbivore predation. It is expected that the saplings that are being grown in secure home gardens will be bigger and better able to withstand weather conditions and herbivore attacks when they are transferred to sites to increase forest cover.

Outcome of the Community Development Program

Besides the temporary setbacks due to floods, drought and the Easter Sunday bombings, the SPEARS program's progress is hampered by the lack of a permanent source of financial support (see below). Despite the slow progress, the people of Waga are gradually beginning to appreciate the SPEARS team's efforts to help all segments of the community. This appreciation was reflected in the willingness shown by several pepper plant recipients to grow saplings of indigenous species in their home gardens so that they could be transferred later to suitable areas to increase forest cover to benefit the survival of the western purple-faced langur and other wildlife. This gesture made the local community equal partners in SPEARS Foundation's efforts to promote the conservation of the western purple-faced langur and other wildlife. A local community-based environmental organization also made a pledge to support future activities of the SPEARS Foundation.

Fund-raising

Between 2007 and 2019, the SPEARS Foundation spent about \$160,000 to defray the cost of the community development and research activities around Waga. Nearly 20% of the total amount was provided by the family that manages the SPEARS Foundation. The rest was raised in a piecemeal fashion through grants from overseas foundations, local donations and an international crowd-funding initiative. The funds raised during the 12 years supported the 13-month research project, 20 school lectures, 19 field surveys, 12 nature walks,

10 community surveys, nine workshops, four public exhibitions and three health clinics. They also helped to promote public awareness of environmental conservation throughout the country via 18 articles in the local newspapers. Furthermore, the SPEARS Foundation conducted 11 field surveys in Sri Lanka's administrative districts between January 2016 and June 2018 to locate other sites that would be suitable for the establishment of CCAs like the one that is being developed around Waga. The average annual cost of the activities conducted during the past 12 years was about \$13,300.

Discussion

The survey of the western purple-faced langur population showed that human activities were undermining its survival, and the support of the rural people was essential to mitigate this problem. However, people's indifference to the langur's plight was overshadowed by their own woes due to poverty and their ignorance of the detrimental effects of deforestation. The inability of government authorities to help solve these problems made their predicament even more challenging. It was clear, therefore, that the people's distress had to be addressed before they would be ready to help protect the western purple-faced langur. As a result, the SPEARS team undertook efforts to harness the support of the rural people before dealing with activities to conserve the endangered langurs.

The initial reaction of the Waga residents to the SPEARS team's community development activities was ambivalent. This was not surprising because the city-dwelling team of conservationists had no roots in the local community and had no experience in community development either. However, the team established permanent residency at Waga and gradually overcame doubts about its long-term commitment to the community's welfare by conducting a program that benefitted all segments of the population there. This program has been conducted for about 12 years, and is now greatly appreciated by the Waga community.

The program's value for children and adults is perhaps easy to understand but the assistance given to the community's elders may not be as apparent. Besides improving the quality of life for seniors, the assistance they received helped to resolve a serious dilemma that rural communities often face when they follow the traditional system of living in extended family units. Under these conditions a husband and wife must care for themselves, their children as well one or two sets of elderly parents. The burden of caring for the numerous different needs of three generations can be overwhelming to a rural family that is often hardly able to make ends meet. Therefore, the appreciation shown by heads of households to the SPEARS team's senior care initiative helped a great deal to overcome people's early ambivalence of the community development program.

The community's appreciation for the SPEARS team's efforts was also reflected by the willingness shown by several pepper plant recipients to grow saplings of indigenous species

in their home gardens so that they could be transferred later to suitable areas to increase forest cover to benefit the survival of the langurs and other wildlife. This gesture made the local community equal partners in SPEARS Foundation's efforts to promote the conservation of the western purple-faced langur. A local community-based environmental organization also made a pledge to support future activities of the SPEARS Foundation. These outcomes show that partnerships can be forged between conservationists and local communities to protect the western purple-faced langur and other wildlife. Such partnerships provide invaluable assistance to Sri Lanka's underfunded and understaffed government wildlife agency to fulfill its conservation mandate.

The concept of forging partnerships between conservationists and local communities to help protect wildlife is not as common as the older system where government administrators drew boundaries around protected areas and strictly regulated their use by local people. Those living in the vicinity did not benefit from this system of wildlife management, and it created numerous problems, such as land encroachment, poaching and other illegal activities. With increases in the size of human populations, several countries have seen the difficulties in maintaining the old system of managing protected areas, and realized the importance of allowing human communities to coexist with and benefit from the wildlife resources around them. This has resulted in the successful conservation of the black rhino in Namibia, the vicuña in the Peruvian Andes, Grevy's zebra in Kenya (Roe 2014), 16 ungulates in Tanzania (Lee 2018), and the marine turtles that nest along the coast of Costa Rica (Hocking 2019).

Although old practices are difficult to change, the trend towards sharing space with wildlife is becoming increasingly common throughout the world (Jones-Engel *et al.* 2011; Fuentes 2012; Fuentes and Hocking 2010; Hocking 2019). Sri Lanka has an excellent opportunity to embrace this trend and make it work because respect and reverence for animals and plants have long been part of its cultural traditions. Buddhism, which is practiced by more than 70% of Sri Lanka's Sinhalese community, preaches compassion towards all living things. Furthermore, 81% of Sri Lanka's human population live in rural areas (World Bank 2019), where cultural practices are more deeply entrenched than in urban localities.

There is little doubt that the outcomes of the Waga program were related to the fact that about 70% of those living in that district were followers of Buddhism (Central Bank of Sri Lanka, 2019). Gautama Buddha made the following remark about forests that he got to know intimately through the many years he spent in them while searching for enlightenment: "The forest is an organism of infinite kindness that provides shade even to the axe man who destroys it." Arahata Mahinda, the son of the Indian Emperor Asoka, who brought Buddhism to Sri Lanka nearly 2,300 years ago said the following when he was disturbed by the commotion of the country's King hunting deer while he was meditating in the forest: "O' great King! This land belongs to all living things. You are not its owner but only its guardian." This is from the first Buddhist

sermon delivered in Sri Lanka by Arahat Mahinda, and upon hearing it the King was filled with remorse and converted to the Buddhist way of showing compassion towards all living things. Furthermore, he established what is likely the first protected area known to the world, at Mihintale.

Sri Lanka's long Buddhist history is clearly the basis for the deep-rooted attitude of compassion towards all living things shown by the majority of the country's population. Likewise, Hinduism, the religion of most Sri Lankan Tamils, the country's second largest community, is replete with animal symbolism in the form of Hanuman, the monkey god and the elephant-faced Lord Ganesh. Christianity and Islam also have adherents in Sri Lanka's view of wildlife as God's creations that people must protect. This widely prevalent religious attitude provides Sri Lanka with a very effective way of unifying stakeholders and promoting community participation in wildlife conservation.

The Waga experience has revealed that communities can be recruited to help conserve wildlife. However, it has still not reached the point where community participation has helped to protect the western purple-faced langur. Progress towards this objective has been slow for several reasons. If a government institution took the lead in community development, progress would probably have been faster because local people normally have greater faith in them than in non-governmental organizations which usually move on once they accomplish their mission. As a result, the SPEARS team spent a considerable amount of time trying to win the confidence of the people before it could get their help to promote wildlife conservation. Another reason is that the program lacked a regular source of financial support which stalled its activities when funds dried up. Whenever this happened, fundraising always took priority over community development activities. The lesson learned is that patience and perseverance are essential to bridge the knowledge gap between the educated urban elite and the relatively impoverished rural culture that is unaware of the detrimental effects of destroying natural habitats.

Much remains to be done before a Community Conservation Area can be established around the environs of Waga, so that local people and wildlife could benefit through sustainable development activities under the supervision of the Department of Wildlife Conservation. International agencies are requested to help expedite this effort to conserve the Critically Endangered western purple-faced langur. International assistance is especially critical because the western purple-faced langur inhabits Sri Lanka's lowland rainforest which is the country's most endangered and rapidly dwindling ecosystem (Ashton *et al.* 1997). Furthermore, it is part of the Western Ghats Biodiversity Hotspot that harbors innumerable plants and animals found nowhere else in the world (de Zoysa and Raheem 1990; Myers *et al.* 2000; Brooks *et al.* 2002).

In order to find suitable sites throughout the country to establish Community Conservation Areas, the SPEARS Foundation has been conducting field surveys in several

administrative districts and interviewing local communities. Information collected during these surveys are currently being analyzed to help fulfill the objectives of the strategic plan for Sri Lankans to conserve and coexist with monkeys and other wildlife (Department of Wildlife Conservation 2016; Rudran and Kotagama 2016).

Conclusions

Despite the lack of a dependable source of financial support, a non-governmental organization was able to demonstrate that partnerships between rural communities and private institutions could be forged to promote wildlife conservation in Sri Lanka. This partnership was facilitated by the country's cultural heritage, which was compatible with the interests of those committed to wildlife conservation. However, it could not be developed until the stresses caused by poverty and the lack of environmental awareness of the rural poor were addressed. If these two factors are dealt with, Sri Lanka has the cultural attributes to effectively promote wildlife conservation. There are many young and qualified people who can replicate the Waga experience but the problem that stands in the way is lack of funding. We appeal, therefore, to international agencies to provide on a competitive basis, a steady stream of financial support to conservation oriented non-governmental organizations in Sri Lanka, to safeguard the country's unique contribution to global biological diversity.

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