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Stakeholder Perceptions of Potential Flagship Species for the Sacred Groves of the North Western Ghats, India

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Flagship species are often key in marketing ecotourism. Such flagships, however, are frequently perceived differently by local communities and tourists, which could undermine the function of flagships in conservation. This article investigated the differences between locals’ and tourists’ perceptions about potential bird and tree flagships in sacred groves in the north Western Ghats, India, by surveying 154 villagers and 148 tourists. Tourists generally appreciated aesthetic value, but villagers had species-specific views that incorporate use, cultural, and aesthetic values of these species. The results imply that the views of tourists potentially complement the existing values of these species for villagers by promoting ecotourism. Our results suggest the importance of considering both tourists’ and locals’ perspectives if conservationists aim to promote ecotourism using flagships, and if they are to harness the support of local communities and strive for both biological and social sustainability.

Keywords community-based conservation, flagship species, sacred grove, tourism, north Western Ghats

Introduction

Adopting flagship species has become a common strategy to capture public support for biodiversity conservation. Flagship species have been defined as surrogates of biodiversity that raise awareness and funds and contribute to the achievement of wider conservation goals (Dietz, Dietz, & Nagagata, 1994, pp. 32–33; Leader-Williams & Dublin, 2000, p. 55; Walpole & Leader-Williams, 2002). “Charismatic” megafauna, such as the giant panda (Ailuropoda melanoleuca) and the African elephant (Loxodonta africana), which conservation organizations assume have appeal to a vast audience, have been widely used as flagship species (Home, Keller, Nagel, Bauer, & Hunziker, 2009; Leader-Williams & Dublin, 2000). However, recognizing the need to clarify the definition for the more effective use of flagship species, Veríssimo, MacMillan, and Smith (2011) proposed a new definition as “a species used as the focus of a broader conservation marketing campaign based on its possession

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of one or more traits that appeal to the target audience.” They emphasized the importance of determining the target audience and understanding their interaction with the flagship species in selecting appropriate flagship species.

The use of flagship species varies, as do the target audiences. Barua, Root-Bernstein, Ladle, and Jepson (2011) set out seven uses of flagship species: conservation awareness; fund raising; ecotourism; community-based conservation; promotion of funded research; protection of species/habitat; and influencing policy. Ecotourism is sought as an instrument to give the local communities in the destinations economic incentives to support conservation (Goodwin, 1996; Walpole & Leader-Williams, 2002; Wunder, 2000). Walpole and Goodwin (2001) give an example of the Komodo dragon (Varanus komodoensis) as a successful ecotourism flagship species. The Komodo dragon flagship has been benefiting local communities through the tourism industry and has led to community acceptance of the Komodo National Park, which conserves the dragon’s habitat and its associated biodiversity. Ecotourism flagships are frequently charismatic megafauna, which are aimed to attract tourists to visit.

For local communities, however, attracting tourists and bringing economic opportunities are not the only aspect of these flagships. Locals usually have conventional interactions with these species, which are frequently not in their favor. Local people can be antagonized by common ecotourism flagships, such as lions, jaguars and elephants, because these species can damage their crops, kill livestock and in some instances injure or even kill members of their community (De Boer & Baquete, 1998; Mulder, Schacht, Caro, Schacht, & Caro, 2009; Oli, Taylor, & Rogers, 1994; Parry & Campbell, 1992). Such a “mutiny” of flagships could eventually undermine local support for conservation (Barua, Tamuly, & Ahmed, 2010). On the other hand, rural residents in developing countries tend to appreciate species that have strong local cultural or use values (Kellert, 1986, p. 63; Leader-Williams & Dublin, 2000). Bowen-Jones and Entwistle (2002) proposed the identification and the use of such species as “local flagship species,” which could encourage support for conservation from local communities. Local communities and tourists are important audiences of ecotourism flagships. Ideally, flagships should appeal to both audiences but there have been no previous studies exploring differences in the perspectives of tourists and local people toward such species. The potential differences in wildlife perceptions between the two different stakeholders and the need to target a specific audience in selecting effective flagship species (Verissimo, Fraser, Groombridge, Bristol, & MacMillan, 2011) highlights the need for such a study.

This article compared the perspectives of tourists and locals in the context of ecotourism centered on viewing species in sacred groves in the north Western Ghats, India. Sacred groves are forest patches that are traditionally protected by local people for religious importance. Many sacred groves retain rich biodiversity even among spreading agricultural landscapes (Bhagwat, Kushalappa, Williams, & Brown, 2005; Khumbongmayum, Khan, & Tripathi, 2005; Ramanujam & Kadamban, 2001). Recognizing the rich biodiversity in, and various threats to, the groves, Bhagwat and Rutte (2006) and Ormsby and Bhagwat (2010) point out the need for strategies to conserve biodiversity in sacred groves. However, sacred groves lack a formal framework to invest in official conservation efforts, such as protected areas have. This, and the traditional tie of local communities with sacred groves, implies the need for substantial community engagement for conserving these areas. In the north Western Ghats, ecotourism is thought to potentially complement dwindling traditional importance of sacred groves for villagers and to give villagers incentives to conserve sacred groves (Godbole & Sarnaik, 2004, pp. 48–52). In this context, the use of flagship species that both attract tourists and interest locals could link tourism benefit to biodiversity
in sacred groves, which could be positively perceived by locals, and motivate them to conserve biodiversity. Nevertheless, the historical and cultural relationship between local communities and the groves suggests that the perspectives of locals and tourists may be quite different.

Accordingly, the aim of this study is to address how the views of locals and tourists toward wildlife in sacred groves differ, and what this may mean for selecting flagships for sacred groves. This will consequently allow for a broader understanding of how ecotourism flagships could harness the support of local communities for biodiversity conservation.

**Methods**

**Study Area**

The study was carried out in Ratnagiri district of Maharashtra state, India, located in the northern part of the Western Ghats. The district comes under the Western Ghats and Sri Lanka biodiversity hotspot, which indicates rich plant endemism and serious decline of its habitats (CI, 2007), and the north Western Ghats moist deciduous forest ecoregion (WWF, 2001), which supports an important proportion of the biodiversity of the Indian subcontinent. However, the protected area coverage in the ecoregion is only 4%, which is far less than the 10% goal of the 2010 Biodiversity Target (Coad et al., 2009). Ratnagiri district has 834 sacred groves recorded, covering approximately 0.3% of the total forest area in the district (CPREEC, 2008; FSI, 2009). Although the coverage of sacred groves seems insufficiently high, the relatively intact vegetation and presence of many endemic or threatened species in the groves, which are not common in other forest landscapes, and traditional stewardship of local people (Godbole & Sarnaik, 2004; Punde, 2007) justify the importance of conserving sacred groves for biodiversity conservation in the district.

To understand the perceptions of local communities living close to sacred groves, we chose the villages of Phansavale, Devade, and Ujgaon. These communities were geographically close, have sacred groves in relatively intact status and have a previously established rapport with one of the organizations involved in this study, the Applied Environmental Research Foundation (AERF). We focused on Indian domestic tourists, a rapidly expanding market segment (ITOPC, 2010) that comprises the major portion of visitors to protected areas in India (Karanth & DeFries, 2011). We interviewed domestic tourists from Mahabaleshwar, one of the busiest resort destinations for domestic tourists nearby to the three studied villages.

**Questionnaire**

The study used questionnaires to understand the perceptions of villagers and tourists about different bird and tree species found in and around sacred groves. We first reviewed literature on species distribution and site-specific species inventories in the study site and conducted informal interviews with key informants about their experiences of sighting these species. The results were compiled in a list of the potential flagship species that were present in all three villages. The scope of the list was limited to bird and tree species that are widely seen and relatively easy to identify, and could be the target of ecotourism. Although large mammals are commonly used as tourism flagships, they are not frequently seen in the study area. The informal interviews with key informants collected information about the perceptions of the villagers about different species.
Second, on the basis of the known attributes of flagship species, we selected those attributes that were both relevant and applicable to the listed species in each stakeholder context. These attributes were: appealing aesthetics, endemism, and rareness for being tourism flagship species (Caro & O’Doherty, 1999; Leader-Williams & Dublin, 2000; Meuser, Harshaw, & Mooers, 2009; Veríssimo et al., 2009); and cultural importance and use value for being local flagship species (Farjon, Thomas, & Luu, 2004; Leader-Williams & Dublin, 2000). Finally, we selected three bird and three tree species that had at least one attribute of being either tourism or local flagships (Table 1).

Surveys were written in the state’s Marathi language and in English. The questionnaire asked villagers and tourists to rank the selected bird and tree species according to their preferences, followed by a question on the reasons for their preferences from a set of given options. When respondents chose other from the given options, we asked an open-ended question about the reason for their preference. During the questionnaires, we showed respondents cards containing the picture and English, vernacular, and scientific names of each species (Figure 1). This was important because vernacular bird names only indicate the general group to which the species belongs. To minimize the possible biases due to differences in the photographs, we used profile pictures for all bird species. For trees, we used pictures that depicted, for each species, the entire tree, the leaves and fruits, so that respondents would have enough information to identify the species. No other information was given to respondents.

Table 1
Selected bird and tree species and the key attributes

<table>
<thead>
<tr>
<th>Birds</th>
<th>Attributes of local flagships</th>
<th>Attributes of tourism flagships</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use value</td>
<td>Cultural or religious value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Endemism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abundance</td>
</tr>
<tr>
<td>Oriental dwarf kingfisher</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(Ceyx erithaca)</td>
<td></td>
<td>Scarcely or rare</td>
</tr>
<tr>
<td>Great hornbill (Buceros</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>bicornis)</td>
<td></td>
<td>Uncommon</td>
</tr>
<tr>
<td>White-bellied woodpecker</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(Dryocopus javensis)</td>
<td></td>
<td>Uncommon</td>
</tr>
<tr>
<td>Trees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banyan (Ficus benghalensis)</td>
<td>Medicinal</td>
<td>Religious (Hindu)</td>
</tr>
<tr>
<td>Bark cloth tree (Antiaris</td>
<td>Medicinal</td>
<td>No</td>
</tr>
<tr>
<td>toxicaria)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beletic (Terminalia</td>
<td>Medicinal</td>
<td>No</td>
</tr>
<tr>
<td>bellirica)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<sup>a</sup>Habitat range in the Indian subcontinent is restricted to the Western Ghats and few other places.
In June 2010, the first author, with three local interviewers, carried out the survey after piloting the questionnaire to 16 respondents in nearby Khundi village. The interviewers separately carried out the survey by visiting houses or by approaching any villagers available on the streets and in the fields. We used nonprobability quota sampling to acquire an equal male–female ratio. In Mahabaleshwer, the first author, with a local interviewer, conducted the survey of tourists at view points, a boating station beside a lake and teashops. We used nonprobability opportunistic sampling because women were frequently unresponsive to the interviews and hence quota sampling was not possible.
Data Analyses

We used binary logistic regression analysis for testing the effect of the socioeconomic attributes of respondents on their preferences for birds and trees, and on their selection of attributes of species as the reason for their preferences (Backward stepwise). Dependent variables were the preference of each species (favorite or not favorite) and applicability of each attribute (applicable or not applicable) as the reason for the choice of the favorite species. Covariates were sex (male or female), age (discreet number), and education (no education; primary school; secondary school; high-secondary school; university graduate; or more). We analyzed responses to the open-ended questions about the other reasons for the preference of respondents for bird or tree species using a basic content analysis.

Results

Sample Characteristics

Sample size was similar for both local villagers \((n = 154)\) and tourists \((n = 148)\) although their demographic and socioeconomic characteristics differed. The villager sample was relatively balanced between sexes (56% male and 44% female) and across different age groups, while tourists were heavily skewed toward younger males (89% male and 11% female) with higher educational backgrounds. The skew in sex was because females were in many cases not responsive to the interviews in the mixed-sex groups of tourists that frequented the site. There were significant differences in age and educational background between villagers and tourists (Age: Mann-Whitney \(U = 3712.00\), \(p < .001\); Education: \(U = 406.50\), \(p < .001\)). Most of the villagers (91%) were farmers. Regarding tourists, 88 (60%) were from urban areas, such as Mumbai or Pune. The majority of respondents in both samples were Hindus, with 23 (15%) villagers being Buddhists and 17 (12%) of tourists Muslims or from other religions.

Preferences of Villagers and Tourists for Birds and Trees

Preferences for bird species were significantly different between villagers and tourists \((\chi^2 [2,302] = 15.11, p = .001; \text{ Figure 2a, b})\). The primary reason for villagers favoring a bird species was beauty and, secondly, rareness, both of which were not significantly different among species (Table 2). Of those villagers who answered other as the reason for

![Figure 2. Proportion of respondents who chose each bird and the species as their favorite species. Note. (a) and (c): \(n = 154\); (c) and (d): \(n = 148\).](image)
Table 2
The proportions of respondents who selected each attribute as the reason for their choice of favorite species

<table>
<thead>
<tr>
<th>Sample</th>
<th>Attributes</th>
<th>Favorite bird species</th>
<th>Favorite tree species</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Oriental dwarf kingfisher</td>
<td>Great hornbill</td>
</tr>
<tr>
<td>Villagers</td>
<td>Beautiful</td>
<td>96%</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Medicinal importance</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Cultural and religious importance</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Endemic</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Rare</td>
<td>44%</td>
<td>38%</td>
</tr>
<tr>
<td>Tourists</td>
<td>Beautiful</td>
<td>93%</td>
<td>84%</td>
</tr>
<tr>
<td></td>
<td>Medicinal importance</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Cultural and religious importance</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Endemic</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Rare</td>
<td>19%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Dash indicates that the attribute is not applicable to the species.

*aResults of Chi-square test of association between the frequency that respondents chose each species as their favorite and that they selected each attribute as the reason for the choice of their favorite species.

$^b n = 154, df = 2.$

$^c n = 148, df = 2.$

$^{*}p < .05, ^{**}p < .01, ^{***}p < .001.$
their choice of favorite bird, four described that Great hornbill (*Buceros bicornis*) preys on reptiles, which they perceived as nasty animals, or specific calls of the bird that forecast approaching rainy season—an important benefit for villagers whose crops are dependent on monsoon rains. Two villagers preferred a bird because it does not harm people. Such utilitarian aspects were not mentioned by tourists. Instead, tourists associated mainly beauty with the Oriental dwarf kingfisher (*Ceyx erithaca*) and Great hornbill and rareness with Great hornbill (Table 2). Of 24 cases that tourists answered *other* as the reason for their preference for a bird species, the majority (79%) appreciated the appearance and the behavior of the bird, which could be interpreted as the aesthetic aspects of the bird. Looking at the overall tendency, both groups appreciate beauty and rareness of birds, while villagers associated cultural or religious value with birds significantly more than tourists ($\chi^2[1,302] = 5.31, p = .021$).

Regarding tree species, preferences of villagers and tourists were also significantly different ($\chi^2[1,302] = 18.37, p < .001$), although the majority of respondents in both samples preferred Banyan (*Ficus benghalensis*) (Figure 2c, d). Villagers appreciated the medicinal value of Bark cloth tree (*Antiaris toxicaria*) and Beleric (*Terminalia bellirica*), the religious importance of Banyan and the rareness of Bark cloth tree (Table 2). Nine of those villagers who answered *other* described the use of the leaves of Banyan as plates for serving food and the timber of Beleric. Amenity uses of trees such as shade and as a playground for children were also mentioned by three villagers. Tourists specifically associated medicinal value with Beleric, religious importance with Banyan, and rareness with Bark cloth tree (Table 2). Although seven tourists appreciated amenity use of Banyan, no tourist mentioned any consumptive uses for the trees. Overall, villagers tended to appreciate cultural and religious values of trees ($\chi^2[1,154] = 7.94, p = .005$), while tourists generally appreciated aesthetic value of trees ($\chi^2[1,148] = 10.9, p = .001$).

The majority (79%) of villagers, when asked whether they prefer their favorite bird or tree species, answered that they liked both the bird and the tree species equally. Of the remaining respondents, 30 (20%) preferred the tree; only two respondents (1%) preferred the bird. This contrasted with the preference of tourists who selected *bird*, *tree* or *like equally* in nearly equal proportions ($\chi^2 [2,148] = 0.01, p = .739$).

Binary logistic regression analysis showed a notable effect of age on the villager’s preferences among all the surveyed socioeconomic attributes of the respondents. Older villagers were more likely to favor Great hornbill than were younger villagers ($b = .028$, *Wald* [1,154] = 5.77, $p = .016$, $R^2 = .051$), but were less likely to favor While-bellied woodpecker (*Dryocopus javensis*) and Banyan ($b = -.052$, *Wald* [1,154] = 6.38, $p = .012$, $R^2 = .136$; and $b = -.028$, *Wald* [1,154] = 5.62, $p = .018$, $R^2 = .051$, respectively). Sex and education had no significant effect on preferences. The logistic regression analysis also showed that older villagers were less likely to choose *beautiful* than were younger villagers as the reasons for the choice of their favorite bird (Table 3).

**Discussion**

**Different Perceptions of Birds and Trees Among Stakeholders**

This article presented an initial approach to understanding the differences in perspectives among different conservation stakeholders. Our results showed differences between the perspectives of villagers and tourists about bird and tree species that are found in, and around, sacred groves in the north Western Ghats. Villagers generally appreciated use or cultural values of the birds and trees, while tourists preferred species they considered beautiful. This tendency was upheld by the result that only two (1%) villagers preferred
Table 3

Results of the binary logistic regression analysis\(^a\) testing for significant effects of sex, age, and educational background of respondents on their selection of species’ attributes as the reason for their choice of favorite species

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Covariate</th>
<th>df</th>
<th>b</th>
<th>SE</th>
<th>Wald</th>
<th>Nagelkerke R(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Villagers(^b)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird Beautiful</td>
<td>Age</td>
<td>1</td>
<td>-0.04</td>
<td>0.02</td>
<td>4.73*</td>
<td>0.06</td>
</tr>
<tr>
<td>Cultural and religious importance</td>
<td>NS(^c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endemic</td>
<td>Age</td>
<td>1</td>
<td>0.05</td>
<td>0.02</td>
<td>3.00*</td>
<td>0.07</td>
</tr>
<tr>
<td>Rare</td>
<td>Gender</td>
<td>1</td>
<td>0.74</td>
<td>0.35</td>
<td>4.45*</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Tree</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beautiful</td>
<td>Gender</td>
<td>1</td>
<td>-0.74</td>
<td>0.35</td>
<td>4.53*</td>
<td>0.04</td>
</tr>
<tr>
<td>Medicinal importance</td>
<td>NS(^c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural and religious importance</td>
<td>Age</td>
<td>1</td>
<td>0.03</td>
<td>0.02</td>
<td>3.15</td>
<td>0.05</td>
</tr>
<tr>
<td>Endemic</td>
<td>Education</td>
<td>1</td>
<td>0.60</td>
<td>0.29</td>
<td>4.23*</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Tourists(^d)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird Beautiful</td>
<td>NS(^c)</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Cultural and religious importance</td>
<td>Gender</td>
<td>1</td>
<td>-3.17</td>
<td>1.63</td>
<td>3.79</td>
<td>0.17</td>
</tr>
<tr>
<td>Endemic</td>
<td>Education</td>
<td>1</td>
<td>-1.31</td>
<td>0.84</td>
<td>2.45</td>
<td>0.00</td>
</tr>
<tr>
<td>Rare</td>
<td>NS(^c)</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td><strong>Tree</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beautiful</td>
<td>Gender</td>
<td>1</td>
<td>2.13</td>
<td>1.08</td>
<td>3.89*</td>
<td>0.10</td>
</tr>
<tr>
<td>Medicinal importance</td>
<td>Age</td>
<td>1</td>
<td>0.06</td>
<td>0.02</td>
<td>6.42*</td>
<td>0.12</td>
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<tr>
<td>Cultural and religious importance</td>
<td>NS(^c)</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Endemic</td>
<td>NS(^c)</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Rare</td>
<td>Gender</td>
<td>1</td>
<td>-2.17</td>
<td>0.95</td>
<td>5.24*</td>
<td>0.10</td>
</tr>
</tbody>
</table>

\(^a\)Backward stepwise–conditional; probability for stepwise: entry .05 and removal .10; classification cutoff: .5; and maximum iterations: 20.

\(^b\)\(n = 154\).

\(^c\)All covariates were removed.

\(^d\)\(n = 148\).

\(^p < .05\).

birds, with which they primarily associated aesthetic value, to trees. This agrees with the findings of De Boer (1998) in Mozambique that rural villagers preferred plants to animals due to their usefulness. This would be expected especially in rural villages where the use of plant species comprises an important part of their livelihood.

A closer look at the perspectives of villagers shows their more species-specific views that incorporate appreciation of use, cultural and aesthetic values. There are similar reports in Mozambique and Tanzania that support the conclusion that preferences of rural villagers for wildlife species reflect specific uses of and cultural beliefs about each species (De Boer & Baquete, 1998; Kaltenborn, Bjerke, Nyahongo, & Williams, 2006). In our case, this species-specific view of villagers would be one of the reasons why the majority of
villagers in the study site could not prioritize bird or tree, which, for them, would mean measuring values of different objects using different yardsticks. It should also be noted that younger villagers were more likely to appreciate aesthetic value, but not other aspects of birds, than older villagers. On the assumption that this indicates the shift of wildlife views across generations and considering the recent rapid economic growth of India, our findings are consistent with the theory and the empirical evidences that economic growth shifts “materialist” toward “post-materialist” views of wildlife (Inglehart & Baker, 2000; Manfredo, Teel, & Bright, 2003; Manfredo & Dayer, 2004). However, our results do not provide evidence for the shift of wildlife view, but not simply an age-related difference, and whether recent economic growth of India is having similar effect on wildlife views there is the scope for further studies.

Given the empirical evidences regarding the effect of respondents’ knowledge about species on their preferences (Meuser et al., 2009; Tisdell, Swarna Nantha, & Wilson, 2007; Tisdell & Wilson, 2006), the dissimilarities of the preferences for birds and trees between villagers and tourists could be caused by the differences in their knowledge about the provided species. Villagers would have more information about the given birds and trees, which they can see in their villages, than tourists. Tourists, who were generally not familiar with these species, might prefer the species that they thought beautiful, because they only had the visual image of the species shown in the picture cards. Although this could bias the results, it mimics the real-world context where ecotourism is developed in places where use and cultural values of birds and trees for local villagers outweigh those of tourists.

Implications of the Different Perceptions of Stakeholders to Ecotourism

In an ecotourism setting, where tourists primarily enjoy the beauty of species, the consumptive use of, or negative views toward those same species by local people can upset tourists or undermine local support for ecotourism. Hinch (1998) addresses this issue by illustrating tourists in an Arctic expedition witnessing an indigenous whale hunt. Barua and Ahmed (2010) provide an empirical example of how the direct contact with wild elephants, such as crop raiding and house damage, compromises the conservation intentions of locals. This is highly likely in the parts of the world where bushmeat comprises an important local livelihood or where potential flagship species have negative local impacts, such as livestock predation by snow leopards and crop damage by elephants (De Boer & Baquete, 1998; Oli et al., 1994; Parry & Campbell, 1992).

In our study, villagers and tourists have fairly common views of birds. Although villagers associated use values with Great hornbill such as a rain forecaster and predator of “vicious” reptiles, these uses are not consumptive and hence unlikely to conflict with the views of tourists. Unlike some tribal communities in India (Sethi & Howe, 2009) villagers in the study site do not hunt this bird species. The conformity of the two views might, however, be framed by limited options of bird species with relatively similar attributes that were set out in the questionnaire. The results of the study hold for the three presented species, or other birds with similar attributes. Presenting the species with negative aspects for villagers, such as raptors that occasionally prey on poultry in the studied area, might have brought about different results.

Villagers had several uses for the tree species in this study. The majority of villagers valued medicinal uses of trees, which many tourists also appreciated. These local medicinal uses usually require tiny parts such as bark fragments, root tips, fruits, seeds, or sap (FRLHT, 2010; Punde, 2007; Singh, Wadhawani, & Johri, 1983) and would not be detrimental to the survival of individual trees. Thus, the conflict between use and nonuse value in terms of local medicinal uses is unlikely. Regarding other uses, villagers taking
timber from Beleric seems obviously inconsistent with the views of tourists. Concerning
the harvest of the leaves of Banyan for plates, however, there is no information about how
the practices potentially oppose the views of tourists. It is probable that other aspects that
villagers and tourists commonly associate with the tree, such as amenity use and its reli-
gious role, would outweigh the potential conflict between the two views. The religious
importance of Banyan for Hindus (Singh et al., 1983) could substantially contribute to the
conformity of the views of villagers and tourists, who were mostly Hindus. Marie et al.
(2009) illustrate endemic baobab trees in Madagascar that constitute a religious icon but
have several uses, from conventional uses of fiber from the bark and edible fruits to the
emerging value as a tourism attraction, and hence are protected by local people. The value
of Banyan for local people in our study seems similar to that attributed to these baobab
trees in Madagascar.

Accordingly, cross-cultural issues are not likely to arise by using the three bird and
two tree species as ecotourism flagships, except for Beleric. Instead, ecotourism could cap-
ture payments from tourists who primarily appreciate the beauty of wildlife, which would,
for villagers, add economic values to the species to which villagers have traditionally
associated cultural, religious, or use values.

Local communities need to play a major role in conserving sacred groves because the
groves were traditionally protected by them and have no formal status, such as protected
areas have. For motivating local communities to support biodiversity conservation, a num-
ber of studies propose the selection and the use of local flagship species that the members
of local communities inherently appreciate (Bowen-Jones & Entwistle, 2002; Farjon et al.,
2004; Leader-Williams & Dublin, 2000). These have extended the scope of flagships from
charismatic large mammals to noncharismatic animals, or even to tree species. Our point
is that, when other conservation stakeholders, such as tourists, are involved, it is critical to
consider their perspectives on the flagships and how these relate to the local perspectives.
Only then can conservationists achieve outcomes that build on the synergies between
all the perspectives of involved stakeholders. On the basis of empirical support for the dif-
fences in wildlife preferences between locals and tourists, this study highlights the need
for understanding the different perspectives of different stakeholders, and how these relate
to the local context, for selecting effective ecotourism flagship species that could harness
local support for biodiversity conservation.

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Stakeholder Perceptions of Flagship Species


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