

wildlife feeding, national park policy and visitor practice: where to from here?

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ABSTRACT

The supplementary feeding of wildlife in national parks and other protected areas is an activity that is often sought by many visitors. However, wildlife feeding is often contrary to the management intent of these areas, and as a result, is strongly discouraged by agency personnel on the basis of biological and/or ecological reasons.

A survey of visitors to the Bunya Mountains National Park during the 1996, 1997 and 1998 Easter periods was undertaken to determine why the feeding of wildlife was a popular pastime at this location and to consider the effectiveness of the management agency's response to this activity. Target species include crimson rosellas, king parrots and red neck wallabies while non-target species include brush turkeys, red-brow firetails and superb fairy-wrens.

Data interpretation suggests that visitors wanted to interact directly and indirectly with wildlife at this location. Consequently, attempts by the management agency to discourage wildlife feeding on the park were proving largely ineffective. In an attempt to manage this activity and promote the well-being of target species and humans, management agencies may need to take a proactive approach and educate visitors on the dietary needs of the wildlife they wish to interact with.

INTRODUCTION

The feeding of native wildlife is a complex and often contentious issue. However, many people seek the positive experiences that can be gained from the direct interaction with wildlife (Rogers 1997). Consequently, wildlife feeding is an established practice at many tourist centres and fauna parks. Many people also feed wildlife in their backyards and at local parks. Wildlife tourism is one of the fastest growing sectors of tourism worldwide. So, why can't people interact directly with wildlife in a national park?

A study conducted at the Bunya Mountains National Park over three years forms the basis of this debate. The Bunya Mountains National Park is the most western rainforest park in South-East Queensland and attracts around 175 000 visitors annually (Beaty pers comm. March 1996). It is located approximately 250km west of Brisbane and 110km north of Toowoomba (Figure 1). The national park was first gazetted in 1908 and preserves the

largest remaining natural stand of bunya pines (*Araucaria bidwillii*) in Queensland (QDoE 1997). The park also provides habitat for a variety of birdlife including crimson rosellas (*Platycerus elegans*), king parrots (*Alisterus scapularis*), red-browed firetails (*Aegintha temporalis*), superb fairy-wrens (*Malurus cyaneus*) and brush turkeys (*Alectura lathami*) and animals such as red neck wallabies (*Macropus rufogriseus banksianus*) and the mountain brushtail possum (*Trichosurus caninus*). These species are central to the wildlife feeding activities that occur on the mountain.

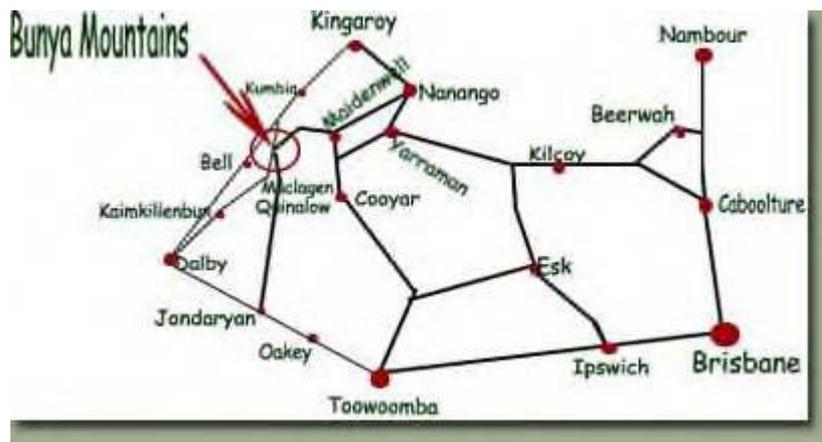


Figure 1: Bunya Mountains location map

The Bunya Mountains has also experienced a real estate boom in the last few years. Many of the dairy farms that used to share the mountain top with the Park have been sold, subdivided and turned into private estates. These estates contain many holiday homes and are actively marketed as holiday destination. The Bunya Mountains National Park and the opportunity to interact directly and indirectly with the area's native wildlife are promoted as some of the main attractions for holidaying at this location.

METHODOLOGY

Survey Population and research instruments

A sample population of visitors to Bunya Mountains National Park were surveyed by questionnaire during the Easter school holiday break in 1996, 1997 and in 1998. The questionnaire sought visitor's views, amongst other things, on the issue of wildlife feeding. In addition, observation sheets were used to record the number of adults and children feeding and observing wildlife in the survey area. These observations consisted of counting the number of people and wildlife (species and number) participating in this event during the day. Data were recorded, on average, over a ten-minute period (eg. from 8:25am until 8:35am) at hourly intervals (eg 8:30, 9:30, 10:30, until 4:30pm).

RESULTS and DISCUSSION

The feeding of wildlife (particularly birds) at the Bunya Mountains is an activity that is firmly entrenched in visitor practice and consciousness - a fact supported by significant anecdotal information. The earliest recordings of wildlife feeding at the Bunya's dates back to the 1940's (Dave Beaty *pers com* April 1996). It is also a popular tourist attraction (Beaty & Sansom 1996). In 1998, 17% of respondents (n = 142) said they *specifically* came to the Bunya Mountains to feed wildlife. However, personal observations and anecdotal reports over the three survey periods would suggest that this figure is at least 20 - 30%. This is due to the presumption that visitors who came to the Bunya Mountains for other purposes may have also participated in the feeding of wildlife, even though this *was not* their prime purpose for visiting the Park.

Many people also feed wildlife on the mountain's private estates (Kelvin Quinn, *pers comm.* April 1998). In many instances bird-feeders and bird baths at guest houses and chalets support this practice. Tourist brochures and leaflets left in the accommodation houses also encourage visitors to partake in this activity.

Many factors influence the feeding of wildlife by people: culture, education, up-bringing, attitude and perception. However, there is one motivator that remains central to the reasons why people feed wildlife - the *experience* of doing it. Many people seek the positive experience that can be gained from directly interacting with a "wild" animal (Rogers 1997). Moore et al (1997) also infer that this "positive experience" will be enhanced if the activity is conducted in a natural area - such as a national park allowing empathy for wildlife to be developed. An outcome perceived as being positive for wildlife conservation, and the role of national parks.

There are three main reasons why people fed wildlife at the Bunya Mountains: to interact with wildlife (59%), for personal pleasure (29%) and because other people were doing it (12%) (Figure 2). These reasons are quantifiable and part of the human psychic/physique, people have a desire to be able to touch, help and enjoy wildlife (Knight & Temple 1995, Rogers 1997). Bernstein et al (1991) also claim that as individuals, humans are also predictable in that if they perceive that other people are receiving a benefit from some activity then they also want to be "part of the action". This behavioural trait provides substance to the earlier presumption that people who did not come to the Bunya Mountains specifically to feed wildlife may also take part in this activity during their visit.

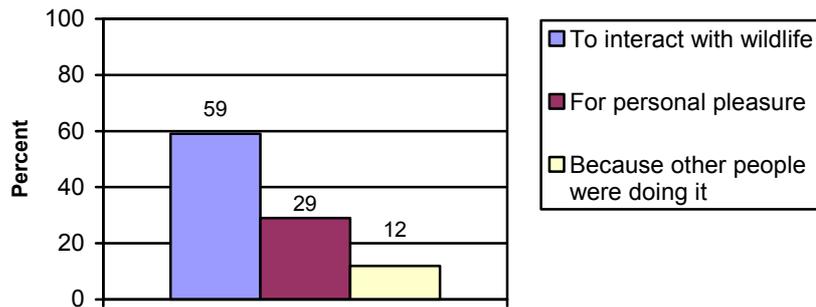


Figure 2: Reasons why respondents fed wildlife at the Bunya Mountains

Yet, the practice of wildlife feeding conflicts with the management intent of the Bunya Mountains National Park (Beaty & Sansom 1996). In fact, many of Australia's conservation agencies responsible for the management of their national parks have policies that actively discourage this practice. These policies may or may not be supported by an Act of Parliament. In Queensland, the *Nature Conservation Act (1992)* (NCAct) provides for the conservation of nature in this state. It also provides for the management of eleven classes of protected area in Queensland. The *Nature Conservation Regulations (1994)* (NCRReg) support the intent of the NCAct and makes it an offence for a person to feed an animal which (a) is dangerous, venomous, or capable of injuring a person, or (b) if a regulatory notice is present prohibiting the activity in a protected area (NCRReg r87) or in the wild (NCRReg r237).

The public would most likely interpret this provision as relating those species that are commonly perceived as being dangerous (eg. crocodiles, cassowaries and dingoes) (Pullen, cited in Stanley 1995). The public perception is that it is okay to feed species such as kangaroos, wallabies, birds, possums, dolphins and fish (even though all native animals have the potential to injure humans) and therefore a legitimate practice. And while the erection of a regulatory sign prohibiting this activity may appear to be a simple solution, it is counteractive when commercial enterprises and private landholders are legitimately continuing this practice (ibid). Such an approach would be counter-productive and unlikely to assist the QPWS in their efforts to address more serious conservation issues.

In addition, the sale of birdseed adjacent to the park boundary and/or the bringing of seed into the park for the purpose of feeding wildlife compound the issue (QDEH 1995). The act of bringing seed into a national park may also be construed as an offence under Queensland legislation (NCRReg r78). However, the real issue for staff is the supplementary feeding of target species (crimson rosellas and king parrots) and scavenging by non-target species (eg. red neck wallabies, scrub turkeys and wrens) and the likely introduction of a potential weed source. Safety is also a real issue for staff as most of the wildlife feeding occurs on the coach parking area near the park entrance. And as anecdotal evidence suggests, the seed

may also cause a range of ill health and population disorders in these species (Skira & Smith 1991, Beaty & Sansom 1996, Jervis Bay National Park 1996, Stanley & Siepen 1996).

While it is accepted that the sale of seed adjacent to the national park boundary may encourage visitors to participate directly and/or indirectly in this activity, many visitors to the park actually bring their own birdseed and other food stuffs with them to facilitate a direct interaction with wildlife. In 1998, 54% respondents who specifically came to the Bunya Mountains to feed wildlife purchased birdseed from the kiosk while the other 46% brought seed with them. It is also expected that the sale of birdseed adjacent to the park boundary facilitates and encourages the involvement of other visitors to partake in this activity because *other people were doing it* (refer Figure 2).

Nearly all survey respondents (92%) were aware that the feeding of wildlife is strongly discouraged in Queensland national parks (Figure 3). Many parks which have a wildlife feeding problem (eg. Lamington, Carnarvon, Fraser Island, Moreton Island, Woodgate, etc.) actively discourage this activity through a range of educational activities. Bunya Mountains is no exception, the Park has for a number of years displayed in their Information Centre a very informative and provocative presentation outlining the detrimental effects that artificial feeding has on wildlife health. This display and the overriding theme "*Look ... but don't feed*" is also reinforced by staff during their rounds when they encounter people feeding wildlife on the park. Only 6% indicated that they were not aware of current management policy towards this issue, while 2% did not answer the question.

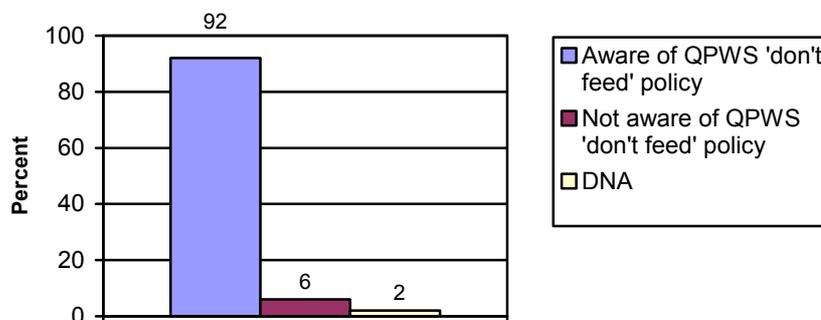


Figure 3: Respondents awareness of QPWS's policy to discourage wildlife feeding in national parks

In line with current management policy, staff erected a number of large signs in an attempt to further discourage people from feeding wildlife. These signs were erected the week prior to the Easter 1997 break. These signs are located at the entrance to the National Park, within the Dandabah picnic ground, and directly opposite the private kiosk. These signs state, "Do not feed the wildlife - it is harmful to their health and well-being". The majority of survey

respondents (83%) correctly interpreted the intent of these signs (Figure 4). That is, *do not feed the wildlife*. However, 13% of respondents thought that these signs referred to the feeding of food scraps to wildlife and that a wild seed mix (which was being sold by the shop adjacent to the park) was appropriate while a further 1% interpreted them to mean that natural foods were acceptable. Three percent of respondents either did not know what the signs meant or declined to answer this question.

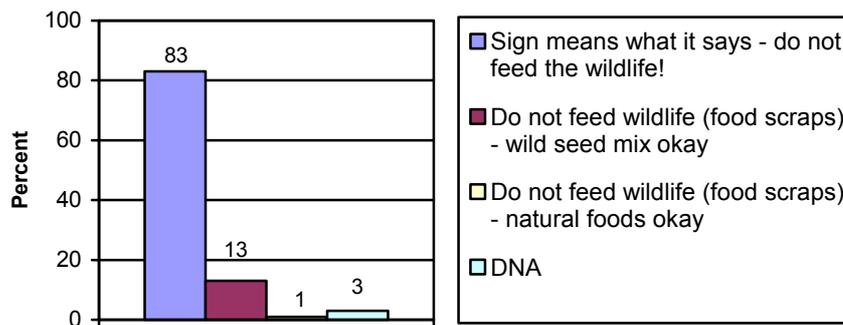


Figure 4: Respondents interpretation of 'Do not feed the wildlife - it is harmful to their health and well-being' signage

When asked why they believed the Queensland Parks and Wildlife Service (QPWS) discouraged wildlife feeding, many respondents cited reasons commonly echoed by conservation agencies. For example, 63% of respondents presumed that it was because the practice created a dependency on humans; 51% believed it was because it was detrimental to animals' health; while 27% thought it was to keep the animals wild (Figure 5). Respondents also indicated that it was to reduce the likelihood of animals becoming aggressive (15%); while 13% believed that it upset the balance between competing species. Five percent of respondents did not answer this question. Clearly, these responses indicate that visitors are aware of the potential threats that the supplementary feeding may have on the Park's wildlife. However, many visitors continued to feed wildlife irrespective of this knowledge and the signs placed around the park.

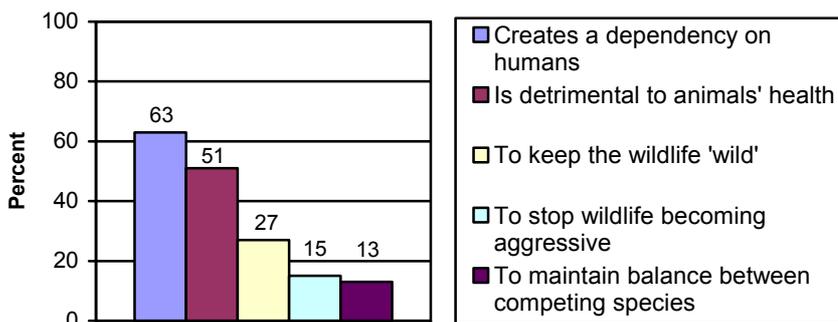


Figure 5: Reasons why QPWS discourages the feeding of wildlife on national parks

During the course of this study, the four days of Easter (Easter Friday - Easter Monday) were recorded as the main days on which visitors fed wildlife within the national park (Figure 6). The highest incidence of feeding generally occurred on Easter Sunday. The prime feeding period was between 12:30pm and 3:30pm. Data indicates that bird numbers increased until midday and then fluctuated, generally in keeping with the numbers of people present at the feeding site. What is noticeable over this 3-year period is that data¹ indicate that children were more likely to feed wildlife than adults, while adults either looked on or supervised their children partaking in this activity.

1996

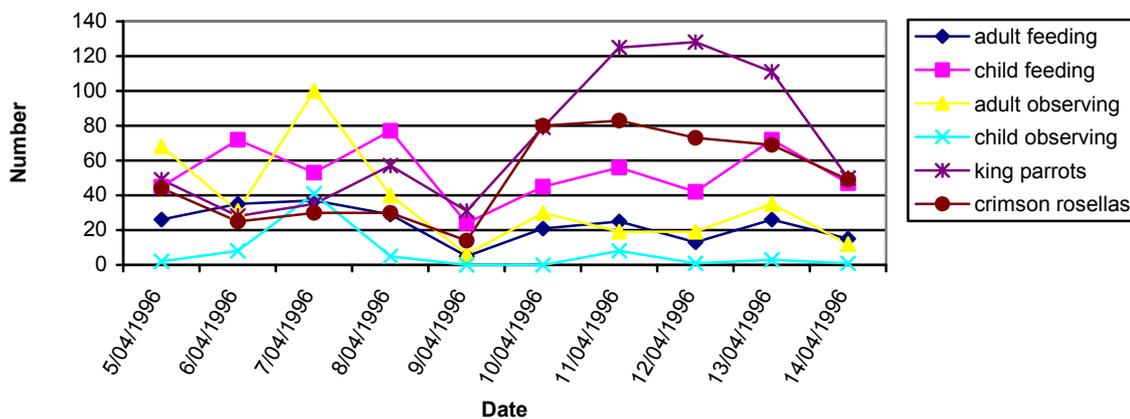
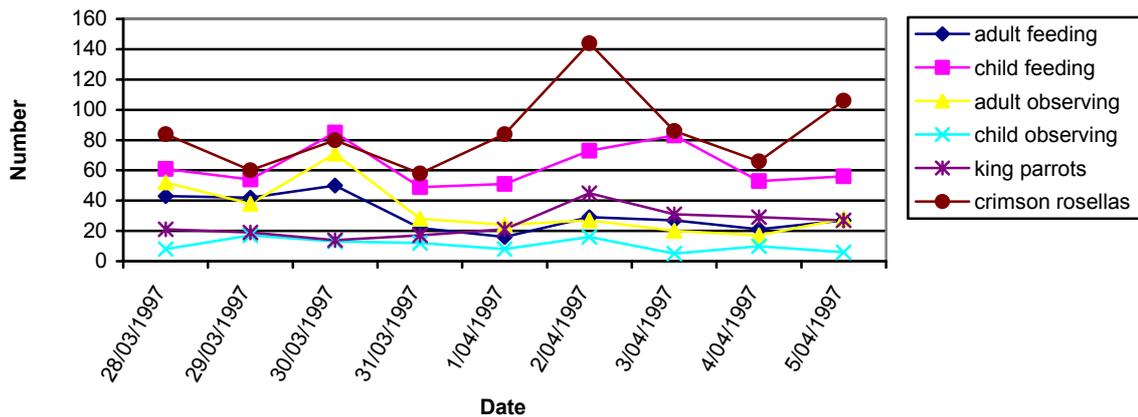


Figure 6: Number of adults and children feeding or observing the feeding of king parrots and crimson rosella's during the 1996, 1997 and 1998 Easter holiday periods

¹ It must be acknowledged that these results are only approximates of actual numbers due to the abilities and enthusiasm of observers and the period over which data was collected: 5 - 10 minutes either side of designated time.

1997



1998

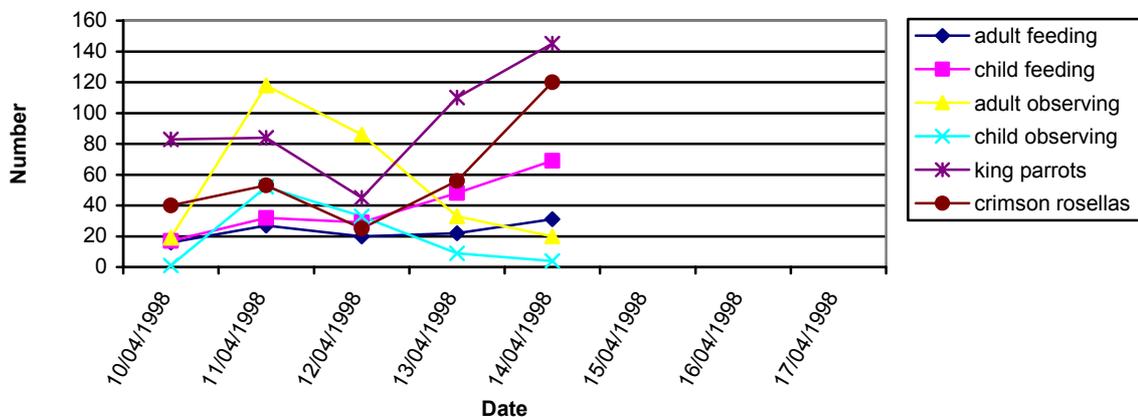


Figure 6 (cont'd): Number of adults and children feeding or observing the feeding of king parrots and crimson rosella's during the 1996, 1997 and 1998 Easter holiday periods

What is also noticeable is that while there were no signs at the commencement of this study (Easter 1996) to discourage visitors from feeding wildlife from within the survey area to the present situation (Easter 1998), there appears to be little difference between numbers of people actually feeding and observing during this study. That is, the signs and attempts by park staff to discourage the feeding of wildlife in the park have not reduced the level or the desire of people to feed wildlife in this national park.

Encouragingly, 91% of those visitors who specifically came to the Bunya Mountains to feed wildlife indicated that they would be willing to stop this practice if they knew it was detrimental to their health (Figure 7). However, this willingness to refrain from feeding wildlife is at odds with current attempts by park staff to limit this practice. The lack of conclusive evidence and the reluctance by conservation agencies to address the feeding of wildlife off-parks may be contributing to the disparity between visitors feeding wildlife on parks and their willingness to stop this practice. Regardless of any evidence that feeding is detrimental to the health of the

wildlife, 6% of these respondents said they would not stop feeding wildlife, while the remaining 3% were unsure.

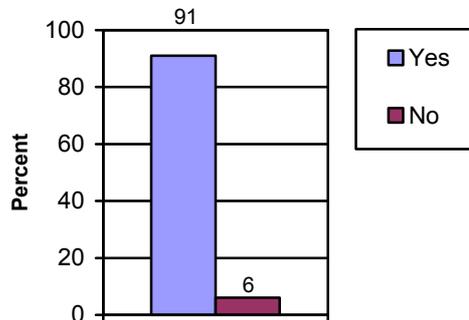


Figure 7: Respondents reply to question whether they would refrain from feeding wildlife if they knew it was detrimental to their health?

The location of the private kiosk and the sale of birdseed from their premises also presents a level of confusion to the visitor at Bunya Mountains. The kiosk is painted in colours that are commonly used by the Queensland Parks and Wildlife Service. And as the kiosk adjoins the park boundary many visitors believe that the kiosk is part of the national park (Baldwin et al 1998). Therefore, many visitors may believe that a double standard is being presented by the QPWS in this locality.

RESEARCH IMPLICATIONS

It is reasonable to assume that a majority of visitors to the Bunya Mountains National Park do not come *specifically* to feed wildlife. However, anecdotal information suggests that a large majority of visitors *do* engage in wildlife feeding, particularly children, despite there being a high level of awareness about the inappropriateness of this practice amongst adults. With an annual visitation rate exceeding 175,000 people the direct and indirect effects of this activity on the park estate is a major concern.

The majority of visitors who come to the Bunya Mountains to feed wildlife do so because they have a desire to interact with wildlife for their own personal pleasure. It is therefore, reasonable to assume that this practice will continue against all attempts by QPWS staff to discourage visitors from this activity. The sale of seed adjacent to the park boundary does not help the park staff in addressing this issue. Nor does, the marketing of Bunya Mountains as a place to come “face-to-face” with nature.

Unless appropriate management initiatives are formulated or existing legislation is enforced, wildlife feeding will continue in protected areas like the Bunya Mountains. Currently, this

practice constitutes an offence within the parameters established by section 62 of the Queensland *Nature Conservation Act 1992*, and section 87 of the Queensland *Nature Conservation Regulation 1994*. It is quite possible that Regulations 78 and 83 are also breached during visitor's efforts to feed wildlife. However, the "big stick approach" is likely to be counterproductive and effect park/neighbour relations especially when commercial enterprises and private landholders are legitimately continuing this practice. Visitor empathy for the park and the role that the QPWS plays may also be compromised.

Many people go to areas such as national parks and fauna parks to interact either directly (through feeding) or indirectly (by being there) with wildlife. Educational strategies such as interpretation, extension and minimal impact education are often employed to promote a "no feeding policy". However, educational opportunities that use wildlife interactions to facilitate in-depth learning, appreciation and understanding are not being realised. Why not? How can communication, education and wildlife feeding be used in a proactive manner, meeting management directives and the public's desire to interact with wildlife?

CONCLUSION

This study has highlighted the disparity between national park policy and visitor practice and has added to the debate whether the supplementary feeding of wildlife is detrimental to their health or not. Many land management agencies view the supplementary feeding of wildlife contrary to their charter. Thus, wildlife feeding within their boundaries is actively discouraged. The feeding of wildlife at the Bunya Mountains is a well established practice, it can be traced back many generations. However, no hard evidence exists to positively support the assumption that feeding wildlife at this location has contributed to animal ill-health in any way, or that it has affected the Park's ecological integrity.

Wildlife feeding is a contentious issue: it is perceived as being both detrimental to the ecological integrity of a species and an important vehicle for fostering community appreciation and participation towards the conservation of nature. Arguments for and against the supplementary feeding of wildlife range from a change in species composition, and loss of diversity, disease, and aggressiveness through to forming empathy with wildlife, learning about nature and being supportive of nature conservation ideals and practices (Moore et al 1997).

Despite widespread debate, appropriate research data is limited (Moore et al 1997). Thus, much of the information is largely anecdotal and is based on personal belief or management directives. This lack of definitive data has led to two polarized views on the issue: the "FOR" and the "AGAINST". Does the supplementary feeding of wildlife significantly effect their survival, or the ecological balance in an urban, rural or natural environment? Do people who feed wildlife in fauna parks or in their backyards pose a threat to the management of protected areas? Do the potential benefits of this activity in enhancing community attitudes towards nature conservation outweigh the negative consequences? Answers to these

questions will inevitably vary depending who is asked, the species of wildlife in question and the type and form of supplementary feeding involved.

Research is needed to quantify the problems associated with the feeding of wildlife. Research is also needed to determine whether the benefits derived from feeding wildlife outweigh the negative consequences. Yet regardless of any research on the positive and/or negative effects of this practice, and the effect it may have on the ecological integrity of protected areas, people will continue interact with wildlife in their backyards, at fauna parks and at any other location where wildlife can be enticed to take food from humans. In the meantime park managers are required to persevere with a policy that is flawed on many accounts.

There is a need to establish a conclusive response to this issue before the social, political and ecological implications of this debate become distorted to solve. In the interim, a proactive education strategy that accepts some visitors desire to interact directly with wildlife in a protected area and one that promotes responsible supplementary feeding of native wildlife may be more effective than the current situation. The next paper in this series will outline a possible education programme that may be adopted by a conservation agency to proactively address wildlife feeding on and off-park. The third paper will provide a case study evaluation of the proposed education programme.

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