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EDITORIAL

The tragedy of the nature photography commons

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Over the last few decades, photography has become a crucial tool in the mainstreaming of biodiversity and its conservation. Today, it would be almost impossible to find any conservation outreach or marketing materials that do not include at least a few photographs. This emphasis on photographic material is well justified, as there is evidence that photographs can have an important impact in our perceptions, attitudes and even behaviour towards nature (Kalof, Zammit-Lucia and Kelly 2011; Myers Jr., 2006). Examples of this are the efforts of the Sierra Club to establish some of the world's first protected areas in the USA; National Geographic's coverage of the "Megatransect" trek by ecologist Michael Fay across the Congo basin; or the recent media reports on the large scale killing of Amur Falcons in the of Nagaland, India (Dalvi and Sreenivasan, 2012; Myers Jr., 2006). Such encouraging outcomes have lead to the creation of the field of "conservation photography" and to the formation of organizations such as the International League of Conservation Photographers, who work specifically to disseminate the need for biodiversity conservation (Myers Jr., 2006).

Yet, not all is well. While there are few studies on the impact of nature photography as an activity (e.g. Cline *et al.*, 2007; Rouphael and Inglis, 2001) recent research has highlighted that nature photography can have important impacts at all ecological levels, ranging from individual species (Kanagavel *et al.*, 2013) to ecosystems (Seshadri *et al.*, 2013). This assessment reflects ever more severe measures taken to control the activity of nature photographers, in India for example; the Ministry of Environment and Forest declared in 2012 a ban on photographing the Great Indian Bustard (*Ardeotis nigriceps*) during the breeding season.

It is clear that for years many nature photographers have been aware of these issues with debates about nest photography, the use of bait or recorded bird calls raging within the nature photography community. Yet, the lack of a strong and cohesive stance on these issues from nature photographers, together with the massification of nature photography as a hobby, has resulted a in a kind of "tragedy of the nature photography commons", where popular locations and species are sought out by increasing numbers of people even after they clearly start suffering clear and unsustainable impacts. The ecotourism mantra "take only photographs leave only footprints", an

example of how nature photography is often seen as an activity with little or no impact on the biodiversity, seems today to have become more and more misleading. It is time that these impacts are recognised and potential solutions proposed.

One key aspect will be to build greater awareness of the impacts of nature photography on biodiversity, as nature photographers tend to have a genuine concern for biodiversity (Teisl and O'Brien, 2003) but many are simply ignorant of the impacts associated with this activity. In the digital era, online forums and groups dedicated to nature photography can surely have a key role in achieving this.

Another vital aspect will be to ensure that all organisations involved in nature photography have a clear, easily accessible and comprehensive policy on the ethics of nature photography. This policy should use the best evidence available to understand the potential impacts of different types of practices on biodiversity. These regulations will carry more weight if a common standard could be agreed upon not only by the photographers but also by publishers, government officials and conservationists, with the later having a potential key role of helping determine where to set the boundaries for different species, ecosystems and landscapes.

The existence of such policy would raise the issue of enforcement, something which is to a degree possible to achieve by for example, accessing photos posted online, as was exemplified by the work of Kanagavel *et al.* (2013). Online photos, usually with some level of additional information on location and equipment, allow for estimation of the distance at which the photographer was from the subject, if the animal was disturbed by the presence of the photographer and the time at which the photo was taken. This information coupled with a ban on photos featuring species or habitats of high conservation concern, should go far in reducing the incentives for unscrupulous behaviour, as photographers are often tempted to bend the rules in search of the next best shot.

It should be noted that all nature-based activities will have impacts and nature photography is in many ways similar to other outdoor activities such as bird watching or hiking. Nonetheless, documenting and minimising these impacts is key to ensuring the sustainability of this activity which is dependent on the

existence of biodiversity. As with doctors in their Hippocratic Oath, nature photographers should aim to "first do no harm".

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