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The Conservation Impact of the American Society of Primatologists' Conservation Small Grant Program

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Abstract: Given the dire condition of existing biodiversity and the limited availability of funding to protect it, conservation practitioners and scholars are increasingly recognizing the need to monitor and evaluate conservation investments. In line with this trend, our objective was to assess the conservation impact of the American Society of Primatologists' (ASP) Conservation Small Grant Program. Since 1989, the ASP has provided funding in support of research- and education-based projects aimed at effecting primate conservation. To date, 185 projects on 74 primate species have been supported in 41 countries. To accomplish our objective, we developed and administered a voluntary survey to former grant recipients from the years of 1997–2012 to assess whether ASP funded projects resulted in further research, dissemination of results, capacity building and other conservation outcomes. We also assessed grant recipients' perceptions regarding factors that impeded conservation outcomes and factors that would have facilitated greater success. Of the 106 people we contacted, 42 responded, giving a 39.6% response rate. Seventy-nine percent of respondents reported at least one conservation outcome. The two most frequently reported outcomes were: (1) research presence generates greater local awareness/interest in target species and/or its habitat, and (2) increased scientific understanding of target species. None of the respondents reported outcomes directly related to the status of the target primate species. Capacity building through the training and employment of students, local people, and protected area staff was reported by 81% of respondents. Almost all of the respondents (93%) disseminated their project results in some fashion (e.g., scholarly journals, newspapers, local radio and TV, conference presentations, and presentations to local schools and communities). The top five factors impeding conservation outcomes were: (1) limited funding, (2) limited time, (3) illegal resource extraction, (4) changes in local government, and (5) lack of support from local people. The top three suggestions for ensuring more successful outcomes were: (1) develop partnerships with local governments and NGOs, (2) establish a long-term research presence, and (3) secure follow-up funding. Overall, the results highlight the importance of garnering local support for primate conservation projects, sustaining a long-term research presence at field sites, clearly defining terms used in monitoring and evaluation, building evaluation into the design of primate conservation projects, and encouraging and enabling researchers to share both successes and failures.

Key Words: ASP, capacity building, conservation evaluation, funding, primate conservation, success

Introduction

Despite an expanded interest in the preservation and protection of global biodiversity, resources available for conservation remain inadequate (James *et al.* 1999; McCarthy *et al.* 2012). To ensure effective use of those limited resources, it is therefore critical that focus be directed toward evaluating the success of conservation initiatives. Accordingly, in the past few decades there has been an increase in the development and use of tools to monitor and evaluate investments in biodiversity conservation (Sutherland *et al.* 2004; Ferraro and Pattanayak 2006). In an "age of accountability," donors, aid agencies, and international non-governmental organizations are demanding greater transparency and disclosure of results (Christensen 2003). Evaluation requires a clear understanding of what constitutes "success," which can vary widely depending on people's values and the contexts in which the initiatives are conducted. For example, conservation activities can be both direct (for example, species management) and indirect (for example, capacity-building and conservation education) (Kapos *et al.* 2008), but are both types of action on equal footing with regard to what counts as successful? In order to better measure success, scholars have called for a shift in emphasis on "inputs" (for example, monetary investment)

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and "outputs" (for example, conservation brochures) to the reporting of "outcomes" (for example, increased population size of targeted species) (Ferraro and Pattanyak 2006; Kapos *et al.* 2008; Bottrill *et al.* 2011).

In line with these trends in conservation evaluation, our objective was to conduct an assessment of the conservation impact of the American Society of Primatologists (ASP) Conservation Small Grant Program. This fund is one of a handful of programs that provide small grants (i.e., less than $5000) for projects aimed at the protection and conservation of nonhuman primate populations. According to the IUCN (2015), 54% of the 633 primate taxa are currently threatened with extinction, and the percentage continues to increase each year. Primates across the world are threatened primarily by human activities, with more than half experiencing habitat degradation or loss, and hunting or live capture (Oates 2013). These conditions can lead to rapidly declining populations, making primate conservation an urgent concern. For many, primates are considered intrinsically important and worthy of the conservation efforts aimed at protecting them. Primates also have ecological and cultural value to humans (Riley *et al.* 2011). For example, forest health may depend on primates as seed dispersers, thereby ensuring the regeneration of the ecological systems in which they live (Chapman 1995; Lambert and Garber 1998). In addition, primates can be valuable to a nation's sense of pride, a local tourism-based economy, or a religious worldview (Wheatley 1999; Hill 2002; McKinney 2014).

Since the ASP, a scholarly and educational society dedicated to all aspects of primatology, was first founded in 1976, it has been committed to advancing primate conservation. In 1989, the ASP initiated a Conservation Small Grant program to provide small awards (usually ranging from $500 to $1,500 per award) to support research and education-based projects with a clear goal of contributing to primate conservation (Kyes and Howell 1999). Although the grants are generally small, they do represent an important source of funding for habitat country nationals and graduate students from around the world. The program is also competitive; from 2011–2015, a mean of 21.6% (±2.79) of applicants were successful. To our knowledge, however, there has been no attempt to evaluate the success of the program in effecting primate conservation since its inception. To begin to fill this gap in knowledge, we developed and administered a survey to former grant recipients from the years 1997–2012 to assess whether the ASP funded projects had resulted in further research, dissemination of results, capacity building and other conservation outcomes. In order to contribute to a "safe-fail culture in conservation" (Redford and Taber 2000; p.1567) that exposes both what works and what doesn't, we also assessed grant recipients' perceptions regarding factors that impeded conservation outcomes and those that would have facilitated greater success.

Methods

We used a voluntary survey instrument administered to former grant recipients (from 1997–2012) via email to assess conservation impact. The survey was developed in the fall of 2012 and approved by the ASP Board of Directors in January 2013. The Institutional Review Board (IRB) at San Diego State University determined that human subjects' approval was not required to administer the survey. The survey comprised 10 questions (Table 1). We used the online service SurveyMonkey™ to create the survey and collect responses. We sent the survey link via email to former grant recipients for whom we could find current contact information (106 people out of a total of 185). The survey link was made available from April–September 2013. We acknowledge that our approach relied on self-assessment and hence is inherently subjective and potentially subject to bias. At the same time, project personnel are likely the best sources of information on the implementation and outcomes of their project (Kapos *et al.* 2008).

Table 1. Survey questions asked to ASP Small Grant recipients.

1. What was the title of your ASP funded project? (Please include species/taxa, and whether the study was research or education based)
2. What was your institutional affiliation at the time of your ASP funded project?
3. What is your current institutional affiliation?
4. Other than the report required to be submitted to ASP for publication in the Bulletin, were the results from your ASP funded project published? If yes, where and when?
5. Were your results disseminated in another way? If yes, how? If no, why not?
6. Did your ASP funded project lead to further research? If yes, please explain and indicate whether research is currently on-going.
7. Did your ASP funded study result in capacity building (e.g., training of park personnel, career development for habitat country nationals)? Please explain your answer.
8. What are some specific conservation outcomes that resulted either directly or indirectly from your ASP funded project?
9. What factors may have impeded conservation outcomes resulting from your project?
10. What factors may have helped your project be more successful in generating conservation outcomes?

Results

Characteristics of all ASP funded projects, 1989–2015

To date, the ASP Conservation Small Grant program has funded 185 projects on 74 primate species in 41 countries. The geographic coverage of the projects is fairly evenly spread across Africa, Asia, and the Neotropics (Fig. 1a). The majority of projects have been research-based (87%), with the majority focusing on Old World and New World monkeys, followed by apes and then prosimians (Figs. 1b and 1c). The conservation status of the target species varied across the IUCN categories, but the majority (68%) were classified as "Threatened with Extinction" (i.e., Critically Endangered, Endangered, and Vulnerable) (Fig. 1d).

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Characteristics of our survey sample, 1997–2012

Of the 106 people we contacted, 42 responded, resulting in a 39.6% response rate. Survey respondents were involved in projects in 19 countries, focusing on 26 primate species. The geographic coverage of survey respondent projects is also fairly evenly spread across the world regions (Fig. 2a). The majority of projects were research-based (83%) and focused on Old World and New World monkeys (Figs. 2b and 2c). The majority (81%) of survey respondents were affiliated with an academic institution at the time of the funded project. The IUCN conservation status of the target species varied across the categories, but the majority (65%) were classified as "Threatened with Extinction" (Fig. 2d). Although the response rate is low and our sample size is rather small, the breakdown of this sample is representative of the total pool of ASP grant recipients (Figs. 1 and 2).

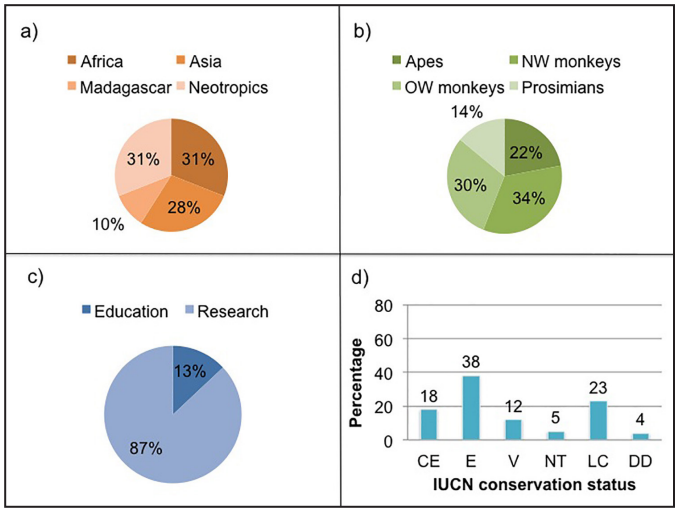


Figure 1. Descriptives on all ASP Conservation Small Grant projects (1989–2015): Percentage of projects by (a) geographic region, (b) taxonomic category, (c) focus, and (d) IUCN conservation status of all species involved in ASP funded projects (CE = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Data Deficient).

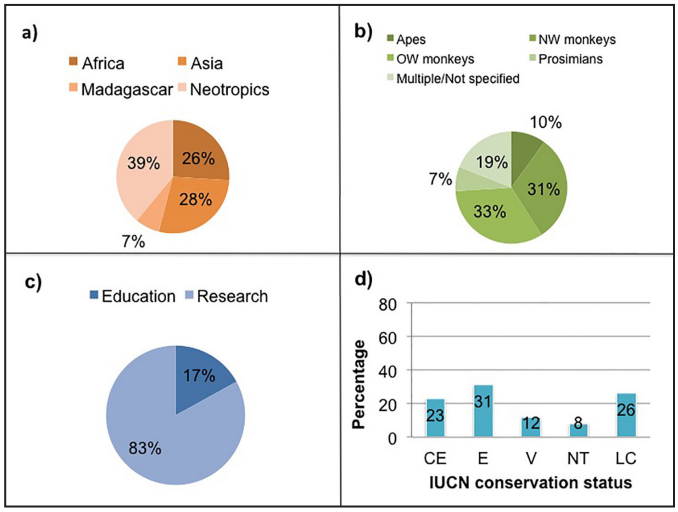


Figure 2. Descriptives on survey respondents' projects (1997–2012): Percentage of projects by (a) geographic region, (b) taxonomic category, (c) focus, and (d) IUCN conservation status of target species (CE = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, LC = Least Concern).

Dissemination and further research

Almost all respondents (93%) disseminated their results in some way, such as in printed sources, digital media, social media, and oral presentations (for example, theses and dissertations, newspapers, local radio, local TV, and presentations to local schools and communities). Approximately half of the survey respondents reported publishing their project results in a peer-reviewed scholarly journal. The top three journals noted as venues for papers based on ASP funded projects are *American Journal of Primatology*, *International Journal of Primatology*, and *Folia Primatologica*. The percentage of those who published papers increases to 64% if book chapters are included. Out of the number of respondents who conducted research-based projects, 89% reported that their ASP funded project led to further research. This additional research took the form of new but related projects conducted by the grant recipient, follow-up research conducted by subsequent students, and the continuation of long-term studies.

Capacity building

Eighty-one percent of respondents reported that their ASP funded projects led to at least one form of capacity building, and 12% of respondents reported multiple examples. Capacity building occurred at the personal (for example, researcher career growth), educational (for example, student and field assistant training and employment), community (for example, training and employment of local teachers, park staff, government officials, and community members), and organizational levels (for example, project evaluation) (Table 2). The most frequently reported examples of capacity building were the training and employment of students (n = 17) and local people (n = 11) (bolded in Table 2).

Other conservation outcomes

The majority of survey respondents (79%) reported at least one conservation outcome (beyond dissemination of results and capacity building) that resulted from their project. Conservation outcomes fell into the following five categories: (1) building conservation awareness and knowledge, (2) building institutional and infrastructural support, (3) building critical datasets, (4) augmenting enforcement efforts, and (5) enhancing primate habitats (Table 3). The two most frequent responses were: research presence generates greater local awareness/interest in target species and/or its habitat and increased scientific understanding of target species (bolded in Table 3).

Factors impeding conservation outcomes

Sixty-four percent of respondents reported at least one factor that impeded conservation outcomes. Reported obstacles to conservation success were political, financial, practical, academic, cultural, and educational in nature. The top five factors impeding conservation outcomes were (1) limited funding, (2) limited time, (3) illegal resource extraction, (4) changes in local government, and (5) lack of support from

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local people. Additional examples of challenges to conservation success included problematic volunteers, rugged terrain, and language barriers.

Table 2. Types of capacity building reported by grant recipients.

Category	Type	# of times reported
Personal	Researcher career growth	2
Educational	**Student/research assistant training**	**17**
	Employment for trained students/field assistants	5
Local community	**Training and employment of local people**	**11**
	Training of national park staff	4
	Teacher training	1
	Education of government officials	1
	Education of local students and community members	2
Organizations	Opportunity for organization to evaluate projects Establishment of training program for organizations/universities/government	1 1

Table 3. Conservation outcomes reported by survey respondents.

Category	Outcome	# of times reported
Building conservation awareness and knowledge	**Research presence generates greater local awareness/interest in target species/ habitat**	**8**
	Establishment and continuation of local education programs	3
	Evaluating conservation efforts	2
	Study species became a flagship species	1
	Informative signs established in protected areas	1
	Holding of annual conservation workshops	1
Building institutional and infrastructural support	Established strong contact networks	3
	Increased publicity/visibility for projects/ organizations	3
	Training of students/employees	3
	Established new conservation organization	2
	Building of ongoing research site	2
	Establishment of local environment committee	1
	Building of education center	1
Building critical datasets	**Increased scientific understanding of the target species**	**9**
	Established baseline data	3
	Contributions to larger/existing datasets	4
Augmenting enforcement efforts	Increased patrols for illegal activity	2
	Increased monitoring of protected area	2
	New hunting restrictions	1
	Research presence deters poaching	1
Enhancing primate habitats	Establishment of successful wildlife bridges and/or natural corridors	2

Factors to improve conservation success

When asked about factors that would have increased conservation success, the respondents' most frequent suggestions were developing partnerships with local NGOs and governments, establishing a long-term research presence, and securing follow-up funding (Fig. 3). Other responses included increased communication with and more support for protected area staff, increased involvement of students and local people, and more time to implement result-based strategies.

Discussion

For more than 25 years, the ASP has been providing small grants in support of research and education-based projects aimed at effecting the conservation of nonhuman primate populations. Our objective was to begin to assess the conservation impact of this grant program, and ultimately, to provide critical "lessons learned" information to help improve the effectiveness of primate conservation small grant programs like that of ASP. The results indicate that the ASP small grant program primarily supports indirect conservation activities (for example, education and awareness building, capacity building, and increasing scientific understanding). While improved status of the target species may be the ultimate outcome (and measure) of the conservation success (impact) of a project, conservation practitioners and scholars acknowledge that such a result often requires considerable time depth as "biological outcomes often respond slowly to interventions" (Ferraro and Pattanayk 2006; p.486). Accordingly, evaluation efforts should also focus on basal outcomes (for example, enhanced conservation skills of field assistants in a capacity-building project) that can result in intermediate or "key" outcomes (for example, improved quantity or quality of conservation action as a result of capacity building) (Kapos *et al.* 2010). Intermediate outcomes are typically easier to measure than changes in the target species' status and the threats it faces, and have been found to be useful predictors of the likelihood of the species' persistence (Kapos *et al.* 2008, 2010). Although our results indicate that ASP funded projects have largely produced basal outcomes, some intermediate outcomes are also apparent (for example, increased enforcement efforts and the application of research results in conservation practice such as through the building of habitat corridors to improve dispersal).

The finding that no respondents reported ultimate outcomes (i.e., improved species status) may be explained by a number of factors (beyond the underlying constraint that such outcomes often require lengthy periods). The majority of ASP grant recipients are affiliated with academic institutions which means they likely have additional responsibilities (for example, completion of a dissertation, high publication expectations, full-time teaching and heavy service loads), thereby making it difficult to ensure the generation of intermediate and ultimate outcomes. Referred to as the "great divide" between theory and practice (Anonymous 2007), researchers in academia are often accused of "knowing, but not doing" (Knight *et al.*

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Figure 3. A Wordle™ word cloud generated from responses regarding how to improve conservation success.

2008; Arlettaz *et al.* 2010). This "lack of time" constraint, frequently noted by respondents, is exacerbated by the reality that academic institutions tend to value basic research leading to publications over applied work, such as the implementation of conservation actions (Meffe 1998; Chapron and Arlettaz 2008; Arlettaz *et al.* 2010). Another possible explanation is that the small size of the ASP grants does not effectively enable recipients to generate intermediate or ultimate outcomes. Therefore, for small grant programs such as that of ASP with limited funds, the evaluation of basal outcomes may be a more realistic measure of conservation impact. The fact that the majority of ASP grant applicants disseminated their results and led to capacity building through the training of students and local people who may in turn continue working in conservation is promising (cf. du Plessis and Primack 2001). There is also clear evidence of multiple projects having a lasting impact in the form of establishing a long-term presence in an area, thereby facilitating ongoing research.

Our results also generate a number of important lessons for primate conservation activities in general and the small grant programs that fund them. First, the survey results provide further support that partnerships with other institutions, such as local conservation NGOs, and the support of local people are recognized as critical to the success of conservation projects (Ancrenaz *et al.* 2007; Méndez-Carvajal *et al.* 2013; see also Mariki *et al.* 2015). Second, our results raise the important question of whether the likelihood of conservation success will be greater at sites where a long-term research presence exists (Pusey *et al.* 2007). For example, Campbell *et al.* (2011) empirically demonstrated that encounter rates of primates and duikers in Taï National Park, Côte d'Ivoire, were higher in the research area compared to adjacent areas, thereby supporting the assumption that a research presence effectively protects wildlife by reducing hunting pressure. Sustained research presence may therefore be an important criterion for grant programs to consider when deciding which projects to fund. Third, the results indicate that within the conservation community there is a lack in consistency in the use of key conservation terms such as "outcomes," "actions," and "outputs." For instance, while some may see the development of informative signs as an output (cf. Ferraro and Pattanyak 2006), others may envision it as a specific conservation outcome. It is therefore critical that the primate conservation community work collectively to clearly define terms to ensure clear and efficient monitoring and evaluation (see Stem *et al.* 2005). Along with having clearly defined terms, our project reinforces the need for researchers to build evaluation into the design of their projects (Ferraro and Pattanyak 2006), and for grant programs like ASP's to stipulate the linking of actions and outcomes in grant applications (Kapos *et al.* 2008). For example, if a proposed project aims to develop a conservation education program (action), the design could also include attention to assessing changes in people's behavior as a result of the education program (outcome). A final lesson learned concerns the important issue of hesitancy in reporting project shortcomings. Admittedly, we were surprised that so many of the survey respondents in our study were willing to discuss the specific factors that impeded success of their projects, given the general reluctance in the overall conservation community to share less successful experiences (Kapos *et al.* 2010). We should encourage and enable scholars and practitioners alike to share their successes as well their failures (see, for example, Webber *et al.* 2007), as such information is critical for the design, implementation, and assessment of future primate conservation endeavors.

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