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Biomedical Research vs. Biodiversity Conservation in the Colombian-Peruvian Amazon: Searching for Law Enforcement Where There is Lack of Accountability

Ángela María Maldonado and Thomas Lafon

“The shape of tomorrow’s world depends upon the decisions that are made today. We can sit back and let others make those decisions and chart the new course; we can let the world be ruled by a handful of powerful political and economic elites; or we can expose and challenge their power and the paths they select. We can stand mute, or expand our vision, join our platform with popular, activist, progressive platforms and in doing so hopefully expand the scope and impact of criminology in developing a humanistic social orientation”

(Lynch, 1990 p. 169).

Á.M. Maldonado (✉) · T. Lafon

Asociacion Primatologica ColombianaFundacion Entropika, Calle 18
No. 7B- 23, Leticia, Amazonas, Colombia
e-mail: amaldonado@entropika.org; tlafon@entropika.org

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D. Rodríguez Goyes et al. (eds.), *Environmental Crime in Latin America*, Palgrave Studies in Green Criminology,
DOI 10.1057/978-1-137-55705-6_12

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Introduction

Despite global efforts aimed at the creation of novel mechanisms and technologies to control and trace the illegal wildlife trade, the magnitude of trafficking suggests that the current global approach is failing and governments do not prioritize the issue (WWF-Dalberg 2012). Different sources estimate the value of this trade as between US\$7 and 23 billion dollars annually (Nellemann et al. 2014). A large part of the market is due to the demand for primates for use in biomedical and pharmaceutical research in the United States, which rose from around 57,000 in 2000 to more than 70,000 animals in 2010 (Miller-Spiegel 2011). Although more than 80 % of these creatures were reportedly captive-bred, recent investigations reveal that most came from tropical countries, mainly Southeast Asia and were wild-caught (Eudey 2008). Corruption is one of the most critical factors enabling the illicit commerce, according to a study conducted by WWF-Dalberg (2012).

The lack of accountability and transparency in the legal system of several countries means that the illegal trade is largely untraceable and goes unpunished. In order to control the racket effectively, it would be necessary to address the problem on different fronts and from different perspectives; inter/multidisciplinary approaches are urgently needed in order to conserve global biodiversity. Colombia has one of the most progressive legislative frameworks for prosecuting incidents of such crimes. Recently, new laws have even been created to increase penalties (e.g., Ley 1333, 2009) against environmental felonies and to strengthen the country's environmental legislation. Moreover, Colombia, as a signatory country of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), has explicit responsibilities to enforce CITES legislation through its CITES Administrative Authority under the aegis of the Ministry of the Environment.

Despite this history of strong and explicit legislation, the Ministry of the Environment has recently been involved in several illegalities related to the issuing of mining licenses in areas declared as primary regions for conservation, areas with high unique endemism, and water reservoirs, such as the Paramo de Santurbán, which provides drinking water to 2.5 million people across 48 municipalities. In addition, in February 2015, the constitutional

Court, the supreme authority for matters involving interpretation of the constitution, was involved in a major corruption scandal when its president was denounced by one of the Court's Magistrates for requesting a US \$200,000 bribe from an oil company in exchange for revoking a \$9 million fine imposed on the company by a lower tribunal. All members of the Accusation Committee in charge of examining this case are currently under investigation, mainly for institutional fraud (Bradshaw-Smith 2015). One can reasonably argue from these examples that the lack of accountability and transparency concerning the work of the judiciary in Colombia leaves the rights of civil society unprotected as subornation dominates the legal system.

In this chapter, we focus on the *Aotus* case, as it is known, where night monkeys have been used in malaria research in an unsustainable and illegal way for almost four decades. This research has the approval and participation of Colombian environmental authorities, which supports our argument about ecological harm at the Colombian-Peruvian Amazonian border. We will examine how the harm to the *Aotus nancymaae* (Nancy Ma's night monkey) and *Aotus vociferans* (Amazonian night monkey) species has occurred as a result of "altruistic" and anthropocentric claims that research to improve human wellbeing trumps the fundamental rights of other species and ecosystems. We will also provide a description of the outcomes of an *acción popular*—a "popular action" or "popular benefit lawsuit"—which is a legal tool provided by the Constitution of Colombia (also known as the Constitution of 1991) enabling any citizen to bring a lawsuit to compel the performance of the administration of justice in defense of collective interests. Thus, an *acción popular* was filed in 2011 by Ángela Maldonado (one of the authors of this chapter) and Gabriel Vanegas against the responsible institutions: Corpoamazonia (the regional environmental authority, *Corporación para el Desarrollo Sostenible del Sur de la Amazonía*), charged with issuing and ensuring compliance with legal permits for scientific trapping and trade; the Colombian Ministry of the Environment (the CITES Administrative authority); and the *Fundación Instituto de Inmunología de Colombia* (FIDIC)—the medical research laboratory involved in the use of night monkeys for research. The *acción popular* was filed to demand the protection of collective rights and interests as set forth by the Constitution; the rights include: (1) sanctions for corruption and/or negligence of governmental

institutions and/or public servants for not fulfilling their obligations to protect natural resources—a fundamental right of civil society; (2) public security and health; (3) the existence of ecological balance and the rational management and harvesting of natural resources in order to guarantee sustainable development, conservation, restoration or substitution; and (4) the conservation of animal and plant species and the protection of areas of ecological importance and ecosystems located in frontier areas. Our goal is to present evidence that demonstrates that the lack of accountability and the venality of environmental authorities (involving violation of sections of the Colombian legal system and CITES regulations) results not only in the loss of particular species but poses a threat to biodiversity more generally. This case study highlights current weaknesses of, and illustrates the important role for, civil society in improving law enforcement regarding environmental crimes.

In the following sections, we provide an overview of the damage incurred as a result of over 40 years of malaria research in Colombia, including the impact on wild populations of night monkeys, inhumane treatment of animals during the experimentation procedures, deforestation associated with unsustainable trapping methods, and violation of environmental legislation. In addition, we describe the ethnographic methods used for data collection. The results reveal complex legal processes where the lack of accountability and corruption leave civil society unprotected and national legislation completely overlooked. Despite that, we conclude by providing evidence that confirms that civil society and an organized approach to a long-term legal strategy offer powerful tools to improve law enforcement. Finally, we argue that the exposure of environmental crimes serves as an effective way to advance accountability for the sustainable use of natural resources.

Background

Malaria Research in the Colombian Amazon

Since the early 1980s, a biomedical research facility—*Fundación Instituto de Inmunología de Colombia* or FIDIC—located in Leticia, Amazonas, has been conducting research on a synthetic vaccine against malaria, the SPf66 (later

called the COLFAVAC), which has been, and continues to be, tested on night monkeys (*Aotus* spp.). In 1987, the FIDIC claimed that the SPf66 protected 50 % of the night monkeys inoculated with the vaccine and donated it to the World Health Organization (WHO). This elevated the director of the FIDIC to the status of celebrity scientist in Colombia as the “discoverer of the first vaccine against malaria” (Correa 2015).

According to Graves and Gelband (2006), the SPf66 trials in Africa and Asia have had an efficacy of 2 % and 6 % respectively, while in South America, the efficacy of the vaccine has been 28 %. Children that were given several inoculations were no more protected than those given a placebo (Holloway 1996). The international controversy and lack of credibility about the actual effectiveness of the vaccine arose when researchers worldwide were not able to replicate the results of the trials; the FIDIC responded by claiming that the other research groups had used a different compound. The vaccine received severe criticism from the scientific community, not only for the methodology the FIDIC employed, but also for ethical concerns over the start of human trials at such an early stage of the development of the vaccine (Holloway 1996).

Today, the SPf66 vaccine has been declared “inactive” by the WHO because of its low levels of efficacy (WHO 2006; Graves and Gelband 2006). Nevertheless, the FIDIC has continued its research on the SPf66—now called the COLFAVAC—using the same principle and methods of the SPf66 and claiming it to be between 80 % and 90 % effective in night monkeys. These assertions have not been published as findings in any scientific journal.

Despite the lack of results and scientific credibility, the Colombian Research Funding Agency (COLCIENCIAS), with an endorsement from the Governor of the Amazonas, granted approximately \$1,200,000 in 2014 to the FIDIC to continue with its research. The Health Section of the Department of Amazonas, a public institution with a broader mandate, did not receive funding for the same period, however.

In order to carry out its research, the FIDIC has received permits from the Corpoamazonia to capture wild night monkeys (*A. vociferans*) for use as experimental subjects. The permits allow a number of registered indigenous people to capture the animals from what are mainly aboriginal territories. Extraction quotas are determined based on the needs of the FIDIC,

rather than by the Corpoamazonia pursuant to scientific study of the carrying capacity of the species and its ecosystems. Colombian legislation sees wildlife as a “resource” and the State adopts a utilitarian point of view under which it is legal to exploit animals regardless of the suffering inflicted on them. Thus, under Colombian law, in order to conduct any kind of extraction of natural resources, the Corpoamazonia has the obligation to assess the status of the resource in order to confirm that the extraction will not adversely affect wild populations (Decreto 1608, 1978).

In the 1980s, when the FIDIC began its research, the Corpoamazonia granted trapping permits for the collection of 200 monkeys per year. In the late 1990s, the quota was increased to 800 annually. Permits entitled only the capture of the species *A. vociferans*, the Spix night monkey, which is widely distributed in Brazil, Colombia, Ecuador and Peru, and is classified by the International Union for the Conservation of Nature (IUCN) as “Lower Risk (Least Concern),” implying that there are not imminent threats to its survival. The FIDIC, however, reported in several publications the use of *A. nancymae* and *A. nigriceps* species (e.g., Patarroyo et al. 2006; Rojas-Caraballo et al. 2009; Suárez et al. 2011)—species naturally distributed in Brazil and Peru—for which the FIDIC does not possess any legal permits.

Malaria Research and the Infringement of Colombian Legislation

The FIDIC has contravened its permit obligations in two ways: (1) by unauthorized trapping of a species (*A. nancymae*); and (2) by exceeding its annual extraction quota. Maldonado and Peck (2014) obtained official records of incoming and outgoing (released) monkeys through freedom of information requests. The documents show that for the period March–May 2012, the FIDIC, under the supervision of Corpoamazonia, received 912 night monkeys, while the annual quota was 800 animals. No sanctions were imposed by the authority.

In addition, Colombian legislation requires that, prior to any research venture, a consultation procedure has to be undertaken, in which the entire indigenous community and its authorities are informed about

the project and its impacts on the people, their traditional knowledge and the natural resources inside their territories. During this process, a representative from the Ministry of the Interior (Indigenous Affairs) should oversee the meeting and ascertain that the community understands and approves of the project (Ley 21 1991). From 1987 to 2009, the FIDIC overlooked this legislation, presenting the project only to Corpoamazonia, the Ministry of the Environment, other institutions that by law are not part of the prior consultation process, and one or two indigenous people from each community. Only since 2010 has the FIDIC carried out this process properly.

Although one of the indigenous representatives has to be from the political authority—the *Curaca*, which is the highest authority for indigenous communities in this part of the Amazon—this does not guarantee that the interests of the indigenous community have actually been represented because bribery is common when corporate entities need the signature of the *Curaca*. Testimonies of local leaders confirm that, in the case of the FIDIC's permits, the communities were not informed prior to the extraction of animals inside their territories. As a result of the FIDIC's failure to enter into discussions with indigenous people, the latter never knew the actual scope of the research on malaria and its environmental implications. This was not a mere oversight; the governmental institutions participating in the process of granting the permits to the FIDIC were well aware that the FIDIC was not following this particular component of the statute.

Because of the multiple violations of the ley committed by the FIDIC in its malaria research, we started a multidisciplinary project (2008–2011) that aimed at: (1) assessing the population status of night monkeys in the Colombian-Peruvian border area in order to compare densities (ind/km²) at sites exposed to different levels of hunting and under different protection levels; (2) quantifying extraction rates of night monkeys in Colombia and Peru, using ethnographic methods and records from Corpoamazonia of incoming and outgoing animals; and (3) denouncing illegalities through a popular action law suit to force competent authorities into taking action to penalize and stop these infractions.

In this analysis, we adopt a utilitarian point of view, which regards animals as experimental subjects, and employ a “Welfarism” approach that demands better treatment of animals in their use by humans

(Goodman 2004). We regard the infliction of pain upon primates used in malaria research as an unethical practice and believe this research should be undertaken using human volunteers in order to reach effective results and meet the minimum international biomedical standards for a vaccine that has been in development for almost 40 years.

At the same time, we are persuaded by White's (2013) notion of "ecological justice," whereby an ecosystem as a whole is valued owing to its intrinsic relationship with humans and the services offered for their wellbeing. This embodies the "3Rs" approach, which requires researchers to *reduce* the number of animals used in experiments, *refine* experimental procedures to minimize animal pain and suffering, and *replace* animal subjects with non-animal alternatives when scientifically feasible (Russell and Burch 1959). We take this position because no legal tools exist under Colombia law to address the suffering of individual species.

Despite the lack of ethical and moral grounding of the "3R" approach, and its demonstrated failure, as most experiments using animals produce few actual benefits for humans yet cause a large number of animals to experience tremendous suffering, this approach is currently widely incorporated into legal systems and research policies worldwide (Ibrahim 2006). Under the utilitarian Colombian legal framework, which is just starting to adopt the concept of animals as sentient beings (Gil-Botero 2013; Ley 1774, 2016), this approach provides the legal tools necessary to enforce environmental law and protect species and ecosystems from unsustainable use (see Goyes 2015 for a detailed analysis of this ethical and moral position).

Environmental Damage

After having been subjected to research procedures by the FIDIC that last an average of eight months, night monkeys are released back into the wild; the FIDIC does not conduct any follow-up to determine how or whether individuals survive or the impact of their release on other night monkeys in the region. Four decades of these releases has created an introduced population of *A. nancymaae* in Colombia and, given that

these are territorial animals, has resulted in the drastic decrease of the resident populations of *A. vociferans*, bringing them to the brink of extinction (Goyes 2015; Maldonado and Peck 2014).

One of the requests included in the *acción popular* filed in 2011 was that the defendants (the Corpoamazonia and the Ministry of the Environment) carry out a demographic and genetic study to determine the conservation status of the genus *Aotus* at trapping/releasing sites; This request was made in order for them to comply with legislation regarding the issuing of permits for the extraction of natural resources. The Corpoamazonia and the Ministry of the Environment, through the CITES scientific authorities, the *Universidad Nacional* (UNAL) and the SINCHI Institute, executed the first phase of this study at four of the twenty sites where night monkeys are trapped and released (Naranjales, San Juan de Atacuari, Doce de Octubre and Santa Teresita); a fifth site—the control site (San Pedro de Tipisca)—where animals have been trapped but not released was also the subject of the first phase of the study (Bloor et al. 2012).

Results of this UNAL/SINCHI study, which were revealed in 2012, suggest the existence of a historical distribution of *A. nancymaae* in the western part of the Colombian Amazon (between the western frontier with Peru and the indigenous community of Naranjales), as well as of another population of *A. nancymaae*, not of historical lineage but probably introduced in Colombia in more recent times. *A. vociferans* was found at only one site, the control site, supporting our hypothesis that this species might be displaced by the continuous releases of *A. nancymaae* (Bloor et al. 2012).

This study recommended that in order to protect this endemic species, the trapping and releasing of night monkeys used by the FIDIC in their research should not be done in the Western Amazonian frontier between Colombia and Peru as long as the genetic origins of this species are not determined. Nevertheless, the FIDIC, under the supervision of the Corpoamazonia, has continued releasing animals into the area, putting at risk a population that might be on the brink of extinction because of their over-exploitation for malaria research and the genetic contamination caused by the release of animals of unknown origins.

For the period between July and November 2013, the Corpoamazonia registered the capture of 413 animals in 13 indigenous communities; 189 animals (46 %) were trapped in the area where the UNAL/SINCHI

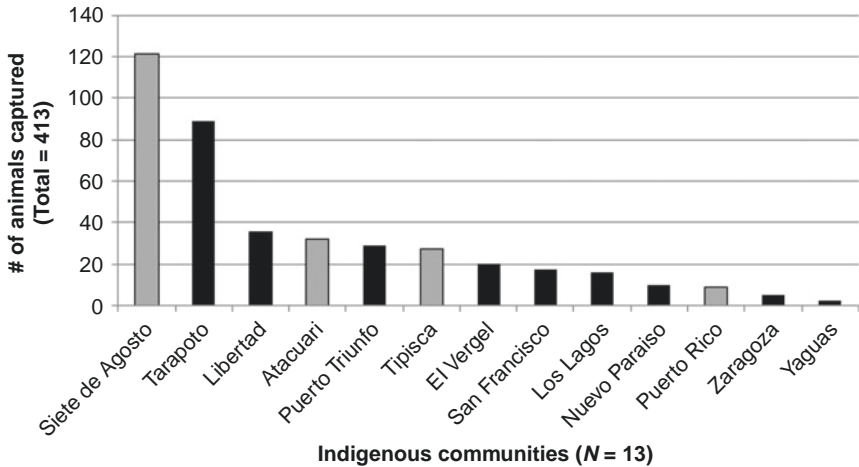


Fig. 12.1 Captures from July 2013–November 2013

study recommended prohibiting any captures and releases (see [Fig. 12.1](#)). (The July–November period represents the span of time from the first captures after the recommendations of the UNAL/SINCHI study until the last registered captures.)

[Figure 12.1](#) shows the number of captures by the FIDIC under the supervision of the Corpoamazonia between July and November 2013. Bars in grey correspond to the communities in the area where the UNAL/SINCHI study prohibited any captures and releases.

Likewise, the records of the Corpoamazonia for the period of December 2012 to February 2014 show that a total of 853 monkeys were set loose; 44 % of these animals were liberated in areas where the UNAL/SINCHI study recommended that capture and release should not occur (see [Fig. 12.2](#)). It is important to note that the emancipation sites of 102 animals (12 %) were not registered by the Corpoamazonia. (The period of December 2012 to February 2014 pertains to the period of time between the first and last releases after the recommendations of the UNAL/SINCHI study.)

[Figure 12.2](#) shows the number of animals set free by the FIDIC under the supervision of the Corpoamazonia between December 2012 and

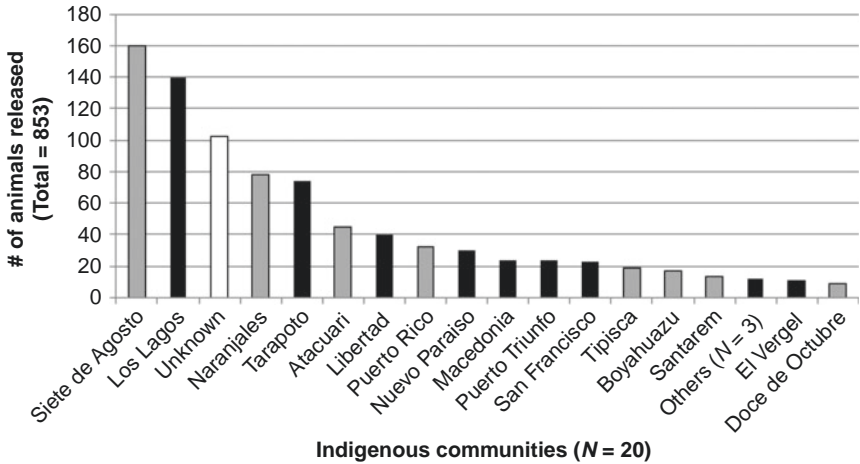


Fig. 12.2 Releases for December 2012–February 2014

February 2014. Bars in grey correspond to the communities in the area where the UNAL/SINCHI study prohibited any captures and releases. The white bar represents the number of animals let go in unknown sites. “Others” refers to: San Juan del Socó, Santa Sofía and Zaragoza.

We found that from January 2012 to February 2014, 1506 animals were kept for malaria research at the FIDIC’s facility in Leticia. Approximately 40 % of these animals spent an average of 8 months at the FIDIC as experimental subjects, with 5 days constituting the shortest stay and 3.3 years the longest. These findings contrast strongly with the FIDIC’s position, which is that the monkeys spend one month in their facilities (see Fig. 12.3).

As reported by Maldonado (2011, 2013) and Maldonado and Peck (2014), the effects of the continuous harvest of night monkeys for malaria research have had considerable impacts on wild populations in Colombia and Peru. For instance, the UNAL/SINCHI study could not determine densities for *A. vociferans* because the animals were detected only once in the control site where populations have not been exploited (Roncancio 2012). Table 12.1 provides a comparison

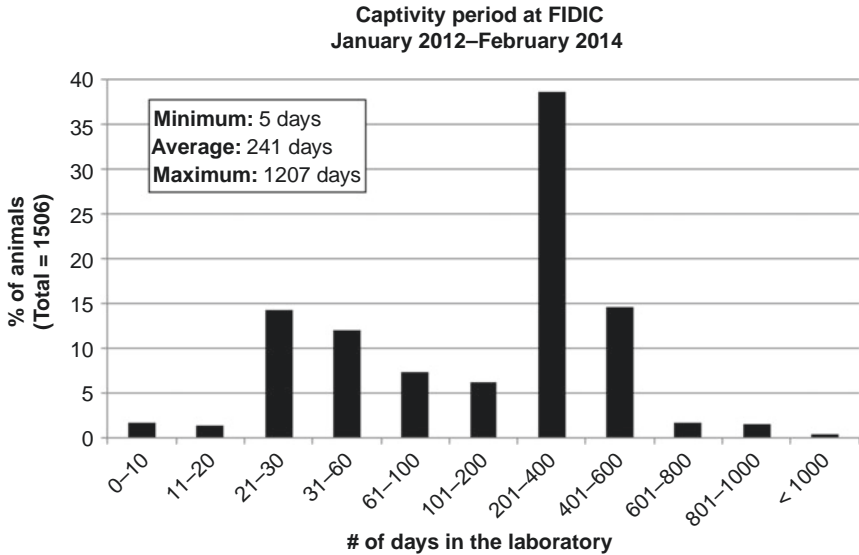


Fig. 12.3 Captivity period of night monkeys at the FIDIC's facility for malaria experimentation

between population density estimates in Colombia and Peru from three different studies.

Aquino and Encarnación (1988) present estimates from healthy wild populations in Peru. Maldonado and Peck (2014) show nine sampling sites at the Colombian-Peruvian border (see Fig. 12.4). Population densities from Peruvian sites correspond to *A. nancymaae*, where night monkeys were harvested for the FIDIC; estimates of *A. vociferans* in Colombia correspond to sampling locations that were not part of the extraction or releasing places. Finally, Roncancio (2013) provides the results from the UNAL/SINCHI short-term study at Naranjales, Colombia.

The absence of *A. vociferans* clearly demonstrates the negative effects on wild populations in Colombia of close to 40 years of extraction of night monkeys for malaria research. Furthermore, the fact that *A. nancymaae* is now present in Colombia (whose distribution was previously limited to Brazil and Peru) and the very low populations of *A. nancymaae* in the Peruvian communities that trapped these monkeys for malaria research reveals the negative effects of the illegal practices by the FIDIC.

Table 12.1 Comparison of population densities of *Aotus* spp. in flooded and *terra firma* forests, in Colombia and Peru

Densities	Aquino and Encarnacion, 1988		Maldonado and Peck, 2014		Roncancio, 2012 (SINCHI)	
	Peru		Colombia		Colombia	
	<i>A. nancymaae</i>	<i>A. vociferans</i>	<i>A. nancymaae</i>	<i>A. vociferans</i>	<i>A. nancymaae</i>	<i>A. vociferans</i>
Flooded						
Group/km ²	11.3	10.0	6.8	13.3	8.8	0
Ind/km ²	46.3	33.0	13.6	44.0	23.9	0
Terra firma						
Group/km ²	5.9	2.4	-	9.5	-	0
Ind/km ²	24.2	7.9	-	24.9	-	0

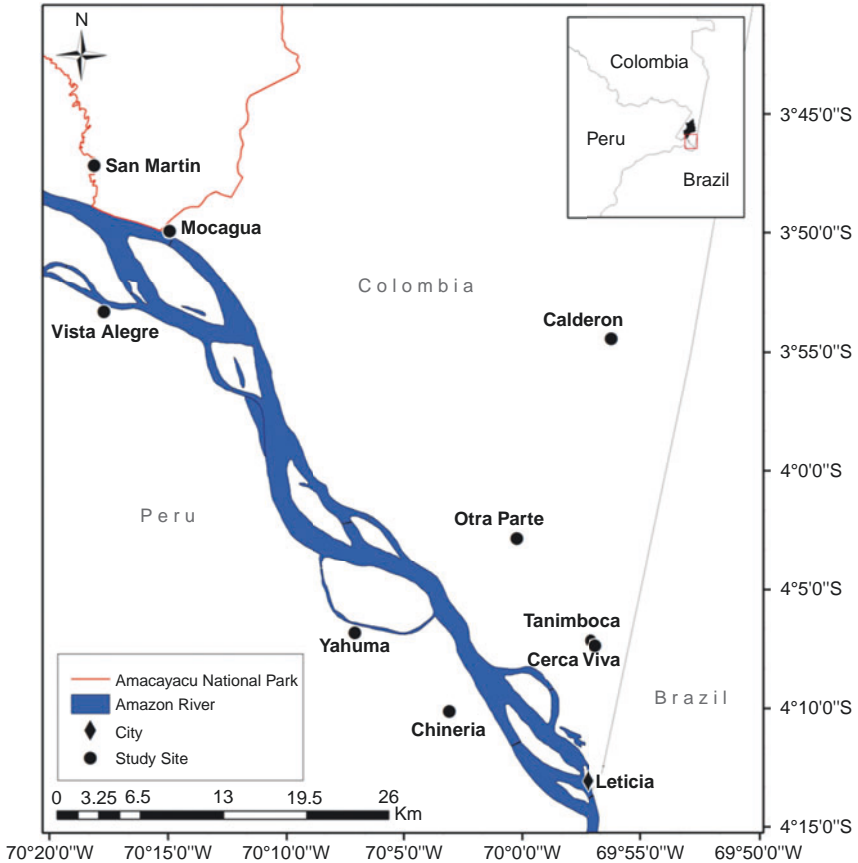


Fig. 12.4 Map of the location of nine census sampling sites of *Aotus* spp. at the Colombian-Peruvian border; study conducted by Maldonado and Peck (2014)

As described above, this ecocide has been perpetrated by the FIDIC, under the supervision of the Corpoamazonia and with the endorsement of the Ministry of the Environment, leaving these three entities responsible for the introduction of *A. nancymaae* in Colombia and the local extirpation of *A. vociferans* in the Southern Colombian Amazon. These entities are also responsible for putting at risk the presumably endemic population of *A. nancymaae*. Finally, the methods used for trapping night monkeys involves cutting down trees in some 15 m radius around the nest, which has had a

negative environmental impact on the composition of the forest—a loss of approximately 65,000 trees per year (Maldonado and Peck 2014).

Methods

In this section, we focus on the methods used by the authors in support of their *acción popular* against the FIDIC. We used a combination of ethnographic and auto-ethnographic qualitative research techniques, as well as freedom of information requests to obtain data from governmental institutions.

Interviews

We employed interviews (semi-structured, unstructured) and used oral histories (Bryman 2006, 2008) to collect information on trade dynamics and the perceived changes in trapping of night monkeys, and to confirm dates of particular commercial/extractive activities carried out by foreigners in the area, in which local people also participated. Thus, interviews were conducted with members of 11 communities (comprising Tikuna, Yagua and Cocama indigenous groups and a minority of *caboclos* or mixed-blood groups). When arriving at each location, the team visited the *Curaca* and the *Teniente Gobernador* (indigenous authorities in Colombia and Peru, respectively), in order to have their consent to contact the collectors/traders. Informants were asked to participate voluntarily and could withdraw at any time without giving any reason. We enquired whether meetings could be recorded with audio and/or visual technologies, and we asked for permission to take pictures (Maldonado et al. 2009).

Auto-Ethnography

This technique is a form of self-reflection and writing that explores the researcher's personal experience and connects his/her autobiographical story to wider cultural, political and social meanings and understandings

(Anderson 2006). Using auto-ethnography, we documented our interactions with indigenous leaders, with the organizations and entities that were eventually sued in the *acción popular* (the Corpoamazonía, the Ministry of the Environment, and the FIDIC), and meetings at the courts. These were valuable as a way of gathering further evidence that was later submitted as part of the *acción popular*.

Acción Popular

From 2008 to 2011, we gathered evidence on the illegal trade in night monkeys. This included quantitative data on the status of populations of *Aotus*, including the number of trapped animals for the malaria research market, which provided the basis for our claim of negligence by environmental authorities in controlling the trade (Maldonado 2011; Maldonado et al. 2009). The evidence we gathered was presented to the administrative CITES authorities of Brazil, Colombia and Peru during the 61st meeting of the CITES Standing Committee held in Geneva, Switzerland. In April 2011, an environmental lawyer, Gabriel Vanegas, and one of the authors, Ángela Maldonado, filed an *acción popular* against the FIDIC, the Corpoamazonia and the Ministry of Environment.

Freedom of Information Act (FOIA)

The Freedom of Information Act (FOIA) provides citizens with the right to access recorded information held by public sector organizations. In the Constitution of Colombia (Art. 23), a FOIA request has to be answered within 15 working days. If the FOIA request is not responded to within this timeframe, the citizen who has filed the request may file a writ of injunction to protect his/her fundamental right to access public information. The FOIA was our main tool to obtain official documents from the Corpoamazonia and the Ministry of Environment regarding the research permits granted to the FIDIC from 1999 to 2010. These documents constituted the main evidence that supported the popular action.

Results

Legal Case

On July 5, 2012, the Administrative Tribunal of Cundinamarca (the “Tribunal”) issued its judgement on the *acción popular*, ruling against the FIDIC and revoking its permit for trapping night monkeys for biomedical experimentation. The Tribunal also requested investigations of the Ministry of the Environment and the Corpoamazonia. The ruling recognized the defending entities as guilty of not fulfilling their duty to ensure the protection of biodiversity and environmental integrity, and of not complying with Colombia’s international commitments to CITES. On November 29, 2013, the *Consejo de Estado* (State Court), which oversees the administrative actions of the State,¹ through its Third Section, affirmed the Tribunal’s ruling.

The ruling of the State Court protects collective rights, sanctioning the Ministry of Environment for not applying and enforcing Colombian environmental legislation regarding the implementation of “repopulation fees.” These fees were established by Decree 1608 (1978), wherein any individual or institution using wild flora or fauna has to compensate the State in order to maintain the balance of the natural resource that has been exploited. In addition, the *Consejo de Estado*’s ruling includes thorough legal, philosophical and ethical analyses on the use of wildlife—especially that of night monkeys—for biomedical research. The judgment emphasizes that the use of animals to better human wellbeing has to adhere strictly to international ethical protocols and must consider the species’ reproductive limitations. If the FIDIC wishes to continue research using night monkeys, it must establish a captive breeding colony following the protocols provided by the plaintiffs. This judicial decision has set a historical precedent in Colombia as it clearly protects the fundamental rights of civil society to a healthy environment;

¹The *Consejo de Estado* is composed of five sections, each of which has a different task. Of relevance for this chapter is that the Third Section is in charge of contractual and extra-contractual issues; the Fourth Section deals with tributary issues; and the Fifth Section attends to electoral issues. Each deals with different cases accordingly.

moreover, research for the benefit of humans must be conducted ethically and legally (Gil-Botero 2013).

Winning this lawsuit has resulted in a persecution campaign against both authors and the foundation where we work. This campaign, orchestrated by the FIDIC, has included calumny, incitement to hate, misinformation through various media (e.g., national newspapers, radio, television), and banners and posters in indigenous communities and municipalities of the Amazon department comparing Ángela Maldonado, one of the authors, to Adolf Hitler (see Fig. 12.5). In addition, the FIDIC has sent us intimidating emails and bribed indigenous authorities to write letters to prohibit our further access to the indigenous communities.

Captions under each picture on the banner (from left to right) are as follows: Picture 1) ‘Él [Hitler] mató 6.000.000 de judíos en cinco años’ (*He [Hitler] killed 6 million Jews in five years*); Picture 2) ‘Cada 45 segundos muere alguien de malaria en el mundo’ (*Every forty-five seconds someone dies of malaria in the world*); and Picture 3) ‘Ángela Maldonado y su ONG a [sic] logrado atrazar la vacuna por cuatro años’ (*Angela Maldonado and her NGO have delayed the [malaria] vaccine by four years*). Caption running along the bottom of the banner: ‘Esto representa aproximadamente [sic] 8.000.000 de muertes entre los más pobres’ (*THIS REPRESENTS APPROXIMATELY 8,000,000 DEATHS AMONGST THE POOREST*).



Fig. 12.5 Pictures of the flyers and banners as a hate campaign against Ángela Maldonado and her foundation

As noted at the beginning of this chapter, the director of the FIDIC's lab is a celebrity scientist who has a huge influence on national media. The lack of results of his research and the failure to live up to his promises has made him lose the trust of the government and the Colombian scientific community in recent years. That said, he maintains significant influence at the political level. In February 2014, a slander suit against the laboratory's director, his employees and indigenous authorities who have been involved, was pursued by Ángela Maldonado to prohibit such attacks. At the time of this writing, no action has been taken by the Prosecutor General.

On May 8, 2014, the director of the FIDIC sued via a *tutela*—the tool to protect fundamental human rights in the Colombian legal system—the Third Section of the *Consejo de Estado* (State Court), which issued the ruling that revoked its trapping permits, claiming that the ruling “violates the FIDIC’s fundamental rights to conduct research” and requesting the immediate reversal of this ruling. As explained above, the *Consejo de Estado* is composed of five sections. When dealing with fundamental rights-related suits (*tutelas*), such division disappears and every Section, except the Third Section, can handle the action. If a Section of the *Consejo de Estado* is sued for a fundamental rights breach, another Section of the same *Consejo de Estado* takes the case. Because the *tutela* was filed against a ruling of the Third Section, it had to be assigned to another Section in the State Court. On December 12, 2014, the Fourth Section ruled in favor of the FIDIC for the protection of the constitutional right “to conduct research,” completely reversing the ruling of the Third Section—a decision rendered despite the absence of convincing arguments. The ruling requested the Corpoamazonia to provide a report to determine whether the FIDIC had complied with its obligations as contained in its trapping permits.

The ruling was widely considered as a third stage of the *acción popular*. One of the three magistrates in charge of studying the case abstained from voting and has stated that the ruling is unconstitutional and a violation of the *Consejo de Estado*'s obligation to protect the fundamental rights of civil society (Ramirez 2015). In March 2015, Ángela Maldonado and the Third Section appealed the ruling of the Fourth Section. The case was then transferred to the Fifth Section, which

determined that the appeals had been filed too late, leaving the Corpoamazonia (pursuant to the order by the Third Section) to decide whether the FIDIC had met its permit obligations. Gabriel Vanegas and Ángela Maldonado filed a complaint to the Superior Judiciary Council for the arbitrary proceedings of the State Court.

In its report, the Corpoamazonia stated that the FIDIC has only partially fulfilled its obligations and that a study of the population status of *Aotus* spp. is required before determining further hunting quotas for malaria research. The case was transferred to the Constitutional Court of Colombia, which rejected the revision of the ruling of the writ of injunction (*FIDIC v. Third Section of the Consejo de Estado*) filed by the Ombudsman Office of Bogotá on the grounds that the defense of animal rights is not a priority for this Court.

The FIDIC then filed an *incidente de desacato*—akin to a charge of contempt—against the Corpoamazonia for not allowing it to capture animals after the ruling. On October 22, 2015, the Fourth Section ruled once more in favor of the FIDIC, fining the Corpoamazonia approximately \$2062, despite evidence that demonstrates the legal obligation of environmental authorities to conduct studies to determine whether local populations can sustain extraction prior to the issuing of scientific hunting permits (e.g., Decreto 1608, 1978; Ley-99, 1993). The Corpoamazonia was thus forced to reinstate FIDIC's previous trapping permit, which was originally nullified by the second instance ruling of the *acción popular*, thereby entitling the FIDIC to capture 1463 night monkeys over a period of 566 days. In addition, the general director of Corpoamazonia was sanctioned (Ortiz De Rodriguez 2015).

Lack of Accountability

Although we used all the legal tools available to civil society, we could not rely on the existing legal system to remedy all the environmental crimes and harms committed by the FIDIC and the State in this particular case. Table 12.2 offers a summary of the environmental damage perpetrated by the State (the Corpoamazonia and the Ministry

of Environment) and the FIDIC. It includes a sample of the laws that provide specific sanctions and fines for each of the offenses described. It is important to note that harm to civil society, such as that to indigenous people and environmental activists, is not included in this analysis.

Through the *acción popular*, we were able to influence policy-making in Colombia: the Ministry of the Environment was fined by the Administrative Tribunal of Cundinamarca and required to create the mechanisms set forth in Ley 1608. Currently, the Ministry of the Environment is in the process of establishing the procedures to implement repopulation fees. The Ministry of the Environment solicited public comment on its proposed mechanisms and procedures, and received strong criticism from the academic community and civil society because the recommendations privileged commercial exploitation of natural resources over research by universities and NGOs. We expect the final version of the mechanisms and procedures to reflect the concerns and suggestions of civil society.

The Corpoamazonia has had proof of the illegal trade in night monkeys since 2005, when one of its staff members reported that Brazilian and Peruvian citizens were selling them to the FIDIC. The FIDIC laboratory in Leticia (the southernmost city of Colombia) was then sanctioned and subsequently closed. But the Vice-Minister of the Environment at that time, Oscar Dario Amaya, asked the Corpoamazonia to re-open the FIDIC's facility and ignore the evidence of the illegal trade in night monkeys on the grounds that the FIDIC was planning to contact the governments of the two countries to apply for import permits. This never transpired and the FIDIC laboratory was re-opened in January 2006.

In November 2007, the Colombian magazine *Revista Cambio* exposed the FIDIC's international trade in night monkeys in a series of interviews and pictures of Brazilian and Peruvian traders (*Cambio* 2007). The Corpoamazonia subsequently carried out visits to the FIDIC but no sanctions were imposed.

In addition, the invasive trapping methods causing deforestation and the release of night monkeys performed by the FIDIC and the Corpoamazonia with support of the Ministry of the Environment constitute "damage to natural resources," while the role of the authorities in

Table 12.2 Environmental damages incurred by the FIDIC and the State in the course of research on a vaccine for malaria

Description	Responsible Party	Victim	Damage	Legal Frame
Four decades of extraction of night monkeys for malaria research without conducting population and genetic studies	FIDIC , Corpoamazonia (CORPO), Ministry of Environment of Colombia (MEC)	Wild populations of <i>Aotus vociferans</i>	- Critical decrease of wild populations and possible local extirpation of this species at the northern bank of the Amazon River in Colombia where animals have been used for malaria research (20 indigenous territories).	Decreto 1608, 1978: The environmental authority must conduct population studies prior to the exercise of any permit that allows the extraction of wild fauna and flora.
	FIDIC, CORPO, MEC	Wild populations of <i>Aotus nancymaae</i>	- Endemic population genetically contaminated by releases of animals coming from Peru.	Ley-99, 1993 & Ley 1333, 2009: the MEC and CORPO have to regulate the sustainable use.

Table 12.2 (continued)

Description	Responsible Party	Victim	Damage	Legal Frame
Releases of night monkeys from Peru in Colombian territory	FIDIC, CORPO	Colombian wild population of <i>A. vociferans</i>	- The competition for resources and territory between released animals and resident populations of <i>A. vociferans</i> , which led to displacement of the latter. - Between 2007 and 2008, 75 % of animals used in the FIDIC were trapped in Peru (Maldonado et al., 2009). Population estimates in Peru are 13.6 ind/km ² at extraction sites, in contrast to 46 ind/km ² in areas without hunting.	Ley 165, 1994: National Policy for Biodiversity: the second cause of biodiversity loss is the introduction of exotic and invasive species. CITES legislation: Animals imported from Peru must have a CITES export permit. Ley-99, 1993: the MEC has to regulate the use, import and export of fauna.
	FIDIC, CORPO, MEC	Peruvian wild population of <i>A. nancymaae</i>		

(continued)

Table 12.2 (continued)

Description	Responsible Party	Victim	Damage	Legal Frame
FIDIC, CORPO	FIDIC, CORPO	Colombian wild population of <i>A. nancymaae</i>	<p>- Between 2006 and 2012, 4041 night monkeys were released in Colombia in groups that ranged from 20 to 276 animals, without any follow up or genetic identification, subsequently genetically contaminating an endemic population.</p> <p>- Between December 2012 and February 2014, 189 animals were captured and 373 were released in areas where the UNAL/SINCHI study prohibited any activity of this kind in order to protect the endemic population of <i>A. nancymaae</i> in Colombia.</p>	<p>IUCN, 2013: Guidelines for Reintroduction: Prior to their release, the origin of animals must be known and their species must be genetically determined. Animals must be monitored after having been released.</p>
FIDIC, CORPO	FIDIC, CORPO	Colombian wild population of <i>A. nancymaae</i>	<p>- Between December 2012 and February 2014, 189 animals were captured and 373 were released in areas where the UNAL/SINCHI study prohibited any activity of this kind in order to protect the endemic population of <i>A. nancymaae</i> in Colombia.</p>	<p>Ley 1333, 2009: Any environmental damage has to be penalized and fines must be imposed reflecting the harm caused. Environmental authorities must open an investigation to sanction offenders.</p>

Table 12.2 (continued)

Description	Responsible Party	Victim	Damage	Legal Frame
Deforestation associated with the trapping methods	FIDIC, CORPO	Indigenous territories at the Colombian-Peruvian Amazonian border	- Between 2007 and 2008, around 4000 night monkeys were sold to the FIDIC. During the captures, a loss of over 65,000 trees annually was calculated (Maldonado & Peck, 2014).	Ley 1333, 2009: Same as above. Sanctions include fines ranging up to 5000 times the amount of minimum monthly wages, the temporal or definitive closure of the institution responsible for the environmental offense, and the revocation or expiration of the license, permission, concession, licensing or registration.

(continued)

Table 12.2 (continued)

Description	Responsible Party	Victim	Damage	Legal Frame
Malaria experimentation that does not meet minimal protocols for humane use on nonhuman primates	FIDIC, CORPO	Night monkeys used in malaria research	- Animals spent an average 8 months as experimental subjects for this research.	<p>Ley 84, 1989 (modified by Ley 1774, 2016): Wild animals may be captured and kept for research purposes for no more than two months a year.</p> <p>Extraction quotas may not be higher than 1 % of the wild population estimated by the regional environmental authority.</p>
	FIDIC, CORPO	Night monkeys used in malaria research	- A percentage of animals are splenectomized (having the spleen removed) and animals that survive are released back into the wild, irrespective of their physical condition; survival rates post-release are low (Roncancio, 2012).	<p>Resolution 8430, 1993: Experimental animals should be captive bred. The animal facilities shall be in accordance with the species, body shaping, habits, preferences and locomotive postural characteristics of animals, to provide comfort and minimize unnecessary suffering.</p>

this matter rises to the level of “malfeasance” and “incompetence.” The National Policy for Biodiversity (Ley 165, 1994, amended in 2012) establishes that responsible entities must be penalized according to current legislation. Despite the clear evidence, none of the environmental authorities involved have been sanctioned.

The Ley 84 of 1989 (amended by Ley 1774, 2016) clearly establishes that permits for the capture of animals for research are not allowed for more than two months per year, and that the extraction quota shall be no higher than 1 % of the estimated population. This law also establishes that the use of animals in experimentation shall be approved only when there are no other means of conducting research. Laboratories testing vaccines against malaria were using night monkeys during the 1970s up to the 1990s, but today, most research on malaria is performed with human volunteers. We would also like to stress that the use of wild monkeys as experimental models is scientifically invalid because the impact on the research of the animals’ response to the stress of capture, contact with humans and adaptation to changes is unknown. What is clear is that the FIDIC is violating Colombian law and international protocols for the use of nonhuman primates in research, and inflicting unnecessary suffering on individual primates, as well as harming entire wild populations of monkeys. For example, the FIDIC removes the spleen (splenectomy) of most *A. nancymaae* to lower their natural defenses, which strongly diminishes their survival chances when released back into the wild after experimentation.

Discussion

The lack of accountability by the Republic of Colombia has put the rights of civil society and the protection of biodiversity at risk. Corruption, ignorance and negligence have had a negative impact on the ecosystem in the Amazonian border between Brazil, Colombia and Peru, resulting in the local extirpation of *A. vociferans*, the introduction of a new species, *A. nancymaae*, illegally sourced from Peru, into Colombian territory, and the decimation of *A. nancymaae* on the

Peruvian side of the river. For almost 40 years, capture methods have entailed the felling of numerous adult trees, estimated at 65,000 per annum. Those animals that have been caught have suffered during their capture, experimentation period and release.

Those entities responsible for ensuring the vitality of night monkey populations have ignored national environmental law. The FIDIC has used its connections and influence to evade sanctions, has misinformed the public, and has conducted a defamatory campaign against the plaintiffs. The State has also failed to grant protection to the plaintiffs even after the ruling in their favor, despite the fact that legal support is supposed to be offered by the Colombian Constitution for the defense of fundamental rights (*Ley-599, 2000*). Despite such hurdles, this chapter has demonstrated the important results that can be achieved using the legal tools at hand. Through an *acción popular*, environmental authorities and the FIDIC have been disciplined. As stated by the Magistrate of the *Consejo de Estado* in her appeal, the writ of injunction filed by the FIDIC did not satisfy all of the necessary criteria. First, the FIDIC did not use all legal resources available prior to filing a writ of injunction as required by the Colombian Political Constitution. The Magistrate also stated that the “right to conduct research” is not a fundamental right and the damage caused to the FIDIC by cancelling its trapping permits is not considered an “irreparable harm.” Accordingly, the Magistrate ruled that the writ of injunction is unconstitutional (De La Hoz 2015, p. 5).

As suggested throughout this chapter, the actions taken by civil society have been hindered by offenders who wield significant influence: the State itself and a celebrity scientist. As reported by Goyes (2015), a staff member from the Corpoamazonia who confiscated monkeys from the FIDIC owing to their poor conditions was transferred and further access to the FIDIC’s files has been denied. The General Director of the Corpoamazonia, the Governor of the Amazonas and even the President of Colombia made calls in order to have the monkeys returned to the FIDIC. The *Aotus* case demonstrates that the Republic of Colombia does not fulfil its obligations to protect natural resources, thereby infringing on a fundamental right of civil society. Laws and legislation with regard to the environment are explicit; these rules, however, have been by-passed for more than 40 years. Even the Constitution of

Colombia has been overlooked in order to please an influential offender. It is clear that the State does not apply the law equally to every Colombian citizen.

The latest actions taken by the General Secretariat of the *Consejo de Estado*, which nullified and requested the reassessment of the ruling of the *incidente de desacato* filed by the FIDIC, makes us question the legitimacy of this legal body. Nevertheless, this case has shown that the persistence of civil society can have an impact at national level and that soliciting international support has been a valuable strategy for raising global awareness about the corruption and lack of accountability of Colombia's legal system and the Ministry of the Environment. We feel this long fight against an irresponsible state for the protection of natural resources will continue until it becomes clear that no further contravention of environmental law will occur.

Conclusion

Our experience in the Amazon has shown that the illegal trading of natural resources is a direct result of the unscrupulousness of local governments who misuse regional governmental budgets designated for improving basic living standards of indigenous communities. Historically, the Amazonas Governor's office and the Leticia Mayor's office have been two of the most corrupt authorities in Colombia during the last 20 years. Little action has been taken by the central government, however. As such, we believe that social and environmental activism is more effective to achieve enforcement of the law and justice.

As this chapter has described, the legal intervention of civil society has resulted in: (1) enforcement of environmental law; (2) an impact on policy-making (e.g., assistance in the creation of mechanisms and procedures for establishing the economic responsibility of users of natural resources); (3) an order requiring the Corpoamazonia and the CITES Administrative and Scientific Authorities to fulfil their responsibilities under Colombian legislation and CITES (e.g., conducting a population and genetic study on night monkeys as exploited species); (4) public

exposure of the corruption of environmental authorities and Colombia's legal system; (5) the first ruling in Colombia on the need for the sustainable use of resources—a ruling that refers (albeit in the obiter dictum) to animals as “sentient beings” deserving humane and ethical treatment; (6) the rise of environmental awareness and animals' rights in Colombia, more generally; (7) providing the public with a better understanding of the real scope of malaria research in Colombia; and (8) upgrading of the conservation status of *A. nancymaae* from “Least Concern” to “Vulnerable” on the Red List of the International Union for the Conservation of Nature.

Despite persecution and a considerable investment of time and energy, the authors feel deeply satisfied with their long-term pursuit of accountability and the protection of biodiversity. We hope that the results of our efforts will influence the decision-making of environmental authorities when granting permits to exploit natural resources. We believe that a response by civil society, acting in an organized way and using a long-term legal strategy, can be a powerful tool to achieve law enforcement in a country where corruption leaves citizens completely unprotected and neglected. We also believe that a multidisciplinary approach to corruption is critical, as professionals from different backgrounds are needed to tackle the novel issues one faces while striving for the protection of nature.

Acknowledgements This research was funded by Rufford Small Grants, the Whitley Fund for Nature, IPPL (USA), Rainforest Concern, the Russell E. Train Fellowship-WWF (Washington), the Overseas Research Students Awards Scheme (ORSAS) (UK), the British Union for the Abolition of Vivisection (UK), the American Society of Primatologists and the Kilverstone Charitable Trust.

The views presented in this chapter do not necessarily reflect the views or policies of the funding agencies, and the funders had no role in study design, data collection, analysis, in the decision to publish this chapter, or in the preparation of this chapter for publication. We thank the invaluable contribution of the environmental lawyer, Gabriel Vanegas, for his support during the entire case. We also wish to thank the Colombian and Peruvian environmental authorities for providing research permits to carry out this study and the Ministry of the Interior for conducting Previous Consultation Processes with

indigenous communities. In addition, we would like to thank Mocagua, San Martin and all the other indigenous communities that participated in this study. We are very grateful to the British Union for the Abolition of Vivisection for sharing the results of its investigation in Colombia and Peru, which were critical for updating our evidence of the trade during 2012.

Additional thanks go to Entropika's research team for data collection and the Amacayacu National Park and the Police of Leticia for their logistical support, as well as the Colombian Primatological Society, the International Primatological Society, the European Federation for Primatology, the *Associação Portuguesa de Primatologia* and Drs. Evans and Cooper at the DuMond Conservancy for their institutional support. Further thanks go to Otra Parte, Cerca Viva and Tanimboca for allowing us to conduct data collection in their reserves. Finally, we would like to thank magistrate E. Gil-Botero for his thoughtful and thorough second instance ruling that will improve the management of natural resources in Colombia.

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