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POACHING AND ILLEGAL KILLING OF TIGERS


Many visitors to India’s tiger reserves are disappointed not to see a tiger. This study examines the scope for promoting eco-tourism by making the tigers more visible to tourists by using CCTV cameras to stream live video displays to the reserves Visitor Centres and to nearby lodge. Images streamed on the Internet could also promote tourism and attract foreign donors. The scheme would provide local people with an incentive to protect the tigers from poaching. A detailed assessment is included of the technological requirements of the scheme.


Higher tiger densities in Indian tiger reserves were found to be related to the greater availability of prey, a relatively flat reserve terrain, the existence of a “buffer” area surrounding the reserve, the absence of insurgents and criminal gangs, higher levels of tourism and higher reserve management scores. Two variables showed no relationship to tiger densities: the number of Tribal villages in the core of the reserve and forest cover. It was concluded that government efforts to evict Tribal settlements from the reserves and to exclude tourists could be relaxed.


Livestock predation by tigers often leads to retaliatory killings by villagers. In an attempt to reduce such killings, the Indian government compensates affected villagers and communities, but the scheme is cumbersome and slow. Consequently, the Corbett Foundation established the Interim Relief Scheme (IRS) to speed up compensation for communities surrounding the Corbett Tiger Reserve. This study undertakes a spatiotemporal analysis of livestock predation surrounding the Reserve and examines the possibility that the IRS might have encouraged poor husbandry practices in order to get compensated.
PARROT POACHING


This study evaluates the relative contributions of poaching and habitat loss to the endangerment of neotropical parrots. Using NatureServe digitized range maps, 145 parrot species were individually matched with 145 control species from similar ranges and, by proxy, from similar habitats. The control species were taxonomically similar, mid-sized, forest dwelling birds that, like parrots, use holes and cavities for breeding and roosting. The conservation status of the two samples was established through the IUCN Red List of endangered species. Nearly five times as many parrot species (59 out of 145) as non-parrots (13 out of 145) were found to be threatened with extinction to some degree. The study establishes that poaching is now a strong threat to the conservation of neotropical parrots – perhaps stronger than habitat loss.


This study examines whether CRAVED, a criminological model of theft choices can help to explain parrot poaching. It correlates estimates of the numbers poached for the 22 species of Mexican parrots with measures of CRAVED components (concealable, removable, available, valuable, enjoyable and disposable). Widely available species and those whose chicks are easily removable from the nest were found to be more commonly poached, a pattern suggesting that most poachers are opportunistic villagers. More valuable/disposable and more enjoyable species are rarely taken because few remain in the wild after being heavily poached for export in the 1980s.


Available data are used to investigate why some species of Bolivian parrots, but not others, are found in an illegal pet market in Santa Cruz. Species commonly found in the market make more enjoyable pets, are more abundant in the wild and are more accessible to humans. They are also mostly found within 50 miles of the city, but some found at greater distances are probably brought to the market by wildlife traders, “itinerant fences” who travel around buying parrots poached by villagers. It is concluded that opportunistic villagers are responsible for most parrot poaching in Bolivia and that this should guide solutions to the problem.


This study will interview people involved in all stages of the neo-tropical parrot trade (i.e. legal and illegal). It will explore questions about foraging practices by poachers and middlemen. For instance: How far do poachers/trappers travel to obtain parrots? How much time is spent foraging to collect parrots? How far are middlemen willing to travel to collect parrots? This research study will better understand how the trade operates by interviewing people directly involved in the neo-tropical parrot trade (i.e. legal and illegal).

Hours before the sun awakens, hundreds of citizens, market sellers, and traders in major cities of the Peruvian Rainforest await the arrival of boats from all corners of the Amazon. Most of these people are trading goods for sustenance, but a few are buying and selling live animals. This commerce threatens the existence of many species in the Amazon. Loose social networks connect the actors of this informal economy which spreads through ports, markets, and private homes. Conducted across eight cities within two provinces of the Rainforest jungles of Peru, this ethnographic inquiry uses field observations, formal and informal interviews to examine the trade and life circumstances and opinions of the actors involved.

ELEPHANT POACHING


The Convention on International Trade in Endangered Species (CITES) secured an agreement in 1989 among its member states to ban the international trade in ivory. The continent’s overall population of elephants increased after the ban, but an analysis of elephant population data from 1979-2007 found that some of the 37 countries in Africa with elephants continued to lose substantial numbers of them. This pattern is largely explained by the presence of unregulated domestic ivory markets in and near countries with declines in elephant populations.

ILLEGAL FISHING


Illegal fishing threatens ocean biodiversity, harms coastal countries dependent on fisheries and threatens the food supply and job stability of millions of people worldwide. Previous studies of factors contributing to this problem have focused on such macro-level variables as a country’s GDP, governance effectiveness, level of corruption and lack of accountability, political stability, and the degree to which it is able to manage its resources. No previous study has examined the situational factors influencing the decision to engage in international illegal fishing. This research uses available data from 54 countries to analyze the role of situational factors in illegal fishing including resource attractiveness, access to an easy escape route, formal and informal surveillance, and fisheries management efforts. All the situational factors were related to illegal fishing except informal surveillance.

Petrossian, G. and R.V. Clarke (in progress). “What Fish are CRAVED? Exploring Species Vulnerability to Illegal Fishing”.

Guided by the CRAVED theft model (see parrot study above), this study uses available data to
compare 56 species of fish known to be caught illegally with a closely comparable group of 56 species not caught illegally. Results suggest that all elements of CRAVED were found to be significantly correlated with illegal fishing, thus showing the utility of investing criminological thinking into future studies of illegal fishing. From a practical perspective, a primary prevention goal should be the closer monitoring of long-liners.


Albatrosses are the most endangered species of birds. They are highly vulnerable to becoming ensnared by long-line fishing vessels. Many vessels fishing illegally use long-lines and these vessels have little incentive to employ procedures to reduce by-catch of albatrosses. This study seeks to document the role of illegal fishing in contributing to the endangerment of albatrosses.

WILDLIFE LAW ENFORCEMENT


This is a case study of law enforcement practices and illegal activities in Queen Elizabeth National Park in Uganda. It is comprised of three parts (1) a spatial-temporal analysis of documented illegal activities and park ranger patrols between 2000-2010; (2) participant observation of ranger patrols to document patrol activities, group dynamics and group decision-making while on patrol; (3) 24 in-depth interviews with rangers to examine perceptions of community relations, patrol activities and occupational attitudes.


Most official records of wildlife crime are collected by law enforcement agencies inside the world’s protected areas. This study discusses the reliability and utility of these data using Queen Elizabeth Protected Area (QEPA) in Uganda as an example. This study is divided into three parts: (1) background information on and limitations of law enforcement monitoring (LEM) inside protected areas, (2) an overview of LEM in Uganda and (3) descriptive analyses of Uganda Wildlife Authority (UWA) ranger efficiency in QEPA.


This study presents a spatial analysis of patrol intensity and patrol efficiency in Queen Elizabeth Protected Area (QEPA). It examines the use of ranger patrol data to help understand where rangers go to on patrol and where their
presence is most efficient in terms of amount of detected poaching activity. The explanatory models employ two variables, patrol intensity (patrol hours per square kilometer) and patrol efficiency (poaching activities detected per 100 patrol hours), and relate these to explanatory variables that represent (a) access points such as borders and roads, (b) animal attractors such as rivers and lakes, and (c) anchor points of poachers such as neighboring settlements. The goal is to produce practical knowledge to help understand the rangers’ decisions so as to improve patrol efficiency.

Lemieux, A.M. (In progress). The WILD LEO Project.

The ‘Wildlife Intelligence and Leadership Development program’ (WILD) seeks to provide law enforcement officers (LEOs) in the protected area with advanced intelligence gathering and analysis training. A select team of rangers will collect photographs of poaching activity using digital cameras embedded with GPS. These photographs will be used to create a spatial database that describes where poachers are operating within the reserve. In addition, arrested poachers will be photographed at the hunting site and the photograph will be used in court to prove the hunting occurred inside protected area. The goals of the project are to increase: (1) poacher apprehension using crime mapping and analysis techniques and (2) poacher conviction rates using better courtroom evidence.

THEORETICAL


Script analysis of crimes assists the study of modus operandi by laying out the sequential steps in the completion of a crime. It identifies the players involved at each step, and describes their tasks, their skills, and the tools they need. This helps in directing preventive measures to the best “pinch points”. This paper discusses how a script analysis could be undertaken of the Transnational Illegal Market in Endangered Species (or TIMES). A detailed description of this process, or a "master script", should provide the framework for identifying pinch points. This is the “dream” that motivated our efforts, but we were left in doubt that master scripts of the TIMES were really feasible.


This paper argues that the 5Is and the Conjunction of Criminal Opportunity (CCO) framework advocated by Ekblom (2001) are particularly useful in the investigation and analysis prevention of “nested” complex crimes. This argument is illustrated by case studies of labor trafficking within the illegal fishing industry. Implications for future research are discussed.


The 'tragedy of the commons' occurs in the field of wildlife crimes where species become overexploited to increase short-term profits while endangering and eliminating a natural resource for future users. Current approaches to the illegal wildlife trade include trade bans and regulatory schemes of unknown effectiveness. Perhaps, a better approach in reducing the illegal wildlife trade is a combination of making it more difficult to poach (i.e. situational crime prevention) and incentivizing locals to abstain from poaching. This paper develops these arguments using case studies of the illegal parrot trade, the market for wildlife skins, and over-fishing.