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Editorial: Empirical approaches to wildlife crime prevention

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Editorial on the Research Topic

Empirical approaches to wildlife crime prevention

Crimes against wildlife range from poaching, injuring, and killing to the illegal trade in wildlife species. These crimes are in violation of national, regional, or international laws and are often transnational in nature, spanning every continent and affecting billions of species. They threaten global biodiversity and affect ecosystems, depriving developing nations and undermining sustainable development and global security in myriad ways. Trafficking in wildlife has become one of the most profitable illicit enterprises alongside trafficking in drugs, arms, and humans, and we have seen unprecedented rates in the growth of internationally-traded wildlife in recent decades, which is considered by many to have escalated into a global crisis.

Understanding the nature and the scope of crimes against wildlife is paramount in order to develop preventive and reactive measures to combat this crime. Within the last decade, increasing criminological theoretical and empirical attention has led to the development and the establishment of wildlife crime-related research within the field of criminology published in a variety of traditional criminological, as well as conservation journals, such as the *Journal of Research in Crime and Delinquency*, *Deviant Behavior*, the *British Journal of Criminology*, *Biological Conservation*, *Conservation Biology*, and the *Marine Policy Journal* (e.g., Pires and Moreto, 2011; Petrossian et al., 2016; Hübschle, 2017; Moreto and Pires 2018; Arroyo-Quiroz and Wyatt, 2019; Boratto and Gibbs, 2021; van Uhm and Nijman, 2022). A considerable number of books have also been published by criminologists in this regard (e.g. Wyatt, 2013; Lemieux, 2014; Nurse, 2015; van Uhm, 2016; Gore, 2017; Moreto, 2018; Lynch and Pires, 2019; *Global Crime*, *European Journal on Criminal Policy and Research*; Petrossian, 2019; Sollund, 2019; Wong, 2019). The emergence of conservation criminology (Gibbs et al, 2010) and conservation crime science (Kahler and Gore, 2017) as subdisciplines within the field of criminology, and the already well-grounded green criminology perspectives on crimes against nature (Beirne and South, 2007; White, 2018) have established the solid footing for the proliferation of such research.

This trend was also evident in the publication of various Research Topics on wildlife crime in the past several years. For example, Moreto (2016) edited a Research Topic on wildlife crime to further shed light on the role of criminal networks within the scope of wildlife crime, particularly poaching and the illegal wildlife markets, including the parrot and wildlife trade in Bolivia and Peru (Pires et al., 2016), abalone poaching in South Africa (Warchol and Harrington, 2016), the illegal caviar trade in Russia (van Uhm and Siegel, 2016), and the role of NESTs to combat environmental crime networks (White, 2016). In 2021, van Uhm and Siegel (2021) focused their

Research Topic on empirical evidence, criminological analysis, and theoretical explorations of the various connections between organized crime and animal exploitation, including the connections between the trafficking in wildlife and drugs (van Uhm et al., 2021), state-organized crime and the killing of wolves in Norway (Sollund and Goyes, 2021); Chinese organized crime and the illegal wildlife trade (van Uhm and Wong, 2021); Mexican organized crime and the illegal trade in totoaba maw (Martínez and Alonso (2021); and the regulatory and enforcement challenges of transnational organized IUU fishing crimes (Stefanus and Vervaele 2021). In 2022, Pires and Olah (2022) published a Research Topic on wildlife crime and existing promising solutions, with contributions from Romero-Vidal et al. (2022) on the impacts of the legal possession of parrots in the Neotropics; Romero-Vidal et al. (2022) on the impacts of longline fishing on albatross populations Petrossian et al. (2022); Nijman et al. (2022) on the legal and illegal trade in wildlife in Indonesia's wildlife markets; Zenke et al. (2022), and Rodionov et al. (2021) on the forensic aspects of wildlife crime prevention, and Viollaz et al. (2021) on the situational factors that drive retaliatory killings of leopards in South Africa. These Research Topic, among others, reflect criminologists' role in exploring this understudied topic of wildlife crime. Moreover, growing attention from policymakers and the public has resulted in calls to further disentangle the criminogenic, socioeconomic, and ecological aspects of wildlife crimes.

While the scientific community is making significant efforts to identify ways to deal with various crimes against wildlife, there is an urgent need for empirically-driven intervention strategies and tools essential to deal with these crimes more effectively. Understanding wildlife crimes requires long-term interdisciplinary approaches, and the collection and systematic analysis of both qualitative and quantitative data. In an attempt to continue in this vein, this Research Topic calls on the global scientific community to stimulate a multi-disciplinary discourse and dialogue about the nature and the scope of crimes against wildlife and integrate different scientific perspectives, combining criminological, conservation, and legal empirical research methods.

Therefore, the aim of this Research Topic is to advance empirical understanding of the various dimensions of crimes against wildlife, whereas multi-dimensional approaches are combined to improve the protection, prevention, and reaction to wildlife crimes. In order to advance knowledge about crimes against wildlife and promote state-of-the-art research that relies on innovative analytical scientific methods, this Research Topic proposes empirically-driven solutions to the various types of crimes against wildlife.

The Research Topic starts with an article about profiling wildlife crimes prosecuted federally in the United States. Sosnowski et al. explored the application of charges associated with wildlife crime cases *via* their judgment documents; the wildlife species involved in prosecuted cases; the distribution of cases across U.S. federal districts; and the sentencing patterns of wildlife crimes. Based on in-depth analyses of these cases, they revealed the nature of sentencing behind wildlife crimes.

The second article focuses on the extant knowledge base and advanced adaptation and application of target suitability research to explain wildlife-related crimes. Kahler et al. drew on research, fieldwork, and empirical evidence from conservation science to develop a poaching-stage model with a focus on live specimens or wild animals. Their target suitability model, IPOACHED, built

using the data collected from the Bukit Barisan Selatan National Park, Indonesia, predicts that species that are in-demand, passive, obtainable, all-purpose, conflict-prone, hideable, extractable, and disposable are more suitable species for poaching and, therefore, more vulnerable to poaching.

The third article delved into the illegal wildlife trade in two special economic zones in the Golden Triangle borderlands. Based on both criminological interviews and a conservation market survey, van Uhm and Zhang found that in the Golden Triangle Special Economic Zone, the illegal trade in wildlife occurs more covertly than previously observed; the trade transformed underground to online social media, while in Boten, illegal wildlife traders diversified into tiger products due to the decline in bear bile products and the reduction in the opportunity to obtain the latter.

In the fourth article, an evaluation of legal protection and enforcement perspectives regarding the prevention of marine wildlife crimes was conducted by Nurse. The study identified that while, in principle, the UK has robust legal protection for marine wildlife, in practice, the policy allows the exploitation and disturbance of marine wildlife that causes harm to individual animals and is detrimental to efforts to conserve marine wildlife and marine ecosystems.

The fifth and final article focuses on the translation of evidence-based research and theoretical innovation in environmental crime prevention into ground-level practice. White discusses the importance of combining academic work and practitioner experience as part of applied criminology and underlines the potential role of a 'harm prevention criminalist' in environmental crime prevention interventions.

In closing, we believe that this Research Topic provides a wealth and breadth of knowledge and contributes to the ongoing debate about wildlife crime in many important ways, including confirming the important role criminologists play in contributing to the wildlife crime discourse. We would like to thank the journal for the opportunity to edit this volume and for providing us with the platform to highlight the works of some of the leading scholars in this field, to whom we remain profoundly grateful for their contribution.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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