

Editorial: Forensic Science and Herpetology

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This volume concludes a three-part series of papers on the subject of forensic herpetology, initiated under the former journal *Applied Herpetology* (Cooper et al., 2008a, 2008b, 2009). We are grateful to the editors of the *Herpetological Journal* for allowing us to conclude this series in their journal. The four papers published here were originally peer-reviewed and accepted for publication in *Applied Herpetology*, prior to undergoing a subsequent peer-review process by the *Herpetological Journal*. As such, we are grateful to the authors of these papers for their patience during the completion of this project. We also thank Dr Adrian Hailey, former Managing Editor of *Applied Herpetology* who oversaw this project from its inception - suggesting that the three of us work together to edit a volume on the emerging sub-discipline of forensic herpetology. Little did we know that the project would take several years to complete, resulting in three published volumes! Special thanks are extended to Dr Robert Jehle, along with the editorial board and reviewers for the *Herpetological Journal* for accepting our proposal to publish these papers here (following the closure of *Applied Herpetology*). Finally, we thank the late Dr Michael R.K. Lambert, a strong proponent of research in the area of applied herpetology, and one of the first scientific journal editors to officially recognize forensic herpetology as a sub-discipline in need of a publication outlet.

As defined in our previous volumes on this subject, forensic herpetology (or herpetological forensics) is that branch of science that relates to reptiles and amphibians when these animals become the subject of a legal case. In Volumes 1 and 2 of this series, we presented overviews of the sub-discipline, focusing on the broad scope of the subject, definitions, legal aspects, standard laboratory techniques, post-mortem techniques, DNA investigations, forensic record-keeping, clinical techniques, crime scene investigation, reptilian and amphibian osseous pathology, and the forensic implications of reptile use in traditional medicines.

Here, we present our final four papers, with the recognition that researchers have only begun to publish on this subject (e.g., Martin 2012). Baker et al. (2012) provides a case study on the use of alternate light source imaging, in combination with forensic digital photography, to reveal original snake skin pigment patterns on dyed leather products in the wildlife trade. Such methods can be easily applied to the inspection and species identification of imported/exported leather goods, as officials attempt to enforce CITES regulations.

Cooper (2012) reviews the current state of knowledge regarding estimation of post-mortem interval (PMI)

in reptiles and amphibians. Estimating the time that has elapsed since an animal died is often an important question in wildlife forensic investigations. Cooper (2012) shows that for reptiles and amphibians, little has been published. More taphonomic studies are needed, and both professional and amateur herpetologists can contribute to this research.

Parham et al. (2012) examine mitochondrial sequence data for key Iranian specimens of the tortoise species *Testudo graeca*. This provides base-line data for future forensic studies addressing the phylogeographic characterization of CITES-protected tortoises in the wildlife trade. This echoes the recent paper by Espinoza et al. (2012) who identified as one of the greatest future needs in wildlife forensic science the establishment of large DNA databases for taxa seen in trade.

Finally, Nijman et al. (2012) provide a quantitative overview of selected reptiles traded illegally in Indonesia. They conclude that current trade quotas are not abided by many reptile traders, and are not sufficiently enforced by authorities. They note that if trade in these species is to be sustainable, increased enforcement is needed. This also echoes Espinoza et al. (2012), who conclude that increased mechanisms for the identification of emerging trends in the wildlife trade are needed to enhance wildlife law enforcement efforts.

Overall, we are optimistic and excited about the future of wildlife forensics and forensic herpetology, and for the potential that these fields have for contributing to wildlife conservation efforts. The newly formed Society for Wildlife Forensic Science (SWFS) is at the forefront of efforts to develop wildlife forensic science as a comprehensive, integrated and mature discipline. We encourage our herpetologist colleagues to become familiar with SWFS, and to continue to publish applied research in the field of forensic herpetology.

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