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Foreword

Reproductive technologies as essential tools for amphibian and reptile conservation

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Twenty-twenty saw the much-anticipated beginning of a new decade but instead, humanity was startled by the global outbreak of CoVid-19. The current pandemic has certainly highlighted the delicacy of life, and the devastating effects that disease and mortality can have on a species. However, pandemics are not new to other taxonomic groups, and the rate of species' declining in abundance or going extinct continues at an alarming rate. Amphibians and reptiles have been suffering extreme and consistent declines for decades as the result of habitat loss, pollution, and yes, very powerful and taxonomic specific diseases. With this in mind, *ex situ* management of endangered and vulnerable species is of the utmost priority. While the global amphibian conservation community has been working tirelessly to preserve amphibian and reptile species through the traditional methods of habitat preservation, *ex situ* management, reintroduction/translocation methodologies, assisted reproductive technologies (ARTs) and the establishment of genome resource banks (GRPB) have come to the fore. These programs provide a long-term strategy for preserving genetic diversity, and, equally as importantly, they offer an economically viable management tool for conservation programs charged with preserving an ever-increasing number of amphibian and reptile species in need of rescue. In 2005, the Amphibian Conservation Action Plan (ACAP) (Gascon *et al.* 2007) called for ARTs (including biobanking) to be implemented as an essential and primary tool for amphibian conservation. In a move to open, diversify and make this an equitable and inclusive field, the IUCN SSC Amphibian Specialist Group's Assisted Reproductive Technologies and Biobanking Working Group was established to unite specialists of the field with colleagues from other disciplines working on amphibians and reptiles worldwide. In this special edition of *Reproduction, Fertility and Development*, we highlight the global diversity of colleagues working in this field as well as the advances that we, as a community, are making in continuing to develop ARTs and cryopreservation protocols for species conservation. Further, this edition also aims to highlight the financial and logistical advantages of the application of ARTs, the way ARTs can assist other more widely used conservation tools, and the application of reproductive technologies to health and welfare monitoring. This first volume of the special edition showcases new and original research in hormone induction, cryopreservation, reproductive anatomy and, the application of new technologies to the monitoring of reproductive health in a range of amphibian and reptile species. This volume will be closely followed by a second later this year and I, along with my guest co-editors, Gina Della Togna, Ruth Marcec, John Clulow and Simon Clulow, look forward to discussing, in more detail, the great contribution that the participating authors have made to the amphibian and reptile field. I would also like to thank the team at RFD for their amazing support and guidance through this venture in particular, Leona Campitelli, Graeme Martin and Jenny Foster. Finally, but most importantly, we would like to acknowledge the traditional custodians of the lands on which we live and work. We acknowledge their union under common language and strong ties of kinship and ancestry and pay our respects to the Elders, past present and emerging.

Reference

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