

**Crocodile Specialist Group Steering Committee Meeting**  
**Universidad Nacional del Litoral, Santa Fe, Argentina**  
(6 May 2018)

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**Veterinary Science**

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**Report on Activities - May 2016-May 2018**

*“The CSG Veterinary Science Group provides a platform for the exchange of and access to crocodile specific veterinary knowledge and advises the CSG on veterinary matters relating to crocodilian conservation and farming. The CSG Veterinary Science Group contributes to advancing crocodile veterinary science and medicine. The CSG Veterinary Science Group provides support to animals under human care, including farms, zoological or educational institutions, Biologists and researchers, Non-governmental and Government organizations investigating in-situ mortalities and population health status”*

**1. Continuation of the Fritz Huchzermeyer Veterinary Science Student Research Assistance Scheme.**  
Recipients of assistance of \$US1000 in the previous two years are:

- a. Arvin Jet Marcida (Sep. 2016). Endoparasitic helminths in *Crocodylus mindorensis* and *C. porosus* from crocodile farms in the Phillipines.
- b. Jinhong Zhao (Feb. 2017). Survey on the parasites and evaluate the pathopoiesis of parasites to Chinese alligators.
- c. Sierra McLinn (Apr. 2017). Investigating the life cycle of the deadliest crocodilian parasite in North America.
- d. Ethan Woodyard (Sep. 2017). Molecular characterization of parasites infecting *Alligator mississippiensis*.
- e. Kathryn Wayne (Jan. 2018). Establishing crocodilian genital differentiation: new approaches investigating hatchling *Alligator mississippiensis* sexual dimorphisms.

**2. CSG Veterinary Science group mailing list.** The veterinary list continues to be a resource that attracted interesting questions from a number of veterinarians and researchers and other croc professionals. The list includes: Annabelle Olsson (boongarry@bigpond.net.au); Brian Stacy (stacyb@vetmed.ufl.edu); Cathy Shilton (Cathy.Shilton@nt.gov.au); Csaba Geczy (sbcasaba@gmail.com); Danny Govender (dannyG@sanparks.org); David Huchzermeyer (aquavet@telkomsa.net, huchzermeyer@telkomsa.net); Gowri Mallapur (Gowri@madrascrocodilebank.org, gowrimallapur@gmail.com); Jan Myburgh (Jan.myburgh@up.ac.za); Javier Nevarez (JNevarez@vetmed.lsu.edu); JE and ME Cooper (ngagi2@gmail.com); Luis Bassetti (luisbassetti@terra.com.br, luis@criatoriocaiman.com.br); Luis Sigler (luis@dwazoo.com); Manuel Muniz (crocodylus@prodigy.net.mx, moreletii@prodigy.net.mx); Pablo Siroski (cocokaima@hotmail.com); Paolo Martelli (paulusvet@yahoo.com, paolo.martelli@oceanpark.com.hk); Sally Isberg (sally@crocfarmsnt.com); Samuel Martin (s.martin@lafermeauxcrocodiles.com); Samuel Seashole (crodoctor@yahoo.com); Silke Pfitzer (vet@chuiwildlife.co.za); Terry Cullen (tcullen9@gmail.com).

**3. Workshops at the CSG meetings:**

- a. A full day workshop was held at the old elephant processing plant in Kruger National Park. The first component of the workshop in the morning was composed of Powerpoint presentations, including an overview of wildlife conservation approach in Kruger NP, and introductions to the subjects of the hands-on component in the afternoon, which included anaesthesia and pain management, sample collection, ultrasound health assessment, tagging/markings and necropsy. The workshop was extremely well attended and assessment comments afterwards generally positive. Some comments were that it was difficult to understand all the speakers due to a combination of accents and poor sound quality in the room.
- b. A workshop on HCC, population management, clinical techniques and restraint was carried out in Medan, Sumatra, Indonesia. The Veterinary Science thematic group provided instrumental instigation and support to the TTF and the University of Aceh. Full report can be found in the TTF pages.

**4. Other**

- a. Gowri Mallapur was appointed CSG Veterinary Science Group Secretary in May 2016, which has resulted in better organization and response time.
- b. A number of the Veterinary Science subgroup members have contributed to reviewing the OIE document on the humane killing of reptiles including Javier Nevarez and Paolo Martelli.

- c. Official representation of CSG Veterinary Science group within CSG delegation at World Herpetological Congress in China and study trip on Chinese alligator (see also report by Charlie Manolis *et al.* on CSG website).
  - d. E-mail survey of most important conditions of farmed crocodilians repeated following Skukuza CSG 2016. Results collated, and final report provided to CSG Chair, via the Secretary in September 2017.
5. Website updates ([www.iuencsg.org/pages/Resources-provided-by-the-CSG-Veterinary-Science-Group.html](http://www.iuencsg.org/pages/Resources-provided-by-the-CSG-Veterinary-Science-Group.html))

Updates to Veterinary Science resources are highlighted in **red text** within the list of existing resources on the site:

1. Step by Step Guide and Reporting Form for the Necropsy of Crocodilians (English) (prepared by Dr. Paolo Martelli and Dr. Fritz Huchzermeyer)
  - 1.1. Guia Paso por Paso y Formato de Reporte para la Necropsia de Crocodilianos (Español) (Translated by Dr. Luis Sigler)
  - 1.2. Manuel Operatoire et Formulaire pour la Realisation d'Autopsies de Crocodiliens (Français) (Translated by Dr. Samuel Martin)
2. Expertise register (updated June 2017)
3. Literature relating to crocodilian immobilization (compiled by Dr. Annabelle Olsson)
4. Manual for Parasite Collection and Preservation (Dr. Marissa Tellez)
5. A Checklist of Host-Parasite Interactions of the Order Crocodylia (Dr. Marisa Tellez; University of California Press, Berkeley). Dr. Tellez has also provided a Crocodile-Parasite Data Sheet (Excel format)
6. [Link to the Histopathology site \(Spectrum WebViewer\), added an index](#)
7. Crocodilian Laboratory Diagnostics and Necropsy Reference List (compiled by Dr. Cathy Shilton)
8. Crocodilian Clinical Laboratory Diagnostics Overview: Haematology and Clinical Biochemistry (Dr. Cathy Shilton)
9. Crocodile Necropsy: Procedure and Appearance of Tissues (Saltwater Crocodile *Crocodylus porosus*) (Dr. Cathy Shilton) added photos
10. Crocodile Necropsy: Examples of Lesions in Farmed Saltwater (*Crocodylus porosus*) and Freshwater (*C. johnstoni*) Crocodiles (Dr. Cathy Shilton)
11. Euthanasia/killing method for crocodilians
12. Parasite drawings
13. Diagnosing and treating disease in live crocodiles (presentation delivered by Dr. Paolo Martelli at Cambodia CSG, 2015, with added Table of Contents.
14. Necropsy recognition of disease in hatchlings (presentation delivered by Dr. Cathy Shilton at Cambodia CSG, 2015, with added Table of Contents.
15. Biosecurity, an introduction (presentation delivered by Dr. Cathy Shilton at Cambodia CSG, 2015).
16. [Sampling Tips for Various Types of Ancillary Necropsy Testing \(from CSG Veterinary Workshop, 2016\)](#)
17. [Immobilization of Crocodiles \(Dr. Silke Pfitzer, Dr. Samuel Martin and Dr. Paolo Martelli\) \(from CSG Veterinary Workshop, 2016\)](#)
18. [Necropsy Basics and Taking the Best Samples \(Dr. Cathy Shilton\) \(from CSG Veterinary Workshop, 2016\).](#)
19. [Live Blood and Tissue Sampling Techniques \(from CSG Veterinary Workshop, 2016\).](#)
20. [Ultrasound - a Useful Tool for Health Assessment in Crocodilians \(Dr. Paolo Martelli and Dr. Brian Chin Wing Kot\) \(from CSG Veterinary Workshop, 2016\).](#)
21. [Transmitter Attachment and Monitoring - Appropriate Techniques and Technologies \(Dr. Xander Combrink, Dr. Jonathan Warner and Dr. Danie Pienaar\) \(from CSG Veterinary Workshop, 2016\).](#)
22. [Marking: Tags, Natural Tail Marks and Scute Clipping \(Dr. Xander Combrink, Dr. Jonathan Warner and Dr. Danie Pienaar\) \(from CSG Veterinary Workshop, 2016\).](#)

**Prepared by:** Paolo Martelli, Cathy Shilton and Gowri Mallapur

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