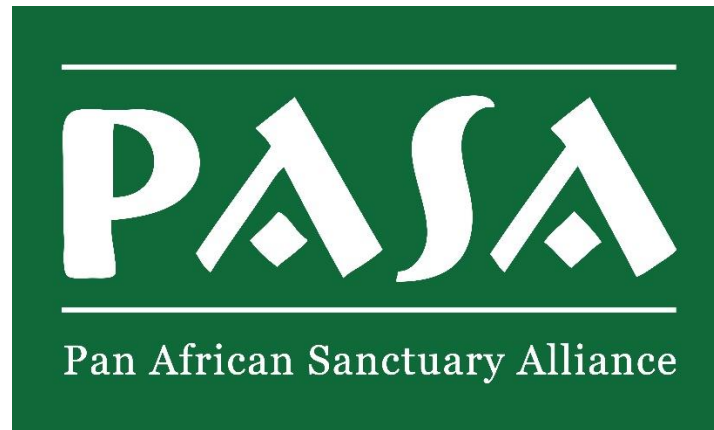


Pan African Sanctuary Alliance



Veterinary Workshop

Yaoundé, Cameroon

March 25 to 29, 2019



Summary Report

The Pan African Sanctuary Alliance (PASA), the largest association of wildlife centers in Africa, includes 23 organizations in 13 African countries. Our members are securing a future for Africa's primates by fighting the illegal wildlife trade, rescuing, rehabilitating, and reintroducing orphans of the trade, protecting wild primate populations and their habitats, and educating and empowering communities.

PASA strengthens our member organizations; together, we are building a global movement to save Africa's great apes and monkeys. The combination of PASA's worldwide network and our members' local expertise uniquely positions the Alliance to make a significant, sustained impact.



Veterinary staff of African wildlife centers and global specialists gathered for PASA's four-day workshop in Cameroon.

The bushmeat crisis, the illegal wildlife trade, and habitat degradation are increasing rapidly. Humanity's closest relatives are nearer to extinction than ever before. **There is an urgent need to build the capacity of the organizations on the frontlines of the movement to protect African primates.**

To address this need, PASA partnered with leaders in education for primate veterinarians to conduct a workshop to build the veterinary capacity of sanctuaries and wildlife rescue and rehabilitation centers. This workshop, which took place in Yaoundé, Cameroon on March 25-29, 2019, was hosted by Ape Action Africa, home to chimpanzees, gorillas, mandrills, baboons, guenons, mangabeys, and other species of monkeys.

To achieve the workshop's aims, PASA assembled a committee to plan and conduct the workshop. **The committee consists of wildlife center veterinarians and leaders in primate health:**

- Thalita Calvi, Veterinarian of Chimfunshi Wildlife Orphanage
- Mike Cranfield, Africa Director Emeritus & Chief Veterinary Officer of Gorilla Doctors and Veterinarian at UC Davis Karen C. Drayer Wildlife Health Center
- Luis Flores Giron, Veterinary Advisor of Lwiro Primate Rehabilitation Center
- George Omondi Paul, researcher at the University of Minnesota and former Head Veterinarian at Sweetwaters Chimpanzee Sanctuary
- Joshua Rukundo, Acting Executive Director of Chimpanzee Trust (also known as Ngamba Island Chimpanzee Sanctuary)
- Dominic Travis, Associate Professor of Veterinary Population Medicine, University of Minnesota College of Veterinary Medicine
- Gregg Tully, Executive Director of PASA
- Steve Unwin, Lecturer at Liverpool University, OVAG program lead, wildlife health consultant for Wildlife Impact, and former Veterinary Officer at Chester Zoo



Workshop attendees conduct a chimpanzee health exam.

*“It’s really nice to see the community coming together”
- Mike Cranfield*

The committee collaboratively developed an agenda which combined active participation, practical skills, and presentations by specialists. Each representative of a primate center gave a case presentation followed by time for questions and discussion, in the standard format of veterinary conferences worldwide. This developed their

professional communication skills in addition to providing opportunities to receive advice about their current challenges. In several sessions, the workshop participants were actively involved in setting the directions of future PASA veterinary training.

Objectives

The objectives of the Veterinary Workshop were to:

- Increase wildlife centers' collaboration with veterinarians and researchers worldwide.
- Cultivate a stronger global primate veterinary community, particularly to facilitate collaboration and provide support for less-experienced wildlife center vets.
- Build the capacity of primate centers by professionalizing their veterinary treatment and management of animal health.
- Empower wildlife center vets to work to international standards.
- Instill a more evidence-based approach to decision-making.

*"I think it has been
the best vet
workshop I have
ever attended"*
- Ainare Idoiaga



Workshop attendees sort through donated veterinary supplies.

Upon completion of the workshop, participants were able to conduct the following:

- More effectively monitor health of primates in wildlife center and control infectious diseases (particularly tuberculosis).
- Conduct disease risk analysis.
- Diagnose and treat parasites.
- Reach out to a global network of primate veterinarians for collaboration and support.
- Confidently and professionally communicate health science to diverse audiences through presentations of case studies.
- More effectively manage anesthesia, contraception, infant care, nutrition, and treatment of common illnesses and injuries for primates in wildlife centers.

Furthermore, the workshop established a foundation for the **PASA One Health Initiative**, a multifaceted veterinary education program which will build the capacity of primate centers across Africa. These centers stand at the interface between human and animal health and are uniquely positioned as hubs of research on areas including zoonoses and other infectious diseases. The program will include mentorships, on-site training, e-learning, and workshops about topics such as preventative healthcare, biosecurity, and diagnostics.

Workshop Highlights

Susannah Thorpe, Jackie Chappell, and Johanna Neufuss of the University of Birmingham gave a presentation about the Enclosure Design Tool, an app they recently developed which enables an evidence-based approach to optimally meet the behavioral needs of great apes living in

enclosures. An important use of the tool is to improve the success rates of reintroductions by supporting more natural behaviors in enclosures.

After extensively testing the tool, including at Ape Action Africa, they are ready to expand its implementation to primate care facilities worldwide. The PASA veterinary community was impressed with the Enclosure Design Tool and a number of the wildlife center veterinary personnel are now in discussions with the Birmingham team about implementing it at their centers.

“[It was a] really good workshop, clear and logical, with amazing contacts and direct discussion with experts.” - Workshop Attendee

As wildlife centers are sentinels at the interface of human health and wildlife health, it is essential that their veterinary personnel can identify and treat infectious diseases. George Omondi Paul gave a highly informative presentation about tuberculosis, including advantages and limitations of the diverse TB tests and approaches to treatment.



Workshop attendees practice using personal protective equipment.

During the workshop, participants focused on the roles of African wildlife centers in **disease surveillance and outbreaks**, to secure the health of primates that will be released to the wild as well as in wild populations.

Ariane Deux and Tobias Graessle of Fabian Leendertz’s lab at the Robert Koch Institute and Steve Unwin walked the participants through safe protocols for conducting necropsies. As primates are a major source of emerging infectious diseases for humans, it is essential to ensure that vets are not at risk of exposure. Everyone had an opportunity to be involved in putting on full personal protective equipment which minimizes the risk of exposure to disease while safely handling infected animals and conducting necropsies.

“One of the best vet workshops I’ve ever been to!” - Workshop Attendee

Workshop participants traveled to Ape Action Africa where they participated in health exams of the center’s chimpanzees, led by Babila Tafon, Thalita Calvi, and Joshua Rukundo. They discussed procedures for anesthesia and exams, minimum samples to collect, and procedures for collecting and archiving samples. More- and less-experienced participants worked collaboratively to ensure everyone had opportunities for participatory learning. They also toured the wildlife center and learned about Ape Action Africa’s programs and facilities.

Rebeca Atencia introduced a chimpanzee body condition score (BCS) and a chimpanzee welfare index which provide evidence-based methods to assess the well-being of primates in wildlife centers. Aimee Drane gave a detailed presentation about cardiac disease management, including techniques for assessment, the work of the International Primate Heart Project, and recent research. This was followed by a comprehensive presentation by Yedra Feltrer about contraception and reproductive pathology, in which she covered benefits and disadvantages of a wide range of means of contraception.

Outcomes

It was critical that the outcomes were driven by the wildlife center personnel, rather than specialists from abroad. **Major outcomes of the workshop included:**



Katja Koepfel works with workshop attendees at Ape Action Africa to perform chimpanzee health checks.

- The appointment of a new PASA Veterinary Coordinator and a new PASA Animal Health Advisory Committee, which evolved from the workshop planning committee. This committee added new members consisting of wildlife center veterinary staff and other members of the PASA veterinary family. Joshua Rukundo, acting Executive Director of Chimpanzee Trust (also known as Ngamba Island Chimpanzee Sanctuary), agreed to be the Veterinary Coordinator. The roles of the committee include sharing information among the veterinary personnel of PASA member wildlife centers, making connections with specialists who can provide guidance when needed, revising the

PASA veterinary manual, writing procedures which can be standardized across PASA members, assisting in the development of an online learning platform, and helping to plan future veterinary workshops.

- Formation of new, valuable relationships between wildlife centers, establishing an outreach network for collaborative problem solving.
- To use **telemedicine** to strengthen this community, there was an agreement to revitalize the PASA Animal Health Google Group, as well as to create a new WhatsApp group specifically for veterinary personnel at PASA member wildlife centers.
- A plan to collaboratively develop procedures that can be standardized across wildlife centers.
- Collectively acknowledging that tuberculosis is an important threat to primates in wildlife centers, which can be addressed more effectively by sharing data and collaborating with key partners.

*“Fantastic,
collaborative
atmosphere”
- Workshop Attendee*

Evaluation

At the completion of the workshop, all participants completed an evaluation, including quantitative and qualitative questions. This was followed by a facilitated discussion about how future veterinary workshops can be improved.

The quantitative portion of the evaluation form lists eight statements about the impact of the workshop, for example “I learned skills that will improve the veterinary treatment I provide” and “I can more effectively manage animal health in a sanctuary,” and asks participants to give each a score from 1 (“I strongly disagree”) to 5 (“I strongly agree”). Average scores ranged from **4.0 to 4.9**, indicating that most participants agreed or strongly agreed with all statements. The statements with the highest average scores are “I can collaborate more with veterinarians and others worldwide” and “I am more connected to the primate veterinary community.”

In the qualitative portion of the evaluation form, participants indicated that the most useful sessions were those about tuberculosis, parasitology, and the case presentations by wildlife center veterinary staff, although all sessions were mentioned by some participants as the most useful to them.

“I wanted to thank you all for this great workshop. It has been a pleasure and an honor to be there with you!” - Yedra Feltrer

Participants expressed enthusiasm for learning more about a wide range of topics. The most popular were nutrition, including species-specific nutrition; parasitology, particularly methods of identification; and anesthesia protocols. There was also support for more practical sessions in future veterinary workshops. Many people said the case presentations were valuable for letting the group understand the priority challenges that wildlife center vets are facing, in addition to providing opportunities for developing professional communication skills.

Many people commented that the workshop was very well-organized. Additionally, they were impressed with the positive, collaborative atmosphere of the PASA veterinary community. This workshop involved much more discussion and interaction than previous workshops, which was attributed to the case presentations, more open discussions, and fewer traditional lectures. There was overwhelming enthusiasm for more training opportunities for wildlife center veterinary personnel.



Attendees listen to a workshop presentation.

The Future of PASA Veterinary Education

Several sessions throughout the 2019 PASA Veterinary Workshop provided opportunities for wildlife center veterinary staff to discuss their priority needs for training. This established a foundation on which PASA, the PASA Veterinary Coordinator, and the PASA Animal Health Advisory Committee will develop future training opportunities. Furthermore, they will work to standardize procedures across wildlife centers. This will help all centers to share their data as well as to use evidence-based best practices drawn from a wide body of knowledge, particularly in priority areas such as:

*“It was an amazing conference that really helped”
- Emeline Chanove*

- Tuberculosis (testing, interpretation of test results, and treatment)
- Species-specific nutrition
- Assessing welfare using the Enclosure Design Tool, body condition score (BCS), and chimpanzee welfare index

Future veterinary education will focus on tuberculosis and nutrition, areas in which there was abundant interest.

There was also widespread enthusiasm among wildlife center personnel to standardize the collection of data about animals at PASA member wildlife centers using a FileMaker database which most centers already use. This will provide consistent data spanning all of Africa that PASA members are uniquely positioned to collect and will facilitate research on confiscations, trafficking routes, veterinary care, behavior, and reintroductions.

Many participants expressed that updating the PASA Primate Veterinary Healthcare Manual is a priority, including adding procedures that can be standardized across wildlife centers.

The PASA family looks forward to the next PASA Veterinary Workshop at Sweetwaters Chimpanzee Sanctuary in Kenya in 2021.

In Gratitude of Our Supporters

The Pan African Sanctuary Alliance would like to thank the **very generous organizations that made the 2019 Veterinary Workshop a pivotal and valued event for Africa’s primate health community**. The workshop would not have been possible without their support. We look forward to holding the next Veterinary Workshop in 2021.

Thank you to the **Arcus Foundation**, the **International Fund for Animal Welfare (IFAW)**, the **Robert Koch Institut**, the **World Association of Zoos and Aquariums (WAZA)**, and **Zoo de Barcelona** for making the 2019 Veterinary Workshop possible. We would also like to thank **International Veterinary Care**, **Lion Country Safari**, **Oraltec**, **Project VETS**, the **Jacksonville Zoo**, and the **Worldwide Veterinary Service** for kindly donating veterinary supplies valued at several thousand dollars for the PASA member wildlife centers.

The 2019 PASA Veterinary Workshop is sponsored by generous donations from:



Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages

Workshop Participants

Aimee Drane	Cardiff Metropolitan University
Ainare Idoiaga	Translator
Akih Emmanuel	Limbe Wildlife Centre
Andrea Pizarro	Tacugama Chimpanzee Sanctuary
Ariane Deux	Robert Koch Institute
Babila Tafon	Ape Action Africa
Balon Touoyim Ghislain	Mvog Betsi Zoo
Bandi Cyrille Prudence	Mvog Betsi Zoo
Dominic Travis	University of Minnesota
Emeline Chanove	Chimpanzee Conservation Center
George Omondi Paul	University of Minnesota
Gregg Tully	PASA
Harrison Fon Mafor	Ape Action Africa
Immaculate Asonglefac	Sanaga-Yong Rescue Center
Jackie Chappell	Enclosure Instructor
Jana Swart	Chimpanzee Eden
Janeserah Mukundi	Colobus Conservation
Jean Claude Binemo	J.A.C.K. Sanctuary
Johanna Neufuss	Enclosure Instructor
Joshua Rukundo	Ngamba Island
Katja Koeppel	Chimpanzee Eden
Luis Flores	Lwiro, Gorilla Doctors
Mike Cranfield	Wildlife Health Center, UC Davis
Nicholas Bachand	Projet Gorille Fernan-Vaz
Nicholas Banadzem	Sanaga-Yong Rescue Center
Olutoye Adegboye	Chimpanzee Rehabilitation Project
Pauline Grentzinger	Parc de la Lekedi
Peggy Motsch	Limbe Wildlife Centre
Rachel Hogan	Ape Action Africa
Raphaël Belais	Lola Ya Bonobo
Rebeca Atencia	Tchimpounga
Roxane Couttenier	J.A.C.K. Sanctuary

Sheri Speede
Steve Unwin
Susannah Thorpe
Tamara de Juana
Thalita Calvi
Tobias Graessle
Victoria Curr Smith
Wamba Gerry
Yedra Feltrer

Sanaga-Yong Rescue Center
University of Liverpool
Enclosure Instructor
Ape Action Africa
Chimfunshi Wildlife Orphanage
Robert Koch Institute
Vervet Monkey Foundation
Ape Action Africa
Contraception specialist

PASA Veterinary Workshop
March 25 to 29, 2019
Agenda

Tou'ngou Hotel, BP:3626, Yaounde-Carrefour Etoa-Meki, Yaounde, Cameroon. Tel: (237) 222 20 10 25

For information, please contact: Gregg Tully, WhatsApp: +1 971 712 8360, gregg@pasa.org

Daily: breakfast at 0700 – 0800 and dinner at 1900 - 2000

SUNDAY, MARCH 24

1900 Dinner and social event at Tou'ngou Hotel

2100 Social event at Tou'ngou Hotel

MONDAY, MARCH 25

0800 - 0830 Welcome (Ape Action Africa and Gregg Tully)

0830 - 0930 Introductions by Participants (60 Seconds Each)

0930 - 1030 Icebreaker Activity (Steve Unwin)

1030 - 1100 Break

1100 - 1130 History and Future of PASA Veterinary Education (George Omondi Paul, Steve Unwin)

1130 - 1230 Role of Veterinarians in Sanctuary Management (Moderator: Gregg Tully)

Panelists: Joshua Rukundo, Sheri Speede, Thalita Calvi, Babila Tafon

1230 - 1330 Lunch

1330 - 1430 Case Presentations (Moderator: Joshua Rukundo)

- The management of a large open surgical wound in a 2 year old vervet using a combined pharmaceutical and herbal treatment plan (Victoria Curr Smith)

- Invasion of parasitic cysts in chimps - What to do? (Pauline Grentzinger)

1430 – 1600 Risk Based Health Monitoring (Dominic Travis, Steve Unwin, Mike Cranfield)

1600 – 1630 Break

1630 – 1730 Individual and Group Record Keeping (Thalita Calvi)

TUESDAY, MARCH 26 (GROUP A) & WEDNESDAY, MARCH 27 (GROUP B) – At Ape Action Africa

0800 - 0930 Drive to Ape Action Africa (1 - 1.5 hours)

0930 - 1230 Health checks, standard minimum samples to collect, the basics of proper sample collection and archiving. (Babila Tafon, Thalita Calvi, Joshua Rukundo)

1230 - 1330 Lunch

1330 - 1530 Debrief of health checks, tour of sanctuary, and additional time as needed (Babila Tafon, Thalita Calvi, Joshua Rukundo)

1530 - 1730 Group Management: Behavioral Welfare (Susannah Thorpe, Jackie Chappell, Johanna Neufuss)

1730 - 1900 Drive to Yaounde (1 - 1.5 hours)

TUESDAY, MARCH 26 (GROUP B) & WEDNESDAY, MARCH 27 (GROUP A)

- 0800 - 1200 Safe necropsy protocols and techniques, the use of PPE, and basics of proper sample collection and archiving. (Ariane Deux, Tobias Graessle, Steve Unwin)
- 1200 - 1300 Lunch
- 1300 - 1430 Cardiac Disease Management (Aimee Drane)
- 1430 - 1500 Break
- 1500 - 1630 Contraception and Reproductive Pathology (Yedra Feltrer)
- 1630 - 1730 Time for additional Discussion and Q&A (Aimee Drane, Yedra Feltrer)

THURSDAY, MARCH 28

- 0800 - 0900 Anesthetic Protocols: How do we vary anesthesia by species and procedure? (Luis Flores)
- 0900 - 1030 Case Presentations (Moderator: George Omondi Paul)
- Outbreak of Tuberculosis in Chimpanzee in Chimp Eden (Katja Koeppel, Jana Swart)
 - A tuberculosis study case, lymph nodes form, in a juvenile chimpanzee (Emeline Chanove)
 - Tacugama Chimpanzee Sanctuary, mystery disease investigation: latest news (Andrea Pizarro)
 - Uncovering Why An Adult Male Gorilla Fails To Gain Weight Despite Food Supplementation (Nick Bachand)
- 1030 - 1100 Break
- 1100 - 1200 Group Management: Care of Infants (Rebeca Atencia)
- 1200 - 1300 Infectious Disease Control - TB (George Omondi Paul)
- 1300 - 1400 Lunch
- 1400 - 1530 Case Presentations (Moderator: Andrea Pizarro)
- What next for Valentine? Euthanasia, hard release or life in captivity? (Janerarah Mukundi)
 - Wild Vervet Aggression Management (Victoria Curr Smith)
- 1530 - 1600 Break
- 1600 - 1630 Training Needs I: Feedback on PASA Survey (George Omondi Paul)
- 1630 - 1730 Group Management: Nutrition (Dominic Travis and Ainare Idoiaga)

FRIDAY, MARCH 29

- 0800 - 0900 Identifying and treating parasites in a sanctuary setting (Steve Unwin)
- 0900 - 1030 Case Presentations (Moderator: Luis Flores)
- Acute renal failure. Causes, management, prevention (Joshua Rukundo)
 - Congestive heart failure in a Chimpanzee (Rebeca Atencia)
 - Floppy Infants - To pull or not to pull? Intensive Respiratory Disease Management- Case Series (Thalita Calvi)
 - Case Study on Monkey Pox Outbreak at Ape Action Africa/Mefou primate park (Babila Tafon)
- 1030 - 1100 Break
- 1100 - 1200 Sanctuaries and Disease Surveillance: the Big Picture (Mike Cranfield)
- 1200 - 1300 Training Needs II: What do Sanctuaries want/need regarding Veterinary Education (Dominic Travis, George Omondi Paul)
- 1300 - 1400 Lunch
- 1400 - 1500 Case Presentations (Moderator: Rebeca Atencia)
- The problem of surgical treatment of Tibia fracture in chimpanzees: the case of Bapu at JACK Sanctuary (Jean Claude Binemo)
 - Traumatic Brain injury (TBI) in a vervet monkey (Olutoye Adegboye)
 - Onsite Culture and Sensitivity, to Fight Bacterial Resistance to Antibiotics (Nicholas Banadzem)

- 1500 - 1600 Training Needs III: Strategy for Ongoing Veterinary Education (Steve Unwin, Dominic Travis, George Omondi Paul)
- 1600 - 1630 Break
- 1630 - 1730 Talk by representative of Minister of Forestry and Fauna
Evaluation, Participant Feedback, Closing Remarks (Gregg Tully)

