

DRILL **INFO**

Issue 31, September 2021

Dear members, dear friends of the drill

Worrying disease outbreak among the Drills at Limbe Wildlife Center (LWC), Cameroon

A veterinary report by Dr. Heike Weber



deceased: "Irene"

photo: Peggy Motsch

At the end of February we received alarming news from the Limbe Wildlife Center (LWC)

in Cameroon. Several drills had become infected with an as yet undetermined disease. Eight animals died.

On February 19th, when the keepers arrived at the drill enclosure, they found two animals dead (N.1: Chaussiko and No.2: Irene). Both were taken to pathological examination.

A third animal (No.3: QT) was noticed at the same time by difficult breathing in the form of increased respiratory frequency with mouth breathing. At the same time, one adult female (No.4: Jabari) was found to have mucous (slimy) discharge from the nostrils. However, the animal was otherwise active and inconspicuous.

The condition of No.3 (QT) deteriorated visibly. He was salivating extremely, fluid was dripping from his mouth, and he showed coordination problems while walking. As a result, he was

caught out of the group and taken to the infirmary to receive intensive care.

Such intensive medical treatment naturally requires anesthesia, which is always associated with risks, especially in the case of severely ill animals. However, in the case of severely ill wild animals that have stopped eating, there is almost no chance of providing sufficiently intensive treatment

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without anesthesia. Under anesthesia, venous access could be established and infusion therapy started for circulatory and metabolic support. This prevents the animals from "drying out". In addition, glucose is administered as a source of energy and other drugs are transported to all regions of the body via the bloodstream - much faster, incidentally, than if they were injected under the skin or into the muscles. In total, drugs to improve breathing (nasal drops), broad-acting antibiotics, pain and anti-inflammatory drugs, atropine to prevent salivation, and various vitamin preparations to support the immune system were administered.

Despite the quick and intensive intervention, the condition of QT (No.3) deteriorated visibly and he died the same afternoon.

At this point it was already clear that it must be a very serious and potentially dangerous happening also for humans.

Hygiene measures always play a major role in dealing with monkeys anyway, but they were tightened up once again. The animal keepers and also the medical staff were divided into groups, so that only drill keeper Alvin Muma wearing special clothing was allowed to enter the drill enclosure for feeding and cleaning. He was, of course, not allowed to enter any other areas of the Limbe Wildlife Center, let alone care for other species.

A team consisting of the two veterinary assistants Akih Emmanuel and Tana Ossomba as well as the quarantine head nurse Killi Matute worked solely in the infirmary. They worked under the instruction and observation of the head veterinarian, Dr. John Kyiang, as well as the LWC management team, who themselves were not allowed to have any contact with the sick drills. This was necessary to safely prevent a possible infection. After all, these are the responsible decision-makers who are necessary for the maintenance of the entire operation and must not be unavailable under any circumstances.

The following day (20/02), another drill was seen in the enclosure at 7:00 am with the same worrisome symptoms. This fifth case was a young male (No.5: Akon), which was also caught and taken to the infirmary. However, by the time he arrived there at 8:00 o'clock, he had already died.

An hour later (9:00 o'clock) another drill (No.6 Alex) was noticed in the enclosure with symptoms of illness and at 11:00 o'clock another one (No.7: Jube). Both were taken to the infirmary for intensive medical care.

Around 13:00 o'clock two more animals were caught from the enclosure and brought to the infirmary. Once case No. 4 (Jabari), which was still active the day before and until then had shown "only" nasal discharge, and another animal (No.8: Najeme).

This 2nd day (20.02.), the balance looked like: 4 animals had died and 4 animals were cared for intensively in the infirmary.



deceased: "Queue Tordu" (QT)

photo: Peggy Motsch

This was also the day when I received a call for help from Peggy Motsch, manager of the Limbe Wildlife Center in Cameroon. The email outlined the course of events just as described and went not only to me, but of course as well to Peter Jenkins and Liza Gadsby and also to Ainare Idioaga, the former Spanish veterinarian of the Pandrillus projects. We were all deeply shocked and frightened by this severe and, in four cases, already fatal course of the disease. Together we

discussed options in terms of quarantine measures, treatment regimens, root cause research,...etc. However, it is difficult to judge the situation on the ground from a distance. Especially for me, since it has been decades since I was in Limbe. Since then, many things have changed, especially with regard to available medicines or even walking routes and quarantine facilities. While Peter jumped into the discussion about the hygiene quarantine concept, Ainare recommended contacts to PASA and I emailed the latest EAZWV (European Association of Zoo Veterinarians) literature on COV-19. Because corona infection was at the top of our differential diagnosis list, that is the list of possible causes - among various other diseases, of course. But in times of this worldwide pandemic and with the knowledge that in some zoos animals (especially monkeys and cats of prey, but also e.g. minks in farms) have already fallen ill, this was of course our "worst case scenario" according to which one should act. There was not much we could do from a distance. But just the confirmation that the measures taken were correct, that nothing was overlooked, that there were no completely different strategy proposals and that there are people who think along with you and support you, was already very helpful for Peggy and the entire LWC team in this crisis.



deceased: "Akon"

photo: Peggy Motsch

Absolute silence was agreed upon, before first results would be there and the LWC would also have the possibility to talk to the government. It should not be forgotten that such a disease outbreak has a medical significance as well as a political one!

Of course, the LWC had the greatest veterinary support from their own veterinarian on site: Dr. John Kyiang. In addition, they were advised on therapies, tests and pathological examinations by veterinarian Luis Flores

from the Lwiro Sanctuary in the Democratic Republic of Congo.

In the following two days, two other animals fell ill No. 9 (Chipo) on 21.2. and No.10 (Nnoko) on 22.2.

Finally 2 animals (No.8: Najeme and No.10: Nnoko) could be saved by the intensive medical care in the infirmary. Their treatment lasted for 10 days each and required a lot of effort, both in terms of staff and medication.

Fortunately, there have been no further cases of sick drills to date.

Nevertheless, quarantine and increased hygiene measures will be maintained until April 6. This mainly concerns working in teams as well as isolating the drill enclosure from the rest of the center.

Since the Limbe Wildlife Center has already been closed to visitors since April 2020 anyway as a result of the humane Corona pandemic, no further measures needed to be taken in this regard to protect the public.

So what is the cause of these disease symptoms that hit the drill group like a hurricane in four days and ultimately led to the death of eight animals? So far, all we can say is that the rapid corona tests carried out were all negative. All further test results are still pending.

This also shows the difference between Africa and Europe. If such an outbreak were to occur in a European zoo, one would have completely different diagnostic possibilities and much faster results. And this applies not only to the veterinary field, but - even more important in these times -

unfortunately also to the human field. The differences in medical diagnostics and care are immense. We must not forget that.

With our claim "...more than species protection" we always try to keep this in mind. Packages with protective masks for the people are on their way to our two partner projects in Africa (LWC Cameroon and Pandrillus Nigeria) - see extra report.



deceased: "Chipso"

photo: Peggy Motsch

And we urgently ask again for donations for the LWC, since here now almost all medicine supplies were used up and urgently money for the still outstanding tests and analyses is needed!

It is necessary to find out what the cause is behind this seemingly epidemic-like occurrence in order to be prepared for further cases if necessary and also to know how to possibly act even

more intensively and at an earlier stage in terms of employee protection.

In addition, there has been no visitor revenue since April 2020, when the LWC had to close due to the pandemic situation. Paying employees is becoming increasingly difficult.

And the feeding of the animals must actually be even more balanced and richer in vitamins than it already is, in order to strengthen their immune system!

**Therefore our big request: Donate now for the animals and the people
at the Limbe Wildlife Center!**

Update

Of course, blood samples were taken from the diseased animals for hematological and biochemical examinations and COVID rapid tests were performed.

For virological and bacteriological examinations, either swab samples, fecal samples or tissue samples from dead animals are needed. Of course, the deceased animals were dissected and examined.

Despite all these sampling and testing, no pathogen could be found that could have causally triggered this fatal rapid progression.

This problem is frequently encountered in individual deaths. Even experienced pathologists who can take every conceivable sample sometimes fail to find specific causes of death.

With 8 deaths in a short period of time, it is rather unusual that nothing can be found. However, such an acute rapid course of a disease resulting in death often does not lead to pronounced clear changes, so that it is difficult for pathologists to find the cause. And in a country like Cameroon, the examination possibilities are certainly limited and not comparable with those in Germany. It is

frustrating, but even all examinations that were carried out afterwards could not clarify which disease / which pathogens were behind this drama or were responsible for it. Fortunately, the spook was over quickly and no more drills have fallen ill since February 22, 2021.

The whole thing will probably remain a mystery forever.

News from Nigeria

Since 2013 Zachary (Zack) Schwenneker is at the Drill Ranch in Nigeria. First some years as a volunteer, since 2018 as a manager in the Afi Mountains.

He regularly sends us monthly statements of the ranch's income and expenses. This way we can easily understand what our donations are used for.

In this issue we would like to show some examples:

For the first time in 7 years, a drill was confiscated and delivered to the Drill Ranch in Calabar. Aniekan, one of the first staff members on the project alerted Drill Ranch staff to a young male drill



"Bette" in quarantine in Calabar

photo: Zack Schwenneker

in a village near the Oban Division of Cross River National Park. Patrick Njar, head of the Wildlife Division at the Department, and wildlife officer David Pius met with Aniekan and picked up the animal from the village. The woman where he was found was very upset and did not want to talk to Patric and David about the animal. She said that she loved it and that they would take away a beloved pet.

The male, "Bette", who is only 2 years old, had a severe infection in his groin, probably from an attempted circumcision - this is still traditionally done to male children in Africa. The animal would certainly not have survived this infection.

At Drill Ranch, he was given antibiotics and salt water baths - the wound healed well, but other health problems remained unclear for a long time. Of course, costs were incurred for staff, travel, and veterinary treatment.

At the end of April, a massive tropical storm hit Calabar and caused considerable damage. Southern Nigeria has a tropical hot and humid climate with a productive rainy

season that lasts from April to October. Humidity ranges from 85 to 95 percent year-round, and the annual average daytime temperature is about 30°C. Especially during the rainy season, mainly on the coasts, strong storms / hurricanes are not uncommon.

Two large strangler fig trees were uprooted in late April, falling through the rear security wall of the Drill Ranch property and damaging the roof and water tank of the neighboring house, which the project will pay to repair.

In addition, the only living tree within the drills' enclosure (Group 3), a mountain apple, was uprooted. It damaged the foundation of the fence. Fortunately, the fence remained largely intact and the drills were safe and remained in the enclosure.

Of course, the repairs again incurred costs for the project (- but the drills enjoyed the enrichment provided by the branches in their enclosure!).

In April, a female drill born in group 3 and a patas monkey (*Erythrocebus patas*) died in quarantine at Calabar. Microscopy of the faeces of randomly selected animals in all Afi drill groups were performed to monitor endoparasites and bacterial infections: 20 faecal samples were submitted at

approximately 13.50 euros per test.

After the main birth months of the drills, prophylactic deworming of the animals in the Afi Mountains should be started.

A new feed store had to be built in the Afis. This was now completed. Zack spent three days in Ikom, a town about two hours south of Afi Mountain, procuring the steel needed for the construction. He took the opportunity to buy materials for other projects, including 250m of water pipes. In addition, two water tanks, each with a capacity of 1,500 liters, were purchased to replace those damaged during the attack on 09 January 2020 (total approx. 150 euros). Curtis Akpos, an Ikom-based project friend, generously loaned Zack his 4x4 MAN truck to transport all the materials to Afi - the only cost of the trip was diesel!



...the new feed store is ready

photo: Zack Schwenneker

Chief Peter Otu, a friend and helper of the project from Buanchor for many years (for example, last fall he sawed the large Achi tree that had fallen on the camp during a storm), had a serious motorcycle accident together with his wife. The costs for the medical care of the two in the amount of about 110, - euro, was also taken over by the project.



"Melek"

photo: Zack Schwenneker

The two dogs, Yogi and Lulu, are now very old and there is an urgent need for a dog for security at the Drill Ranch in the Afi Mountains. The project policy is to never buy or sell animals and all dogs to date have been donated or rescued.

Buying a dog, especially a non-native breed, encourages reckless dog breeding, which is already a problem in Nigeria. This time, however, an exception was made and a Caucasian Shepherd puppy was purchased for about 120 euros. Caucasian Sheepdogs grow very large and are robust and hardy even in climatic extremes. They are considered very self-confident, suspicious of strangers and have a

strong guarding and protective instinct with a special defense reaction. The dog's training and education is provided by Zack in the Afi Mountains. He writes:

"Although we broke our own rule, "Melek" is a wonderful puppy and is a quick learner. She is a great breed of dog that will serve us for many years for our safety."

Funeral of Kyrian Tah

Kyrian Tah was finally buried - more than a year after his accidental death in police custody, the event that triggered the attack on Drill Ranch (see Drill-Info 28, special issue).

His family finally proposed a reasonable solution, and under legal supervision Pandrillus agreed and paid the costs of the funeral and burial and provided drinks. In total, costs of the equivalent of 923 euros were incurred.

A legal document signed by both parties will protect Pandrillus from future challenges related to his death and employment at Drill Ranch. Kyrian's wake in Buanchor was attended by several project staff, including Project Manager Zack Schwenneker. After the funeral (which lasted a weekend), deputies of the family came to the camp to thank them for the gift and apologize for what happened in January.

Such an "official" apology means a lot in Nigeria and is not given lightly!

Meeting with government employees at Drill Ranch

This February, there was an important meeting at Drill Ranch in Nigeria:

The Ministry of Climate Change and Forestry is Pandrillus' official partner in the state government, and Drill Ranch hosted a meeting between officials from the ministry and surrounding villages, where topics such as rainforest conservation were discussed.

And also in March, the Ministry convened a second round of meetings in three communities of the Afi Mountain Wildlife Sanctuary. The committee member responsible for Pandrillus, Mr. Undiandeye, led the team, which included several government department heads. These meetings focused on the ongoing destruction of the protected area through illegal agriculture, hunting,

slash-and-burn agriculture and logging. High-ranking government partners were able to see for themselves on site the destruction of the protected area and the forest reserves.



*Zack Schwenneker gives ministry staff a tour of Drill Ranch in the Afi Mountains
photo: Pieter van Heeren*



...finally a visit to the Afi Mountains again

photo: Pieter van Heeren

The Drill Ranch hosted the delegation for one night, where conservation issues were discussed in depth over dinner. These expenses are money well invested for the Drill Ranch in Nigeria, because it can be assumed that the government partners will now be seen more often on site.

The Drill Ranch is now open to the public again, but with restrictions:

Group size is limited to 15 people and mouth-nose masks are required.

Hand-washing stations have also been set up for guests.

Most visitors are school groups ages 5-18.

Admission to the Drill Ranch is free, but provides an opportunity for caretakers to teach visitors, especially children, about drills and species conservation.

A day dedicated to drill

Marco Dinter



The athletes are standing at the starting line. The starting signal is given. The first runner, an animal keeper from Saarbrücken Zoo, completes the sprint course in record time. His opponent is a tapir that doesn't seem to think much of charity runs: it stays seated and wrinkles its nose.

The charity run by the Professional Association of Zoo Animal Keepers e.V. (BdZ) and the accompanying video, in which the staff of the Saarbrücken Zoo races with their animals (to be found on the Facebook page of the BdZ, (<https://www.facebook.com/BerufsverbandDerZootierpfleger/videos/895590821018143>) -be sure to watch!), were actions for this year's Day of the Drill. This day of action was initiated last year by Save the Drill to draw attention to the drill and its threatening.

On May 4th, 2021, Drill Day took place for the second time. Like last year, due to the pandemic situation, the actions were mainly limited to social media. Nevertheless, many friends of the drill could be found to celebrate this day with us.

About a dozen European zoos participated with posts on Facebook and Instagram. They were joined by organizations such as the European Association of Zoos and Aquaria (EAZA), the International Council of Zoo Keepers (ICZ) and many, many more.

Also many drills have enjoyed the day very much: For example, the animals in Eskilstuna, Sweden, received colorfully wrapped gifts with treats. At the Green Zoo in Wuppertal, the Drills found a delicious writing made of curd on their window. In addition to "Save the Drill," there was also written the hashtag "#dayofthedrill," under which many of the posts about the day of the drill can still be found online. Fortunately, these contributions last a little longer than the curd that the monkeys had licked off the windows after only a few minutes.

The BdZ has gone one step further. The association decided to donate part of the seminar fees of a webinar on veterinary training to Save the Drill. It also organized the mentioned charity run. Anyone could participate, running in front of their own doorstep. To participate, one could buy a ticket online. The funds raised were donated to Save the Drill. This way, about 200€ were collected from the entry fees, which the BdZ even doubled from their own funds. We want to say thank you for that!

Even some private people have celebrated the day of the drill on their channels. Currently, we have 185 members. However, a few of them are not private individuals, but the so-called "institutional members". These are zoos and one sponsoring association that support our work and provide us with a valuable platform, for example by reporting on our work.

For this year's Day of the Drill, we wanted to "turn the tables" and introduce these members in more detail. In a countdown to the Day of the Drill, there was a new post every day on Facebook ("Rettet den Drill e.V.") and Instagram (@rettet_den_drill), in which eight member zoos and the Zoofreunde Hannover were introduced. Beforehand, representatives of the zoos told us in interviews why their institution is committed to the drill and what exactly their work looks like. The presentation texts can still be read on the channels of Save the Drill.

As a "finale" on May 4th, we published a series of video messages. In it, our 1st Chairwoman Kathrin Paulsen explained where you can experience drills without having to travel directly to Nigeria. The manager of the Drill Ranch in Nigeria, Zack Schwennecker, reported about the work on site. And Liza Gadsby, founder of Pandrillus and the drill sanctuaries in Africa, shared her memories of seeing her first drill. That encounter led her and her partner, Peter Jenkins, to decide to dedicate their lives to the drill.

So the second international day of drill was also a great success. We are very happy about every contribution and thank everyone who participated. We are excited to see what awaits us next year on May 4th!

"Save the Drill" - more than species protection! - 10,000 masks for Africa

One example of this is the successful action carried out by the association together with the Wilvorst company from Northeim / Germany. Wilvorst is actually a specialist for festive menswear. Due to the Corona pandemic, Wilvorst had changed its production since mid-March 2020: in addition to wedding suits, mouth and nose masks were also produced. 10,000 of them went as a donation to our association.

Also, for the postage costs, enough donations have been received spontaneously after a request from our members!



*Drill Ranch staff with the donated masks. from left to right: Gabriel Oshie, Ezekiel, James Emmanuel, Asuquo Ani, Emmanuel Asu, Iwara
photo: Zack Schwennecker*



Zack hands over masks to planned parenthood federation of Nigeria

"We

have split the masks on three packages and set them on their journey to Africa", reports Mrs. Ann-Kathrin Hupe, OnlineMarketing of WILVORST. She organized everything together with the drill team board. "...it was also exciting for us to follow whether the packages arrive and how they are reacted to in Cameroon and Nigeria" Ms. Hupe continues.

Of course, the joy was huge in both drill projects! The stations are one of the largest employers in the region. Proud and happy, the many employees and their families now wear the mouth-nose masks from Germany. Animal keepers, craftsmen, gardeners, teachers, biologists, veterinarians and managers work directly on site.

But also the people working in agriculture in the surrounding villages, who grow the feed for the animals or harvest fodder plants in the forests, are part of the extended team. So are the schools, where educational projects are carried out in cooperation with the stations.

Since the people in Nigeria and Cameroon often have no or only extremely insufficient medical aid available, the mouth-nose masks from Lower Saxony are incredibly valuable as a protective measure against corona infection!

We are therefore very grateful to the Wilvorst company!

A small part of the masks went from the Drill Ranch in Nigeria to the organization "planned parenthood federation of nigeria", PPFN. This organization organizes nationwide outreach for family planning as well as HIV/AIDS screening, cervical cancer screening, HBP, malaria testing, pregnancy testing, etc. This gesture, of course, also greatly improves the reputation of Drill Ranch.

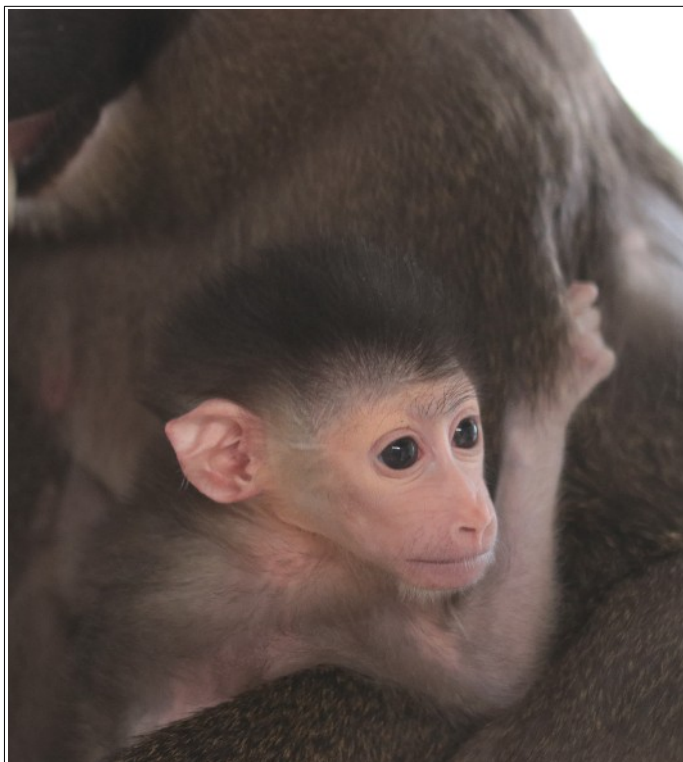
News around the drill in a nutshell

Osnabrück: on April 5th little "Keymo" was born.

Mother of the first drill born at Osnabrück Zoo is the 13-year-old "Katara", father the 15-year-old "Aku"

Saarbrücken: on May 25th a healthy female cub was born.

Mother of the little "Elani" is the 7-year-old "Makena", father the 8-year-old "Takamanda".



"Elani"

photo: Zoo Saarbrücken

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