

DRILL INFO

Issue 29, May 2020

Dear members and friends of the drill,

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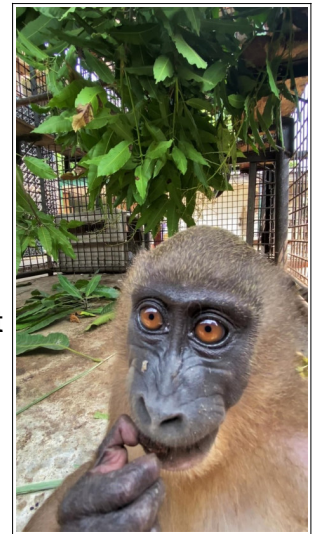
The corona virus now has also reached Africa and spreads quickly.

Of course this also concerns the rescue centers for drills, Limbe Wildlife Center (LWC) in Cameroon as well as the drill ranch in Nigeria.

The situation over there is dramatic. There is an entry ban for both countries and a lockdown for many areas.

Donations are missing, since the stations have been closed to visitors there are no more receipts through entry fees. Volunteers can't come right now so also these receipts through volunteer fees are missing.

In these countries, there is no statutory health insurance and hygienic standards are low. Many people live in poor circumstances in the tightest of spaces.



The efforts on security and safety actions have accelerated for staff and animals, hence the costs have increased enormously.

Once again, the drills in Cameroon and Nigeria urgently need our help:

Donations:

Rettet den Drill e.V.
IBAN: **DE95 2675 0001 0014 0759 56**
BIC: NOLADE21NOH
Kreissparkasse Grafschaft Bentheim

Cameroon:

Currently, 75 drills live at Limbe Wildlife Center (LWC) in Cameroon.

Both managers, Peggy Motsch and Guillaume Le Flohic, are on site.

Since the first corona infection has come up in Cameroon, the number has increased to 2.579 official infections (WHO, as at May 12th 2020). However, there are not many tests available so the estimated number of unreported cases is likely to be extremely high.

LWC has taken various security actions. Most important are the two-step disinfection and protection protocols both between the public area and the center and between the animal area and that of the staff.





Hand washing stations with soap and hand disinfectant are installed in various strategic areas of the center.

Daily staff meetings inform everyone about the latest developments.

Employees must strictly maintain a distance of at least 1.5 meters between themselves and between the animals and themselves. They are required to wear clean clothes and disinfected rubber boots, as well as a mask and gloves.

Hands must be thoroughly washed and disinfected regularly.

Used masks, gloves and cloths are collected, disposed of or cleaned in designated areas.

Colleagues who show symptoms of illness must stay at home.

Once an employee has left the city, he or she must comply with a strict quarantine period upon return.

All working materials and equipment (including door handles) are systematically disinfected after each use. Similar procedures apply to all incoming food, which is cleaned, disinfected and rinsed before being fed to the animals.

In addition, waste disposal is now completely internal, reducing the risk of potential virus transmission into or out of the center.

There is a strict hygienic protocol for all employees, based on new information about the virus, and it is constantly updated and improved.

Guillaume Le Flohic:

"The main challenges we are currently facing and will continue to face in the near future will probably be the shortage of food, the prevention of our staff getting infected, the financial burden we will encounter due to temporary loss of financial support and closing of the volunteer programme and our Centre to visitors. We do not have much in hands to secure all these issues yet, logistics will become more complicated, and costs will increase as we also spend more to limit the risk here.

We will be needing all the help we can get!"

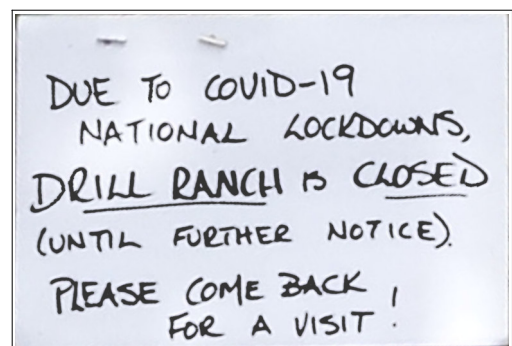
Nigeria:

At the Drill Ranch in Calabar and in the large, semi-natural facilities in the Afi Mountains, there is a total of 575 drills at the moment.

Liza Gadsby is still in the USA (because of the entry ban in Nigeria).

Peter Jenkins and Zachary Schwenecker are on site.

In Calabar, Kerrie, a long-term volunteer, has been helping with the management for a long time now and is also our "contact person" at the moment.



With around 200 million inhabitants, Nigeria is the most populous African country. It has the largest economy and is the most important oil producer in Africa. At the same time, no country in the world has more people living in such extreme poverty.

The first infection was officially reported on February 27th. Currently, 4641 cases (WHO, as at May 12th 2020) of infections are known. Here as well, the number of unreported cases will be alarmingly high.

Everyone there is on high alert.

In case the markets close, dried fodder (beans, rice, soya, maize ...) is stored for the animals. Basic foodstuffs such as noodles or tinned food for the staff as well as sufficient diesel reserves are also purchased.

Face masks and rubber gloves are worn by all employees. Distance rules must also be respected there as well. This also includes a distance of 2 meters to the animals.

The greatest challenge is the purchase of feed. The feed buyer in Calabar, Joy Umoh, still goes to the market 4 days a week, but deposits the feed at the gate. The keepers then take the food to the Drill Ranch where they wash and store it. This makes extra work for the keepers as Joy normally washes, stores and prepares the feed.

Two animal keepers, David and Kufre, and Calabar manager Raphael Asiba are currently not going home. They are for now living permanently on the station. This is of course a big burden for them.

Also at the Drill Ranch in the Afi Mountains, not necessarily needed employees were asked to stay in the village. The others continue to live on the ranch as they have since the raid in January. They are not allowed to go to the village to visit their families. It often is difficult to make this clear to the staff over and over again.



There as well, the feed is delivered to the street and brought in by "inside" staff for sorting, washing and storage.

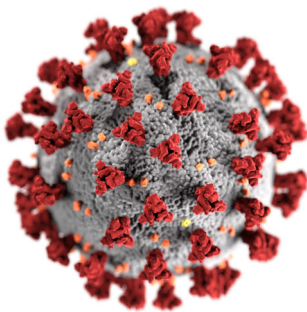
The costs have risen immensely. Employees who are not absolutely needed or those who live in a large family were asked to stay at home. However, the basic salary will still be paid. The employees who are now with the drills receive higher salaries at the moment, as the workload is significantly higher for each individual due to the "missing" colleagues.

In addition, televisions were purchased to make the time more bearable for the local staff, who are not allowed to maintain any further social contacts, and who live quite cramped in Calabar.

Liza Gadsby:

"Thank you for keeping us in your hearts during these tough times We need you more than ever to survive."

Science Corner: Das Coronavirus



Dr. Tanja Wolf

Although the lockdowns in many European countries are being loosened now, a lot of countries on the African continent are only at the beginning of the spread and the numbers of infected individuals are on a rise.

Different viruses are distinct by the appearance of their genetic material. There are two types: the DNA- and the RNA viruses.

Coronaviruses are RNA viruses which are commonly found in mammals and birds, but there are a lot of non-symptomatic carriers who are not developing a disease. This RNA virus family is comprised of four main groups, the Alpha- to Deltacoronaviruses. Alphacoronavirus is mainly found in bats, but the feline and canine coronaviruses also belong to this group. The most common group in mammals is the group of the Betacoronaviruses. It also contains the three most recently appearing coronaviral diseases MERS CoV and SARS CoV.

In general coronaviruses are very species-adapted and the transmission between species is rather rare. Some of the coronavirus species have a more broad host species range, like the mentioned

MERS CoV (humans, bats and camels) and SARS CoV humans, bats, swines). A between species transmission does not necessarily mean the development of a disease.

How could CoVid-19 then be transmitted from animals to humans?

Generally, viruses lack a regulation mechanism that fixes copy errors of the genome as it is seen in animal cells. Therefore, mutations are often of a larger magnitude and helps the virus to adapt to a new host. The mutation rate of the coronavirus is not bigger than in other viral families, however, RNA viruses are more susceptible to mutations than DAN viruses. Additionally, the RNA of the coronavirus is longer than in most other families, that increases the likelihood of a mutation. This makes it easier for a coronavirus to adapt to a new host in a shorter time.

Where did CoVid-19 come from?

The genome of CoVid-19 has certain similarities with a coronavirus seen in bats, as well as with a pangolin coronavirus. It is speculated that it originated from the bat coronavirus, but a different intermediate host was necessary to finally invade human cells. In order to make the leap between species certain conditions are needed, for example an infected animal has to show infectious secretions, as well as close contact and several repetitions within a short time frame.

Wildlife markets like the one in China from which the CoVid-19 spread probably originated are a perfect environment: Poor hygiene during slaughter combined with stressed animals who are more likely to shed increased amounts of virus in addition to a close proximity between livestock and wild animals. Wild animals are often kept as pets or eaten (often raw) and therefore promoting the close contact between the virus and the host's intestinal tract. China's ban on eating and trading wildlife is a first step in the right direction, as the harvest of wildlife by humans is one of the 'root causes' of the current pandemic. We are hoping this ban will become permanent and that other countries will follow the example. This would in the long run also profit the drills in Nigeria and Cameroon. Illegal hunting for bushmeat, next to the loss of habitat, is one of the main reasons these primates are listed as endangered on the IUCN's (International Union for Conservation of Nature) red list of threatened species.

So far there is no indication that CoVid-19 can be transmitted from humans to primates, but due to the close taxonomic proximity it remains a possibility. In rhesus monkeys the experimental infection with CoVid-19 lead to pathological signs of pneumonia, but without obvious clinical signs of a respiratory disease. Therefore, the European Association of Zoos and Aquaria (EAZA) gave the advice to reduce the direct contact with species that might be susceptible, such as great apes. While in most zoos in Europe and the US it is possible that the animal care taker work in shifts, this is a big problem in Cameroon and Nigeria. Although not directly endangered by the virus itself, this crisis does have a direct impact on the drills and all the other species living at the Limbe Wildlife Centre; Cameroon and the Drill Ranch; Nigeria.

References:

- European Association of Zoos and Aquaria
- German Federal Ministry for Environment, Nature Conservation and Nuclear Safety
- Wildlife conservation society
- Shan et al. 2020

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