

NEWSLETTER MARCH

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Dear clients,

As the world turns mad, take a step back and relax with our newsletter! In this edition we cannot ignore the COVID-19 disease, what impact does it have on your pet? We also discuss the amazing stomach adaptations of vultures, and cat diseases against we vaccinate. We proudly tell you more about our first official PM course, and we explain once again our regional WhatsApp groups.

Kind regards, Ulf and Mariska

COVID-19 (CORONA) AND PETS

The world is captivated COVID-19, or commonly known as Corona. COVID-19 is a respiratory disease that can affect lungs and airways, and is caused by the SARS-CoV-2 corona virus. While measures are being put in place to stop the virus from spreading, what about your pets and animals? Here are some facts.

Coronaviruses are a large family of viruses, some cause disease in humans, some in animals. Examples of corona strains in animals are canine coronavirus (CCV) in dogs, and feline infectious peritonitis (FIP) in cats. Some of these coronaviruses that infect animals, have mutated in a way that they can infect and spread between humans. Severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) are examples of a coronavirus that started in animals, and then spread to people. It is suspected that the current coronavirus, COVID-19, also originated from animals (the first infections were linked to a live animal market in Wuhan, China), but the exact source is still unknown.

Can animals get and spread COVID-19?

At the moment there is no evidence that pets (cats and dogs) can become infected with COVID-19. There is also no evidence that pets can spread COVID-19 to humans.

You might have heard about a dog in Hong-Kong that tested 'mildly positive' for the virus. The dog did not have clinical signs, and these test results did not show that the dog was actually infected. The reason for the mildly positive test results was likely due the fact the dog was breathing contaminated air from the owner, who was infected with COVID-19.

What can you do?

Animals always can carry germs that might make people sick, therefore maintain proper hygiene around animals:

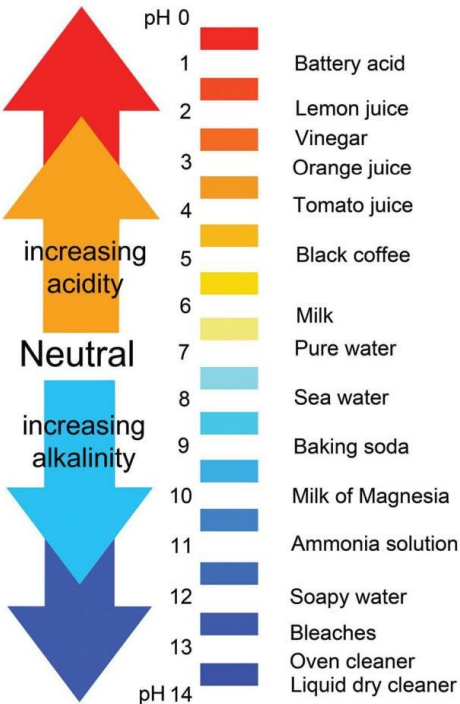
- 🐾 Wash your hands after handling animals, their food and faeces;
- 🐾 Practice good pet hygiene and clean up after your pet;
- 🐾 Take your pet regularly to your vet for a health check and for their vaccinations;
- 🐾 Regularly deworm and apply anti-tick control;
- 🐾 If you are infected with COVID-19, restrict contact with pets and other animals. Although there is no evidence that animals can become infected, it is recommended to limit contact until we have more information about the virus.

Dogs wearing masks in Shanghai (Feb 2020) – There is no benefit of giving your pet a mask, it is probably stressful for your pet to wear this. © CNN



THE VULTURE'S IRON STOMACH

Vultures like eating rotting meat, a meal which would make you so sick, that you might die! They can even happily finish a carcass with anthrax, rabies, TB or other infectious diseases that would kill most other scavengers. How come vultures don't get sick? The secret lies in their 'iron' stomach! Vultures have developed the lowest gastric pH of all animals, this allows them to digest rotting meat without getting sick.



pH scale © [Alain Lacroix](#), [Dreamstime.com](#)

The pH scale goes from 0 to 14; 0 is a highly acidic substance, 7 neutral, and 14 highly alkaline. A human stomach (depending on what you ate) is between 1 and 3. The stomach acid of a Turkey vulture (American species) has a pH of almost 0! To clarify how acid this is, the pH scale is a logarithmic scale, this means that each value below 7 is 10x more acidic than the next value. The stomach is so acidic, it can dissolve bones, and it may even dissolve metals! The stomach acids are thus strong enough to kill most pathogens than would make us very sick.

Another interesting adaptation is what is inside their intestines. While humans have 100s of species of microbes, vultures boast only 2; *Clostridia* and *Fusobacteria*. *Clostridia* (which can cause food poisoning in humans) reproduce quickly; most bacteria reproduce in 20 minutes, *Clostridia* in just 6.3 minutes. This fast reproduction stops the toxic bacteria from gaining a foothold. The *Fusobacteria* are very good at breaking down flesh. Vultures will urinate and defecate over themselves (especially their legs), to kill off bacteria that try to crawl up via their legs.

Vultures are extremely important in a healthy ecosystem; they clean up carcasses, and thereby stop spreading diseases. It is believed that vultures consume more carrion than scavengers like hyenas. The African vulture population however has declined, making most species endangered or even critically endangered. Poisoning is the main reason for this decline. This can be intended, or unintended. Diclofenac is for example a drug that is widely used to treat cattle, but highly toxic to vultures. In India wildlife scientist think there is a link in the increasing cases of human anthrax, and the decreasing vulture population. Anthrax spores form when a carcass lies open and is exposed to the sun. Vultures that eat the carcass therefore slow down the spread of spores, by consuming the anthrax infected meat.

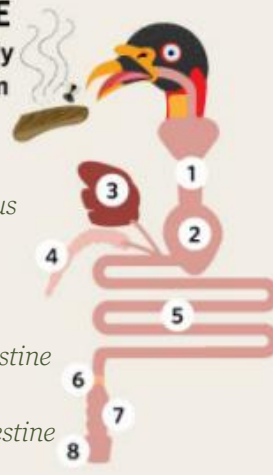
You can help vultures by creating a vulture restaurant, read more [here](#) (document by NARREC). If you are worried that vultures make your animal's drinking troughs dirty, you might want to consider creating a small shallow dam, the vultures will enjoy this better than a drinking trough. When you have a carcass that was recently treated with medicines (esp. diclofenac) or darted with an immobilizing drug, make sure scavengers cannot get to the carcass! Rather bury or burn the carcass, or cover it with lots of thorny bushes.



Vultures eating from a carcass

© [Today I found out](#)

VULTURE
average body
length 75 cm



1. Oesophagus
2. Gizzard
3. Liver
4. Pancreas
5. Small intestine
6. Caecum
7. Large intestine
8. Cloaca

© [Cosmos lessons](#)

Check out this great and informative video from Ted-ed on YouTube: [Vultures: The acid-puking, plague-busting heroes of the ecosystem](#) (5.06 min)



VACCINATING CATS

As per MET regulation, captive held wild cats must undergo an annual check by a registered vet, and be vaccinated. We recently did this for some captive cheetahs, caracals and leopards. We vaccinated them against several dangerous cat diseases (see table below), including rabies.



Darts with Rabies (left) and cat vaccine which protects against FeLV, herpesvirus, calicivirus, and FPLV (right) © M. Bijsterbosch

	Feline Leukemia Virus (FeLV)	Feline Rhinotracheitis Virus - Feline herpesvirus 1 (FHV-1)	Feline calicivirus	Feline Panleukopenia Virus (FPLV) – Feline distemper
What?	Infectious disease, most common cause of cancer in cats, can cause blood disorders and immune deficiency.	Upper respiratory infection of the nose and throat in cats.	Common and highly contagious virus, that can cause severe respiratory problems in cats.	highly contagious and severe parvovirus that infects cat species. Kittens are particularly at risk.
Transmission	Saliva, nasal discharge, faeces, urine, milk.	Direct contact. Sometimes an infected cat remains without symptoms, but can spread the disease to other non-infected cats.	Via air, orally and indirectly via contaminated objects.	Via faeces or oral contact, and indirectly via contaminated objects.
Symptoms	First; no signs. Weeks, months later deteriorating health. E.g. loss of appetite, weight loss, poor coat condition, enlarged lymph nodes, pale gums, fever, infections, diarrhoea etc.	Sneezing, watery or pussy nasal discharge, conjunctivitis (inflammation of the inner eyelids and mucous membranes around the eyes), inflammation of the cornea (keratitis), lack of appetite and fever.	Upper respiratory signs, this can develop into a pneumonia and difficulties in breathing. Some cats develop ulcers and inflammations in the mouth.	Decreased energy, low appetite, vomiting and diarrhoea. As the white blood cell count drops, the cats get more susceptible for infections, they can get fever, abdominal pain, nasal discharge and eye problems.
Diagnosis	Clinical signs, blood test.	Clinical signs, lab tests.	Clinical signs, lab tests.	Clinical signs, faeces/blood test.
Treatment	None specific; supportive drugs.	None specific; supportive drugs such as antibiotics	None specific; supportive drugs.	Immediate, aggressive treatment in the form of supportive drugs.
Prognosis	After diagnosis 50% die within 2.5 years.	Once they had the infection, they carry the disease for life, and might get rebounds.	Depended on the severity of the symptoms. Some cats may recover in days or weeks, while other might die.	Can be fatal in less than 24h. Survival prognosis is 50%.
Vaccination	Kitten < 16 months: at 8 weeks, then 1 shot 3-4 weeks later. Annual booster. > 16 months (initial vaccination): 2 shots, 3-4 weeks apart. Annual booster.	Kitten < 16 months: at 6 weeks, then every 3-4 weeks until 16 weeks. After 1 year a booster, then every 3 years. > 16 months (initial vaccination): 2 shots, 3-4 weeks apart. After 1 year a booster, then every 3 years.	Kitten < 16 months: at 6 weeks, then every 3-4 weeks until 16 weeks. After 1 year a booster, then every 3 years. > 16 months (initial vaccination): 2 shots, 3-4 weeks apart. After 1 year a booster, then every 3 years.	Kitten < 16 months: at 6 weeks, then every 3-4 weeks until 16 weeks. After 1 year a booster, then every 3 years. > 16 months (initial vaccination): 2 shots, 3-4 weeks apart. After 1 year a booster, then every 3 years.

All the cats were also vaccinated against rabies. Rabies is a deadly viral infection that usually spreads from animal to animal (and man) via bite wounds, or via saliva contamination of an open wound. The incubation time (period between infection and the appearance of signs of a disease) is about 2 months. Cats will get aggressive, get disoriented and death quickly follows. Once the symptoms start developing, rabies is 100% fatal!

Vaccination is of utmost importance, also for humans that work with wildlife. For cats it is recommended to give the 1st shot at 12 weeks, then at 16 weeks, and then annually.

Vaccination, hoe does it work?

After vaccination, the immune system is ‘trained’ to recognize infections agents. The body produces proteins, which we call antibodies, or activates special cells to kill the infectious agents. When a vaccinated animal encounters these agents in the future, its body rapidly generates antibodies, thereby producing an immune response. This immune response will eliminate the infectious agent.

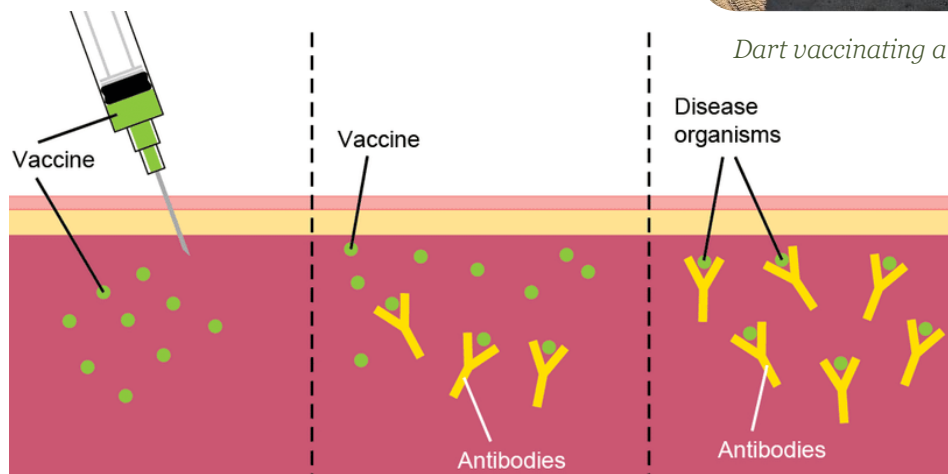
There is no vaccine in the world that is 100% effective, but vaccination makes disease transmission less likely, and might reduce symptoms in vaccinated cats.



Ulf preparing the injections for a caracal. Habituated animals we can hand inject. Other ways of administration are dart vaccination, or immobilizing the animal © M. Bijsterbosch



Dart vaccinating a cheetah © M. Bijsterbosch



Schematic drawing on how a vaccination works; a weakened or killed form of a disease is injected. The body creates antibodies to fight against the disease.

Whenever the disease comes back, the antibodies return and destroy the disease. © [Frank Adusei-Mensah](#)



POST-MORTEM COURSE AFRICAT

After a lot of planning, finally we held our first official Post-Mortem (PM) course! The course was given 14 March at the PAWS centre at AfriCat Okonjima. A group of 14 participants with different backgrounds joined our course and together we had an awesome day!

The idea behind this course is to enable farmers and farm managers to be able to do a basic PM themselves. The earlier the PM is done, the better your results will be. Since Namibia is so big, it often takes a long time for a vet to come out, and, because of cost implications, most farmers rarely have a professional PM done. Lots of information and knowledge is lost this way. With us teaching you to do the PM, take samples and take proper photos, which you then send to us for interpretation and processing. Once we have an overview of the case (and received lab results where needed), we will contact you and discuss the diagnosis and potential management interventions with you.

We started the day with an introduction to doing a PM; when to do it yourself, and when should you get a vet in? We also explained on how to dispose a carcass. In the 2nd lecture it was back to the biology classes! In the anatomy and physiology lecture we explained where the different organs were located, what they do, and which samples one should collect during a PM. The 3rd lecture was about what changes in the body after an animal has died. Sometimes an organ looks abnormal, but this might be a natural rotting process. The 4th lecture was about how to take proper photos during a PM. This might sound a bit overdone, but your photos are our eyes, so the better your photos are, the better we can help. The 5th lecture was a quick lecture on what one should have in a PM kit, and the 6th lecture about how to collect proper samples.

After the lunchbreak we drove to the slaughterhouse, where we did a PM on an oryx carcass. This old bull had some interesting lesions, such as worms, tapeworm cysts and enlarged lymph nodes. After the PM the last lecture was given, about organ lesions. This lecture consists of lots of photos of diseases, and abnormal things one might encounter during a PM.

It was an intensive but great day. All participants gave useful feedback which we will use to improve the course. We hope to do more courses in the future. If you are interested in joining, sent an email to mariska@wildlifevetsnamibia.com, when we do another course, we will inform you. Alternatively, should you want us to present the course at for example a Boere vereniging day, let us know.



'Teaches a lot on how to handle a PM step by step'

'Very comprehensive, structured, well planned'

'Topics covered were enlightening and well explained'

'Very informative, friendly, relaxed'





Spreetshoogte Pass. Did you know that with up to 22%, this slope is one of the steepest in southern Africa? With 1780m above sea level, it is also one of the highest roads of Namibia © M. Bijsterbosch

REGIONAL WHATSAPP GROUPS

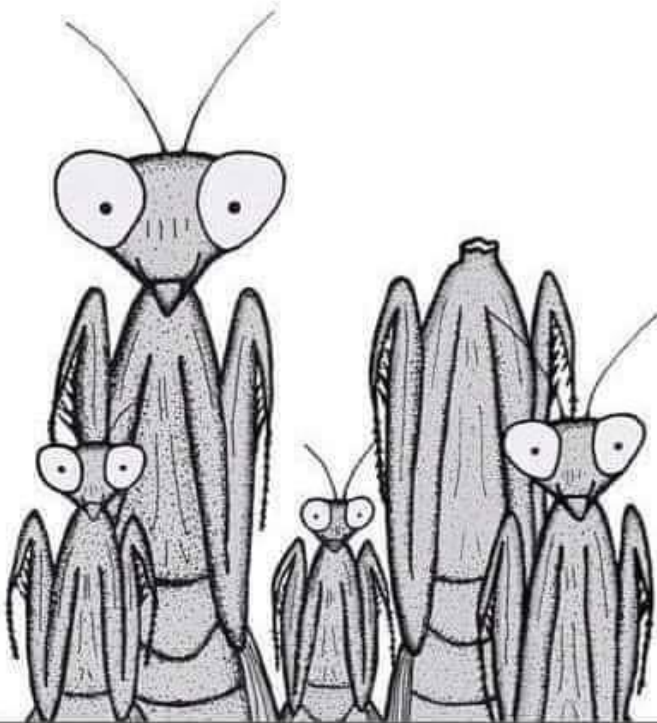
We work all over Namibia; from north to the south, from east to west. Sometimes it happens that we are in an area, finish our job, drive back to Windhoek, and the next day we are called out to that area again. This is a waste of kilometres and time. Therefore, we have started WhatsApp groups last year. When we are called out to a certain area, we will notify this group. If you happen to have a job that needs to be done, you can jump in and share kilometre costs. These groups will only be used to notify that we will be working in a specific area. To respect your privacy, we won't mention names or farms, just the area where we will be working in. If you want us to come, or have a question, please contact us directly and do not use this group. We are sure you agree that there are already too many 'chat'-groups taking up our time!

We have groups for the following regions:

- 🐾 North of Windhoek (e.g. Okahandja/Otjiwarongo/Outjo/Tsumeb etc. area)
- 🐾 East of Windhoek (e.g. Omitara/Witvlei/Gobabis etc. area)
- 🐾 South-east of Windhoek (Dordabis/Nina etc. area)
- 🐾 South of Windhoek (Rehoboth and south)

If you are not on the group and you want to be added, please contact us and we will add you to the group ☺

PRAYING MANTIS FAMILY PHOTO



Inklings by Steve Thompson

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