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THE ETHICAL
TREATMENT
OF ANIMALS
FOUNDATION

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April 29, 2021

Bob Fulton
License and Revenue Branch
California Department of Fish and Wildlife

Via email: Bob.Fulton@wildlife.ca.gov

Dear Mr. Fulton:

I am writing on behalf of PETA to urge the California Department of Fish and Wildlife (CDFW) to investigate the circumstances surrounding the recent death of the African elephant Buffy, exhibited by Charlie Sammut and the Monterey Zoological Society, Inc. (CDFW Permit No. 1713). PETA has just obtained the enclosed [necropsy](#), which raises serious questions about the adequacy of care that Buffy received prior to her death.

Buffy was found dead in a barn on February 5, following 17 days of colic (abdominal pain). Her necropsy shows that a large amount of sand blocked her large intestine and caused a 25 cm rupture. Her intestinal contents poured into her abdominal cavity, causing severe inflammation and infection (peritonitis)—a very painful condition. The bacteria spread through her blood stream, causing sepsis and toxemia (blood poisoning) that impacted her spleen, liver, and heart. She would have suffered immensely.

California's restricted species regulations require permittees to observe animals daily and ensure that "[s]ick or diseased, stressed, injured, or lame animals shall be provided with veterinary care or humanely destroyed." Cal. Code Regs. tit. 14, § 671.2(a)(7). Permittees shall maintain a written log documenting each animal's health care that includes, among other things, "date and description of illness and/or injury, health care treatment provided, [and] name and signature of the person treating the animal." *Id.* § 671.2(b). The log "shall be made available to department officers or its authorized agent on demand." *Id.*

As detailed in the enclosed appendix, Buffy received some veterinary care, but she did not evidently receive certain essential diagnostics and treatment. Please investigate the circumstances surrounding Buffy's death, consult with an independent elephant veterinary expert to evaluate the adequacy of care, and take appropriate enforcement action if violations are found—including through revocation or denial of the Monterey Zoo's restricted species permit for elephants. *See id.* § 671.1(c)(5), (6). A list of questions to assist in your evaluation is included in the attached appendix.

Very truly yours,



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Appendix

Colic in Elephants

Bloat, constipation, infection (including salmonellosis, *Clostridium* spp., and elephant endotheliotropic herpesvirus), impaction, ingestion of rocks or sand, neoplasia, inappropriate diet, sudden changes in diet, lack of access to water, parasites, stress, reproductive tract disease, intussusception or torsion of the intestines, and dental disease are all potential causes of colic, which broadly refers to the clinical presentation of abdominal pain.¹ Therefore, veterinarians must act quickly to determine colic's cause in order to administer proper treatment and avoid prolonged suffering or death.

In addition to considering the elephant's clinical signs and history, standard diagnostics include:

- GI auscultation to screen for stasis (listening to the GI tract to assess slowing or stopping of digestion).
- Close monitoring of hydration status (i.e. through bloodwork to assess packed cell volume (PCV) and total protein).
- A dental evaluation to screen for conditions that are painful or disrupt appropriate chewing of food that can cause secondary impaction and colic.
- Bloodwork, which may indicate infection or PCV abnormalities commonly observed with colic.
- Salmonella PCR testing.
- Fecal testing and culture to screen for infection, blood, parasites, and ingestion of sand, rocks, or other indigestible materials.
- Urinalysis.
- Rectal examination to check for an impaction or obstruction in the distal large intestines.
- Trans-rectal ultrasound to scan portions of the reproductive and urogenital tracts for pathology that could contribute to abdominal pain or discomfort, and to screen for GI stasis and thickening and free fluid, which can indicate GI or other potential etiologies (causes originating either from within or external to the GI tract).
- Endoscopy to scan the large intestine for impaction or obstruction and other evidence of disease or abnormal pathology.²

Medical treatment for sand impaction includes pain management, hydration (intravenous or rectal fluids if the elephant is not drinking sufficient amounts to maintain hydration status), movement therapy, warm water enemas to facilitate dislodging an impaction or obstruction, mineral oil to help lubricate and facilitate movement of the impaction or obstruction, psyllium and magnesium sulfate to promote gut motility and provide a bulk forming laxative, as well as alternative treatments such as laser acupuncture and fecal transfaunation.³ Administering non-steroidal anti-inflammatory drugs (NSAIDs) helps alleviate pain, but does

¹ Hatt, J. M., & Clauss, M. (2006). Feeding Asian and African elephants *Elephas maximus* and *Loxodonta africana* in captivity. *International Zoo Yearbook*, 40(1), 88-95. https://zslpublications.onlinelibrary.wiley.com/doi/pdf/10.1111/j.1748-1090.2006.00088.x?casa_token=94HX3L-t_ewAAAAA:VrS4tdwI8xZ7dfr_nv8Qrr7-8Dxy0HEmTccHQJ5P8XsBY8Q-kJo_6vz_ws-hOxNVaDbzhL47J4FZxA; Ullrey, D. E., Crissey, S. D., & Hintz, H. F. (1997). *Elephants: nutrition and dietary husbandry*. East Lansing, MI: Nutrition Advisory Group. <https://nagonline.net/wp-content/uploads/2014/01/NAG-FS004-97-Elephants-JONI-FEB-24-2002-MODIFIED-2.pdf>.

² Dumonceaux, G.A. (2006) 'Digestive System' in Fowler, M. and Mikota, S. (Eds) *Biology, medicine, and surgery of elephants*. Blackwell Publishing, Oxford, U.K. pp. 299-307; Greene, W., Mikota, S., Pitcairn, J., & Ryer, M. (2019). Clinical Management of a Complete Gastrointestinal Obstruction and Ileus in A Geriatric Female Asian Elephant (*Elephas maximus*). *Journal of Zoo Biology*, 2(1), 01–04. <https://doi.org/10.33687/zoobiol.002.01.2217>.

³ Rajeev, T.S. (2018). Proceedings of the EAZWV/AAZV/Leibniz-IZW Conference. Prague, Czech Republic; Greene et al., 2019. *Supra* note 2.

not address the *cause* of colic. These drugs can also cause secondary gastrointestinal upset and must be administered and monitored appropriately, including the addition of gastric protectants and alternative pain management options in the event of an adverse reaction or failure to achieve adequate pain control.

Concerns Raised by Buffy's Necropsy

Buffy's necropsy indicates that on January 19, Monterey Zoo staff noticed her holding up one foot, lying down and getting up, and refusing food and water.⁴ These were "her typical signs of colic"—she apparently had a "long history" of it, including of ingesting rocks—so over the next two days the facility treated her with its "typical" regimen of Banamine (an NSAID) and attempted to offer her grain, mineral oil, and browse. The report also lists exercise as part of the treatment, but notes that Buffy was kept indoors for two days because of a storm. There were "sporadic positive results" but her food consumption was "minimal." Two days later, staff noted partially chewed food in Buffy's stall and attempted to check her teeth for a problem or infection. They weren't able to do so. The facility did blood testing "for concern of her condition being more than just colic," but the results "didn't seem to flag anything significant." These results are not included with the necropsy, so we cannot assess them.

There is no clinical history noted for the next eight days. On January 29—the eleventh day of Buffy's colic—she had an elevated temperature, so she was put on an antibiotic. The facility took another blood sample, but the results aren't noted or attached. The next day, the zoo consulted with an individual whose name is redacted, and decided to do "detailed testing" on blood, urine, and stool samples. The blood test results indicated that Buffy had muscle inflammation and damage, which the consultant said signaled possible salmonella infection. On day 16 of Buffy's colic (February 3), the consultant checked with another individual whose name is also redacted. The second consultant indicated that Buffy's Banamine dose was excessive and recommended using a different NSAID and a gastric protectant "in the event her stomach was upset or ulcerated from the Banamine." On the morning of February 5, Buffy was found dead in the barn.

Buffy's necropsy indicates that the Monterey Zoo failed to perform key diagnostics to assess the cause of Buffy's colic, and therefore failed to treat it appropriately. Her illness persisted for more than two weeks, but a rectal exam, trans-rectal ultrasound, or endoscopy were never performed. It's not clear whether Buffy's stool was ever screened for sand, and there is no indication that sand impaction was suspected, despite Buffy's history of ingesting rocks. Although a blood test was performed two days into her illness, it's not clear who reviewed the results. A fecal test wasn't performed until the twelfth day of colic. Salmonellosis is a common cause of colic and can be rapidly fatal and yet it took over 10 days to screen for this. There are notes that she was refusing food and water for periods of time, and yet there is no record of attempts to assess her hydration status or provide supplementary fluids as basic supportive care. If one analgesic alone is not providing adequate pain relief—as appears to be the case here—there are additional analgesics and products that can and should be safely used together as multimodal analgesia for pain. Buffy is also noted to be "a bit neurotic and anxious," which can contribute to elevated glucocorticoid levels and cause GI inflammation and ulceration, yet gastric protectants were not initiated until an external contact was consulted 15 days after her initial presentation of colic.

⁴ The necropsy includes a clinical history. It is not clear whether this was written by Monterey Zoo staff, or whether it was written by the zoo's veterinarian.

Questions to Evaluate Buffy's Care

- It's not clear whose notes appear in the "clinical history" section of the necropsy. Are the notes from the Monterey Zoo's vet, or from its staff?
- When did Monterey Zoo staff first contact their vet about Buffy's colic? When and how often did he/she evaluate Buffy?
- The necropsy indicates that Buffy has a "long history of colic," including one instance where her illness lasted 4-6 days, after which she passed a large amount of gravel in her stool. In this instance, Monterey Zoo followed its "typical treatment" of Banamine, grain, mineral oil, browse, and exercise. How often did Buffy's prior colic episodes occur? When did Buffy start having them? How many times has Buffy experienced colic in the past? What diagnostics or treatments were performed for those past episodes? What efforts did the Monterey Zoo and its veterinarian make to seek an underlying cause of colic and prevent these episodes from recurring?
- Ingestion of gravel or sand could be an indication of improper feeding techniques, such as offering food on a sandy or gravel substrate. What, if any, changes did Monterey Zoo make to its husbandry practices and elephant diet to minimize the risk of colic when it previously found rocks in Buffy's stool?
- The Monterey Zoo's elephant enclosure substrate appears to consist entirely of sand or dirt. What is the facility doing to ensure that its remaining elephant, Butch, does not ingest sand?
- There is no record of standard diagnostics being performed: there was no rectal exam, no ultrasound to determine the possible causes of colic, and no endoscopy to scan for an obstruction. Why weren't these standard diagnostic procedures performed?
- Why did 11 days pass before "detailed" testing on blood, urine, and stool was performed? The results of the fecal and urine tests are not reported. What did they show? Was a fecal screening for sand, blood, infection, or parasites ever performed?
- Why did 12 days pass before Monterey Zoo or its vet contacted an outside consultant on Buffy's colic?
- On day 16 of Buffy's colic, an external consultant informed the zoo that its Banamine dose might be excessive. She recommended a different pain medication, and a gastric protectant "in the event [Buffy's] stomach was upset or ulcerated from the Banamine." Was the Banamine dose excessive? Why did it take more than two weeks to determine this? Why wasn't a gastric protectant used alongside Banamine to begin with (as commonly recommended)?
- Buffy's colic began on January 19 and she was found dead on February 5, after 17 days. Why are there no notes on Buffy's health or treatment between January 21 and January 29? What occurred during this eight-day period? What treatments were provided during that time?
- How frequently was Monterey Zoo staff monitoring Buffy in order to intervene quickly if needed? Were they monitoring her overnight? Did the facility have a plan to provide euthanasia, given Buffy's ongoing and apparently unmanageable pain?
- Prior to the colic episode, Buffy had ventral edema, which the Monterey Zoo treated "homeopathically" with cooked coffee grounds. This is not a recognized veterinary-prescribed treatment for edema, but the notes say that the zoo has "treated" edema this way in the past. There's no indication that additional diagnostics such as bloodwork, urinalysis, ultrasound, electrocardiography, or fecal testing were performed to rule out serious causes of edema (including heart disease, cancer, reproductive tract disease, gastrointestinal-protein-losing conditions, kidney disease, and some infectious diseases). Who prescribed coffee grounds to Buffy? How much was she given? How often has this been used in the past? Why were no other diagnostics performed?