AFRICAN SEA TURTLE NEWSLETTER

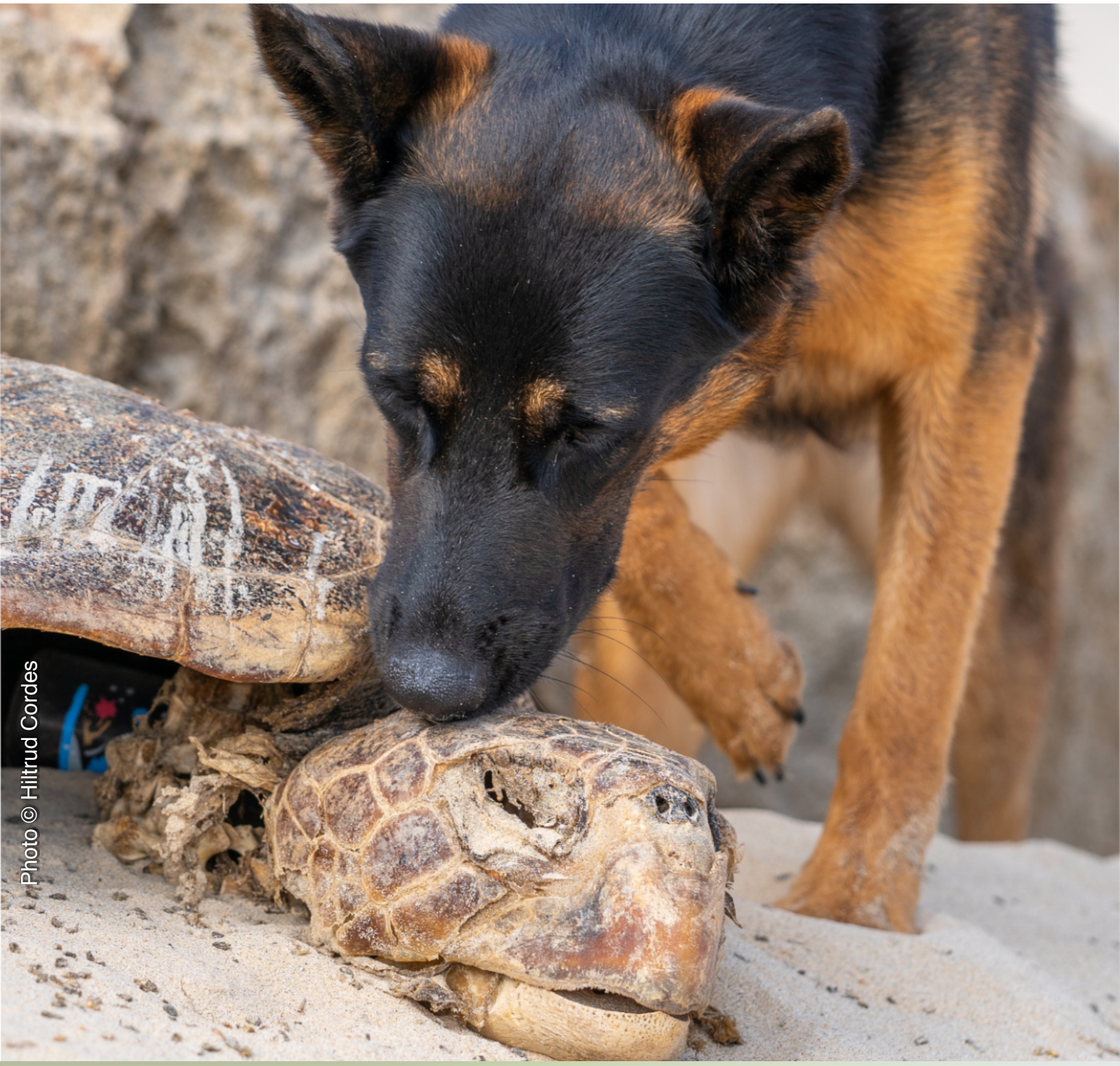

Photo © Hiltrud Cordes

Conservation dog, Karetta, is trained to detect turtle meat and poached turtle remains on Boa Vista Island, Cabo Verde.

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Wildlife Conservation Dogs Used in Sea Turtle Protection on Boa Vista Island, Cabo Verde

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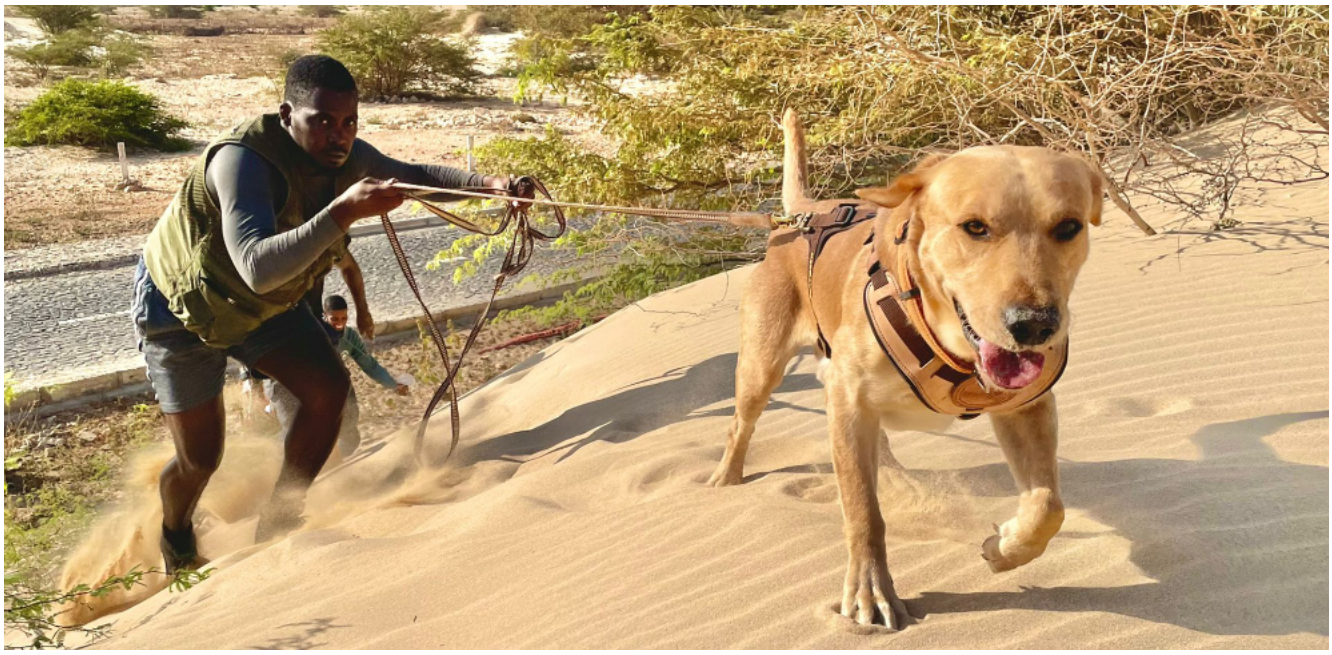
Dogs' special ability to detect and distinguish scents has made them very valuable in search work across a variety of different fields. Compared to other scent detecting instruments, a dog's nose is reliable even when molecules from other odors may interfere and when odors are present in minute amounts (Lesniak *et al.* 2008). Although they were first used in conservation over a century ago, it is only recently that conservation dogs have become popular (Beebe *et al.* 2016). Traditionally, conservation dogs are used to search for rare species and their scat, or diseases and pathogens (Beebe *et al.* 2016). Dogs that are used to detect contraband items such as poached animal parts or for tracking in police settings are known as wildlife dogs (Hurt and Smith 2009).

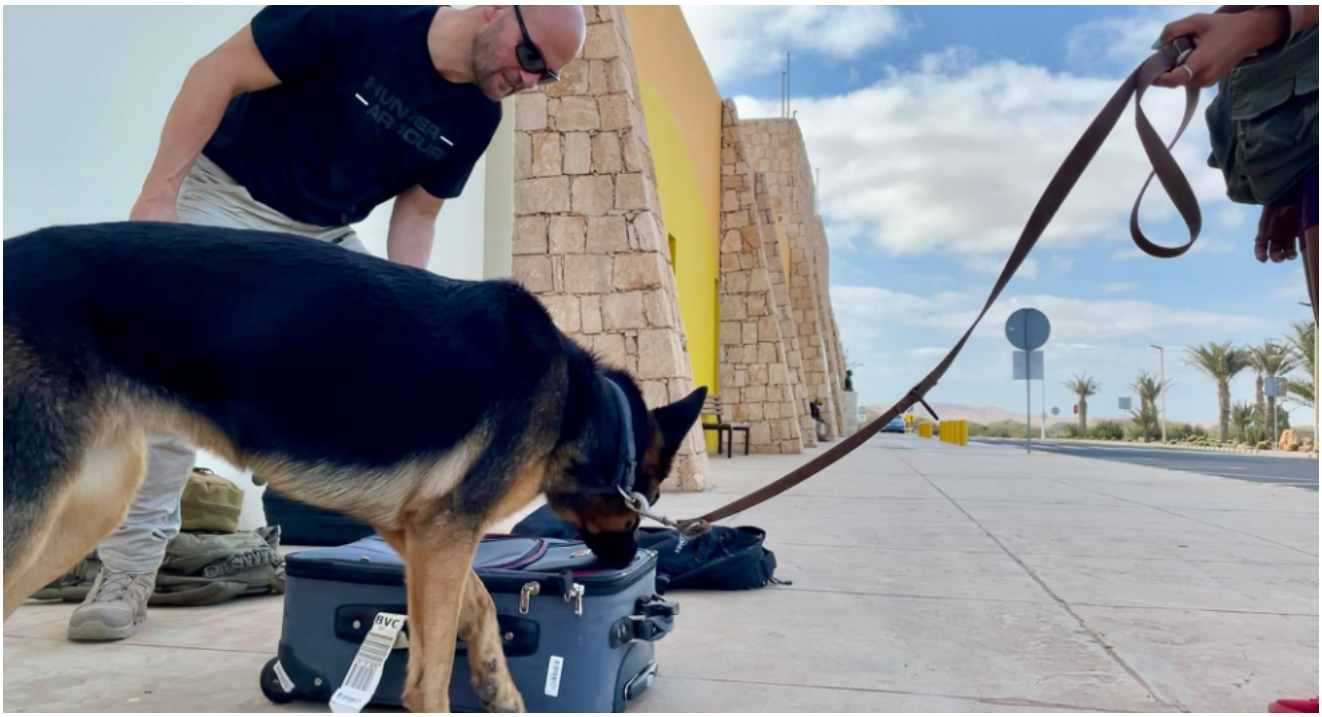
Fundação Tartaruga has explored the use of wildlife dogs and has created a special dog team that provides technical support to law enforcement to reduce sea turtle poaching on the island of Boa Vista, Cabo Verde. For this, the dogs are being trained to track and identify suspects and sniff out evidence that may lead to the arrest of active poachers.



Kelo with his handler Carlos Monteiro during mantrailing training (Photo: Marcel Maierhofer).

The dogs and their handlers are receiving training and support from world-renowned dog trainer and consultant, Marcel Maierhofer (http://www.mantrailing24.de), who has trained other wildlife conservation dog teams such as those of Virunga National Park in the Democratic Republic of Congo. The dog team will have two major tasks: mantrailing and searching. During mantrailing, the dogs are taught to track the scent of people using articles that they have worn or touched. A dog's nose is a very powerful tool that can create a scent profile for each individual and follow the trail of scent that a person leaves behind (Woidtke 2016). Dogs are

also said to “smell time” as they can determine the freshest trails and can detect the sequence of people who touched an item (M. Maierhofer, *personal communication*). Once training is completed, we will be able to use mantrailing to gather leads as to a suspect’s whereabouts and identify people of interest for further investigation by the police. Searching involves familiarizing the dogs with the scent of target items and training them to indicate the presence of those items to their handlers upon detection. Our dogs are trained to search for turtle meat and eggs to help law enforcement collect proof of poaching. With the help of their sensitive noses, the dogs will reduce investigation time and increase confidence in the outcome of searches. The island’s national police have already expressed interest in having our dogs help them carry out routine searches for contraband at the airport and shipping port.

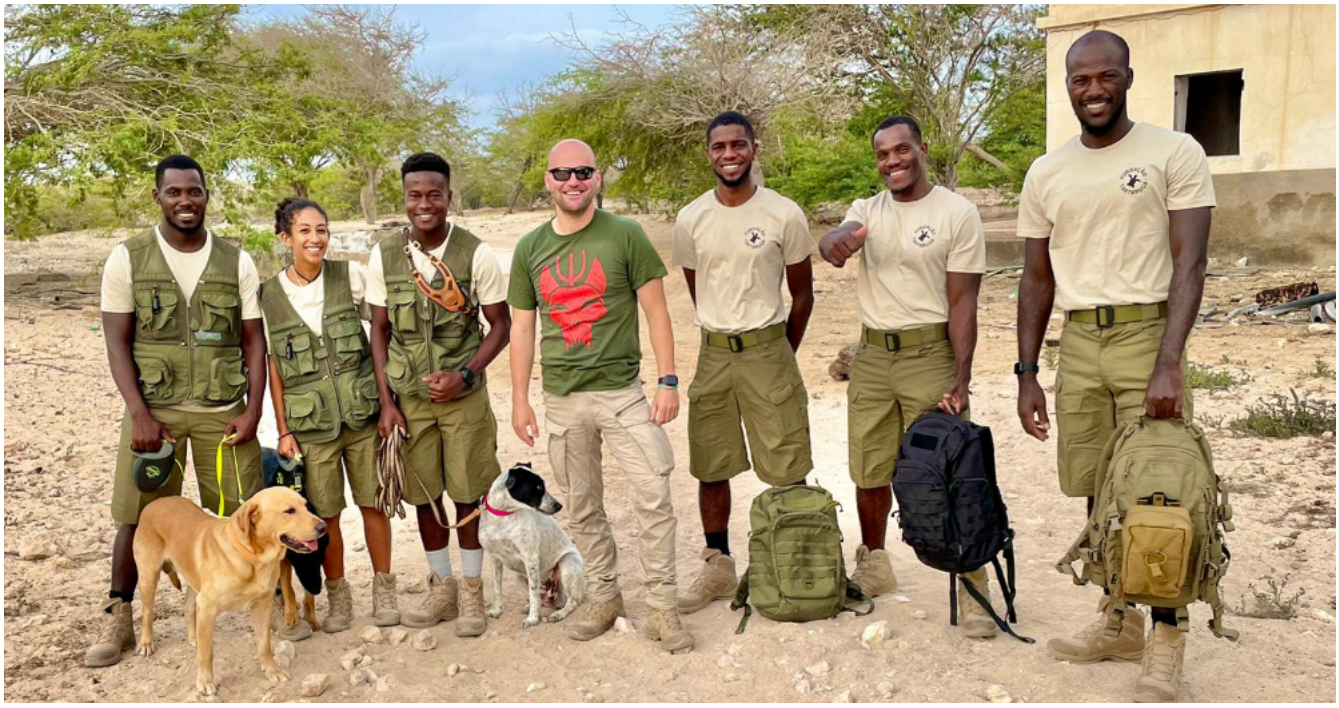


Karetta’s training at the airport to detect turtle meat hidden in luggage. Photo: Jose Luis Rodrigues.

The original dog team consisted of a brother and sister pair of Labrador Retrievers named Kelo and Karetta I. They were born four years ago in Slovakia and received training in Switzerland for the first couple of years of their life before travelling to their new home on Boa Vista in 2019. Their names are special because they are derived from the Latin names of the two most common sea turtle species found in Cabo Verde: Kelo comes from “*Chelonia mydas”* or Green turtle, and Karetta from “*Caretta caretta”* or Loggerhead turtle. After sustaining a leg injury that required surgery, Karetta I was returned to Switzerland where she remains with her first trainer. The dog team is now comprised of three dogs and their respective handlers. Kelo and his handler Carlos Monteiro practice higher level exercises than the other team members, because of the previous training that Kelo received, and their specialty is mantrailing. Kelo is an extremely friendly and calm dog that loves people, and especially children. Next to join the team was our one-year-old German Shepherd mix named Karetta II. She joined the team at only four months old as a namesake and replacement for Karetta I. Her breed is known for working as detection dogs and she has excelled in all her trainings. She works with Stephanie Butera (lead author of this article) and has quickly become the best at searching for turtle meat. Currently we are focusing on mantrailing exercises that push her to use her nose to follow the trail by slowly removing visual cues. Finally, we have Zeda, our six-year-old mixed breed who works with João Oliveira. She is our Director’s family dog, but she joined the team after showing interest in participating in trainings and because she is highly motivated to

please her handler. She began training as an adult, so she is still on a more basic level than her two teammates, but she loves working and has come a long way in a short time.

The training phase of the project was planned to be completed in time for the 2021 nesting season, however due to the COVID-19 pandemic that made it impossible for Marcel Maierhofer to travel to the island, the training was interrupted. After struggling to advance through virtual training sessions, Marcel Maierhofer was finally able to visit in September 2021 and the training process has resumed. Despite still learning their role, the dog team spent the two previous nesting seasons living in one of our research camps on the beach of Boa Esperança, located on the northern coast of the island. There they support staff and volunteers with patrolling the beaches at night to deter poachers and they continue their training during the day. During the off-season, the dogs live in the town of Sal Rei where they are always cared for by their handlers, and they travel all over the island for training so that they get accustomed to all types of working environments.

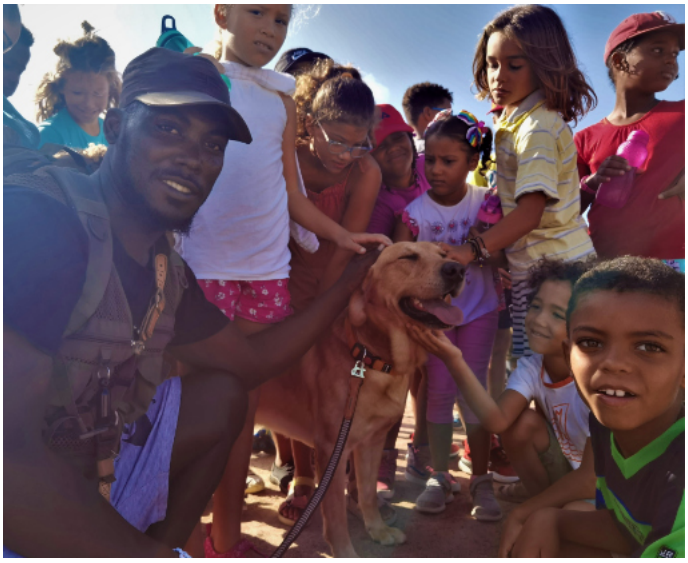


The dog team (left) and the drone team (right) with trainer Marcel Maierhofer (middle). Photo: Fundação Tartaruga

Apart from continuous training, the team also uses the off-season to educate communities about our work and more broadly about sea turtles and environmental conservation. We organize events with schools and bring Kelo along to demonstrate his skills to the children. Kelo really captures the attention of children, which allows us to have important discussions about conservation while they pet and cuddle him. Since consuming sea turtle meat is a tradition in parts of Cabo Verde, it is important that we educate communities about the value of turtles as living organisms and about alternatives that are available to them.

The dog unit is an important part of a larger team that delivers technical assistance and information to the national police and the Protected Area management. The team consists of two special units: dog and drone, but all members are trained to work on the ground in pursuit of evidence and information. The drones are equipped with a thermal camera that allows us to patrol the beaches at night and record footage that we can hand over to the police (Reischig *et al.* 2018). The key to our success is teamwork and effective communication. Despite being specialists in their own fields, the dog and drone units must bring their talents together to work towards a common goal: to help reduce sea turtle poaching to a minimum on the island of Boa Vista. Since the team's conception in 2017, there has been a drastic reduction in poaching on

the island, largely due to the deterrent effect of constant surveillance and a change in national law that can put poachers in jail if caught. Our dog and drone team is one of a kind and we hope to set an example for what is possible for conservation.



Kelo with his handler, Carlos Monteiro, enjoying the attention from children during a school visit. Photo: Stephanie Butera.

During a weeklong intensive training with Marcel Maierhofer in November 2021, the dog team made steps forward in mantrailing and search training and the whole team learned and practiced various nighttime surveillance techniques. We were also taught best practices for documenting information and evidence and preserving poaching scenes for police investigation. One of the first and most important decisions that the team must make when arriving at the scene of a crime is whether it is worthwhile to search the area and track the suspect or to concentrate on preserving the scene and gathering information. Our focus as a team is to provide the police with evidence leading to the identity of a suspect so that they can make a case for their arrest. The ability to make good decisions quickly and under pressure is key and is the focus of the team, along with working as a cohesive unit, as we train and get ready for the up-coming nesting season.

Thanks to the generosity of partners and donors, this year the dog and drone teams received technical equipment and materials that will facilitate work and increase the efficiency of the surveillance unit. While MAVA and PPI supported the salaries and training expenses of the team, BIOPAMA provided us with funding to buy two cars that are used for surveillance of Boa Vista's beaches on a nightly basis, and two pairs of night vision binoculars that have been added to the arsenal of tools that we can use to secure our advantage over poachers. Used in conjunction, dogs, drones, and radios for constant communication of information between the teams, we can effectively secure the beaches and confidently determine the presence or absence of potential poachers. Each member of the team has also been provided a uniform and a cell phone that increases productivity and gives an aura of professionalism that is undeniable.

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