

ALAIKA'S CUBS, OBELIXA AND OTHER DEVELOPMENTS

This will be the first newsletter where most of the reports are written by my students. It is a really good feeling to know that so many people participate now in the project and share our experiences in the Sperrgebiet National Park. Therefore I just want to mention a few words about what else has happened in the past three months:

- Alaika's cubs are 5 months old. She predominately keeps them at Jungle den, but has moved them occasionally to other dens. I have set-up camera traps at two dens including Jungle den to monitor their movement.
- I have been trying to find Obelixa to do a data download several times, but unfortunately can't get a signal. I also don't capture her often on the camera traps at E-Bay ghost town any more. I'm not sure whether the collar is malfunctioning or whether she rests inside the old plant, so that I can't receive the VHF signal. Gino will try to locate her by air at the end of September.
- Sarah Edwards has started with her PhD study, looking at human-wildlife-conflict along the Sperrgebiet and Namib Naukluft Park boundaries. She is based on farm Namtib and has already set-up a number of camera traps. Her assistant Cristina is arriving soon and will help her to set-up hair snares and rub station. We will keep you informed about the progress.
- Namdeb has set-up six brown hyena warning signs, four on the road between Kolmanskop and E-Bay and two in the mining area. I have also already given a talk to raise awareness about carnivores in the mining area and I'm working closely together with Namdeb's Environmental Officer at E-Bay to reduce any conflict.

I hope you enjoy the reports of the two Master's students Eric and Jack from the University of Exeter, Inga, our Bachelor's student from the University of Van Hall Larenstein and our PhD student Sarah, from the Royal Holloway University in London.



SARAH

Field work for the Human-wildlife conflict study began at the end of June when I set up camp at Namtib, situated on the D707, around 120km North of Aus. With help from Linn and Thorsten, the large tent was quickly erected and my new home set up. Night time temperatures were getting down to -5°C, but that didn't stop a spotted hyena coming to check out my tent within the first two weeks, and testing the effectiveness of the camera trap protective housing.

Six camera traps were soon set up around Namtib and it soon became apparent that the cattle, unlike my original fears of hyenas and baboons, were the real problem animals. They started using the camera trap mounted on the tree as a scratching post, often changing the angle completely. After some brain storming it was decided to try a chicken wire cage filled with stones to place the camera trap in. The cattle also showed their thoughts on the matter and had also used it to itch themselves with. Currently the battle continues with my strengthening and tweaking the cage design hoping to at last deter the cattle.

One camera trap placed at a natural spring on Namtib called Porcupine Point has given some puzzling images. Two appearances from a mystery animal have got us all guessing. Both times the animal has been caught on camera it has only revealed the top of itself, we are yet to see the whole thing. Guesses have ranged from porcupine to civet, and we eagerly await the next appearance! Other camera trap images have been easier to identify and have shown jackal, Cape fox, spotted hyena, secretary bird, kudu, oryx, springbok, steenbok, klipspringer and even a lappet faced vulture using the water trough. Currently there are also camera traps placed out at Gunsbewys and Tsirub, which I am excited to check.

I also spent 24 hours in the hide sitting at the water hole. Within an hour I was quickly rewarded with a jackal visiting the trough to drink, followed by the entire herd of cattle. The two zebra x horse hybrids spent most of the morning checking out this strange box containing a human. Throughout the day oryx and springbok visited to drink but no more carnivores were seen, until two more jackal pitched up just as I finished and started walking back to the car. The next phase of the project will involve setting up hair snares and more 24 hour cattle post observations, which I am very much looking forward to.

I would like to take this first opportunity to thank Ingrid for this massive opportunity and all the participating farmers whom have been so helpful and interested in the study. A special thanks to Linn and Thorsten Theile from Namtib for all their help and enthusiasm and for allowing me to set up camp there for the next two years.



We are currently looking for a volunteer for the HWC study from October to December 2012. It is not essential for a background in biology, just a keen interest in wildlife and being prepared to camp in basic conditions. Interested applicants should contact Ingrid via email.



ERIC

Howdy! My name is Eric Murray and I have just recently completed my Masters in Evolutionary and Behavioural Ecology at the University of Exeter in Southwest England. Originally from Texas, I had no idea of the amazing journey I was about to embark upon when I accepted my admission to this course just over a year ago. Not only would I be moving overseas to the UK, but I would also be making yet another move to the most beautiful, serene place I've ever set foot – the desert coast of Namibia. It is here that I would spend 3 months at Van Reenen Bay in the Sperrgebiet studying the incredibly fascinating black-backed jackal.

After receiving the list of potential research projects from the university faculty, I found myself with a lack of enthusiasm; all the projects offered failed to inspire me. I decided to take matters into my own hands and attempt to generate a project of my own – one that I would truly be passionate about. The relentless search to meet my selective criteria eventually led me to the Brown Hyena Research Project. Instantly sparking an interest, I contacted Ingrid Wiesel with hopes she would have something I could do to help with her brown hyena research. Unfortunately, she didn't have anything available. However, she instead offered me the possibility of studying an entirely different species that also inhabits Namibia's desert coast – the black-backed jackal. I immediately grabbed hold of this unique opportunity, and after a long approval process at the university, I was finally off to Namibia for the adventure of a lifetime.

At Van Reenen Bay just 80km south of Lüderitz, the black-backed jackal lives in a harsh desert environment where food would normally be scarce. However, there is a 2-kilometer stretch of beach that is home to a permanent breeding seal colony. The shoreline itself provides resources that inland jackals do not have the pleasure of indulging in, such as washed up fish and other dead marine organisms in which they frequently scavenge. But more importantly – or what I set out to find – is that the seals themselves provide the bulk of the coastal jackal's diet. Many studies have delivered some proof of this, but the general consensus is that the majority of seals eaten are scavenged upon – either by natural death or kills made by brown hyenas that also frequent the colonies. My research aimed to provide evidence that the coastal jackal population relies heavily on active hunting of seal pups for their primary food source. Though such claims have been made, there have been no behavioural studies to date that can truly describe what is happening on a daily basis. I was given such a great opportunity to dive into some really novel research.

I signed on to this project imagining the beach would have just a few jackals roaming around – sometimes having to wait hours before even one showed up. I couldn't have been more wrong. You can imagine my surprise when upon arrival, a quick scan of the beach revealed about 20 jackals. And after an hour or so, I witnessed my first successful hunting event. Watching the dynamics of these hunts is extremely interesting. Each jackal within the group almost seems to have a job or role within the hunt. One seems to target a seal pup followed by the group working together to harass the adults in order to split the group and isolate the pup. Once the prey is secured, one jackal tends to hold the neck or throat, others begin to try and open it behind the front flippers, and one or more take on the role of guarding the kill as other scavenging jackals on the beach begin to accumulate. The kill is both an



Me during a beautiful day of jackal observations at Van Reenen Bay



2 jackals immobilizing a pup in what ended as a successful hunt

Brown Hyena Research Project

incredible and saddening site to behold. On one hand, you are watching highly adapted predators cooperate and hunt to survive. Discovery Channel doesn't do it justice. But on the other hand, you are also watching a baby seal struggle and fight for its life. Before getting used to this scene, I had to repeatedly tell myself, "This happens every day – whether I am here to watch or not. I might as well make some good science out of it."

With that being said, the hourly jackal counts were usually between 20 and 50 individuals. When a kill was made, almost every jackal on the beach surrounded it, waiting for an opportunity to feed. Those that made the kill were able to defend it – but not for long. Only up until the first mobbing event began. Mobbing is when all the jackals positioned around a kill rush in, creating a chaotic feeding frenzy. The most that were counted surrounding a kill was 70. By the end of my 3-month study period, an astonishing 753 hunting attempts were observed with 58 of those ending in a successful kill. This was more than enough data to create an amazing Masters research project!

I can honestly say that the time I spent in Namibia at the Brown Hyena Research Project was hands down the greatest experience of my life. I had the privilege of meeting and working with some phenomenal people in such a beautiful place. I miss my humble little desert home every day. I miss the jackals, the seals, and the sunsets. I will definitely be back as soon as possible to continue the jackal research!



One jackal manages to sneak away with a reward from a recent kill



Over 20 jackals mobbing a seal carcass just moments after a kill



A hunting group of 7 jackals attempt to take down a seal pup



A curious jackal comes over for a closer look



Two's company, three's a pack

By Jack Merrifield

In March 2012 Eric Murray and I set out from London for Lüderitz. As Masters' students at the University of Exeter, England, we had to conduct a research project in the field of Evolutionary and Behavioural Ecology. Eric had contacted Dr Ingrid Wiesel of the Brown Hyena Research Project many months before and it was through her support, knowledge of the local environment, and provision of scientific resources that enabled us to plan and implement our projects. The study species for our research was the Namibian Black-backed jackal, a widely

JACK

distributed canid that frequents Van Reenen Bay Cape fur seal colony on the Sperrgebiet's desert coastline. This seal colony acts as a clumped food resource that the jackals depend upon throughout the year. Jackals are recognised almost exclusively as opportunistic predators, only hunting circumstantially and preferring to scavenge off other predators kills, such as those made by Brown Hyena and Leopards. In scientific literature there isn't much evidence to suggest that Black-backed jackals prefer to hunt rather than scavenge, and it is even rarer to read about jackals hunting cooperatively. However, recent reports suggest that jackals at Van Reenen Bay are hunting seal pups in small groups. I doubt even Ingrid was ready for what the Van Reenen Bay jackals had in store for us during our first visit to this seal colony.

Brown Hyena Research Project

Within an hour of our arrival at the study site, a pair of patrolling jackals set about dispatching a seal pup that was caught in no-man's land between the safety of the sea and a group of resting adult seals from where it had strayed from. On the third day we witnessed three successful seal pup kills involving groups of three and four jackals working together. During this time we also observed the chaotic mobbing events that follow a jackal hunt. Jackals, that were uninvolved in the initial hunt but in the surrounding area, would rush to the kill site the moment a seal pup was isolated and subdued. These waiting jackals would accumulate in greater and greater numbers and eventually overcome the jackals that had made the kill in order to eat. Often as many as 60 jackals would flood a carcass in what can only be described as a scavenging frenzy. Despite the dramatic feeding events that follow a successful kill I found myself particularly interested in the hunting events that led up to mobbing, whereby hunting jackals would patrol the colony in various group sizes and work together to isolate, kill and defend a seal pup. I returned to our research station, and base of operations in the field, that evening with even more questions about these jackals' hunting behaviours than I had before we left London.



Photograph by Jack Merrifield

Many social predators are thought to accrue fitness benefits by hunting cooperatively. Although, few studies have shown conclusively that these benefits are influenced by hunting group size. Moreover, there is little evidence to suggest that individual group members coordinate roles during a hunt. My study aimed to elucidate factors influencing various aspects of cooperative hunting by considering the following questions: what factors influence hunting occurrence and success? How does group size influence the duration of a hunt and time committed to a particular role? And how do group size, and the roles individuals play during a hunt, affect the time they spend feeding? As the project took shape Eric and I began the lengthy process of collecting data during

three week stints at the study site. Over time it became possible to identify individual jackals based on their individual body markings, size, gender and colouration. Our findings revealed that group size is a key factor affecting hunting success. Furthermore, group size significantly influenced the amount of time individual jackals got to eat during feeding periods. Groups consisting of up to nine jackals were repeatedly observed cooperating during hunts. Individual jackals were found to significantly influence the time they spent eating, depending on the role they took during a hunt.



Photograph by Jack Merrifield

Of all the roles investigated, one in particular showed evidence of the jackals' ability to hunt cooperatively; within every observed group size, all members worked together in order to defend the kill and its surrounding area. Due to this need for cooperation, the optimal group size for a successful hunt involves three to four jackals. We are currently making our research available for publication and I am writing proposals for a PhD to further our research in the near future. I intend to return as soon as funding has been secured to continue identifying the parameters in which optimisation is achieved during cooperative hunting by these fascinating social predators. I am in awe of what Ingrid has achieved with the Brown Hyena Project and feel privileged to have been a small part of it and conduct research in the Sperrgebiet. The opportunities she affords many young scientists has been an inspiration and I hope to collaborate closely with her and its members in the near future.



INGA



Figure 1 A 360° view from one of the mountain ranges within the Sperrgebiet.

It's me again, Inga Jänecke. As I already wrote in the Newsletter of March 2012, I was going to come back to Lüderitz again soon at the beginning of April 2012. This time it wasn't for an internship but for collecting data for my Bachelor Thesis. I wanted to make a comparison of sign survey data and GPS telemetry data to use for habitat and core area analysis. As the GPS telemetry data were already available for several brown hyena, I only had to do a sign survey for brown hyena signs (dens, latrines, paste marks and resting sites). Therefore, I mapped the territory of the Wolf Bay Clan in the Sperrgebiet on foot and collected data on the brown hyena signs. During my internship, I had already spent a lot of time in this area of the Sperrgebiet,

either checking camera traps, downloading telemetry data or collecting data at the Wolf Bay seal colony. Already at that time, the desert fascinated me and I was wondering how it would be to hike there. Therefore, I was really excited to finally start my data collection. I was looking forward to it a lot, but at the same time I was really nervous and a little bit scared too. Nevertheless, I wasn't scared to dare it and it totally paid off. I had an amazing time. These two and a half months were a big challenge – the biggest I have ever experienced until now. I spent an amazing time out in the Sperrgebiet with a lot of moments I won't forget.

Although I enjoyed being out in the field, it still was a lot of work. I was in the field 6 days a week for at least 6 hours per day, walking transect for transect and looking for signs. On some days, time flew by as I found a lot of signs, but there were also many days where I only found one or two signs. Nevertheless, after two and a half months I had found 664 signs in an area of 64km² and I walked a distance of 1023km. During all this time and kilometers, it wasn't always easy to find signs and I always had to take good care. Sometimes I had to climb up a steep hill or gully and suppress my fear of heights. But I managed it successfully and finally lost my fear. Often I thought that hyenas must be insane to have their resting sites so high up, but then I realized that I wasn't any better as I also climbed up there. But most of the times my efforts paid off by a beautiful view. Often I used these places for my lunch breaks as I could take some time to just enjoy nature. Other than the fact of the beautiful view, I understand the choice of resting site places by brown hyenas much better now. These places were not only protected from the heat of the sun but also from the wind, which is present most of the time.

As I was somewhat following the brown hyenas, I always had to be careful when approaching resting sites and dens especially, as it was possible to come along a hyena. But unfortunately I never saw a hyena during the whole period. Instead I had jackals following me for hours and keeping me company. It was impressive to see them just several meters away and without any fear. Furthermore, I spent some time at the seal colonies again. There I had the feeling of being set back in time to when I drove there during my internship.



Figure 2 Me having reached the top of Albatrosskop the highest mountain I had to climb.



Figure 2 The trail walked for data collection.

As it is always the case with things that you enjoy, they pass too fast, and so did my time in Lüderitz. When I had to leave, I had the feeling I just arrived. And although I was really exhausted from the whole data collection and all the hiking, I was sad that it finally found an end.

But I can already say that it wasn't the last time that I will be in Lüderitz and hopefully also not the last time helping Ingrid with the brown hyena project.

CAMERA TRAP IMAGES



I moved the camera trap at the southern end of Van Reenen Bay from the road to a bush facing a well-used paste mark. The new location works well and I will also move the camera at the northern end next time.



There is still activity at the den at E-Bay. The cubs (one of them on the photograph on the right) are 15 months old now and possibly independent of their mom, Obelixa.



Obelixa's 15 months old cubs



Obelixa together with another hyena – maybe her new mate?

FUNDRAISING AND DONATIONS

The **Porcupine Pub & Grille** in Utah, USA, has donated US\$ 200 towards the human-wildlife-conflict study. Sarah will use these funds to purchase a camera trap.

Linda de Jager from **Endgame Media** has donated N\$ 300 to the Brown Hyena Research Project. She is raising funds through sales on her web page www.endgamemedia.co.za – we thank the following people for their donation: Anton Diedericks, Bert Peskens, Reg Hall, Nkosi Gugushe, Colin Drew, Jaco Fourie, Chris Greyling, Nicholas Goslar, Kathleen Bignaut, Richard Yeomans, Michael Moody, Matthew Harper, Darryl Lancock, Ettiene Scwagele, Chris Groenewald, Hylton Bland, Nick Armaradi, Kate Beck, Natasha du Preez, Mr Computerguy, A Wallace, Abri Fourie, Cornel Radyn.

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