






















Overberg Renosterveld Trust: Black Harrier Project: Updates from tracked birds, 2020-2024














Thanks to the incredible donations from ORT supporters, we have managed to raise enough funding to purchase 24 tags over the last four years (three of which have been used twice as they were still functional after being retrieved from dead birds, and six of which just arrived in South Africa and will be deployed in 2025). Most of the tags have been used to tag renosterveld-breeding harriers in the Overberg, but because of our collaborative work with Dr Rob Simmons, as well as our concerns around the impacts of windfarms throughout the species' breeding range, some of the tags (3) were used by Rob to tag birds outside of the Overberg. This report covers the 18 renosterveld-breeding birds that the ORT (with much assistance from Rob) has tagged since 2020.

Name	Update	Tracking map
<p style="text-align: center;">♂</p> <p style="text-align: center;">GOEREESOE MALE #47 (Goereesoe)</p> 	<p style="text-align: center;">❤️</p> <p>This male never left the Overberg over the two years that his tag was functional. Last signal from 27th Dec 2022, but bird is alive! Seen on same breeding site in both 2023 & 2024 (tag clearly visible).</p>	 <p style="text-align: center;">26 Nov 2020, signal lost 27th Dec 2022</p>
<p style="text-align: center;">♂</p> <p style="text-align: center;">GOEREESOE MALE #48 (Goereesoe)</p> 	<p style="text-align: center;">⚰️</p> <p>After breeding at Goereesoe in 2020, he spent time at De Hoop NR and we then lost his signal for about 10 months. On 5th November 2021, he was killed through a collision with a wind turbine at Excelsior Wind Energy Facility.</p>	 <p style="text-align: center;">26 Nov 2020, died 5 Nov 2021</p>
<p style="text-align: center;">♂</p> <p style="text-align: center;">GOEREESOE MALE #88 (Goereesoe)</p> 	<p style="text-align: center;">❤️</p> <p>After breeding at Goereesoe in spring 2021, he headed east on 12th February, travelling over 800km in just 5 days, settling about 70km south of Bloem where he stayed until 4th April. He then moved further northeast to near Vrede, Free State, where he stayed until early July, when he headed south and back to Goereesoe to breed in spring 2023. He stayed on here the whole year and is breeding at Goereesoe again in 2024.</p>	 <p style="text-align: center;">26 Sep 2021 - current</p>

Name	Update	Tracking map
<p style="text-align: center;">♂</p> <p>AMES (Tarentaal), named by donors who wish to remain anonymous</p> 	<p style="text-align: center;">☩</p> <p>After breeding in the Overberg in 2022, he spent the rest of summer and autumn west of Cathcart, Eastern Cape. He then travelled up to southern Namibia (where it appeared he might have been planning to breed!) but was killed by an aerial predator near Springbok.</p>	 <p style="text-align: center;">4 Oct 2022, died 5 Sep 2023</p> <p>Tracker was retrieved and still in perfect working order; fitted by Rob to another bird ('Houdini') at the Hopefield Wind Farm, where some exciting research on blade-patterning as a mitigation measure for bird strikes is being tested.</p>
<p style="text-align: center;">♂</p> <p>HWK MALE (Haarwegskloof)</p> 	<p style="text-align: center;">☩</p> <p>Didn't leave his breeding grounds from 2021 – Dec 2022, after which he left the Overberg for the Eastern Cape, undertaking an impressive journey of over 760km over just 4 days, settling in Stutterheim (Eastern Cape), where he appears to have bred. He left this area in early June 2024 and returned to HWK in mid-July. Unfortunately his signal was subsequently lost.</p>	 <p style="text-align: center;">26 Oct 2021 - signal lost 8 Aug 2024</p>
<p style="text-align: center;">♂</p> <p>TARENATAAL MALE #08 (Tarentaal)</p> 	<p style="text-align: center;">☩</p> <p>After breeding in and staying in the Overberg through 2021 and 2022; he headed east in Feb 2023 on an incredible journey covering over 1000km in 7 days. He stayed at various locations (Stekfontein Dam, Vrede) in the Free State region until July 2023 when he made his way back to the Western Cape: this time the Klein Karoo. He then bred near Robertson in 2023 and subsequently made his way back to his Overberg breeding grounds in 2024.</p>	 <p style="text-align: center;">27 Sep 2021 - Current</p>

Name	Update	Tracking map
<p style="text-align: center;">♂</p> <p style="text-align: center;">HARTEBEESTERIVIER MALE (Hartebeesterivier)</p> 	<p style="text-align: center;">☠️</p> <p>5th November 2021, killed by wheat-cutter / harvester, where he was roosting in a wheatfield, less than 2km from nest. His chicks had luckily just fledged and the female was able to take care of them.</p>	 <p>26 Oct 2021, died 5 Nov 2021.</p> <p>Tag re-fitted to Goereesoefemale#10</p>
<p style="text-align: center;">♀</p> <p style="text-align: center;">MESA (Tarentaal), named by donors who wish to remain anonymous</p> 	<p style="text-align: center;">❤️</p> <p>After breeding in the Overberg in 2022, Mesa moved east, spending December near Victoria West, moving further east to various sites southeast of Bloemfontein. She returned to the W Cape, sampling the Klein Karoo & the eastern Overberg in July 2023, finally deciding on the Robertson area in the Klein Karoo for breeding that season. In April 2024, she returned to the Overberg, sampling several sites before returning to Tarentaal to breed.</p>	 <p>4 Oct 2022 - current</p>
<p style="text-align: center;">♀</p> <p style="text-align: center;">GOEREESOE FEMALE #10 (Goereesoefemale)</p> 	<p style="text-align: center;">❓</p> <p>Left the Overberg after breeding in 2021 and spent time overwintering north of Oudsthoorn and then north of Mossel Bay. She then returned to the Overberg, but her signal died on 3rd June 2022: We suspect this is due to the battery dying during long periods of no sun while she incubated. She was confirmed alive in 2022 (nest found and tag clearly visible on her back, seen much later in the breeding season again (October); faulty tag. Not seen since.</p>	 <p>1 Dec 2021, signal lost 3 Jun 2022</p> 







Name	Update	Tracking map
<p style="text-align: center;">♂</p> <p>CHUANA (Tarentaal), named by Callan Cohen on behalf of Birding Africa</p> 	<p style="text-align: center;">❤️</p> <p>After breeding in the Overberg, Chuana moved northeast to spend the remainder of summer and autumn in the Free State, just next to the Lesotho Border. He then returned to the W Cape, where he has been since winter 2023, breeding in renosterveld remnants south of Riversdale in both 2023 and 2024.</p>	 <p style="text-align: center;">4 Oct 2022 - current</p>
<p style="text-align: center;">♀</p> <p>KWEZI II (Goeresoe), named by donors, the Inkwazi Bird Club</p> 	<p style="text-align: center;">❤️</p> <p>Kwezi II has been centred on her breeding grounds at Tarentaal since she was tagged last year, although she has done some impressive sampling trips including a two-week return trip to just west of East London in April and a week long foray along the west coast and into the Tankwa Karoo (the latter covering about 800km).</p>	 <p style="text-align: center;">10 Nov 2023 - current</p>
<p style="text-align: center;">♀</p> <p>MOLLY (Tarentaal), named by Odette after her daughter</p> 	<p style="text-align: center;">❤️</p> <p>After breeding at Tarentaal in 2023, Molly undertook a sampling trip that included the Karoo (near Calvinia) and the Free State where she turned southwards again just south of Bloemfontein, eventually settling in the Gamkaberg just south of Oudtshoorn. She stayed here for a few weeks before her tag stopped working.</p>	 <p style="text-align: center;">12 Nov 2023, signal lost 27 Mar 2024</p>

Name	Update	Tracking map
<p style="text-align: center;">♀</p> <p>VALERIE (Haarwegskloof), named by the Cape Bird Club (donor) and by the late Peter Steyn prior to his passing, in anticipation of another female being tagged, in honour of Valerie Gargett, great naturalist and biologist (an expert on Verreaux's Eagles)</p> 	<p style="text-align: center;">❤️</p> <p>Valerie is another one of our handful of birds tagged in 2024. Sadly, her nest also failed shortly after she was tagged (several nests in the area have failed due to predation, thus we do not believe the tagging had anything to do with it). She has since done some exploring within the areas around Haarwegskloof, but is still centred on the reserve.</p>	 <p style="text-align: center;">25 Nov 2024 - Current</p>
<p style="text-align: center;">♂</p> <p>TONY (Tarentaal), named by the ORT to acknowledge Toni Hoenders, Dutch biologist and volunteer (photographed above, holding Frank) for her contributions to the ORT's Black Harrier work.</p> 	<p style="text-align: center;">❤️</p> <p>A newly-tagged male currently provisioning a nest with four young chicks (<1 week old). Given the high rates of predation we have witnessed in the latter part of the 2024 breeding season, we really hope his chicks will fledge.</p>	 <p style="text-align: center;">4 Dec 2024 - Current</p>
<p style="text-align: center;">♂</p> <p>FRANK (Haarwegskloof), named by donor Michael Raimondo for his father, the late Frank Raimondo, a man who cared deeply about conservation and about wild things and wild places.</p>	<p style="text-align: center;">❤️</p> <p>Frank is one of our new birds, tagged in 2024, with three tiny 1-day old chicks on the nest. Sadly, the nest was depredated just 5 days after Frank was tagged, whereafter Frank left the breeding</p>	 <p style="text-align: center;">25 Nov 2024 - Current</p>



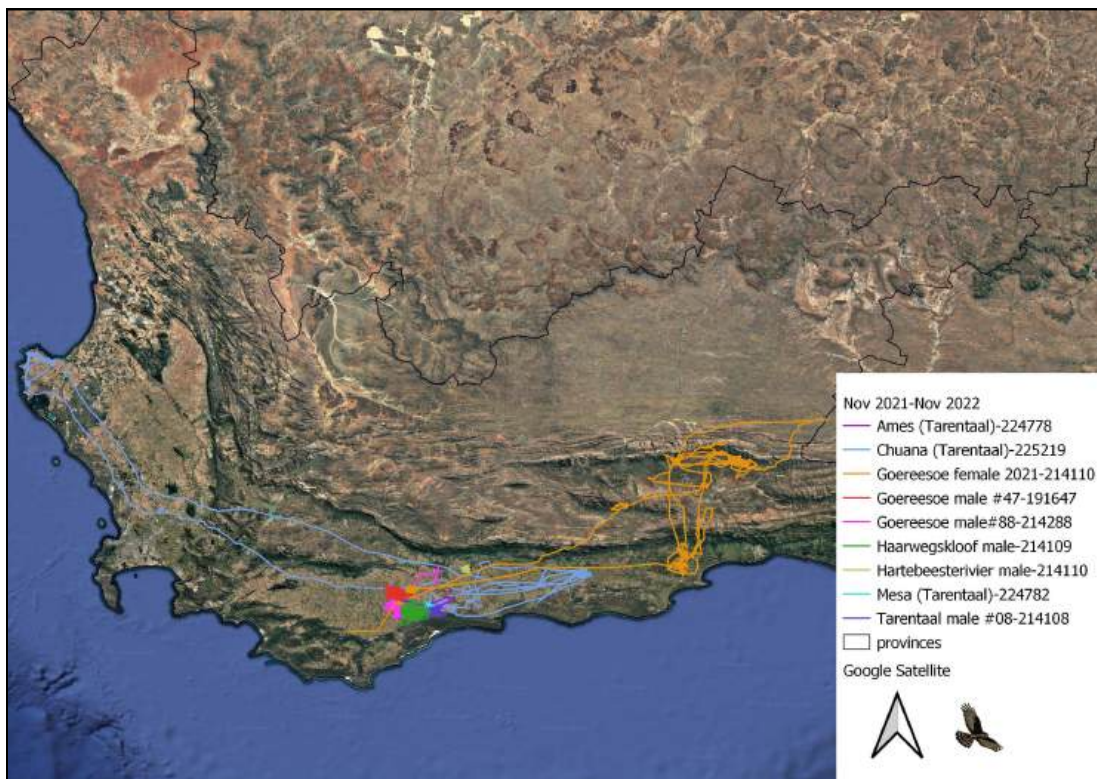
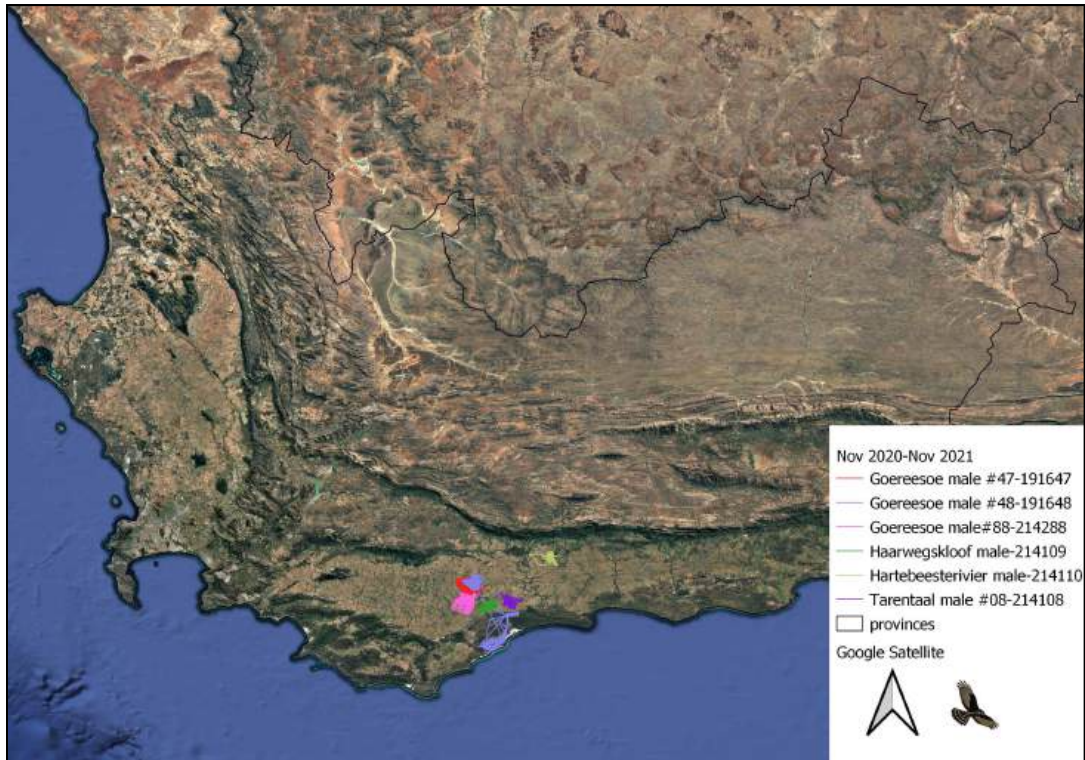
area on a 'sampling trip' of 800km lasting 5 days that took him beyond Vredendal after which he made a beeline back for Haarwegskloof, where he settled again.

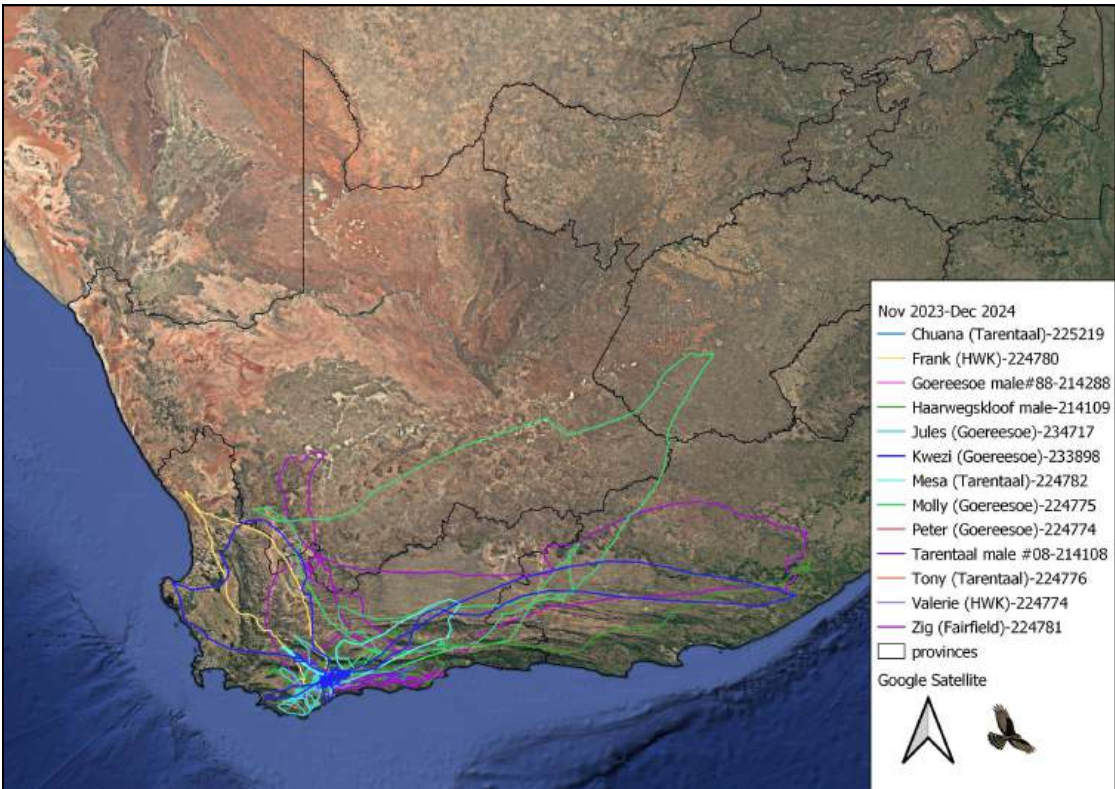
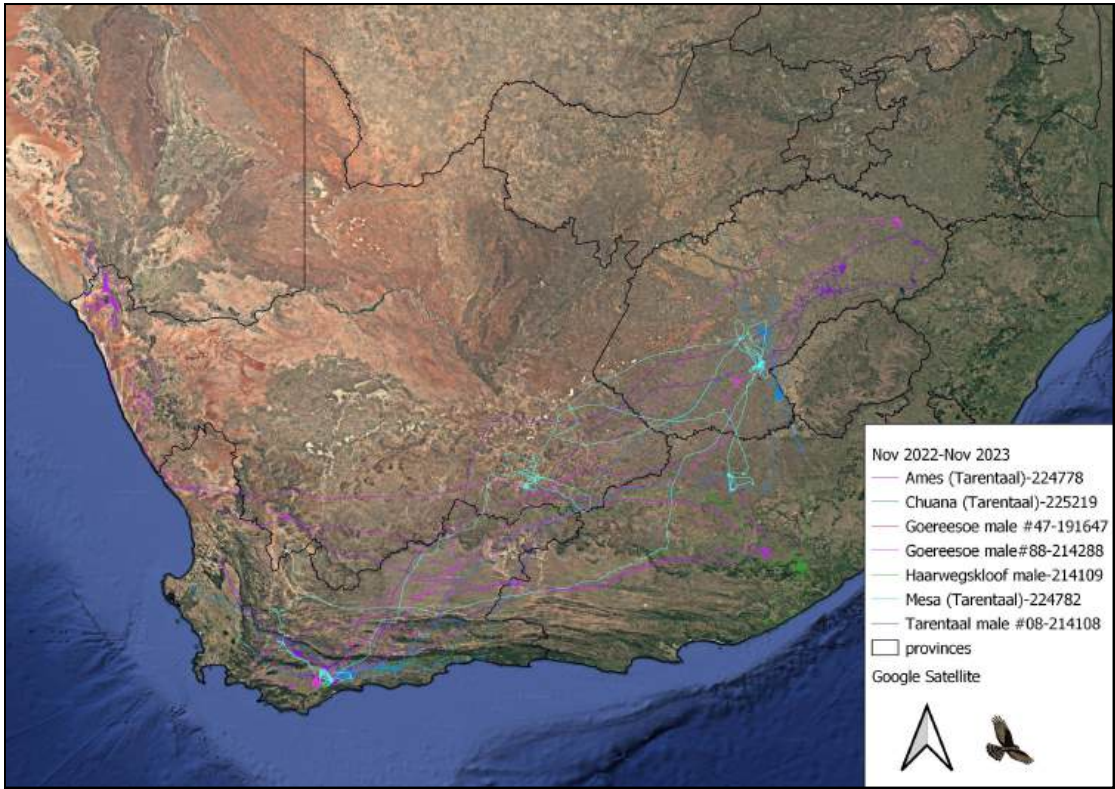


Name	Update	Tracking map
<p style="text-align: center;">♂</p> <p>PETER (Goereesoe), named by the Cape Bird Club (donors) & the ORT to honour the (now late) Peter Steyn, legendary naturalist, author & photographer when he was still alive.</p> 	<p style="text-align: center;">☠</p> <p>Tagged at Goereesoe, a breeding hotspot for Black Harriers, located opposite the Excelsior Wind Farm (WEF), Peter lived only another two months before tragically meeting his end through a collision with Turbine 1 at the WEF</p>	 <p style="text-align: center;">11 Nov 2023, died 14 Jan 2024</p> <p style="text-align: center;">Tag refurbished and fitted to Valerie</p>
<p style="text-align: center;">♀</p> <p>ZIG (Fairfield), named by donor Alison Gilbert, keen birder and Cape Bird Club member, for her late husband Simon, whose nickname was 'Zig'.</p> 	<p style="text-align: center;">❤️</p> <p>. Zig was tagged just 15km west of Napier in late 2023, where she had a large chick on the nest. She subsequently undertook some impressive travelling where she traversed the Klein Karoo, the Tankwa Karoo and the Eastern Cape (As far as East London), before settling down in Mossel Bay where she is breeding now (2024).</p>	 <p style="text-align: center;">18 Dec 2023 - current</p>
<p style="text-align: center;">♀</p> <p>JULES (Goereesoe), named by the Dutch Montagu's Harrier Foundation to honour harrier enthusiast, Jules Tolboom</p> 	<p style="text-align: center;">❤️</p> <p>Apart from a brief sampling trip into the Klein Karoo, Jules has essentially not left the Overberg since she was tagged in 2023. However, this year she has moved from the Goereesoe renosterveld breeding colony to the fynbos mountains of the Heuingberg behind Bredasdorp.</p>	 <p style="text-align: center;">10 Nov 2023 - current</p>

Annual tracking comparisons 2020-2024

Below are four maps denoting general Black Harrier movement over four years (Nov-Nov for each year), showing how variable movements can be, with all the birds staying in the Overberg (where they were originally tagged) in some years and many individuals travelling extensively in others.







Our fundraising effort are ongoing, please see our webpage for more details:
<https://overbergrenosterveld.org.za/black-harrier/>



Black Harriers in renosterveld: a project update

Excerpts from an article written for the Cape Bird Club's *Promerops*

Nearly 25 years ago, I was privileged to be part of a small team that started a project on one of SA's most enigmatic raptors, the Black Harrier. At the time, it was listed as Vulnerable on the Red Data List and there were just two published papers on the species' breeding biology based on a handful of nests. There were no data on the species' weight, size, preferred breeding habitats, home ranges and the biggest mystery: *where did the birds go when they weren't breeding?* Since then, nearly a quarter of a century later, several studies by students and other collaborators under the capable leadership of harrier guru Dr Rob Simmons, have revealed some critical information about this bird's biology. Just as well that some of these knowledge gaps were filled, because its status has since jumped up the Red-Listing ladder to Endangered and the Black Harrier is now considered one of the top 10 rarest birds in SA. Modelling suggests that its population is sitting as low as 1300 birds in total, while experiencing ongoing declines of over 2% per annum. We are very concerned about this charismatic beauty and there is an urgent need to dig deeper into the causes of the downward trajectory the species faces.

What DO we know? We know that harriers breed in a variety of habitats, mostly within the Fynbos Biome: they appear to prefer coastal and inland-lowland (renosterveld) shrublands and will also make use of mountain fynbos, however breeding success in the high altitude sites is typically lower than in the lowland and coastal areas. We know that after breeding, they *sometimes* head east, towards the summer rainfall grasslands of Lesotho, the Eastern Cape and the Free State. But they do not do this every year – in some years, they stay on or near their breeding site, until the following breeding season, where they may breed again. We also know that there are breeding hotspots where one can essentially always find them in spring; these include the West Coast National Park and several other private conservation areas along the west coast, as well as some critical remnants of renosterveld in the Overberg. At these key locations, the birds will breed in colonies of anything from 10 to 20 pairs (on sites ranging from 200-500 ha), with individual nests as little as 50m apart. In more arid, inland regions, breeding is more erratic and is likely only to take place following good rains (which are followed by booms in mouse populations). Like several of their northern-hemisphere counterparts, the species appears to (sometimes) congregate at communal roosts: a phenomenon that might be more common than we initially realised (and also, of course, requires further study). Modelling suggests that the species is in dire need of conservation action and that without understanding how we can mitigate for anthropogenic-related declines,

we could lose our Black Harriers completely in the next 50-75 years. And we know that the initial decline in numbers was driven by habitat loss, and while this continues to contribute to current and future declines, we now have climate change and collisions with wind turbines and powerlines to worry about.

What DON'T we know and what are we doing about this? Well, of course this list is endless, so I will mention just a few critical knowledge gaps: We don't know if and how exactly we can mitigate for the high collision propensity with wind turbines and powerlines, although this is of utmost importance as the development of Wind Energy Facilities is increasing exponentially in South Africa, and the species is highly prone to these collisions. Several scientists, again driven by Rob's initiative, are looking into this and the experimental work with blade patterning is most promising indeed.

We don't know how the species will fare under predicted climate change scenarios, but it is likely that increasing temperatures inland will render such breeding sites unsuitable, pushing more harriers towards the coastal lowlands where densities are already high and space is limited (again due to habitat loss). We also don't know exactly what drives the birds to stay on, or leave, their breeding sites (although it is clear that this is mostly linked to prey numbers, mice being most important, followed by birds (particularly Common Quail)), nor do we fully understand their use of different habitats for foraging, particularly in relation to farmlands and how the radical annual changes in these lands (with planting and harvesting cycles) impact prey availability and abundance.

In order to build on the phenomenal work undertaken by one of Rob's PhD students, Dr Sophie Garcia-Heras (who tagged 13 harriers with satellite tags for a year each), a large amount of effort is being put into tagging and tracking Black Harriers with new GPS technology (which provides much higher resolution data), in the hope that we can start to answer some of these questions through collaborative research: Dr Megan Murgatroyd and Prof Arjun Amar, Dr Rob Simmons and ourselves at the Overberg Renosterveld Trust are building a database that will ultimately comprise tracking data from 40-50 adult harriers. This impressive database will be available for several different studies which look at, for example, building collision risk models for wind energy facilities, identifying key foraging, breeding and roost sites for long-term habitat protection and understanding how harriers use transformed vs. natural habitats for foraging.



A major missing piece of the puzzle: juvenile dispersal

We do not know much at all about where young birds go once they leave their nest sites, or their survival rates post-fledging. This is a complex issue as survival rates for most raptors in their first year tend to be very low, thus undertaking such a study will require substantial time and funding; **a priority for the next few years.**

The ORT's tracking study

Through incredible support from various organisations and individuals, the ORT has thus far managed to raise funds for 24 trackers in total, of which 18 have been fitted to renosterveld-breeders in the Overberg, while three were fitted (by Rob) to birds in other regions where wind farms are being proposed or planned. Six of the trackers are brand new, having just arrived in South Africa for deployment in 2025 (three tags retrieved from dead harriers were re-used). Three tags were re-deployed after being retrieved from birds that died.

How the tags work: The tag, weighing just 9g, has a tiny built-in solar panel covering its exposed side, which provides the charge it needs to keep collecting the data. It is fitted to the birds (males weighing about 350g on average and females about 550g) like a little backpack, using a Teflon ribbon. Data gathered by these nifty

devices include the bird's speed and altitude, latitude and longitude, and the temperature of the tag. From the comfort of our offices, we can check on the birds and make sure their batteries are at optimal charge (and change their settings if they aren't) and that they are moving around and not stationary for too long - a tag that emits several 'pings' from the same location over a day or two suggests a bird in trouble. This is how we have managed to identify the causes of death and retrieve the tags from birds that were killed.

People have asked us: *How do the birds know to head up to Lesotho in time to coincide with the breeding season of the Ice Rats?* Well, they don't always head to Lesotho, they head to several different areas (typically in the summer-rainfall, eastern grasslands of SA or Lesotho), and they don't always leave their breeding sites. In fact, none of the 18 Overberg birds went into Lesotho! But all the data (from Sophie's previous work and ours) suggest that they undertake 'sampling' trips, where they sometimes fly at high speeds (up to 80km / hour!), covering long distances (up to over 500km in a day!) to 'sample' areas to see what prey numbers are like. When they find a location that they like, they settle down into a small area where they might stay for weeks or months. Sometimes, they find nothing to their liking and return to their breeding areas quite quickly. Some Overberg birds have even bred in a completely different area (like the Klein Karoo or the Eastern Cape) in one year and then returned to the Overberg's renosterveld to breed again in the following year. It is impossible to predict what the birds will do from one year to the next. Every time we think we understand them, they do something completely unexpected. We are constantly humbled by how little we really know these birds, despite all the time spent on trying to understand them (for their own good!).

What tracking reveals in renosterveld-breeding harriers:

Out of 18 adults tagged to date:



- 4 dead: 2 through wind turbine collisions, 1 by a wheat-cutter & 1 by an aerial predator (3 of these tags were re-used)
- Maximum distance travelled between breeding & non-breeding sites: ± 1000 km
- Maximum continuous flight in a single day (12 hours): 525km
- Maximum speed travelled: 80km/h
- Foraging distance from a nest for provisioning males in the Overberg appears to be below 10km.



THANK YOU for your contribution to this important work. Without your generosity, none of this would have been possible.

