



محمية دبي الصحراوية  
DUBAI DESERT CONSERVATION RESERVE

# Annual Report 2024-25





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## Chairman's message

The Dubai Desert Conservation Reserve (DDCR) stands as a remarkable success story and a vital part of Dubai's natural ecosystem. It represents a journey of intent, inspiration, and execution—preserving native wildlife and habitats amidst the rapid growth of a dynamic city.

Managed by the Emirates Group in collaboration with Dubai Municipality, the DDCR benefits from expert on-site conservation management and support drawn from across the Emirates Group's vast internal network. Through this collective effort, a culture of environmental responsibility has been fostered across departments and roles within the organisation.

Aligned with Dubai Government's vision to safeguard the environment, the DDCR plays a key role in promoting biodiversity and supporting renewable energy and other sustainability initiatives. Covering 5% of Dubai's land area, the reserve continues to successfully reintroduce native desert species and restore natural habitats.

Throughout 2024–2025, the DDCR expanded its programmes and strengthened its partnerships, staying firmly aligned with its 2019–2024 strategic goals. The new management team—rich in conservation expertise—leads the reserve into its next chapter of growth and resilience with the upcoming 2025–2030 management period.

This report highlights the DDCR's key milestones, major projects, research initiatives, and conservation efforts during the 2024–2025 period. As the world faces escalating environmental challenges, economic uncertainty and global trade disruptions, the DDCR remains a shining example of the importance of wildlife conservation, biodiversity, and coexistence. We are proud to contribute to this critical mission.

**HH Sheikh Ahmed bin Saeed Al-Maktoum**  
Chairman, Dubai Desert Conservation Reserve



## 2. Introduction

Over the past year, the Dubai Desert Conservation Reserve (DDCR) has remained committed to its mission of preserving the last inland desert ecosystem. Thanks to the dedication of our DDCR team, we've made meaningful strides in protecting the reserve's remarkable species and landscapes.

Guided by the new conservation management team, the reserve achieved significant milestones over the year, from documenting new bird species to relocating the iconic Arabian oryx to private collections and sanctuaries, both within the country and abroad. These efforts have helped reduce grazing pressure on the reserve's naturally growing vegetation and has since resulted in the increase of biodiversity within the reserve.

Conservation officers launched volunteer projects that offered the public a behind-the-scenes glimpse into the world of conservation efforts taking place within the reserve, and the uptake of volunteers has grown month over month, showing that the public must do their bit to preserve this beautiful piece of Dubai.

Research is central to the reserve's mission, and the research committee—consisting of 14 members from diverse fields—has approved two projects from UAE University and one led by the reserve's

conservation ranger. These studies will focus on reptile diversity, gazelle genetic variation, and floral community dynamics. Additionally, ongoing research on vultures, Ghaf tree nesting behaviour, and the biodiversity of Jebel Nazwa has produced remarkable findings, deepening our understanding of the desert ecosystem.

The DDCR has been chosen as the designated location for the world's largest Aquifer Storage and Recovery (ASR) site, developed under the direction of DEWA. Once completed in 2026, the full-scale project will serve as a strategic reserve, capable of storing up to 6,000 million imperial gallons of potable water—making it the largest ASR facility of its kind globally for emergency water retrieval. While the project is still underway, there is growing concern about its potential impact on the reserve's delicate ecosystem, particularly regarding disruptions to animal movement patterns and the behaviour of nocturnal wildlife.

We remain committed to our vision, mission, and objectives as we strive to ensure a thriving future for the natural habitats and wildlife of the DDCR, while sharing this extraordinary desert environment with both local and international visitors. Looking ahead, we're excited to move forward with several sustainable initiatives in the coming year, including

the installation of solar panel parking and the launch of a live camera feed showcasing one of the reserve's most active waterholes.

The 2024–2025 report comprises all the aspects of the reserve and all the major milestones that were achieved by the dedicated and passionate team of conservation staff.





### 3. Vision:

‘A desert haven for nature .... A living heritage for people’

#### DDCR’s overall purpose

To conserve a representation of Dubai’s inland desert’s original landscapes and indigenous fauna and flora through careful and effective management that promotes natural processes for optimum conservation outcomes, leading to rewilding of the desert habitat.

Provide an authentic desert experience for people, which showcases the beauty and wonders of the natural environment and educates on the intricacies of nature and the living heritage of Dubai.

#### Strategic management goals

Our strategic management goals for the 2019–2024 planning period were:

1. Embark and progress on a new rewilding paradigm for regional desert conservation, fostering thriving habitats and a diversity of indigenous species.
2. All species populations, particularly ungulates, are in balance with the natural regenerative properties of the available vegetation.
3. All management interventions and practices are sustainable and orientated towards natural habitat rehabilitation.
4. The reserve is an IUCN Green List protected area with effective management, good governance and planning that are realising optimum conservation outcomes.
5. The DDCR is a regional leader in biodiversity conservation and building resilience to climate change in arid land ecosystems.
6. The reserve is promoted and recognised as the premier destination for authentic nature-based experiences in the UAE.





Over the 2019–2024 strategic planning period, the DDCR successfully achieved a majority of its management goals, marking significant progress in regional desert conservation. A new rewilding approach was effectively implemented, resulting in healthier habitats and increased diversity of native species. Wildlife populations, particularly ungulates, were carefully monitored and managed to remain in balance with the natural regenerative capacity of the vegetation. All management practices throughout the period were aligned with principles of sustainability and focused on habitat rehabilitation.

The DDCR also strengthened its role as a regional leader in biodiversity conservation and climate change resilience in arid ecosystems, while continuing to grow its reputation as the UAE’s premier destination for authentic nature-based experiences. While the reserve did not attain IUCN Green List status within this timeframe, foundational steps were taken to align with the necessary standards, positioning us well for future certification.

As we look ahead to the 2025–2030 planning period, the DDCR is entering a new phase of growth and innovation in conservation. Building on the successes of the previous strategy, our new strategic management goals will focus on deepening ecological resilience, enhancing sustainable tourism, advancing scientific research, and embracing innovative technologies to support long-term habitat and species preservation. The following goals will guide our efforts to ensure the DDCR remains a benchmark for desert conservation, both regionally and globally.

Our strategic management goals for the 2025-2030 planning period are:

1. Reduce and then regulate ungulate populations to the reserve’s natural carrying capacity by end of 2026 by introducing an apex predator, ultimately

resulting in the restoration of ecological balance that aligns with the natural regenerative properties of the available vegetation.

2. Achieve IUCN Green List recognition by the end of 2025, showcasing effective management, good governance and planning that highlights optimum conservation outcomes.
3. Increase regional and global attendance of conservation congresses, forums, seminars, and webinars. Resulting in the DDCR being recognised as a leader in biodiversity conservation through building resilience to climate change in arid land ecosystems.
4. Increase public awareness through publishing scientific research papers in reputable journals, increasing DDCR’s visibility and impact within the scientific community.
5. Increase the usage of sustainable energy throughout the DDCR’s energy requirements by installing solar car park energy systems, ultimately reducing the carbon footprint of the reserve.
6. Conduct quarterly training sessions for all safari drivers of approved tour operators within the DDCR, which will result in the DDCR being promoted and recognised as the premier destination for authentic nature-based experiences in the UAE.
7. Maintain continuous engagement with universities and other scientific bodies to further explore and expand research regarding urban encroachment, natural habitat rehabilitation, and inland desert ecosystem biodiversity.





## 4. DDCR Governance and Management

The DDCR's governance is in accordance with the Decree 11-2003 on the establishment of protected areas in the emirate of Dubai. A memorandum of understanding has been signed between the government authority (Dubai Municipality) and Emirates as the designated management authority.

Underscoring its commitment to supporting conservation efforts, Emirates spent AED 8 million for DDCR over the last six years. Cumulative sponsorship support of Emirates now exceeds AED 28 million since the establishment of the reserve.

The Dubai Conservation Board (DCB) is chaired by  
**His Highness Sheikh Ahmed bin Rashid Al Maktoum**

**Emirates executive management is represented by:**

**Mr. Ali Mubarak Al Soori**

General Secretary DCB, Chief Procurement & Facilities Officer

**Mr. Devarajan Srinivasan**

SVP Facilities & Asset Management

**Mr. Rahul Sawhney**

VP Strategy, Planning & Asset Management

### Key responsibilities

- Work with operational management to formulate and approve a strategic direction for DDCR (DDCR Management Plan 2019–2024 and DDCR Management Plan 2025–2030)
- Due diligence on the induction of new tour operators
- Revenue management strategies
- Approval of annual operational budgets and monitoring of expenses
- Funds management





## 5. Operational Management Team

### **Gerhard Erasmus** – Conservation Manager

After completing training at the renowned Kruger National Park and studying Nature Conservation at the University of South Africa, Gerhard began his career as a game ranger in both private and national parks across South Africa. In 2011, he moved to the UAE, joining Al Maha Desert Resort and Spa as a field guide, leading desert safaris and educating guests on the DDCR's wildlife and ecology.

By 2013, Gerhard was promoted to senior field guide, overseeing the resort's leisure department, which included vehicles, camels, Arabian horses, birds of prey, and a team of guides. He also served as the resort's sustainability champion, driving key initiatives such as recycling, energy and water conservation, and helping Al Maha maintain Green Key certification from 2013 to 2017. During this time, he completed diplomas in operations management, project management, and business administration.

In 2020, Gerhard became director of operations, supporting the general manager and leading a team

of over 10 department heads. In 2023, he was appointed conservation manager of the DDCR, where he now oversees the reserve's overall management, conservation programmes, and sustainable tourism efforts. He plays a key role in species reintroduction projects and aims to elevate the DDCR's public profile through the newly established Visitor Centre.



### **The operational management team have the following key responsibilities**

- Work with executive management to formulate a strategic direction for DDCR (DDCR Management Plan 2025–2030)
- Implement all conservation programmes
- Implement all research and monitoring activities
- Manage and promote educational awareness through the DDCR Visitor Centre
- Manage sustainable tourism within the DDCR



**Basil Roy – Conservation Officer**

Basil has spent most of his life in the Arabian Peninsula, fostering a deep connection with both its people and natural environment. Between 2017 and 2019, while pursuing a master's degree in environmental studies at Sorbonne University

Abu Dhabi, he actively contributed to conservation efforts within the DDCR, including monitoring the Spiny-tailed lizard population and surveying the reintroduction of the Asian houbara.

Before officially joining the DDCR team in 2022, Basil worked as an environmental consultant at Nautica Environmental Associates LLC, a consultancy based in Abu Dhabi.

In his current role at the DDCR, Basil is responsible for planning, overseeing, and enhancing conservation practices and environmental programmes within the reserve. His work includes

leading research initiatives and implementing long-term monitoring programmes, such as those focused on the Arabian oryx.



**Aline Witte De La Torre – Conservation Officer**

Aline holds a bachelor of science in biology from the Universidad Autónoma de Nuevo León in Mexico. Her career in conservation began at ARCAS Wildlife Rescue and Rehabilitation Centre in Guatemala, where she was involved in the rehabilitation and release of various bird, mammal, and reptile species.

Upon returning to Mexico, she joined Chipinque Ecological Park, where she implemented conservation initiatives, managed GIS data, and monitored key species to evaluate ecosystem health.

Aline became part of the DDCR team in September 2022. In her current role, she is responsible for managing and updating GIS data, conducting scientific research, and implementing long-term wildlife monitoring programmes.





**Maria Jose Martin – Conservation Officer**



Maria holds a master's degree in biology and biodiversity conservation from the University of Salamanca, Spain. She has contributed to various conservation projects across Latin America, with experience in sea turtle research and animal husbandry at a wildlife rescue centre. Driven by a passion for travel and expanding her expertise, she relocated to the UAE three years ago.

Before joining the DDCR, Maria was involved in conservation

initiatives focused on mangrove ecosystems along both the east and west coasts of the UAE, with a particular emphasis on environmental education.

In her current role at the DDCR, Maria is responsible for planning, implementing, and conducting research programmes aimed at preserving the reserve's biodiversity. Her work includes regular monthly and annual surveys to monitor a range of plant and animal species, such as the Ghaf tree and the Spiny-tailed lizard, supporting the reserve's long-standing conservation efforts.

**Pubudu Madurapperuma – Conservation Ranger**

Pubudu is a dedicated conservationist from Sri Lanka with over 20 years of experience in wildlife conservation and biodiversity management. He holds a diploma in biodiversity conservation from the University of Colombo and began his career with the Young Zoologists Association at Sri Lanka's National Zoological Gardens. Over the years, he has developed strong expertise in reptile research, husbandry, and captive breeding, with specialised training at the Madras Crocodile Bank in India.

Before joining the DDCR, Pubudu contributed to conservation education initiatives across Sri Lanka, focusing on community outreach and human-wildlife conflict, including a UNDP-funded biodiversity project. In his current role at the DDCR, he is involved in ecological monitoring, law enforcement, and community engagement, supporting the reserve's conservation goals. Passionate about nature, he also enjoys hiking and exploring diverse cultures.





**Meena Arun – Administrator**

Meena is a highly detail-oriented and quality-driven professional bringing over 19 years of experience in managing office operations within the UAE’s fast-paced, deadline-oriented environments. Having spent the majority of her life in the UAE, she has a strong understanding of local customs, Arabian traditions, and the region’s rich cultural diversity.

Before joining the Dubai Desert Conservation Reserve (DDCR), Meena served as an administrator and HR coordinator at an advertising firm, where she developed her expertise in administrative and human resource functions.

In her current role at the DDCR, Meena provides essential administrative support to ensure the efficient and seamless operation of daily activities. She is proficient in handling both internal and external requests, processing transactions, and addressing queries with a high level of professionalism and responsiveness.

Her key responsibilities include consolidating daily visitor data from tour operators with the visitor management system, preparing invoices and financial statements, overseeing attendance records, capturing transactional data, and generating operational reports. Meena’s commitment to excellence and operational efficiency plays a critical role in supporting the DDCR’s ongoing success.



**The Reserve Team**

Front row (left to right):  
**Muhammad Naseer, Muhammad Alkumandi, Mohammad Gopal, Muhammad Dawood, Suhaib Vayakkarth.**

Back row (left to right):  
**Muhammad Lokman, Khaseem Ali, Muhammed Rafiq Rashid, Lucian Felix Wanniarachchige, Mohamed Rafiq, Muhammad Shafique**





# 6. Highlights from the Conservation Team

**Basil Roy – Conservation Officer**

Attending the IUCN Forum in Riyadh was my major highlight this year. The DDCR was invited to exhibit the reserve and connect with other protected areas and conservation organisations from across the region. The forum brought together IUCN members - including environmental experts, government officials, universities, and eco-tourism companies - for seminars and workshops on current projects.



Another key moment was meeting Dr. Laurie Marker, founder of the Cheetah Conservation Fund, whose guidance will be valuable as the DDCR prepares for future cheetah reintroduction efforts. In collaboration with Dubai Municipality, we also reintroduced a GPS-collared Arabian red fox to the reserve, allowing us to monitor its movement and adaptation. Initiatives like this highlight the value of our ongoing conservation work at the DDCR.

**Aline Witte De La Torre – Conservation Officer**

Working at the Dubai Desert Conservation Reserve remains an exceptional opportunity. Over the past year, I undertook an independent research project focused on assessing avian and plant biodiversity at Jebel Nazwa—an intellectually stimulating and rewarding experience. I also had the privilege of attending several conservation-focused conferences, including the Cheetah Conservation Fund and the Sharjah International Forum for Arabian Biodiversity (SICFAB), which offered valuable insights and professional growth. A particular highlight of the year has been the preliminary exploration of a potential predator reintroduction initiative within the reserve—an exciting and impactful development both for the DDCR and the UAE as whole.





**Maria Jose Martin** – Conservation Officer

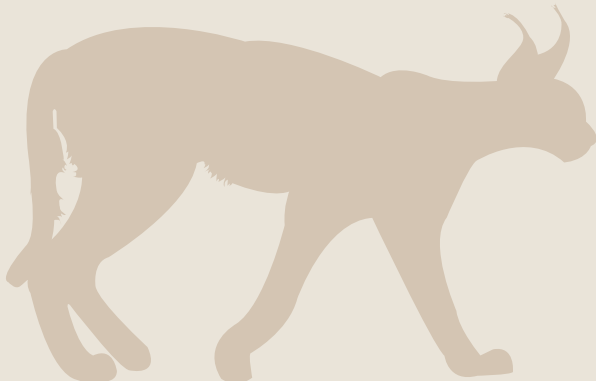
This past year has been very rewarding for me. Besides my regular research work, I've really enjoyed getting involved in environmental education. I spent more time working with volunteers and helping organise events for special days like Reptiles Awareness Day and Vulture Awareness Day—the first time such an event was held in the UAE. These experiences have allowed me to connect with people who share the same passion for nature and conservation, and I've met many individuals eager to support DDCR in any way they can.

I'm also excited about the progress in my personal research project. This year, I discovered three raptor nests and had the opportunity to ring two Pharaoh Eagle-owl owlets—a first for the reserve. This achievement is opening new opportunities to study their behaviour and movements, both within DDCR and beyond.



**Pubudu Madurapperuma** – Conservation Ranger

As a conservation ranger, 2023–2024 has been a truly rewarding experience. I especially enjoyed my work in monitoring and ensuring compliance with reserve regulations and laws, which has contributed to a noticeable decrease in violations by both tourists and drivers. Conducting awareness programmes, including workshops, was another highlight, allowing me to engage with the public and promote conservation efforts. One of the most fulfilling parts of the year was witnessing the success of species reintroduction programmes, particularly for the Arabian oryx and Spiny-tailed lizard, which reflect the positive impact of our ongoing conservation work.





# 7. Reviewing the past year (2024–2025)

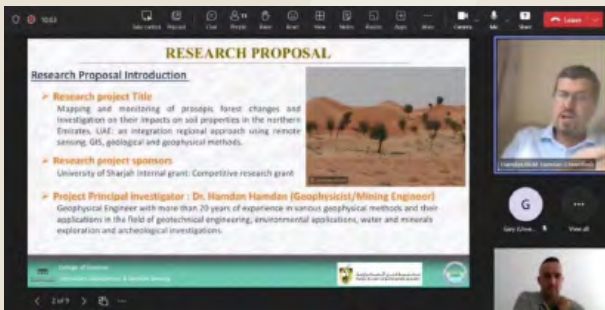
April 2024



The DDCR had the honour of hosting a high-level visit by the UAE SDG group, accompanied by His Excellency Abdullah Lootah, Deputy Minister of Cabinet Affairs for Competitiveness and

Knowledge. This visit focused on sustainable initiatives within the reserve, and how the new Visitor Centre can be used as a knowledge base for school groups and universities.

The DDCR team also convened a productive Research Committee meeting, sharing key updates and unveiling a new proposal to advance conservation efforts with assistance from Sharjah University.



Among the year’s most exciting field achievements were the first-ever recording of the African wattled lapwing on the Nazwa camera trap.

During a routine morning survey, Conservation Officer Aline Witte de la Torre captured a photo of the first-ever recorded Red-backed shrike in the DDCR, marking a significant addition to the reserve’s avian biodiversity records.

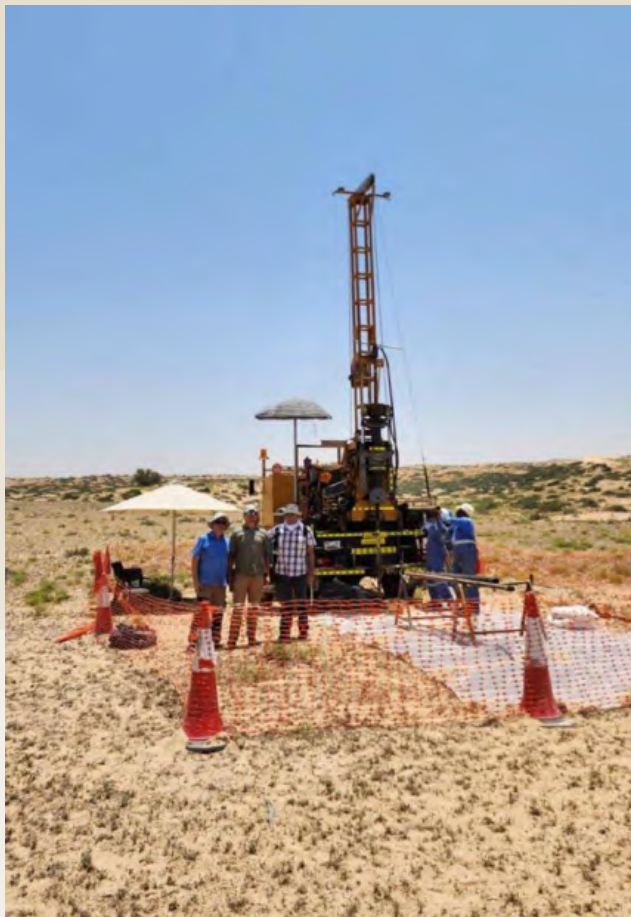


A second nest of the Pharaoh Eagle-owl was discovered within the reserve, this time with two healthy chicks inside—an encouraging sign of successful breeding and the species’ continued presence in the area.



May 2024

A borehole drilling operation in the DDCR provided valuable geological insights into key areas of the reserve. Using a rig that drilled up to 20 metres deep, sediment samples were collected and analysed to understand what the landscape looked like thousands of years ago. One site, where Neolithic arrowheads were found, is now believed to have once been a lake—something the sediment analysis may soon confirm.



Muhammed Alum Kandi celebrated 20 years of dedicated service—a remarkable milestone reflecting two decades of commitment and contribution to the reserve.



Held an exciting Zoom call with world-renowned cheetah expert Dr. Laurie Marker to explore the possibility of reintroducing cheetahs into the DDCR—a potential milestone for conservation in the region.



A total of 12 Lappet-faced vultures were observed at the newly established vulture restaurant in the reserve—a promising sign that this conservation initiative is providing vital support for one of the region’s most threatened scavenger species. The feeding station not only helps sustain the vultures by offering a reliable food source, but also encourages their return to the area, playing a key role in maintaining the ecological balance of the desert environment.





June 2024



Joined evolutionary biologist Theo Busschau for an exciting night survey, uncovering the hidden world of nocturnal wildlife and gaining fresh insights into the desert’s after-dark biodiversity.

The annual vegetation survey was successfully completed, revealing a positive trend with increased species richness and greater plant diversity across the reserve—an encouraging sign of ecosystem health and resilience.



DDCR proudly joined forces with Emirates and dnata to take part in World Environment Day, showcasing our commitment to conservation through engaging activities and impactful environmental initiatives.



Conducted an in-depth bat survey in collaboration with bat specialist Nils Bouillard using acoustic monitoring and field observations to identify and study the diversity and activity of bat species within the reserve. This effort not only contributes to our understanding of the region’s nocturnal biodiversity but also supports broader research into the ecological roles bats play in desert ecosystems.



Upgraded the Margham staff accommodation with the installation of new porta-cabins, enhancing comfort, functionality, and living conditions for on-site team members



August 2024



Participated in the Cheetah Conservation Forum alongside renowned Cheetah expert Dr. Laurie Marker, engaging in vital discussions on strategies to support global cheetah conservation efforts.



Hosted the second research meeting of 2024, where ongoing projects were reviewed through detailed updates and a new research proposal was presented and evaluated for future implementation.

Hosted an engaging online webinar with Amadeus de Kastle, focusing on Arabian red fox den density within the DDCR and its implications for understanding fox behaviour and habitat use in the reserve.



September 2024

Conservation Officer Basil Roy represented the DDCR at the IUCN Regional Conservation Forum in Riyadh, contributing to important discussions on regional conservation priorities and collaborative strategies.



Achieved a historic milestone by collaring an Arabian red fox and releasing it back into the reserve—marking the first time this has been done in DDCR history. This groundbreaking effort will provide valuable data on the fox’s movement patterns, habitat use, and overall behaviour, contributing significantly to ongoing research and conservation efforts aimed at protecting this iconic desert species.





September 2024



Celebrated the region’s first International Vulture Awareness Day (IVAD) on September 7 with a well-attended event featuring insightful talks by Conservation Officer Basil Roy and IUCN Vulture Specialist

Dr. Panos Azmanis. The event drew over 60 participants, raising awareness about the vital role vultures play in our ecosystems and the urgent need for their conservation.

A new weather and soil monitoring station was installed at the Eastern Ghaf Grove in collaboration with the University of Sharjah, providing vital data to support long-term research on microclimate conditions and ecosystem health in this key area of the reserve.



Muhammad Rafiq marked an impressive milestone, celebrating 20 years of dedicated service with the DDCR—a testament to his long-standing commitment and valuable contributions to the reserve’s mission.



October 2024

On October 9, a comprehensive gazelle count survey was conducted in collaboration with Sand Sherpa and supported by eight dedicated volunteers.

This joint effort combined expert guidance with community involvement to monitor gazelle populations across the reserve, contributing essential data for tracking species health and informing future conservation strategies.



Conservation Officer Maria Jose Martin delivered an insightful presentation on the Dubai Desert Conservation Reserve (DDCR) during The Secrets of UAE Wildlife exhibition hosted by the Alliance Française. Her talk highlighted the unique biodiversity of the reserve and the ongoing efforts to protect and preserve its fragile desert ecosystem.





October 2024



CMA CGM contributed to local reforestation efforts by planting 25 Ghaf trees generously donated by Goumbook as part of their commitment to environmental sustainability in the UAE.



In a meaningful environmental initiative, students from the Royal Grammar School Guildford planted 28 Ghaf trees in partnership with

Sand Sherpa. This collaborative effort aimed to promote ecological awareness and support native reforestation, contributing to the preservation of the UAE's national tree and its desert ecosystem.

Reptile Awareness Day was celebrated on October 26 with an engaging educational event that featured two expert-led presentations. Evolutionary biologist Theo Busschau shared fascinating insights into the evolutionary history and ecological significance of reptiles, while reptile specialist Nasser Obeidat captivated the audience with his in-depth knowledge of native and exotic species, their behaviour, and conservation needs. The event attracted around 20 enthusiastic participants, fostering greater appreciation and awareness of reptile biodiversity and the importance of their protection.



An early morning filming session was conducted in collaboration with the Environment Agency – Abu Dhabi to produce a short documentary highlighting the extensive conservation efforts that helped save the Arabian oryx from extinction. The film serves as a tribute to the late Sheikh Zayed bin Sultan Al Nahyan, whose visionary leadership and deep commitment to environmental stewardship laid the foundation for wildlife conservation in the UAE. It aims to celebrate the remarkable recovery of the Arabian oryx and honour the legacy of a leader who championed the protection of the nation's natural heritage.





November 2024

On November 2, a team of dedicated volunteers from Emirates Nature-WWF conducted a comprehensive reptile survey within the Dubai Desert Conservation Reserve (DDCR). Their efforts aimed to assess the diversity and health of the region’s reptile population, contributing valuable data for ongoing conservation and habitat management.



A Great spotted eagle was captured on one of the camera traps within the Dubai Desert Conservation Reserve, offering an exciting glimpse into the region’s diverse wildlife. Known for its impressive hunting skills, the Great spotted eagle has keen eyesight, allowing it to spot prey from great distances, making it a top predator in its ecosystem.



A total of 157 Arabian oryx were carefully relocated to private conservation areas across Dubai as part of a broader effort to expand their habitat and ensure the continued success of their reintroduction programme. This strategic move aims to create safer, more sustainable environments for the oryx to thrive while contributing to the ongoing efforts to stabilise and grow the population of this iconic species that was once on the brink of extinction.





December 2024

An Eastern imperial eagle was recently captured on a camera trap at the Al Faqa Waterhole, marking a significant and exciting sighting within the region. As one of the largest and most powerful eagles in the world, this majestic raptor is known for its striking appearance and wide wingspan. The presence of such a rare and vulnerable species highlights the ecological importance of the area and underscores the value of ongoing monitoring efforts to track and protect wildlife in the UAE's desert habitats.



Photographer Marios Mantzourogianis utilised a specialised DSLR still camera to capture striking images of two elusive desert species: the Arabian red fox and the Arabian hare. His work not only showcases the beauty of these nocturnal animals but also contributes to documenting the rich biodiversity within the reserve.



A total of 33 oryx calves were born, marking a significant boost to the population.



Eight new feeding sites were introduced across the reserve to encourage ungulate movement and ease competition within herds.



Conservation Ranger Pubudu and Conservation Officer Maria delivered engaging presentations at the Etihad Museum on 18 and 25 December. Speaking to groups of young students, they shared their knowledge, experiences, and passion for conservation, aiming to inspire the next generation to appreciate and protect the UAE's natural heritage. The sessions highlighted key environmental challenges and the importance of preserving biodiversity through active stewardship.



The Visitor Centre roof was upgraded with aluminium sheets, enhancing structural integrity and improving resilience against heavy rainstorms.



The Dubai Natural History Group paid a visit to the reserve, engaging in an educational exploration of the region's unique desert ecosystem, native wildlife, and ongoing conservation initiatives.





January 2025



A meteorological survey was carried out in collaboration with Sorbonne University Abu Dhabi, contributing valuable climate insights to the reserve.



A volunteer-led clean-up initiative was carried out within the reserve, bringing together community members and conservation staff to remove waste, promote environmental stewardship, and enhance the natural habitat for wildlife.



A new nest of the Long-legged buzzard was discovered, marking an exciting addition to the reserve’s avian diversity. This discovery highlights the ongoing success of habitat restoration efforts and the thriving conditions for raptor species within the area.

A second sighting of the Eastern imperial eagle was recorded, marking another rare and exciting encounter with this majestic raptor.



Khaseem Ali joined the DDCR team as the new bulldozer operator, bringing valuable skills to support habitat management and infrastructure maintenance across the reserve.



Two confirmed sightings of the elusive Houbara bustard were recorded, offering encouraging signs of the species’ presence and movement within the reserve. Known for its secretive nature and significance in regional conservation, these observations underscore the habitat’s suitability and the success of monitoring initiatives aimed at protecting vulnerable desert wildlife.

Conservation Officer Maria had the opportunity to attend an inspiring talk by the renowned Jane Goodall, gaining invaluable insights into primate conservation and the broader global efforts to protect biodiversity.





February 2025

In a historic first for the DDCR, the conservation officers, in collaboration with Dubai Municipality, successfully ringed and placed GPS trackers on Pharaoh eagle owl owlets. This groundbreaking initiative is set to provide invaluable data on the owlets’ movements and behaviours, enhancing conservation efforts for this iconic species.



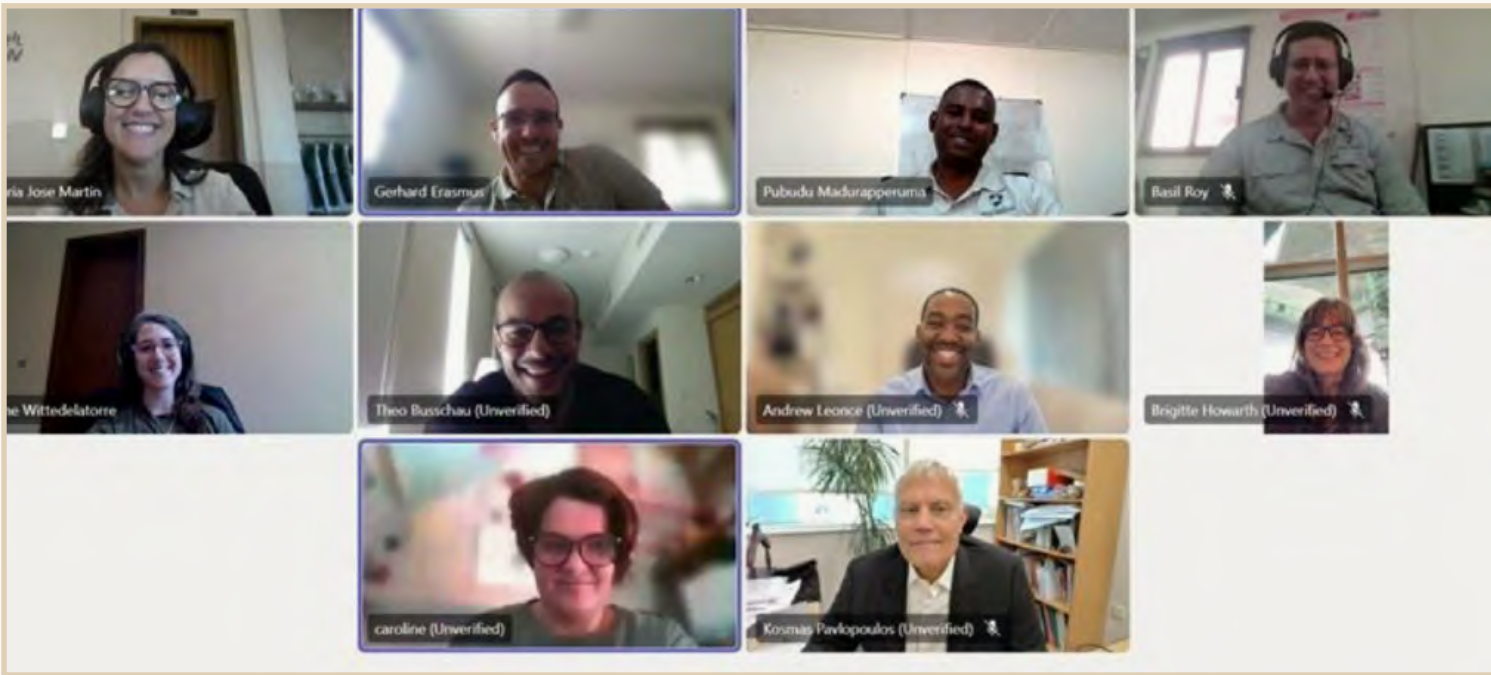
The Dubai Desert Conservation Reserve welcomed the Minister of Climate Change and Environment (MOCCA) to its Visitor Centre. The visit highlighted DDCR’s vital role in conservation, biodiversity protection, and sustainable tourism. The minister was briefed on key initiatives, including native species reintroduction and habitat restoration, reinforcing the importance of continued collaboration in achieving national environmental goals.



The DDCR team participated in the 2025 SICFAB event, engaging with conservation professionals, sharing insights, and exploring new opportunities for collaboration in wildlife management and habitat restoration.



Introduced new retail items at the Visitor Centre in collaboration with Marios Mantzourogianis, featuring stunning images captured within the reserve to showcase its natural beauty.



A research committee meeting was held to review ongoing and new project proposals. During the session, two new research proposals were thoroughly evaluated and officially approved for implementation. These projects are expected to contribute valuable insights to the reserve’s conservation objectives and support evidence-based management practices. The approved proposals will be conducted by the University of the United Arab Emirates, namely “Investigating microbiome associated with native desert plant species” and “Genomic insights into the genetic diversity, adaptation and evolutionary history of Sand gazelle (*Gazella marica*) and the Arabian gazelle (*Gazella arabica*)”.



March 2025



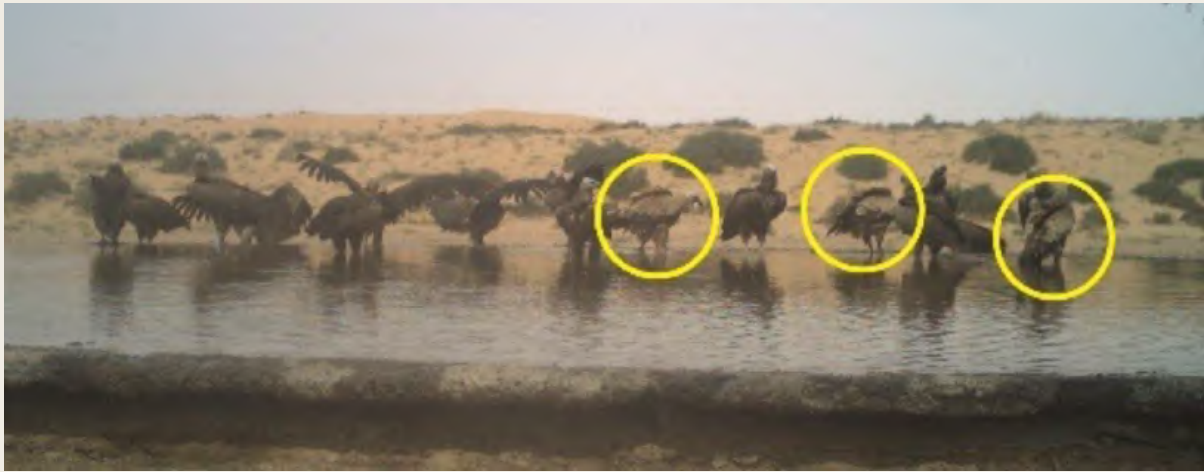
Two dens belonging to the Arabian red fox were recently discovered in the southern region of the reserve, indicating healthy breeding activity and the continued presence of this native predator within the ecosystem. These findings contribute to ongoing wildlife monitoring and habitat assessment efforts.



A special sighting was made in the reserve of two Egyptian vultures drinking together—a rare encounter with this endangered raptor species and a significant moment for the reserve.



A remarkable sighting was recorded at the Faqah Waterhole, where three Eurasian griffon vultures were seen alongside Lappet-faced vultures—an extraordinary gathering of scavengers rarely observed together in the reserve.



The Lappet-faced vulture tagged A07, originally released in Oman, has been sighted multiple times at both the Faqah Waterhole and Tawi Manana Lake. Its regular visits to the reserve are especially significant, as they highlight the reserve’s role as a vital stopover and foraging ground in the species’ wider range. Continued sightings of A07 underscore the importance of protected areas like the DDCR in supporting the long-term survival and movement of this vulnerable raptor across the region.





## 8. Conservation, research and environmental work

### Research Policy, DDCR Management Plan

Research conducted within the DDCR should assist in applying sound scientific ecological principles to the decision-making process and add new knowledge about the species and habitats of the DDCR. The DDCR will be promoted as a destination for applied research in arid land ecosystems by national and international academic institutions. The DDCR Research Committee will evaluate all research proposals based on relevance to the reserve as well as ethical and practical implications. Research is vital for the effective management of the DDCR, in making informed management decisions and the mitigation of climate change and desertification.

### Desert Research Centre

The vision of the research centre is to promote and facilitate scientific studies that help solve environmental challenges. This will be achieved through undertaking collaborative research on the impact of natural, human, social, and ecological aspects on developmental progress. The DDCR aims to become a source of authority and a centre of excellence in biodiversity research by building

a robust scientific community connected with local, regional, and international stakeholders. We aim to prioritise the integrity of the ecological and social systems, values, and resources by facilitating research and providing study opportunities along with logistical and field support within a research-friendly environment. This will allow students, researchers, and volunteers to address essential questions and gain experience and networking skills.

### The objectives of the Desert Research Centre are:

- Encourage and undertake high-quality research
- Conduct research addressing environmental policy objectives
- Develop research projects that provide practical evidence to inform policy
- Promote and facilitate collaborative and multidisciplinary research
- Establish links with both international and national research bodies for cooperation and sharing of research information
- Organise meetings, seminars, and forums

### The DDCR aims to utilise research collaboration for the following purposes:

- Grow functional capacity for effective management and governance of protected areas in the UAE and West Asian Region
- Draw on local and international universities' strengths, expertise, and technical capabilities to offer the highest quality research products
- Build on regional opportunities and enhance the chances to demonstrate, guide, and support quality research in protected areas
- Adapt, facilitate, and coordinate protected area research and spread research results
- Recognise, adapt, develop, and promote excellence and model practice in protected areas research
- Encourage and assist researchers willing to improve their knowledge and skills in research on protected areas, find research ideas and opportunities relevant to their needs, and facilitate ongoing learning and sharing through professional networks and communities of practice





DDCR Research Committee

Following the establishment of the DDCR Research Centre, the reserve initiated a research committee to evaluate all research proposals based on relevance to the reserve as well as ethical and practical implications with a defined Terms of Reference (ToR) and regular (biannual) meetings to propose, evaluate, and guide research activities within the DDCR. The research committee members are from diverse backgrounds and well regarded in their respective fields.

NAME	AFFILIATION	INSTITUTE
Gerhard Erasmus	Conservation Manager	DDCR-UAE
Basil Roy	Conservation Officer	DDCR-UAE
Aline Witte De La Torre	Conservation Officer	DDCR-UAE
Maria Jose Martin	Conservation Officer	DDCR-UAE
Pubudu Madurapperuma	Conservation Ranger	DDCR-UAE
Teresa Navarro	Botanist	Malaga University - Spain
Gary Brown	Ecologist	Freelance - Germany
Brigitte Howarth	Entomologist	Abu Dhabi Natural History Museum
Kosmas Pavlopoulos	Geologist	Sorbonne University - Abu Dhabi
Andrew Leonce	Computer Science	Zayed University
Stephane Boissinot	Herpetologist	New York University - Abu Dhabi
Theo Busschau	Evolutionary Biologist	New York University - Abu Dhabi
Panagiotis Azmanis	IUCN Vulture Specialist	IUCN/DFH
Jacky Judas	Ornithologist	Emirates Nature
Caroline Autret	Archaeologist	Sorbonne University - Abu Dhabi
Alan Stephenson	Ornithologist / Zoologist	Sheikh Butti Wildlife Manager

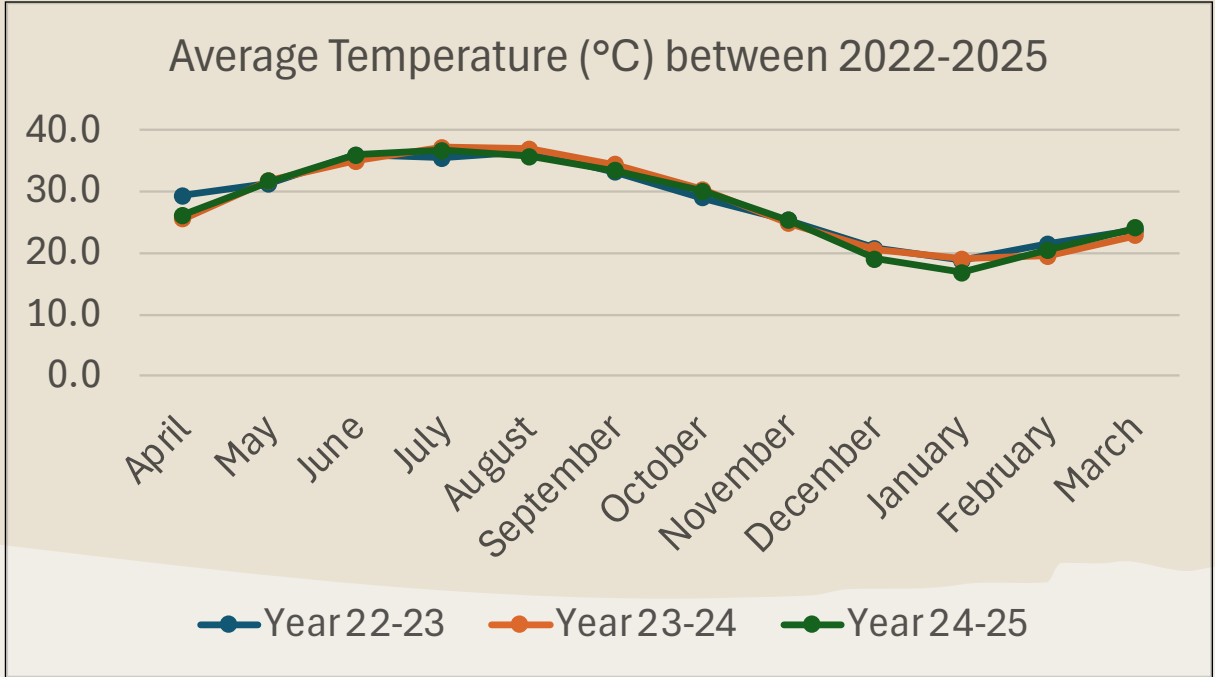
The 12th DDCR Research Committee was held in January 2025 and the following research proposals were approved.

1. Investigating microbiome associated with native desert plant species
2. Genomic insights into the genetic diversity, adaptation and evolutionary history of Sand gazelle (*Gazella marica*) and the Arabian gazelle (*Gazella arabica*)
3. Baseline assessment of nocturnal reptiles inside the Dubai Desert Conservation Reserve

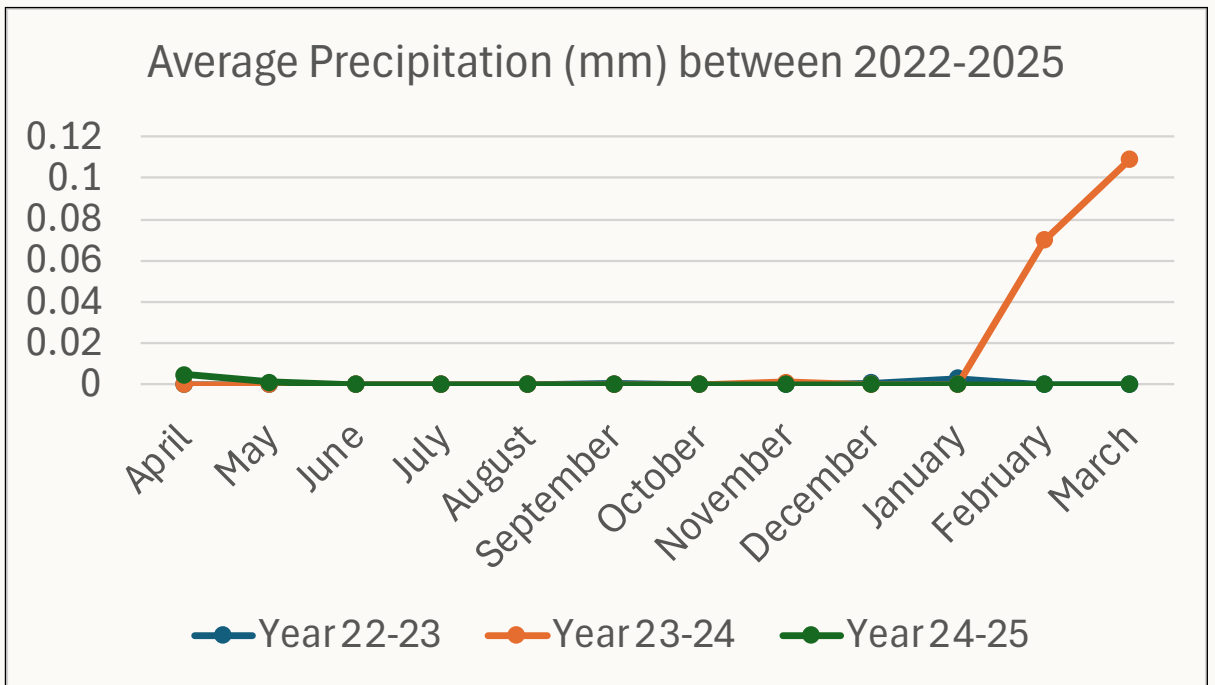




## Weather comparison for the last three years (2022–2025)



Temperature has remained relatively constant over the last three years, with the most recent year being slightly cooler than the previous ones. However, there has been a noticeable increase in temperature between January and March of 2025, with a rise of nearly 10 degrees.



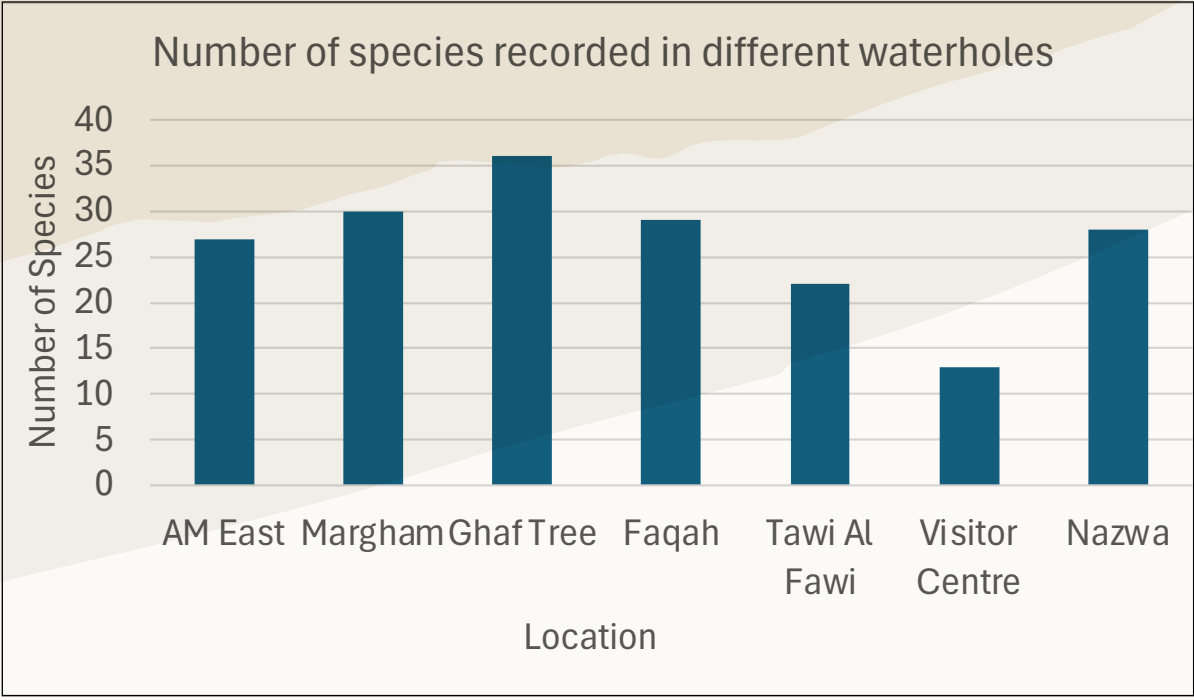
However, precipitation has drastically decreased this year, with barely any rain compared to last year. The combination of higher temperatures and lower precipitation has affected vegetation. At the beginning of 2024, especially after the rains, the reserve was lush and green. However, in 2025, the vegetation survey has recorded less than a third of the number of species present in the previous survey. This has also impacted the populations of ungulates, which now require supplemental feeding to help them survive the more difficult months ahead.

### Research reports

#### Camera trap monitoring report 2024/2025

Camera traps (CT) are a useful tool for monitoring wildlife. In the Dubai Desert Conservation Reserve, seven permanent CTs are strategically positioned at waterholes—areas that are regularly frequented by a variety of species.

Over the deployment period from 1 April 2024 until 31 March 2025, these seven CTs collectively recorded a total of 365 live camera days and captured 512,468 images. A total of 54 species were identified during this period, including 1 reptile species, 9 mammalian species, 41 avian species, and 3 arthropod species.



The highest levels of biodiversity were recorded at Margham and Ghaf Tree, with 30 and 36 species observed at each site. Tawi Al Fawi has a low count of biodiversity in comparison to previous years due to the recent increase of human activity in the area. Unlike the other camera traps, the Visitor Centre camera trap was only deployed in October 2024, explaining the low number of species recorded at the site.

The most frequently captured species in the camera traps were the three main ungulates: the Arabian oryx, Arabian gazelle, and Arabian sand gazelle (Table 1). These species are year-round residents of the reserve, as is the Arabian red fox. In contrast, other mammalian residents such as the Cape hare and Ethiopian hedgehog are more elusive and are rarely recorded by the camera traps.



Table 1: Species of interest at the DDCR

Order	Scientific name	Common name	IUCN Status	January	February	March	April	May	June	July	August	September	October	November	December
Mammalia															
Artiodactyla	<i>Gazella arabica</i>	Arabian Gazelle	VU	X	X	X	X	X	X	X	X	X	X	X	X
Artiodactyla	<i>Oryx leucoryx</i>	Arabian Oryx	VU	X	X	X	X	X	X	X	X	X	X	X	X
Carnivora	<i>Vulpes vulpes arabica</i>	Arabian Red Fox	LC	X	X	X	X	X	X	X	X	X	X	X	X
Artiodactyla	<i>Gazella marica</i>	Arabian Sand Gazelle	VU	X	X	X	X	X	X	X	X	X	X	X	X
Aves															
Accipitriformes	<i>Aquila fasciata</i>	Bonelli's Eagle	LC			X		X		X		X		X	
Accipitriformes	<i>Aegypius monachus</i>	Cinereous Vulture	NT	X		X	X								
Accipitriformes	<i>Neophron percnopterus</i>	Egyptian Vulture	EN	X		X						X			
Accipitriformes	<i>Gyps fulvus</i>	Eurasian Griffon	LC			X		X			X				
Accipitriformes	<i>Torgos tracheliotos negevensis</i>	Lappet-faced Vulture	EN	X	X	X	X	X	X	X	X	X	X	X	X
Accipitriformes	<i>Buteo rufinus</i>	Long-legged Buzzard	LC	X		X		X	X	X	X	X		X	
Accipitriformes	<i>Circus macrourus</i>	Pallid Harrier	NT	X	X	X	X					X	X	X	X
Strigiformes	<i>Bubo ascalaphus</i>	Pharaoh Eagle-owl	LC	X		X		X	X	X	X	X		X	
Strigiformes	<i>Tyto alba</i>	Western Barn Owl	LC	X		X		X		X		X		X	

Several species are regularly recorded in the DDCR throughout the year. Some, such as the Pharaoh Eagle-owl and the Long-legged buzzard, are permanent residents of the reserve. Others, like the Lappet-faced vulture and Bonelli’s eagle, visit the area to take advantage of its resources.

Migratory species such as the Pallid harrier also utilise the DDCR as a resting stop during their seasonal journeys. Additionally, it is likely that other vulture species, following the Lappet-faced vultures, originate from the Hajar Mountains and make frequent visits to the reserve.

Some species are recorded on rare occasion (table 2), often due to their elusive nature, such as the Cape hare and Desert monitor. Others are rarely encountered in the area, including three species of eagles—the Booted eagle, Greater spotted eagle, and Imperial eagle—which appeared only on a few occasions.

All the monthly highlights of the camera traps are posted on our Instagram page @ddcr\_uae

Table 2: Rare sightings with camera traps

RARE SIGHTINGS			
Order	Scientific name	Common name	IUCN Status
Reptilia			
Squamata	<i>Varanus griseus griseus</i>	Desert Monitor	LC
Mammalia			
Lagomorpha	<i>Lepus capensis</i>	Cape Hare	LC
Eulipotyphla	<i>Paraechinus aethiopicus</i>	Ethiopian Hedgehog	LC
Aves			
Accipitriformes	<i>Hieraaetus pennatus</i>	Booted Eagle	LC
Anseriformes	<i>Alopochen aegyptiaca</i>	Egyptian Goose	LC
Accipitriformes	<i>Accipiter nisus</i>	Eurasian Sparrowhawk	LC
Columbiformes	<i>Streptopelia turtur</i>	European Turtle Dove	VU
Accipitriformes	<i>Clanga clanga</i>	Greater Spotted Eagle	VU
Accipitriformes	<i>Aquila heliaca</i>	Imperial Eagle	VU
Charadriiformes	<i>Vanellus senegallus</i>	Wattled Lapwing	LC



### 2024 Vegetation Survey

Vegetation surveys are conducted annually to assess the overall status of plant communities across the Dubai Desert Conservation Reserve (DDCR). These surveys help evaluate plant species diversity and enable comparisons of floral communities across different habitats and years.

A total of 100 points were established across the reserve's two main habitat types—sand dunes and gravel plains. Ten sites were chosen, with 10 quadrats (each measuring 10m x 10m) at every site. These quadrats are surveyed repeatedly each year. Within each quadrat, the density, frequency, abundance, and cover of every plant species are measured. The

2024 vegetation survey was carried out from March to June, followed by data analysis in the subsequent months. The findings from both habitat types were then compared with results from previous years.

In the 2024 survey, 57 plant species were recorded across the 100 quadrats, of which 13 species had not been observed in previous surveys. The total number of species per site ranged from 18 to 36. Individual plant counts per site ranged from 2,571 to 51,345. Overall, the results indicate an increase in biodiversity compared to last year's findings



### Arabian and Sand Gazelles Survey in the DDCR

The Dubai Desert Conservation Reserve supports a diverse range of native wildlife, including important populations of antelope. This survey was conducted to obtain an accurate population count of the two resident gazelle species: the Sand gazelle (*Gazella marica*) and the Arabian gazelle (*Gazella arabica*). In addition to total counts, field teams also recorded the age and sex of every individual observed.

The survey took place on 9 October 2024, from 6:00 AM to 10:30 AM, with 17 participants organised into six teams of 2–3 members. Each team was assigned a designated survey area and equipped with a 4x4 vehicle to facilitate a simultaneous reserve-wide count.

A total of 684 Arabian gazelles were recorded, comprising 220 males, 330 females, 131 juveniles, and 3 individuals of unknown sex. The Sand gazelle population was estimated at 181, including 65 males, 81 females, and 35 juveniles. Arabian gazelles were most frequently observed across the gravel plains surrounding Al Maha Resort and near waterholes. Sand gazelles were primarily located in the more remote southern areas of the reserve, where human activity is minimal.

### Arabian Oryx Body Condition Scoring Survey 2024

The Dubai Desert Conservation Reserve is home to a large and thriving Arabian oryx population. The DDCR actively monitors the health and well-being of this species to ensure its long-term sustainability.

One of the primary tools used to evaluate the health of the oryx is the Body Condition Scoring (BCS) method. BCS assessments are carried out twice a year—once in winter and once in summer—to track variations in body condition across different seasons. This system relies on specific morphological criteria, including fat cover, back posture, and the appearance of musculature and the spine. Scores range from 0 to 5, with 0 representing an emaciated state and 5 indicating obesity.

In the October 2024 survey, a total of 69 Arabian oryx were assessed, comprising 34 females, 25 males, and 10 individuals of unidentified sex. The average BCS was 3.19, indicating that the oryx population is in good overall health. These findings suggest that the current feeding program remains vital for the continued well-being and sustainability of the Arabian oryx in the DDCR.



<https://www.ddcr.org/research/?reports>



## Ungulate summary report 2022–2024

### Arabian and Sand Gazelles in the DDCR

The two gazelle species that occur in the reserve are the Arabian gazelle (*Gazelle arabica*) and Sand gazelle (*Gazelle marica*). Both species are in decline in the region but in the DDCR they are flourishing. The reserve does not have a natural predator to keep gazelle populations stable, and human activity is supervised and limited in the DDCR, giving gazelle an ideal environment to thrive in. This increase in population has been monitored and recorded regularly by DDCR staff. Gazelles are counted weekly and also recorded during a regular intensive survey that lasts a day.

During the intensive survey conducted in October 2024, a total of 684 Arabian gazelles and 181 Sand gazelles were recorded, while the survey conducted in October 2023 recorded a total of 421 Arabian gazelles and 107 Sand gazelles.

Arabian gazelles are mainly found in the centre, where the Al Maha Resort is situated, and in the north, where tour operators have their camps and touristic activities. While the more elusive Sand gazelle have mostly been recorded in the south of the reserve, which is off limits to humans.

### Arabian oryx

The overpopulation of the Arabian oryx (*Oryx leucoryx*) has a direct effect on the abundance of vegetation on the reserve, which then also has an impact on the overall wildlife of the DDCR. Overgrazing by oryx can reduce the overall amount of naturally growing vegetation inside the reserve and impact other desert animals' shelter and food security. Without a natural predator and being protected from human activity, the oryx population reached up to an estimated 900 individuals in the year 2020. The DDCR has a carrying capacity of roughly 300 oryx; therefore, in April 2021, a relocation programme was established, removing oryx outside of the reserve and into enclosures to alleviate the grazing pressure on the reserve's vegetation. Today, the rough estimate of oryx inhabiting the reserve is 600 individuals. All the oryx kept in the enclosures have been sent to other suitable locations around the UAE; however, the continuous flourishing oryx population inside the DDCR will still need to be managed and oryx will have to continue to be relocated to the enclosures to avoid overgrazing.

### DDCR Ungulates

The DDCR is dedicated to maintaining the natural balance of the reserve. One example of this commitment is the continuous monitoring and management of the largest grazers inside the DDCR: the ungulate population. On an annual basis, population sizes, births, and deaths of the Arabian oryx, Arabian gazelle, and Sand gazelle are recorded. The DDCR staff conduct weekly counts of ungulates in the areas they congregate—including all feeding stations, watering holes, lakes, and plantations—and count ungulates found on all existing tracks inside the reserve. The total numbers calculated for all these ungulate species are less than the actual count. Oryx and gazelles can be found throughout the entire reserve, including in remote areas, which can be challenging to record; however, weekly counts generate a good estimation of population sizes, births, and deaths.

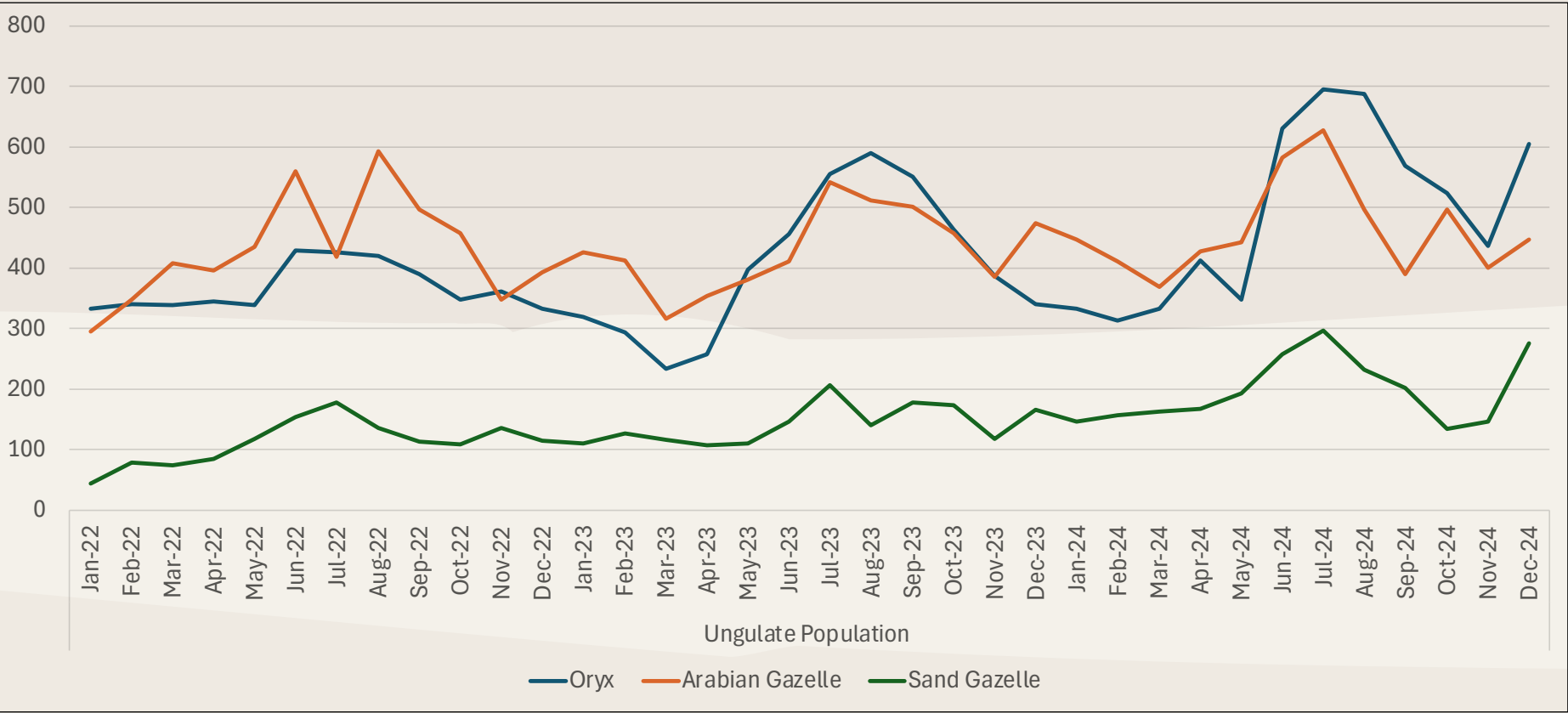




Table 1: Ungulate counts, births, deaths from 2022 to 2024

Month	Oryx Count	Oryx Births	Oryx Deaths	A.Gazelle Count	A.Gazelle Births	A.Gazelle Deaths	S.Gazelle Count	S.Gazelle Births	S.Gazelle Deaths
Jan 2022	332	0	0	295	0	3	44	0	0
Feb 2022	340	0	0	347	0	3	78	0	0
Mar 2022	338	0	0	407	0	0	73	0	0
Apr 2022	344	0	0	396	0	1	84	0	0
May 2022	338	0	0	435	0	0	117	0	0
June 2022	428	1	0	560	0	1	154	0	0
July 2022	425	1	2	418	0	3	178	0	0
Aug 2022	420	0	1	593	0	0	136	0	0
Sept 2022	389	1	0	496	0	0	113	0	0
Oct 2022	348	0	1	458	0	0	109	0	0
Nov 2022	361	0	0	348	0	2	136	0	0
Dec 2022	332	0	0	393	0	0	114	0	0
Jan 2023	319	0	0	425	0	2	110	0	0
Feb 2023	293	0	0	412	0	0	126	0	0
Mar 2023	233	0	0	316	0	5	116	0	0
Apr 2023	258	0	3	354	0	1	107	0	0
May 2023	397	0	0	381	0	1	110	0	0
June 2023	456	3	1	410	0	0	146	0	0
July 2023	555	11	2	542	0	0	206	0	0
Aug 2023	589	0	0	511	0	0	140	0	0
Sept 2023	550	0	1	501	0	1	177	0	0
Oct 2023	463	0	0	458	0	0	173	0	0
Nov 2023	386	1	0	385	0	2	117	0	1
Dec 2023	340	1	0	474	0	0	165	0	0
Jan 2024	332	2	0	447	0	0	146	0	0
Feb 2024	313	1	0	411	0	0	156	0	0
Mar 2024	332	1	0	369	0	1	162	0	0
Apr 2024	412	0	0	427	0	0	167	0	0
May 2024	347	0	0	443	0	0	192	0	0
June 2024	630	0	0	582	0	0	258	0	0
July 2024	695	0	0	628	0	0	297	0	0
Aug 2024	687	2	2	497	0	2	231	0	0
Sept 2024	569	3	0	390	0	1	201	0	0
Oct 2024	524	2	0	496	0	5	134	0	0
Nov 2024	436	2	5	400	0	3	146	0	0
Dec 2024	605	13	1	447	0	4	276	0	0

Figure 1: Ungulate population count from 2022 to 2024



- Figures show that all ungulate populations are increasing. In 2024, both Arabian oryx and Arabian gazelle populations have passed the 600 mark.
- The spikes in ungulates during the summer months indicate that these populations are mainly recorded in areas that have shade and water during the hottest times of the year.
- The Sand gazelle population is the smallest; however, it is still increasing, going from roughly 100 individuals recorded in 2022 to 300 individuals recorded in 2024.





9. Current research

Monitoring Programme for the Major Site Values of the DDCR

This programme includes the objectives, methodology, and expected outcomes of monitoring each of the Major Site Values (MSV) identified in the DDCR Management Plan. The results of this programme will provide us with performance measures for each of these MSV and will be used to evaluate our success in achieving successful conservation outcomes.



DDCR Monitoring Plan							
	Major Site Values	Monitoring Study	Aim	Methods	Timelines	Performance Measures	Thresholds
1	Fauna						
1.1	Arabian Oryx ( <i>Oryx leucoryx</i> )	Monitoring of Arabian Oryx in the DDCR	Maintain a healthy, optimum and self-sustaining population of Arabian oryx in the reserve. To achieve this aim it is imperative to implement a long-term monitoring program in order to have a better understanding of the Arabian oryx population and their requirements and subsequently to utilise this understanding to make better management decisions for the DDCR.	Species weekly counts	Weekly (Tuesdays)	Population size	200-300
				Body condition scoring (BCS)	Bi-annual	Muscle mass and fat stores	2.5-3.5
1.2	Arabian Gazelle ( <i>Gazella arabica</i> )	Monitoring of Arabian Gazelle in the DDCR	Maintain a healthy, optimum and self-sustaining population of Arabian gazelle in the reserve. To achieve this aim it is imperative to implement a long-term monitoring program in order to have a better understanding of the Arabian gazelle population and their requirements and subsequently to utilise this understanding to make better management decisions for the DDCR.	Species weekly counts	Weekly (Tuesdays)	Population size	200-300
				Distribution assessment	Annual (Winter)	Breeding effort	Stable population
1.3	Sand Gazelle ( <i>Gazella marica</i> )	Monitoring of Sand Gazelle in the DDCR	Maintain a healthy, optimum and self-sustaining population of Sand gazelle in the reserve. To achieve this aim it is imperative to implement a long-term monitoring program in order to have a better understanding of the Sand gazelle population and their requirements and subsequently to utilise this understanding to make better management decisions for the DDCR.	Species weekly counts	Weekly (Tuesdays)	Population size	100-200
				Distribution assessment	Annual (Winter)	Breeding effort	Incr. population
1.4	Lappet-faced Vulture ( <i>Torgos trachiolotos</i> )	Monitoring of Lappet-Faced Vultures in the DDCR	Gain a better understanding of the status of the Lappet-faced vulture population visiting the reserve and identify their home-range, breeding and roosting sites.	Observations	Continuous	Population size	20-40 individuals
				Camera trapping (Waterpoints)	Continuous	Roosting	Roosting site identified
				Camera trapping (Vulture restaurant)	Continuous	Breeding	Breeding site identified
1.5	Pharaoh Eagle-owl ( <i>Bubo ascalaphus</i> )	Monitoring of Pharaoh Eagle-owl in the DDCR	Gain a better understanding of the population status of the Pharaoh Eagle-owl within the DDCR and to learn more about their diet and breeding ecology.	Nest survey	Annual (Feb-May)	Breeding effort	2-5 nests
				Camera trapping (Waterpoints)	Continuous		
1.6	Macqueen's Bustard ( <i>Chlamydotis macqueenii</i> )	Monitoring of the Macqueen's Bustard in the DDCR	To have an established breeding population of Macqueen's bustard in the DDCR and surrounding area.	Species weekly counts	Weekly (Tuesdays)	Breeding effort	1-5 nests
				Distribution assessment	Annual (Winter)		
1.7	Arabian Wildcat ( <i>Felis lybica lybica</i> )	Monitoring of the Arabian Wildcat in the DDCR	To have a better understanding of the population status of the Arabian wildcat in the DDCR. As they are a main threat to the Arabian wildcat, feral cats will be eradicated from the reserve.	Camera trapping (Waterpoints)	Continuous		
				Trapping feral cats	Continuous		
2	Habitats						
2.1	Sand sheet with perennial herbs	Vegetation survey for sand sheets with perennial herbs	To implement the continuous practical and efficient vegetation monitoring with the application of appropriate functional analysis for valid data interpretation that will lead to adaptive management plans for the reserve with sets of priorities and objectives.	Vegetation monitoring	Annual (Winter)	Cover and species distribution	5-10%
				Vegetation survey	Every 5 years	Diversity	Simpson 0.8-0.9
2.2	Interdunal plains and Gravel plains	Vegetation survey for interdunal plains and gravel plains	To implement the continuous practical and efficient vegetation monitoring with the application of appropriate functional analysis for valid data interpretation that will lead to adaptive management plans for the reserve with sets of priorities and object	Vegetation monitoring	Annual (Winter)	Cover and species distribution	7-14%
				Vegetation survey	Every 5 years	Diversity	Simpson 0.8-0.9
2.3	Nazwa limestone outcrop	Vegetation survey for Nazwa limestone outcrop	To implement the continuous practical and efficient vegetation monitoring with the application of appropriate functional analysis for valid data interpretation that will lead to adaptive management plans for the reserve with sets of priorities and object	Vegetation monitoring	Annual (Winter)	Cover and species distribution	Not declining
				Vegetation survey	Every 5 years	Diversity	Simpson 0.8-0.9
3	Flora						
3.1	Ghaf Groves ( <i>Prosopis cineraria</i> )	Ghaf groves survey	Mapping the change in the natura Ghaf groves over time is an essential aspect of conservation of the DDCR's natural resources and monitoring at the species level requires on-ground observations. This project will explore the viability of tracking changes of individual tree plants over time across the two Ghaf groves using regular inspection and measuring trees. Satellite imaging will also be used to monitor tree health over time.	Ghaf groves survey	Continuous	Tree population	Not declining
						Tree health (NDVI)	
3.2	Endangered and habitat restricted species: Dipcadi biflorum and Euploca rariflora	Vegetation survey for Nazwa limestone outcrop	Monitoring changes in populations of Dipcadi biflorum and Euploca rariflora in to ensure the conservation of these endangered species.	Vegetation monitoring	Annual (Winter)	Species presence and distribution	Increasing



**Biodiversity of Jebel Nazwa inside the Dubai Desert Conservation Reserve: An initial assessment with focus on plant communities and bird diversity – 2023/FN-FL-EC/03 -**

Aline Witte de la Torre

**Research summary**

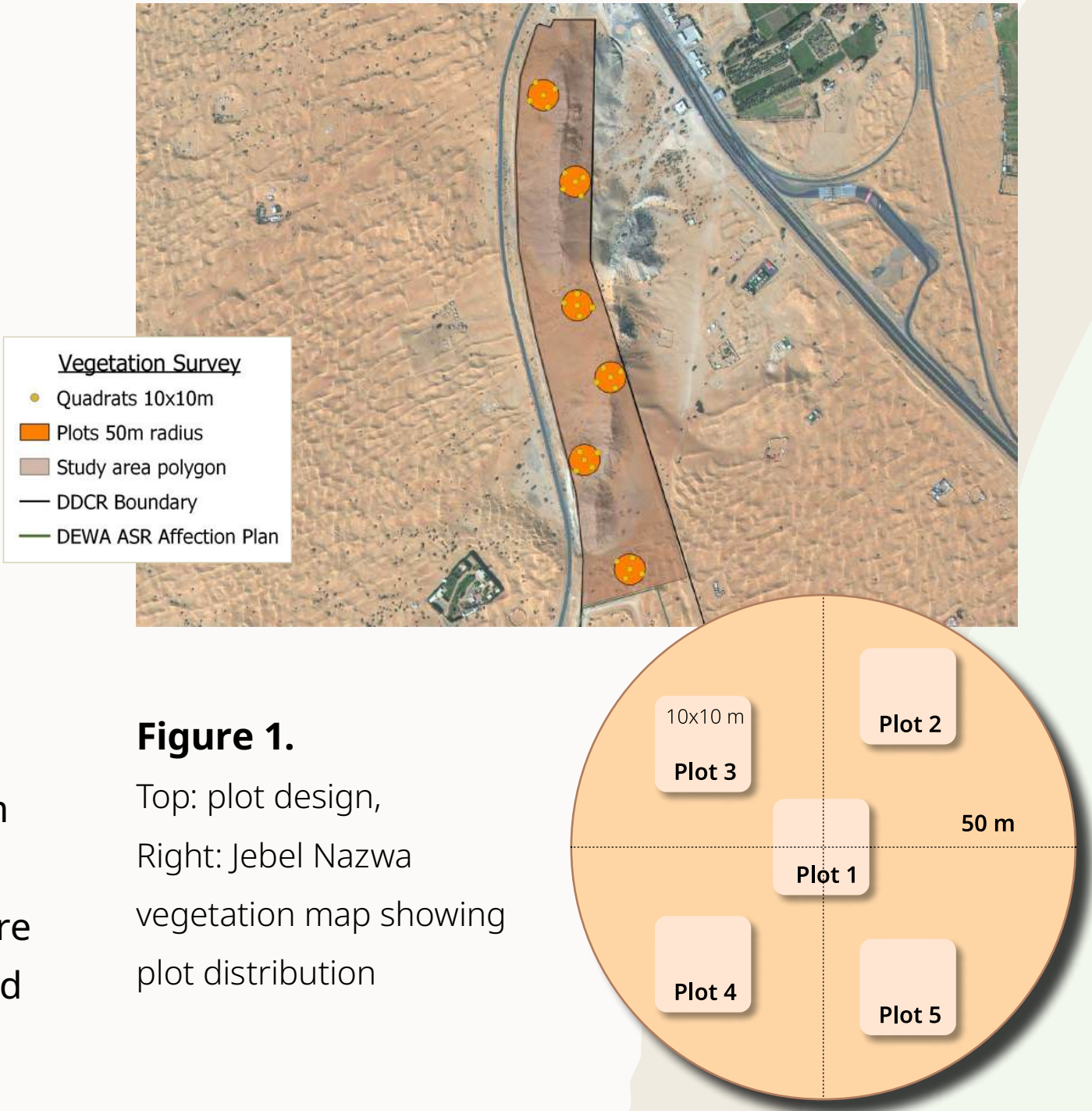
The objective of this project was to assess vegetation communities, composition, and diversity in the Jebel Nazwa limestone outcrop of the Dubai Desert Conservation Reserve (DDCR), and to compare these findings with data from the annual vegetation surveys conducted in sand dune and gravel plain habitats. Additionally, an initial assessment for bird diversity was undertaken over a one-year period to enhance understanding of the habitat’s ecological value for avian species.

**Vegetation Survey**

*Methodology*

Vegetation cover and community structure were assessed using plot sampling, following the methodologies established by Alqamy (2004) and Khafaga (2009) (Figure 1). A total of thirty 10m x 10m quadrats were surveyed once between March and April 2024. Within each quadrat, all plant species were identified and recorded, and three randomly selected individuals per species were measured to gather representative morphological data.

Plant species were photographed using a Canon 90D camera equipped with an EFS 18-135mm lens. Species identification was conducted using The Comprehensive Guide to the Wildflowers of the United Arab Emirates (2003). For specimens not identifiable through the guide, expert verification was provided by Dr. Gary Brown. Data analysis included species richness and composition and biodiversity indices such as Simpson’s Index (D), Shannon Diversity Index, and Margalef’s Richness Index.

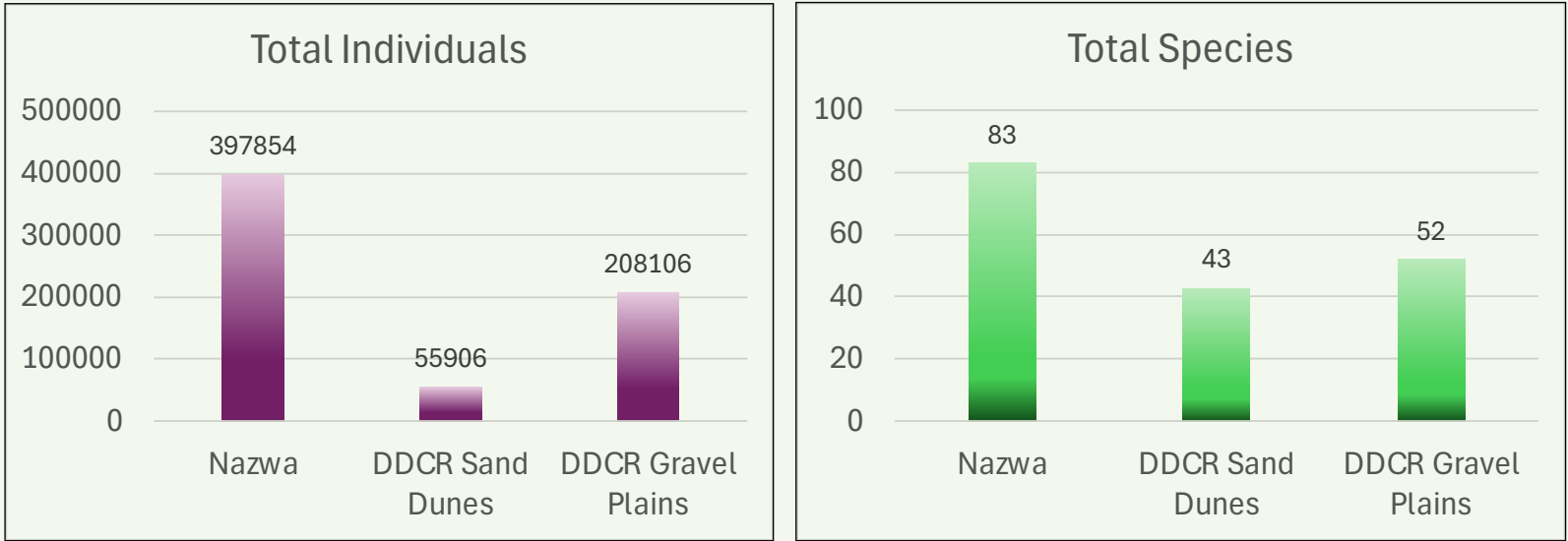


**Figure 1.**

Top: plot design,  
Right: Jebel Nazwa  
vegetation map showing  
plot distribution

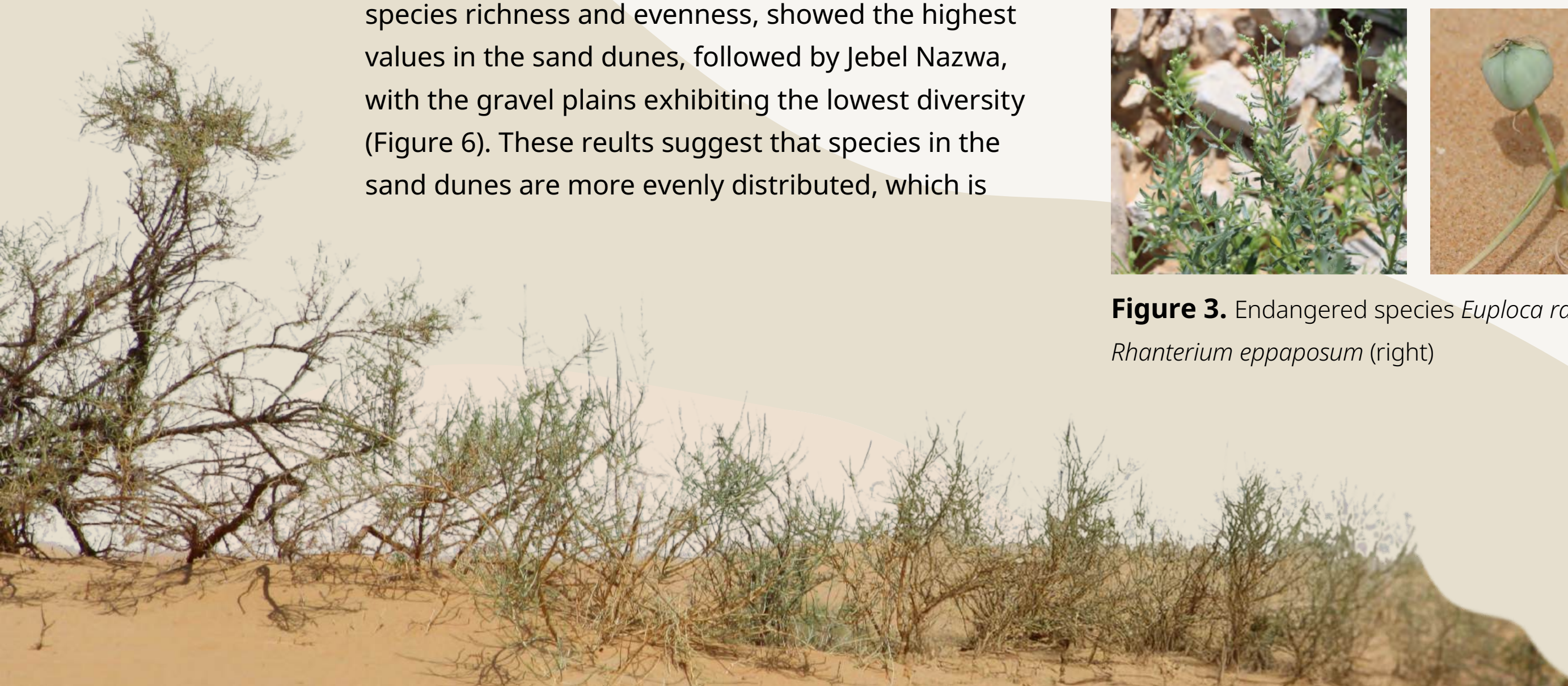
*Results*

A total of 30 quadrats were surveyed over a two-month period, resulting in the recording of 397,854 individual plants from 83 species at Jebel Nazwa. This establishes Jebel Nazwa as the habitat with both the highest species richness and abundance when compared to the sand dunes and gravel plain habitats within the DDCR (Figure 2). Of the recorded species, 27 (including one unidentified species) represent new records for the DDCR as they had not been documented in previous vegetation surveys (Table 1). Noteworthy findings include the presence of *Dipcadi biflorum*, *Euploca rariflora*, and *Rhanterium eppaposum*, all of which are listed as endangered in the UAE National Red List (NRL) (Figure 3).



**Figure 2.** Total individuals (left) and total species (right) recorded in each of the three habitats of the DDCR





Simpson’s Index (D), which reflects the probability that two randomly selected individuals belong to the same species, yielded the lowest value in the DDCR sand dunes, followed by Jebel Nazwa, and was highest in the gravel plains (Figure 4). In this context, lower values correspond to higher diversity, indicating that the sand dunes exhibit the greater species diversity.

Margalef’s Richness Index, which adjusts species richness based on the total number of individuals, showed the highest values at Jebel Nazwa, followed by the gravel plains, with the sand dunes displaying the lowest richness (Figure 5). This suggests a more complex and heterogenous plant community at Jebel Nazwa, which may be indicative of greater ecological resilience.

Shannon’s Diversity Index, which accounts for both species richness and evenness, showed the highest values in the sand dunes, followed by Jebel Nazwa, with the gravel plains exhibiting the lowest diversity (Figure 6). These results suggest that species in the sand dunes are more evenly distributed, which is

consistent with the broader and more continuous nature of sand dune habitats. Jebel Nazwa, representing a single isolated outcrop also shows an even species distribution. In contrast, gravel plains occur in fragmented patches, which likely contributes to greater variability and uneven species distribution in this habitat.

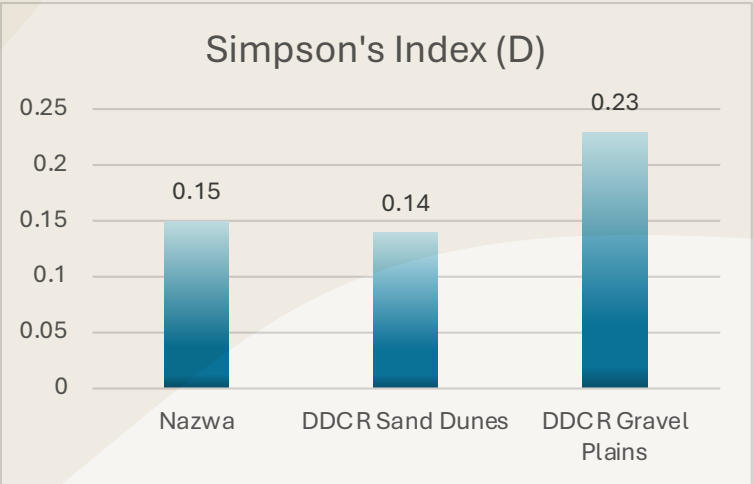
<i>Aizoon canariense</i>	<i>Euphorbia granulata</i>	<i>Rumex spinosus</i>
<i>Argyrobium roseum</i>	<i>Euphorbia larica</i>	<i>Rumex vesicarius</i>
<i>Astragalus eremophilus</i>	<i>Euploca rariflora</i>	<i>Salvia aegyptiaca</i>
<i>Cometes surattensis</i>	<i>Forsskaolea tenacissima</i>	<i>Savignya parviflora</i>
<i>Dactyloctenium scindicum</i>	<i>Lasiurus scindicus</i>	<i>Sclerocephalus arabicus</i>
<i>Dichanthium foveolatum</i>	<i>Medicago laciniata</i>	<i>Seetzenia orientalis</i>
<i>Dibpcadi biflorum</i>	<i>Notoceras bicornes</i>	<i>Stipagrostis raddiana</i>
<i>Echiochilon persicum</i>	<i>Oligomeris linifolia</i>	<i>Zygophyllum bruguieri</i>
<i>Enneapogon desvauxii</i>	<i>Plantago amplexicaulis</i>	Unidentified 1

**Table 1.** List of new records of plant species for the DDCR database highlighting endangered species

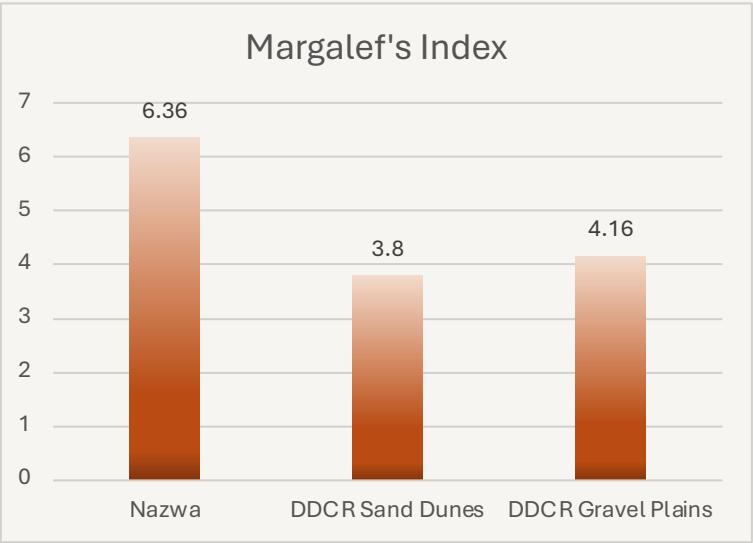


**Figure 3.** Endangered species *Euploca rariflora* (left), *Dipcadi biflorum* (middle), and *Rhanterium eppaposum* (right)

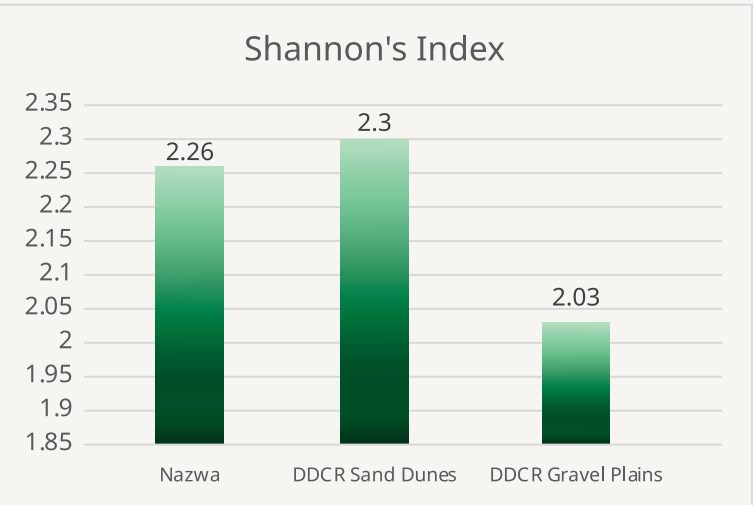
Vegetation Survey



**Figure 4.** Simpson’s Index (D) across the three habitats in the DDCR



**Figure 5.** Margalef’s Richness Index across the three habitats in the DDCR



**Figure 6.** Shannon’s Diversity Index across the three habitats in the DDCR

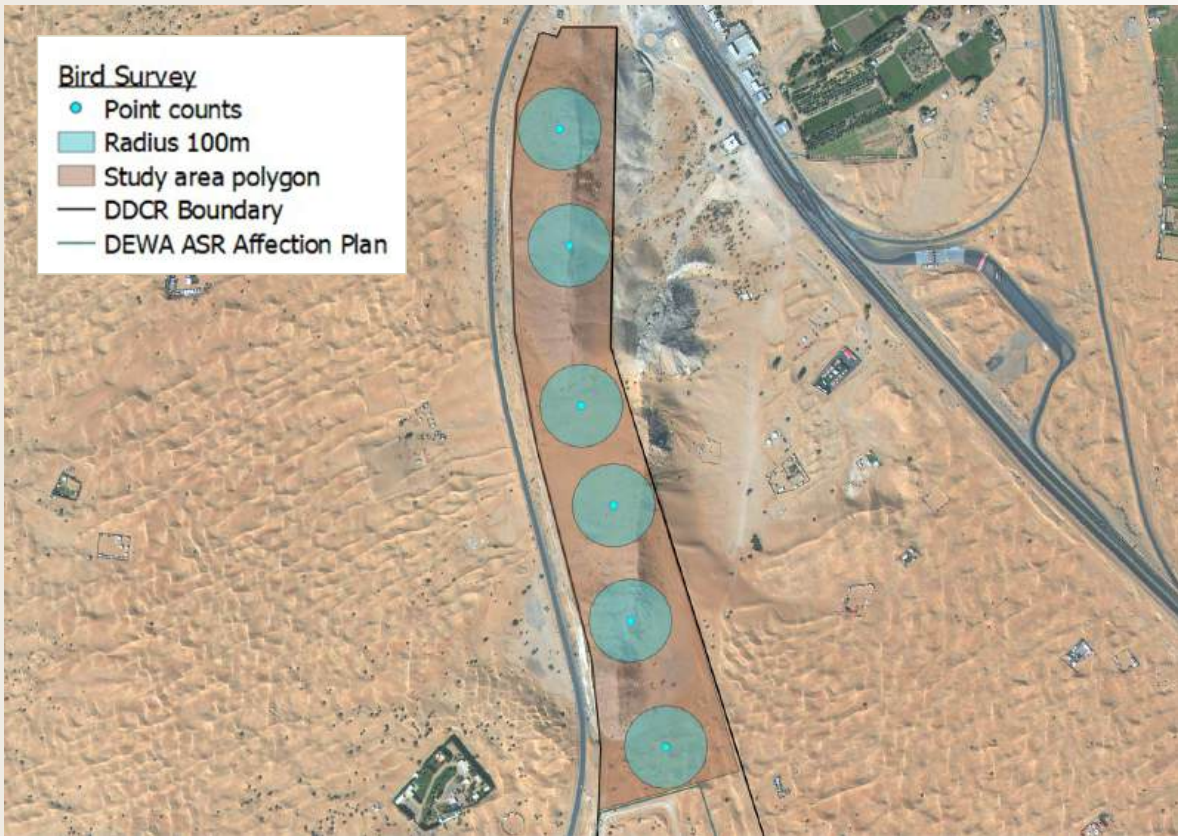


## Bird Survey

### Methodology

Bird species richness, abundance, and diversity were assessed using point count surveys (Figure 7). Observations were conducted at six fixed points 20–30 minutes after sunrise, where all birds seen or heard within a 100m radius were recorded during a 10-minute period. Detection distances were categorised into three bands: <25m, 25–50m, and 50–100m. Birds were observed using binoculars and identified with the aid of the Birds of the Middle East (2010) field guide. Whenever possible, photographs were taken using a Canon 90D camera equipped with a Tamron 100-400mm lens for documentation and verification purposes. Each point count location was surveyed twice per month from November 2023

through October 2024. Data was analysed using EstimateS software to calculate Shannon's Diversity Index, Simpson's Index (D), and the Abundance Coverage-based Estimator (ACE).



**Figure 7.** Bird point count locations at Jebel Nazwa

### Results

Over the one-year survey period, a total of 2,232 individual birds from 46 species were recorded at Jebel Nazwa (Figure 8). Of these, 23 species were classified as migratory, 17 as resident, one as a partial migrant, and five as invasive. Bird communities showed pronounced seasonal variation, a pattern characteristic of desert ecosystems where resources are typically scarce and only temporarily abundant. This fluctuation is further illustrated by the species accumulation curve, which shows two distinct peaks corresponding to the spring

and autumn migration seasons, when many species pass through the Arabian Peninsula en route to or from their wintering grounds (Figure 9). Notably, five species recorded during the survey represent new records for the DDCR, having not been previously documented within the reserve (Figures 10 and 11).

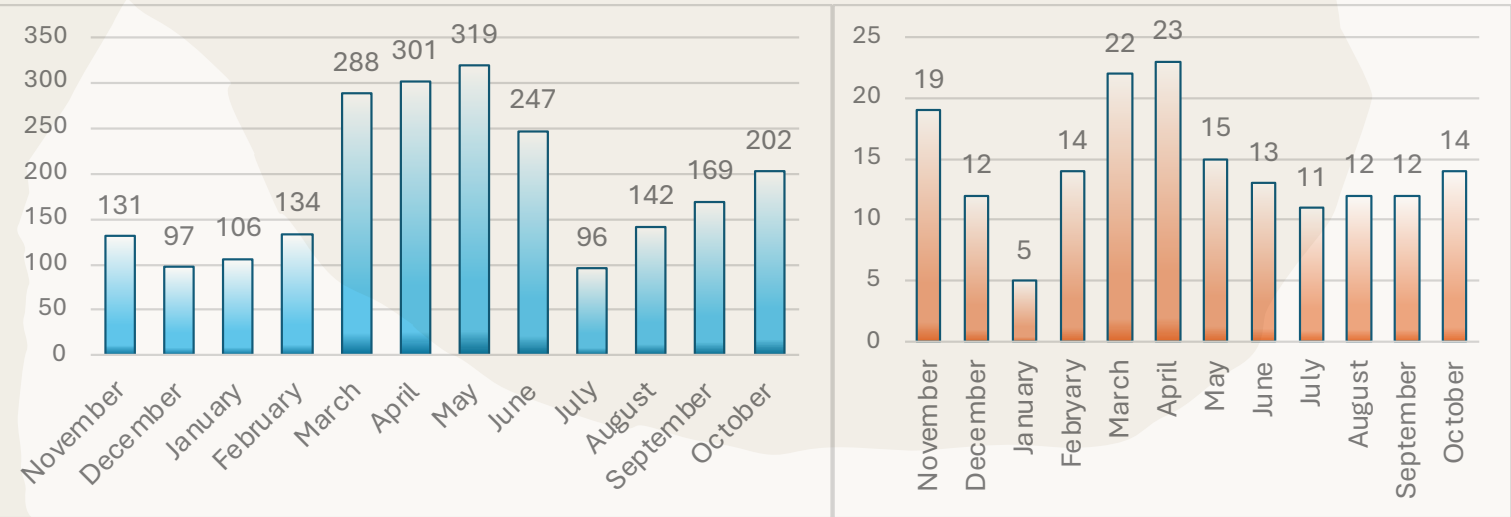
Simpson's Index was calculated at 0.2, indicating a high level of bird diversity at Jebel Nazwa despite its relatively small geographic area. Similarly, Shannon's Diversity Index was calculated at 2.17, reflecting both high species richness and evenness. While certain species, such as House sparrows (*Passer domesticus*), Laughing doves (*Spilopelia senegalensis*), and Sunbirds (*Cinnyris asiaticus*) were more commonly observed, the habitat does not appear to be overwhelmingly dominated by a small number of species.

The Abundance Coverage-based Estimator (ACE), which estimates the number of undetected species in communities with many rare taxa, produced a value of 55.8, suggesting that approximately 10 additional species may be present at Jebel Nazwa but were not recorded during the survey period. An especially noteworthy observation was the presence of four bird species known to favour mountain habitats, three of which are rarely recorded outside montane environments in the UAE (Figures 10 and 12). This finding underscores the ecological uniqueness of the Jebel Nazwa outcrop and its potential importance as an avian refuge within the DDCR.

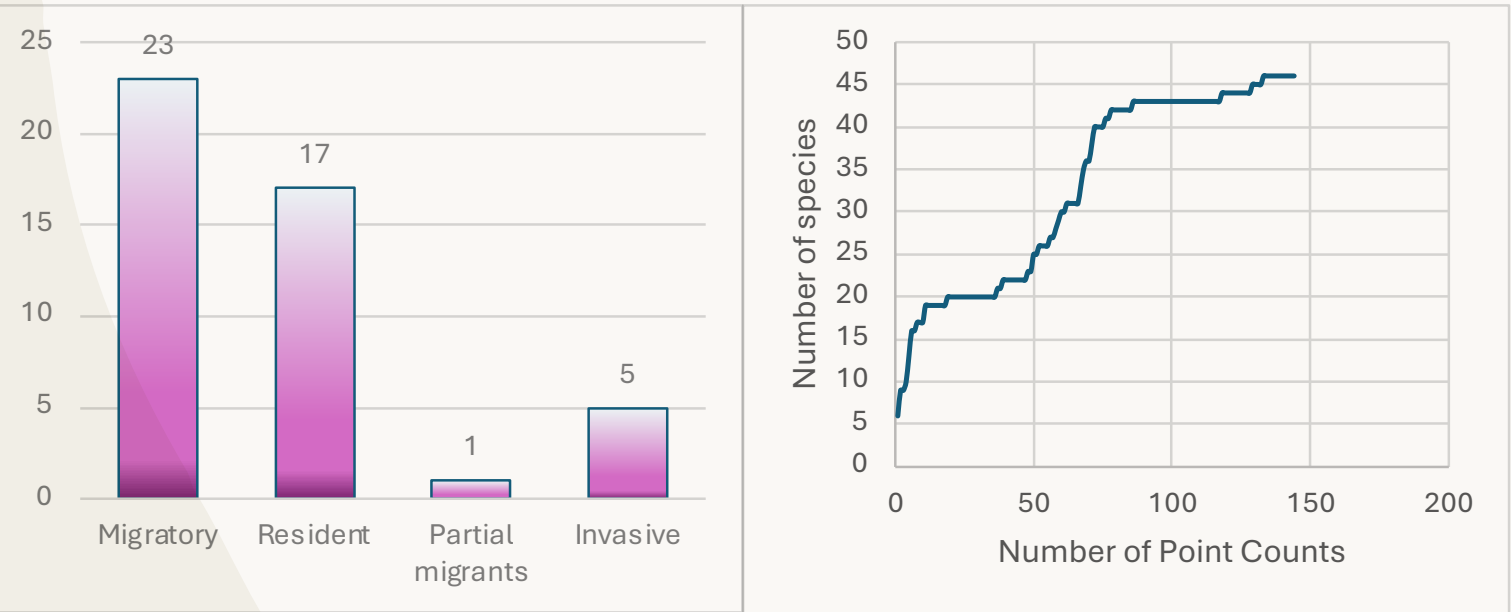




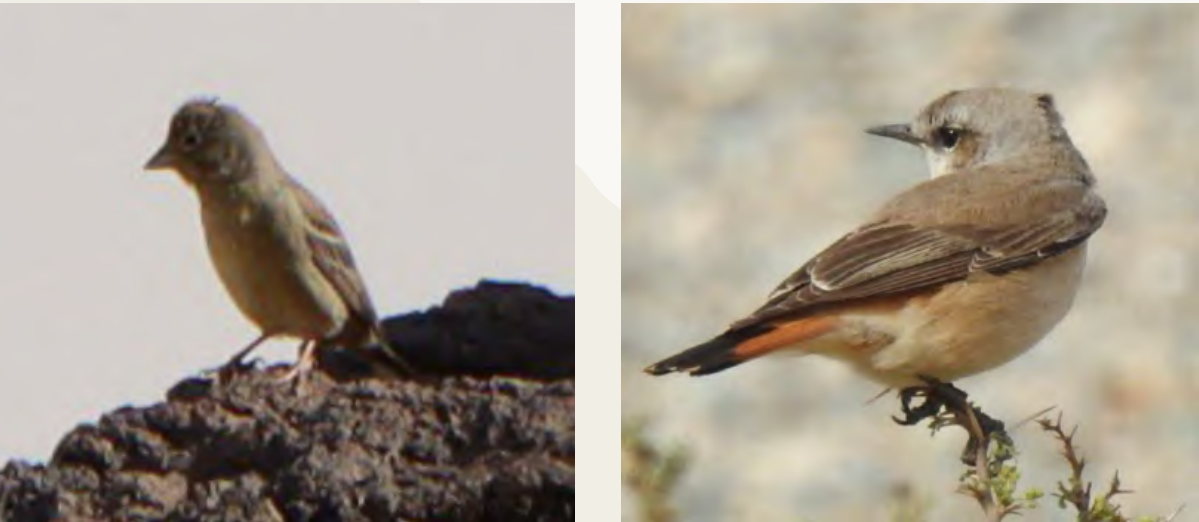
# Bird Survey



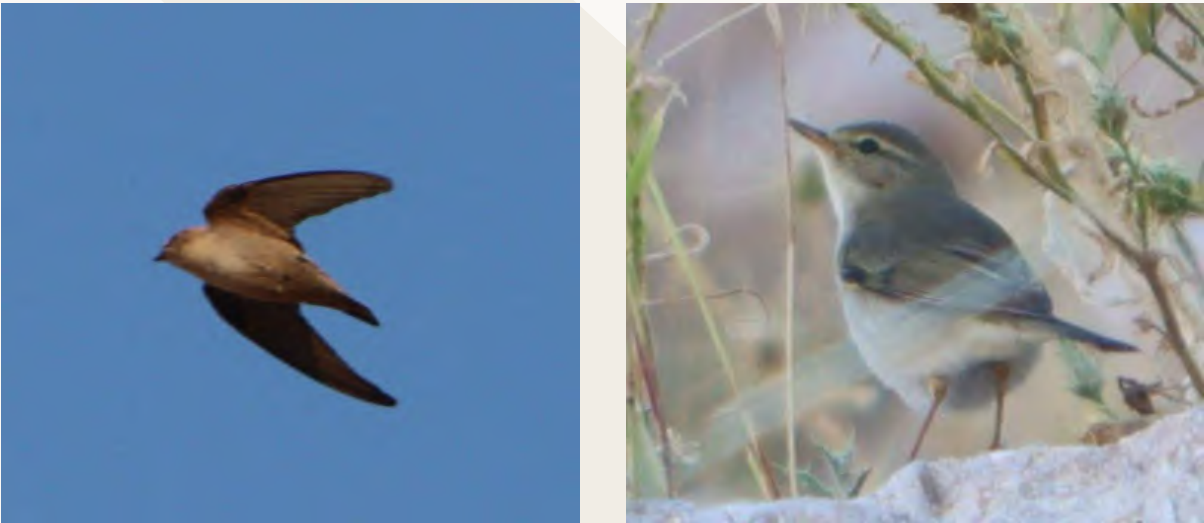
**Figure 8.** Total individuals (left) and total species (right) recorded per month during the bird survey



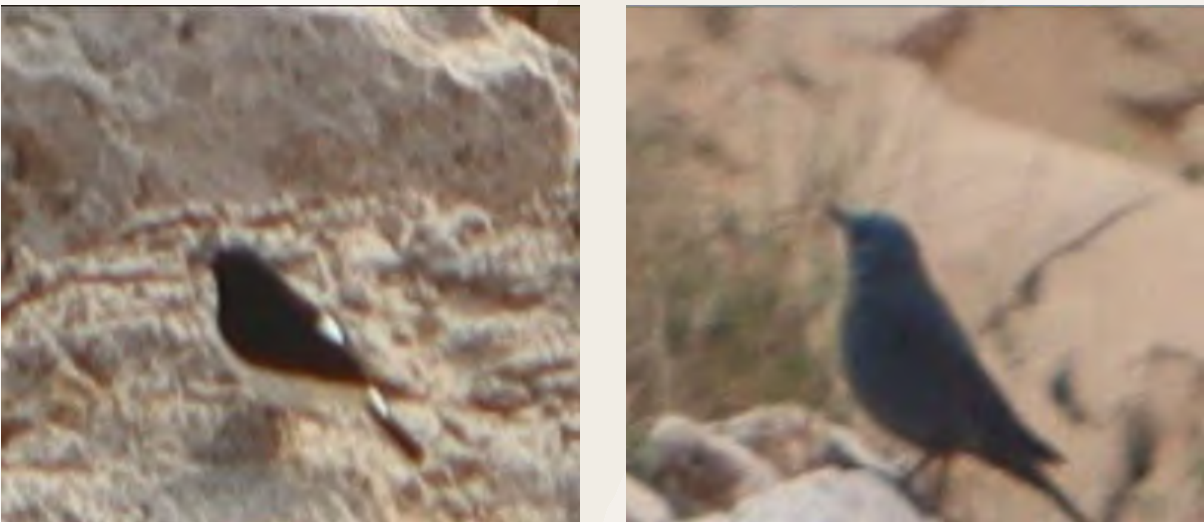
**Figure 9.** Status of bird species recorded (left) and bird species accumulation curve (right)



**Figure 10.** Cinereous bunting, *Emberiza cineracea* (left), and Persian wheatear, *Oenanthe chrysopygia* (right)



**Figure 11.** Eurasian crag-martin, *Ptyonoprogone rupestris* (left), and greenish warbler, *Phylloscopus trochiloides* (right)



**Figure 12.** Hume's wheatear, *Oenanthe albonigra* (left), and blue rock-thrush, *Monticola solitarius* (right)

## Conclusions

Jebel Nazwa shows high plant diversity, hosting rare species such as *Euploca rariflora*, *Dipcadi biflorum*, and *Rhanterium eppaposum*, as well as plant species that are unique to this habitat within the reserve. Given its significance, it's crucial to continue monitoring the vegetation at Jebel Nazwa to ensure the conservation of rare and endangered species.

Selecting ten quadrats from this study's sampling areas and including Jebel Nazwa as a designated site in the DDCR's annual vegetation survey is recommended to enhance monitoring efforts, as this will allow for regular tracking of target species. Future vegetation surveys could focus on sampling across various terrain types within the area and consider additional variables such as slope angle, humidity, and soil temperature. This would provide deeper insights into the structure and dynamics of the plant communities at Jebel Nazwa.

In addition to its plant diversity, Jebel Nazwa also supports a wide variety of bird species, with notable seasonal variations driven primarily by migratory patterns. The site plays an important role as a pit stop for bird species that prefer mountain habitats and is a vital component of the reserve's landscape. Future bird studies should prioritise sampling during peak migratory seasons (spring and autumn) and expand efforts to include all habitats within the reserve, offering a more comprehensive understanding of bird diversity and habitat use across the DDCR. Given the uniqueness of this habitat within the reserve, and the presence of endangered and habitat-restricted species identified during the study, it is recommended that Jebel Nazwa be designated as a Major Site Value (MSV). Furthermore, its continuous monitoring should be prioritised as part of future management plans.



**Vulture Research Update - Basil Roy**

Vultures in the UAE are rarely seen; however, in the DDCR, they are daily visitors. Four species of vulture have been recorded in the reserve: the Lappet-faced vulture (*Torgos tracheliotus*), Egyptian vulture (*Neophron percnopterus*), Eurasian griffon vulture (*Gyps fulvus*), and Cinereous vulture (*Aegypius monachus*).

In the end of 2023, a new vulture restaurant was established, and half of a capturing cage had been built to one day capture and release vultures. This capture and release operation takes under one hour, and the cage will be completed once it has been confirmed that vultures go inside the cage. During this operation, vultures will be fitted with GPS trackers, tagged, and released, allowing us to record their movements and possibly locate their breeding grounds. Samples (blood, swabs, faeces, ectoparasites, and feathers) will also be collected to assess the health of the individuals and check their exposure to diseases, environmental lead, and possible NSAID contaminants. Samples will also be preserved for future conservation genetics.

All four species of vulture have been recorded at the newly established vulture restaurant. Since the beginning of the project, oryx, gazelle, common eland, ostrich, and goat carcasses have been placed at the vulture restaurant and in front of camera traps. The use of camera traps on-site allows us to

monitor vulture numbers, behaviour, and adaptation to the newly built cage, and more recently, the conditions of the site.

In February 2025, feral dogs have been recorded at the vulture restaurant, reaching carcasses before vultures could. However, in April 2025, there have been fewer recordings of feral dogs at the vulture restaurant and in the reserve, partially due to the rise in temperature. At this stage, vultures are congregating and flying roughly 10 metres next to the cage. Once vultures are comfortable enough to enter the cage, the next phase will be to complete the cage and set up a triggering door to capture and then release vultures for data collection.



Eurasian griffon and Lappet-faced vultures recorded on 18 November 2023 at the vulture restaurant



Cinereous and Lappet-faced vultures recorded on 18 November 2023 at the vulture restaurant



Egyptian and Lappet-faced vultures recorded on 5 May 2024 at the vulture restaurant



Vulture cage for the capture and release programme at the new vulture restaurant



Vulture field data is also being gathered outside of the vulture restaurant. Permanent camera traps at waterholes throughout the reserve are being used to record vulture activity. Also, observers who are in the field take photos of vultures and record their location. The data collected by camera traps and long lens cameras contributes to vulture awareness in the DDCR and can help us understand vulture movement in the reserve, the UAE, and regionally. A good example of this occurrence is with an individual Lappet-faced vulture with a white tag numbered A07, which has been recorded by both camera traps and by field observers. The vulture was recorded on 10 July 2023 at the Faqah Waterhole in the DDCR, then again recorded on 24 September 2023 in Al Buraimi, Oman, and then more recently recorded in the DDCR on 31 March 2025.



Photo taken at DDCR's Al Faqah Waterhole, Dubai, UAE, on 10 July 2023



Photo taken in Al Buraimi, Oman, on 24 September 2023



Photo taken at the DDCR, Dubai, UAE, on 31 March 2025





**Biodiversity in Ghaf Trees (*Prosopis cineraria* (L.) Druce) with focus on bird nesting**

*Update in the research*

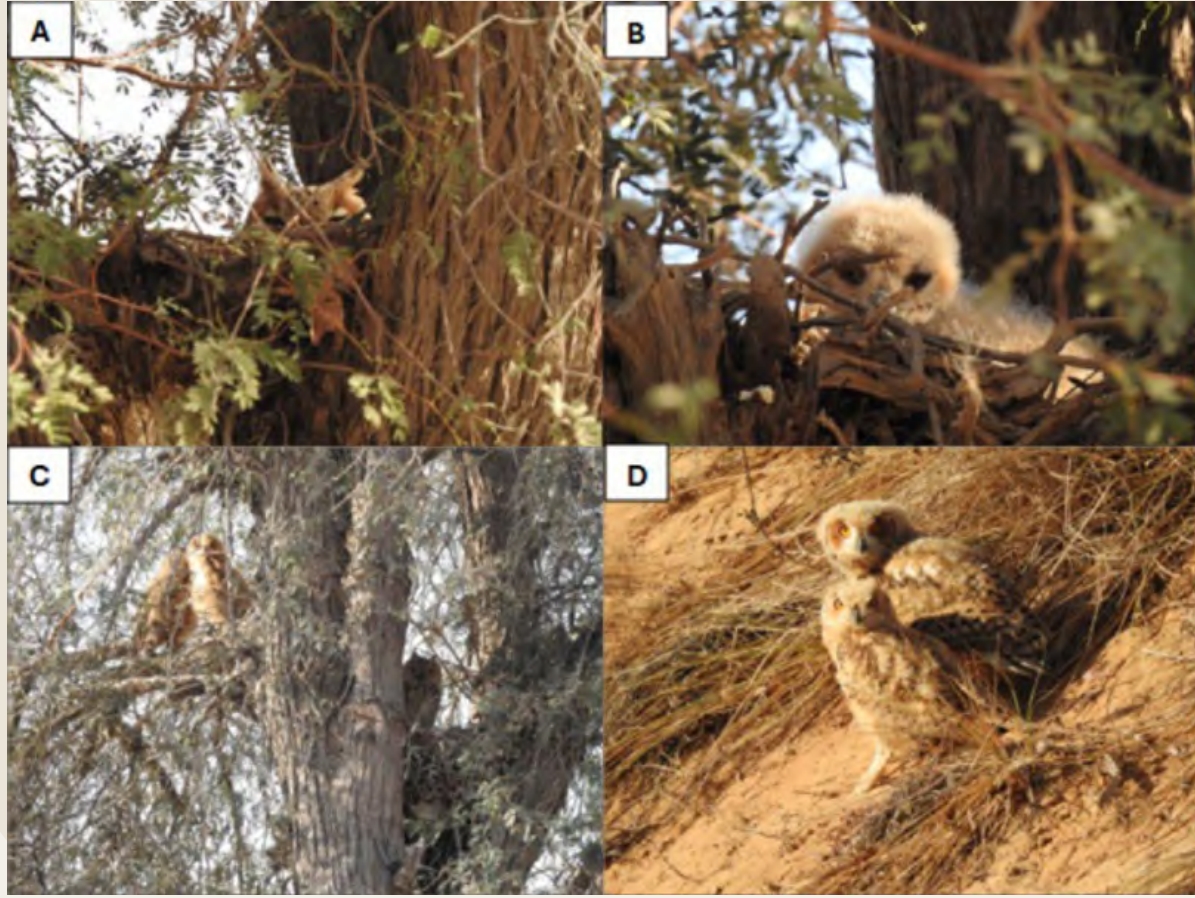
The Ghaf tree is a vital species providing shelter, food, and nesting sites for various animals. Most Ghaf groves in the reserve are inhabited by species that have a close relationship with humans, such as sparrows, white-cheeked bulbuls, and common mynas. However, the impact of these invasive species on desert species has not yet been quantified. Therefore, there is a need to quantify their effects by studying the nesting dynamics on the trees, with a focus on certain species of interest, such as raptors. Compared to last year, the number of trees to be surveyed this season has increased to 348, scattered across 22 locations.

During the 2024–2025 breeding season (December–March), three nests of interest were observed.

1. Pharaoh Eagle-owl (*Bubo ascalaphus*): For the second consecutive year, this pair returned to use the same nest, raising two owlets. The nest was discovered on 17 December 2024 with the female presumably incubating the eggs. On 1 January 2025, two owlets were observed. Camera traps were placed to monitor the activity of both the parents and the chicks, and weekly visits were established. The two owlets abandoned the tree on 11 February 2025. To study their movements and distribution within the reserve—and potentially beyond—both owlets were ringed on 13 February 2025, with one being equipped with GPS in collaboration with Dubai Municipality. This marks the first time such tracking has been implemented in the reserve.

2. Long-legged buzzard (*Buteo rufinus*) breeding pair #1: Just 300 metres away from the owls' nest, the same pair again bred this year. The nest was discovered on 23 December 2024 and the chicks were observed a month later. A total of three chicks were successfully raised and they abandoned the tree during the first two weeks of March.
3. Long-legged buzzard (*Buteo rufinus*) breeding pair #2: A second pair was discovered breeding in the south of the reserve, presumably for the first time in the area. The nest they used was an old one that was recorded two years ago but was not used during that period. The female was observed incubating the eggs on 29 January 2025. The nest is located in a remote area with no easy vantage point. So far, only two chicks have been observed, with the first sighting on 24 February 2025.

The rest of the areas are continuously monitored, and they are mostly formed by Ghaf groves with trees of an average height of 9 metres and 7 metres in diameter, and very close to each other. Multiple nests can be found in these Ghaf groves, but they belong to the considered invasive species.



**Figure 1.** Pharaoh Eagle-owl (*Bubo ascalaphus*) nest. A) Female incubating the nest (17" December 2024). B) Two owlets observed for the first time (1" January 2025). C) Owlets leave the nest and stay on the tree branches for a few days. D) Two owlets abandon the tree and stay within 50m away (11" February 2025)



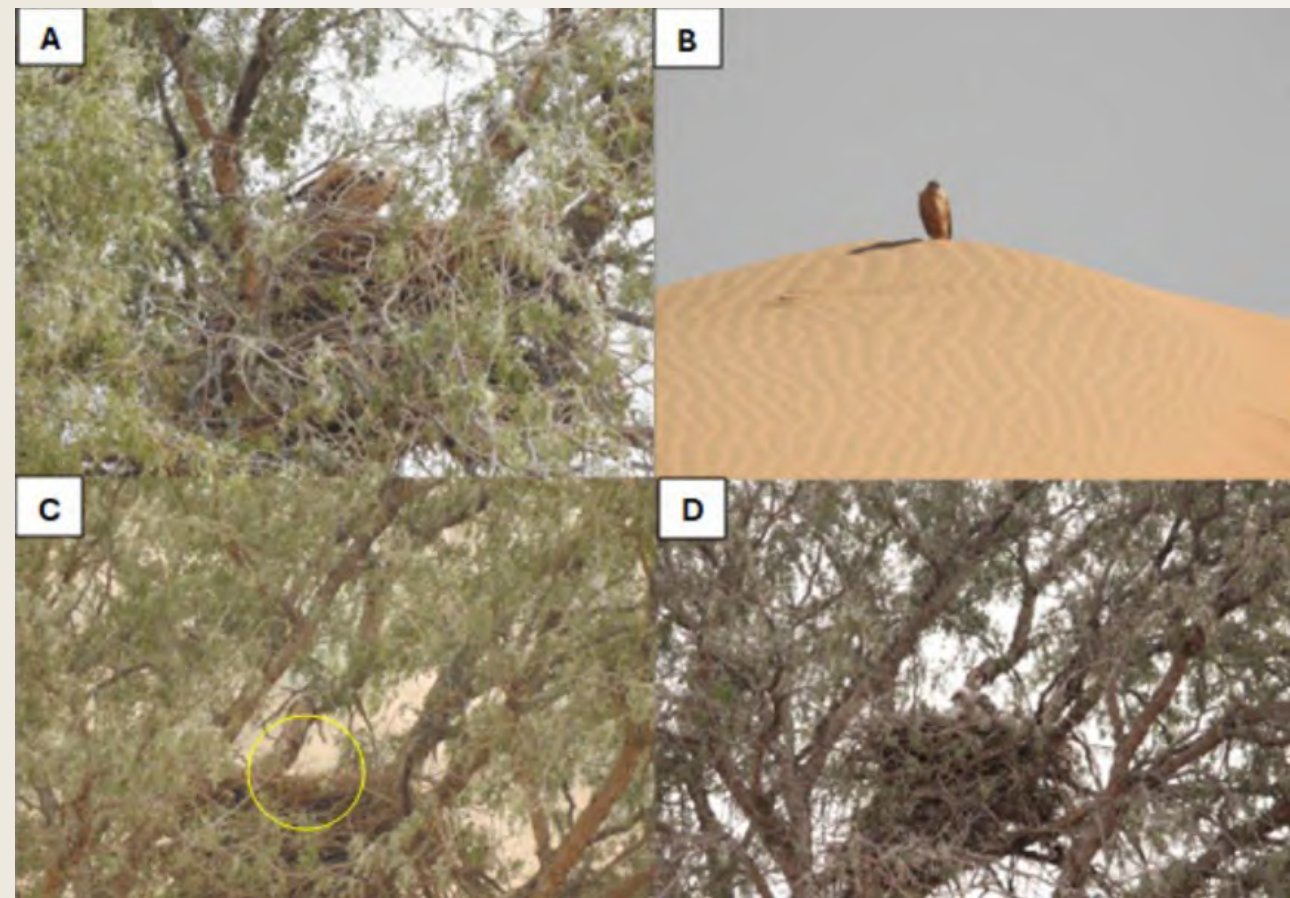




**Figure 2** A) Owlet A10 B) Owlet A12- placed with a GPS. C) Measurement of the head and bill D) DDCR Conservation Officers Maria Jose Martin and Basil Roy, with Esmat Elfaki (Dubai Municipality Wildlife Officer)



**Figure 3.** Long-legged Buzzard (*Buteo rufinus*) breeding pair #1 A) Female positioned on the nest (23" December, 2024) B) First sighting of the chicks (29" January, 2025) C) Chick eating a Sand Skink (*Scincus mitranus*) (12" February, 2025) D) Three chicks almost fully fledged (24" February, 2025)



**Figure 4.** Long-legged Buzzard (*Buteo rufinus*) breeding pair #2 A) Female in the nest (29" January, 2025). B) Male in a closed-by dune (29" January, 2025) C) First sighting of the chicks (24" February, 2025) D) Two chicks can be observed (16" March, 2025)





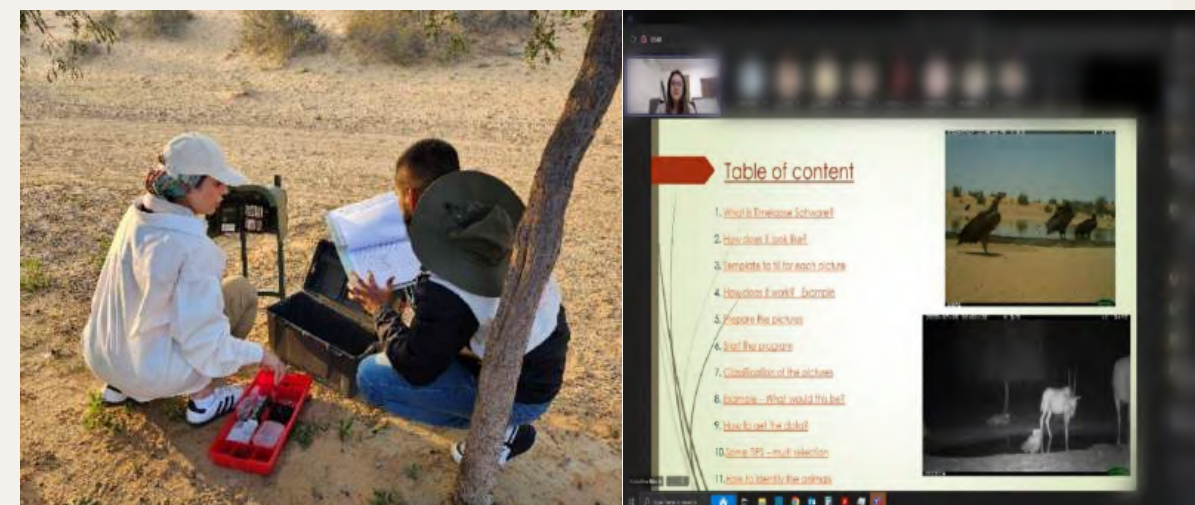
## 10. Volunteer projects

The volunteer programme was initiated to raise awareness about wildlife and the Dubai Desert Conservation Reserve. This initiative encompasses various activities, including participating in the monthly rotation of SD cards within the reserve's six permanent camera traps, analysing the captured images, and collaborating in several surveys. The programme's level of engagement is exceedingly encouraging and holds promise for the future. A total of 426 people signed up to this volunteer programme:

- 15 people visited the reserve and participated in the change of SD cards (6 hours per day/person → total 90 hours)
- 3 sessions were held to train volunteers on the use of software to analyse the pictures (3 hours)

- More than 50,000 pictures were analysed by the volunteers (which involves more than 500 hours of volunteer participation)
- 9 people participated in surveys (total of 6 hours per person → total 45 hours)
- A dedicated clean-up session was also held to assist the conservation team in keeping the area in pristine condition

Furthermore, as a component of our Environmental Education initiatives, the series of webinars continued with special sessions with various speakers. These webinars are facilitated by researchers who have conducted projects within the DDCR.



### Instagram account

Social media has become an essential tool for connecting with people and an invaluable platform for outreach. Consistent daily posts and interactive games have successfully captured the public's attention, leading to a significant increase in followers. This growing engagement, along with a heightened level of interest from our followers, has laid a strong foundation for the development of a volunteer programme.

Our social media interactions now reach approximately 2,200 accounts each week, with notable spikes in activity during the posting of monthly highlights from our camera traps. This increased visibility not only broadens our reach but also strengthens our connection with the community, paving the way for deeper involvement and support.





# 11. Wildlife

## Ungulate population policy

In line with the DDCR's purpose and as an ecological imperative, the policy is to significantly reduce and then regulate ungulate populations to restore the natural balance and aid the recovery of the desert ecosystem.

This will be accomplished by a tested, phased, and carefully monitored programme of reducing and subsequently regulating the ungulate populations, which will involve a combination of translocation, controlled eradication, and natural predation of the oryx and two gazelle species, with consequent adjustments to their supplementary feeding.

The population of Arabian oryx in the reserve had reached unsustainable numbers that exceeded the reserve's capacity, with evidence of overgrazing having a damaging impact on the natural vegetation. The situation arose as a result of the Arabian oryx having no natural population regulators such as



food restrictions (supplementary feed is provided), migration, or predators. Excess population creates a risk of disease transmission, mortality from aggression, and abnormal behaviours due to stress, such as pacing along the fence. Moreover, everything is connected and an ecosystem with an overpopulation of any one species can lead to the overall loss of biodiversity as other species are displaced through habitat loss or change and over utilisation of resources. Therefore, it has been necessary to implement a project to move some Arabian oryx from the DDCR into two adjacent enclosures and then stop the continued breeding by the separation of males and females.

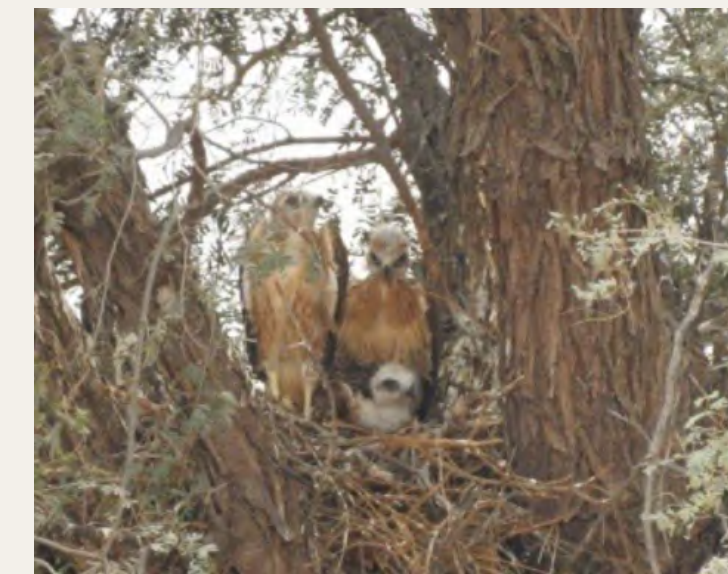
As of October 2024, all the remaining oryx that were kept in the enclosures were translocated locally to private collections and sanctuaries.

## Nesting Birds 2024-2025

The reserve's primary purpose is to restore the contained habitats to their original natural conditions using natural processes, which include the monitoring and recording of nesting birds. The below was recorded throughout the past year.



**March 2025 –**  
Crested lark nest found inside dune grass on a routine morning patrol



**December 2024 –**  
Long-legged buzzard nest was found in one of the naturally occurring Ghaf tree groves within the DDCR



**December 2024 –**  
Pharaoh Eagle-owl nest was found in one of the naturally occurring Ghaf tree groves within the DDCR



# 12.DDCR visitors

## Visitor Management Policy, DDCR Management Plan

As a premium tourism destination, the DDCR will continue to deliver a range of authentic and quality experiences for visitors by enforcing regulations and limiting visitor numbers to levels that do not undermine the reserve’s inherent values. In line with the DDCR's stated purpose, high-impact visitor activities will be strictly restricted to existing designated areas, while low-impact nature-based visits and activities will be promoted and encouraged with greater access to the reserve.

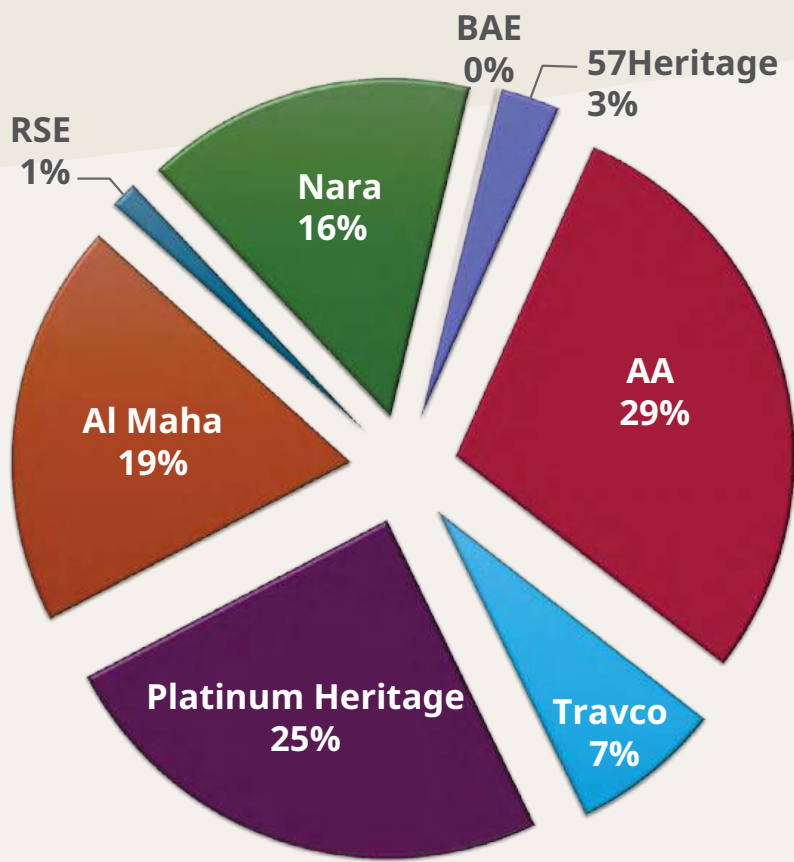
Visits to the DDCR are all through tour operators that hold a concession agreement with the reserve or as guests of the Al Maha Desert Resort.

The number of visitors to the DDCR has remained constant in comparison with 2023–2024.

A total of 213,264 visitors came to the DDCR in 2024–2025, with Platinum Heritage, Arabian Adventures, NARA Desert Escapes, and Al Maha providing the bulk of visitors.

Tour Operator Summary													
Year	April	May	June	July	August	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
2019/20	27,099	14,013	11,820	11,203	12,295	13,238	22,264	23,148	26,838	27,112	24,430	9,979	223,439
2020/21	667	1,406	1,404	2,089	2,529	2,599	4,967	6,455	13,376	9,792	7,113	8,140	60,537
2021/22	8,888	7,268	3,612	4,141	3,666	6,566	15,268	25,030	21,956	16,995	19,214	25,876	158,480
2022/23	18,942	14,518	7,446	6,687	5,889	8,905	19,259	25,481	25,271	27,446	26,181	24,419	210,444
2023/24	22,792	14,139	7,907	6,998	6,141	9,722	20,834	22,497	26,163	25,837	25,827	24,407	213,264
2024/25	20,600	14,126	6,680	6,287	6,178	9,055	20,350	22,307	28,456	26,950	25,958	20,626	207,573

Tour Operator Summary 2024-25





## 13. Major projects

### **Outreach and Public Awareness Policy, DDCR Management Plan**

Concerted efforts will be made and resources mobilised to raise local, national, and international awareness of the DDCR's natural and heritage significance, its conservation purpose, and social values. The aim is to build wider public understanding and support for the reserve's conservation by designing and implementing awareness and outreach programmes along with marketing campaigns. The target audiences will be local and international visitors, tour operators, local communities, and senior decision-makers.

The Visitor Centre will be a place for people to enhance their environmental awareness and connect with the unique desert habitat of the DDCR. Visitor centres are facilities that prepare visitors physically, mentally, and emotionally to experience special places. A better visitor experience leads to better word-of-mouth, which leads to the success of the DDCR's visitor activities.

### **The Visitor Centre will continue its aim to achieve the following:**

- Enhance the visitor experience by adding new activities they can experience before or after touring the reserve
- Connect DDCR visitors with an authentic desert experience
- Be used as a platform to develop an educational programme for schools and higher education institutions

- Better understand DDCR visitors' motivations and needs, and identify opportunities to provide a better experience
- Raise visitors' awareness of desert values and to elicit support for its conservation

### **Solar Panel Installation at DDCR Visitor Centre Parking**

As part of our ongoing commitment to sustainability, we are planning to install solar panels over the Visitor Centre parking area at the Dubai Desert



Conservation Reserve. This initiative will harness clean, renewable energy to power our facilities while providing shaded parking for guests. By utilising solar power, we aim to reduce our carbon footprint and support DDCR's wider conservation goals, ensuring a greener future for both our visitors and the reserve.

### **Introduction of a Predator to Regulate Ungulate Populations at DDCR**

To help maintain a healthy and balanced ecosystem, the Dubai Desert Conservation Reserve is planning the careful introduction of a native predator species. This initiative aims to naturally regulate and control the reserve's ungulate populations, preventing overgrazing and ensuring a sustainable environment for all flora and fauna. By restoring a more complete food chain,

we promote biodiversity and the long-term health of the desert ecosystem.

### **Extension of DDCR Visitor Parking**



To better accommodate our growing number of visitors, the Dubai Desert Conservation Reserve is extending its parking area. This expansion will provide

additional capacity and improve the visitor experience, ensuring safe and convenient access to the reserve while continuing to respect and protect the surrounding desert environment.





## 14. DDCR affiliations



### IUCN Green List of Protected Areas

The IUCN Green List of Protected and Conserved Areas is the first global standard of best practice for area-based conservation. It is a programme that certifies protected and conserved areas that are effectively managed and governed. The DDCR is currently a candidate site for the IUCN Green List.



### Sorbonne University – Abu Dhabi

The Sorbonne University conducts archaeological surveys throughout the DDCR. They found significant findings, including pre-Islamic pottery fragments, seashells used for trade, and neolithic arrow heads. The Sorbonne University has also been involved in the reintroduction of Asian Houbara Bustards, *Chlamydotis macqueenii*, and the monitoring of Leptien's spiny-tailed Lizard, *Uromastyx aegyptia leptieni*, inside the DDCR.



### University of Sharjah

The University of Sharjah monitors weather conditions inside the reserve. Using weather stations and ground sensors, the university gathers data on yearly precipitation, humidity, and wind patterns. The university also collects data on ground sediments and uses seismic surveys to check for what lies beneath the sands.



### Keele University

The DDCR records thousands of photos and videos from the trail cameras distributed throughout the reserve. Keele University is currently in the process of creating an AI software with the capability of analysing trail camera footage. This AI technology will be able to identify animal species without the need of physically searching through large amounts of data.



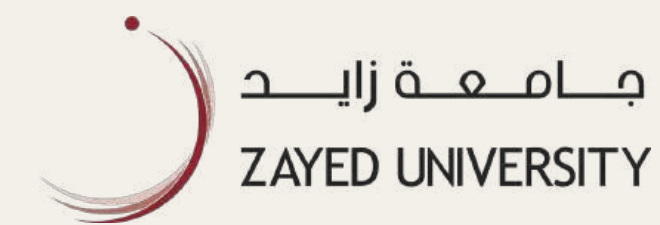
### American University of Central Asia

The university conducted an Arabian Red Fox, *Vulpes vulpes arabica*, survey in 2022. The survey consisted of locating fox burrows throughout the reserve, indicating an estimation of the Arabian Red Fox population number residing inside the DDCR.



### United Arab Emirates University (UAEU)

UAEU conduct studies on indigenous flora inside the DDCR. The university takes samples of naturally growing desert plants, including collecting their fine roots. After further analysis, the data gathered from this study is then used in UAE's agricultural sector.



### Zayed University

Zayed University uses drones for scientific and conservation research inside the protected area. The drones used are equipped with Artificial Intelligence (AI), which is in the process of distinguishing animal species in the most remote areas of the reserve. Drones are also being used to monitor vegetation coverage and to locate areas with extensive littering.



Images courtesy of Marios Mantzourogianis



## 15. A word from the Conservation Manager

When reading the year-end report for 2024–2025, it is evident that the past year has been one of the most successful in the history of the Dubai Desert Conservation Reserve. With a completely new team of dedicated conservation officers, rangers, and staff, the reserve has truly entered a new era of conserving and protecting one of the last remaining desert inland ecosystems.

The diversity of the team has resulted in increased productivity, better decision-making, enhanced problem-solving, and multiple perspectives on the challenges we face. As the conservation manager of the reserve, I am immensely proud to work with such highly talented, dedicated, and passionate colleagues.

Some of the most significant accomplishments this past year include the opening of our Visitor Centre, which was originally proposed back in 2018 and faced many challenges along its path toward completion. This centre aims to inspire and educate the public about the diverse fauna and flora we protect, showing that even such a harsh climate can sustain a rich variety of life. Since officially opening in October 2023, we have been able to spread the message of conservation to schools across Dubai, working closely with tour operators like Arabian Adventures and Sand Sherpa to deliver high-quality educational experiences that inspire the next generation to appreciate and protect the natural environment.

Additionally, we have successfully initiated new projects to further enhance the reserve. These include extending the DDCR Visitor Centre parking area to better accommodate growing visitor numbers, installing solar panels over the parking bays to promote renewable energy use, and preparing for the carefully considered introduction of a native predator species to regulate ungulate populations and support a balanced desert ecosystem.

As we draw near the end of 2025, we will also reflect on the achievements of our 2019–2024 Management Plan and evaluate our progress against the Strategic Management Goals we set. At this pivotal moment, we will establish a new set of goals for the 2025–2030 Management Plan, ensuring they align with the United Nations Sustainable Development Goals.

Finally, we would like to thank all our trusted stakeholders, tour operators, and the Emirates Group for their invaluable support over the past year. Our successes were only made possible through this ongoing collaboration and commitment to conserving one of the UAE's most treasured natural landscapes.

With best regards,

**Gerhard Erasmus**  
Conservation Manager







محمية دبي الصحراوية  
DUBAI DESERT CONSERVATION RESERVE

Emirates Group Headquarters  
PO Box 686, Dubai, UAE  
[www.ddcr.org](http://www.ddcr.org)

