

# Project to study genes of falcon species

The Emirate of Abu Dhabi on Sunday launched a project to identify the origin and population of two common falcons found in the country with genetic studies and solutions. Falcon Genetics Project, the programme launched by the Environment Agency -- Abu Dhabi (EAD), in coordination with EAD's Abu Dhabi Falcon Hospital (ADFH) and the International Wildlife Consultants, UK, is aimed to identify the genes of these two species of birds commonly found in the country. Abu Dhabi Executive Council Secretary General Mohammed Ahmed Al Bowardi said it was a milestone in the country's study of falcon genetics and will prove to be a lasting tool for scientists working on the conservation of these species.

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## Project to study genes of falcon species

### Specimens of Peregrine and Saker species to be analysed to determine full genetic sequences

Nissar Hoath

ABU DHABI — The Emirate of Abu Dhabi on Sunday launched a project to identify the origin and population of two common falcons found in the country with genetic studies and solutions.

Falcon Genetics Project, the programme launched by the Environment Agency - Abu Dhabi (EAD), in coordination with EAD's Abu Dhabi Falcon Hospital (ADFH) and the International Wildlife Consultants, UK, is aimed to identify the genes of these two species of birds commonly found in the country.

Talking to *Khaleej Times* on the project, ADFH Director Margrit Muller said: "This project will help us determine and identify the genetic sequences of these two particular species of bird - Peregrine and Saker falcons - that are commonly found in the UAE and the region. The project will also help us protect these endangered species."

She added that more species of falcons will be added to the project in the future to identify their genetic



Margrit Muller collecting blood sample from a falcon

sequences as well as their worldwide population and to what extent these species are endangered.

In the initial stage, DNA samples from four male birds - two each from Saker and Peregrine falcons - were taken to carry out the study. Two blood samples will help identify their genome

and other two, one from each species, will be used as backups in the process.

"These male specimens of Peregrine and Saker species will be analysed to determine the full genetic sequences that make up the genome of these important bird species," she further explained. The two particular species have been

used in the initial stage as they are very common in the country and the region," she further explained.

The process of sample collection was carried out by two expert professors of University of Cardiff from UK's International Wildlife Consultants on ADFH premises, which is a state-of-the-art facility receiving falcons for treatment from across the GCC region.

Muller further added the genome project will enable biologists to study the specific genes of the birds, providing new insights into the evolution of these species and increase the understanding of their basic biology and hereditary diseases. The genome sequence analysis will take two years of laboratory and computer work.

To date, genome sequences have only been obtained for two bird species, the Chicken and the Zebra Finch (a small songbird). Despite having a smaller genome than humans, birds have similar number of genes of which approximately 23,000 are responsible for their physical and behavioural characteristics.

In a statement, EAD explained: "Now that blood samples have been collected from specially selected male specimens of the Peregrine and Saker falcons by ADFH, their DNA will be sequenced at the BGI (formerly known as the Beijing Genetics Institute) in Shenzhen, China, an internationally renowned

centre which recently produced whole genome sequences for the Giant Panda and the Camel.

Abu Dhabi Executive Council Secretary General Mohammed Ahmed Al Bowardi said it was a milestone in the country's study of falcon genetics and will prove to be a lasting tool for scientists working on the conservation of these species.

"The genome project is a taking a major step in a more strategic approach for research and conservation management. The importance of both the Saker and the Peregrine for traditional Arabic Falconry has meant that Abu Dhabi has been at the forefront of conservation efforts for these species in Eurasia," he added.

Dr Nick Fox, Director of International Wildlife Consultants, said the genome makes up the building blocks of a species.

He said: "From the genome results we can start to clarify which falcons are distinct species and how regional populations relate to one another. At last we will know exactly what it is that we are trying to conserve."

Professor Mike Bruford of Cardiff University Biosciences Department, one of the two experts, said: "This project provides a unique opportunity to analyse and compare the genomes of two closely related and widely distributed birds of prey." — [news@khaleejtimes.com](mailto:news@khaleejtimes.com)

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