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Sultanate of Oman
Diwan of Royal Court

Issue 24

Conocarpus

Evergreen, but districtive





Diverse and Fascinating Marine Environment

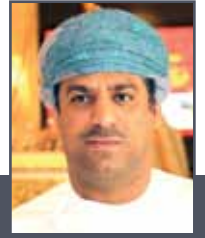
By: **Faima Al Zidjaliah**

The Sultanate of Oman is blessed with fascinating and wonderful marine life, as well as a diverse and fascinating marine environment. Marine life include many rare and varied aquatic species, along with a vast fish wealth. There are five types of sea turtles; four of them nest in various beaches of Oman. The most famous of them is the rare green group. There is also groups of whales and dolphins. Besides, there are more than 130 species of corals. The Coast and land overlap in Oman, creates a unique and diverse climatic conditions that make those areas natural habitats, especially rich with mangrove forests that provide perfect conditions for the growth of certain types of crustaceans, such as shrimps and Lobsters (Shakhah).

Monitoring Programs

The Omani authorities take special care of the marine environment in accordance with Royal Decree No. 3474/ on the issuance of the Marine Pollution Control Law, which has become the cornerstone of the legislative construction of the environmental work in the Sultanate. This is beside the provision of of all kinds of pollution control equipment, the development of a national

plan for pollution combating, the provision of waste disposal equipment for all regions, the development of monitoring programs for coastal facilities to ensure that they apply environmental Laws and regulations, the Pollution Control Programs for the marine environment, coral reef clean-up campaigns, the mangrove planting campaigns, awareness programs on the importance of beaches and conservation methods, as well as finding appropriate solutions to the environmental problems facing the beaches of Oman. Coastal areas in the Sultanate are complex and dynamic. These areas are under considerable pressure due to many development activities, both near and offshore. The Sultanate has taken a number of sound initiatives aimed at linking the ever-increasing economic and social projects with the protection of its natural resources. These protection efforts were emboied in the creation of marine reserves. Twelve marine reserves were established in the Sultanate: the Qurum Nature Reserve for Qurum Trees, the Sea Turtle Preserve at Ras Al Hadd, the Dimaniat National Reserve for the protection of coral reefs, turtles and birds, as well as 9 Coastal Lakes Reserves at Salalah Coast for migratory birds and Qurum Trees.



point of view

Violations Against Marine Life

Dawood Sulaiman Al Balushi

Editor-in-Chief

Surprisingly, the series of violations against wildlife continues in some governorates of the Sultanate, especially with regard to marine organisms such as marine turtles and dolphins, which represent one of the most important ecosystems in the Sultanate.

This subject has recently been referred to by various social media outlets, the matter that resulted in denunciation of these irresponsible acts that destroy the natural life in the Sultanate. The social media also discussed the role of the responsible governmental bodies towards such problem.

The issue in general, is a dangerous and embarrassing phenomenon for our society. Sea turtles and dolphins are an important part of the ecosystems that is at risk of extinction. Overfishing threatens their survival in the Omani marine environment. These actions, which are carried out secretly and in twisted ways, are far from being controlled, though they are considered an environmental offense punishable by environmental laws and legislation.

Governmental agencies do their best to monitor wildlife in the Sultanate, but these bad behaviors are committed out of sight. Sometimes the criminals hunt and kill wildlife, marine animals and birds. Sometimes they burn and uproot plants and perennial trees. Thus, the series of violations continues unabated and wildlife is in constant danger from those reckless hands.

Government agencies cannot place a guard for every wild animal, sea, bird or plant, to watch and protect it all the time. There are surveillance and inspection patrols from time to time, but I believe that the custodian of safe life in the Sultanate is the Omani citizen himself. The citizen must protect his wealth and environmental and natural heritage from degradation, extinction and overfishing. He must contribute by informing the responsible authorities of those who wish to tamper with one of the Omani environmental systems.

Protecting the environment is the responsibility of everyone and the citizen is responsible for the protection of his homeland, heritage and natural and environmental resources, so that they will remain for him and his future generations.

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new study has linked the complexity of Cetacean culture to the size of their brains.



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have complex relationships, talk to each other and even have regional dialects -- much like human societies. A major new study has linked the complexity of Cetacean culture and behavior to the size of their brains. Whales and dolphins (Cetaceans) live in tightly-knit social groups, have complex relationships, talk to each other and even have regional dialects -- much like human societies. A major new study, published has linked the complexity of Cetacean culture and behaviour to the size of their brains. The research was a collaboration between scientists at The University of Manchester, The University of British Columbia, Canada, The London School of Economics and Political Science (LSE) and Stanford University, United States.



Whales and Dolphins

have rich (human-like) cultures and societies

Data base

The study is first of its kind to create a large data base of cetacean brain size and social behaviours. The team compiled information on 90 different species of dolphins, whales, and porpoises. It found overwhelming evidence that Cetaceans have sophisticated social and cooperative behaviour traits, similar to many found in human culture.

Relationship of brain size to marine culture

Dr Susanne Shultz, an evolutionary biologist in Manchester's School of Earth and Environmental Sciences, said: «As humans, our ability to socially interact and cultivate relationships has allowed us to colonise almost every ecosystem and environment on the planet. We know whales and dolphins also have exceptionally large and anatomically sophisticated brains and, therefore, have created a similar marine based culture. «That means the apparent co-evolution of brains, social structure, and behavioural richness of marine mammals provides a unique and striking parallel to the large brains and hyper-sociality of

humans and other primates on land. Unfortunately, they won't ever mimic our great metropolises and technologies because they didn't evolve opposable thumbs.»

The SBH and CBH are evolutionary

The team used the dataset to test the social brain hypothesis (SBH) and cultural brain hypothesis (CBH). The SBH and CBH are evolutionary theories originally developed to explain large brains in primates and land mammals.

They argue that large brains are an evolutionary response to complex and information-rich social environments. However, this is the first time these hypotheses have been applied to «intelligent» marine mammals on such a large scale. Dr Michael Muthukrishna, Assistant Professor of Economic Psychology at LSE, added: «This research isn't just about looking at the

intelligence of whales and dolphins, it also has important anthropological ramifications as well. In order to move toward a more general theory of human behaviour, we need to understand what makes humans so different from other animals. And to do this, we need a control group. Compared to primates, cetaceans are a more «alien» control group.»

many complex social behaviours

Dr Kieran Fox, a neuroscientist at Stanford University, added: «Cetaceans have many complex social behaviours that are similar to humans and other primates. They, however, have different brain structures from us, leading some researchers to argue that whales and dolphins could not achieve higher cognitive and social skills. I think our research shows that this is clearly not the case. Instead, a new question emerges: How can very diverse patterns of brain structure in very different species nonetheless give rise to highly similar cognitive and social behaviours?»

Results

The study demonstrates that these societal and cultural characteristics are linked with brain size and brain expansion -- also known as encephalisation.

The long list of behavioural similarities includes many traits shared with humans and other primates such as:

- complex alliance relationships -- working together for mutual benefit
- social transfer of hunting techniques -- teaching how to hunt and using tools
- cooperative hunting
- complex vocalizations, including regional group dialects -- «talking» to each other



- ◆ **T**he conocarpus tree, locally known as damas, dams or Kuwaiti tree, is an extraneous exotic species to the Omani environment, “The Lynx” seeks to warn of its dangers to our environment. Although the tree has a range of benefits, but such benefits are always connected to its original environment, as the tree turns into many environmental hazards when moved to a new environment.



It is one of the most water consuming trees

Conocarpus

Evergreen, but districtive

Information

The Conocarpus is a plant species belonging to the Umayyad or Cambrian species, comprises two types of plants, the first of which is the Conocarpus and the second types is the lancifolius or Conocarpus erectus. It is an evergreen tree with many branches of Eudicots type.

It may reach a height of twenty meters and is characterized by the soft branches

with green or red color. Its leaves are reciprocated, short necks, the shape spear. The edges of the leaves are flat, while their peaks are sharp. The flowers are axillary, or peripheral, and are greenish white in color, but sometimes it is dark green.

Its fruits are conical and the plants name is originally attributed to the conical shape of the fruit.





■ **It is an evergreen of Eudicots type with many branches**

■ **It has strong roots that extend deeply into the soil vertically and horizontally to search for water sources**

Environmental Hazards of Planting Conocarpus Tree

The benefits of this tree are connected to its original environment. This tree becomes a threat to the new environment to which it is transported. It turns into an invading plant. The most prominent of these threats to non-indigenous environments such as Oman are:

1. This tree is highly water-consuming and therefore poses a major environmental hazard to water-stressed environments.

2. The roots of these plants grow horizontally, causing extensive damage to infrastructure such as water pipes, sewage pipes, electrical and telephone connections. The roots can penetrate into rocks and reinforced cement concrete in search of water, which contributes to the destruction of buildings.

3. Continuous dripping of leaves and fruit throughout the year leads to the accumulation of dirt in the streets and on the sidewalks and on the soil.

4. Recent scientific research has shown that this tree causes health risks. The gas that rises from it activates cancer cells in the body. It also causes allergic reactions in the airways, causing some people to have asthma. It is a leading cause of sinus allergies.

5. The fruit of the tree has an unpleasant smell which creates environment suitable for harmful insects and a place for dangerous reptiles such as snakes and others.

6. This tree harms the diversity in the environment in which it is planted. Because it has a high capacity to absorb water, it deprives other plants and trees from the source of life and lead to their death.

■ **The original habitat of the tree is the Australian continent and the beaches and rivers of Somalia, Djibouti, Yemen and the edges of Florida swamps**

■ **The fruits of the tree have an unpleasant smell constitute a environment suitable for harmful insects and it is a breeding habitat for dangerous reptiles**

The Origin of Conocarpus Tree

The original habitat of Conocarpus trees are the beaches and rivers of Somalia, Djibouti and Yemen. As well, there are many such trees on the edges of the swamps of Florida. The continent of Australia is one of the original habitats of this tree. Despite the fact that it is distributed throughout the globe, it is noted that the original places of this tree features plenty of water, as this tree consumes a lot of water. but it is similar to the abundance Water, as this tree by nature consumes a lot and lots of water.



Its Benefits in its Original Environment

1. The Conocarpus tree has strong wedge shape roots that extend deep into the soil vertically and horizontally to search for water sources. This is, therefore, a good feature for stabilizing sand dunes,

2. It helps to stabilize rivers' beaches and protects them from collapse and erosion, so it was noted that the original habitats are filled with rivers.

3. Conocarpus tree wood is of good quality. It is used for construction of boats and characterized by being strong and heavy weight. They are a good source of energy (wood) and good for production of slow-burning wood coal.

4. It provides food and shelter for a variety of animals, and has the ability to resist soil erosion factors.

5. Its soft branches are considered animal feed, although they contain the Tannin which causes constipation.

6. The tree leaves extract is popularly used in the environment to treat anemia, diarrhea and fever. Studies have shown that its bark and leaves are rich with high levels of antioxidants used to treat gingival bleeding, vaginal bleeding, skin ulcers, and it is anti-cancer.



Bahrain to Build a 100 MW Solar Power Plant

Kingdom of Bahrain has announced the establishment of a 100 MW solar power plant through a partnership with the private sector. This is the first governmental investment in renewable energy. The project will produce 2.5 percent of Bahrain's electricity production.

The private sector will finance the entire project, building, managing, and maintaining, then the private sector will sell the produced

electricity to the Bahraini government. The cost of electricity from the solar project will be less than the cost of electricity produced by using gas, as currently the case in government projects. It is worth mentioning that the demand for electricity in Bahrain is growing at an annual rate of 6%. That is why the situation requires implementation of large projects or reduction in electricity consumption.

The Scientific Centre of the turtle Reserve at Ras Al-jinz is Open

The Scientific Centre of Ras Al-Jinz Turtle Reserve was inaugurated with its new design after completion of renovation works and enrichment of its contents. It is hoped that the Centre will contribute to the enhancement of information and environmental educational resources on sea turtles for visitors, researchers and interested persons. The reserve aims to spread the environmental culture and



protecting the future of sea turtles. The reserve also offers many tourist services to the visitors and researchers through the available means, the most famous of which is the Ras Al-Jinz Turtle Scientific Centre. The Centre has been recently renewed in cooperation between the Ministry of Tourism and Oman LNG Company. The museum is equipped with state-of-the-art technical tools and systems that are designed to showcase the life cycle of sea turtles and to highlight the archaeological sites of the region. As well, tourism services at the Reserve plays an important role in preserving various species which are endangered in many parts of the world. The waters around the Ras Al-jinz Reserve area are a refuge for

the rare green turtles. This is reason why the site of the Scientific Centre and the Ras Al-jinz Museum is chosen. It is a unique Reserve, where endangered turtles resort to its pristine beach for breeding. Khalid Bin Abdullah Al-Masan, CEO of Oman LNG's Development Corporation, said that the Renovation of the Scientific Centre represents another milestone in the company's contribution to the conservation of the environment. The environment is at the forefront of the company's interests, not only within Oman LNG, but through many other initiatives and projects that the company funded, notably the Scientific Centre for Turtles in Ras Al-Jinz Reserve, which attracts many visitors, researchers and interested people from around the globe.

Qatari Efforts to Protect the Houbara Bird from Extinction

The Ministry of Municipalities and Environment in Qatar is working on the production and breeding of Houbara Bird in a number of its reserves and natural habitats in Qatar and in a number of other countries in order to protect this endangered birds and to emphasize the role of Houbara Bird in maintaining the environmental balance globally. Through its efforts to produce this semi-extinct bird, Qatar aims to resettlement the bird. The farms that belong to the Qatari Ministry of Municipalities and Environment, inside Qatar and abroad, in several countries such as Iran, Morocco, China, produce Houbara birds in increasing numbers, as much as 1300 to 1600 birds per year. Each year, the farms release the Houbara birds into the wild to achieve the environmental goals.

Kuwait Opens Al-Jahra Reserve for the Public

What is considered as the first step of its kind, Kuwait's Public Authority for the Environment (KPA) will open Al-Jahra reserve to the public in late October. For its part, the Authority considers this step as complement to its efforts towards environmental awareness in order to show the beauty and cleanliness of nature if it is protected and cared for. In preparation for the opening, the Authority issued a list of symbolic entrance fees, in order to encourage people to visit the reserve and enjoy it.

A UAE Company Treats and Recycles 100 Percent of the Waste

The main waste recycling company in the Emirate of Sharjah, UAE seeks to assist in sustainable development throughout the whole region. The company, which has the largest recycling plant in the Middle East and the third largest in the world, aims to become the first company to treat and recycle all waste in its dumps without any waste. The company has five different facilities, each specializing in the processing and recycling of certain types of waste, such as household waste and non-usable vehicles. The sorting process begins by manual separation of the large waste pieces from the others before the automatic sorting phase. High-tech machines separate various types of garbage to classify them



into paper, plastic, aluminum and other things before sending each to its specialized plants for recycling. This process takes a maximum of 24 hours from the moment the waste enters the plant until turned into a recycled product. This plant is treating 1,500 tons of waste daily, which is the total quantity of waste materials generated in Sharjah Emirate.

Scientists: Paris Climate Agreement is the Last Chance for Coral Reefs Survival

David Obora, head of the Coral Reef Group at the International Union for Conservation of Nature (IUCN), confirmed that limiting global warming to less than 2 ° C in line with the Paris Agreement provided is the only chance for coral reef survival. "We are on the threshold of a world without coral reefs" Obora said in an article published in the Journal of Science. He added that, the only way to avoid this is by fully implementing the Paris Agreement.



Environmental Vocabulary

The Precious metal

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The more it hides between the cracks and under the rocks, the more willing to search for it. It is like a diamond in deep of hard mountains, or a piece of gold covering with smooth rocks. Overshadowing its elastic flesh in rough shells and soaked by salt water to far depths. This is the habitat that lives in, many other marine organisms shared it this habitat, some feed on them like marine algae, or it serves is a good meal for other organisms that seek and feed on it. lives in a chase, under, above and surround it, and it is only a piece of flesh that is inserted between the jaws of a shell.

Is Its secret is in its flesh, or its flesh is the secret of its death. The divers take the most trouble and fatigue to search on it between the rocks, clinging under their roofs to escape from unknown, and away it selves from the hustle of the day, taking the night as a cover from enemy eyes, as its movement activated. Its fully self protection is like a natural sensors tell its importance to the mouths of the connoisseurs, but it does not fully realize that its enemies come from outside its marine planet. It does not also know that a kind of a terrestrial creature has the tools and the ability to extract it from its hiding place and attack its security.

What made this marine sea creature (Abalony) locally known as Safailh, of a great economic importance?!, Is it because only its presence restricted to Oman particularly Dhofar Governorate among Arabian countries?!, or is there any other reasons that raised up its economical value and demand which make the price of a kilogram of a cooked and dried of Abalony meat to more than seventy Oman Riyals !? May be the incomplete fact or thoughts also be the cause of the high demand, especially for those who wish to harden their nerves which may suffer weakness, and for those who want to strengthen their abilities!. It is not a strange to a marine soft creature for its components to opened outlets of power and give other flavor of manhood. No doubt, the Abalony is considered as one of the most famous sea foods in the world.

The high demand and high price encourage many divers and traders, that caused increasing of divers significantly. In Addition, they developed fishing tools that reduced risks and doubled production. This prompted the concern authorities to identify November and December as a permitted fishing period only and of no more than eight meters depth, with a restriction to traditional fishing tools.

The Abalony, this small soft marine animal gained very high importance, not because of its shape, size, or common in dining table, but because it has a special taste on the mouths of the luxuriant, and more spatiality on the bodies of people that willing on it. If this is a fact or a myth, the Abalony remains among the most wanted food on the world's rich dining tables. It is truly a precious metal.

Brazil Re-enforces Mining Ban to Protect Amazon Forest

The Brazilian government announced that it would re-impose a mining ban on a vast area of the Amazon forest in a complete and abrupt change of position, which is a victory for environmentalists who fear desertification. The Ministry of Mining and Energy said in a statement, that the government of



President Michel Tamer decided to cancel a decree issued in August abolishing the National Copper Reserve, an area of 46 thousand square kilometers or slightly larger than Denmark. The reserve, located in the states of Amapa and Bara in the north of the country, was set up in 1984 to protect what is believed to be large deposits of gold, copper, iron and other minerals, from the perceived risk of foreign mining companies at the time. The reserve includes part of the Amazon forest, the world's

largest forest. The reserve is essential for absorbing carbon emissions responsible for global warming. The government said it would reconsider the case in the future in a broader debate. "Brazil needs to grow, create jobs, attract investments in mining and exploit the economic potential of the region," the ministry said. The government has argued that lifting the ban would be a gift to the economy and would allow better supervision of an area where an estimated 1,000 people are believed to be illegally mining.

Arab Sustainable Development Needs 85 \$ Billion Annually

The United Nations Development Program (UNDP) representative in Egypt, Randa Abulhassan, said that achieving Arab sustainable development requires 85 billion dollars a year. The goals of sustainable development have the international consensus to implement an ambitious agenda for the whole world by finding appropriate resources to increase investment. This came during a second workshop on the objectives of sustainable development, organized by the Egyptian Ministry of International Cooperation in coordination with the World Bank and opened by the Minister of Investment and International Cooperation Sahar Nasr.

Rare White Giraffes Appear in Kenya

Kenyan guards were able to shoot a video showing rare giraffes roaming a protected area in northeastern Kenya. The rare Giraffes show white color acquired as a result of genetic mutations. According to reports by the US news agency UPI, the giraffes that the guards of the reserve were able to photograph, were infected with Vitiligo, which leads to partial or total loss of skin color. White giraffes were first seen in 2016 in Tanzania. It seems that they have moved to Kenya now.



The Red Fox



Design: Marwa al.Ghafri

I would like to introduce myself to you. I am the Red Fox. I have been given this name, to distinguish me from other types of foxes, though my color varies according to the seasons of the year and the nature of the region in which I live. So it varies between light brown and reddish brown.

I am one of the sons of this good country. Although I am one of the most abundant wild animals in the Sultanate, my species spreads all over the world. I can adapt to all environments and places, whether forests, grasslands, mountains or deserts. I can even change my diet according to the environment where I settle.

I am most active in the dark. My weight is about 3 to 5 kg. I feed mainly on rodents, birds and rabbits, but I can adjust my diet according to the area where I live, to the extent that I can become vegetarian and eat vegetables and fruit. I can also feed on fish, frogs, insects, bird eggs, turtle eggs, and small turtles. I can easily adapt to the human environment in farms and in urban areas, even large urban communities.

My female gives birth once a year and gives birth to 3-5 pups. Its pregnancy lasts about 56 days. My average age is 3 years. That's why I'm one of the endangered species as a result of overhunting. But I can live in captivity for almost 12 years.

Lynx

DO YOU KNOW..?

Green areas in cities perform several tasks. City forests provide oxygen and absorb carbon dioxide, leading to improved air quality. It also helps control rainwater and provide habitat for plants and animals in cities.

