



The National Field  
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Environmental Conservation  
About innovative Environmental Research



Sultanate of Oman  
Diwan of Royal Court

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# The Myna Bird in Oman

Beautiful and attractive but bad detective



Scientists are Convinced

# that Climate change is a major Cause of Hurricanes



Scientists have come to believe that Erma and Harvey hurricanes have intensified as a result of climate change. But they still lack "definitive evidence" to make that public. Evidence elements are available, from sea level rise to ocean warming and atmospheric fluctuations. The computer simulation models are able to confirm all these changes, but one piece of information remains incomplete to dispel uncertainty. That is that data resulted over a sufficiently long period after the occurrence of such hurricanes.

"It's really annoying, as we are still unable to confirm 100 percent that Erma has intensified because of climate change, while we can decide in all other cases, Such as heat waves", admits Dan Mitchell, a specialist in atmospheric currents at Bristol University. Nevertheless, many scientists believe the case is supported by enough proof. " Physics

is very clear in this regard, hurricanes derive their destructive energy from the heat of the oceans," explains Professor Lestermann, a professor at the University of Potsdam. "Greenhouse gas emissions from burning coal, oil and gas raise the temperature on our planet and provide more powerful tropical storms," he said.," he said.

Experts have extensive information on the global warming of the oceans at a rate of 20 centimeters since the 1880s and the beginning of the industrial revolution. " Sea level is rising, and it will continue to do so under global warming," says Chris Hollowway, a hurricane specialist at Reading Universty. This increase is reinforced by cyclone damage by the surge of waves on the coast. "The rising storms are an expected sign of climate change, but it is still too early to say whether Hurricane Erma was aggravated by this phenomenon,"



point of view

## Philanthropy for Environment

**Dawood Sulaiman Al Balushy**  
Editor-in-Chief

At one of the Arab environmental conferences, the lecturer focused on the concept of human philanthropy for the environment, saying that the person should dedicate himself to the service of his environment, protects it from deterioration and extinction, as well doing his best to educate his peers in the community about the importance of preserving the natural resources of his society.

When discussion was opened, one of the attendees stood up and poured out all of his anger at the lecturer. He said him in his own local slang: «All this we do for the environment, so what role is left of the government to play?»

Giving to environment is a very broad concept and the environment itself is not the property of the government. Conservation and preservation of environment must not be limited to government agencies. It is a common duty shared by the individual and the government. Perhaps the individual bears larger parts of this important vital responsibility. Preserving the environment, before being a governmental concept, it is a subjective concept that concerns each and all of us. Humans are the ones who deal every minute with the environmental system continuously, starting from the house, then the surrounding area and then the whole society in all walks and aspects of life.

The greatness of the human care towards environment has been demonstrated in the least human behavior such as (Removing harmful objects from the road). Such concept must be applied to other greater actions, such as preserving wildlife, being plants or animals, preventing logging, reducing pollution in all its forms, preserving cleanliness and public property, ensure the sustainability of natural resources, as well as raising awareness of children, families and community members in the area of caring for the ecosystem.

Human care towards environment has no specific boundaries and has no closed spaces. It is a human example of peaceful and safe coexistence with the environment. Let us teach our children from their tenderness, the true concept of human care towards environment. Let us instill in their minds, the love of giving in all its concepts.

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The research project carried out by the National Field Research Centre for Environmental Conservation in collaboration with the Ministry of Environment and Climate Affairs in the Al-Sallayil Nature Reserve Park around the Arabian Ghazelle, or the scientific name of Ghazelle, yielded important information about this animal. An animal living in the mountains and the slopes of the plateaus as well as coastal plains, and the spread of these gazelle closely related to the scope of the spread of acacia tree, where not exist in all but in the areas inhabited by these trees.



Conducted by the National Centre in The Salil National Park

Study on

# The Arabian Ghazelle

Natural habitat  
and ways to protect it

## studying

The research team conducted the surveys in the Salil Nature Reserve Park, where the sites of the Arab ghazelle were monitored with GPS devices while watching them. The viewing angle and distances from the survey line were determined using the relevant survey software. The team also analyzed and modeled data to track the spread and distribution of ghazelle using modeling tools and GIS. The study showed a decrease in the density of the ghazelle in the plains where it reached (5.12 km<sup>2</sup>) in the survey (20142015/) while it was (5.48 km<sup>2</sup>) in the previous survey

## Ghazelle Habitat use

Ghazelle maximised the distance between their habitats and human dwellings and from the reserve boundary. Also, there was a strong association with mixed vegetation cover and vegetation biomass. However, canopy cover or areas with high woodland density were avoided.

## informations

The mountain ghazelle is considered the thinnest and longest-standing ghazelle in the world. The color of these animals is brown to dark brown on the back, neck, and head, while the stomach and back are white and bright. These two types of color vary from broad dark lines on both sides of the body. There is a specific ghazelle species in Oman called Muscat Mountain Species. It is characterized by the dark color compared to other species. These animals are short, smooth and shiny in summer, reflecting most of the solar radiation. In winter, they become longer, thicker, absorbent, and shiny.



## Risk

The researchers said the Arabian ghazelle is an endangered animal that is already facing a worrisome decline in its numbers globally and needs protection, but it still lives in the wild and most of the mountain ghazelles are found in Oman.

## Objectives

The main objectives of the study are to obtain an accurate estimate of the number of Arabian ghazelle in the Sultanate, to understand its distribution within the Al-Silil Reserve, to establish a framework for monitoring it, and to train cadres to be able to collect and analyze survey data. The researchers warned the vulnerability of extinction of Ghazelles if no protection.

## Recommendations

The team has issued many points with respect to the monitoring of ghazelles. A major one is that distance sampling surveys can be conducted in 8 working days, and such surveys should continue so that the world's most important ghazelle population is well monitored. Also, the survey data helps focus effectively on the reasons for the population decline and limitations to growth of ghazelles. The research suggests that to ensure the protection of ghazelle habitats, disturbances and intrusions on the boundary and inside of the reserve must be strictly reduced, as such human interferences make ghazelle to avoid these areas – resulting in habitat loss. Further there should be a check on the number of goats and camel sallowed inside the reserve area. Their numbers must be gradually brought down to the minimum levels, the study suggests. Finally, the team feels that a buffer zone needs to be established. The research also threw light on the significant potential for small scale 'guided' eco tourism in Al Salil reserve. Both walking and driving tours could be developed, but at the same time all the required tourism infrastructure should be established only outside of the reserve so as not to disturb the ghazelle population, the team recommends. Further, the research team argues that an effective monitoring mechanism should be in place before starting any tourism projects.

# The Myna Bird in Oman

## Beautiful and attractive but bad detective

◆ Editing By: Dawood Al Balushy & Khalifa Al Higgi

◆ Photographer: Nasr Al-Rahbi

**E**xotic or invasive species pose a major threat to the biodiversity of the areas to which they enter. These species of plants, animals or birds are invasive alien species or may rapidly spread by crowding and competing with other native plants and animals when added to a new habitat that lacks traditional control factors. Invasive alien species are currently a major threat to global biodiversity. Perhaps the largest model of extraneous or invasive organisms in the Sultanate is the Common Myna Bird, the presence of which is recently noted in the Sultanate. It has spread widely. The bird has a significant impact on biodiversity at places of existence, because it is one of the aggressive birds that attack birds, animals and even humans. Therefore, It clearly affects the food chain in the areas it controls by attacking other bird nests and killing young ones.



### Original Home

**T**he open forests from Afghanistan to India, Indochina, Sri Lanka, Pakistan, Nepal and western Indonesia are the original home of the Indian Common Myna, but it deliberately or taken humans in attempts to raise it as homes pets and then migrate, the bird spread over many other places around the world such as the Sultanate of Oman, where it has



### Its Features

The Indian Common Myna belongs to the Starlings Family of the platelets. The bird is 22 to 25 cm long and its wings, when flying is 33 to 36.5, cm. It is a medium-sized bird with black heads and yellow feet.

been seen in abundance, especially in the provinces of Muscat and the north and south of Batinah, Al Dhakhliya, Al Dhahira and Dhofar. It is also located close to Al Jabel AL Akhdr, which is one of the most important areas of biodiversity in the Sultanate, and the bird is a major threat to those areas.

It is also dangerous in the way it breeds rapidly, mating 3 times a year, and eggs 4 - 6 eggs at a time. It is also a perennial bird, aged 25 years, and starts breeding after one year from hatching.

The Myna is a farmer's

friend in his native country for his ability to eat insects that destroy crops.

In many parts of the world, Indian Common Myna is a problem for the environments in which it settled. Although in its original environment in India, it is a friend of farmers for its ability to eat insects that destroy crops, but in Australia, for example, it has been pursued after its breeding, as it is causing economic problems by destroying fruit and crops.

The story of the Common Myna with

- It's average age is 25 years, mating 3 times a year and puts 4 - 6 eggs at a time
- It is aggressive, kills birds, small animals and may attack humans
- It affects agricultural crops and contributes to the spread of many infectious diseases

Australia is a long one, but it shows how dangerous the human interference in environmental balance can be. The Common Myna entered into Australia in 1862 to help fight insects, but the situation differed after the damage caused by the alien bird to an environment other than its original.

#### **Damages Caused by the Common Myna**

The Common Myna causes a lot of damage in the places inhabited in. The most important are:

- Attacking the nests of other birds and killing their young ones, in addition to attacking the small animals and killing them.
- The destruction of some crops grown by farmers, especially at growing stage.
- It also eats bees causing significant reduction in the output of the beekeepers.
- It helps to transmit diseases, parasites and fleas to humans and animals such as cattle.
- There is the possibility that the Myna may carry diseases causing viruses that local species do not have sufficient immunity to meet them.
- It affects the food chains. In the places where it is located, absence of crows was noted. So the role of crows in beaches cleaning from dead fish was missed. This affected the environment in such places.
- This bird is characterized by loud noise. Such sound is made in every movement it makes and when it sees another bird or any person approaching it.
- Due to its presence in urban areas, it destroys infrastructure such as canals and pipes where it builds its nests.
- Attacking other birds, nests and nesting in, and hatching the eggs of other birds.





## The Sultanate Participates in the Convention to Combat Desertification in China

The Sultanate of Oman, represented by the Ministry of Environment and Climate Affairs, participated in the meetings of the thirteenth session of the Conference of the parties in the United Nations Convention to Combat Desertification, held in Ordos - Republic of China, September 6 - 16.

The meetings discussed many issues, including land degradation, early warning, before and after dust storms and droughts, how the private sector could invest in supporting the fight against land

degradation, and the potential contribution of cities to addressing the challenges that face the lands.

The United Nations Framework Convention to Combat Desertification (UNCCD) was concluded in 1994 and is the only binding legal agreement linking environment and development to sustainable land management. The Convention serves arid, semi-arid, dry and semi-dry regions. The parties countries are working to improve the living conditions of people in desert and to repair arid lands.

## GCC Signs Environmental Agreement with UN

H. E. GCC Secretary-General, Dr. Abdul Latif bin Rashid Al Zayani and Mr. Erik Solheim, the UN Environment Executive Director, signed a cooperation agreement to implement four environmental projects. The signing of the agreement allows the commencement of the four agreed projects, which are: Study of the scope of coastal filling and its impact on the marine and coastal environment, the development of a regional manual for the collection of air quality data, the updating of the Standard Guidelines on the Sound Management of Chemicals and the preparation of a report on the State of the Environment and Environmental Outlook in the GCC Countries.

## Saudi Aramco Grants The First Technical License To Clean Solar Panels

Saudi Aramco has signed a technical license agreement with NOMAD Solar Solutions, for cleaning solar panels. It is license of its kind. NOMAD Solar Solutions is a local startup company funded by King Abdullah University of Science and Technology. It manufactures and markets a mechanical device to clean solar panels without using water. Under this agreement, Saudi Aramco will grant NOMAD the right to develop and manufacture solar panels cleaning technology, a technology Saudi Aramco's research and development team has successfully developed locally. The technology will be integrated with NOMAD's automated dry cleaning system for solar panels.



## Qatar Produces Solar Technology and Equipment in Germany

Qatar Solar Technology Company (QSTec), a subsidiary of Qatar Foundation for Education, Science and Community Development, has announced a cooperation agreement with Solar World Industries to overcome its financial crisis and continue to manufacture solar modules in Germany. Solar World Industries, headquartered in Germany, is an integrated solar photovoltaic manufacturer and is renowned for its high-efficiency, high-quality products and advanced technology, based on research and development. The Financial Times estimated the deal at Euros 100 Million (428 million Rials), boosting the country's presence in Europe's largest economy. The cooperation agreement between the two sides has succeeded in providing jobs for hundreds of workers at the German company's plants, which will continue to provide their advanced technology products to meet the growing global demand for solar energy. The agreement has also earned (QSTec) many strategic advantages.

## Abu Dhabi:

## Large Flamingos Thrive in Al-Wathba Reserve

The Environment Agency – Abu Dhabi has announced the success of the Large Flamingo birds, to achieve a new record, after their successful breeding at Al-Wathba Wetlands Reserve for the seventh consecutive year, where the number of chicks recorded during the breeding season this summer reached 448 chick. The nesting of flamingos was observed, at their main sites in the reserve, in mid-April. A short time later, the birds' experts observed the presence of eggs in the nests. It is expected that the number of chicks will reach 448. This number exceeds the number of chicks recorded in Al-Wathba Reserve in 2015, which were 420. The Flamingo is one of the most popular birds for the visitors

of the Al-Wathba Reserve, where many visitors have been keen to see the birds since the opening of Reserve to the public in the last quarter of 2014. The breeding of this species for seven consecutive years has increased the interest of the public, the researchers and those who are interested in this field. The first successful breeding of flamingo birds at Al-Wathba Reserve was recorded in 1998. After this success, the area was declared a natural reserve. Al-Wathba Park is the only site in the UAE where flamingo is regularly reproduces. The reserve is about 45 minutes from Abu Dhabi city and is also a safe haven for many reptiles, small mammals and insects.



## Big Cats are Celebrated in the World Wildlife Day

Lynx, lions, leopards, tigers and other big cats symbolize strength and courage, but all face great risks to their survival in the wild. These animals will be placed under the spotlight on the World Wildlife Day, which falls on March 3, 2018, as announced by the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Large cats are among the most famous animals around the world, yet these predators face many and varied threats, most of them caused by human activity. Their numbers are declining at alarming rates because they have lost habitat and prey, as well as humans conflicts, hunting and illegal trade. For example, the number of tigers has declined by 95 per cent over the last 100 years, and African lions have fallen by 40 per cent in just 20 years.



Environmental Vocabulary

### The King Talker

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Its belief in the transfer of the sincere Inews protected it from the punishment of the King Prophet, almost its absence from the king meeting about to lose its life. Among all the worlds that came and underwent the prestige of the king, the only one which left, not stubbornness or negligence or disinterest, but its searching for water led it to a distant place Called Saba. It was aware that its absence would kill it, but it also realized that the justice of the king would save it after he had given him the certainty of knowledge, and aware the king of the existence of another kingdom of mankind. So It saved from Punishment, and received the reward. God specialized it by mentioning its name in the Holy Qur'an, and by Its closeness and speaking to the prophet King Solomon.

This bird lives everywhere in the world, selects the holes of trees or stones, and in old buildings, escapes from human settlements, distancing itself from the hustle of civilization, and not staying long in one place, but still moving from place to place. This is Its life and nature. When it feels safe somewhere it settles for the nesting period, where the female sits about fifteen days to incubate Its eggs until hatching, embracing two young every year. During which, It cannot leave the eggs, for fear and tenderness, instead the male provides needs to all. The male gives its family more affection and continues to bring food to its young until they leave after thirty-two days. The hoopoe continues its innate cooperation and helps its young neighbors with the food and protection. The hoopoe feeds on the insects, larvae and worms from agriculture. It cleans agriculture fields without knowing, so it earns satisfaction and friendship of the farmers.

It has a great presence in the Sultanate, but hardly seen because it avoids public places. Its protection is innate and is not eatable. It protects itself in a strange way from any harmful animal or predator by spraying an odorless black oil spray. Despite that, protecting it from threats is important and a necessary requirement.

The length of the hoopoe is about thirty-three centimeters. It has a graceful body and beautiful appearance, very fast-flying, and has the extraordinary ability to detect underground water. Its wings are often black and white, with a distinctive crown on its head and a long beak that tends to warp. Its good features gave it a prestige like a king. Why not, it is a Solomon talker's the prophet the king.

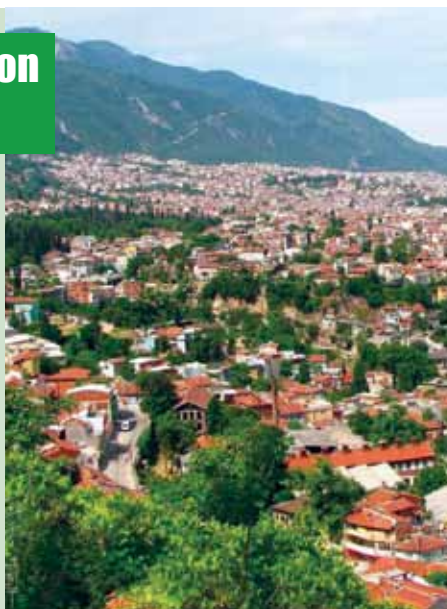
## Establishment of the World Largest Marine Protection Zones in the Pacific Ocean



The British Guardian newspaper reported the creation of one of the largest marine protection zones in the world off the coast of Easter Island, the national park of Rapa Nui, one of UNESCO's World Heritage sites. The park is located on Easter Island in the southeastern part of the Pacific Ocean. The area was used by the Chilean government in 1935 to create the 740,000 square kilometers park, approximately the size of the Chilean mainland, and will protect at least 142 species of endemic marine species, including 27 endangered species.

## Trees Provide \$ 500 Million Annually Per Megacity

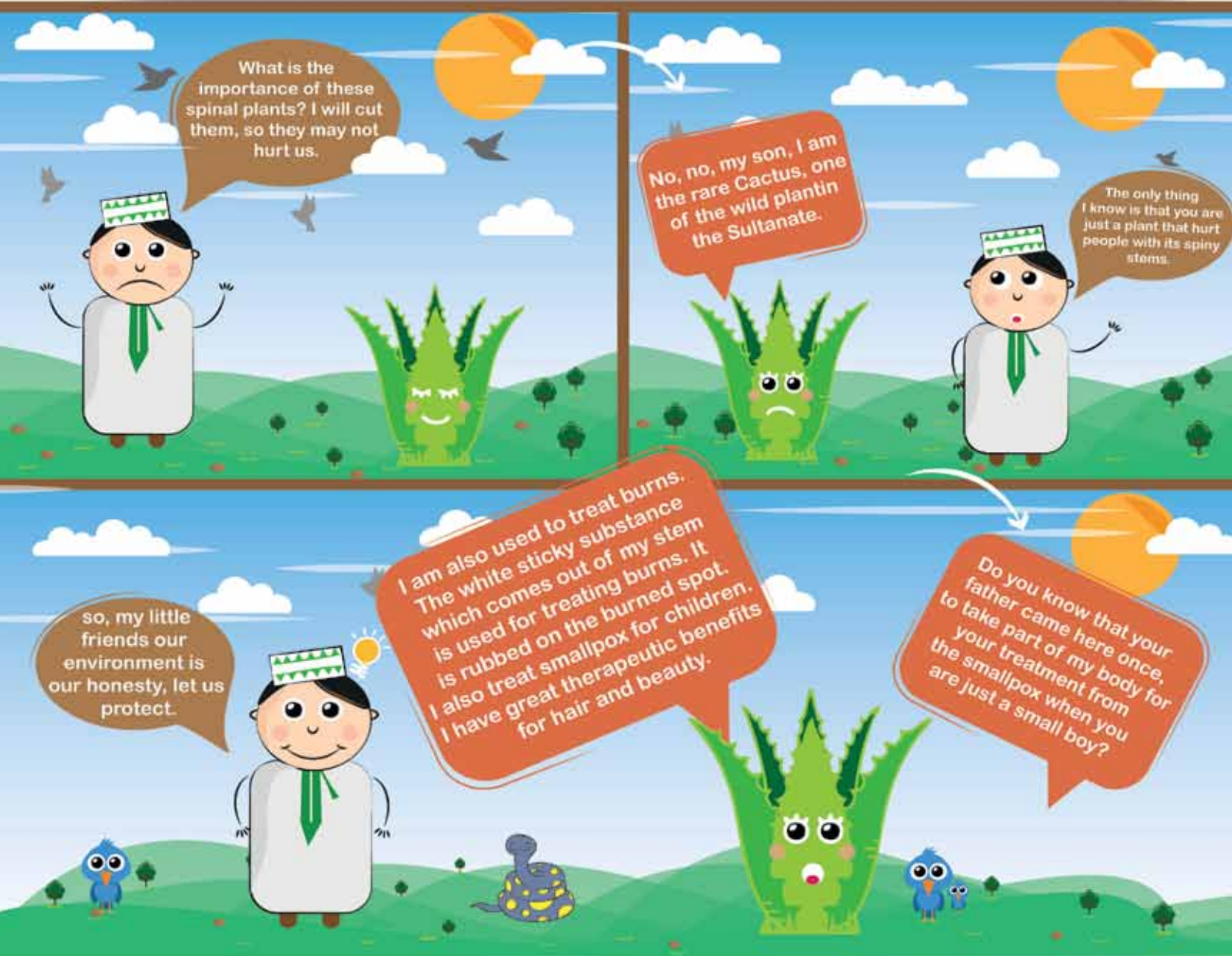
A study published recently in the Ecological Modeling Journal found that trees in urban areas provide large cities with more than \$ 500 million a year spent on public health, energy costs and environmental protection requirements. The study, conducted by scientists from the State University of New York, examined the services provided by trees in 10 huge cities around the world with a population of more than 10 million, including Cairo, Istanbul, Beijing and Tokyo. On average, the study found that trees cover about 21 percent of city areas and reduce the costs of each city by \$ 482 million per year by reducing air pollutants such as small particles and sulfur dioxide



# Cactus



Design: Marwa al.Ghafri



## Lynx

### DO YOU KNOW..?

Do you know that a small piece of plastic needs two centuries to decompose in natural circumstances and that the bottle of juice you drink and carelessly through, needs ten hundreds years to decompose? .. Imagine how many centuries we need to discharge the waste plastic from your home only! How on the level of the earth?

