

**Project Life+Nature** "Conservation and Management of Special Protection Areas for the Steppe Birds of Andalusia (LIFE08NAT/E/000068).

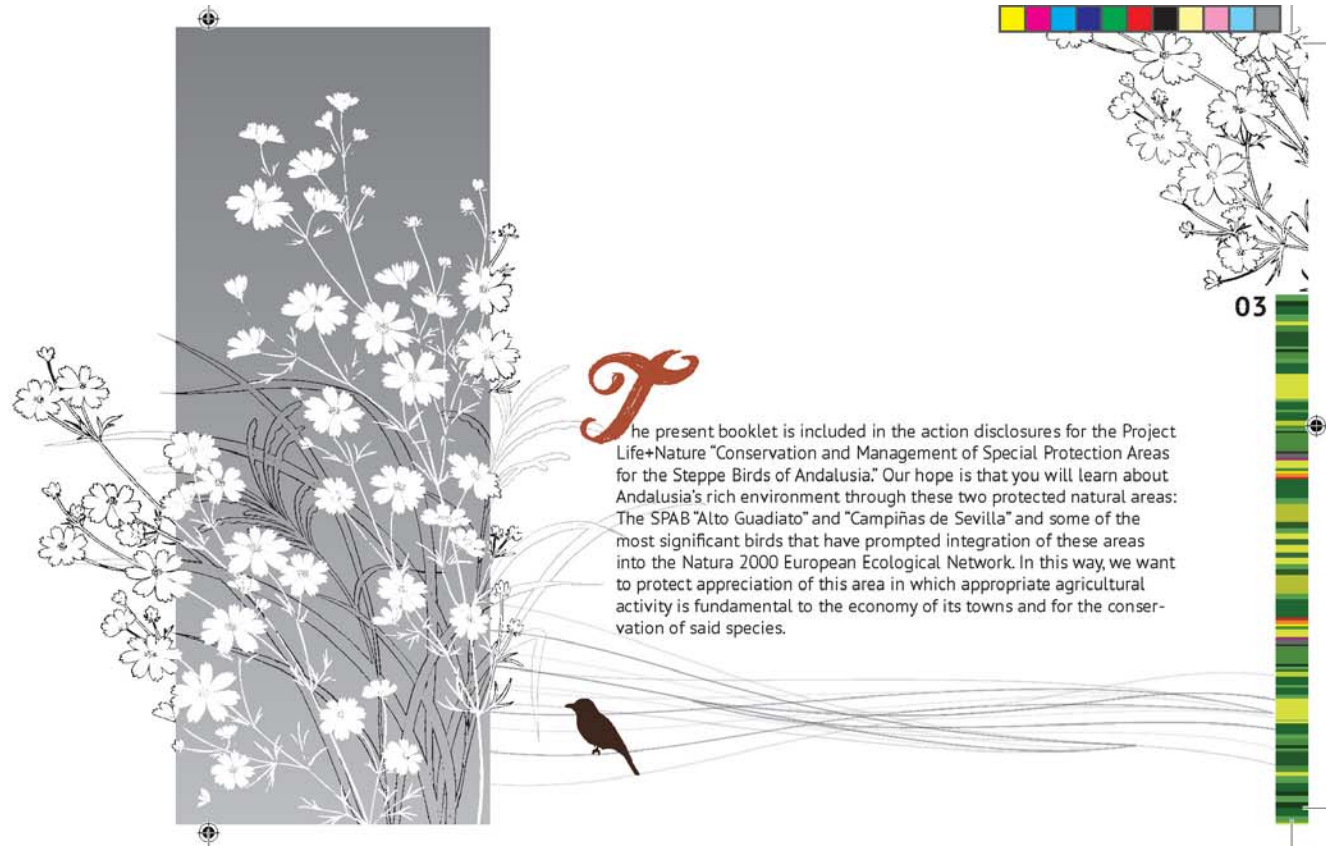
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## What is the Natura 2000 NETWORK?

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### What is the Natura 2000 NETWORK?

Due to evolution and to the way the resources in Andalusia have been taken advantage of, our region is characterized by a noteworthy biological, geological, and scenic diversity that allows Andalusia to be considered one of the richest regions from an environmental standpoint and one of the best conserved in Europe.

The **Natura 2000 NETWORK** is a European network made up of a group of natural areas of high ecological value that has as its objective to guarantee the long term survival of the most valued and most endangered habitats and species in the European Union.

We can find the Special Areas of Conservation (SAC) and the Special Protection Areas for Birds (SPAB).

#### Information on the Andalusia Natura 2000 NETWORK

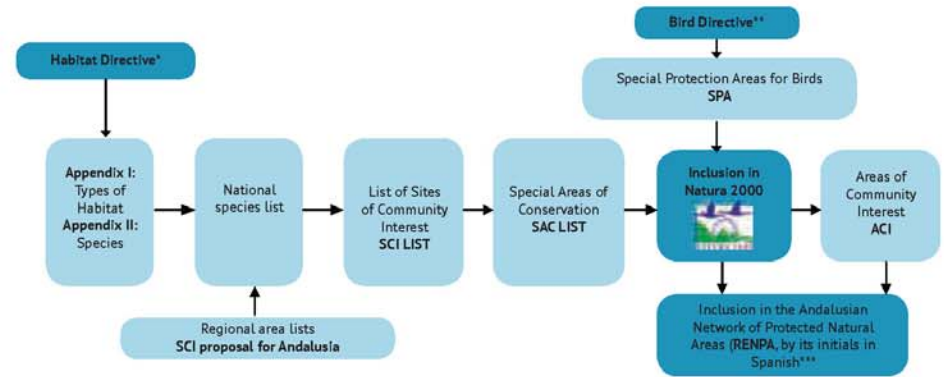
In Andalusia we have a total of 195 SCI areas (status prior to the SAC) of 2,624,429.05 hectares and 63 SPAB areas of 1,644,110.86 hectares.



-  ZEPA
-  LIC



Below we have shown you a diagram of the declarative process for a natural area to be included in the Natura 2000 Ecological Network:



**Declaration process:**

\*Council Directive 92/43/CEE of May 21, 1992, concerning the conservation of natural habitats and of wild flora and fauna: Preserve habitats and species classified as of community interest. One of its main objectives consists of integrating human activities into a sustainable development process.

\*\*Council Directive 79/409/CEE of April 2, 1979 concerning conservation of wild areas: Long term protection and management of all the bird species that live in the wild in a community territory, as well as their habitats, with particular impact on migratory birds.

\*\*\* Law 18/2003 of December 29th, for which fiscal and administrative measures were approved: adopted in 2003, modifies Article 2 of the Inventory of Protected Natural Areas of Andalusia law (Law 2/1989), including a new legal precept in regional guidelines, called "Areas of Community Interest" (SIC, by its initials in Spanish), that includes the SPAB and SAC precepts. The Natura 2000 areas will be incorporated in this way to the Network of Protected Natural Areas of Andalusia (RENPA, by its initials in Spanish).



## Classifications of Endangered Species



A large number of species take refuge in Andalusia, that for various reasons find their existence in danger, normally due to human actions. With the intent of preserving our natural heritage, different standardized measures have been established that try to deal with this problem, notably the **Andalusian Catalog of Endangered Species**. This catalog includes and goes into more depth in the existing catalog on a national level, considering endangered classifications as "in danger of extinction," "vulnerable," and "extinct."

In order to assess the preservation status of the species, Red Books or Atlas' are usually used, scientific/technical documents that, though of no legislative value, contribute very valuable systematic information in the form of index cards that a minimum amount of information concerning identification, distribution, biology, threats, and active or passive management measures. In the species descriptions recorded here the Red Book of Threatened Vertebrates of Andalusia will be used that includes the endangered classifications from the Red List of Threatened Species of the IUCN (International Union for the Conservation of Nature).

### IUCN RED LIST (International Union for the Conservation of Nature)

- Extinct (EX)
- Extinct in the wild (EW)
- Critically Endangered (CR)
- Endangered (EN)
- Vulnerable (VU)
- Near Threatened (NT)
- Least Concern (LC)
- Data Deficient (DD)
- Not Evaluated (NE) (species not evaluated for any of the classifications)



# Project Life+Nature “Conservation and Management of Special Protection Areas for the Steppe Birds of Andalusia”

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Agricultural activities are found to be closely related to the environment. Many protected natural areas are in equilibrium and are even sustained by extensive agricultural and livestock practices, contributing to the survival of many wild protected species as in the case of the steppe bird.

Project Life+Nature “Conservation and Management of Special Protection Areas for the Steppe Birds of Andalusia” promoted by the Agricultural, Fish, and Environmental Council and co-financed by the European Union, presents conservation actions and awareness aimed at improving the situation of the steppe bird population of our cereal steppes: Great Bustard, Little Bustard, Lesser Kestrel, Montagu’s Harrier, Stone Curlew, Black-bellied Sand Grouse, European Roller...

### Where is the project centered?

The project has been developed in four Andalusian areas declared as Areas of Special Protection for Birds, SPAB: Alto Guadiato, Campiñas de Sevilla, Laguna de Fuente de Piedra, Lagunas de Campillos.

These are areas of important agricultural activity, fundamental to the economy of these towns, with great ecological value for which they have been included in the Natura 2000 Network.



### What is the objective?

The objective of the planned joint measures is to increase the availability of food, develop habitat management models that are compatible with agricultural activities, contribute to diversification of agricultural landscape, increase opportunities for nesting for the Lesser Kestrel and the European Roller, carry out awareness measures, generate a positive image of the areas of special protection for steppe birds and facilitate the creation of tourist bird watching initiatives.

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## Areas of Special Protection for Birds “Alto Guadiato” and “Campiñas de Sevilla”

### Common Characteristics

In September of 2008 the July 29th DECREE 429/2008 went into effect which declared the Areas of Special Protection for Birds “Campiñas de Sevilla” and “Alto Guadiato” based on the population of steppe birds present in their environment. These areas are considered to be the most important areas in our community for the Great Bustard (*Otis tarda*) and the Little Bustard (*Tetrax tetrax*), both are classified as threatened.

Within said demarcation, with the intention of procuring greater protection for the species that SPABn the exhibition areas, mating, nesting, and raising young, the Sensitive Areas are demarcated in the decree cited for the conservation of steppe birds.

*The existence of hedges and boundaries increase the opportunity for ecological niches*

Man-made cereal steppes are predominate in both protected areas, making for a type of flat land landscape, slightly rolling, with a significant portion of bare land and interspersed trees, where animal and vegetative

species have adapted to a semiarid climate. A large number of protected bird species live together in this steppe habitat together with important agricultural activity, as the driving force of the territories economy.

A mosaic of herbaceous crops together with elements that diversify the landscape like hedges, boundaries, forest islands, or cairns is essential for the survival of our steppe birds, seeing that they offer refuge, food, and propitious places to nest.

We find these combinations in the Areas of Special Protection for Birds, which we show you below. Areas of great biodiversity and an agricultural model sustainable with the environment.

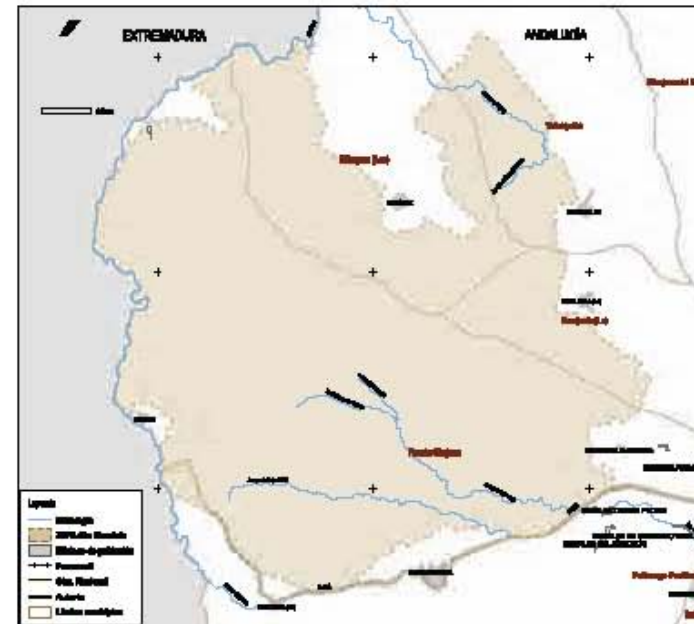
## SPAB "Alto Guadiato"

The SPAB "Alto Guadiato" includes a surface area of 33,930.72 hectares with significant agricultural activity, mainly cereal and livestock. Open meadows with considerably extensive livestock are interspersed among the large expanses of cereal.



### Characteristics

- **Municipality:** Los Blázquez, Fuente Obejuna, La Grajuela and Valsequillo.
- **Surface area:** 33.930,72 hectares.
- It is **dominated** by the extensive growth of cereal.
- **The notable presence of extensive livestock** makes the pastureland very varied and abundant.
- It includes a **wide variety of species** linked to the steppe habitats, being one of two of the most significant reproductive centers in Andalusia for the bustard.
- **Sensitive Areas:** 12.540 hectares.



### SPAB "Alto Guadiato"

Area situated to the Northwest of the Córdoba province, in a transitional area with Extremadura, to the North, and to the East with the Los Pedroches region. The steppe landscape is dominated by extensive cereal crops, with interspersed meadows of limited tree coverage that usually give place to pastureland that is very suitable for livestock. Some enclaves of noble scrubland are also there as witnesses to the ancient Mediterranean forest that contribute in diversifying the landscape and introduce elements that favor the presence of birds characterized as very forest like.

This humanized territory covers four municipalities that together form a population of 6,821 inhabitants, with a small portion of the population being sustained by the service sector and agriculture.



The Guadiato River, which gives name to the protected area and to the region, flows through an extensive valley in which diverse mountains of no more than 811 meters are interspersed. They are almost completely private lands, without public properties, with the exception of certain lineal elements like livestock trails, public pathways, and waterways.

*A great population of cranes, around 2,500 specimens, comes every year to pass the winter*

The Alto Guadiato is a place linked to agriculture and livestock, where Bustards, Little Bustards, Black-bellied Sandgrouse, Montagu's Harrier, and the Northern Harrier live together, nonetheless the most noteworthy is the population of cranes that come every year to the same places to pass the winter. Around 2,500 specimens (2010), probably the largest group of this species in Andalusia.

The population of Guadiatán Bustards are considered to be the most viable on a midterm and long term basis in Andalusia, seeing that it has a connection and permanent interaction with the numerous Extremaduran groups in Serena.



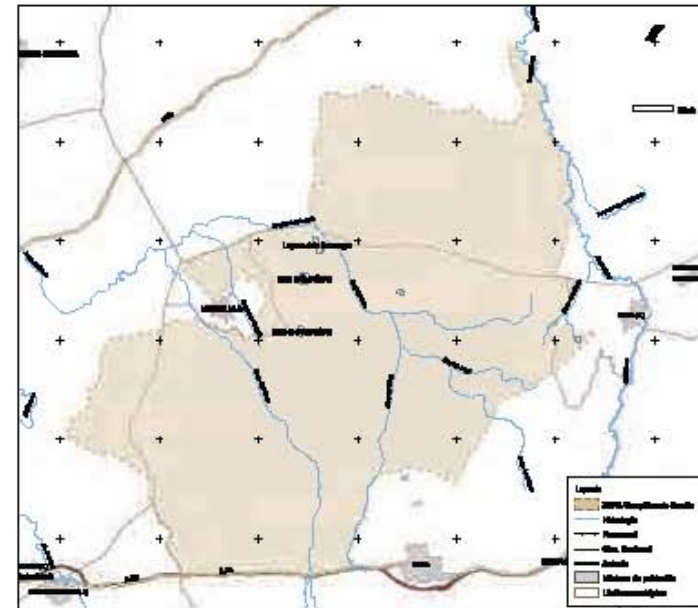
## SPAB "Campiñas de Sevilla"

An extensive plain situated in an Endorheic area that give way to lakes that make an extremely important refuge for the birds in this area characterized by scarce precipitation and high temperatures in summertime.

The SPAB "Campiñas de Sevilla" includes a surface area of 35,735.90 hectares and its landscape is dominated by a mosaic of dry crops of limited size.

### Characteristics

- **Municipality:** Écija, La Lantejuela, Marchena and Osuna.
- **Surface area:** 35.735.90 hectáreas.
- **Greatly fertile clayground** of considerable quality.
- **Campiña great amount** of cereal production.
- **Presents a great variety of species** linked to steppe habitats, being one of the primary groups of Bustards in Andalusia.
- **Sensitive Areas:** 20.118 hectáreas.



## SPAB "Campiñas de Sevilla"

This protected natural area, located in the southern part of the province of Seville, is characterized by its large meadows with rolling hills, highlands, and fertile wetlands. It is an area dominated by grain fields with interspersed irrigable land. However, most of all, it is noted for its olive groves which have slowly but surely taken over more land as new plantations are introduced.

Therefore, extensive agriculture by large farming operations dominates the area, having average surface areas of over 50 hectares. Ownership of these farms is primarily private (95.6%), with the exception of the Las Turquillas farm, which is the property of the Department of Defense. This property is located in a strategic enclave for steppe birds due to the fact that it is included in the stable settling area for the Great Bustard.

Traditional agriculture uses have, over time, been forming a steppe landscape which includes a group of thirteen lakes, some of which are protected and included in the Lantejuela Endorheic Complex Natural Reserve (Reserva Natural Complejo Endorreico La Lantejuela in Spanish). They are also recognized and declared as SPAB (Special Protection Areas for Birds), due

*This protected area supports one of the Great Bustard's primary reproductive centers in Andalusia*



to the interesting variety of aquatic birdlife found in them (White-headed Duck, Squacco Heron, Common Shelduck, Gull-billed Tern, etc.).

This secular management of agricultural lands has permitted, at the same time, the settling of a large group of steppe species which are perfectly adapted to life in a simple structure.

The Campiñas de Sevilla SPAB supports one of the Great Bustard's primary reproductive centers in Andalusia. It is also a valuable area for other species such as the Stone Curlew, Roller, Lesser Kestrel, Black-bellied Sandgrouse, Montagu's Harrier, Little Bustard, and others. Steppe Passeriformes are also very well represented and some are abundant, such as the Chalk-browed Mockingbird and the Crested Lark. There are also others which are less abundant but just as interesting, such as the Tawny Pipit.



## Steppe birds

As we have mentioned, **steppe birds play a fundamental role in the declaration of both areas as a Special Protection Area for Birds.**

### I Do you know what these species have in common?

As we have already mentioned, the grain steppes contain birdlife that is unique and specific to these areas and which has adapted to the environment and climate. The extensive areas which are devoid of trees and covered with low vegetation have resulted in the birds having mottled, dark colored plumage, allowing them to camouflage themselves to the environment and go unnoticed by potential predators. This hidden coloring is especially noticeable in the females as it is these that spend more time caring for their young. Many bird species exhibit sexual dimorphism, meaning the males and the females have morphologic differences, both in size and plumage.

### I Other environmental adaptations:

- Long legs, in comparison to the body, which are strong, enabling them to run in open areas.
- Elusive birds with rapid flight to evade and escape predators.
- Construct their nests on the ground with little material or using items from the environment such as small stones and gravel.
- Chicks are nidifugous, abandoning their nests as soon as they are born. They also have plumage with very discreet coloration and when faced with any danger they remain silent and crouched down, staying completely unnoticed.



## Steppe birds

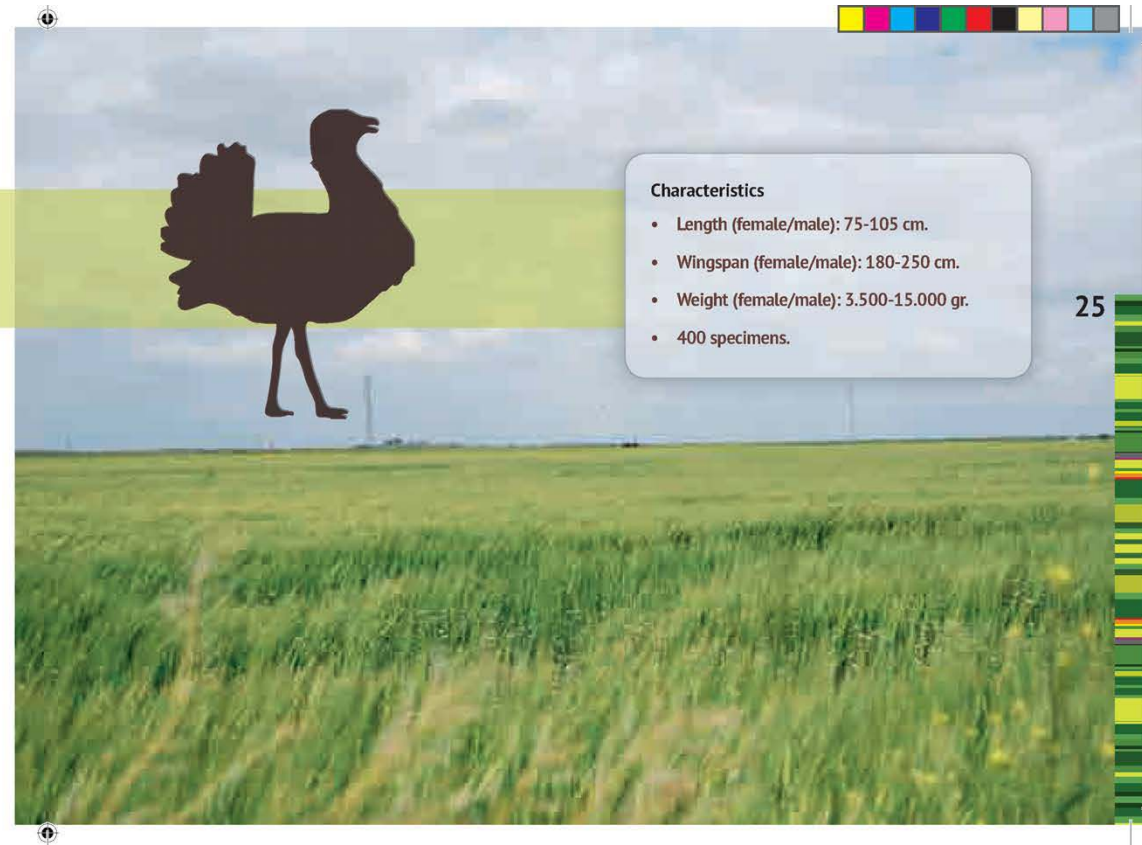
# Great Bustard: *Otis tarda*

Threat category according to the Red Book of Threatened Vertebrates of Andalusia.

**In critical danger of extinction (CR)**

This is one of the largest birds among all European birdlife and the heaviest flying species in the world. It also presents the largest weight difference between the male and female.

Its breeding season begins in April and results in spectacular courtship displays in which the males establish themselves in areas known as leks. In these areas they exhibit themselves by increasing their volume while they slowly make circles in a show known as the rueda. The chicks are born in May.



### Characteristics

- Length (female/male): 75-105 cm.
- Wingspan (female/male): 180-250 cm.
- Weight (female/male): 3.500-15.000 gr.
- 400 specimens.

## Steppe birds

# Lesser Kestrel: *Falcon naumanni*

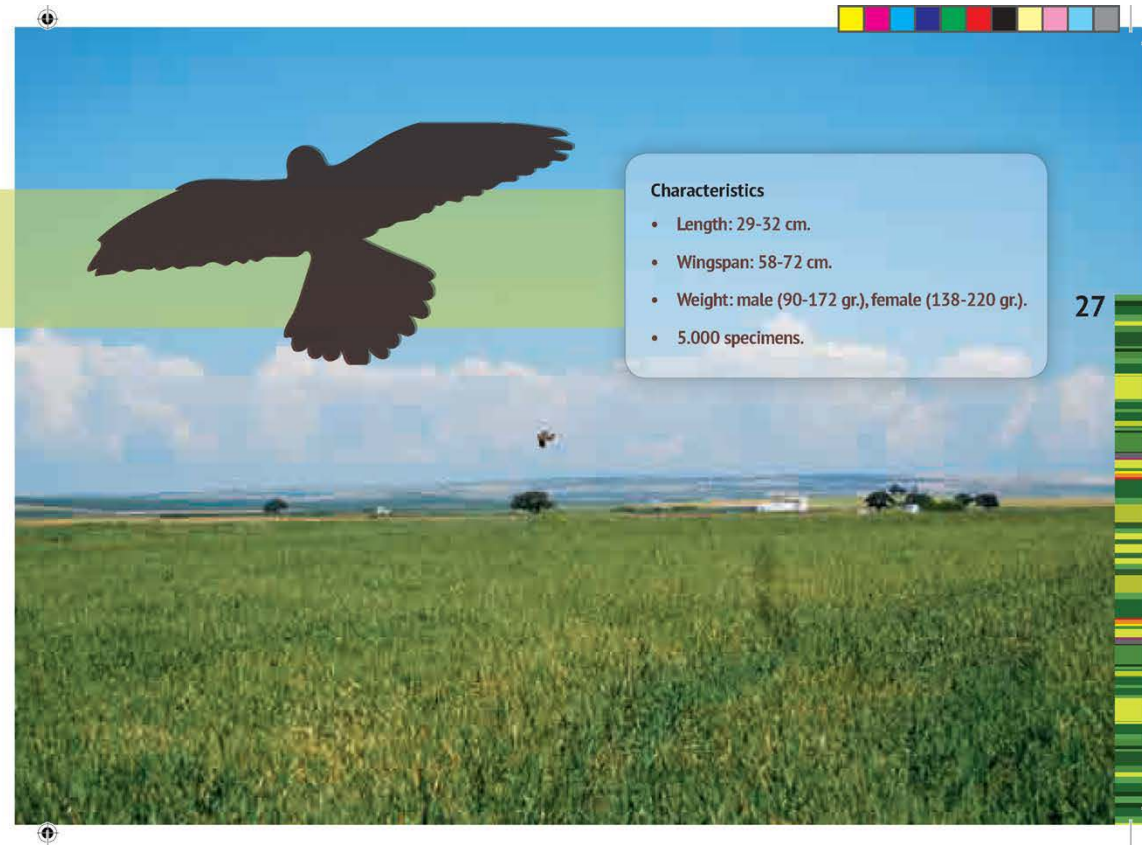
Threat category according to the Red Book of Threatened Vertebrates of Andalusia.

Low risk, nearly threatened (LR), (NT)

This is a small predator that spends the breeding season (spring/summer) at our latitudes. It then migrates to Africa to spend the winter.

We can find them in areas where humans are present, primarily in areas tied to grain steppes, although they are also easily found nesting in urban structures within towns and cities. Here they tend to be gregarious, a characteristic that extends into hibernation when the birds gather in roosts.

They feed on large insects and small mammals and reptiles.



### Characteristics

- Length: 29-32 cm.
- Wingspan: 58-72 cm.
- Weight: male (90-172 gr.), female (138-220 gr.).
- 5.000 specimens.

## Steppe birds

### *Black-bellied Sandgrouse:* *Pterocles orientalis*

*Threat category according to the Red Book of Threatened Vertebrates of Andalusia.*

**In danger of extinction (EN)**

Frequently found in very open areas.

They nest in small depressions that they find on the ground.

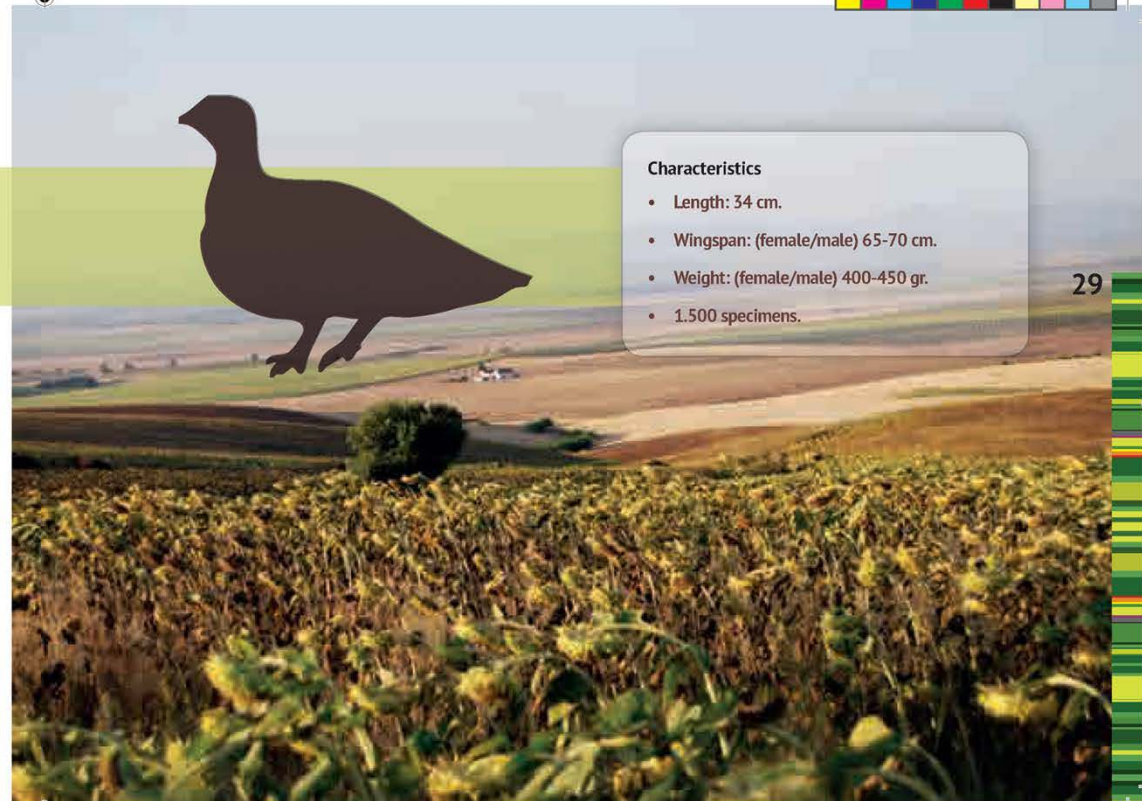
Feeds on steppe plant seeds and insects.

Exhibits adaptations that allow it to live in extremely arid areas, such as a large separation on their ventral side along with breast feathers which are used to gather water and carry it to the nest for their young.



#### Characteristics

- Length: 34 cm.
- Wingspan: (female/male) 65-70 cm.
- Weight: (female/male) 400-450 gr.
- 1.500 specimens.



## Steppe birds

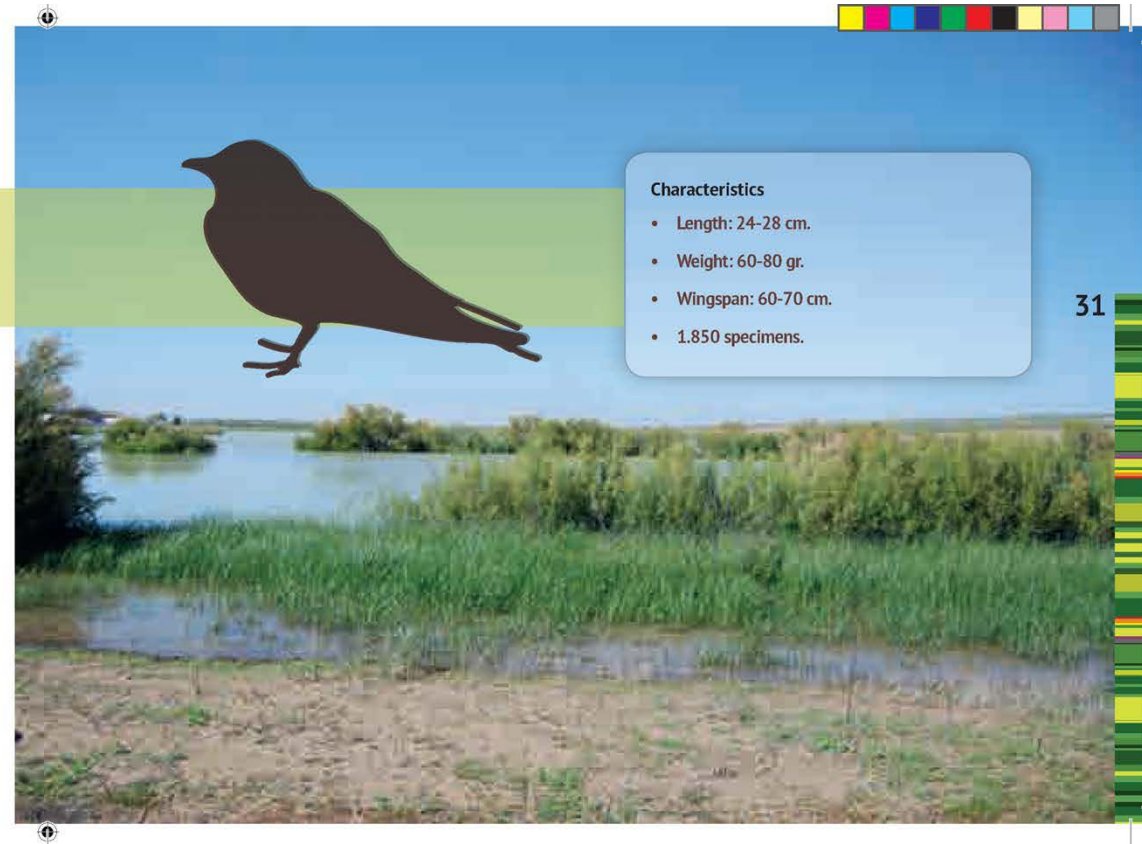
### Collared Pratincole: *Glareola pratincola*

*Threat category according to the Red Book of Threatened Vertebrates of Andalusia.*

**In danger of extinction (EN)**

Unique in that it is considered a steppe bird despite the fact that it belongs to the shorebird family. This is because it uses enclaves near wetlands for reproduction but displays typical steppe characteristics.

It spends nearly all its time hunting insects in flight, meeting up with others in large groups that concentrate themselves in notably productive enclaves.



#### Characteristics

- Length: 24-28 cm.
- Weight: 60-80 gr.
- Wingspan: 60-70 cm.
- 1.850 specimens.

## Steppe birds

# Little Bustard: *Tetrax tetrax*

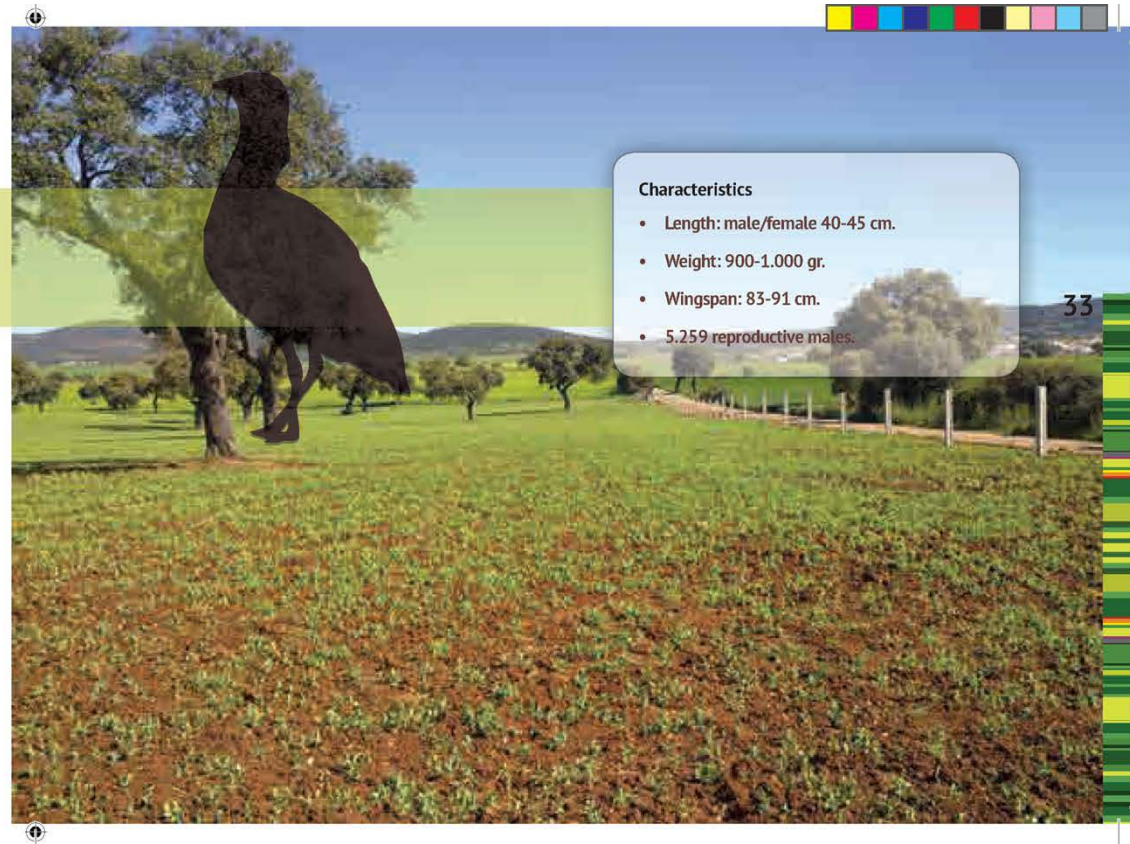
Threat category according to the Red Book of Threatened Vertebrates of Andalusia.

Vulnerable to extinction (VU)

During flight the male makes a characteristic whistling sound. This sound is known in Spanish as siseo and thus the bird earns its Spanish name, Sisón. The sound is produced by a notch in the fourth primary feather of the wing.

It builds its nest among plants and plantations in depressions in the ground. Here, it remains very well hidden and difficult to detect. It feeds on plants and insects.

In winter they gather in large groups.



### Characteristics

- Length: male/female 40-45 cm.
- Weight: 900-1.000 gr.
- Wingspan: 83-91 cm.
- 5.259 reproductive males.



## Steppe birds

# Stone-curlew: *Burhinus oedicnemus*

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*Threat category according to the Red Book of Threatened Vertebrates of Andalusia.*

**Vulnerable to extinction (VU)**

A shore bird which has adapted to life in steppe environments. Large, yellow eyes that allow it to move about in the twilight and nighttime hours.

This species adapts well to life in different environments such as in gravel, bushes, beaches and near rocks.

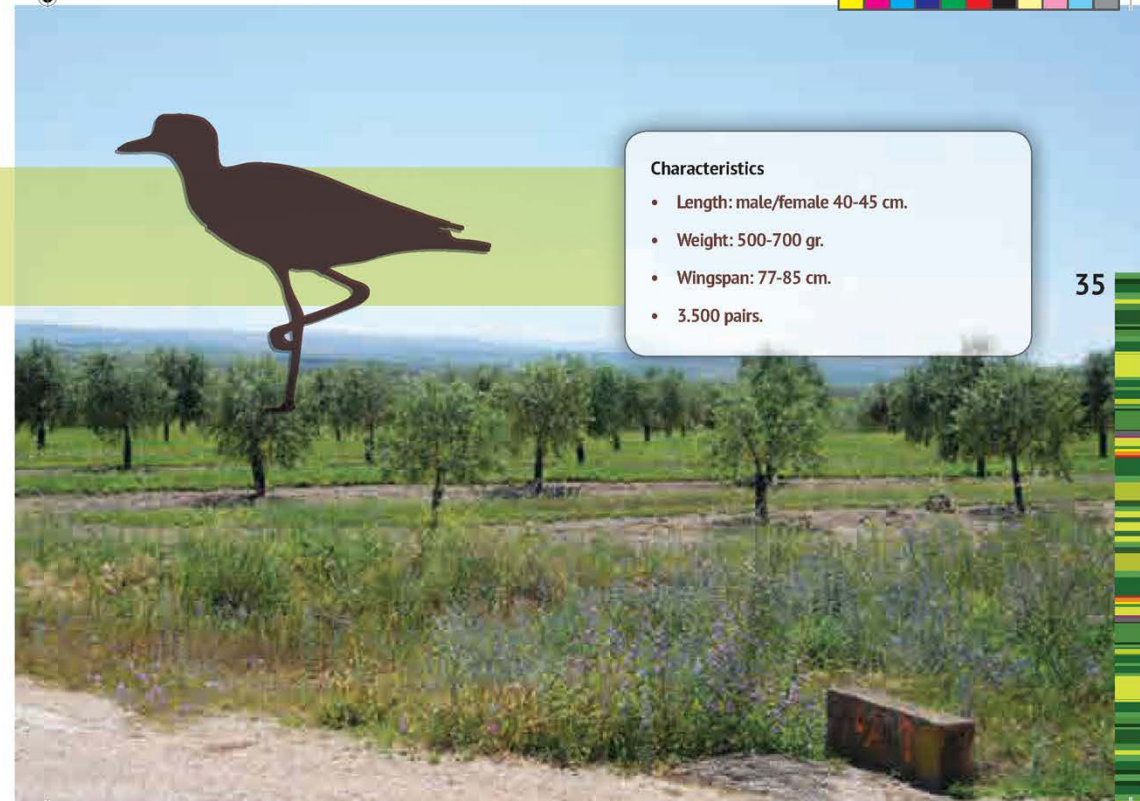
They dig several holes in the ground, usually with small stones that the birds have brought. They later choose one of these holes to lay their eggs in.



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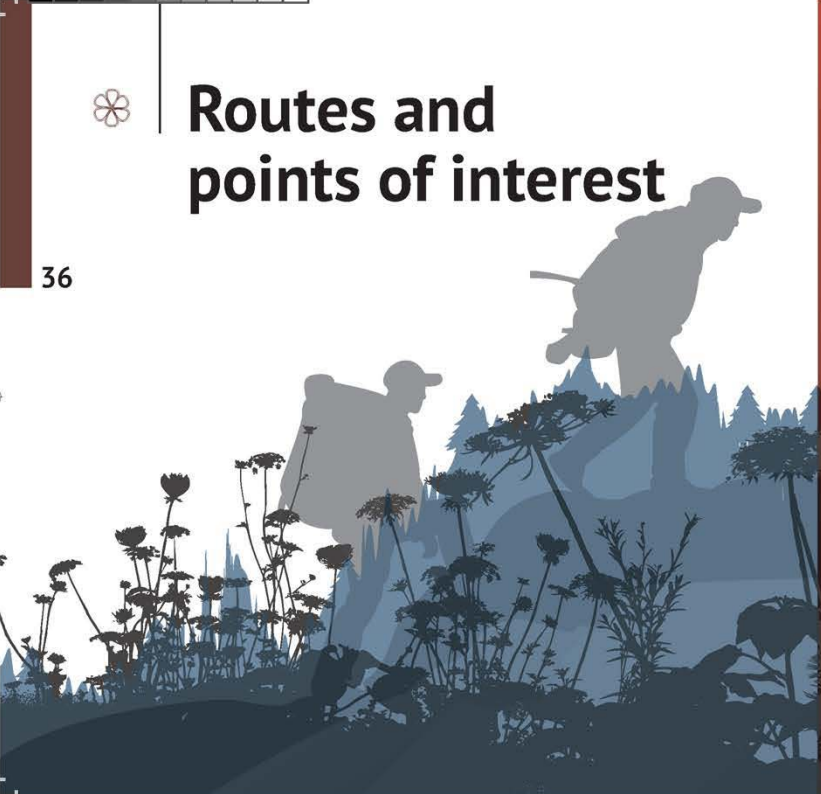
### Characteristics

- Length: male/female 40-45 cm.
- Weight: 500-700 gr.
- Wingspan: 77-85 cm.
- 3.500 pairs.



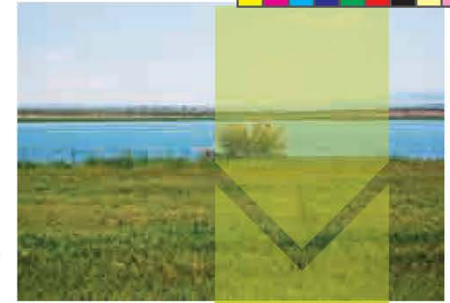


# Routes and points of interest



## General information

The "Alto Guadiato" and "Campiñas de Sevilla" Special Protection Areas for Birds make up an important biological treasure noted for the presence of steppe birds, many of which are protected to some degree in their environment.



*The existence of these birds makes this area of special interest and makes it an ornithologist's destination where the special characteristics and vulnerability of steppe birds can be observed*



## "Alto Guadiato"

In the Alto Guadiato SPAB we can enjoy a peaceful landscape with great beauty, where the importance of agricultural activities in harmony with the environment can be observed. As an example of this harmony we can observe a large number of structures linked to rural living, in some cases mere reminders of what they once were, which now serve as places of refuge and reproduction for many birds.

As we have mentioned, this reserve contains one of the two most important reproductive centers for the Great Bustard in all of Andalusia. Therefore, it is very common to see large groups of these birds in the area, making it easy, using discretion, to observe their behavior and enjoy a natural spectacle that attracts many people who are interested in ornithology.

We are in an area which contains some important paths, such as cattle trails and public trails, which can be traversed to explore the SPAB.

Below is a description of some well marked trails.

### "La Piruetanosa" Ornithology trail

Length: 9,3 km.

Suggested season: winter-spring.

Primary species: Great Bustard, Crane, Black-bellied Sandgrouse, Montagu's Harrier and Northern Wheatear.

From La Granjuela, going towards Fuente Obejuna on highway CO-8405, after crossing La Pamilla creek we will find a marked path to the left that indicates the beginning of this trail. This path, known as La Piruetanosa, earns its name from the wild pear trees known in Spanish as *piruetanos*. These pears are abundant in other seasons in the area.



After walking 2 km and having crossed a cattle farm which is representative of cattle farming activity in the area, we will find a path to the left that will take us to a bird observatory located in the area of the Peña la Zorra and Matallana lakes. This is an excellent spot to observe, in the wintertime, large groups of Cranes arriving at their sleeping area.

The route crosses through open grain fields with scattered oak trees, a human-made environment where men's work can be felt and where protected species can find suitable nesting areas. The last section travels parallel to La Pamilla creek and comes out on La Granjuela rural path before arriving at regional highway A-3277 (Los Blázquez - La Granjuela).

### "Los Blázquez" Ornithology trail

Length: 10,5 km

Suggested season: end of autumn-winter-spring.

Primary species: Great Bustard, Lesser Kestrel, Little Bustard and Montagu's Harrier.

The route begins in the town, next to the municipal pool. The first section travels along highway A-3277 towards La Granjuela until arriving at some old greenhouses where a path leads to the right.

This path, which travels along a grain farming area, takes us to a farmhouse where a colony of Lesser Kestrels can be observed. Where the path forks off next to this farmhouse we continue to the left until arriving at the Vereda de la Plata cattle trail. Here we turn right and continue on this trail until crossing highway CO-8404. Along this section it is easy to observe, in the spring, male Bustards exhibiting their plumage while dancing their rueda. At the same time we can listen to the loud whistling of the males in their breeding areas.



## "Campañas de Sevilla"

Within the area declared as a SPAB, we can find a variety of paths and lookouts, but without a doubt, the most notable are the water bodies that are of endorheic origin and that form one of the highest concentration centers of salty wetlands in the Guadalquivir Depression. These are very frequented by birds as they hold the water supplies which are so necessary during the hard summer. They are known as: Calderón, Calderón chica, Checa, Terrosillo, Turquillas, La Olla de la huerta, Consuegra, Ballestera, Verde Sol, Ruiz Sanchez, Pedro López, Pozo Calzado and Ojuelas.

Alongside this group of lakes we can observe many bird species which are linked to their environment. Together with the steppe birds these birds and lakes make this area a stronghold for biodiversity.

The water supply in the lakes comes from rainwater, either directly or by means of runoff. Outflow is by means of evaporation.



*Cordel de la Jarda is a natural vegetation refuge area in which several native species of fauna find refuge. A trip through this strip of vegetation allows one to discover hidden life within this steppe area*

### Ballestera and Calderón Chica lakes

**Lantejuela Endorheic Complex. Natural Reserve.**  
Municipality: Osuna.

	Lake surface area (ha)	Catchment surface area (ha)
<b>Ballestera Lake</b>	<b>25</b>	<b>155.63</b>
<b>Calderón Chica</b>	<b>6</b>	<b>190.21</b>

*During the dry season a salty crust is often observed due to salt precipitation from evaporation*