a

TABLE OF CONTENTS TABLE OF CONTENTS

Ta	I. I	 				
12	nı	 ١т.	\boldsymbol{r}	ηт	OΡ	ITC

Landscape	II
Geographical overview	12
Geology	16
Habitats	24
Lowlands of the southwest	25
Central lowlands	33
Sierra Morena	35
Sandstone mountains of Alcornocales-Tarifa	41
Limestone mountains	47
History	57
Nature conservation	66
Flora and fauna	71
Flora	74
Mammals	92
Birds	98
Reptiles and amphibians	117
Insects and other invertebrates	124
Practical Part	133
Routes in southwest Andalucía	134
Route 1: The classic Doñana	135
Route 2: To the José Valverde visitors' Centre	141
Route 3: Dehesa de Abajo	146
Route 4: The umbrella pine forests	149
Additional sites in southwest Andalucía	152
Routes in the Sierra Morena	154
Route 5: Aroche – on the edge of Extremadura	155
Route 6: The Chestnut groves of Castaño del Robledo	158
Additional sites in the Sierra Morena	160
Routes in Cádiz and Los Alcornocales	161
Route 7: Bonanza – the eastern part of Coto Doñana	162
Route 8: The temporary lagoons of Cádiz province	168
Route 9: La Janda and surroundings	174
Route 10: Bird migration over the Strait of Gibraltar	178
Route 11: Exploring the Alcornocales	184
Route 12: Climbing Aljibe mountain	188
Additional sites in Cádiz province	191

Routes in the Sierra de Grazalema and las Nieves	198	
Route 13: The Pinsapar	200	
Route 14: La Garganta Verde	203	
Route 15: Llanos de Libar	205	
Route 16: Sierra de las Nieves – the high part	208	
Route 17: Los Quejigales	211	
Additional sites in the Grazalema-Nieves	214	
Routes along Málaga – Antequera road	217	
Route 18: Osuna and La Lantejuela	218	
Additional sites in the Antequera area	223	
Tourist information & observation tips	229	
Birdwatching list		
Acknowledgements	252	
Picture and illustration credits	253	
Glossary	254	
Species list & translation		

LOWLANDS OF THE SOUTHWEST LOWLANDS OF THE SOUTHWEST



Dark clouds gather over Coto Doñana.
That's good news for birds — as the marismas are fed by rain water, the marshes are at their best after wet winters.

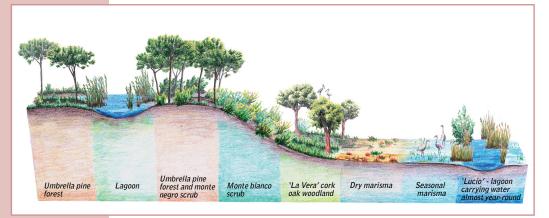
Cross-section view of the coastal lowlands.

most clearly seen in places where the sea dug into the fossil dunes to form cliffs, such as at Breña de Barbate (route 9) and Cuesta de Maneli (route 4). There are several spectacular areas with shifting dunes, though most dunes are overgrown by open pine woods and a special type of scrubland, known as *Monte Blanco* (white scrub; see page 28). In several places (route 1 and 4) groundwater surfaces where two dune layers meet, leaving temporary lagoons with a superb flora and fauna. The lagoons are fringed by a groundwater dependant scrubland which is strikingly

darker in foliage, hence its name Monte Negro (black scrub).

Near streams and freshwater marshes, the umbrella pine forests give way to luxuriant growth of Cork Oaks and other woodland species – *La Vera*. Beyond, you enter the *marisma*.

Marismas are a special type of marshland. The enormous summer evaporation and very seasonal influx of water (mostly rain falling in winter) cause about 90% of the surface to dry out in summer. The marshes that remain are in permanent contact with rivers with a steady water supply. The marismas as such form a mosaic of spots that are flooded for shorter or longer periods. On top of this, the marismas show



a patchwork of fresh to brackish and saline marshes. In their totality, they form one of Europe's most important sites for aquatic birds.

Mobile dunes

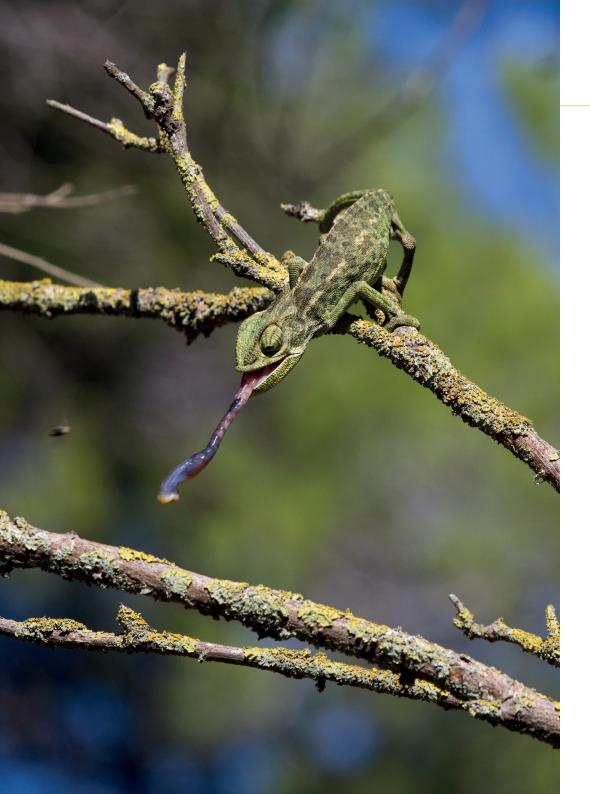
The highest and most spectacular mobile dunes in the whole of Europe are found in the southwest of Spain. Whipped up by the strong southwesterly winds, massive walls of sand march relentlessly inland, swallowing trees wholesale (see page 20), while leaving behind secluded valleys in which a unique pioneer ecosystem emerges, prospers and grows up to woodland until the next wave of sand engulfs it.

From Playa de los Lances across to Huelva, there are several sites with such spectacular shifting dunes, but nowhere are they as high and as spectacular as in the Coto Doñana National Park. The large expanses of blinding white sand look so much like a desert that, in 1962 it was decided to film parts of the classic movie *Lawrence of Arabia* here.

The dunes are the result of strong gales and a sandy sea floor below a shallow ocean, but only became mobile between the 1600s and 1800s, when areas of umbrella pine forest were cut and the sands were freed from the clutch of the tree roots. Today, dunes over 40 metres tall move with a speed of about 3 metres a year inland.



The winds from the southeast push up high mobile dunes in some parts of the Campo de Gibraltar, like here at the western end of the Playa de los Lances.



FLORA AND FAUNA

Naturally, species diversity is not evenly distributed across the world, but, generally, increases with higher temperature and moisture. *Biodiversity hotspot* is the technical term for an area with an exceptionally high number of plant and animal species. The tropical rainforests (warm and moist) are world famous for being natural treasure troves. Yet only few people know that the Mediterranean basin is also among the world's biodiversity hotspots as well.

Within the Mediterranean region there are again specific areas that are much richer than others. Amongst the 10 Mediterranean biodiversity hotspots is the Sierra Baetica (the range that extends north-west from Cádiz to Valencia) of which roughly a third lies in our area. It is literally the top of the tops. Hence, the flora and fauna of western Andalucía is hugely diverse. The number of species far exceeds that of any similar-sized area north of the Alps.

Much of this richness comes from its endemics – plants and animals that are confined to just a small area, be it the whole of the Iberian Peninsula or a smaller part like the Sierra Baetica. There are even some that are confined to a still smaller patch. Some plants are found exclusively in the Sierra de Grazalema. Obviously, such species have a special appeal.

To understand the why behind this uneven distribution of plant and animal species, you need to look back into the past. When the Iberian tectonic plate got sandwiched between the much larger African and Eurasian land masses, the Pyrenees were formed in the north and the Rif-Baetic chain was pushed up in the south. These east-west oriented mountain chains became, quite literally, hurdles for the flora and fauna as species migrated north and south to the rhythm of the advancing and retreating ice.

During the warm interglacials, cold-adapted species found refuge high up in the mountains, where isolated from northern populations, they evolved into new species.

While the mountains acted as a refuge for cold-loving species, the warmthloving ones found them a formidable, or even impassable, barrier. For some species (e.g. lizards like the Large Psammodromus) the Pyrenees are such a barrier, confining them within the Iberian Peninsula. Yet others, such as the Spanish Psammodromus, found a way into France, but ground to a halt when faced with impassable barriers in the Alps and an inhospitable northern climate.

The Common
Chameleon was most
probably introduced
by the Moors and has
established several
populations on the
warm west coast.

BIRDS **BIRDS**

Birds

The best itineraries for waterfowl and marshland birds are routes 1, 2, 3, 7 and 9 and sites C on page 153, J on page 197 and A on page 223. In wet springs, the endorheic lagunas on route 8, 18 and site E on page 226 can be excellent for waterfowl. Birds of agricultural land, scrub and dehesa should be sought on routes 3, 4 and 5. Routes 8, 10 and sites G and H on page 195 harbour some rare species restricted to the southern Cádiz Province. Route 10 is entirely devoted to watching bird migration. Steppe birds are best looked for on route 18, but also route 2, 3, 7, 8 and 9 hold several steppe birds. Cliff and karst birds are best sought for on route 14, while route 13, 14, 17 and sites B, C and D on pages 214-216 support birds of this habitat too.

On page 244 and further you'll find a complete where-to-watch overview of all the birds of the area.

Western Andalucía ranks high amongst Europe's top birding destinations; some would argue that it occupies the top spot. It is certainly hard to name another region on our continent with such a diversity of birds year-round. The region owes its richness in part to the vast tracts of unspoilt habitat. With Coto Doñana and its surrounding marshes, western Andalucía is home to one of Europe's largest and most important wetlands. Vast numbers of waterfowl, waders, herons, terns, Spoonbill,

Glossy Ibis, Greater Flamingo, Purple Gallinule and Collared Pratincole

are found here. Among the many raptors, there is a healthy population of Spanish Imperial Eagles. The scattered endorheic lagunas may be relatively small, but are ornithologically important.

The holm and cork oak dehesa of the Sierra Morena harbour a birdlife that resembles that of the adjacent, famous Extremadura. Exploring this part of western Andalucía, you'll come across flocks of Azure-winged Magpies, Black Storks, Black and Griffon Vultures, various species of eagle and a score of Mediterranean songbirds. Different again, the karst mountains of Grazalema and las Nieves support healthy populations of birds of rocky uplands, such as Alpine Swift, Red-billed Chough, Black Wheatear and Bonelli's Eagle. In between these two ranges are the interior lowlands. Although generally of lesser

interest, they have some remnant areas of steppe, which still support Great and Little Bustard, Black-bellied Sandgrouse and even wetland species in the few endorheic lagunas.

Besides taking advantage of the intact habitat, western Andalucía's birdlife profits immensely from its favoured position near the African coast. Several (north)-African species just make it into western Andalucía, but not, or only a very little further into Europe. Within this group of birds are some highly sought-after species, like Red-knobbed (or Crested) Coot, White-rumped and Little Swift. Within Europe, western Andalucía is the only region where you'll find them. In the same category are Lesser Crested Tern and Rüppell's Vulture, which regularly visit the area in small numbers. White-rumped Swift, Western Olivaceous Warbler, Black-winged Kite, the western race of Rufous Bush Robin are all essentially (north) African species that breed in small numbers in southern Spain.

The colonisation of African birds is a long-standing and on-going process but one often fraught with difficulty. Early in the 20th century, Redrumped Swallow started to breed in Andalucía and is now established across much of Spain. Both White-rumped and Little Swift have tried to replicate this achievement but with a more limited success (particularly the latter). Common Bulbuls seemed to be gaining a toehold at the start of this century but faltered. The baton has now passed to House Bunting which bred for the first time in 2024. None of these most recent colonists are very



When the water levels are high, the marshes of Coto Doñana have an exceptional birdlife, both in number and in diversity.

Western Andalucía has the largest numbers of Lesser Kestrel in Spain.

Routes in southwest Andalucía

The southwestern part of Andalucía (west of Sevilla and the Guadalquivir river) consists of flat and gently rolling lowlands and the extensive marshes of Coto Doñana, one of the most famous National Parks of Europe. The marshes or marismas of Coto Doñana form the larger part of the delta of Andalucía's greatest river, the Guadalquivir. Being a strict reserve, the core marismas are not open to the public, but, fortunately, the exterior fringe along a line formed by Almonte - El Rocío - Matalascañas is accessible. This is the region where birdwatchers and naturalists find the best (accessible) sites in Coto Doñana. With the famous village of El Rocío (an attraction in itself; see page 136) as a base, you can explore the best sites (routes 1 to 4), both inside and outside the National Park.

The drier parts of the Doñana and the region west of it, towards Huelva (route 4), are clad in umbrella pine forest and special type of Mediterranean scrubland known as Monte Blanco. This is a quiet and beautiful

> region which has a lot to offer to birdwatchers and naturalists alike. A spring visit here is particularly rewarding.

Near Huelva, the delta of the River Odiel has created its own, more modestly sized 'Doñana' (site C). Though lacking the regal splendour of the Doñana, it has the advantage of being more accessible, whilst much less visited.

There are plenty of places to stay in El Rocío (including campsites), Matalascañas, Almonte and Villamanrique. El Rocío is perhaps the nicest, but also the most touristy place, and during the pilgrimage of Spanish Pentecost (seven weeks after Easter Sunday) it will be impossible to find an empty room.



Overview of Coto Doñana and surrounding areas with the position of the routes. The letters refer to the sites on pages 152-153.

Summer and autumn - when the marshes are dry

The marismas dry out completely in the course of summer. At this time of year, all the lagoons along route 1 and 4 are dry. Routes 2 and 3 should still hold water. In late spring the *lucíos* (point 9-11 on route 2 and the lake at Dehesa de Abajo; route 3) should also be wet. Note though that drought and excessive extraction have recently caused problems throughout the year.

Route 1: The classic Doñana

1-2 DAYS, 42 KM EASY











Car route connecting all the famous Doñana sites. Superb birdwatching.

Several short walks for every type of naturalist

Habitats: Marisma, freshwater lagoons, umbrella pine forest, monte blanco scrub, cork oak wood, dunes

Selected species: Audouin's Gull, Gannet, Savi's Warbler, Purple Gallinule, Ferruginous Duck, Little Bittern, Greater Flamingo, Azure-winged Magpie, Egyptian Mongoose, Spiny-footed Lizard, Moorish Gecko, Sand Stock, Spotted Yellow Sunrose*, Three-leaved Snowflake, Portuguese Crowberry

in the area. Leave no valuables in the car!

> Best season February-June Of interest Year round

Thieves are active

There are relatively few waymarked trails in the Doñana, and most of them are quite short and close together. Here we put them up together to form a single route, from which you can pick the sections that suit you best. Combined, they offer great birdwatching, mostly from hides overlooking lagoons, connected by short, partially shaded walks through dunes and open forest, where wildflowers, dragonflies and reptiles are just as much an attraction as the birds.

Starting point the church of El Rocio.

Walk to the far eastern end of the village and, with the morning sun behind you, stroll along the marshes towards the old road that connects El Rocío to Matalascañas.



ROUTE 1: THE CLASSIC DOÑANA ROUTE 1: THE CLASSIC DOÑANA

136

El Rocío

El Rocío is an extraordinary town. It is probably the only village in Spain without any tarmac. The wide, open streets are of the finest white sand, while the veranda-bordered houses remind of a scene from a western movie. The town centre is right beside the marsh and is marked by an exorbitant white church. El Rocío is a deeply traditional village, strongly connected to Catholic devotion. Most property belongs to brotherhoods (hermandad) and was built for the annual pilgrimage; at Pentecost hundreds of thousands of people come in brightly coloured horse-drawn tiltcarts to honour the Holy Virgin Mary.

Check the meadows on the east side of town, where, especially after rainfall, large numbers of Cattle Egret, Whiskered Tern and Glossy Ibis can be found. The marismas south of town can be alive with birds or disappointingly quiet, depending on the water level. In wet springs, there are many waders here, plus Glossy Ibis, Greater Flamingos, Cattle Egrets, Whiskered Terns and Collared Pratincoles. The reeds are home to smaller species like resident Cetti's Warbler and Great Reed Warbler.

This site has the best light in the early morning or evening. In the evening, check the walls in the village for geckos. Both species occur, although Moorish is far more common.

Continue down the old road to Matalascañas. Where it reaches the new road, it is blocked for motorised traffic. On foot you can cross the new road (carefully!) to visit the marshes and bird hides of La Rocina behind the small visitors centre.

All five hides overlook open water fringed by varying amounts of reeds and bulrushes, and muddy flats. Purple Heron, Little Egret, Little Bittern, Little Grebe and Purple Gallinule seek shelter amongst the reeds. The latter barges through the stalks with its huge feet to forage on the bulrush shoots. Look for Iberian Chiffchaff (replaced by its Common cousin in winter) and Penduline Tit. Reed, Great Reed and Savi's Warbler sing from the reed beds, while Cetti's Warbler and Nightingale seek shelter in the leafy scrub.

On the open water itself, a variety of ducks, including Red-crested Pochard, may be present, frequently joined by herons, various waders and Glossy Ibis. Whiskered Terns scout for food, while Booted Eagles sometimes drift over. Inside the hides, look behind the wooden poles in the roof for Moorish Geckos.

The trail connecting the hides runs through an open pinewood and swampy depressions with dense tangles of Mediterranean Willow and Bracken. In spring, drifts of Pink Catchfly* (*Silene colorata*) and Three-leaved Snowflake there are beautiful.

The final hide overlooks a heronry with Night Heron, Little Egret and sometimes Glossy Ibis. The trail over runs through a wonderful patch of Monte Blanco scrubland. Frequent wildflowers in spring are Round-headed Thyme, Three-leaved Snowflake, French Lavender, Sand Stock, Lusitanian Spreading Bellflower, Tolpis, Spotted Rockrose and Spotted Yellow Sunrose* (Halimium halimifolium). It is the perfect habi-

tat for Dartford Warbler, whilst both Large Psammodromus and Spiny-footed Lizard are common between the shrubs.

Return to El Rocío to pick up the car and drive to the Acebrón Palace, which is 4 km further along the same road as the La Rocina marshes. The track leads through Monte Blanco where Egyptian Mongoose is frequently seen. Park at the Acebron car park. From here, you can pick up a circular footpath. Just after passing the main gate, check the field near the trail for Small-flowered Tongue Orchid.





Both birds of freshwater and of brackish marshland can be seen near El Rocío. The Purple Heron (top) prefers the reedbeds of the La Rocina stream, whereas the flamingos on the brackish marisma in front of El Rocío is the classic Doñana image. ROUTE 1: THE CLASSIC DOÑANA ROUTE 1: THE CLASSIC DOÑANA

138

The marshes of EI

out due to the

cultivation.

Acebuche are drving

excessive water use

in the strawberry

The footpath crosses some of the last wet forests along the La Rocina stream. You walk through a wonderful jungle of Mediterranean Willow and Narrow-leaved Ash, with Royal Fern and Yellow Iris in the swampy underbrush. On higher ground, there are patches of cork oak forest, with Violet Bird's-nest and Greater Honeywort in spring and Autumn Narcissus and Autumn Snowflake in October.

The trail ends at the bright marble *Palacio del Acebrón*, built by a rich merchant in 1961 as a hunting lodge. Now the palacio harbours a permanent exhibition on the human history of the Doñana.

Return to the main road and turn right, towards Matalascañas. At km 31.9, turn right onto a road besides a white building (GPS: 37.089750, -6.518444).

Follow the road for about 2.5 km until you reach the gate into 'Sector 15'. This is Bee-eater paradise! Sector 15 consists of moist grasslands, grazed by cattle. Right after you pass through a gate you'll see a horse corral on your left. Bee-eaters are numerous around here. Spotless Starling and Corn Bunting also occur in good numbers. Warning: stay on the tarmac road. Since the Bee-eaters breed in holes in the ground and it is easy to disturb the birds or their nests.

Continue slowly towards the second gate, but beware of the many pot-

holes. Bee-eaters will be everywhere, in addition to Yellow Wagtails, Linnets and Crested Larks. Also look out for Red-legged Partridges. White Stork's nests are on almost every pylon. Also keep an eye out for Black-eared Wheatear. Sector 15 is one of the best places in Doñana to see this species, although it can be elusive.

The whole area is good for raptors. Common Kestrel, Black Kite and Booted Eagle are normally easy to

see. In the afternoon you have a fair chance of finding the scarce Black-winged Kite. With some luck, a Spanish Imperial Eagle might fly by. Beyond the second gate, continue for about 1 km. You'll pass a scrubby area with Orphean and Sardinian Warblers, Woodchat Shrike, Hoopoe and Corn Bunting.

Return to the main road and head towards Matalscañas. Turn right to El Acebuche visitors centre.

6 The stately visitors centre of El Acebuche and the immediate surroundings are a major site in Doñana. Its attractions start right in the car park, or more precisely at the picnic site

underneath the umbrella pines, where Azure-winged Magpies are common and tame – unusual for this often shy bird. This is your chance to take some good photographs.

Enter the visitors' centre. On the right side there is a large exhibition about Coto Doñana. Behind the visitors' centre, a boardwalk departs to both the left and the right, connecting a series of hides that overlook some lagoons, now often largely dry due to the high demand for water for strawberry cultivation in the area. When the lagoons are full, the hides offer views of herons, ducks (frequently including the rare Ferruginous Duck and Red-crested Pochard), Little Grebe, Purple Gallinule, Spoonbill and Glossy Ibis, plus during migration, a score of waders.

The boardwalks connecting the hides are not merely a means to get from A to B. They run through flowery *Monte Blanco* with Spotted Yellow Sunrose* (*Halimium halimifolium*), Sage-leaved Cistus, Sticky White Cistus* (*Cistus libanotis*), Sand Stock and French Lavender. Spiny-footed Lizard and Large Psammodromus are both common, and Sardinian and Dartford Warblers and other scrubland birds are present. Raptors overhead may include Shorttoed Eagle, Booted Eagle, Black Kite and Peregrine.

Continue to Matalascañas. This 'town' consists mostly of hotels that cater for sun seekers, and therefore couldn't provide a more contrasting atmosphere to El Rocío. The great attraction for naturalists of Matalascañas is the flora of the dunes and the birds of the beach and shore. The first



Collared Pratincoles breed in colonies throughout Coto Doñana. Their location changes from time to time, but if there is one near, you can see a hundred or more over the marismas of El Rocío.

Of interest

Year-round





stop is the *Parque Dunar*, or Dune Park. Upon entering the resort, go straight at the first and right at the second roundabout and find a spot to park. The Parque Dunar is on your left (GPS: 36.989778, -6.522500).

7 Follow any of the trails in this small, fenced off area of dunes. This is one of the most accessible

Many Bee-eaters breed along the track to 'sector 15' (point 5 on this route.) parts of the Lusitanian dune habitat – the dry sand dunes in south-west Iberia with its special flora. Look for Portuguese Crowberry, Shrubby Figwort* (*Scrophularia frutescens*), Spiny Thrift, Rosemary, and Phoenician Juniper. In the scrub, look for Spiny-footed Lizard and Spanish Psammodromus, as well as for, Booted Eagle, Sardinian Warbler, Hoopoe and Azure-winged Magpie.

Return to the first roundabout and go right. Follow this road all the way along the northern side of Matalascañas. until you reach the car park at the eastern end of the road. From here you can start a short stroll along a boardwalk to the beach (GPS: 36.989778, -6.522500).

East of Matalascañas lies one of the most unspoilt coastlines of Spain. A boardwalk gives a little insight in the ecology of bare mobile dunes and vegetated depressions called *corrales*, which are so typical of the southern part of Doñana National Park (see page 27). For the most part, this habitat is off limits to visitors except by guided excursion (see page 152). This short trail offers you a glimpse of it from up close. Plants and animals are similar to the previous site, but include Sand Stock, Sea Spurge, Sea Stock, Dune Galingale and Coastal Crucianella.

Follow the coastline in an easterly direction for as far as you like. Audouin's Gulls are frequently present among the Yellow-leggeds, Sandwich Terns fly by regularly, while further out at sea, look for Gannets.

Route 2: To the José Valverde visitors' Centre

FULL DAY, 80 KM





The best birding in the entire Doñana.

Habitats: Dry fields, Rice paddies, dry, saline marismas, freshwater marshes, scrub

Selected species: Glossy Ibis, Lesser Kestrel, Collared Pratincole, Pin-tailed Sandgrouse, Purple Gallinule, Black-winged Kite, Spanish Imperial Eagle, Griffon Vulture, Spectacled Warbler

If birds are your thing, then a visit to the Doñana National Park and the famous San Iosé Valverde visitor centre is a must. It is one of the best places in the area to see species like Greater Flamingo, Lesser Kestrel, heaps of herons and egrets, Purple Gallinule and Glossy Ibis. Dry land species also occur, like Calandra Lark. Short-toed and Lesser Short-toed Lark, Griffon Vulture, Black-winged Kite, Collared Pratincole and Pintailed Sandgrouse. In the past conditions were pretty poor, but there has been a serious effort to improve the roads. Nevertheless, stay alert in



rainy conditions when some of the dirt roads can get slippery.

You'll need a full day to explore this area. Leave early to make the most of it. Even then, a second visit is highly advisable – chances are that you'll run into species you missed the day before.

Starting point Villamanrique de la Condesa (note the palm park with the Stork nests on the palm trunks).

142

Be aware of potholes in the road!

Leave the village in an easterly direction, signposted Isla Mayor.

Scan the surrounding farmlands for Black and Black-winged Kite, Spotless Starling, Woodchat Shrike, Bee-eater, Azure-winged Magpie, Booted and Short-toed Eagles. Don't be surprised if an Egyptian Mongoose darts across the road.

At the end of the road, turn right (signposted José Valverde Visitors Centre) and then take the first left.

The conspicuous tall eucalyptus trees standing near the farm on the right side of the road mark a site known as Dehesa de Pilas (GPS: 37.198500, -6.268194). It's hard to miss the large numbers of Spanish and



House Sparrows in the trees. The fields are among the best places in the area to find Pin-tailed Sandgrouse, Stone Curlew and Little Bustard. It is worth being here at dawn when the sandgrouse and bustards are most active. Pintailed Sandgrouse often fly around in little flocks – listen

In wet springs, the marismas are full of birds. Whiskered Terns (top) hunt for fish while the tamarisks near the José Valverde visitors' centre host a large egretry with Little and Cattle Egrets, Glossy Ibis and Night Heron.



for their conspicuous croaking *kata kata* call. Other birds you are likely to see are Woodchat Shrike, Short-toed Lark and Crested Larks and Tawny Pipit.

Continue and take the first road on your right towards the visitors' centre (GPS 37.172472, -6.251417).

2 Look and listen on this entire stretch for Zitting Cisticola, Great Reed, Sardinian and Cetti's Warblers. Wherever there are good views of the canals search for water birds, like Little Egret and Purple Gallinule. In summer and autumn, as the marismas have dried out, these channels attract quite a number of birds, with Spoonbills, Black Storks (on migration) and a variety of waders joining the herons. Red-rumped Swallows breed underneath the bridges, while the flat open land is excellent for Corn Bunting, Iberian Yellow Wagtail, Calandra and Short-toed Lark, the latter often dust-bathing on the road. The whole area is very good for raptors, including Spanish Imperial Eagle.

After 10 kms through open fields, you arrive at a T-junction (GPS: 37.107833, -6.313778). Turn right (visitors' centre still signposted), cross the two bridges and continue in westerly direction.

On the right, the fields give way to rice fields (again excellent in autumn when the paddies are inundated while everything else is dry). After 3.7 kms, the track bends to the left and follows the the marismas at the *Caño del Guadiamar* (GPS 37.107222, -6.357139). Stop anywhere you like to scan the water and surrounding marshes. This is the first stretch of wet marismas and when the water level is high, it is excellent for birds. Glossy Ibis often occurs close to the road, sometimes accompanied by Purple Gallinule. The water holds waterfowl like Teal, Shoveler, Red-crested Pochard, Little Grebe and sometimes Marbled Duck. Great White Egret, Little Egret, Purple Heron and Bittern also inhabit this area, as do Red-knobbed Coot and Black-necked Grebe. Just before the T-junction, check the bank at the right side. This is a very

Just before the T-junction, check the bank at the right side. This is a very reliable site for Purple Gallinule. The rare Dark Spreadwing (a damselfly) breeds in the Caño de Guadiamar.

Turn right at the T-junction. You're now driving along the border of the Doñana National Park. After 80 metres there is a steep 'parking place' on your right (Only park here if you're confident that you're able to get your car out again!)