

IBERIAN WILDLIFE TOURS/BOTANICAL SOCIETY OF THE BRITISH ISLES

A VOYAGE OF DISCOVERY in the CANARY ISLANDS

17 February – 2 March 2012

Leaders: Teresa Farino & John Muddeman



Cover images, from left to right, top to bottom

Canarina canariensis (Canary Bellflower); Garajonay, La Gomera

El Teide, Tenerife

Ceropegia dichotoma ssp. *dichotoma*; Teno, Tenerife

Caralluma burchardii; Betancuria, Fuerteventura

Isoplexis canariensis; Anaga, Tenerife

Euphorbia handiensis; Jandía, Fuerteventura

Euphorbia atropurpurea; Degollada de Cherfe, Tenerife

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Natural History of the Canary Islands

The Canary archipelago comprises seven principal volcanic islands – Lanzarote, Fuerteventura, Gran Canaria, Tenerife, La Gomera, La Palma and El Hierro – plus a number of lesser islets, adrift in the Atlantic Ocean, around 100 km from the coast of north-west Africa and more than 1,100 km from mainland Spain, by which it was annexed in the fifteenth century. Along with Madeira and the Azores, the Canaries are part of the biogeographic region of Macaronesia, renowned for its incredible plant and animal diversity. The largest island is Tenerife, covering just 2,035 square kilometres and rising 3,715 metres above sea level to culminate in Spain's highest peak, El Teide.

Although in the past it has been suggested that the easternmost Canary Islands – Fuerteventura and Lanzarote – were once attached to the African mainland, today most authorities agree that all the islands in the Canary archipelago are truly oceanic and have never been linked to a continental land mass at any time. They were formed as a result of eruptive phenomena taking place in zones of weakness in the Earth's crust, more than 2,000 m below the surface of the ocean, and in effect represent the tips of a series of volcanoes, some of which are still active today.

Geological evidence exists to demonstrate that the seven islands of the Canary archipelago appeared at different times. Fuerteventura and Lanzarote, which perch atop the same block of parent material, are the oldest islands, thought to have reached the surface around 20 million years ago, while the westernmost islands of La Palma and El Hierro are the youngest, considered to be just 1.5–3 million years old. Sporadic volcanic activity has persisted into historic times on all the islands except for La Gomera, which has been inactive for more than four million years. Although the most recent terrestrial eruption occurred in the south of La Palma, in 1971, at the time of writing a submarine volcano is nearing the surface some five kilometres from the southern coast of El Hierro. The Timanfaya National Park, on Lanzarote, probably harbours the best-preserved volcanic landscape on the archipelago.

Ever since the islands broke free of the ocean they have been subject to the erosive forces of sea, wind and rain; over millennia these sterile mounds of lava and volcanic ash have undergone a process of weathering to produce small pockets of soil, in which the first plants – arriving as wind- or water-borne seeds – were able to gain a tenuous foothold. Today more than 2,000 species of vascular plants occur in the Canary Islands, although only about 1650 are thought to have arrived under without the aid of man, but of these more than 40% are found nowhere else in the world.

Similarly, the first animals to colonize the Canaries had to arrive under their own steam, crossing many kilometres of open water in which to do so. Isolated from continental influences, these species were then at liberty to follow their own evolutionary paths, generating a fauna exceptionally rich in endemic taxa. This is perhaps most evident among the reptiles – sixteen unique species of lizards, skinks and geckos are scattered across the archipelago – and the invertebrates, new taxa of which are being discovered every year.

However, the Canaries are also home to five bird species – Bolle's Pigeon (*Columba bollii*), Laurel Pigeon (*Columba junoniae*), Canary Islands Stonechat (*Saxicola dacotiae*), Canary Islands Chiffchaff (*Phylloscopus canariensis*) and Blue Chaffinch (*Fringilla teydea*) – that are found nowhere else in the world. Four other Canary Island species occur exclusively in Macaronesia – Atlantic Canary (*Serinus canaria*), Berthelot's Pipit (*Anthus berthelotii*), Plain Swift (*Apus unicolor*) and the very scarce and declining Macaronesian Shearwater (*Puffinus baroli*) – while a number of essentially North African bird species, such as the Barbary Falcon (*Falco pelegrinoides*), have their only European breeding grounds here. In addition, the Canaries also host two endemic terrestrial mammals: the Canary Shrew (*Crocidura canariensis*) and the Canary Big-eared Bat (*Plecotus teneriffae*).

PRINCIPAL HABITATS

The principal habitats of the Canary Islands are dictated primarily by climate and altitude. In essence, distinct bands of vegetation have developed at different altitudes, the height at which these occur varying according to whether they are exposed to the north-easterly *alisios* or lie in the rain shadow.

Cardonal–Tabaibal

The Basal Zone – often called *malpaís*, or ‘badlands’, and much affected by the recent rash of new tourist resorts and banana plantations – encompasses the hottest, driest regions of all the islands. It extends from sea level to around 400 m on north-facing slopes and up to 700 m on south-facing slopes, thus covering the larger part of the eastern isles of Fuerteventura and Lanzarote. The principal vegetation type of this Basal Zone is referred to as *Cardonal–Tabaibal*, named after the dominant shrubs, although in the eastern Canaries great expanses of stony and sandy plains – known locally as *jables* – are also present, harbouring similar plants to those found growing in coastal sands.

Cardón is the local name for *Euphorbia canariensis*, a succulent spurge characterised by great clumps of columnar stems up to 3 m tall, which is surely one of the most memorable plants of all seven islands. In essence, the *Cardón* has adapted to the lack of available water in exactly the same way as the New World cacti, in a superb example of convergent evolution. The extensive root system absorbs water rapidly when it rains, storing it in the stems for use during drought periods, while the leaves have been reduced to short, curved spines to avoid water loss by transpiration, such that photosynthesis is carried out exclusively by the stems.

This is obviously such a successful strategy in arid conditions that several other Canary plants have opted for a similar way of life, including the leafless spurge *Euphorbia aphylla*, the very spiny *Euphorbia handiensis*, the small, cactus-like *Caralluma burchardii* (family Asclepiadaceae) and several related species of *Ceropegia*.

The *Tabaibas* also belong to the genus *Euphorbia*, but are leafy shrubs – often known as tree spurges – displaying a much lesser degree of succulence, and tending to shed their leaves in times of drought. The most widespread species are *Euphorbia balsamifera*, *E. lamarckii* (formerly *E. obtusifolia*/*E. broussonetii*) and *E. regis-jubae*, often growing in conjunction with *Kleinia neriifolia*, which is morphologically very similar but belongs to the daisy family (Compositae), and the distinctive *Plocama pendula* (Rubiaceae), a Canary endemic genus, with long drooping branches.

Typical invertebrates of the *Cardonal–Tabaibal* include the Barbary Spurge Hawkmoth (*Hyles tithymali*), whose caterpillars feed on the leaves of the various spurges; by the time they are ready to pupate, these creatures look like fat, black and red sausages, some 8 cm long. The endemic longhorn beetles *Lepromoris gibba* and *Stenidea albida* both have larvae that develop exclusively within the dead stems of the *Cardón*, while the spectacular, rather spiny mantis *Blepharopsis mendica* – up to 6 cm long and also found in North Africa – may be found lurking among the branches of the tree-spurges, where it is surprisingly well camouflaged.

Such hot, dry habitats also find favour with a wide range of endemic reptiles – lizards of the genus *Gallotia*, geckos and skinks – as well as with the endemic Canary Shrew, and the introduced Barbary Ground Squirrel (*Atlantoxerus getulus*), thus far confined to Fuerteventura.

The most distinguished bird of the Basal Zone is undeniably the Canary endemic race of Houbara Bustard (*Chlamydotis undulata fuerteventurae*), the largest bird in the Canaries, standing around 60cm tall. It occurs exclusively in the extensive arid *jables* of Fuerteventura and Lanzarote, where it is threatened with loss of habitat owing to the relentless construction of tourist facilities, and its total population does probably not exceed 600 individuals. Like all bustards, Houbaras are ground-nesting birds, so are very much at home in these sparsely vegetated habitats, and are also willing to use their long legs to good effect by running away when threatened, rather than taking to the air. They are omnivores, feeding on seeds, small lizards and invertebrates.

The Cream-coloured Courser (*Cursorius cursor*) is almost impossible to detect if it is not moving, so well does its sand-coloured plumage blend in with its habitat, but with a bit of patience, small groups can be detected sprinting around in the open, arid plains of the eastern Canaries, like miniature roadrunners. The archipelago represents the principal European breeding locality for this medium-sized wader, harbouring some 2,000 individuals; it is considerably more common on Fuerteventura than Lanzarote and has occasionally bred in southern Tenerife.

Other birds characteristic of the Basal Zone include the endemic Desert Grey Shrike (*Lanius (excubitor) koenigi*), the ever-attractive Hoopoe (*Upupa epops*), Berthelot's Pipit and Canary endemic subspecies of Spectacled (*Sylvia conspicillata orbitalis*) and Sardinian Warblers (*S. melanocephala leucogastra*), as well as the introduced Barbary Partridge (*Alectoris barbara koenigi*). Stone Curlews, or Eurasian Thick-knees, (*Burhinus oedicephalus*) are represented by two endemic races: *distinctus* in the central and western islands and *insularum* in the east of the archipelago, while the Canary endemic races of Trumpeter Finch (*Bucanetes githagineus amantum*) and Lesser Short-toed Lark (*Calandrella rufescens polatzeki*) are both most abundant on Fuerteventura and Lanzarote. The Canary endemic subspecies of Egyptian Vulture (*Neophron percnopterus majorensis*), which has suffered serious declines in recent years, nowadays breed only on Fuerteventura, as do the Canary population of Black-bellied Sandgrouse (*Pterocles orientalis*) and the endemic Canary Islands Stonechat.

Thermophilic Forest

The thermophilic forest is essentially a transitional zone lying above the arid badlands, its upper margin grading into laurel forests on north-facing slopes and pines on the southern flanks of the islands. Ever since the Canaries were first colonized by man, this has been the most populated zone in the archipelago, much affected by centuries of felling, grazing and agriculture, such that little remains of the climax vegetation today, although enclaves persist on inaccessible sea cliffs and in some of the gorges, such as the Barranco del Infierno, on Tenerife.

Because temperatures are slightly lower and rainfall a little higher than in the Basal Zone, stands of endemic Canary Palms (*Phoenix canariensis*) and Canary Junipers (*Juniperus turbinata* ssp. *canariensis*) are able to grow here, accompanied by a range of fairly drought-tolerant shrubs such as Wild Olive (*Olea cerasiformis*), *Maytenus canariensis*, and the deciduous *Pistacia atlantica*. The Canary Palms have long been cultivated, particularly on La Gomera, where a syrup is prepared from the sap and the fronds are used for animal fodder. Together with Date Palms (*Phoenix dactylifera*), they have also been planted extensively for ornamental purposes, but truly wild populations are extremely rare today.

Perhaps the most famous denizen of these warmth-loving forests, however, is the Dragon Tree (*Dracaena draco*), a Macaronesian endemic member of the Lily family (Liliaceae). Dragon Trees are much sought after for their dark red sap, colloquially known as 'dragon's blood', which is reputed to have medicinal and magical properties. As a result, only young trees survive in the wild, confined to inaccessible nooks and crannies in a few hot, humid, steep-sided *barrancos* on Tenerife, La Palma and Gran Canaria. It is however, commonly planted in parks and gardens, where it eventually develops into a graceful, umbrella-shaped tree, its single trunk topped by numerous forked branches, at the ends of which grow clusters of half-metre-long, sword-shaped leaves.

Laurisilva

As the prevailing northerly winds encounter the abrupt peaks of the westernmost Canary Islands they are forced upwards, such that the air cools and water vapour condenses, creating a dense, persistent cloud layer between 500 and 1,200 m on the north-facing slopes. This humid, montane zone is occupied by the renowned laurel forests – known locally as *laurisilva* – of the archipelago. Wreathed in perpetual mist, these damp, shady woodlands represent some of the last remaining examples of the semi-tropical vegetation that dominated much of Europe during the Tertiary period, with exceptional stands preserved within the Garajonay National Park on La Gomera.

Among the trees of the *laurisilva*, adaptation to high levels of humidity has resulted in an overriding morphological stereotype, similar to that frequently encountered in the tropical forests of the world: tough, evergreen, glossy leaves with pronounced ‘drip-tips’, such that water runs off easily and doesn’t accumulate to rot the foliage. As a result, it is hard to differentiate between the various tree species that make up the canopy, only four of which are in fact laurels (family Lauraceae): *Laurus novocanariensis*, *Ocotea foetens*, *Persea indica* and *Apollonias barbujana*. The other characteristic *laurisilva* trees belong to a wide range of families: Small-leaved and Large-leaved Hollies (*Ilex canariensis* and *Ilex perado* ssp. *platyphylla*), in the Aquifoliaceae, *Prunus lusitanica* ssp. *hixa*, in the Rosaceae, the strawberry-tree *Arbutus canariensis* (Ericaceae), the buckthorn *Rhamnus glandulosa* (Rhamnaceae), and *Pleiomeris canariensis* (a Canary endemic genus) and *Heberdenia excelsa* in the essentially tropical Myrsinaceae.

In the most ancient of these woodlands, the branches of the trees are interlinked to such an extent that the canopy is continuous. As a result, the forest floor receives virtually no light at all, such that only a few extremely shade-tolerant plants can survive at ground level, for example, the orange-flowered foxglove relative *Isoplexis canariensis* and a tall member of the gentian family with large yellow flowers known as *Ixanthus viscosus*; another Canary endemic genus. Ferns too abound here, notably the spectacular *Woodwardia radicans*, whose two-metre fronds produce roots where their tips meet the ground, as well as *Dryopteris oligodonta*, *Pteris incompleta* and *Diplazium caudatum*.

Climbing plants such as the blue-flowered bindweed *Convolvulus canariensis*, the exquisite Canary Bellflower (*Canarina canariensis*) and the liliaceous lianes *Smilax canariensis* and *Semele androgyna* scramble through the understorey in order to get closer to the light, while epiphytic lichens, mosses and ferns – particularly *Davallia canariensis* – festoon the trunks of the trees, their water requirements satisfied by the constant mist.

Among the animal inhabitants of the *laurisilva*, the two endemic laurel pigeons undoubtedly take pride of place. Both Bolle’s Pigeon and the Laurel Pigeon are confined to the islands of La Palma, El Hierro, La Gomera and Tenerife, where they feed almost exclusively on the fleshy fruits of the laurel forest trees. While the Laurel Pigeon tends to nest in crevices or small caves on rocky outcrops, usually just below the *laurisilva* zone, in the thermophilic woodlands, Bolle’s Pigeon breeds only in the thickest, most mature laurel forests, constructing untidy platforms of sticks in the trees; clutch size in both species is just a single egg.

Other noteworthy birds of these forests, though in most cases not exclusive to them, are the Canary Islands Chiffchaff (*Phylloscopus canariensis*), the various forms of the taxonomically confusing African Blue Tit (*Cyanistes teneriffae*) complex, and the various races (*canariensis*, *palmae* and *ombriosa*) of Common Chaffinch (*Fringilla coelebs*), all of which are also confined to the archipelago. The diminutive Canary Islands Kinglet, formerly considered a full species, has recently been demoted to a subspecies of Common Goldcrest (*Regulus regulus teneriffae*).

Canary Pine Forests

Above the sea of cloud that is such a feature of north-facing slopes, humidity is lower and temperatures decrease significantly, especially at night, despite the fact that the level of insolation is much higher. These fairly harsh conditions give rise to a Dry Montane Zone that extends from about 1,200 m to 2,000 m, while on southerly inclines, in the absence of the laurel forests, it may commence at just 700 m above sea level. The only native tree able to tolerate this marked diurnal temperature variation and paucity of soil water is the Canary Pine (*Pinus canariensis*), a species unique to the archipelago.

As is the case with the *laurisilva*, Canary Pine forests are absent from the low-lying islands of Fuerteventura and Lanzarote, with the most extensive stands occurring on Tenerife, La Palma, El Hierro and Gran Canaria. The Canary Pine is blessed with an extensive root system that allows it to colonize even the poorest of soils, including lava flows and pyroclastic fall-out, although under favourable conditions these trees can grow to a staggering 50 m. It is also supremely adapted to forest fires, able to shoot from the base even after the tree has been completely destroyed, while the seeds germinate readily after such events. As pine needles decay extremely slowly, the soil beneath the trees is very poor in nutrients, such that other plants find it difficult to grow here; among the most characteristic shrubs are the pink-flowered *Cistus symphytifolius* and the legume *Chamaecytisus proliferus*, distinguished by its white flowers, both of which grow only in the Canary Islands.

Not many species of insect find pine needles palatable, but caterpillars of the Canary endemic moth *Calliteara (Macaronesia) fortunata* (family Lymantriidae) are the exception to the rule, sometimes reaching plague proportions in the Canary Pine forests, while the larvae of the jewel beetle *Buprestis bertholoti* (family Buprestidae) and the bark-gnawing beetle *Temnochila pini* (family Ostomidae) feed in dead pine trees.

Two endemic races of Great Spotted Woodpecker (*Dendrocopos major*) – *thanneri* from Gran Canaria and *canariensis* on Tenerife – have their strongholds in the Canary pine forests, where night-flying invertebrates provide food for the Canary Big-eared Bat, which is also confined to the archipelago. The best-known denizen of this habitat, however, is the Canary endemic Blue Chaffinch, the males of which are stunning slate-blue birds. They are often seen in small groups in the more open pine woodlands of Tenerife's Corona Forestal Natural Park, foraging for the pine kernels that make up a large part of their diet.

The High Mountain Zone: *Retamar*–*Codesar*

Above 2000 metres, night-time environmental conditions are so harsh that trees cannot grow, such that the Canary Pines are replaced by a unique high-mountain scrub known locally as *Retamar*–*Codesar*. Only La Palma and Tenerife reach this altitude in the Canaries, peaking respectively at Roque de los Muchachos (2,426 m) and El Teide (3,715 m), head and shoulders above the rest of the archipelago.

The principal shrubs of these bleak, 'cold desert' habitats are the bushy legumes known as *Retama del Teide* (*Spartocytisus supranubius*) and *Codeso de Cumbre* (*Adenocarpus viscosus*), both of which are unique to the Canaries. Many of the other shrubs of these heights adopt the classic cushion habit so typical of high-mountain species, in winter resembling nothing so much as a flock of 'vegetable sheep'. Among the more commonplace species are the crucifers *Descurainia bourgeauana* and *Erysimum scoparium*, with yellow and pink flowers, respectively, the figwort *Scrophularia glabrata*, the scabious *Pterocephalus lasiospermus* and the composites *Argyranthemum tenerifae* and *Cheirolophus teydis*.

Perhaps the most memorable plant of these heights, however, is the spectacular viper's-bugloss known as *Tajinaste Rojo* (*Echium wildpretii*), common in Tenerife's Cañadas del Teide National Park, but extremely rare on La Palma. In late summer, each large, silvery leaf-rosette produces a fat spike several metres tall, studded with hundreds – if not thousands – of small, blood-red flowers.

Less imposing is the delightful little Teide Violet (*Viola cheiranthifolia*), which holds the record for being the highest naturally-occurring plant of the archipelago, growing among loose scree to a height of some 3,500 m on the summit of Tenerife; the closely related *Viola palmensis* occupies a similar niche amid the peaks of La Palma's Caldera de Taburiente National Park.

The only birds that breed habitually in the High Mountain Zone are Kestrels (*Falco tinnunculus canariensis*), Barbary Partridges, Rock Doves (*Columba livia canariensis*), Plain Swift and Berthelot's Pipits. Possibly of greater interest are the large numbers of endemic invertebrates that can be found only here, notable among which are the Canary Blue butterfly (*Cyclirius webbianus*), whose caterpillars feed on leguminous shrubs in all vegetation zones of the islands, the grasshopper *Sphingonotus willemsei*, the longhorn beetle *Hesperophanes roridus* and the diminutive flightless mantis *Pseudoyersinia teydeana*, which can sometimes be seen sunning itself on the flowers of *Pterocephalus lasiospermus*. The Tenerife Lizard (*Gallotia galloti*) is also very common in the high mountain habitats of both La Palma and Tenerife.

Coastal Habitats and Offshore Islets

The shores of the western islands of the archipelago are for the most part rocky and precipitous, whereas in the eastern islands low-lying sandy beaches abound, with sea cliffs present only in western Fuerteventura and northern Lanzarote. The most remote stretches of cliffs are noted for their populations of giant Canary lizards (several distinct species across the archipelago), and frequently possess a rich endemic flora. For example, the Riscos de Famara, in north-western Lanzarote, are home to a unique assemblage of the sea-lavender *Limonium bourgaeuii*, the pink-flowered, shrubby bindweed *Convolvulus lopezsocasi*, the fleshy-leaved tree-plantain *Plantago famarae* and the yellow-flowered composite *Reichardia famarae*, as well as succulent rosettes of *Aichryson tortuosum* and *Aeonium balsamiferum*.

Given their oceanic location, it is perhaps not surprising that the coastal cliffs of the Canary Islands – particularly those of undisturbed offshore islets, such as Tenerife's Roques de Anaga and the Archipiélago Chinojo, off northern Lanzarote – harbour important seabird assemblages, including populations of a number of species that do not breed elsewhere in Spain. Birds such as the Macaronesian Shearwater, Bulwer's Petrel (*Puffinus bulwerii*), both the summer- and winter-breeding populations of Band-rumped, or Madeiran Storm-Petrel (*Oceanodroma castro*) and the White-faced Storm-Petrel (*Pelagodroma marina*) are essentially pelagic species that spend most of their lives at sea, coming to land only to nest and rear their young.

The exquisite White-faced Storm-Petrel, which was only discovered as a breeding bird in the Canaries in 1987, is undoubtedly the rarest of these, with a tiny colony of less than 20 pairs known only from the offshore islets of northern Lanzarote. The stunning Red-billed Tropicbird (*Phaethon aethereus*) is an incipient colonist and has now bred at least twice, and the waters around the islands are also rich feeding grounds for oceanic species at different times of the year, with Wilson's Storm-Petrel (*Oceanites oceanicus*) and South Polar Skua (*Stercorarius maccormicki*) occurring regularly in summer and a range of more northerly breeding species in winter.

More widespread seabirds that breed in the archipelago include Cory's Shearwater (*Calonectris diomedea borealis*), the European Storm-Petrel (*Hydrobates pelagicus*) and Manx Shearwater (*Puffinus puffinus*), the latter more commonly forming colonies in well-vegetated inland gorges, either nesting on ledges or excavating burrows between the roots of the trees. In addition, three species of raptors typically breed on the coastal cliffs, all of which have suffered enormously from habitat loss and disturbance in recent times. The Osprey (*Pandion haliaetus*) is almost extinct as a breeding bird in the Canaries today, with fewer than 20 pairs remaining, principally on Lanzarote, La Gomera and El Hierro, although it was once widespread on all the islands, while Eleonora's Falcon (*Falco eleonora*) nests only on the islets to the north of Lanzarote today, and the Barbary Falcon is nowhere common, although it probably still breeds on all seven main islands.

Important coastal sand-dune systems occur at Maspalomas on Gran Canaria and Corralejo on Fuerteventura, with less extensive communities of this type occurring on all the main islands. These habitats are populated by an interesting shrubby flora, dominated by the fleshy chenopod *Traganum moquinii*, the succulent *Tetraena fontanesii*, distinguished by its almost grape-like leaves, the white-leaved birdsfoot-trefoil *Lotus sessilifolius*, the sea-lavender *Limonium pectinatum* and the widespread yellow-flowered composites *Schizogyne sericea* and *Launaea arborescens*. On Fuerteventura and Lanzarote, open sands are populated by the charming little *Androcymbium psammophilum*, a rare, winter-flowering member of the Lily family.

The most characteristic bird to breed in undisturbed sandy coastal habitats of Lanzarote and Fuerteventura is the Kentish Plover (*Charadrius alexandrinus*). Although Common Terns (*Sterna hirundo*) once nested in large colonies in the eastern islands, today the population probably does not exceed 50 pairs, confined mainly to remote coastal habitats in the western islands of La Gomera, La Palma and El Hierro. Even more tragically, the distinctive, all-black Canary Islands Oystercatcher (*Haematopus meadewaldoi*) – equipped with startlingly red legs and bill – which formerly bred on rocky coasts and sandy shores in the eastern Canary Islands, has not been seen since 1981 and is almost certainly extinct.

FLORA

The flora of the Canary Islands is simply remarkable, numbering around 1600 native taxa, of which around 680 are endemic, particularly within the genera *Aeonium* (Crassulaceae), *Echium* (Boraginaceae), *Micromeria* and *Sideritis* (Labiatae) and *Argyranthemum* (Compositae), each of which contains more than 20 species unique to the archipelago. Even more extraordinary is the fact that the islands harbour no less than 22 endemic genera, including *Dichranthus* (Caryophyllaceae), *Greenovia* (Crassulaceae), *Parolinia* (Cruciferae), *Spartocytisus* (Leguminosae), *Neochamaelea* (Cneoraceae), *Ixanthus* (Gentianaceae), *Ceballosia* (Boraginaceae), *Plocama* (Rubiaceae) and *Vieraea* and *Atalanthus* (Compositae).

Because they grow on remote islands, these endemic plants have nowhere to go if things get rough, such that the ill-considered placement of a single tourist resort could wipe out a whole species. Of the 1,414 variously threatened plants that make up the *Red List of Spanish Vascular Flora*, published in 2000, 458 occur only in the Canary Islands within Spanish territory. Compare this to the 845 taxa cited for the whole of the Spanish mainland, and it is clear that the Canary flora has its back against the wall.

It has been estimated that almost 70 per cent of the Canary endemic flora is in danger of extinction. Some of the most severely threatened plants of the archipelago, with less than a dozen individuals surviving in the wild, are the rock-roses *Helianthemum aganae* from La Gomera and *Helianthemum inaguae* from Gran Canaria, three distinctive birdsfoot-trefoils – *Lotus eremiticus* and *L. pyranthus* on La Palma and *L. maculatus* from Tenerife – and the labiate *Sideritis amagroii*, again from Gran Canaria. Sadly, the Tenerife endemic shrub *Kunkeliella psilotoclada* (Santalaceae) has not been seen since 1983, and is probably extinct – a victim of uncontrolled livestock grazing on the island – with *Normania nava* (Solanaceae), which formerly grew in the laurel forests of Anaga, again on Tenerife, following suit in 1984.

INVERTEBRATES

The level of endemism displayed by the Canary Island invertebrate communities is perhaps even more astounding than that of the flora, with all the principal habitats harbouring species that are found nowhere else in the world. Not surprisingly, this is particularly the case at altitude, where the geographically isolated subalpine and alpine zones on Tenerife and La Palma have given rise to dozens of endemic genera, many of them flightless, with new species being discovered every year.

Among the many Canary endemic species of grasshoppers and crickets, perhaps the most eye-catching are the huge, chunky members of the genus *Acrostira*, also flightless, which are represented by different species on La Gomera, Tenerife and La Palma. The related *Purpuraria erna*, which is listed as Vulnerable in the Spanish Red Data Catalogue, is confined to more vegetated badlands of Fuerteventura and Lanzarote, where it feeds primarily on the tree-spurges *Euphorbia obtusifolia* and *E. regis-jubae*.

Butterflies

Better known are the many species of Canary endemic butterflies, with species typical of the *laurisilva* including Canary Red Admiral (*Vanessa vulcanica*) and Canary Brimstone (*Gonepteryx cleobule*), the latter considered Vulnerable on the 2011 IUCN Red List of Threatened Species. More widespread Canary endemics include the Canary Blue and Canary Speckled Wood (*Pararge xiphioides*), found in almost every habitat, from sea level to more than 2500 metres, and the skipper *Thymelicus christi*.

Recent taxonomic revision has identified a separate species of grayling for each of the western and central islands of the Canary archipelago: El Hierro Grayling (*Hipparchia bacchus*), La Palma Grayling (*H. tilosi*), Gomera Grayling (*H. gomera*), Canary Grayling (*H. wyssii*), which occurs only on Tenerife, and Gran Canaria Grayling (*H. tamadabae*). Similarly, butterflies of the genus *Euchloe* in the Canaries have also been split, with the Canary Green-striped White (*E. hesperidum*) confined to Fuerteventura, *E. grancanariensis* known only from Gran Canaria, and *E. eversi*, described only in 2008, restricted to habitats above 2000 metres on Tenerife. The Endangered Canary Islands Large White (*Pieris cheiranthi*) is nowadays probably extinct on La Gomera, although it is widespread and locally common on La Palma, and also occurs along the northern coastal reaches of Tenerife.

Other notable Canary butterflies include the Canary Migrant (*Catopsilia florella*), Greenish Black-tip (*Euchloe charlonia*), Monarch (*Danaus plexippus*) and Plain Tiger (*D. chrysippus*), with more widespread European species such as Clouded Yellow (*Colias crocea*), Bath White (*Pontia daplidice*), Long-tailed and African Grass Blues (*Lampides boeticus* and *Zizeeria knysna*, respectively), Painted Lady (*Vanessa cardui*) and Red Admiral (*V. atalanta*) found on all the islands, while the Queen of Spain Fritillary (*Issoria lathonia*) is confined to La Gomera, Tenerife and La Palma.

Dragonflies

Although there are no true Canary endemics among the odonates, damselflies such as the Ubiquitous Bluetail (*Ischnura senegalensis*), Sahara Bluetail (*I. saharensis*) and Barbary Featherleg (*Platycnemis subdilata*) are essentially African species that occur nowhere else in Europe. Among the North African dragonflies that have made the short crossing to the Canary archipelago are the handsome Red-veined Dropwing (*Trithemis arteriosa*), which also occurs in southern Turkey, Ringed Cascader (*Zygonyx torridus*), which is extending its range northwards from the Mediterranean into Iberia and Sicily, and Epaulet Skimmer (*O. chrysostigma*), which has recently reached northern Portugal, as well as colonising the Greek islands bordering Turkey.

More widespread European species which have an outpost in the Canaries include Blue Emperor (*Anax imperator*), Lesser Emperor (*A. parthenope*), Broad Scarlet (*Crocothemis erythraea*) and Red-veined Darter (*Sympetrum fonscolombii*). The Island Darter (*Sympetrum nigrifemur*), which some authors consider to be a subspecies of Common Darter (*S. striolatum*), occurs in both the Canary Islands and Madeira.

The above article is based on a series of excerpts from Farino, T. (2009) *Wild Spain* (New Holland Publishers Ltd), incorporating up-to-date ornithological information from John Muddeman, and with the botanical taxonomy revised according to Arechavaleta, M., Rodríguez S., Zurita, N. & García, A. (coord.) (2010) *Lista de especies silvestres de Canarias. Hongos, plantas y animales terrestres*. Gobierno de Canarias.

Leaders:

Teresa Farino is an all-round naturalist with a special interest in the flora and lepidoptera of Iberia. She lives in the Picos de Europa, in northern Spain, and has been leading wildlife tours in Spain and Portugal since 1989. Over the past decade she has visited the Canary Islands on many occasions, drawn back time and again by the unique communities of animals and plants that thrive on the archipelago. This is the seventh field meeting that Teresa has organized and led for the BSBI, with illustrated reports of the previous excursions available on our website (www.iberianwildlife.com).

John Muddeman is a biologist and all-round naturalist. While specialising in Western Palearctic birds, he also has particular interests in the dragonflies and lepidoptera of Iberia, and naturally, more than a passing interest in the flora and fauna of everywhere he visits! Living in the Western Sierras of Madrid and resident in Spain since 1997, he has guided over 200 tours on 5 continents, including several with Teresa to explore the flora and fauna of different parts of the Iberian Peninsula, as well as a number of trips to the Canary Islands.

During the course of this trip we will be visiting four islands in the archipelago: Lanzarote, Fuerteventura, Tenerife and La Gomera. In late February, the flora of the basal zone and coastal habitats is perhaps at its best, and there will also be plenty in flower at middling altitudes, in both the Canary Pine and laurel forests, although at this time of year, the subalpine zone on Tenerife will not yet have emerged from its period of winter dormancy.

Although flora is the primary focus of this trip, as befits a BSBI group, we feel that we should also take the opportunity to show you some of the more charismatic animal species of the archipelago, in particular the endemic birds, reptiles and butterflies.

With more than 1870 taxa of vascular plants on these four islands alone, including around 460 endemics, we hope you realise that the leaders will not be able to identify every species at first sight!

INFORMATION FOR PARTICIPANTS

DATES

Friday 17 February to Friday 2 March 2012 (15 days, 14 nights)

PRICE

The cost of this tour, including all international and inter-island flights, ferry crossings, half-board accommodation, picnic lunches, transport by minibus throughout (except during transfers from one island to another), all entry fees and services of the leaders is £2350 per person, based on two people sharing a room. This price compares very favourably with that of trips to the Canaries organised by, for example, Naturetrek and The Travelling Naturalist in 2012.

Single accommodation (see **Accommodation**, below) is only available at this point for our two nights on Fuerteventura, and costs £28 per person. However, depending on availability at the other various apartment complexes in February, there may be the option to upgrade to single-room occupancy on arrival (for which you might need to make an additional payment).

ISLAND HOLIDAYS

This tour includes international and inter-island flights, and ferry crossings. To ensure your financial protection, bookings will be taken by Island Holidays (ATOL number 2725). For more information visit the **Island Holidays** website (www.islandholidays.co.uk). Booking forms and conditions have been attached as a separate pdf document, but can also be downloaded from www.islandholidays.co.uk/downloads/Island_Holidays_Booking_Form.pdf. When making a booking, please quote 'BSBI Canaries' where it says 'Tour'.

PARTICIPANTS

The maximum number of participants on this tour is 14, excluding the leaders.

Although the tour is being offered primarily to members of the BSBI and their partners/friends in the first instance, in the event that there are still places available three months prior to departure, we reserve the right to offer these to other interested parties.

For this tour there is no minimum number of participants and Island Holidays confirms that the paragraph in their booking conditions relating to group size does not apply. The tour will go ahead even with a small group of confirmed bookings, although we reserve the right to appoint just a single leader (Teresa Farino) with up to eight clients.

TRAVEL ARRANGEMENTS

On previous BSBI and IWT tours we have been able to accommodate flights from various UK regional airports, but on this occasion (primarily because we fly into one airport and out from a different one) this has simply not been possible. Thus, after much searching, we have found only one flight suitable for this tour:

- **Friday 17 February 2012:**
easyJet Flight 8683: London Gatwick to Lanzarote (Arrecife), departs 07.40, arrives 12.05.
- **Friday 2 March 2012:**
easyJet Flight 8706: Tenerife South to London Gatwick, departs 19.05, arrives 23.20.

NB The Canary Islands lie within the same time zone as the United Kingdom.

You are advised to make your booking promptly to avoid disappointment, as obviously there will be a limited number of places available on these flights.

Island Holidays can also book connecting flights from UK regional airports to Gatwick for you, if necessary. If you require reasonably priced accommodation close to Gatwick either before or after the tour, Island Holidays have one or two places that they can recommend or book for you.

If you opt to extend your stay in the Canaries at either end of the tour, or indeed, choose alternative flights, please make sure that you are at Lanzarote international airport (Arrecife) at 12.30 (midday) on Friday 17 February, otherwise you will have to make your own way to the hotel. Similarly, on 2 March, we will be arriving at Tenerife South airport at 16.30, in plenty of time for return flight given above, so please do not book an alternative flight departing before 19.00, because you might miss it.

LUGGAGE RESTRICTIONS

The easyJet international flights include 20kg of hold luggage, in a single bag. There is no weight limit on hand luggage, but it is subject to size restrictions: 25 x 45 x 56 cm.

However, although the Binter inter-island flight between Fuerteventura and Tenerife also allows 20kg of hold luggage, which may be split into several bags, because the planes are much smaller the hand luggage limit is only 6kg and must not exceed dimensions of 22 x 33 x 44 cm, which is considerably less than the easyJet limit, although you are able to wear binoculars and cameras round your neck if you wish. Please pack accordingly, as we will not be liable for any excess baggage charges you incur (further information is available on the Binter website: (www.bintercanarias.com/infServMgr.php?opciones=3_5&submenu=2)).

Transport to and from the airports and throughout the tour will be by hired minibuses driven by the leaders. Where we transfer from Lanzarote to Fuerteventura (by boat) and from Fuerteventura to Tenerife (by plane), it will be necessary to exchange one vehicle for another, *so please make sure that you can handle your luggage without difficulty.*

ACCOMMODATION, BREAKFAST & EVENING MEALS

Rather than opt for tourist hotels in the major resorts, where possible we have selected accommodation in local communities in more rural areas, with the aim of giving you an insight into how the native Canary-islanders live. In most cases this means that we will be occupying one- or two-bedroom apartments. As a result, single rooms will not be available as a matter of course on this tour, except at the Hotel Bahía Playa in Fuerteventura, where a single-room supplement of £14 per night will apply (£28 in total), payable at the time the balance is due.

Lanzarote (3 nights):

We shall be staying in two-bedroom apartments in the **Bungalows Playa Famara** (www.bungalowsplayafamara.com/en/) complex on the west coast of the island. Each of these well-appointed, free-standing bungalows is equipped with a fully-equipped kitchen, bathroom and lounge area, and has a small private garden, and the complex also boasts a central shared swimming pool (unheated!). Evening meals will be taken at Casa Ramón, an excellent fish restaurant in the nearby village of Famara, but we shall provide tea/coffee/ cereals/ yoghurts/fruit, etc. for you to have breakfast in your own bungalow (because the restaurant doesn't open until 10am!).

Fuerteventura (2 nights):

To buck the trend, our two nights on Fuerteventura will be based at the modern, 4 star Design **Hotel R2 Bahía Playa** (www.r2hotels.com/en/hotel-4-star-r2-bahia-playa-fuerteventura.html) in the small coastal town of Tarajalejo, strategically placed on the south-eastern coast for easy access to the far south of the island, as well as the western uplands. Standard rooms are for two people sharing, but here you may opt for single room occupancy (for a supplement of a £14 per night (£28 in total)). A further upgrade to sea views might be possible on arrival, depending on availability. Breakfast and the evening meal will be taken at the hotel, which will also provide picnic lunches, although we will supplement these if necessary!

Tenerife (5 nights):

For this part of the tour we shall be using the rural apartment complex of **Finca La Hacienda** (www.fincalahacienda.es/en/bienvenido.html) in the rural region of Tierra del Trigo, which is perched above the coastal town of Los Silos in the north-western part of Tenerife. Some apartments have just one bedroom, for two people sharing, while others have two bedrooms, for four people. Each has a fully-equipped bathroom, kitchen and lounge area. Breakfast and evening meals will be taken in the Finca's small restaurant or on the central terrace, weather permitting, where there is a wood-fired barbeque.

La Gomera (4 nights):

We will be staying in the charming rustic apartments of **Los Telares** (www.apartamentosgomera.com/index.php?option=com_k2&view=item&id=36&Itemid=27&lang=en), situated in the village of Hermigua, on the northern flank of la Gomera. Each studio apartment is suitable for two people, and has a fully-equipped bathroom and kitchen/lounge area. Breakfast and evening meals will be taken at their restaurant, just 200m away, and there is also a swimming pool and communal garden and lounge areas for the use of guests.

LUNCHES

Our picnic lunches (prepared by John and Teresa, except for on Fuerteventura) will include a selection of local cheeses and charcuterie, as well as fresh salads and fruit. If you bring a thermos flask, this can be filled by the hotel staff for a small charge. We recommend that you bring a water bottle that holds at least a litre, as the weather can be very hot, even in February, and potable water sources in the field may be rather few and far between. Tap-water in the hotels is safe to drink, but bottled mineral water is widely available and inexpensive, and will be provided in the field.

We hope you understand that we will need to shop for lunch provisions occasionally.

Evening meals will be taken in the restaurants specified above. Limited wine, beer or soft drinks are generally included in the price.

Vegetarians: bear in mind that you are something of a rarity in this part of the world, and although every effort will be made to accommodate your needs, please be prepared to be flexible.

HEALTH INFORMATION

Although no vaccinations are specifically required for Spain, it is advisable to check that your tetanus inoculations are up to date.

British citizens are entitled to reciprocal emergency medical attention from the Spanish Health Service, provided that they are in possession of a valid European Health Insurance Card, but please note that the possession of valid travel insurance is a condition of booking.

If you are currently taking medication of any sort, please ensure that you bring along an adequate supply. A small personal first aid kit is also a good idea, as well as sunscreen, sunglasses, sunhat and insect repellent.

PASSPORT & VISA REQUIREMENTS

British citizens do not require a visa to visit Spain, but must be in possession of a 10-year passport, valid for at least six months from the date of departure. Nationals of other countries should contact the Spanish Embassy.

CURRENCY

Although all meals (including limited beverages) are incorporated in the price of this tour, it is a good idea to bring a small quantity of euros for personal expenses (refreshments, postcards and stamps, gifts, etc.). 'Hole-in-the-wall' cash machines, which can be used with UK bank debit cards (cash-point cards) as well as credit cards, are likely to be available only at the airports and main towns of the Canaries.

DAILY ACTIVITIES

Although this is primarily a botanical tour, we shall by no means be ignoring the faunal element of the Canary Islands, with the endemic birds being of particular interest (see Introduction). We shall explore the islands at a relaxed pace, leaving plenty of time for botanising, general natural history and photography. Owing to the volcanic origin of the archipelago, the terrain can be rather uneven at times, although there will be plenty of 'fall-out-of-the vehicle' botanising involved. Sometimes, however, we must be prepared to walk a little further so as to see the best of the flora on offer. Of course, with two leaders and two vehicles at our disposal, we can be fairly flexible as to the needs of the party.

In order to fit in with Spanish mealtimes, we will be breakfasting at around 8.00am, so as to leave the hotel by 9.00am, although depending on the group interests we may modify this sometimes in order to offer a pre-breakfast excursion or two. We will be returning to the hotel after a full day in the field by about 6.00pm, leaving ample time for a shower, relaxing drink in the gardens of the hotel before dinner at around 8.00pm. For those who are interested, we will reconvene at 7.30pm to discuss the day's findings over an aperitif.

KIT

'The Canaries have the best climate in the world', so the saying goes, with average day-time temperatures of around 20°C at this time of year, so the weather during the day in February *should* be warm and sunny, although rain is always a possibility, even in the drier eastern islands. However, it can be rather chilly in the early morning and evening, so please make sure that you bring enough warm clothing, as well as a full set of waterproofs. Several of the accommodation complexes have swimming pools, and there will also be the opportunity to swim in the sea on a number of occasions, so bring swimming gear and a small towel if this appeals to you!

Comfortable footwear with some degree of ankle support is essential, and must be strong enough to cope with rough tracks: walking boots are recommended, although walking 'sandals' or 'trainers' can be worn on some excursions. A walking stick is useful for uneven terrain, and an umbrella is ideal for rainy days, in that you can make notes, consult field guides, etc. without getting materials wet. Conversely, don't forget your shorts. Dress in the evening is informal.

Please bring a small rucksack/daysack to carry spare clothing, waterproofs, water bottle (at least 1 litre), and your share of our picnic lunch (please bring your own cutlery, plate and cup). As photographic opportunities abound, a camera is almost obligatory! Binoculars and hand-lens (x10 magnification) are also recommended, depending on your interests. Photographic film can be hard to obtain and expensive in the archipelago, so make sure that you bring a good supply from the UK. Conversely, if you use a digital camera, don't forget to bring your charger and/or plenty of batteries, as well as enough memory cards. The electrical supply is 220V DC, using two-pin plugs (travel plugs are widely available in UK hardware stores, but *not* in the Canaries).

Kitchen facilities will be available at our accommodation on Lanzarote, Tenerife and La Gomera, but not on Fuerteventura.

MAPS AND INFORMATION

You will be sent a comprehensive report on the wildlife of the four islands we intend to visit in the Canaries a few weeks before the tour commences. A good overall map is Michelin Zoom no. 125: Islas Canarias (1:150,000). More detailed (1:50,000) maps can be purchased from the Instituto Geográfico Nacional (www.cnig.es/catalogo.do).

FIELD GUIDES

Teresa and John will bring along their personal copies of as many botanical field guides as they can fit in their luggage (!), as well as subsidiary tomes covering the fauna of the Canary Islands. You are welcome to use this library, but please treat the books with care (many of them are irreplaceable) and don't forget to give them back before returning home!

The most recent catalogue of the flora of the Canary Islands is Arechavaleta, M., Rodríguez S., Zurita, N. & García, A. (coord.) (2010) *Lista de especies silvestres de Canarias. Hongos, plantas y animales terrestres*. Gobierno de Canarias. 579 pp. You can download a copy by pasting the following link into your web browser:

- www.gobcan.es/cmavot/medioambiente/medionatural/biodiversidad/especies/bancondatos/Lista_Especies_Silvestres.pdf.

Undoubtedly the most useful illustrated flora of the Canaries is David Bramwell's *Wild Flowers of the Canary Islands* (2001), which is available from the Natural History Book Service (www.nhbs.com/wild_flowers_of_the_canary_islands_tefno_36254.html), although the taxonomy therein does not always coincide with the above-mentioned catalogue.

LEADER CONTACT

If you have any queries about daily activities, equipment, or anything else, please feel free to contact Teresa: Tel. (+34) 942 735154; Address: Apartado de Correos 59, 39570 Potes, Cantabria, Spain; E-mail: teresa@iberianwildlife.com

All queries about bookings should be directed to **Island Holidays** (www.islandholidays.co.uk/) : Tel. 01764 670107; Address: PO Box 26317, Comrie, Perthshire PH6 2Y, Scotland; email: admin@islandholidays.co.uk

PROVISIONAL ITINERARY

- Fri 17 February Teresa and John will meet easyJet flight 8683 at Lanzarote (Arrecife). We shall then head to the eastern edge of the Timanfaya National Park for lunch before checking in at our accommodation in Famara. Once we have settled in to the bungalows, we shall spend the rest of the afternoon exploring the small sand-dune system close to the resort. Although the *Androcymbium psammophilum* is likely to be over by mid-February, other typical dune plants here include *Aizoon canariense*, *Polygonum maritimum*, *Chenoleoides tomentosa*, *Traganum moquinii*, *Polycarpha nivea*, *Lotus lancerottensis*, *Tetraena fontanesii* and *Launaea arborescens*, with birds including Berthelot's Pipit and the endemic race of Desert Grey Shrike.
- Sat 18 February An early start to search for Houbara Bustards and other open ground birds in the nearby *jable*, followed by a walk into the Barranco de la Pocela, behind the resort, whose flora includes *Periploca laevigata*, *Aeonium lancerottense*, *Lavandula pinnata*, *Sonchus pinnatifidus* and *Asteriscus intermedius*. In the afternoon we shall explore the track that runs north along the base of the Riscos de Famara.
- Sun 19 February We shall spend the morning in the Malpaís de la Corona, including an ascent to the crater of Monte Corona itself, from the village of Ye. Plants here include *Euphorbia balsamifera*, *Lycium intricatum*, *Kleinia neriifolia*, etc. After lunch at the beach, accompanied by some very large Atlantic Lizards, we shall drive to the Mirador del Río, and investigate the Famara cliffs from above, with notable species including *Limonium bourgeaui*, *Echium lancerottense*, *E. decaisnei* ssp. *purpuricense* and, with luck, Barbary Falcon.
- Mon 20 February We leave Famara promptly after an early breakfast and drive to the southernmost tip of the island to catch the 11am ferry to Fuerteventura; a few seabirds and perhaps even cetaceans may be seen during the crossing. We shall make a quick exploration of the vast sand-dune system of the Corralejo Natural Park, for *Euphorbia regis-jubae* and other psammophiles, then drive to Caleta de Fuste for lunch, where the Barbary Ground Squirrels, Trumpeter Finches and Spanish Sparrows are exceedingly tame. After lunch we shall visit the nearby tamarisk-lined Barranco de la Torre, in search of the renowned Canary Island Stonechat and East Canary Geckos, and then drive further south to our hotel in Tarajalejo, where we shall arrive in plenty of time to settle in before the evening meal.
- Tues 21 February We shall spend the day in the mountainous Jandía peninsula, a fabulously scenic natural park notable for one of the most enigmatic plants of archipelago: the spiny, cactus-like *Euphorbia handiensis*. Here too we hope to encounter other scarce local endemics such as *Echium handiense*, *Bupleurum handiense*, *Sideritis pumila* and *Asteriscus sericeus*. We might also possibly encounter the large, resident race (*majorensis*) of Egyptian Vulture here.
- Weds 22 February We pack our bags once more in the morning before heading back up the more vegetated western flank of Fuerteventura, via the Catalina García lagoon and Betancuria, where we will be searching for the fabulous *Caralluma burchardii*, plus *Asparagus pastorianus*, Greenish Black-tips, the rare *degener* race of African Blue Tit and Ruddy Shelduck. We catch the plane to Tenerife (North) at 16.35, transferring to Finca La Hacienda, in the north-western corner of the island, on arrival.

- Thurs 23 February First thing after breakfast we shall walk from the *finca* down the small road that descends from Tierra del Trigo to the town of Los Silos on the coastal platform, admiring the rich flora of the cliffs here: *Erysimum bicolor*, *Rumex lunaria*, *Hypericum canariense*, *H. glandulosum*, *Marcelletia moquiniana*, *Aichryson laxum*, *Aeonium tabulaeforme*, *Jasminum odoratissimum*, *Sonchus acaulis*, etc.
- Once we have retrieved the vehicles, we shall head further west to the Teno headland, where plants of note include fabulous clumps of *Euphorbia canariensis*, *Parolinia intermedia*, *Astydamia latifolia*, *Neochamaelea pulverulenta*, *Ceropegia dichotoma*, *Vieraea laevigata* and *Scilla haemorrhoidalis*. Tenerife Lizards and Tenerife Geckos abound here, and we might also spot Rock Sparrow and Barbary Falcon. If time permits, we shall stop on the way home on the coastal cliffs near Buenavista for *Euphorbia aphylla*, *Lotus tenellus* and *Argyranthemum frutescens*.
- Fri 24 February We'll head south over the Puerto de Erjos, where our first stop will be at the Degollada de Cherfe, for the stunning, red-flowered *Euphorbia atropurpurea*, plus *Chamaecytisus proliferus*, *Echium aculeatum*, *Carlina salicifolia*, etc. From here we shall take the road that winds up towards El Teide via Chío, where the lava fields harbour a wealth of interesting ferns and succulents: *Notholaena marantae* ssp. *subcordata*, *Cosentinia vellea*, *Cheilanthes pulchella*, *Aeonium arboreum* ssp. *holochrysum*, *A. urbicum*, etc., with Sand Crocus in more humid areas.
- The Canary Pine forests further up harbour *Lotus campylocladus*, *Scrophularia glabrata* and *Pterocephalus lasiospermus*, as well as Blue Chaffinches and the *teneriffae* race of African Blue Tits. Unfortunately little will be in bloom in the subalpine Cañadas de Teide in February, but as we descent the northern flank of the island towards La Orotava, we should encounter flowering *Cistus symphytifolius* and *Arbutus canariensis*.
- Sat 25 February We shall head to Anaga, on the north-eastern spur of the island, where a well-preserved expanse of *laurisilva* should turn up *Woodwardia radicans*, *Asplenium hemionitis*, *Davallia canariensis*, *Ranunculus cortusifolius*, *Viola anagae*, *Geranium reuteri*, *Viburnum rigidum*, *Isoplexis canariensis*, *Pericallis tussilaginis*, *Gennaria diphylla*, *Semele androgyna* and more... The birds may include the Canary Islands Chiffchaffs and Kinglets, Bolle's and Laurel Pigeons and the *canariensis* race of Common Chaffinch, with Canary Speckled Woods abundant here.
- After lunch we shall head south for a quick visit to the Barranco de Iguete, where a few Dragon Trees still grow wild. And on the way home, if time permits we shall pay a brief visit to the botanical garden in Puerto de La Cruz (Atlantic Canaries and Rose-ringed Parakeets are commonplace here too!).
- Sun 26 February A fabulous day-long walk from Los Silos up the Barranco de Cuevas Negras, which brings us out back at the hotel. The flora here is quite exceptional, including Mediterranean Selaginella, *Polypodium macaronesticum*, *Descurainia millefolia*, *Maytenus canariensis*, *Lavatera acerifolia*, *Monanthes laxiflora*, *Drusa glandulosa*, *Ferula linkii*, *Sideritis cretica*, *Canarina canariensis*, *Sonchus congestus*, *Dracunculus canariensis*, *Habenaria tridactylites*, etc...

- Mon 27 February We'll be catching the ferry to La Gomera around lunchtime, so we'll have time in the morning to visit the coastal badlands near Las Galletas, where we should encounter *Euphorbia lamarckii*, often covered with Barbary Spurge Hawkmoth larvae, *Echium triste*, *Lavandula canariensis*, *Plocama pendula*, *Campylanthus salsoloides* and *Asparagus arborescens*, followed by a brief stop at the Embalse de Guargacho for *Ceropegia fusca*, *Rumex vesicarius* and *Echium bonnetii*, plus the eye-catching spiders *Argiope trifasciata* and *Cyrtophora citricola*. We'll have lunch on the boat, while looking out for passing cetaceans and seabirds, so that we can start exploring La Gomera as soon as we arrive. The Barranco de La Villa, above San Sebastián, is home to several distinctive species of *Aeonium*, notably *A. saundersii*, plus *Lotus emeroides*, *Bupleurum salicifolium*, *Sideritis gomerae*, etc.
- Tues 28 February We shall walk directly from our apartments this morning, to explore the area around Hermigua, with *Convolvulus floridus*, *Globularia salicina* and *Brachypodium arbuscula* among the plants on offer, while Long-eared Owls breed in banana plantations in the valley. After lunch we shall visit the Garajonay National Park information centre, at Juego de Bolas, where Boettger's Lizards and the Gomera endemic skink *Chalcides coeruleopunctatus* scuttle amongst the plants. We also hope to have time to walk down to Agulo from here, in search of the rare but spectacular *Euphorbia bravoana*.
- Weds 29 February A day in the superb laurel forests around El Cedro, in the heart of the Garajonay National Park. During our various strolls we should encounter *Woodwardia radicans*, *Pteris incompleta*, *Gesnouinia arborea*, *Aichryson pachycaulon*, *Greenovia* spp., *Hypericum grandifolium*, *Echium acanthocarpum*, *Ixanthus viscosus*, *Cedronella canariensis* and *Pericallis appendiculata*, plus butterflies such as Canary Brimstone, Canary Red Admiral and Canary Blue. Both the endemic laurel pigeons can be seen here. as can plus the Canary endemic race of Sparrowhawk (*Accipiter nisus granti*).
- Thurs 1 March First off we shall stop at the spectacular Roque de Agando, where notable flora includes *Dichranthus plocamoides*, *Crambe gomerae*, *Cistus chinamadensis* ssp. *gomerae*, *Aeonium rubrolineatum*, *Teline stenopetala*, *Euphorbia lambii* and *Sideritis cretica* ssp. *spicata*. The rest of the day will be spent around Vallehermoso, where coastal habitats offer *Juniperus turbinata* ssp. *canariensis*, *Euphorbia aphylla*, *Echium aculeatum* and *Reichardia ligulata*, plus the possibility of dragonflies such as Broad Scarlet, Epaulet Skimmer and Red-veined Dropwing by the small stream on the beach.
- Fri 2 March We catch the ferry back to Tenerife mid-morning, once again looking out for cetaceans and seabirds, and will then head to the Mirador de Chirche for lunch, surrounded by tall bushes of *Echium virescens*. We shall spend the afternoon exploring the coastal badlands around Montaña Roja and El Médano, where notable plants include *Mesembryanthemum crystallinum* and *M. nodiflorum*, *Gymnocarpos decandrus*, *Helianthemum canariense*, *Limonium pectinatum* and *Ceropegia fusca*.
- Our flight home departs from the nearby Tenerife South airport, where we shall arrive in plenty of time to catch the return flight to the UK at 19.05.

Please note that we reserve the right to change the programme according to prevailing weather conditions and/or the interests of the participants.

MAKING A BOOKING

If you wish to confirm your participation in the tour, please complete the Island Holidays booking form as soon as possible, as places are limited. A copy of this booking form and conditions has been attached as a separate pdf, but it can also be downloaded from:

www.islandholidays.co.uk/downloads/Island_Holidays_Booking_Form.pdf.

Alternatively, you may request a booking form by telephone, by calling 01764 670107.

Details of how to confirm your booking are contained in the Booking Conditions; *please read them carefully beforehand.*

When making a booking, please quote 'BSBI Canaries' where it says 'Tour'. The deposit for the tour will be £470 (20% of the total tour price, principally to cover the cost of your flights, which must be paid for at the time of booking).

The final payment of £1890, plus the single room supplement if applicable, is due 10 weeks prior to departure, on 9 December 2011.

What's not included

The following items are **not** included in the cost: travel insurance, passport and visa costs, vaccinations and medication, excess baggage charges, telephone calls, laundry, drinks and food (other than those specified in the pre-departure information), tips and items of a purely personal nature.

Travel insurance

All participants MUST have travel insurance for the duration of this tour, details of which are to be entered on the booking form; it is your responsibility to have it.

Travel insurance is absolutely essential; it is a condition of booking that suitable cover be arranged by you for all destinations outside the UK. This must cover you fully against medical expenses, injury, death, repatriation, cancellation and curtailment, baggage and money loss and liability cover.

We will usually insist on details of effective travel insurance cover being made known to us prior to departure

Please read your policy details carefully and take them with you on holiday. It is your responsibility to ensure that the travel insurance cover you purchase is suitable and adequate for your particular needs. We do not check insurance policies.

In view of the insurance fiasco that followed flight cancellations associated with the Icelandic ash cloud in 2010, we suggest you read your policy carefully to ensure that you would be entitled to a refund of holiday fees if an event of this nature were to re-occur, as we are not liable to offer you a refund under such circumstances.

Itinerary

Changes in the itinerary may occur even though the tour has been carefully planned, with some excursions being heavily dependent on the weather. Indeed, changes will be made to the stated itinerary if in our sole opinion it will benefit the tour by providing better opportunities for observing wildlife. The provisional itinerary outlined in the pre-departure information is therefore an illustration of the sites we may visit in order to gain the maximum benefit from the tour, and we will strive to maintain the standard detailed therein.

Our tours do not normally entail strenuous activity but if this cannot be avoided, it will be made clear in the tour details. Nevertheless, you must be able to complete moderate walks of several miles a day, sometimes on uneven or slippery surfaces, in order to meet the schedule of the tour. If you have any health problems or physical limitations you are required to advise us prior to booking.

General and more specific information has been made available to all tour participants in this pre-departure package. This includes details of flights, pick-up arrangements, climate, clothing and kit requirements and a provisional itinerary with information about the plant and animal species that we are likely to encounter. Please note, however, that there is absolutely no guarantee whatsoever that specific species of flora and fauna will be seen, particularly as many are dependent on seasonal variation from year to year.

General

The success of each holiday depends to a great extent on each client's ability to cooperate with other party members and the tour leader(s). The principal leader has full authority to exclude any member, either from part of the daily programme or, in extreme cases, from the entire tour if he or she, in the reasonable opinion of the tour leader, behaves in a way that is detrimental to the safety, welfare or enjoyment of other members of the group, without any liability on our part. Refunds may be made in appropriate cases at our discretion.

We will take all reasonable steps to ensure that all services provided are of an acceptable standard and to comply with appropriate safety measures throughout the trip. We cannot however, accept liability for physical injury, loss, damage or expense resulting from any event whatsoever beyond our control. **Insurance is therefore absolutely essential.**