

WILDLIFE TRAVEL

Morocco 2013



Morocco species lists and trip report, 2nd to 9th March 2013

#	DATE	LOCATIONS & NOTES
1	2nd March	Evening arrival at Agadir, transfer to Atlas Kasbah
2	3rd March	Atlantic Coast: Oued Tamri & Cap Rhir
3	4th March	Atlas Kasbah
4	5th March	Taroudant & Tioute Palmery
5	6th March	Anti Atlas: Ait Baha and beyond
6	7th March	Sous Massa National Park: Oued Massa & Oued Sous
7	8th March	Western High Atlas, to the Cascades du Immouzer
8	9th March	Atlas Kasbah and local area. Evening flight back to UK

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Based at the Atlas Kasbah, close to the city of Agadir we spent a week exploring some of the unique habitats of southern Morocco, from the Atlantic coast to the High Atlas. This area is home to one of the iconic plants of Morocco, the Argan Tree *Argania spinosa*, a plant that accompanied us throughout our journey. It belongs to the primarily tropical family the *Sapotaceae*, which today is confined to southern Morocco, a relic from the time when this area had a tropical climate.

There had been average winter rainfall in Morocco so the landscape was looking reasonably green. However, our week coincided with unseasonal heavy rains sufficient to wash away several local bridges and affect travel. Whilst this required changes to the itinerary to make best use of the days and our proposed routes, Morocco as usual was full of many delights and surprises.



The Atlas Kasbah set within the Argan Biosphere Reserve. *Argania spinosa* in fruit and flower

Day 1, 2nd March – Flight from Gatwick.

The afternoon flight from Gatwick meant we arrived in Agadir in the early evening and thankfully, despite a short delay due to traffic, arrived at the Atlas Kasbah in good time for our evening meal.

Day 2, 3rd March – Oued Tamri and Cap Rhir

Our main excursion took us to investigate the unique succulent *Euphorbia* scrub along the coast north of Agadir and to see one of the rarest birds in the World, the Northern Bald Ibis. To orientate ourselves and introduce some of the native Moroccan plants we first spent an hour after breakfast exploring the garden at the Kasbah. Some of the first spots were several members of the Daisy or Compositae/Asterceae family, a prominent group in the Moroccan flora. This included a number native to southern Morocco: the violet flowered *Volutaria maroccana*; with yellow flowers feathery foliage and branching directly beneath the flower head *Cladanthus arabicus*; and with creamy white flowers and red centre, *Catanache arenaria*. We also found the native red flowered *Echium horridum*, a relative of borage, the species name referring to the large obvious bristles-like hairs on the stem.



Cladanthus arabicus



Volutaria maroccana



Echium horridum

The unusual and prominent purple/pink flowers of *Fagonia cretica* in the family *Zygophyllaceae* were also common, a wide spread Mediterranean species. The Kasbah and its garden was clearly a haven for birds.

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House Buntings were resident in the Kasbah itself, with other common species seen included the Common Bulbul, Blackbirds and Great Tits. Later in the week we had excellent views of Kestrels from the terrace.



Catanche arenaria



Fagonia cretica



Convolvulus althaeoides

Travelling north from Agadir we took the main coast road towards the town of Tamri passing some of the large villas belonging to members of the Moroccan Royal family and those of several Gulf States. The first stop was at the mouth of the Oued Tamri a well-known birding spot, with good saltmarsh and dune vegetation. The parasitic plant, *Cistanche phelyphaea*, with its large yellow flower spikes was particularly spectacular growing on the roots of members of the Chenopodiaceae or sea beet family. Right on the foreshore was *Cakile maritima* (Sea Rocket) and just behind good patches of *Polygonum maritimum* (Sea Knotgrass) and *Euphorbia paralias* (Sea Spurge). Amongst the more develop dunes were the grey leaved *Polycarpaea nivea* and many admired the pink flowered *Frankenia laevis*. The saltmarsh was dominated by the sea beet family, *Chenopodiaceae* particularly *Suaeda vera* (Sea Blite).



Cistanche phelyphaea



Frankenia laevis



Polycarpaea nivea



Bald Ibis on far bank

The river (Oued Tamri) forms a lagoon here and common on the sandbanks were flocks of Audouin's and Lesser Black-backed Gulls. Across the lagoon feeding on the hillside was a small flock of Northern Bald Ibis and we had good views of this critically endangered birds typically sweeping across the ground as the group foraged amongst the rocks and scrub. Once widespread across southern Europe and North Africa their decline was due to factors including pesticide poisoning, hunting and disturbance. Thankfully the Moroccan population has been a conservation success story with the population close to 500 individuals although still confined to a small area and in stark contrast to the highly threatened populations in Syria and Turkey.

We stopped at Cap Rhir lighthouse for a quick tour and lunch around its base. A search behind the lighthouse revealed several typical plants of the area, the pink flowered *Frankenia thymifolia*, the Everlasting Flower or Statice, *Limonium sinuatum*, often grown in the UK and a plant of the Sahara, *Warionia saharae*, a yellow flowered Compositae with strongly scented leaves reaching one of its most northerly points here.

On the escarpments behind are good examples of the succulent *Euphorbia* scrub thriving due to the ameliorating effect of the sea along this coastline. This type of *Euphorbia* scrub extends along the southern Moroccan coastline down into the Sahara and is also found on the Canary Islands off shore. They are a botanical link between this part of Morocco and the flora of the North Atlantic Islands and are collectively termed the Macaronesian flora. In the geological past this flora would have been more widespread on the

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mainland becoming confined to these climatically favourable areas during recent cycles of glaciation. The first area explored was dominated by *Euphorbia regis-jubae* bearing its lime-green flowers and found together with the Compositae, *Senecio anteuphorbia*, also with succulent stems but not in flower. Key shrubs common in the area were the grey-leaved shrub *Lavandula dentata* var. *candicans*, an unusual form of this species and the large yellowed flowered *Nauplius imbricatus*. Amongst the ground flora was the pink flowered *Coris monspeliensis* subsp. *maroccana*, a puzzle at the time and despite visiting this area many times the first time I had seen it here.

The second area explored was dominated by the spiny *Euphorbia officinarum* found with an unusual parasitic plant living on its roots, *Striga gesnerioides*. Spiny shrubs in this area were *Rhus tripartita* a common component of the Macaronesian flora, *Rhamnus lycioides*, with small purple flowers *Lycium imbricatum* and *Argania spinosa*.



Striga gesnerioides on
Euphorbia officinarum



Nauplius imbricatus



Coris monspeliensis
subsp. *maroccana*



Frankenia thymifolia



Euphorbia regis-jubae



Warionia saharae



Agadir fishing port

After making good time on the journey home we made a short detour to the view point above Agadir looking out onto the ever expanding city rebuilt after the devastating earthquake of 1960.

Day 3, 4th March – Local talks and walks

The day dawned with thunder and rain clouds so the decision was taken to spend the day locally with the hope we could undertake the planned trips in better weather. We were treated to a very special talk from Helène on Berber beauty products and stories of life in Morocco.

By the afternoon the rain had cleared allowing us to venture outside and across the road finding the unusual *Periploca angustifolia* climbing through the hedges of spiny dead branches along with *Nanorrhinum heterophylla*. Another highlight was the attractive purple flower of a Moroccan toadflax, *Linaria bipartita*. Spotted on a pylon was a Peregrine Falcon and hunting in the distance a Short-toed Eagle.



Linaria bipartita



Periploca angustifolia



Nanorrhinum heterophylla



Moringa oleifolia on terrace

Day 4, 5th March - Taroudannt, Palmery and Argan Co-operative at Tioute

Rain had continued overnight and over breakfast thunder and very heavy showers threatened to change plans again. With the hope that weather would be better further east we headed for the town of Taroudannt only to find swollen rivers and flooded roads but thankfully not enough to stop our journey. The route took us along the Souss valley, an important area of agricultural production particularly Citrus fruits and salad crops cultivated under polythene for export to northern Europe.

The town of Taroudannt is often described as a mini—Marrakech, its mud plastered ramparts an impressive site on arrival. During the tour of the Medina and Berber market various plant products were encountered including walnut bark used to brush teeth, we visited the Date market and a typical local bakery. A trip onto the ramparts gave good views over the town but alas not to the High Atlas and overhead migrating Swallows and Martins, their journeys like ours disrupted by the weather.

We headed south from Taroudannt towards the edge of the Anti-Atlas, a much lower and older range of mountains than the High Atlas to the north. Argan trees continued to dominate the landscape until we reached Tioute and its Palmery. After lunch we set off on a walk along the irrigation channels that are the life blood of the Palmery. The Date Palms, *Phoenix dactylifera* require a constant source of water and hence are associated with springs in these arid environments. The Dates produced by this palm are harvested from September and stored for later sale (in season at Christmas in the UK) or used as a source of food for the local people. Beneath the palms crops are grown including Broad Beans, Barley and Lucerne cultivated as a forage crop and green manure.

Lining the irrigation channels was the familiar Maidenhair Fern, *Adiantum capillus-veneris*, and above other watering demanding plants including White Poplar, *Populus alba* and the Carob tree, *Ceratonia siliqua*. Along the field edges we found well grown plants of Dutchman's Pipe, *Aristolochia baetica* in both flower and fruit. Above the crowns of the palms with many in flower we had views to the Glaoui Kasbah the setting for the film Ali Baba and the forty thieves.



The Tioute Palmery and Glaoui Kasbah



Irrigation channel lined with Maidenhair Fern



Aristolochia baetica

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Returning we stopped at the Argan oil co-operative in the village of Tioute, a mixture of both modern technology and the traditional – no one can forget the room of local women hand cracking the hard Argan nuts.

Day 5, March 6th – Anti-Atlas

Heading south-east we took the road to Ait Baha one of the larger towns in the western Anti Atlas to explore the plants and landscapes of this region. The Anti-Atlas contain some of the oldest rocks in the World, an ancient mountain range which started to form 300 million years ago and once rivalled the Himalaya in height. Today they are much eroded, the highest peaks between 2500—2700m. In comparison the more recent High Atlas only reached their maximum height within the last 10 million years, the tallest peak is Jbel Toubka at 4167m. A major feature of the Anti-Atlas is the highly folded rock strata, numerous valleys and rounded peaks.

As we approached across the river valley of the Souss we spotted large plants of a grey-leaved fleshy plant upto 3—4 metres tall, the primarily Saharan species, *Calotropis procera* in the Asclepiadaceae. Climbing into the Anti-Atlas rain closed in and we headed towards Ait Baha and a coffee stop. As the weather cleared our next stop was just beyond Ait Baha at a reservoir with feeding House Martins, Swallows and Red-rumped Swallows. There were good views of a Northern Wheater and as we headed onto the bus an Osprey overhead.

Travelling further into the Anti-Atlas our aim was a lunch stop amongst the Argan trees and overlooking a typical Anti-Atlas valley and villages. An unexpected and exciting find was the succulent *Caralluma munbyana*. Here we had views of the Saharan plants, *Warionia saharica* first seen at Cap Rhir but here growing in its typical habitat on cliff faces and for some the rare glimpse of a Gazelle. Thekla Larks were common and we had close views of the striking Moussier's Redstart and Black Wheaters. Moving onto an area with cliffs and terraces revealed some treasures including what must be one of the most spectacular native Moroccan plants, *Linaria ventricosa*. This Toadflax can grow to 2 metres with yellow red veined flowers of varying shades. Common on the road and hillsides was the yellow-flowered broom-like plant *Hesperolaburnum platycarpum*. On the terraces below us we saw plenty of Barbary Ground Squirrels jumping around the rocks their presence also revealed by empty Argan nuts expertly opened by these rodents. Walking up a track we all admired the 'rock garden' of *Euphorbia officinarum* some packed tightly into crevices. Here another species of *Caralluma*, *C. europaea*, was spotted with more angular stems. Looking across the valley to the village below and mountains beyond was a site that perhaps captured the atmosphere of the Anti-Atlas perfectly.

From here we turned back and headed west from Ait Baha to an open plain with some of the largest Argan Trees encountered. The area was full of *Asphodelus fistulosus* some in lines following the furrows of a plough, and one of the best finds was the diminutive *Salvia aegyptiaca*, a semi-desert species.



Calotropis procera



*Hesperolaburnum
platycarpum*



Linaria ventricosa



Euphorbia officinarum

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Salvia aegyptiaca



Caralluma europaea



Anti-Atlas village

Day 6, 7th March - Oued Massa and Souss National Parks

The Atlantic coastline is well known for its wetland reserves, the estuaries of major rivers draining into the ocean creating a mosaic of water channels, reeds and mud flats. From Agadir we first journeyed south to the reserve at Oued (river) Massa before returning to the Oued Souss. Just after leaving the Kasbah we encountered a herd of Dromedary, which had travelled 800 miles from the Sahara following the spring pasture.

The approach to Massa is through a coastal steppe of low growing drought resistant plants before reaching the river lined with *Tamarix*, reeds and the occasional date palm. At the first stop we were able to find three key plants amongst the cultivated fields whilst the occasional fodder laden donkey passed by. Close to the bus a large bright green leaved plant was *Pistacia atlantica* the source of the actual pistachio nut. A grey-leaved rather scruffy shrub is a rarity in the family Nitrariaceae, *Nitraria retusa*. Formerly placed in the Zygophyllaceae, *Nitraria* is a genus of about nine salt-tolerant species found mainly in the Sahara region across to Central Asia. Here on the Atlantic coast it reached its most westerly outpost. Further along and after some searching we found the parasitic plant, *Cynomorium coccineum* with its deep-purple phallic-like inflorescence, at its perfect best attracting numerous pollinating flies. This plant is a speciality of these wetland habitats in Morocco and southern Europe.



Nitraria retusa



Cynomorium coccineum



Elizaldia calycina



Flock of Cranes



Limonium mucronatum



Erodium hesperium



Ismelia versicolor



Rumex bipinnatus

This area proved an excellent spot for birds with many Warblers, good views of Moussier's Redstart, Zitting Cisticola, Woodchat Shrike and several Plain Tiger butterflies, similar to the Monarch butterfly, in the fields.

From the main car park we enjoyed some of the unique dune flora: a Sea Lavender, *Limonium mucronatum* with papery petals and winged stems; *Erodium hesperium* found only in this coastal area; and

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perhaps the botanical gem that Massa is best known for, *Ismelia versicolor* with beautiful tricoloured flowers. Other curiosities included *Rumex bipinnatus* with unusual dissected leaves and a *Euphorbia*, probably *E. falcata*. Birds spotted on the river included Spoonbills, Egrets, Moroccan cormorants with the distinctive white breast patch and we were treated to a flock of European Cranes flying over. On the way out we stopped to explore the succulent *Euphorbia officinarum* scrub with good views of a Swallowtail butterfly and a patch of the North African borage, *Elizaldia calycina*.

Returning to Agadir our final visit was to the Souss River reached after an unpromising drive through suburban Agadir and golf courses. The river had been in full flood due to the heavy rains a few days before and the birds were a little disappointing on this occasion. One of the main birds usually easily seen is the Greater Flamingo's but on this occasion we could only see them through scopes out at the river mouth.

Day 7, March 8th - The Western High Atlas

Our planned route into the foothills of the western High Atlas through Banana and Paradise Valley had been cut due to the recent floods which had swept away several bridges. Thankfully our planned route out from our final destination the Cascades du Imouzzer was open and as it turned out we were the first visitors to make it into the area for four days.

Our first stop looking down onto the new motorway to Marrakech was an opportunity to look at the open woodland of *Tetraclinis articulata*, the Thuya de Berbérie, the attractive wood used in many products and first encountered on as an inlay in the ornamental box used by Helene in her earlier talk. This conifer is only found in Morocco and southern Spain, the name referring to the cones which are split into fours and its finely divided foliage. As we climbed into the mountains the *Tetraclinis* became more common and bright pink splashes of *Cistus crispus* passed by. As we gained altitude the vegetation changed and our next stop was amongst the scrub of the Dwarf Fan Palm, *Chamaerops humilis* var. *cerasifera*, the variant with glaucous foliage mixed with *Lavandula dentata* var. *dentata*. On rocks above was one of the special plants of the High Atlas, the endemic *Polygala balansae*, a small spiny shrub with spectacular deep ruby purple and yellow flowers. We may be familiar with the herbaceous Milkwort from chalk grasslands in the UK but most members of this group are small shrubs. The cultivated Almonds trees were an indication of our altitude at about 850—900m and fossils in the rocks reminded us of the geology of these fold mountains.

Passing over a hill top we found clumps of the Holm Oak, *Quercus ilex*, again another indicator of altitude. This is really a tree of the Mediterranean but growing this far south is only found in the cooler and more amenable climate found at altitude in the High Atlas. Amongst the oaks were flowering plants of *Cistus crispus*, a spectacular display of yellow flowers by *Cytisus arboreus* and a small toadflax, *Linaria* species yet to be identified. We reached Immuzeur at c. 1400m with the cascades at their spectacular best. Before leaving we admired the Oleander, *Nerium oleander*, growing in the riverbed which is their natural habitat, and on a shady wall by the local co-operative, *Sedum modestum*.



Tetraclinis articulata



Cistus crispus



Nerium oleander



Sedum modestum



Lavandula dentata var. *dentata*



Chamaerops humilis var. *cerasifera*



Polygala balansae

Day 8, March 9th – Atlas Kasbah and walk to Tighanimine El Baz

This morning offered the chance to further explore the garden of the Atlas Kasbah and walk to a view point above the nearby village of Tighanimine El Baz. Leaving the grounds of the Kasbah it is evident that grazing is heavy in this area and plants tend to either be spiny such as the wire-net bush *Launaea arborescens*, *Zizyphus lotus* of which the cut branches are used to fence arable fields and of course the *Argania* trees. Other plants tend to be poisonous and unpalatable: the small-flowered *Asphodelus fistulosus* and larger leaved *Asphodelus ramosus* subsp. *nervosus* (not in flower) have needle-like crystals in the leaves; the yellow flowered and highly viscid *Ononis natrix* full of unpalatable oils; *Withania somnifera* in the Solanaceae, a rather scruffy small shrub seen without flowers is extremely poisonous. One of the few plants flowering profusely was the introduced South American *Nicotiana glauca* with blue/green leaves and tubular yellow flowers. This plant has become invasive here, able to root deeply to find underground water and hence often finding a home along roadside ditches where it is frequently seen. As we walked into the environs of the village *Emex spinosa*, a dock relative with very spiny fruits dominated, as did the rubbish, a scourge of Morocco.

The village of Tighanimine El Baz gives an insight into life for many Moroccans. It can be hard but here tourism has provided a new income for families enabling the village to expand, even if these new houses are often half built. Our route passed through the new part of the village and to the women's Argan co-operative housed in a brand new building. Dropping down to the river we made way for a herd of Goats and Dromedary and walked up into the old village and to a view point just beyond. From here we could see the older houses being taken over by the introduced Cactus, *Opuntia ficus-barbarica* with views along the river to plots of onions, beans and the large reed *Arundo donax*, lining the river bank. Clearing our rooms we enjoyed a glass of mint tea at the hotel and a chance to thank Hassan, Hélène and her staff at the Atlas Kasbah before leaving for our flight home.

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A gallery of Philip's photos from the trip can be found at
<http://www.flickr.com/photos/wildlifetravel/sets/72157632963051318>



Top: The Atlas Kasbah eco-lodge, amongst *Argania spinosa* trees.

First row, l to r: Plants of the Atlantic coast: *Cistanche phelyphaea*, *Euphorbia officinarum* and *Striga gesnerioides*

Second row, l to r: *Elizaldia calycina* at Oued Massa; *Acrida hungarica* near the hotel

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Top: House Bunting in the Medina at Taroudant

First row, l to r: Plants of the Anti-Atlas: *Linaria ventricosa*, *Carraluma munbyana*, *Calotropis procera*

Second row, l to r: Plants of the High Atlas: *Polygala balansae*, *Sedum modestum* and *Tetraclinis articulata*

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	ENGLISH NAME	LATIN NAME	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
BIRDS										
Family Anatidae (Ducks, Geese & Swans)										
	Ruddy Shelduck	<i>Tadorna ferruginea</i>		X						
	Mallard	<i>Anas platyrhynchos</i>						X		
	Teal	<i>Anas crecca</i>						X		
	Pochard	<i>Aythya ferina</i>					X			
Family Phasianidae (Pheasants and Partridges)										
	Quail	<i>Coturnix coturnix</i>						H		
	Barbary Partridge	<i>Alectoris barbara</i>					X		H	
Family Podicipedidae (Grebes)										
	Little Grebe	<i>Tachybaptus ruficollis</i>					X			
Family Phalacrocoracidae (Cormorants)										
	Great Cormorant	<i>Phalacrocorax carbo carbo/sinensis</i>		X			X	X		
	White-breasted Cormorant	<i>Phalacrocorax carbo maroccanus</i>		X				X		
Family Ardeidae (Hérons)										
	Cattle Egret	<i>Bubulcus ibis</i>				X	X	X		X
	Little Egret	<i>Egretta garzetta</i>		X				X		
	Great Egret	<i>Casmerodius albus</i>						X		
	Grey Heron	<i>Ardea cinerea</i>		X				X		
Family Ciconiidae (Storks)										
	White Stork	<i>Ciconia ciconia</i>				X	X			
Family Threskiornithidae (Spoonbills and Ibises)										
	Northern Bald Ibis	<i>Geronticus eremita</i>	A party of 8 feeding on the hillside near Oued Tamri, 3 rd							
	Spoonbill	<i>Platalea leucorodia</i>			X			X		
Family Phoenicopteridae (Flamingoes)										
	Greater Flamingo	<i>Phoenicopterus roseus</i>	A group of 60 or more, out in the distance at the mouth of the Oued Sous, 7 th							
Family Pandionidae (Ospreys)										
	Osprey	<i>Pandion haliaetus</i>	One at the reservoir above Ait Baha, 6 th							
Family Accipitridae (Hawks and Eagles)										
	Bonelli's Eagle	<i>Aquila fasciata</i>			X		X			
	Short-toed Eagle	<i>Circaetus gallicus</i>			X					
	Marsh Harrier	<i>Circus aeruginosus</i>			X					
	Sparrowhawk	<i>Accipiter nisus</i>						X		
Family Falconidae (Falcons)										
	Peregrine	<i>Falco peregrinus</i>			X		X			
	Kestrel	<i>Falco tinnunculus</i>		X	X	X	X	X	X	X
	Lesser Kestrel	<i>Falco naumanni</i>				X				
Family Gruidae (Cranes)										
	European Crane	<i>Grus grus</i>	A party of 16 flew over, Oued Massa, 7 th							
Family Rallidae (Rails and Crakes)										
	Coot	<i>Fulica atra</i>		X			X	X		
Family Recurvirostridae (Avocets and Stilts)										
	Black-winged Stilt	<i>Himantopus himantopus</i>						X		
Family Burhinidae (Stone curlews)										
	Stone Curlew	<i>Burhinus oedicnemus</i>							X	
Family Scolopacidae (Sandpipers)										
	Curlew	<i>Numenius arquata</i>						X		
	Greenshank	<i>Tringa nebularia</i>						X		
	Common Sandpiper	<i>Actitis hypoleucos</i>					X	X		

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Family Laridae (Gulls)										
	Black-headed Gull	<i>Chroicocephalus ridibundus</i>						X		
	Mediterranean Gull	<i>Ichthyaetus melanocephalus</i>						X		
	Yellow-legged Gull	<i>Larus michahellis</i>		X	X	X	X	X	X	X
	Lesser Black-backed Gull	<i>Larus fuscus</i>		X				X		
	Audouin's Gull	<i>Larus audouinii</i>		X						
Family Sternidae (Terns)										
	Sandwich Tern	<i>Sterna sandvicensis</i>		X				X		
	Caspian Tern	<i>Hydroprogne caspia</i>						X		
Family Columbidae (Pigeons and Doves)										
	Rock Dove/Feral Pigeon	<i>Columba livia</i>		X	X	X	X	X	X	X
	Woodpigeon	<i>Columba palumbus</i>				X	X	X	X	
	Collared Dove	<i>Streptopelia decaocto</i>		X	X	X	X	X	X	X
	Laughing Dove	<i>Streptopelia senegalensis</i>		X	X	X		X	X	X
Family Strigidae (Owls)										
	Little Owl	<i>Athene noctua</i>					X	X		
Family Apodidae (Swifts)										
	Swift	<i>Apus apus</i>			X			X	X	
	Pallid Swift	<i>Apus pallidus</i>		X		X	X	X	X	X
	Little Swift	<i>Apus affinis</i>		X		X	X			
	Alpine Swift	<i>Apus melba</i>				X				
Family Meropidae (Bee-eaters)										
	Bee-eater	<i>Merops apiaster</i>					X			
Family Upupidae (Hoopoes)										
	Hoopoe	<i>Upupa epops</i>					X			X
Family Alaudidae (Larks)										
	Crested Lark	<i>Galerida cristata</i>		X	X	X	X	X		X
	Thekla Lark	<i>Galerida theklae</i>		X			X	X	X	X
Family Hirundinidae (Swallows and Martins)										
	Crag Martin	<i>Ptyonoprogne rupestris</i>		X			X			
	House Martin	<i>Delichon urbica</i>		X		X	X	X		
	Red-rumped Swallow	<i>Hirundo daurica</i>		X		X	X	X	X	X
	Swallow	<i>Hirundo rustica</i>		X	X	X	X	X	X	X
	Sand Martin	<i>Riparia riparia</i>						X		
	Brown-throated Martin	<i>Riparia paludicola</i>						X		
Family Motacillidae (Pipits and Wagtails)										
	Meadow Pipit	<i>Anthus pratensis</i>						X		
	Spanish Wagtail	<i>Motacilla (flava) iberiae</i>		X			X			
	Moroccan Wagtail	<i>Motacilla (alba) subpersonata</i>		X		X		X		
	White Wagtail	<i>Motacilla alba</i>				X	X			X
Family Turdidae (Thrushes and Chats)										
	Black Redstart	<i>Phoenicurus ochruros</i>		X	X		X	X	X	X
	Moussier's Redstart	<i>Phoenicurus moussieri</i>		X		X	X	X	X	X
	Stonechat	<i>Saxicola torquata</i>		X				X	X	
	Black Wheatear	<i>Oenanthe leucura</i>		X			X		X	X
	Northern Wheatear	<i>Oenanthe oenanthe</i>					X			
	Blue Rock Thrush	<i>Monticola solitarius</i>							X	X
	Blackbird	<i>Turdus merula</i>		X	X	X	X	X	X	X
Family Timaliidae (Babblers)										
	Fulvous Babbler	<i>Turdoides fulva</i>					X			
Family Sylviidae (Warblers)										
	Blackcap	<i>Sylvia atricapilla</i>			X	X	X	X	X	X
	Sardinian Warbler	<i>Sylvia melanocephala</i>		X	X	X	X	X	X	X
	Western Subalpine Warbler	<i>Sylvia cantillans</i>			X			X		X

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	ENGLISH NAME	LATIN NAME	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
	Western Orphee Warbler	<i>Sylvia hortensis</i>					X			
	Chiffchaff	<i>Phylloscopus collybita</i>		X			X	X	X	X
	Willow Warbler	<i>Phylloscopus trochilus</i>						X		
	Cetti's Warbler	<i>Cettia cetti</i>						X		
Family Cisticolidae (Cisticolas)										
	Zitting Cisticola	<i>Cisticola juncidis</i>		X				X		
Family Paridae (Tits)										
	Great Tit	<i>Parus major</i>		X	X	X	X	X	X	X
	African Blue Tit	<i>Cyanistes teneriffae</i>						X	X	
Family Laniidae (Shrikes)										
	Southern Grey Shrike	<i>Lanius elegans</i>		X		X	X		X	
	Woodchat Shrike	<i>Lanius senator</i>		X	X	X	X	X	X	X
Family Malaconotidae (Tchagras)										
	Black-crowned Tchagra	<i>Tchagra senegalus</i>						X		
Family Pycnonotidae (Bulbuls)										
	Common Bulbul	<i>Pycnonotus barbatus</i>		X	X	X	X	X	X	X
Family Corvidae (Crows)										
	Maghreb Magpie	<i>Pica (pica) mauritanica</i>		X	X	X	X	X	X	X
	Raven	<i>Corvus corax</i>					X			
Family Sturnidae (Starlings)										
	Spotless Starling	<i>Sturnus unicolor</i>		X		X	X	X	X	X
Family Passeridae (Sparrows)										
	House Sparrow	<i>Passer domesticus</i>		X	X	X	X	X	X	X
Family Fringillidae (Finches)										
	Chaffinch	<i>Fringilla coelebs</i>		X	X	X	X	X	X	X
	Greenfinch	<i>Carduelis chloris</i>		X	X	X	X	X	X	X
	Goldfinch	<i>Carduelis carduelis</i>			X	X	X	X		X
	Linnet	<i>Carduelis cannabina</i>						X		
	Siskin	<i>Carduelis spinus</i>	1 male in the palmery at Tiout, 5 th							
	Serin	<i>Serinus serinus</i>		X		X	X	X	X	X
Family Emberizidae (Buntings)										
	Corn Bunting	<i>Miliaria calandra</i>			X		X	X	X	X
	House Bunting	<i>Emberiza sahari</i>		X	X	X	X	X	X	X
	Cirl Bunting	<i>Emberiza cirlus</i>			X	X				

	ENGLISH NAME	LATIN NAME	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
AMPHIBIANS & REPTILES										
	North African Green Toad	<i>Bufo boulengeri</i>				X		X	X	X
	North African Water Frog	<i>Pelophylax saharica</i>				X			X	X
	Moorish Terrapin	<i>Mauremys leprosa</i>	Several in the Oued Massa, 7 th							
	Moorish Gecko	<i>Tarentola mauretanica</i>	One on a wall by the pool at Atlas Kasbah, 9 th							
	Bibron's Agama	<i>Agama bibroni</i>	The big, spiny lizard seen sunbathing on a rock in the High Atlas, 8 th							
	Leopard Fringe-toed Lizard	<i>Acanthodactylus busacki</i>	The lizard in the sandy/saltmarsh vegetation, Oued Souss, 7 th							
LARGER MAMMALS										
	Dromedary	<i>Camelus dromedarius</i>		X				X		X
	Algerian Hedgehog	<i>Atelerix algirus</i>	One dead by the road, 5 th							
	Barbary Ground Squirrel	<i>Atlantoxerus getulus</i>					X		X	

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	ENGLISH NAME	LATIN NAME	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th
BUTTERFLIES										
Family Papilionidae (Swallowtails)										
	Swallowtail	<i>Papilio machaon</i>						X		
Family Pieridae (Whites)										
	Moroccan Orange Tip	<i>Anthocharis belia</i>						X		X
	Large White	<i>Pieris brassicae</i>						X		
	Small White	<i>Pieris rapae mauretanica</i>						X		X
	Bath White	<i>Pontia daplidice</i>						X		
	Clouded Yellow	<i>Colias croceus</i>						X		X
	Brimstone	<i>Gonopteryx rhamni</i>								X
Family Nymphalidae (Admirals and Fritillaries)										
	Painted Lady	<i>Vanessa cardui</i>								X
	Red Admiral	<i>Vanessa atalanta</i>							X	
Family Satyridae (Browns)										
	Speckled Wood	<i>Pararge aegeria</i>						X		
Family Danaide (Monarchs)										
	Plain Tiger	<i>Danaus chrysippus</i>	2 or 3 in the small fields, Oued Massa, 7th							
Family Lycaenidae (Blues & Coppers)										
	Moroccan Hairstreak	<i>Tomares mauretanicus</i>	The small orangey butterfly in the gully, at the first Euphorbia scrub stop, Cap Rhir, 3rd							
	Small Copper	<i>Lycaena phlaeas</i>						X		
	Lang’s Short-tailed Blue							X		
	Common Blue	<i>Polyommatus icarus</i>						X	X	
Family Hesperidae (Skippers)										
	Skipper sp, maybe Tufted Skipper or False Marbled Skipper	<i>Carcharodus sp, maybe C. flocciferus or C.tripolina</i>	The tiny skipper in hot, sunny areas at Oued Massa, 7th							
OTHERS										
	Death’s-head Hawkmoth	<i>Acherontia atropos</i>	1 dead adult picked up in the Anti Atlas, 6th							
	a grasshopper	<i>Acrida hungarica</i>	The long, colourful grasshopper near the hotel on 4 th							
	Migratory Locust	<i>Locusta migratoria</i>	The large grasshopper at Tamri, 3 rd							
	a praying mantis	<i>Blepharopsis mendica</i>	At Oued Massa, 7 th							
	Vagrant Emperor	<i>Hemianax eppiphiger</i>	The large, sandy coloured dragonfly seen a few times during the trip							



l to r: Moroccan Hairstreak near Cap Rhir; Plain Tiger at Oued Massa; the praying mantis *Blepharopsis mendica* at Oued Massa

Morocco species lists and trip report, 2nd to 9th March 2013

PLANT LIST

Tim Upson

cf. Indicates identifications which are tentative

FAMILY

COMMON NAME/NOTES

Atlas Kasbah

Garden and crop areas

Acanthaceae	<i>Justicia adhatoda</i>	Shrub by hotel entrance. White flower spikes, red veining
Aizoaceae	<i>Carpobrotus acinaciformis</i>	Hottentot fig from South Africa
Casuarinaceae	<i>Casuarina equisetifolia</i>	Planted along drive
Compositae	<i>Argyranthemum frutescens</i>	White & flowered
Compositae	<i>Argyranthemum maderense</i>	Yellow-flowered
Compositae	<i>Calendula stellata</i>	Native weed
Convolvulaceae	<i>Convolvulus althaeoides</i>	Native weed
Convolvulaceae	<i>Ipomaea batatus</i>	Sweet potato - climber by pottery area
Cupressaceae	<i>Cupressus sempervirens</i>	Pencil cedar
Euphorbiaceae	<i>Acalypha wilkesiana</i>	Ornamental with coloured leaves
Euphorbiaceae	<i>Euphorbia helioscopia</i>	Native weed
Labiatae	<i>Ajuga iva</i>	Yellow-flowered form
Labiatae	<i>Ocimum spp.</i>	Several cultivated including common Basil, <i>O. basilicum</i> ,
Labiatae	<i>Rosmarinus officinalis</i>	Rosemary
Leguminosae	<i>Lotus creticus</i>	Yellow flowered legume
Leguminosae	<i>Vicia lutea</i>	Yellow vetch
Malvaceae	<i>Hibiscus rosa-sinensis</i>	Cultivated with large red flowers
Moringaceae	<i>Moringa oleifera</i>	Horseradish tree on terrace - white flowers
Nyctaginaceae	<i>Bougainvillea hybrid</i>	Dwarf shrub with coloured bracts
Palmae	<i>Washingtonia filifera</i>	Palm along driveway
Papaveraceae	<i>Glaucium corniculatum</i>	Long-horned poppy - red flowered
Polygonaceae	<i>Emex spinosa</i>	Spiny fruits
Polygonaceae	<i>Rumex vesicarius</i>	Dock with red flushed fruits
Myoporaceae	<i>Myoporum laetum</i>	Used as a hedge - white flowers
Resedaceae	<i>Reseda lutea</i>	yellow or wild mignonette
Resedaceae	<i>Reseda alba</i>	white mignonette

Grounds and environs. Semi-desert of Argania scrub. Rocky outcrops and heavily grazed areas

Asclepiaceae	<i>Periploca angustifolia</i>	In hedges along road
Asphodelaceae	<i>Asphodelus ramosus</i> subsp. <i>nervosus</i>	Large flowered species (named as <i>A. aestivus</i>)
Asphodelaceae	<i>Asphodelus fistulosus</i>	Small-flowered, branched inflorescence - common
Boraginaceae	<i>Echium horridum</i>	Red flowers
Liliaceae	<i>Urginea maritima</i>	Leaves only
Cistaceae	<i>Helianthemum aegyptiacum</i>	Yellow flowered
Compositae	<i>Catanache arenaria</i>	White flowers, dark red centre
Compositae	<i>Chamaemelum fuscum</i>	White flowered with feathery leaves
Compositae	<i>Chrysanthemum coronarium</i>	Very common in field opposite driveway
Compositae	<i>Cladanthus arabicus</i>	Moroccan endemic - widespread & very common
Compositae	<i>Launaea arborescens</i>	Wire-net bush with yellow flowers
Compositae	<i>Paronychia argentea</i>	Prostrate herb with smaller silver papery bracts
Compositae	<i>Paronychia capitata</i>	Prostrate herb with larger silver papery bracts

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Compositae	<i>Phagnalon saxatile</i>	Pale yellow brown flowers. In hedge at bottom of drive
Compositae	<i>Sonchus tenerrimus</i>	Sow thistle with pinnate leaves - one planted
Compositae	<i>Volutaria cf. maroccana</i>	Moroccan endemic - Mauve flowers
Cruciferae	<i>Carrichtera annua</i>	White flowered with divided foliage
Curcubitaceae	<i>Bryonia dioica</i>	Climber
Graminae	<i>Avena sterilis</i>	Grass with large spikelets
Graminae	<i>Hyparrhenia hirta</i>	Common in area across from drive
Hyacinthaceae	<i>Muscari comosum</i>	Grape hyacinth
Labiatae	<i>Lavandula multifida</i>	Violet-blue flowers, divided foliage
Leguminosae	<i>Ononis natrix</i>	Sticking viscid shrub
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda buttercup - invasive weed of fields
Plantaginaceae	<i>Plantago albicans</i>	Rosettes of silvery foliage
Plantaginaceae	<i>Plantago lagopus</i>	
Primulaceae	<i>Anagallis arvensis</i>	Scarlet pimpernel
Polygonaceae	<i>Emex spinosa</i>	Widespread in some areas - spiny fruits
Rhamnaceae	<i>Zizyphus lotus</i>	Spiny shrub - used for hedging
Sapotaceae	<i>Argania spinosa</i>	Moroccan endemic - Argan tree
Scrophulariaceae	<i>Linaria bipartita</i>	Violet blue toadflax with large flowers
Scrophulariaceae	<i>Nanorrhinum heterophylla</i>	Previously Kickxia - scrambling through hedge at end of drive
Solanaceae	<i>Heliotropium crispum</i>	Heliotrope - white flowered
Solanaceae	<i>Nicotiana glaucum</i>	Large glaucous leaved shrub with yellow tubular flowers. Introduced invasive from South America
Solanaceae	<i>Solanum dulcamara</i>	
Solanaceae	<i>Withania somnifera</i>	Pale yellow green flowers - poisonous and dominating in grazed areas
Zygophyllaceae	<i>Fagonia cretica</i>	Common purple flowered herb

Sunday 3rd March - Tamri & Cap Rhir. Bald Ibis site

Salt marsh and sand dune vegetation at mouth of Oued Tamri.

Aizoaceae	<i>Mesembryanthemum crystallinum</i>	Large glandular leaves
Caryophyllaceae	<i>Polycarpaea nivea</i>	White tomentose leaves in dunes
Chenopodiaceae	<i>Arthrocnemum macrostachyum</i>	Succulent plant in salt marsh
Chenopodiaceae	<i>Halimione portulacoides</i>	Common grey leaved shrub in fore dunes
Chenopodiaceae	<i>Salsola oppositifolia</i>	Succulent leaves and papery fruits
Chenopodiaceae	<i>Suaeda vera</i>	Dominate succulent plant in salt marsh
Compositae	<i>Reichardia tingitana</i>	Yellow flowered daisy
Cruciferae	<i>Cakile maritima</i>	Annual at edge of dunes
Euphorbiaceae	<i>Euphorbia paralias</i>	Seen with spurge hawkmoth caterpillar
Frankeniaceae	<i>Frankenia laevis</i>	Pink flowered herb
Leguminosae	<i>Lotus creticus</i>	
Leguminosae	<i>Ononis diffusa</i>	Sticky plant on dunes
Orobanchaceae	<i>Cistanche phelypaea</i>	Large yellow spike - parasitic on chenopodiaceae
Polygonaceae	<i>Polygonum maritimum</i>	Sea Knotgrass
Polygonaceae	<i>Rumex vescarius</i> subsp. <i>simpliciflorus</i>	Red flushed fruits
Solanaceae	<i>Lyciumimbricatum</i>	Spiny shrub with small purple flowers
Umbelliferae	<i>Eryngium maritimum</i>	Sea Holly

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Cap Rhir - Euphorbia scrub and example of Macaronesian flora. Lunch stop at Cap Rhir lighthouse

Anacardiaceae	<i>Pistacia lentiscus</i>	Mediterranean sp at southern end of its distribution
Anacardiaceae	<i>Rhus tripartita</i>	3-lobed leaves, spiny shrub
Asparagaceae	<i>Asparagus sp.</i>	
Balanophoraceae	<i>Cynomorium coccineum</i>	Club-like parasitic plant - purple/red
Boraginaceae	<i>Echium sp.</i>	Very attractive sky blue flowers
Chenopodiaceae	<i>Salsola kaki</i>	Succulent with papery fruits
Chenopodiaceae	<i>Salsola oppositifolia</i>	Succulent leaves and papery fruits
Compositae	<i>Launaea arborescens</i>	Yellow flowered shrub - wirenet bush
Compositae	<i>Nauplius imbricatus</i>	Shrubby daisy with large yellow flowers
Compositae	<i>Reichardia tingitana</i>	Yellow flowered daisy
Compositae	<i>Senecio anteuphorbia</i>	Stem succulent - important component of scrub
		Moroccan endemic - yellow flowers and strongly scented leaves
Compositae	<i>Warionia saharae</i>	
Cruciferae	<i>Mattiola littorea</i>	Sea-stock relative
		Main species of succulent Euphorbia with spiny succulent stems
Euphorbiaceae	<i>Euphorbia officinarum</i>	Important component of scrub with lime-green flowers
Euphorbiaceae	<i>Euphorbia regis-jubae</i>	
Leguminosae	<i>Ononis natrix</i>	
Frankeniaceae	<i>Frankenia thymifolia</i>	Pink flowered prostrate herb
Labiatae	<i>Lavandula dentata</i> var. <i>candicans</i>	With grey leaves
Labiatae	<i>Lavandula multifida</i>	
Labiatae	<i>Stachys sp.</i>	Pink flowered
Labiatae	<i>Thymus sp.</i>	
Labiatae	<i>Teucrium cf. polium</i>	Tight flower heads of purple flowers
Liliaceae	<i>Androcymbium gramineum</i>	Early flowering - leaves only seen
		Very deep red/purple flowered parasitic plant by roadside
Orobanchaceae	<i>Orobanche sanguineum</i>	Very attractive pink/purple flower spikes and parasitic on Euphorbia scrub
Orobanchaceae	<i>Striga gesnerioides</i>	
Plantaginaceae	<i>Plantago aff. mauritanica</i>	Described as like 'pine seedling'
Plumbaginaceae	<i>Limonium sinuatum</i>	Everlasting flower - seen in patches
	<i>Coris monspeliensis</i> subsp. <i>maroccana</i>	
Primulaceae		Small pinkish flowers
Rhamnaceae	<i>Rhamnus lycioides</i>	Spiny shrub
Sapotaceae	<i>Argania spinosa</i>	Argan seen in places
Scrophulariaceae	<i>Nanorrhinum heterophylla</i>	Split from Kickxia - scrambling with yellow flowers
Solanaceae	<i>Lycium imbricatum</i>	Spiny shrub with small purple flowers
Umbelliferae	<i>Pseudorlaya pumila</i>	Small umbel

Tuesday 5th March - visit to Taroudannt, Argan oil co-operative & Palmery at Tioute

Palmery - planted Date Palms and cultivated fields

Aristolochiaceae	<i>Aristolochia baetica</i>	
Euphorbiaceae	<i>Euphorbia helioscopia</i>	In cultivated field
Euphorbiaceae	<i>Mercurialis annua</i>	
Leguminosae	<i>Ceratonia siliqua</i>	Carob - few trees by side of path
Palmae	<i>Phoenix dactylifera</i>	Common date palm
Polypodiaceae	<i>Adiantum capillus-veneris</i>	Fern on side or irrigation channel
Rubiaceae	<i>Rubia peregrina</i>	

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Salicaceae	<i>Populus alba</i>	White Poplar
Solanaceae	<i>Solanum sp.</i>	Orange fruits in papery bracts
Solanaceae	<i>Withania frutescens</i>	

Wednesday 6th March - Anti-Atlas and Ait-Baha

Aizoaceae	<i>Aizoon canariensis</i>	Common in roadside areas
Asclepiadaceae	<i>Calotropis procera</i>	First stop for this Saharan plant
Asclepiadaceae	<i>Caralluma europaea</i>	Square stemmed species seen after lunch
Asclepiadaceae	<i>Caralluma munbyana</i>	spotted stemmed species at lunch stop
		Small-flowered and much branched inflorescence - common
Asphodelaceae	<i>Asphodelus fistulosus</i>	
Boraginaceae	<i>Echium trygorrhizum</i>	Red flowered weedy herb
Cruciferae	<i>Clypeola sp.</i>	small yellow flowered herb
Euphorbiaceae	<i>Euphorbia officinarum</i>	Forming rock garden
Leguminosae/Fabaceae	<i>Acacia gummifera</i>	
Leguminosae/Fabaceae	<i>Hesperolaburnum platycarpum</i>	Common yellow flowered pea shrub
Leguminosae/Fabaceae	<i>Genista tricuspidata</i>	Yellow gorse-like shrub
Labiatae/Lamiaceae	<i>Lavandula multifida</i>	
Labiatae/Lamiaceae	<i>Salvia aegyptica</i>	Small flowered herb
Liliaceae	<i>Urginea maritima</i>	Leaves only
Pteridaceae	<i>Cheilanthes pteridioides</i>	In rock crevices
Rhamnaceae	<i>Zizyphus lotus</i>	
Sapotaceae	<i>Argania spinosa</i>	Large trees viewed on plain
Scrophulariaceae	<i>Linaria ventricosa</i>	Tall attractive toadflax - rusty yellow veined flowers
Scrophulariaceae	<i>Nanorrhinum heterophylla</i>	Yellow flowered climbing toadflax
Scrophulariaceae	<i>Scrophularia sp.</i>	Attractive small purple/white flowers
Umbelliferae	<i>Eryngium sp.</i>	Small herb

Thursday 7th March - Oued Massa and Souss National Park

Cultivated areas

Anacardiaceae	<i>Pistacia atlantica</i>	Medium tree at first stop.
Leguminosae	<i>Acacia ehrenbergiana</i>	Planted as hedges
		Small white flowers with grey foliage. Closely related to the Zygophyllaceae
Nitrariaceae	<i>Nitraria retusa</i>	
Solanaceae	<i>Lycium imbricatum</i>	Spiny shrub with purple flowers

Rivers margins and wetland areas

Balanophoraceae	<i>Cynomorium coccineum</i>	Parasitic plant
Chenopodiaceae	<i>Arthrocnemum macrostachyum</i>	Listed as <i>Arthrocnemum glaucum</i> at park.
Chenopodiaceae	<i>Suaeda vera</i>	Listed as <i>Suaeda fruticosa</i> at park
Frankeniaceae	<i>Frankenia laevis</i>	Pink flowered herb
		Very tall grass used as shelter belt and along river margins
Graminae	<i>Arundo donax</i>	
Graminae	<i>Phragmites altissima</i>	Reedmace
Juncaceae	<i>Juncus acutus</i>	Pointed sedge
Palmae	<i>Phoenix dactylifera</i>	Occasional along river edge
Tamaricaceae	<i>Tamarix gallica</i>	Pink flowered shrub

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Sandy dune areas

Boraginaceae	<i>Anchusa hispida</i>	Small blue flowers
Boraginaceae	<i>Heliotropium crispum</i>	White flowers
Compositae	<i>Calendula stellata</i>	Yellow daisy
Compositae	<i>Centaurea cf. sphaerocephala</i>	Knapweed
Compositae	<i>Ismelia versicolor</i>	Endemic to Morocco. Named as Chrysanthemum carinatum & now transferred to Ismelia
Cruciferae	<i>Clypeola sp.</i>	Small white flowers
Euphorbiaceae	<i>Euphorbia falcata</i>	Creeping herb in dunes
Geraniaceae	<i>Erodium hesperium</i>	Endemic to Atlantic coast of Morocco
Leguminosae	<i>Lotus creticus</i>	Yellow flowered & grey leaves
Leguminosae	<i>Ononis natrix</i>	Very viscid sub-shrub
Leguminosae/Fabaceae	<i>Retama monosperma</i>	White scented flowers on leafless shrub
Plumbaginaceae	<i>Limonium mucronatum</i>	Papery petals & winged stems
Polygonaceae	<i>Rumex bipinnatus</i>	Unnamed dock with lobed leaves
Polygonaceae	<i>Rumex bucephalophorus</i>	Red flushed fruits
Euphorbia scrub		
Aizoaceae	<i>Aizoon canariensis</i>	Prostrate leaf succulent by road
Boraginaceae	<i>Elizaldia calycina</i>	On roadside bank
Compositae	<i>Senecio anteuphorbia</i>	Succulent stems
Ephedraceae	<i>Ephedra fragilis</i>	Scrambling shrub
Euphorbiaceae	<i>Euphorbia officinarum</i>	Dominant succulent in community
Labiatae	<i>Lavandula multifida</i>	
Plumbaginaceae	<i>Limonium mucronatum</i>	Papery petals & winged stems
Solanaceae	<i>Withania frutescens</i>	Large green flowered shrub in stream bed

Friday 8th March - High Atlas to Cascades du Immouzer

Apocyanaceae	<i>Nerium oleander</i>	Oleander with pink flowers - in river bed at Cascades
Asclepiaceae	<i>Periploca angustifolia</i>	Scrambling plant not in flower
Cistaceae	<i>Cistus crispus</i>	Deep pink flowers
Cistaceae	<i>Fumana fontanesii</i>	small adpressed leaves
Cistaceae	<i>Helianthemum pergamaceum</i>	Both white and pink flowered variants
Compositae	<i>Anacyclus cf. pyrethrum</i>	White flowered herb at first stop
Compositae	<i>Artemisia herba-alba</i>	Grey leaved sub shrub
Crassulaceae	<i>Sedum modestum</i>	Wall by Argan co-operative in Immouzer
Crassulaceae	<i>Umbilicus horizontalis</i>	Wall by Argan co-operative in Immouzer
Cupressaceae	<i>Juniperus oxycedrus</i>	Needle-like leaves
Cupressaceae	<i>Tetraclinis articulata</i>	Thuya de Bérberie
Fagaceae	<i>Quercus ilex</i>	Trees restricted to top of pass following red shales
Globulariaceae	<i>Globularia alypum</i>	Blue flowered sub-shrub
Labiatae/Lamiaceae	<i>Lavandula dentata</i> var. <i>dentata</i>	Shrub with bracts at top of flower
Labiatae/Lamiaceae	<i>Lavandula multifida</i>	A few plants at one stop
Leguminosae	<i>Chamaecytisus mollis</i>	White flowered and scented shrub - common
Leguminosae	<i>Cytisus arboreus</i>	Yellow flowered broom
Leguminosae	<i>Ebenus pinnata</i>	Possible silver-leaved herb at first stop - no flowers
Oleaceae	<i>Olea europaea</i>	Olive
Palmae	<i>Chamaerops humilis</i> var. <i>cerasifera</i>	Glaucous leaved variant of dwarf fan palm

Morocco species lists and trip report, 2nd to 9th March 2013

Pinaceae	<i>Pinus halepensis</i>	Planted
Polygalaceae	<i>Polygala balansae</i>	Purple and yellowed flowered spiny bush - endemic to High & Anti Atlas
Rhamnaceae	<i>Zizyphus lotus</i>	Spiny shrub - used for hedging
Rosaceae	<i>Prunus dulcis</i>	Almond
Sapotaceae	<i>Argania spinosa</i>	Argan
Scrophulariaceae	<i>Linaria sp.</i>	Small toadflax

Saturday 9th March - Walk to local village of . Semi-desert of Argania shrub with areas heavily disturbed

Aristolochiaceae	<i>Aristolochia baetica</i>	Found above river scrambling through hedge
Cactaceae	<i>Opuntia ficus-barbarica</i>	Fig of the Berbers - Invasive around village and environs. Like Opuntia ficus-indica & recently reclassified
Graminae	<i>Arundo donax</i>	Along river
Palmae	<i>Phoenix dactylifera</i>	By mosque along river bank
Polygonaceae	<i>Emex spinosa</i>	Extremely common around village
Urticaceae	<i>Urtica pilulifera</i>	Roman nettle