N&S Wildlife & Walking Holidays



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Morocco 14 – 21 March 2019

Participants

John and Jan Croft John Rumpus and Rosemary Macdonald Kate Macmillan Michael and Carolyn Greer Walker Paul and Hilary Wordley Katherine Montgomery Diana Grace Suzanne Steer Alice de las Casas Veronica Pratt

Leaders

Richard Hobbs, Sally Ward and Chris Gibson. Report by Chris Gibson, plant list by Richard Hobbs. Photos by Chris, Richard and Sally – by Chris if there is no photocredit. Cover, top row: Moussier's redstart; the only cloud of the week. Middle row: *Fagonia cretica*; olives on display in Agadir souk (RH); *Catananche arenaria*. Bottom row: Black wheatear; Moroccan orange-tip ssp. *androgyne*.



We stayed at Atlas Kasbah Ecolodge <u>http://atlaskasbah.com/en/</u>, above. Below – attired traditionally on the last evening (SW).



This holiday, as for every Honeyguide holiday, also puts something into conservation in our host country by way of a contribution to the wildlife that we enjoyed. The conservation contribution of £40 per person was supplemented by Gift Aid and we were able to give £680 to GREPOM/BirdLife Morocco – Groupe de Recherche pour la Protection des Oiseaux au Maroc. This is towards the cost of wardens to safeguard nesting bald ibises. Khadija Bourass, the Executive director of GREPOM/ Birdlife Maroc, sent the following acknowledgement:

"We truly would like to thank you for your interest in our common cause of wildlife conservation. We appreciate your thoughtful contribution for our project for the Bald Ibis in the Souss-Massa National Park Our actions in favor of the conservation of the Bald Ibis in the Souss-Massa National Park could not be so effective without your various supports."

As at the end of March 2019, the total for all conservation contributions through Honeyguide since 1991 was £129,542.

Thursday 14 March: the way there, and local walk

Our very early flight from a blustery, wet Gatwick was delayed for a couple of hours after a medical emergency on board. Fortunately, it wasn't one of our group, and equally fortunately for the victim it was just as we were taxiing down to the runway. This meant a return to the stand, where the passenger was treated by paramedics before being taken off the plane; the crew then had to check all cabin baggage to make sure all was well; and after that the wait for a new take-off slot but the EasyJet staff deserve fulsome praise for their calm professionalism.

The pilot managed to put his foot down a bit on the flight, so in the end we arrived in a very hot and sunny Agadir at lunchtime, only an hour behind schedule. Passport Control seemed to take an age – we were all raring to go – but once through, it was only a short transfer to our hilltop destination, the Atlas Kasbah Ecolodge, passing spotless starlings, hoopoes and Maghreb magpies, as we entered the foothills of the Atlas Mountains.

Welcomed by Hassan, the owner of Atlas Kasbah who designed and built it only a few years ago, belying its historic appearance, we were ushered straight into the first of many wonderful meals as the bags magically found their way to our rooms. As became the norm, our meal was created largely from vegetables and fruit, insofar as possible sourced from the garden, and from the high terrace we were able to begin our week of wildlife-watching, with common bulbuls in the bushes, a swallowtail butterfly, and fly-over Barbary falcon and yellow-legged gulls. After some 18 months without meaningful rain, the drought was beginning to take its toll on the landscape. At a time when the rolling foothills of the Atlas Mountains should be ablaze with a colourful array of wild flowers, from spring bulbs to poppies and other annuals, it was a scene of parched aridity, the bones of the land clearly visible through its hide. Almost the only green came from deep-rooted argan trees, so important to the local economy, naturally studded evenly across the stony plateaux and slopes in an attempt to make best use of what rainfall or condensation comes their way.



Argan trees in the parched landscape.

After a while to unpack, we set out on our first local walk, starting in the relative lushness of the garden: a verdancy due in part to the exclusion of browsing goats, but especially due to efforts of Atlas Kasbah residents, as translated through the biofiltration water purification plant, complete with its thriving population of Saharan marsh frogs! Richard introduced all to many unfamiliar plants, some (such as *Casuarina, Acacia, Albizia, Jacaranda* and *Myoporum*) originating from other sub-tropical parts of the world, others natives, like the ubiquitous argan, a Moroccan endemic, in fruit and flower at the same time. An almost-black Moorish gecko rested in the shadows on one of the trunks, presumably at risk of overheating if it came out into the intense sunlight.

Out into the countryside beyond the garden wall, it was as dry as we feared, and the flowers consequently missing or sparse or stunted. Large yellow rest-harrow was the most obvious, its gummy leaves probably helping to deter all but the hungriest goats. The endemic knapweed-a-like *Volutaria maroccana* and orange *Cladanthus arabicus* were in flower, but only closely appressed to the ground, and the hedge was made up of zig-zag stemmed *Zizyphus lotus*, wispy *Ephedra altissima*, and *Periploca angustifolia*, the last with its distinctive 'Dali-moustache' fruits.



Large yellow restharrow; Volutaria maroccana; Cladanthus arabicus.

Almost the first insect we saw, nectaring on the *Bougainvillea*, was a hummingbird hawk-moth, but surprisingly this was the only one of the whole week. Meanwhile among the ornamental lavenders and rosemary, a few butterflies flitting around revealed themselves to be long-tailed and Lang's short-tailed blues, and we found Egyptian locusts, the segmented egg case of a praying mantis and the three-dimensional web of a cage-web spider, the spiky female clinging to the bottom end of the long, twisted, silken egg-sac. Bulbuls burbled in pairs and trios from many a tree, a house bunting sang from the main building, and Moussier's redstarts flicked brightly between stone walls and tree trunks: soon to become familiar, probably two pairs were breeding in the garden. These archetypal North African birds, which rarely make it across the Mediterranean, mingled with much more familiar fare – numerous house sparrows, blackbirds, serins, African-race chaffinches (like ours, but as though painted by a colour-blind artist) and a couple of robins, the last probably northbound migrants.



Bulbuls and house bunting, common birds in the hotel garden.

Moving from the road onto the camel drove road between the Atlas and the Sahara, 'crested' larks kept us on our toes – eventually we obtained views of the underwings and/or heard the distinctive calls and songs: it appeared that all those on the stony pasture were Theklas while those on the small cultivated plots were cresteds. A pair of southern grey shrikes stood sentinel on the argans, and several flurries of bee-eaters swept over, although good views for most had to wait a couple of days. The track itself was geologically interesting, being essentially a bed of limestone riven by mineral seams running in every direction, and indication of the intense pressures of continental collisions.

Soon enough the heat and early start caught up with us, and it was back home via a singing male rock bunting, and then two of the invertebrates of the week, a mating pair of African nine-spotted moths, showing their red-and-black hooped abdomens to advantage.

And so to dinner, once again a superb meal, and before too long, welcome sleep, with a backdrop of trilling tree-crickets.

Friday 15 March: local walk to Tighanimine El Baz

Dawn broke clear and calm, with another very hot day in prospect. Our first experience of breakfast at the Atlas Kasbah was interesting, with the usual range of home-made bread and spreads, cardamom-spiced coffee, scrambled eggs and somewhat bizarrely, vegetable soup.... but by the end of the week the breakfast soup, sometimes with barley, others corn-meal, had become a favourite with several in the group.

The morning's walk took us to the local village of Tighanimine El Baz, not especially attractive and rather litter-strewn, although the evidence of new shops opening suggest its fortunes may be rising. In part this could be due to the women's argan cooperative, which we were able to visit to watch the manual process of extracting the oil, for use in both cooking and cosmetics. And to buy their produce, contributing directly to the local economy, and thus to the conservation of argan groves, at risk from charcoal production.

The road verges produced their usual selection of interesting plants: *Launaea arborescens*, like photosynthetic barbed-wire; a dodder *Cuscuta approximata*, parasitic upon it; and the cupid's dart *Catananche arenaria*, the palest of yellow ray florets surrounding a brooding, velvety purple flower centre. Less attractive perhaps, but with very distinctive fruits were the docks *Emex spinosa* and *Rumex vesicarius*, and spiny cocklebur.

House buntings were singing from seemingly every building, along with numerous spotless starlings. A pair of black wheatears was good to see, along with a distant Bonelli's eagle (highly appropriate as the village name translates as 'Valley of the Eagle'), but most surprising was a young male lesser kestrel which circled the cooperative building a couple of times, before moving on. Not known to breed in the south of the country, this was presumably a migrant moving through from the sub-Saharan wintering grounds.

From an untidy patch in the village arose an almost deafening hum of honeybees, feeding on a profusely flowering patch of Roman nettles, perhaps indicative of the lack of other forage plants in the droughty conditions. And close (but not too close: those stinging hairs are vicious!) examination of the nettle leaves revealed two praying mantis nymphs, one first instar, brown and flat, the other a second instar, green and adopting the distinctive curved abdomen. Nearby, a scrambling *Aristolochia* revealed the eggs of Spanish festoon on its leaves.



Roman nettle and first instar praying mantis; oleander seed-bugs.

Down in the dry river, oleander was flowering profusely, each bush supporting a thriving population of the oleander seed-bug *Caenocoris nerii*, at all stages of development from egg to adult. Few creatures can withstand the toxic chemical armoury of oleander, but these bugs can, and presumably (from their warning coloration) sequester the poisons for their own defences. Several red-rumped swallows were feeding around the well and a pair of laughing doves canoodled on a wall, while several Barbary partridges flew noisily out of the scrublands. At this juncture, the group split into two according to fleetness of foot, but for both parties it was head down in the intense heat, seeking to get back to the relative cool of the Kasbah garden. A baby spur-thighed tortoise, Bath white, several brimstones and a Cleopatra were there to welcome our return.

Lunch was as filling and refreshing as we had come to expect, and led naturally to a couple of hours' relaxation, until the heat subsided a little. We then headed down to the camel trail again, hoping to get further than yesterday, now that some of the flowers and birds were becoming more familiar. A small passage of swallows and common swifts was presaged by a pair of little swifts, shooting north. Then as we approached the dry river, a subalpine warbler was singing from an argan, and a few Barbary ground-squirrels scurried around a jumble of boulders, although none showed for any length of time. That may



Laughing doves.

have been due to the presence of a little owl among those rocks, even though in reality it probably posed little threat. In fact, the large darkling beetle *Pimelia chrysomeloides* which crossed our path would probably be a more likely prey item...

Returning home via a slightly different road verge, we chanced upon a couple of rock sparrows, and the attractive, compact, purplish flowerheads of *Teucrium capitatum*. Then it was into the Moroccan salon of Atlas Kasbah, where Hassan initiated us into the Berber tea ceremony. This is central to Berber hospitality, and involves green tea, which must be washed with the first, discarded pot of water, one or more herbs or spices, and sugar loaf. We then learned of the importance of bubbles in the tea, achieved with repeated pouring into the glasses and back into the pot.

We spent a relaxed hour with Hassan – the ceremony can take much longer – and learned much about Berber culture, history, language, script and identity, and its somewhat uneasy relationship with its Arab equivalents.

After dinner, a few minutes on the roof as night fell immersed us in the chorus of tree-crickets, Sahara marsh frogs and a distant churring, probably from an African green toad, in the valley. Despite a light veil of cloud, the starscape was impressive, at least away from the skyglow of Agadir, and a pipistrelle bat was detected as it foraged around. But for what? The hotel lights were not drawing in moths or other insects, again perhaps a symptom of the drought.

Saturday 16 March: Tamri and Cap Rhir

A stiff breeze sprang up overnight and was still noticeable as we reassembled in the roof garden for bird watching and listening as dawn broke. The eerie wails of stone-curlews echoed around, then, as light started to return, the rhythmic chirping of bulbul song from every direction, similar in tone to the daytime burbles but much more regular and structured. And high overhead, first picked up by ear, the dawn flight of bee-eaters, in flocks of fifty, then thirty.

After breakfast, first stop was the supermarket, for some to buy the wherewithal for lunch, but mostly to secure alcoholic accompaniments to our evening meals. It was particularly interesting to note the number of singing house buntings inside the store, at exactly the same time as supermarkets in the UK were being criticised for using anti-bird netting to prevent birds nesting outside their stores, and for seeking lethal control licences to deal with the 'problem' of birds on the inside.....

The coastal drive north of Agadir was rather longer than anticipated: Mohamed was a delightfully careful driver, and there were hordes of speed police along the road. As we approached Tamri, we plunged into a dense bank of sea fret, just thin enough to let us see a few northern bald ibises feeding in the sandy roadside fields. Although access to the famous breeding site was not permitted for fear of disturbance, the warden (whose role is part-funded by Honeyguide conservation contributions from this holiday) was happy to show us to a vantage point away from the breeding cliffs which gave us excellent flight views. And that has to be when these admittedly rather ugly birds look their best! Graceful scimitar-billed aeronauts, rather than vulturine turkeys hunkered down on cliffs in the swirling mist. In fact, we witnessed a single flight of some 75 birds, about one third of the local population, more than a tenth of the entire Moroccan population (which forms the vast bulk of the world population) in just one flock, wheeling across the desert-like perched sand dunes. Although not quite as we had planned, all agreed that it is heartening to see that the conservation of these birds is being taken seriously and the protections applied across the board.



Perched sand dunes at Tamri; northern bald ibises.

Skittering around the sandy and stony ground, no doubt trying to avoid the attention of hungry lbises, were several examples of the Moroccan fringe-toed lizard *Acanthodactylus margaritae*, a species described as recently as 2017 and found only in the stretch of Atlas coast from here to a few kilometres south of Agadir. Interesting plants included shrubs of *Lycium intricatum*, the umbellifer *Thapsia garganica*, in flower and broadly-winged fruit, and *Frankenia thymifolia*, the largest-flowered sea-heath any of us had ever seen. Sadly, it has not yet been possible to ascertain the identity of a lovely mating pair of moths – they will have to remain simply 'Moroccan pearl moths' for now.

A little to the south, around Cap Rhir, after a picnic lunch at the lighthouse, our attention turned to a habitat that is as rare, if not rarer, than the ibis on a world scale: Macaronesian Euphorbia scrub, known only from the southern coast of Morocco and some of the mid-Atlantic islands, and everywhere threatened by tourism infrastructure and over-development. It is dominated by a series of succulent plants, particularly the cactus-like *Euphorbia officinarum*, the tree-spurge-like *Euphorbia regis-jubae*, and a succulent groundsel *Kleinia anteuphorbia*, its 'dandelion-clock' seed heads revealing its family affiliations.

Thekla larks gave unbeatable, and incontrovertible, views, a couple of hoopoes showed to the front-runners of the group, while a kestrel flew around the lighthouse, quite possibly a breeding site. Down at ground level, and ignoring the painful amount of plastic litter, a pale-shoulder moth rested; other distinctive insects included false mallow skipper, a couple of red leaf beetles with black spots *Cryptocephalus rugicollis* and *Lachnaia lucidipennis*, and best of all a fly-around two-tailed pasha.

The final stop of the day was in the small fishing/tourist village of Taghazout, for drinks and ice-creams, with views over the beach where a large flock of yellow-legged gulls and just a very few lesser black-backed gulls were roosting. Then heading back through the outskirts of Agadir, a party of eight white storks flew over the bus, perhaps surprisingly the only ones of the week.

We arrived back at Atlas Kasbah to the usual herb tea welcome, with time for Richard to hold a succulents' masterclass in the roof garden before we assembled for our first debrief/listing session of the week on the upper terrace, the air around us filled with the rainbow glints and liquid trills of bee-eaters. Dinner was wonderful, a fish tagine using conger eel, a culinary 'first' for most, and noticeably relaxed as the first alcohol of the week helped to wash it down!

Sunday 17 March: Souss-Massa National Park

A very mild night saw the development of a deep fog bank over Agadir, and some speculation about the weather forecast, although in the event it soon burned off and was as sunny as all the rest of the days, albeit a shade cooler because of a welcome onshore breeze when we approached the Souss-Massa National Park, a large river at either end with flatlands in between. Heading for the Massa River, the southern boundary of the park entailed driving through the rather uninspiring landscape, typical of deltas worldwide, low-rise, often impermanent settlements, always at risk from flooding. Neither sea nor river nor land, they are places of psychogeographic tension, which reflects the ecological tension, between salt and freshwater, windblown sand and water-deposited alluvial plains.

Dropping down from the low limestone hills to the Massa river valley was a delightful walk: little egrets, greenshank and wood sandpiper on the river, with bee-eaters posing well, their jewel-like properties if anything enhanced by the shimmering heat-haze, plain tiger butterfly and nosed grasshopper, lots of the pink-flowered *Fagonia cretica*, an attractive knapweed *Centaurea sphaerocephala* and two species of *Mesembryanthemum*. Plus two very exciting parasitic plants: *Striga gesnerioides* on euphorbia, and the remarkable, phallic red dog-turd *Cynomorium coccineum*, sprouting fungus-like from the ground amongst the shrubby sea-blite, its presumed host.



Two parasitic plants: Striga gesnerioides and Cynomorium coccineum.

On the flood plain, tamarisk and *Nitraria* took over as the dominant shrubs. A few melodious warblers skulked among them, while in complete contrast male stonechat and Moussier's redstarts showed themselves side by side: the same colour palette, but painted by different artists.

Back to the bus and some shade for lunch, a very pleasant location serenaded by the mocking calls of laughing doves, we then headed back across the delta, with a short comfort and tea stop on the way. At the northern end of the national park, near the mouth of the Souss, despite Sunday afternoon disturbance, we found our largest concentration of water birds, including an array of waders, bound for northern shores, Sandwich terns, white-breasted *maroccanus*-form cormorants, a feeding spoonbill, and then at the last gasp as we headed away, some 80 greater flamingos. Or "flaming-o's" as Richard would have them, leading to speculation about the best collective noun. 'An alphabet of flamingos' seemed appropriate, given that almost runic disportment of their legs, in fact not dissimilar to the Berber alphabet! Add to those a sitting zitting cisticola and several interesting plants appressed to the stable shingle, including *Aizoon canariense* and *Forsskaolea tenacissima*.



"Flaming-o's", gulls and waders.

Back at Atlas Kasbah, with an hour before the pre-dinner meeting, many took the opportunity for a cooling swim, enlivened by an aerial display of bee-eaters, lots of common (and a few pallid) swifts, and a fly-over cuckoo.

Monday 18 March: Askoti Gorge

A very short drive of only 6km or so took us up our valley to the village of Askoti. With a local guide, we then took a delightful off-road walk into the gorge, suitably dramatic rocky scenery and the haunt of black wheatears and Barbary ground-squirrels. Although our guide spoke only Berber and Arabic, there were few communication difficulties, and he managed to convey much information about some of the plants Richard found. One such was *Rhus pentaphylla*, in fruit, and recommended by our guide....although from our perspective not a winner! Other new plants included *Rhus trifoliata*, Moroccan acacia *Vachellia gummifera*, and the long-flowered *Thymus maroccana*, its thyme-scented leaves with overtones of lime and eucalyptus. Just below the entrance to the gorge, our guide pointed out a dead snake in the dry riverbed; rather decayed and smelly, but this was long, and probably a Montpelier snake. He also pointed out a scorpion hole, and a ground-squirrel burrow, surrounded by a swathe of nibbled argan nuts.



Algerian skink; Barbary ground-squirrel.

Back at the bus, a patch of *Heliotropium* flowers was attracting butterflies, especially small coppers and Bath whites, all under the watchful eyes of a basking Bibron's agama. However, despite its mini-dragon-like appearance, it didn't remain 'reptile of the week' for long: as we packed away our picnic in an argan grove, with the only real (small) cloud of the week overhead, we disturbed a splendid Algerian skink, a cylindrical 40cm 'snake with legs' that seemed to have been eating tomato ketchup. Messily!

We continued walking homewards for a while, producing our best hoopoe sighting of the week, before the party split, just a few opting to continue walking the final few kilometres, across what should be a great botanical site in more clement conditions, and meeting a Tuareg camel train, up from the Sahara.

Given the relatively early return for most, seeking shade and water, a late afternoon garden bird stroll was in order, producing excellent views of a singing male cirl bunting, and of the frogs in the biofiltration ponds, as well as a large spur-thighed tortoise in the lower garden. And then before dinner, another botanical masterclass from Richard, focussing on the features of some of the garden plants which help assign them to their families.

Tuesday 19 March: local walk to Elmaasa village

The pre-breakfast garden walk produced only the usual suspects, with no sign of migratory turn-over of birds, but when those usual suspects include Moussier's redstarts and parties of bee-eaters, it helped to kick off another day in the sun, once the dense fog which rolled in over breakfast had burned back.

The morning walk took us along relatively quiet roads to the neighbouring hilltop village of Elmaasa. A woodchat shrike perched on some roadside bushes, giving good views, as did a pair of Maghreb magpies, showing clearly the distinctive shiny blue patch behind their eyes, and black wheatears mingling with house buntings around the village. The wayside plants included henbane, a long and narrow-leaved madder *Rubia agostinhoi* and another cherry-pie, *Heliotropium crispum* together with large thickets of prickly-pear (covered in cochineal bug fluff), one of which supported a veritable housing estate of cage-web spiders, the web several metres long and two high, with ten or more of spiders in occupation. And the road-verge rest-harrows were home to numerous red-and-black oil-beetles *Hycleus* sp.



Buying tangerines in Elmaasa (SW).

Although still too rubbish-strewn for our liking, Elmaasa was apparently more thriving than some of the other local villages. Our visit coincided with the arrival of the peripatetic tangerine seller, so a crowd was already forming. We soon attracted a gaggle of village children who then walked with us, scurrying off every so often to find a new flower to show the group. And we reciprocated with beetles, specifically the large, lumbering darkling beetle *Pimelia chrysomeloides*. The smaller girls initially shrank away from handling it, but when first one of the braver boys and then one of the older girls took their cue from us and the young ones started to follow suit, we felt we might just have left a little bit of Honeyguide stardust behind us....

Back at the ranch for lunch, and a relaxing afternoon on the terrace, watching orange-headed mammoth wasps *Scolia bidens* and painted ladies feeding at false acacia on the terrace. Most then took advantage of an optional extra, a two-hour course in Moroccan cookery, where we made our beef tagines for the evening meal, as well as the starter and sweet, and also flatbreads in the outside oven. Very tasty!



Terracotta tagines used in the cookery course; group members in costume (RH).

Wednesday 20 March: Paradise Valley and Agadir Souk

Inland from the coast road north of Agadir, penetrating the westernmost outpost of the High Atlas, our destination today was Paradise Valley....which didn't really live up to its name: great scenery, yes, but with added, major, noisy, dusty road improvement works, the ever-present scourge of plastic litter, and precious little water in the river, even by the oasis and its date palm grove.

But we persevered, and watched grey wagtails by the river with basking Sahara pond terrapins and large pincertail dragonflies. House martins, little swift, blackcap and chiffchaff were all presumably migrants, rock dove and (fleetingly) blue rock thrush residents, along with a pair of Bonelli's eagles overhead. Two-tailed pasha and Moroccan orange-tip butterflies (the latter of the southern Moroccan form *androgyne*, with reduced underwing markings) were also much appreciated, along with several interesting plants, including *Hypericum aegypticum* in the river-bed, and the wonderfully-hairy fleabane *Pulicaria mauritanica*, *Trachelium caeruleum* and maidenhair fern on the gorge walls.

A mint tea-break (sweetened with honey, this being in the Honey Café) on the way back, high in the open *Tetracinus* forest also revealed *Limonium lobatum* and the subtly beautiful borage relative *Trichodesma calcaratum*, an absolute magnet for foraging insects. Several times camels were spotted from the bus, mostly in trains with handlers, but a mother and calf close to the road seemed to be 'free range'.



Dromedary camel and calf, spotted from the bus.

Back to Agadir, and an hour in the souk was enough retail therapy time for folks to buy their spices, dates and other holiday mementos, although it was a pity our local guide clearly had his own agenda, getting quite shirty with those of us who went off piste and bought from vendors he had not introduced us to.....



Colourful mounds of produce and spices in the souk (RH).

And so back to Atlas Kasbah and our last evening surprise, a visit from a local traditional music and dance combo, who brought enough costumes for us all, and ensured that active participation was not optional! A great fun end to a wonderful, varied week, rich in experiences as well as wildlife, despite the sometimes challenging weather conditions.

Thursday 21 March: the way home...

Before dawn, a red-necked nightjar was singing not too far from the lodge, but being the last morning, there was no opportunity to seek it out for more to hear. After a relatively leisurely start, we left Atlas Kasbah with all the staff lined up outside to wave us off. Twenty minutes to the airport, passing road verges with the yellow broomrape *Cistanche phelypaea* (the botanising never stops!), and before long we were homeward bound.

LISTS

BIRDS

	BIRDS
Cormorant	Several in the Souss; also Cap Rhir
Grey heron	One, in the Souss
Cattle egret	Several parties in fields while travelling
Little egret	Singles at Cap Rhir and Souss River; 10 by the Massa
White stork	Eight over Agadir, on just one day
Northern bald ibis	Total of about 80 birds around Tamri
Spoonbill	One feeding in the Souss River
Greater flamingo	80 in the Souss River
Mallard	A few birds in flight over the Souss
Bonelli's eagle	One distantly over Tighanimine El Baz; two low over Paradise Valley gorge Singles over Tighanimine El Baz and Askoti Gorge
Sparrowhawk Kestrel	Widespread
Lesser kestrel	One at Tighanimine El Baz
Barbary falcon	Singles over Atlas Kasbah and Tighanimine El Baz
Barbary partridge	Pairs at Tighanimine El Baz and near the Massa River
Oystercatcher	Around ten by the Souss
Stone-curlew	Heard at night around Atlas Kasbah
Grey plover	Five birds by the Souss, one in breeding plumage
Kentish plover	Three in flight low over the Souss
Whimbrel	One with curlews by the Souss
Curlew	About 20 roosting by the Souss
Redshank	Three by the Souss
Greenshank	Singles by the Massa and the Souss
Wood sandpiper	One by the Massa
Lesser black-backed gull	Two at Taghazout; a few birds on the Souss
Yellow-legged gull	Widespread; big concentrations on the Souss and the beach at Taghazout
Black-headed gull	Two by the Souss River
Sandwich tern	Around 40 in the Souss, roosting and feeding
Rock dove	Paradise Valley gorge
Feral pigeon	Widespread, especially around settlements
Woodpigeon Collared dove	Seen regularly, usually flying north, probably migrating Widespread
Laughing dove	Pairs at Atlas Kasbah, Tighanimine El Baz and by the Massa
Common cuckoo	One over Atlas Kasbah
Red-necked nightjar	Singing close to Atlas Kasbah, just before dawn, one or two nights
Scops owl	One reported calling on one night at Atlas Kasbah
Little owl	One close to Atlas Kasbah
Common swift	Seen most days, with some concentrated movements
Pallid swift	One loose group, mostly pallids, during the late afternoon movement over Atlas Kasbah on 17 March
Little swift	Two north over Atlas Kasbah; one in Paradise Valley
European bee-eater	Widespread and numerous
Ноорое	Seen frequently while travelling; also at Cap Rhir, Askoti and on one morning only, Atlas Kasbah
Crested lark	Widespread, though less numerous than Theklas generally; often on cultivated ground
Thekla lark	Widespread, often on rocky ground
Barn swallow	Seen daily, though never numerous
Red-rumped swallow	Seen at Tighanimine El Baz, Askoti Gorge and Paradise Valley
House martin	Very small numbers, Askoti Gorge and Paradise Valley only
White wagtail	Cap Rhir and Paradise Valley, though not seen well enough to ascertain subspecies
Grey wagtail	Several pairs in Paradise Valley
Common bulbul	Common almost everywhere; an unassuming bird to look at, but providing the soundtrack for the holiday
Nightingale	One singing half-heartedly at Atlas Kasbah on one night only
Robin Mauagiaria radatart	Several around Atlas Kasbah, although only on the first two days
Chiffchaff	One in Paradise Valley
Western olivaceous warbler	One singing one morning at Atlas Kasbah
Melodious warbler	Once in Atlas Kasbah garden; pair by the Massa river
	Common in and around Atlas Kasbah, including recently-fledged young; also Askoti
Western olivaceous warbler	One singing one morning at Atlas Kasbah

Black-crowned tchagra	One singing one afternoon in Atlas Kasbah garden		
Southern grey shrike	Pair close to Atlas Kasbah; frequently seen while travelling		
Woodchat shrike	One near Elmaasa; occasionally seen while travelling		
Maghreb magpie	Widespread; since 2018 treated as a full species in its own right, rather than as the North African race of the Eurasian magpie		
Spotless starling	Frequent, especially around villages		
House sparrow	Widespread and abundant, especially around settlements		
Rock sparrow	Two close to Atlas Kasbah		
Chaffinch	Africana race birds in several places; daily at Atlas Kasbah		
Serin	Daily at Atlas Kasbah; smaller numbers elsewhere		
Greenfinch	Almost daily around Atlas Kasbah		
Goldfinch	Small flocks around Atlas Kasbah on a couple of days		
Linnet	Small flocks by Massa River and at Askoti		
Cirl bunting	Pair at Atlas Kasbah; also in Askoti Gorge, Paradise Valley and by the Massa		
Rock bunting	Singing male close to Atlas Kasbah on one day; also Askoti Gorge		
House bunting	Common; a feature of all built-up areas		
Corn bunting	Several singing from the flood-plain of the Massa River		

MAMMALS					
Barbary ground-squirrel	Ruppell's fox (presumed, heard)		Pipstrelle bat sp. (echolocated at 42KHz)		Dromedary camel (presumably domesticated)
REPTILES & AMPHIBIANS					
Sahara marsh frog Spur-thig		Spur-thighed tor	toise	Algerian skink	
African green toad (possible, heard) Montpelier snał		e (dead)	Bibr	on's agama	
Sahara pond terrapin Moroccan fring		Moroccan fringe-	-toed lizard	Moc	orish gecko



Above: Bibron's agama. Below: Moroccan fringe-toed lizard.



Above: Sahara marsh frogs mating. Below: Sahara pond terrapins.





BUTTERFLIES					
Swallowtail	Moroccan orange-tip	Lang's short-tailed blue	Painted lady		
Spanish festoon (eggs)	Clouded yellow	Common blue	Wall brown		
Large white	Brimstone	Allard's blue	Southern speckled wood		
Small white	Cleopatra	Plain tiger	Spanish gatekeeper		
Bath white	Small copper	Two-tailed pasha	False mallow skipper		
Greenish black-tip	Long-tailed blue	Red admiral			

OTHER INVERTEBRATES				
Hummingbird hawk-moth Macroglossum stellatarum	A red-and-black seed bug Spilostethus pandurus			
Pale shoulder moth Acontia lucida	Another red-and-black seed bug Graptostethus servus			
Small marbled moth Eublemma parva	Oleander seed-bug Caenocoris nerii			
Coppery taupe moth Charissa mucidaria	A carpet beetle, feeding on coriander flowers Anthrenus			
Double-striped pug moth Gymnoscelis rufofasciata	goliath			
African nine-spotted moth Amata Alicia	Garden chafer Phyllopertha horticola			
Common plume-moth Emmelina monodactyla	Spotted flower-chafer Oxythrea funesta			
A micro-moth Metasia cuencalis	Hairy flower-chafer Tropinota hirta			
Bee moth Aphomia sociella	A red leaf beetle with black spots Cryptocephalus rugicollis			
Lesser emperor dragonfly Anax parthenope	Another red leaf beetle with black spots Lachnaia lucidipennis			
Large pincertail dragonfly Onychogomphus uncatus	Seven-spot ladybird Coccinella septempunctatum			
Epaulet skimmer dragonfly Orthetrum chrysostigma	A red-and-black oil-beetle Hycleus/Mylabris sp.			
Nosed grasshopper Acrida ungarica	Darkling beetle Pimelia chrysomeloides			
Orange-winged grasshopper Oedipoda sp.	Mediterranean fruit-fly Ceratitis capitata			
Egyptian locust Anacridium aegyptiacum	A stripy tachinid fly Trigonospila transvittata			
Tree-cricket Oecanthus pellucens	Honeybee Apis mellifera			
Praying mantis sp.	A cuckoo bee Thyreus histrionicus			
Woolly aphid on olive <i>Eriosoma</i> sp.	Paper wasp Polistes sp.			
Cochineal bug Dactylopius coccus	Orange-headed mammoth-wasp Megascolia bidens			
Fire-bug Pyrrhocoris apterus	Cage-web spider Cyrtophora citricola			



A red and black oil beetle; African nine-spotted moths mating; Orange-headed mammoth-wasp.

EphedraEphedra altissimaaCasuarinaCasuarina equisetiformea	joint-pine aceae		
Casuarina	nceae		
Cosupring equisetiforme	a Avertualian achitan		
Casuanna equisellionne al	n Australian conifer		
Amaryllida	aceae		
Pancratium foetidum a	sand-daffodil, lvs only		
Poacea			
Lamarckia aurea G	olden dog's-tail grass		
Asparaga	ceae		
Asphodelus fistulosus a	small white asphodel		
Plumbagin	aceae		
	tatice, a sea-lavender		
Caryophyll	laceae		
Spergularia media a	spurrey		
Fabace	ae		
Ononis viscosa a	sticky yellow restharrow		
	arge yellow restharrow		
Acacia longifolia Lo	ong-leaved wattle		
Albizia sp. A	Albizia		
Melilotis albus W	/hite melilot		
Rhamnad	ceae		
Zizyphus lotus Z	izyphus		
Zygophyllaceae			
Fagonia cretica Fa	agonia		
Resedaceae			
Reseda luteola W	/eld		
Brassica	ceae		
Eruca sativa W	/ild rocket		
Punicaceae			
Punica granatum P	omegranate		

PLANTS AROUND HOTEL AND GARDEN

	1			
Oleaceae				
Olea europaea	Olive			
Malva	aceae			
Hibiscus rosa-sinensis	a red hibiscus			
Sapot	aceae			
Argania spinosa	Argan tree			
Аросу				
Periploca angustifolia	a twin-fruited silkweed			
Boragi	naceae			
Echium angustifolium	a soft red bugloss			
Heliotropium europaeum	a cherry-pie			
Solan	aceae			
Nicotiana glauca	Tree tobacco			
Plantag	inaceae			
Myoporum laetum	Myoporum			
Convolv	rulaceae			
Convolvulus althaeoides	a pretty pink bindweed			
Ipomoea batatas	Sweet potato			
Bignor	niaceae			
Jacaranda mimosifolia	Jacaranda			
Lamia	aceae			
Lavendula dentata	a lavender			
Asteraceae				
Cladanthus arabicus	a fine leaved golden daisy			
Volutaria maroccana	a knapweed relative			
Euryops evansii	a S. African yellow daisy			
Pallenis spinosa	a pale yellow daisy with spiny bracts			
Scolymus hispanicus	Spanish oyster plant			

TIGHANIMINE EL BAZ

Asparagaceae					
Asparagus acutifolius	a spiny asparagus				
7	Typhaceae				
Typha domingensis	a reedmace (bulrush)				
	luncaceae				
Juncus acutus	Sharp rush				
	Poaceae				
Arundo donax	the largest grass in the world				
Aris	tolochiaceae				
Aristolochia baetica	a birthwort				
l	Jrticaceae				
Urtica pilulifera	Roman nettle				
Po	Polygonaceae				
Emex spinosa	a spiny dock				
Rumex vesicarius	Bladder dock				
Cactaceae					
Opuntia ficus-indica	a prickly pear				
Geraniaceae					
Erodium cicutarium	Common stork's bill				
Euphorbiaceae					
Acylypha wilksiana	a bronze-leaved ornamental				

Fabaceae				
Ceratonia siliqua Carob				
Rhamnaceae				
Rhamnus lycioides	a small-leaved buckthorn			
Re	sedacaea			
Reseda alba	White mignonette			
Арс	ocynaceae			
Nerium oleander	Oleander			
Boraginaceae				
Echium horridum	a red bugloss			
Lamiaceae				
Lavendula multifida	a lavender			
Teucrium capitatum	a sage			
Convolvulaceae				
Cuscuta approximata	a dodder, parasitic on			
	Launaea			
Asteraceae				
Volutaria maroccana	a knapweed relative			
Catananche arenaria	a white Cupid's-dart			
Launaea arborescens	a yellow wire-netting bush			
Xanthium spinosum	Spiny cocklebur			

CAP RHIR AND TAMRI

Frankeniaceae				
Frankenia thymifolia a large-flowered sea-heath				
Frankenia laevis	Sea-heath			
Plumbaginaceae				
Limonium sinuatum	Statice			
Caryophyllaceae				
Paronychia argentea	Silver bracts			
Euphorbiaceae				
Euphorbia officinarum	a spiny spurge			
Fundardia ragia jubaa	a shrubby, much-branched			
Euphorbia regis-jubae	spurge			
Fabaceae				
Lotus cytisoides	a bird's foot trefoil			
Brassicaceae				
Malcomia littorea a stock relative				
Solanaceae				
Lycium intricatum	a Duke of Argyll's tea plant			

Orobanchaceae			
Cistanche phelypaea	a large yellow broomrape relative (through bus window)		
A	piaceae		
Thapsia garganica	a yellow carrot relative		
Pseudorlaya miniscula	a small, white carrot relative		
Asteraceae			
Anacyclus radiata	a succulent-leaved yellow chamomile		
Kleinia anteuphorbia	a very succulent daisy		
Reichardia tingitana	a dark-centred dandelion relative		
Calendula aegypticum	a small pot marigold		
Waironia saharae	a succulent shrub		

SOUSS- MASSA NATIONAL PARK

F	Poaceae
Phragmites australis	Common reed
Ana	cardiaceae
Pistacia atlanticus	a pistachio nut relative
Ui	rticaceae
Forsskaolea	a nettle relative
tenacissima	a neme relative
Chei	nopdiaceae
<i>Beta</i> sp.	Beet
Suaeda iffniensis	a sea-blite
Salsola oppositifolia	a saltwort
Arthrocnemum	a perennial
macrostachyum	samphire/glasswort
A	izoaceae
Aizoon canariense	Aizoon
Mesembryanthemum	a wet and fleshy white-
crystallinum	flowered Livingstone-daisy
Mesembryanthemum	a small pale yellow
nodiflorum	Livingstone-daisy
Carpobrotus	Hottentot fig
achanaciformis	
Zygophyllaceae	
Fagonia cretica	Fagonia

Frankeniaceae			
Frankenia laevis	Sea-heath		
Frankenia boisseri	a sea-heath		
Tan	Tamaricaceae		
Tamarix sp.	a tamarisk		
Balanphoraceae			
Cynomorium	Maltese fungus or red dog-		
coccineum	turd – a phallic parasite		
Nit	Nitrariaceae		
Nitraria retusa	a white-flowered shrub		
Ge	raniaceae		
Erodium hesperium	a stork's bill		
Plan	taginaceae		
Kickxia sagittata	a fluellen		
Orobanchaceae			
Striga gesnerioides	a parasite of Euphorbia		
Asteraceae			
Pallenis spinosa	a spiny pale yellow daisy		
Ismelia versicolor	a yellow daisy bush		
Asteriscus sp.	a yellow daisy bush		
Centaurea sphaerocephala	a pink knapweed		

ASKOTI GORGE

Asparagaceae			
Asphodelus fistulosus	a small white asphodel		
Asphodelus aestivum	a large white asphodel		
Smilad	Smilacaceae		
Smilax aspera	Smilax		
Anacardiaceae			
Rhus trifoliata	a sumach		
Phus pontonhullo	a sumach, with edible		
Rhus pentaphylla	fruits		
Pistacia atlanticus	a pistachio nut relative		
Capparaceae			
Cpaparis spinosa	Caper		
Arecaceae			
Phoenix dactylifera	Date palm		
Caryophyllaceae			
Herniaria hirsuta	a rupturewort		

Fabaceae	
Vachellia gummifera	Moroccan acacia
Lamiaceae	
Thymus maroccana	a long-flowered thyme
Scrophulariaceae	
Verbascum sp.	a mullein
Verbascum sinuatum	a wavy-edged mullein
Plantaginaceae	
Plantago afra	a branched plantain
Kickxia sagittata	a fluellen
Araliaceae	
Hedera algeriensis	an ivy
Cucurbitaceae	
Bryonia dioica	White bryony
Asteraceae	
Dittrichia viscosa	a stink aster

ELMAASA VILLAGE

Agavaceae		
Agave sisalana	Sisal	
Aizoaceae		
Aizoon canariense	Aizoon	
Mesembryanthemum	a white Livingstone-	
crystallinum	daisy	
Cactaceae		
Opuntia ficus-indica	a large-fruited prickly	
	pear	
Opuntia delenii	a purple-fruited prickly	
	pear	
Solanaceae		
Solanum heterophyllum	Orange-fruited	
	nightshade	
Hyoscyamus albus	Henbane	

Boraginaceae		
Heliotropium crispum	a cherry-pie	
Echium horridum	a red bugloss	
Lan	Lamiaceae	
Ballota hirsuta	a black-horehound	
Marrubium vulgare	White-horehound	
Rubiaceae		
Rubia agostinhoi	a madder	
Asteraceae		
Anvillea garcinii	a yellow daisy bush	
Cladanthus arabicus	orange daisy, feathery leaves	
Bidens auriantiaca	a bur marigold	
Volutaria maroccana	a knapweed relative	
Centaurea solstitialis	Yellow star-thistle	

PARADISE VALLEY

Adiantaceae		
Adiantum capillus-	Maidenhair fern	
veneris		
Cupres	ssaceae	
Tetracinus declinata	a juniper relative	
Smilacaceae		
Smilax aspera	Smilax	
Arecaceae		
Phoenix dactylifera	Date palm	
Polygonaceae		
Rumex induratus	Buckler dock	
Papav	eraceae	
Papaver dubium	Long-headed poppy	
Plumbaginaceae		
Limonium lobatum	a sea-lavender	
Hyper	Hypericaceae	
	a shrubby St. John's	
Hypericum aegypticum	wort	
Primulaceae		
Samolus valerandi	Brookweed	
Anagallis arvensis	Blue pimpernel	
Asclepiadaceae		
Asclepias curassavica	Milkweed	
Euphorbiaceae		
Euphorbia helioscopa	Sun spurge	
Euphorbia offiicinarum	a spiny spurge	
Ricinus communis	Caster-oil plant	
·	· · · · · · · · · · · · · · · · · · ·	

Fab	aceae	
Parkinsonia sp.	a tree with many small leaflets	
Coronilla emerus	a shrubby scorpion-vetch	
Coronilla segurioides	a scorpion-vetch	
Paranthyllis tetraphyllus	Bladder vetch	
Lotus creticus	a bird's foot trefoil	
Medicago murex	a medick	
Lathyrus clymenum		
	a two-tone pea	
Ceratonia siliqua	• •	
Вогау		
Trichodesma calcarata	pale blue and white with swept back petals	
Planta	ginaceae	
Veronica anagallis-	Blue water-speedwell	
aquatica	Blue water-speedwell	
Scroph	Scrophulariaceae	
Verbascum sinuatum	a mullein	
Campa	Campanulaceae	
Trachelium caeruleum	Throatwort	
Verbe	enaceae	
Vitex agnus-castus	the chaste tree	
Asteraceae		
Pulicaria mauritanica	a fleabane	
Chrysanthemum	Crown dainy	
coronarium	Crown daisy	
Typhaceae		
Typha domingensis	a reed mace	
Juncaceae		
Juncus acutus	Sharp rush	