



# Your Living Environment

Vol. 11 No. 3

March, 1971

## THE ROAD TO MOROCCO — 1971!

by Colin Sutcliffe

Since the days of Joshua, (1400 BC) people have been arriving in North Africa — some by sea, some walked and many *ran*, hotly pursued from the east by their enemies. Bob Hope and Bing Crosby came by camel! But for us it was the jet-age and Air Maroc!! A contradiction no doubt, in a land of the camel, the donkey and the mule, but this was just the first of many contradictions.

For example, a professor of history and a lecturer in agronomy would seem to have little in common, especially in this environment as we, together with our wives (just one each) stepped out of our Caravelle onto the edge of the Sahara. Dr. Martin's purpose was to study at first-hand the people and history of North Africa. Mine was to learn about its agriculture and ecology — past and present. And we ended up learning how closely connected they are.

Thickly-populated Europe, with its most 'advanced' civilization in all history, has this sprawling gigantic vacant-lot at its front door. In a world bursting with over-population, North Africa is one of the largest under-populated areas on earth. It is in one of the two most favoured climatic zones, yet paradoxically *climate* has driven out all but its last human remnants! Here's what we found.

### CASABLANCA

Two thousand miles of touring in Morocco lay ahead of us and here we were at Casablanca Airport. Its topography was like any airport, but on the bus ride into the city it soon became apparent that we were on a vast, flat, brown coastal plain. Darkness overtook us before we reached the city named for its white houses. But

not before we got a glimpse of the snow-covered Atlas mountains 100 miles away to the south. Even at that distance they were high enough above the flat horizon to impress the traveller setting foot for the first time on the great continent of Africa.

Here we were on the edge of a continent so large that one may travel 4,000 miles overland before reaching the East Coast and the Indian Ocean! And 5,000 miles to far-off Cape Town! You soon realized that it was not just the flatness of this land that gave one a sense of spaciousness, but its lack of vegetation.

Then suddenly in the fading light we sighted our first tree! A tree of Africa? No! That corner of Africa is almost without trees. This sizeable eucalypt was the first of many we were to see that have been transported from the other hemisphere in a valiant attempt to escape the penalties of man's past. Though millions have been planted (and thousands have died), they are not a drop in the bucket.

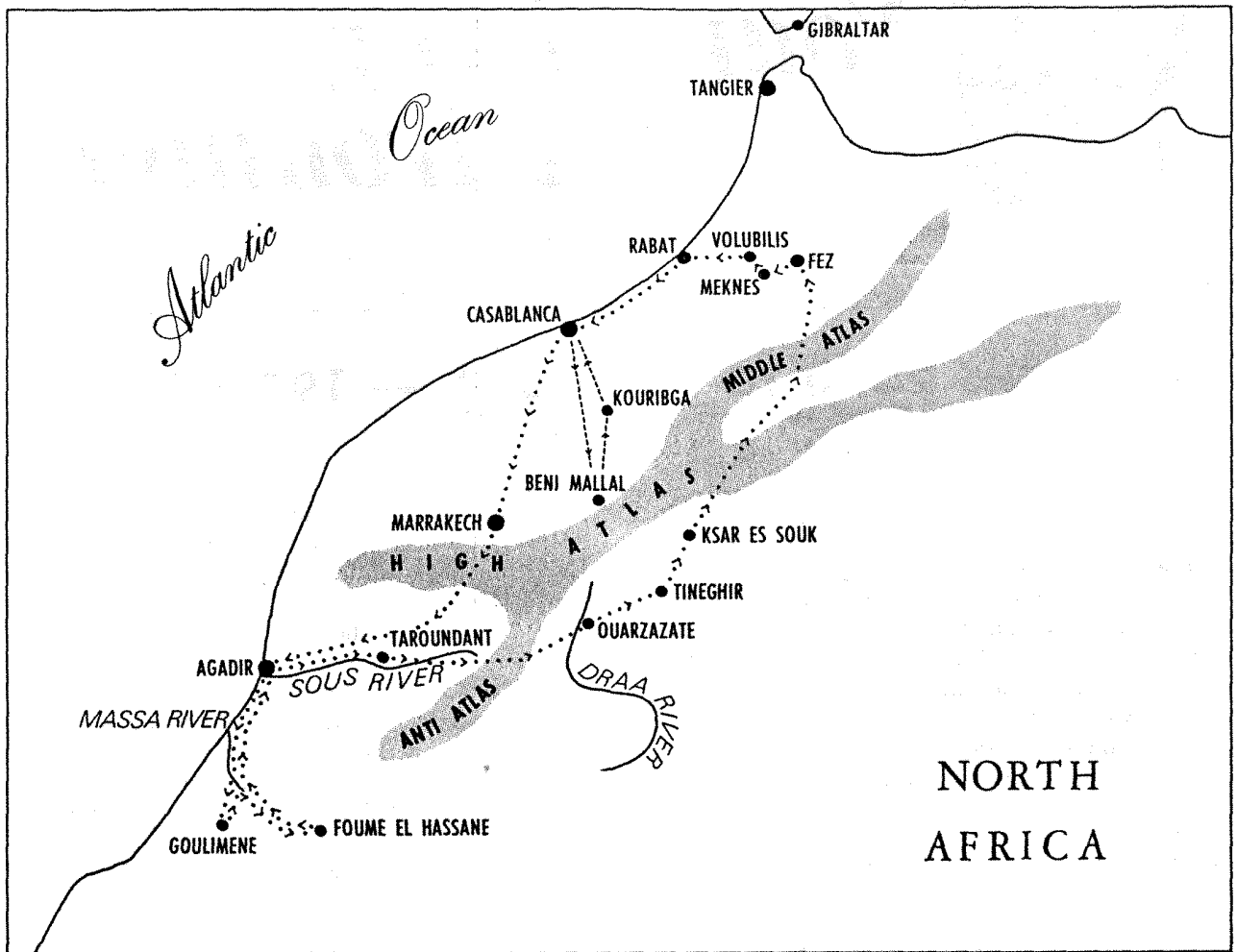
Many mistakenly think that trees are the solution to the problems of North Africa. Some trees, yes, as shelter belts, but top-cover at *ground-level* is what is needed and it will never be achieved unless every goat is either slaughtered or put on a lead. Camels, donkeys, cattle and sheep must also be controlled by effective grazing management.

### TO MARRAKECH

From Casablanca we headed south across that wide and featureless, but fertile coastal plain to Marrakech, at the foot of the Atlas mountains. The plain is so flat and by contrast the Atlas are

AMBASSADOR COLLEGE, AGRICULTURE DEPARTMENT, RESEARCH NEWS

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so high and magnificent, that they form an almost unreal snow-covered backdrop to the city. No wonder Churchill was fascinated by this rare oasis/alpine combination. Its huge date-bearing palms stand right in the shadow of the formidable, thirty-foot high, square, castellated, red mud walls!

Inside, Marrakech is a curious combination. French-inspired boulevards are fringed on either side by rows of fruit-laden orange trees growing right out of the pavement. Then comes the dark, narrow, winding streets filled with a sea of black faces, dogs and swirling dust. Add to that one naked and highly vulnerable little Combi-van trying to nudge a path through this reluctantly writhing mass of jalahbahed (Arab dress) humanity.

#### A WESTERN-TYPE AGRICULTURAL COLLEGE

On the way back we had called at an Agricultural College where we conversed (by interpreter) with the Director and a number of

his assistants, took some photos and hurriedly observed some of their outstanding successes.

All credit for Moroccan attempts at imitating Western agriculture must go to the French. The irrigated results would be a spectacular success in any environment, but they are doubly-so in this great, wide, brown land. Lush Israeli-like citrus groves are surrounded by high protective walls of green cypress and eucalypts. The ring of defence against the hot desert winds is completed by a wide row of dead African boxthorn cuttings piled two to three feet high around the perimeter. This material looks and acts like a barbed-wire military entanglement. Its deadly two-inch long thorns exclude both man and beast, as well as the sand-blasting effects of the winds at ground level.

Irrigation, mechanical equipment, artificial fertilizers, chemical sprays and 'improved' imported plant species make this all too rare and impressive show possible. North Africa is millions of acres and millions of people. The former in dire need

of development, the latter in crying need of right education.

Throughout the entire trip we endured the painful and saddening experience of watching hundreds of miles of these people resigned to the borderline of poverty and beggary. Wherever we looked they could be seen moving slowly across our barren horizon, seemingly numbed like a drought-stricken dumb animal. One wondered if generations of unequal struggle against a slowly deteriorating environment had not produced this dull kind of resignation.

Even more distressing was the thought that the only ray of hope being held out to these poor people is the exported mistakes of *The West!* We stumble blindly under the intoxication of science and technology from one crisis to the next. And yet even while the *West* is in the very act of plunging over the cliff of environmental destruction, we glibly wave the green light for 3,000 million souls to follow us!!

### CROSSING THE HIGH ATLAS!

From Marrakech we soon left the barren yet fertile red plain behind us and headed up into the snow of the High Atlas towering 13,000 feet above us! As we kept climbing toward the 6,500 foot *Tizi n test* pass, the breath-taking beauty of the scenery and the hazards of the route increased in equal proportions. Car access to the south through the snow-covered mountains is possible through two passes. Both of these had been closed until the morning of our departure from Marrakech by the same blizzards that trapped 10,000 motorists on the roads of southern France four days earlier.

### THE SOUS VALLEY AND AGADIR

Our journey on to Agadir (of earthquake fame some 10 years ago) was through rock-strewn desolation and land almost devoid of vegetation. However, as throughout our whole trip, we were seldom out of sight of some lonely Arab figure perched high on the mountain or somewhere out across the distant plain with his donkey and little flock. The general rule seemed to be a confusing mixture of 20 black goats and 10 shaggy little sheep that were either black, white or brown-spotted.

Both kinds of animals appear to nibble their way across the barren desert. When they reach a scrubby thorn-laden argon tree the sheep stand on their hind legs and trim its lower branches. At the same time the goats perform the seemingly impossible circus-like task of climbing the trees

if they are even slightly bent in any direction. To claim that we saw as many as seven black goats eating their way out onto the thin branches of one tree, may be too much for the reader. We did not confine ourselves to Moroccan underground water. The local wine is very pleasant, but we still have photographic evidence of these flinty-hard, cloven-footed little beasts perched in the argon branches as we looked out over the great valley of the Sous.

Though Morocco is now barren and desert, we were surprised at our own ignorance of the fact that it is by no means just camels and moving sand! On the contrary, most of the land we saw has enormous agricultural potential — potential that could be partially fulfilled if the existing goat population were transformed — perhaps into *raindrops!* Millions of now desolate acres are limestone or volcanic in origin. And either of these soils will arouse the keen interest of an agriculturalist, regardless of where they are found around the world.

### PEOPLE ARE FUNNY!

It was sowing time, yet the inactivity of the vast majority of Moroccan farmers was puzzling, to say the least! Their tiny plots of land are designated only by an occasional little pile of stones. The pattern of their single furrow ploughs is at least 2,000 years old and they harness every odd combination of cow, donkey, camel, horse and mule. A smart young fellow could dig up more soil in a day with the toe of his boot than these rare combinations do.

Most amazing is the fact that these people appear to go out for only a haphazard scratch around in one corner of their little plot. Why? The Westerner would be out there rushing around cultivating every square inch, plus some of his neighbour's if he could get his hands on it! The answer comes slowly and as a great shock to the Western mind. These people have different standards to us. If they need only two bags of grain — why cultivate and sow an area that is going to produce ten? To them it just means more work, harvesting!

Keeping ahead of the Joneses causes most of us to rush around in circles getting ulcers through grasping at every material possession we can lay our hands on. If he could see the Western farmer, no doubt the North African would think that *we* are crazy. The truth is that both approaches are wrong, but it is also interesting to note that the North African is not destroying his environment as fast as we are in the West!!

## GOULIMENE AND FOUME EL HASSANE

Leaving the coast, we pushed on south over the lower end of the Anti Atlas to Goulimene which is on an even flatter and more desolate fertile plain than Agadir. From here we made a desperate spring-busting, back-jerking sortie out into the real desert. You may think that is what you have been reading about and we too thought that was what we had been seeing. That was until we struck out for the remote military outpost of Fome el Hassane. Still very little sand, but gigantic gibber plains with fantastic 3,000 foot sedimentary escarpments towering overhead. As the plume of dust trailed out behind us for 20 miles at a stretch, we must have looked like a tiny lonely bug crossing the surface of the moon.

Fome el Hassane is mostly a small military outpost near the border of the Spanish Sahara. Dr. Martin 'callously' dragged us out into this cruel wilderness where it rains at least once every five years. These dying oases are the last vestiges of human occupation, clinging by their finger nails, through blinding sandstorms and terrible searing heat. But we found elephants, cattle, rhinos and many other animals scattered across the hillsides! Who knows how long they had been there? But, there they were, deeply etched into the shimmering rocks by some unknown artist. Presumably he had not come all the way from Ghana or the Congo to record his ecological experiences in the middle of this desolation! In those arid surroundings we concluded along with many others before us, that we were viewing environmental destruction on the grand scale. The ecological gap between the implied environment of the rock engraver and today was mentally unbridgeable!

### FIGHTING THE LOCUSTS!

Back in Agadir we inspected the largest Locust Control Centre in the world. True, the *competition* in locust control centres is neither numerous nor very strong, but the rows and rows of trucks and Landrovers and great heavy tankers were evidence that this was a gigantic operation. Between the tankers and chemical storage vats the place looked like a mini-refinery! The spare parts in the vehicle maintenance depot alone are worth £200,000!

The Director was kind enough to give us an interview without any appointment and gave us a graphic, map-illustrated description of their work. It is now done largely by air and ranges over a desert of 3,000,000 square miles! Every few years enormous clouds of locusts sweep in from the desert, East Africa or Arabia and they are

attacked from the ground and from the air with poisonous chemicals. Coping with the Sahara alone means an area as big as America!

Though expected in 1970 they did not come and experts are now puzzled as they sit waiting and planning and probing and patrolling. They are uncertain about the next attack, but they are ready. To keep their hand in, they last year slaughtered two million olive-eating starlings and ten million grain-eating sparrows that invaded Morocco from Europe! Parathion is used on the birds and DDT/BHC on the locusts.

### UP THE SOUS AND OVER THE ANTI ATLAS

We then travelled back up the Sous valley to Taroumant where we spent the night in a Pasha's palace that had been converted into a hotel. It gave us an idea of the opulence which has surrounded a tiny minority. The grandeur was made even more impressive because it so far outranked the utter simplicity of everything else. We drove day after day seeing only clusters of simple red mud houses, children and palm trees, in otherwise total desolation. Generally these oases were located at frequent intervals along sizeable dry river-beds. The Massa, the Sous and the Draa were exceptions — this was the cool season and they were running strongly.

From Taroumant we took the road to Ouarzazate, (pronounced wuzazzat) which meant that we crossed over the Anti Atlas near their junction with the High Atlas. For miles we were on a 5,000 foot barren plateau. On this section we had snow-covered mountains on both sides — to the south some were 7,000 feet high and to the north they rose to above 13,000 feet!

### WILY MOUNTAIN MEN

At the top of the pass we came upon two Berber shepherds, a little boy, the usual herd of sheep and goats, plus two mules towing a reluctant, skinny, pot-bellied jersey calf! The boy was driving the flock, the men were riding the mules and the calf looked as though he was having his neck stretched. We talked at length to one of the men (going through both interpreters every time). Cattle in North Africa are at a terrible nutritional disadvantage because of competition from sheep and goats. Everywhere the cattle looked like drought-stricken jerseys, but my senses were really jolted when told that this 'thin and weedy beast' was not a *calf* at all. By his size he should have been only 5 months old, one might have guessed 20 months because of obvious severe malnutrition. But he was in fact THREE YEARS old!!

Value? We thought about £5, but the owner insisted it was £25! However, if you could see the terrain over which they had travelled for days before we met them on this high mountain pass, you might conclude that he had earned this amount twice over! Above the snowline looked like the Himalayas and below it (where we were), resembled Mount Sinai!!

All food for the mules and the 'calf' was stuffed into two double-sided woven saddle pouches. It was mostly pulverized barley straw plus a few handfuls of first quality legume hay. Our inquisitive chance inspection of these feed pouches drove an important point home very forcibly. Here was one of the most backward peasants in the world. And he was squeezing a living out of one of its most inhospitable environments. His 'western' counterparts are by comparison environmental millionaires, but one look into those pouches showed that he understood *more* than they do about protein quality in animal feeding!! And equally important — he was putting his understanding into practice.

We tested his knowledge even further by asking in a serious manner how old his mule would be when it reproduced. He smiled and shot back an instant reply to the interpreter that if this beast ever reproduced itself, *it would be the end of the world!* Then we all laughed together, not at the fact that these hybrids are against God's law, but because we understood each other very well!

#### BACK OVER THE HIGH ATLAS

After crossing the High Atlas we then had to climb the Middle Atlas range. From here to the ancient city of Fez we passed through some of the richest volcanic soil you would ever hope to see. Old volcanic craters were everywhere and many 'recent' lava flows. We passed through a snowfield where Dr. Martin got photos of people ski-ing down the outside of one of these volcanic craters.

In this area many of the mountain slopes are covered by natural forests of beautiful Atlas cedars. Then the run down into Fez, Meknes, Rabat and back to Casablanca was across a fertile plain, enjoying a higher rainfall than the land in the south.

#### BENI MELLAL ORANGE GROVES

Once back in Casablanca, we drove to the productive Beni Mellal district. There we enjoyed the fine hospitality of Nearjim Said on his 250-acre citrus grove. This was one of his two farms and its appearance told us that this very friendly

and humble man must be among the top agriculturalists in North Africa. As an important grower's representative on the Moroccan Orange Export Authority he set a fine example. His beautiful 15-foot-high trees were loaded with fruit and well manured from the animals of farmers with less understanding. Disease is not a problem on this farm and he hasn't sprayed in four years.

On the way back to the coast we called at Kouribga where we inspected a small part of Morocco's biggest industry — rock phosphate. Output has skyrocketed the nation into first place as a world exporter of this fertilizer. Between 1967 and 1970 production has jumped from 3½ million tons to more than 10 million!

#### DRASTIC CHANGES IN NORTH AFRICA

North Africa is a huge chunk of misused real estate that has played a much more important role in history than most people realise. Less than 3,000 years ago it must have looked like the garden in Eden. Its soil and climate must have been a veritable paradise! What happened? Did a climate change destroy the vegetation or did the disappearance of vegetation produce the climate change, or did *man* destroy the vegetation, thereby bringing on the climate change himself? Who knows?

Three things we *do* know! Now that the vegetation is gone, the climate makes natural plant restoration difficult! Secondly, the harshness of the climate enables sheep and goats to have a destructive power disproportionate to their numbers! And thirdly we know from many historical references and rock carvings that much of North Africa once had a vastly different eco-system!

The following quotes attest to this: "... The whole country from Carthage [modern Tunis] to the Pillars [Gibraltar] is full of wild beasts, as is also the whole of the interior of Libia" (*Strabo* Bk. 2.5.33 c.64-22BC).

"Sallee [near Rabat]... is beset by herds of elephants... Mt. Atlas... the side facing towards the coast... is shaded by dense woods and watered by gushing springs, on the side facing Africa... fruits of all kinds spring up of their own accord with such luxuriance that pleasure never lacks satisfaction. (Extracts from *Pliny*, Bk.V.5-7 c.23-79AD).

"Among the cultivated plants are hard high protein wheat... The gardens yield almost all the species of pulse known in Europe... Wheat is sown in the Autumn and gathered in April or May... Oats grow spontaneously..." (*Universal Geography*, Bk.LXIV. 1823).

Yes, we found North Africa, including Algeria and Tunisia to be a very different place today, but what enormous potential! In the future, when the great deserts bloom again, none will do so more rapidly, or more effectively than the massive

sub-continent of Northern Africa. Once again it will be enormously productive! Only then will generations of misery, resulting from law-breaking and destruction give way to millions of *healthy, joyful* families, living in *abundance!*