

## BIRDS IN A DESERT GARDEN

by Les Gibson

These notes are about the relatively few birds that visited our California desert garden in the small community of La Quinta in the Coachella Valley, 25 miles (approx. 40km) from Palm Springs and 30 miles (approx. 48km) from the Salton Sea. Close to sea level, it lies within a horseshoe of hills, with the opening to the north, and is only  $\frac{1}{2}$  mile (approx. 1km) from the desert. The average summer temperature for about seven months is 106°F (41°C) with 7.6cm (3in) of rain falling erratically in less than seven days, spread over the year, but with most in late summer. One or two days on either side of the rain the sky is grey, but the other 265 days of the year it is cloudless with relentless sunshine, with on one occasion the temperature going up to 121°F (49.5°C). Global warming affects the desert too, and the last year we were there, only 3.8cm (1½in) of rain fell.

It was wetter in the past 100 years. Building excavations 2 miles (approx. 3km) away downhill revealed the tops of orchard trees that had been buried by silt from a flash flood. A long time ago, the valley used to hold a large lake which was fished by primitive Indians and stone fish traps, now high and dry, can be seen along the former shoreline. Coachella is a mis-spelling of Conchella, the Spanish name for the little shells that were found on the valley floor.

There are three or four small oases in the valley, the largest of which has a good stand of palms, with the old dead fronds hanging haystack-like, almost to the ground, around the trunks. These have become home to a colony of Budgerigars *Melopsittacus undulatus*, which nest in amongst the old fronds, rather in the manner of Quaker or Monk Parrakeets *Myiopsitta monachus*. The Budgerigar's genetic pool gets refreshed periodically as new escapees fly in. Palm seeds are a major food. The valley does not sound like a hospitable place for birds and, was not, until houses and golf courses were built, with their accompanying sprinklers and ponds. A canal brings water from the Colorado River, which is used mainly for irrigation while much of the household water comes from a huge underground lake lying beneath the surface of the former lake.

The garden's stony soil had no low plants and no weeds! There were five local Washingtonia Palms, three of them 4.5m (approx. 15ft) tall and two 9m (approx. 30ft) ones, plus two local Palo Verde (Green Wood) trees. The latter were 7.5m (approx. 24ft) tall, twice the height and bulk of the water-deprived ones growing in the desert. An interesting adaptation of these trees is that all of the wood, including the trunk, is bright green from chlorophyll, which continues to function after the tiny leaves have dried up.



There was also a dense 3m (approx. 10ft) tall Oleander, a big magenta Bougainvillea and a miserable, thirsting Grapefruit tree. The *piece de resistance* was a 4m (approx. 13ft) tall Saguaro Cactus, with limbs more than 30cm (1ft) thick. Outside the wall there were masses of Prickly Pear cacti.

The first birds we noticed after moving in were the Roadrunners *Geococcyx californianus*. These large, ground-dwelling cuckoos are shy in the desert, where their territories are very large, whereas in suburbia they fiercely defend a mere four or five block square. The male is barely larger than the female, more noticeable about the head. The area of blue and orange bare skin behind the eyes is larger and brighter in the male, and he is more pushy and territorial.

Our two were delighted when we moved in and they came right to the open glass door, looking for the hand-outs they had become accustomed to receiving from the previous owners. This had been raw hamburger but we soon substituted this with soaked dog pellets. At first they were puzzled by these, but within a week the male was taking them from our hands using the snatch-and-run method. His mate always hung back but quickly picked up food thrown to her. All the dog food we used to feed the birds was soaked first. Often it dried up in the sun, but was never concrete-hard like it is when taken straight from the bag.

Roadrunners dote on meat, raw or cooked, and are relentless predators. We watched one chase a lizard under the Prickly Pears then stand like a statue for two or three minutes until the luckless lizard thought it was safe to take a look outside. We confess that feeding these birds was in no small part aimed at saving the lizards. Roadrunners have almost no enemies. They face down cats and can outrun, at least to the nearest wall, most dogs. They crouch motionless when a hawk appears, but there never was one big enough to risk attacking them. The only remote threat to them is from the Coyotes *Canis latrans* which roam the streets in the dead of night looking for everything from dog food to cats and Pekinese.

Pairs of Roadrunners part after nesting and usually disappear for one or two months in winter. We suspect they go to a common mate-selecting area for they return around February in pairs. One year, our pair never left and maintained a close liaison, living about two streets apart, and coming separately for food hand-outs. If they arrived at the same time, the male half-heartedly chased away the female, which usually waited over the wall until he had left. In spite of moderate temperatures, 40°F-50°F (5°C-10°C) at night but being very pleasant during the day, winter is a hard time for desert birds. Insects are sparse at the best of times and completely absent then as are the lizards, which are hibernating. Thin young birds from the previous season still without a territory, would be hanging around for days



hoping to snatch some food, risking injury from the resident male, which would often chase a youngster at high speed along the middle of the street.

Mating behaviour was noted, perhaps for the first time. The street was used as a race track and mating ground by the birds which can run at 30kph (19mph). The female was seen to run slowly or walk quickly for about 10ft-12ft (approx. 3m-3.6m) followed closely by the male. His neck was extended forward and his beak was pointing to the ground and holding a piece of dog food. His tail was straight up and wagging slowly from side to side. When the female stopped he jumped 2ft (61cm) into the air and moved his feet as so he was running. This went on for several minutes with the female running back the way she came to the end of the property. Then mating took place. It was not clear which bird ate the dog food, but the male jumped onto the wall for another piece, which was likely presented to the 'lady'.

Their nests were difficult to find especially as they were on someone else's property. The pair was extremely cautious and always approached the nest by devious routes often standing at street corners for a minute or two until the street was clear, especially if they were being watched or followed. We knew the birds were nesting not too far away but they always avoided revealing the exact site, often trotting casually past the nest then returning to it undercover of vegetation. Finally after the chicks had fledged we found the nest three houses away. The birds craftily went past it into the garden and entered the thick Bougainvillea from the house side. The nest was mainly a 14cm (5½in) thick pad of heavy, thorny twigs, surmounted by a rimless, shallow grass-lined depression in the 16.5cm (6½in) diameter top. A new nest is built elsewhere for each new clutch.

Nesting commenced in early spring from February onwards and two broods were the norm. The first young were brought to the garden on April 1st. The young were looked after for about six weeks then driven away. Dog food was placed in a dish on top of the wall along with a large bowl of water which evaporated in two days unless replenished. Because of the irregularity of the natural food supply, the usual clutch of four eggs rarely produced four surviving young, two being average.

One year we provided the birds with a large supply of food throughout the breeding season and just like with the Common or Indian Mynahs *Acridotheres tristis* in South Africa (Gibson, 1996), four broods were raised with four, four, three and two young reaching adulthood. Unfortunately the pair of Roadrunners never built a nest in our garden so we did not know how many eggs were laid.

When old enough to leave the nest, the young came to the garden with one or other parent, mostly it was with the female and sometimes it was with both parents. Several times a day the young were fed with quantities



of dog food then they had a drink of five to 12 sips of water depending on how hot it was. The adult male was seen to eat 14 pieces of hazelnut-sized dog food at a sitting but food for the young in the nest was always carried in the beak. The family returned nightly to the nest or the bush for a period after the young had fledged, but because the nest was not found until the birds had left, the exact details could not be recorded. The female laid again quickly afterwards leaving the male to take care of the young until the second brood hatched, when he then drove away the young of the first brood.

On one occasion a small scraggy chick was brought to the garden by the male. It was the youngest of the final brood the others having either gone off with the female or dispersed. The male took great care of it and it was fed on the wall for at least two weeks longer than usual. As with all young, the chick crouched down and begged insistently while next to the food dish. Later it was driven off rather half-heartedly at first and managed to sneak back and feed itself for a couple of weeks more before the male got serious about driving it away.

Roadrunners do not fly high or long distances. We saw the male fly 3ft-4ft (approx. 1m-1.2m) from the wall up onto the eaves of the house and from there partially glide groundwards over the carport and onto a fence. This 9ft (2.7m) high and 18ft (5.5m) long sortie was the highest and longest flight we had seen. To reach the food dish from the ground a bird would walk to within 1ft (30cm) of the wall and then fly straight up like a helicopter. They did this even when sitting on the thick branch of a tree and were a mere skip away from the wall. Rather than fly across they jumped down to the ground and then flew up.

During the first year we found the Roadrunners interesting but when the next breeding season arrived something happened that made us go off them - almost. In the early spring the Cactus Wrens *Campylorhynchus brunneicapillus* constructed one of several trial nests in the small palm immediately above the food dish, while in the nearby Oleander the Mockingbirds *Mimus polyglottos* were busily building. A month or so later we heard the Mockingbirds clamouring in the street. We looked out to see them dive-bombing an oblivious Roadrunner zipping off with a well-feathered Mockingbird chick, dead and quite bloodied from being banged about.

A week later we observed the male Roadrunner in the crown of the small palm tree where the wrens had built a nest but had not used it. The Roadrunner dropped onto the wall then ran along it to below the next tree in which the Cactus Wrens had a nest with chicks. The Roadrunner waited until he saw one of the wrens by the nest then flew up and clumsily, not being a perching bird, began to poke about. Both wrens jumped around hysterically close by but did not dive at the intruder as the Mockingbirds



had done. The Roadrunner soon found the entrance to the wren's deep nest and managed to extract a chick. There followed the most horrendous spectacle for lacking the beak and claws of a hawk the Roadrunner proceeded to batter the eight to nine-day old chick on the thick stems of the palm fronds, spattering blood all over the place. The Roadrunner then dropped to the large stones on the ground below and as the wrens hopped about calling frantically proceeded to bash the by then dead chick on the stones until it was a bloodied pulp though still in one piece. We wondered how it would be fed to the Roadrunner chicks. Possibly the parents would pull pieces from the carcass but more likely it would be given to one of the Roadrunner chicks to swallow whole. After that we stopped feeding the Roadrunners during the summer but admit to helping them out in the winter when lizards and insects disappeared for three to four months.

The Mockingbird is the only member of its family to have adapted readily to living in desert gardens, although unlike the Roadrunner it does not live in the actual desert. There is little special about the Mockingbird's habits, which are similar to those of other members of the family. Almost everyone knows of its singing ability, repeating the same phrase two to five times. It is also a well-known mimic but there were hardly any other birds in the area for it to mimic. The only sound that interfered with the male's melodic repertoire, and then only rarely was a fair imitation from far off of our Pekinese barking. The one special thing about the Mockingbird is that it continues to sing on and off all through the night especially when there is moonlight. Although in the desert there are sometimes wild and windy though rainless nights, many more are beautiful, warm, still and moonlit. On such evenings we often slept outside, finally nodding off as the loud, clear and unhurried song of the resident male Mockingbird echoed around the garden. The desert is silent during the day and was silent and romantic on stormy nights, as our bird was answered from all points of the compass by rivals. The only competing sound was the occasional far-off cry of a love-struck Coyote in the nearby hills.

In spite of the depredations mentioned earlier, the Mockingbirds succeeded in raising several young each season and kept the area liberally supplied with up-and-coming songsters. The bigger birds could not easily get into the Oleander and the juvenile Mockingbird was probably following its parents about when it was taken. Our other resident nesters - the Cactus Wrens - were our favourites. The largest wren and unlike the others in appearance, it is a handsome bird with its livery of black spots on a white and orange-tan breast. In spite of the sparsity of vegetation these shy birds managed to remain hidden most of the time and though we heard their hoarse, scolding calls daily, it took six months of coaxing before they popped out of the Bougainvillea to eat the kibbled dog food provided. Even if merely



watched they dived back into the spiny bush. In other deserts in which Saguaro Cactus grow the wrens often nest in them. However, our cactus remained nest-free lacking as it did the old nest holes of woodpeckers, which these wrens need to nest in.

In our garden, the Cactus Wrens nested only in the small palms. These had the frond bases left in place all the way down the trunks, giving them an attractive cross-hatched appearance and the wrens built where the cut fronds met the growing ones. The nest was a large, untidy mass of long, dry plant stems and large strap-like pieces of red-brown frond bud covers as well as a fair amount of plastic bag and some paper. However deep within this debris was a snug fibre-lined egg depository. After a wind storm the nests were often found on the ground though usually only when the nesting season was over and they had loosened. We rarely saw the wrens entering their nest as they were extremely shy and always moved around the tree out of sight and also because the nest was placed so that it was not easily observable from the ground. Because of this secretiveness the first we knew of the presence of chicks, during the first year, was when the parents appeared with one at the water dish. Later we found out why there was only one chick. It was because the pair never succeeded in raising more than two young per season, one per nest, due to the predation by the Roadrunners. The only other occasional loss was due to Ravens *Corvus corax*. These wary birds stuck to the tall palms when hunting. The Cactus Wrens, like all the birds in the garden, patronised the water dish all year round and frequently used it for bathing. Garden sprinklers and drip systems all around provided drinking water but rarely provided enough water for bathing in.

The common Ground Dove *Columbina passerina* (whose scientific name sounds like it comes from a Mexican children's rhyme) was a regular nester from the end of winter until the heat set in. These birds nested only in the tallest palms and far from being safe there they were in constant danger. In early spring all the garden birds froze on hearing a deadly sound save that was for the Roadrunners which remained alert and ready to take action. The sound was made by a pair of hunting Ravens as the two birds searched the crowns of the adjacent palms. Their cawing continued for two to three months during which time the Ravens took a heavy toll of chicks, mainly those of the doves, and flew straight to the distant cliff to feed this bounty to their brood. We watched them comb the palm fronds and estimated that one in four palms produced a victim during the breeding season. They lacked finesse and there was a lot of rough scrambling about accompanied by constant loud cawing as they communicated with each other. The Ground Dove was one of the very few birds seen in the inhospitable hills with small flocks of six to 12 moving around eating mainly prickly seeds from a species of cactus. Prior to local migration, the doves gathered in quite large numbers



on the wires outside the house.

The only other species to nest - and then only once - was the tiny tit-like Verdin *Auriparus flaviceps*. It hung its prickly little nest at the end of a willowy but thorny Palo Verde branch outside the wall at the back of the garden. So we saw little of the Verdins and their young. A later examination showed the nest to be globular with the entrance just below the top. It was closed-off with plant material and had a one-way action. It was amazing how the birds got in and even more amazing how they got out again. The nest was completely predator-proof and was very like the Common Waxbill *Estrilda astrild* nest in our garden in Durban (Gibson, 1996). The Verdins' nest had the same kind of one-way door, except that it was made of unapproachable cactus spines. Later, the yellow-headed Verdins were often seen flitting around the garden seeking insects. The only call they were heard to make was a quiet peep.

Assorted hummingbirds were non-nesting winter residents that sometimes stayed longer. These quarrelsome little creatures passed through in droves but only one at a time was resident, and divided its waking hours equally between drinking from the feeder by the back door and driving away other hummingbirds from the feeder. A male Costa's Hummingbird *Calyptes costae* always retired to the same perch on a nearby tree from which it could watch for intruders. To make nectar available to more migrating birds we hung another feeder by the front door. Within two days, the male had shifted to a position higher up in a farther-off tree, from which it could see the original feeder and also watch for hummers heading towards the one by the front door. However whenever it launched an attack, others took the opportunity to take a quick sip of nectar from the unguarded feeder. Many of our neighbours had hummingbird feeders, but a quick check usually found three-quarters of them were empty at any given time.

A Ladder-backed Woodpecker *Picoides scalaris* once spent two weeks in our garden. It drunk the 20% sugar solution from the hummingbird feeder as did a pair of yellow and black orioles *Icterus* spp. which stayed for two days. The woodpecker clung to the underside of a thick limb of a Palo Verde tree pecking at the place where live and dead wood met. It enlarged the hole until it could get its beak inside and extracted a small grub. This took it 17 minutes after which it rested on top of the limb for three minutes then returned to the underside for a further 20 minutes, apparently pecking at random without making any obvious attempt to stop and look or listen. It then flew off and took seven sips of nectar. Five minutes later it returned to the underside of the limb and pecked for 10 minutes before finding a small spider that was walking past. It had been clinging beneath the limb and pecking at it for 42 minutes out of 50. It fell from the underside once recovering after falling 46cm (1½ft) and then flying back to its original



position. The fact that it spent 50 minutes during which it captured just the small grub and spider must say quite a lot for the calorific content of the nectar, and the fitness of the woodpecker.

We sometimes got birds from the local rescue centre, one of which was a Loggerhead Shrike *Lanius ludovicianus* found with a broken wing on the north shore of the Salton Sea. It was one of four million wintering birds in the area. The shrike used its lethal bill to destroy bandage after bandage and its needle-point bill pierced assorted garden gloves, worn when handling it. It would eat only mealworms. Three weeks later its feathers still looked good, and though it had a permanently drooped wing, it could fly quite well and was released.

Another creature which came from the centre, was a very sick White Pelican *Pelicanus erythrorhynchos* found on the Salton Sea. This huge artificial expanse of water, formed from a breach in the Colorado River canal, is now 3.5% salt, 1.5% more than the sea, and is heavily polluted. In spite of this there are in it large numbers of African tilapia and these fish attract large flocks of both White and especially Brown Pelicans *P. occidentalis*. There are periodic heavy die-offs in these flocks, the cause or causes of which remain a mystery at least to government biologists. Our pelican, which was very thin and weighed about 3.5kg (8lbs) was so sick that it remained outside uncaged all day. It barely ate and died within four days. Its intestines were a foul mess, and even without the use of laboratory facilities, it was evident that it had liver flukes which could be seen slithering about.

Parrot ownership is high in the area and a fair number of escapees passed through our garden. These included a white cockatoo that stopped by to screech along with our voluble pet 'Sean Connery', which sat untethered on a perch outside all through the above events. The two cockatoos were still competing to find which could make the most din when the owner of the second cockatoo, who lived a block away, turned up. She was out looking for her bird, when she heard the two screeching.

The only other creatures seen in the garden apart from the aforementioned lizards, were the giant blue-black carpenter bee that drilled a 2cm ( $\frac{3}{4}$ in) diameter tunnel in a dead Palo Verde limb and the interesting wind-scorpions, which pleased us by eating the big red fire ants. Also, we will never forget the termites that completely ate away all the beams of our bathroom ceiling.

## Reference

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## BREEDING THE PAPUAN WREATHED HORNBILL *Aceros plicatus* AT PAIGNTON ZOO ENVIRONMENTAL PARK, ENGLAND

by Jo Gregson

The Papuan Wreathed Hornbill, otherwise named Blyth's Hornbill, is an irregular breeder in captivity. However, as we have begun to learn more about its avicultural requirements more successes have occurred. Asian hornbills can be quite a challenge: these species are intelligent and sensitive to change and take longer to form pairs; young males are vulnerable to bullying by older females; heated accommodation is necessary and a higher protein diet is needed for them to rear their chicks successfully. These and several other factors make them more difficult to maintain and breed compared to their African counterparts.

The pair of Papuan Wreathed Hornbills came to our collection on December 20th 2000. They are housed in an aviary which measures 3m x 5m x 4m high (approx. 9ft 9in x 16ft 4in x 13ft high), with an adjoining inside area measuring 2m x 3m x 4m high (approx. 6ft 6in x 9ft 9in x 13ft high). In the summertime the outside temperature ranges from 10°C-23°C (50°F-73°F), with the average being about 16°C (60°F). During the wintertime the birds are shut in the inside area that at night is heated to an average 15°C (59°F). In the summertime the inside temperature occasionally reaches 25 °C ( 77°F).

Two nest-boxes are provided. The one in which the pair bred measures 60cm x 70cm x 60.5cm high ( approx. 2ft x 2ft 3in x 2ft 1½in high), with a 15cm x 15cm (6in x 6in) entrance hole 12.5cm (approx. 5in) from the bottom on the left-hand side of the 60cm (approx. 2ft) side. The box is 2.5m (approx. 8ft 2in) above the floor of the inside area. The other nest-box, which is in the outside aviary, measures 66cm x 40cm x 50cm high (approx. 2ft 2in x 1ft 3¾in x 1ft 7¾in high) and is 3m (approx. 9ft 9in) above the ground. The entrance hole measures 20cm x 20cm (approx. 8in x 8in) and is at the centre of the narrow end where there is a small landing ledge. This is the same type of box used by our Wrinkled *A. corrugatus*, Trumpeter *Bycanistes* or *Ceratogymna bucinator* and Northern Ground Hornbills *Bucorvus abyssinicus*.

The diet consists of a varied fruit mix, along with mealworms, mice, cooked minced (ground) beef and boiled egg. SA37 is sprinkled onto the food. When the chicks were due to hatch pinkies were added to the diet, then after eight days, 'small fluffs', and by day 25 'large fluffs' and small adult mice were offered.

The pair did not seal the nest-box entrance. The female was often seen





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