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THE SMALLEST LOWANS

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No matter how often seen, the emergence of a Lowan* chick from the mound never fails to arouse the same recurrent sense of wonder. It springs not truly from the fascinating sight of a bird suddenly rising from beneath the quiet soil but from the awareness also that what one has just seen is not the beginning but the culmination of a "birth". The last act of an archaic drama, played out down below in the dark, sandy depths.

The mind follows its unseen progress; from the initial shattering of the deep-buried egg through the long and desperate struggle of the yet "unborn" fledgling as it fights its way upwards, hour after hour, to light and life. Surely the strangest and most ancient and mysterious way to become a bird! And particularly such a bird, a true creature of the sun, born from the buried warmth of its life-giving rays and destined to be its slave ever after in the secret, arid spaces of the sun-parched Mallee scrubs.

Perhaps the manner of their coming conditions the mood of the watcher. In the early morning sunlight the mound lies, a dome of lifeless sand in a small clear space. Except for the call of a distant bird the bush is still and silent; nothing stirs. Then, almost instantaneously, before the mind can quite comprehend it, one is looking into the wary eye of an alert little bird; up like a Jack-in-the-box from the red Mallee sand. Although there are other modes of emergence, this one is so common that it could be said to be the typical one.

In time, one becomes familiar with the minor preliminary signs foretelling the coming. It usually all occurs so quickly, in the space of a few seconds, that unless the closest watch is maintained the emergence will always be startling to the observer. As a rule, the first indication is a slight tremor of a few square inches of sand at the top of the mound. A moment later a wisp of brown feather is seen on the sand where surely there was no feather before. It is the back of the chick's head, the beak and eyes are still below the surface.

At this point variations in emergence begin, due, perhaps, to the physical condition or the temperament of the individual. Some raise head and neck slowly, take in the whole scene with one swift sweep of the newly opened eyes, then straightway race, wobbling, staggering and lurching, to the safety of the nearest cover which, in this area**, is always the base of one of the surrounding clumps of tea-tree.

With others, stronger or wilder or it may be more timid, the feather erupts violently; a little, brown, mottled geyser exploding out with not a moment to lose in its dash for safety. Others again, weary perhaps from the dark struggle, disinter themselves slowly and fall about and rest on top of the mound for ten minutes or more before they, too, weave weakly away to the nearest shelter.

Sometimes, especially in a mound which I refer to as No. 5, the proprietors of which are the most placid and trustful birds in the group, many of the chicks seem to have inherited the family disposition. Rearing unhurriedly from the sand, these may sit half-submerged for five minutes or more, gazing calmly and confidently about them, untroubled by the presence of man. Some of these special types have been seen to sit in plain sight on open ground for a few minutes while on their way to cover.

Having gained protective shelter, behaviour is in all individuals the same. The chick, still uncertainly coordinated physically, rests for periods ranging from one to three or four hours. It is also a time of preparation for its imminent debut, before nightfall, as a complete, efficient, self-reliant and self-supporting Lowan. At first it is very unsteady on its newfound legs, tumbling over when attempting to stand upright. Balance soon being achieved, it begins the process of discovering itself; preening, scratching its chin with a claw like the big birds; flapping its wings and pecking experimentally at a nearby seed-head or at minute things on the ground. Sooner or later, the time comes to begin the great adventure. Some essay it within the hour, slipping from cover to cover until they disappear from sight; stout-hearted little birds taking on all the chances and perils of the unknown on the first day of life.

Once only, and astonishingly, has a chick been seen to fly. Astonishing for two reasons; the act was not impelled by fear and it occurred 25 minutes after emergence. This chick was from No. 5 mound, referred to previously as producing some remarkably placid individuals. Sitting in open shade, it was twice observed to spring into the air, flapping its wings vigorously, then resting. Quite suddenly, it happened. Launching itself strongly from the ground it became airborne, flying for 15 yards about a foot above ground. I picked it up and carried it back to a shady place where I could watch it in comfort but nothing would induce it to give another exhibition. It squatted, quietly resting, for the next four hours.

It is thought that the first day is spent chiefly in resting, moving at times from one shelter to another. Several times I have attempted to keep a chick under observation for the day but the attempt has always ended in failure. They vanish, sooner or later. Wary and elusive, with a highly developed instinct for survival and a mottled, inconspicuous camouflage that blends perfectly with the play of light and shade on the litter of the forest floor, the time always comes when one realizes that the little creature is no longer where it was thought to be. They make full use of cover, even when hard-pressed, noticeably endeavouring to keep a bush or a clump of Mallee obstructing the line of vision between themselves and the pursuer.

There have been some chicks in my experience which, in the initial settling-down period following emergence, seem to have not yet become conscious of the quality of fear. Sitting quietly while a finger gently strokes them along the back, they peer from beneath the covering hand at the new world around them. It is a rather chastening experience for one of the lords of creation to meet this pristine innocence of Nature so intimately.

No contact, communication or recognition exists between parents and chick. Mostly they never see each other. In the few instances observed when contact has been unavoidable - as when a chick emerges while one or both parents are on the mound - all are equally disinterested. An adult, if startled by the unexpected dash of a moving object towards it, may leap aside with a squawk of surprise, only to begin work again immediately, completely indifferent to the thing just encountered. A chick uncovered on its way to the surface while an adult is excavating will be kicked out in a shower of sand, the bird not giving it a second glance.

All chicks emerge in the morning. Although it is rash to postulate any definite rule where nature is concerned, all my observations confirm this. The record of one mound, given here, is typical of all:- the first chick of the season, in early November, emerged at 7.45 a.m. On the following days the next four were within half an hour either way of this time. As the season progressed they began to emerge earlier, until in mid and late summer the times were from a little before sunrise to half an hour later, the earliest seen emerging at 5.15am. It may be entirely co-incidental but this advancement of emerging times corresponded roughly with the progression of egg-laying times, which I had noted earlier. The first eggs, in early September, were laid between 10 and 11.30am, the time gradually advancing until the last eggs, in late December, were laid not later than 6.30am.

Incubation times also show a progressive reduction during the season. Again, the record of one mound may be taken as typical. This mound was selected for the purpose and the closest observation was maintained in order to avoid any possibility of error. The writer was present at the laying of every egg and the emergence of every chick:- the first egg was laid on the 10th of September, the first chick emerging on the 10th November, 61 days later. The next took 60 days and thereafter chicks emerged in the successive order of 59, 57, 56, 54, 52, 51, 51, 51, 47 and 46 days, the incubation time for the last five remaining steady at 46 days.

The eggs were laid at 5 and 6-day intervals throughout the season but, due to the progressive reduction of incubation time, the first seven chicks emerged at irregular intervals of 3, 4 or 5 days. From the first week in December the remainder came at predictable intervals, corresponding to the egg-laying intervals already known - i.e. every 5th or 6th day - with one notable exception, which for a chaotic hour seemed to destroy all belief in the validity of the record.

The last three chicks had arrived on the 4th, 10th and 16th of December, at 6-day intervals from eggs laid respectively on the 14th, 20th and 26th of October; incubation time in each case being 51 days. The record showed that the next egg was laid on the 31st of October, five days later. It was assumed that the chick would arrive in five days time, but next day, on the morning of the 17th December, I found myself staring unbelievably at a chick's head protruding above the surface of the mound, twenty-four hours after the previous one. The explanation was simple but it did not become clear for some time. The chick had arrived in 47 days. Incubation time had been reduced by four days in one step. I had earlier thought that a situation like this could be possible, but I was totally unprepared for the demonstration. The shortening of incubation periods is apparently resultant from (a) the observed and measured increase in mound temperature as the season advances and (b) the lower and waning fermentation heat of the litter forming the egg chamber, as it is superseded by the stored solar heat daily worked into the mound above and around the eggs.

Until the rhythm of hatching became stable and predictable a constant daily watch had to be kept, beginning in late October, fifteen days before the first chick appeared and continuing until late December. This entailed being at the mound, twenty miles away from home and breakfast, for over sixty consecutive dawns. Commenting, on this, a friend caustically pointed out that "You don't HAVE to be mad -- but it helps!" What did help was the fact that the observation provided an invaluable foundation for subsequent studies.

A mark, indicating recent emergence, is invariably left behind by the chick as it escapes from the mound. Insignificant and easily overlooked, especially if the mound is topped with a cover of sticks and litter, it is a small depression in the sand, about the size and shape of a saucer. It can, however, sometimes be misleading.

Once, noting the sign immediately on reaching the mound, I sat down, a little disappointed, to await the arrival of the male bird to begin his day's labour. An hour later the bottom of the saucer heaved, there was a flurry or sand and a chick tumbled down the side of the mound. It had been lying immobile beneath the surface. The depression was caused by the displacement of sand as the chick worked its way up. The depression seems to be always above the known position of the egg, suggesting that the chick rises vertically.

The probabilities of survival of the young chicks are unknown. In the area studied it is estimated that there could be 150 to 200 chicks hatched in a normal season on every thousand acres. Yet surprisingly few young or unmated birds are seen.

Predators, including foxes, are rare in the region; only very infrequently the fresh pad of a fox may be seen near the mounds. It is possible, however, that even one pair of hunting foxes could account for most of, if not all the young chicks in their range.

All observations suggest that availability of food is not a limiting factor in survival expectancy. The behaviour of the male adult in the breeding season supports this assumption. In constant attendance at the mound for at least four months of the season, he seems never to stray more than 100 yards away from it at his morning and evening feeding times, finding all the food he needs in an area of two or three acres. Whatever the reason or cause, the number of breeding mounds in the area does not increase, despite the number of chicks hatched.

The hardiness of a Lowan chick and its inherent ability to survive, or the power of Nature's unconquerable urge to live, was seen very recently. A chick - the last of the season - was due to arrive on Sunday the 9th of February. The last seven of its 19 predecessors had emerged with regularity every sixth day but this one failed to appear.

On the previous afternoon rain had begun to fall - to be described later as "unprecedented", over 4 inches being registered in 24 hours. It rained steadily all through the night before and on the morning following. An examination of the mound showed that it was successfully shedding the downpours. A surface "skin" of about three-quarters of an inch was wet; below that the sand was warm and dry.

On the following morning, the 7th day, the male bird dug out the mound - a common practice on the day following rain. The egg was not uncovered. The interior of the mound was dry, except for one small area above the egg. Probing the wet sand to feel if the egg was still there, something moved beneath my fingers. From the unseen thing beneath the surface came a harsh but muffled croaking sound. Then, rather shockingly, a swaying lump of wet sand detached itself from the mass, wavering uncertainly from side to side. Encased in the adhering lump was the head of the chick - invisible. I lifted it out and laid it on the dry sand at the bottom of the crater.

Let the notes, written at the mound-side, tell the story:-

"It lies on its back, legs feebly twitching, its wings spread fan-wise where they have fallen. They look naked, the shafts of the quills bare and blue and bony like a many-fingered skeleton hand. The skin of its body shows up in bald patches through the scanty down. Its legs cease to twitch and for a long time it lies motionless, the only sign of life being the barely perceptible trembling of the body. It is very weak and I wait for it to die.

Now it rolls over and lies still, head twisted beneath it, half-buried in the dry sand, eyes still unopened. It is drying in the warm air; the quills begin to lose their bony appearance, the filaments folded tightly around the shafts begin to unfurl. It sits up on its haunches like a dog, trembling violently, head drooping, eyes closed. It has fallen on its back, wings helplessly spread, body barely pulsating. The calling of the adult birds comes closer, the male bellowing, the hen whining shrilly in answer. They have been absent for three hours. As I lean low into the mound over the chick a gust of sand sprays us. The male is on the mound, half-inclined to fill it in. Perhaps he thinks the egg is still there. He takes no notice of the chick.

When the sand hit the chick it struggled momentarily before again collapsing. Two hours pass. It still lives. I touch it and an eye opens, looking at me steadily with the familiar brown wary eye I know so well. Sand grains still adhere to the eye-ball.

Another hour passes. It is very still, its scanty feathers occasionally lift as the body inflates in a long sigh. Ants crawl over it. It is dying - "

At this point I took it home, to give it a chance to live if that were possible.

What happened to it was obvious. The mounds in this "desert country" efficiently shed rain but, being built entirely of fine, hour-glass sand with no absorbent loam, there are always one or two points where percolation will occur, the water following a fortuitous line of entry and creating a slim pillar or pipe of wet sand down through the dry interior. One of these "pipes" had formed directly above the egg. The chick instead of finding dry sand above it after leaving the egg, encountered a cohering mass of wet sand which could not be displaced from above to below the chick as it tried to work upwards. For a day and a half it had been entombed alive, fighting endlessly, desperately and hopelessly.

At home I placed it in a high-sided carton and left it in a quiet room. An inspection of the sealed eye showed that the lower lid was distended with sand. Bathing gradually removed this and the eye functioned normally. For two days the chick crouched in a corner of the carton. On the morning of the third day the box was empty. The chick was in a corner of the room and ran quite strongly when disturbed. Its feathers were smooth and normally arranged, showing no sign of its ordeal.

I took it back to the mound and set it free. Its behaviour was that of any other chick. It scratched a comfortable little hollow in the sand and sat in it, head upright and alert. It was not noticeably hungry, once or twice it scratched in the litter and picked up something. Three hours later it wandered away.

I watched it go; an indomitable, indestructible, incredible little bird: one of the smallest Lowans.

*Lowan: the name given by the aborigines to what is now more generally, although not so euphoniously, known as the Malleefowl (*Leipoa ocellata*)

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