

## The Successful Rehabilitation of Two Powerful Owl Fledglings

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### Summary

In separate incidents in south-central Victoria in 1989, two Powerful Owl *Ninox strenua* fledglings were successfully rehabilitated. In one case the owlet was fostered with a pair of owls that had a single fledgling of similar age to the 'orphan'; in the other case the owlet was reunited with its parents. These experiences demonstrate that wild pairs of Powerful Owls will accept fostered young, and that 'branchers' can be fostered.

### Introduction

In 1982 (McNabb 1987) I attempted to rehabilitate a Powerful Owl *Ninox strenua* fledgling in the wild by releasing it at Ferntree Gully National Park, Victoria, in view of a resident pair with one owlet of their own, at their daytime roost. This was not successful but the behaviour of the parent birds gave a strong indication that fostering could be a valid rehabilitation technique.

In this paper I describe two later attempts to rehabilitate young Powerful Owls, one by the above method with some variations, and the other by returning the fledgling to its own nest area. Both of these attempts were successful.

I identify factors which made the difference between failure, as in the 1982 project, and the success of these attempts.

### The successful fostering

On 21 September 1989 Mr Ron Martin, who resides in a wooded gully at The Basin in Victoria's Dandenong Ranges, found a juvenile Powerful Owl (owlet) in his yard in the early morning. Thinking it the best course of action, he notified the Royal Society for the Prevention of Cruelty to Animals (RSPCA) which sent someone to collect it. One of his associates, Ms Helen McKernan, knowing of my studies of Powerful Owls in the Dandenongs, suggested that I be contacted regarding possible return of the owlet to its parents. This contact was made by telephone and although Martin was agreeable, the RSPCA officer determined it was to go to his headquarters.

This was unfortunate because the bird then became the subject of a minor dispute between the RSPCA personnel, who believed that it should be hand-reared at one of their wildlife shelters, and biologists at the Department of Conservation & Environment (DCE, now Department of Conservation & Natural Resources), who supported my contention that it should, if at all possible, be returned to its own parents. The owl was transferred to such a wildlife shelter where it was kept, said to be suffering from concussion, until an agreement was finally reached between DCE and RSPCA that the bird should be transferred to Healesville Sanctuary, where the veterinary care of Dr David Middleton and staff was available 24 hours a day. This second transfer occurred on 27 September, six days after the owlet was found.

On 24 September Martin told me of persistent calling by the parent Powerful Owls near his home during the evening of the 21st, but not on subsequent nights, which suggested that the adult owls had given up their search for the fledgling. However, I was confident that if it could be returned to the area soon, this family could be reunited. My first aim was to locate the adults and find out if they were still responsive to the contact/begging trills of a young owl of their kind. I explored the gully in daylight without locating the owls.

On 29 September I visited Healesville and was shown the owlet by Drs D. Middleton and R. Booth. It was being kept with another juvenile Powerful Owl (see second case, p. 294), in a private enclosure away from public view. A large sheet of cloth draped across the front prevented eye contact between the owls and keepers. Food was passed through a small hole by means of a long pole, to avoid 'imprinting' on humans (see Olsen 1990). The owlet had been eating well and showed no symptoms of concussion. It was declared fit for release back into the wild.

To see if the adults were in the vicinity, I returned to the gully near Martin's home at 1900 h without the owlet and played a tape-recording of a Powerful Owl juvenile trilling. This was intended to attract the parent owls and confirm that they would respond parentally to their fledgling. After 15 minutes without success I moved to a point about 500 m up the gully and played the tape again for about 15 minutes without result. I was tempted to play an adult *woo-hoo* call but decided that it would cause unnecessary stress to the birds, especially if they were to respond aggressively in defence of their territory.

On the night of 30 September, after trying the trilling tape without response at a point 300 m up the gully from Martin's home, I resorted to playing the *woo-hoo* call. Within minutes an adult male Powerful Owl (identified by size) arrived and perched quietly on a horizontal branch about 7 m above ground, 20 m from me. The owlet trills were then played and he immediately flew to a lower branch only a few metres away from me. Ten minutes later at Martin's home, I played the trills again to lure him to the spot where his owlet had been collected, but without response, possibly because a slight breeze had developed, so I returned to the point where I had last seen the owl.

I had been away for 20 minutes and the owl wasn't at first visible but a few seconds after I started replaying the trill tape he was back, on a branch 5 m above me, obviously still interested in the 'owlet'. With this hoped-for response I left the area, confident that if the adults could be located at their current roost, and if I released the owlet in their view, they would accept it and raise it.

On 1 October at 0508 h I heard the male call for a few minutes from trees near the point where I had left him the previous night. The female answered from down in the gully below. At 0530 h in the morning half-light he hooted a few times from the gully approximately 350 m upstream from Martin's house. I assumed these last calls were made from or near his roost, because I have often located a daytime roost by listening for these predawn calls and then, in daylight, searching the area from which they came.

On 2 October there were no predawn calls and I scoured the area without success. A steady drizzling rain had set in. However, as the owls were obviously still resident in this part of the gully I decided to attempt a reunion.

At 1730 h, accompanied by Middleton and Booth, I returned with the owlet to the gully. The owlet was now banded with an Australian Bird & Bat Banding Scheme (ABBBS) band. It had eaten well and gained weight whilst at the sanctuary, but was fasted for the previous 24 hours so that it would be hungry enough to start trilling at first sight or sound of its parents, and so stimulate their feeding and protection responses. We attached a large (1x1x1.2 m) wire 'cocky cage' to a tree trunk, 2.5 m above ground, with the owlet inside. A long perch was installed in the cage with 0.5 m protruding so that an adult owl could land beside the owlet. My intention was to lure the parent owls to the owlet by playing the tape-recording of a juvenile Powerful Owl trilling.

The owlet was placed in the cage at 1800 h and we waited concealed in the bushes,

until 2130 h, playing the tape for 1-2 minutes, at intervals of approximately 10 minutes. It did not trill at all while we were present, but these owlets often remain quiet for long periods even when hungry and then trill in response to calling by a parent.

The adults did not, as far as we could tell, respond. Leaving the owlet in the cage, we left the area, hopeful that the adults would come during the night and roost close by.

On 3 October I returned at 0450 h and watched the cage and surrounds until daylight, then searched the area for the parents without success. The owlet was left in the cage all day. Park staff agreed to check on it when passing by.

At 1800 h Middleton and I returned and repeated our efforts of the previous night until 2100 h, again without success. The parents did not respond, and although the owlet was still being fasted it did not trill. Because the owlet's plumage was beginning to show signs of wear from exercising its wings in the cage, we aborted this attempt and it was returned to Healesville Sanctuary until an alternative plan could be arranged.

The options at this stage were:

- (1) Try again to reunite the owlet with its natural parents.
- (2) Rear the owlet in captivity at Healesville Sanctuary.
- (3) Attempt to foster it out with another pair of the same species. I had in mind the resident Ferntree Gully Powerful Owls, which were used in the fostering attempt of 1982 (McNabb 1987).

We felt that the true parents had not given us any cause for optimism on nights 1 and 2 so the first option was no longer preferred. The second option was not attractive because of the problems of rearing the owl in captivity, most importantly imprinting on humans and the prolonged period of hacking required to return raptors to the wild (Olsen 1990). My observations have shown this species to be dependent on the parents until at least six months of age, so this would have been a very difficult, labour-intensive project.

I considered that if the Ferntree Gully pair of owls had only one young I could attempt to introduce the 'orphan' with them. Over the next week I watched the nesting activities and confirmed the existence of only one owlet.

On 12 October at dusk, 50 m from the nest tree, I watched a parent owl feeding this fledgling for 30 minutes on pieces of young possum, Brushtail or Bobuck *Trichosurus* sp. The other parent was perched nearby.

On 13 October the intended foster parents were roosting about 10 m up on the branch of a large Messmate *Eucalyptus obliqua*. The female, clutching the rear half of last night's possum, was perched with her mate to her left and her owlet to her right (see Plate 50).

The weather that day had been mainly fine with occasional showers, so having prearranged another 24-hour fast for the 'orphan' I decided to make the release. It had been captive for 23 days. At 1800 h while daylight was still fairly good, I placed the 'orphan' on an open branch of a Blanket Leaf *Bedfordia arborescens* 1.5 m above ground (Plate 51) 20 m away and in view of the owl family roosting in the Messmate. I then positioned myself behind some nearby shrubs and waited. The owl family seemed not to notice it at first and remained on the roost perch dozing and at times preening quietly. The 'orphan' sat silent on its perch and also showed little interest at first. At 1815 h I decided to attract the adult owls' attention to the 'orphan' by playing the trilling tape for a few seconds. The male immediately moved several metres to a closer branch and looked at the orphan owlet. He showed little reaction to the interloper and recommenced his preening. The orphan remained quiet even though the other owlet started to trill softly. At 1830 h the female began feeding on the possum carcase and



**Foster parents at time of release of 'orphan', 13 October**

Plate 50

Photo: E.G. McNabb



**'Orphan' was placed on open branch of Blanket Leaf, 13 October**

Plate 51

Photo: E.G. McNabb

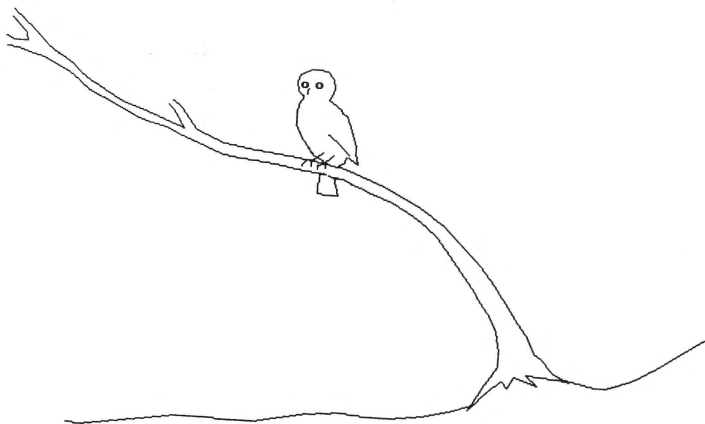


Figure 1. The owlet was placed on a leaning sapling.

her owlet's trilling became louder and more persistent. The orphan became very fidgety and watched intently as the female started to feed her owlet on small pieces of possum.

The loud squeaks and trills of the feeding owlet, punctuated by its mother's soft bleating sounds, continued to arouse the orphan and after a minute or two of wild head gyrations as it focused all of its attention on the feeding activity, it stretched its wings and launched itself clumsily toward the parent and owlet.

This flight, being probably only its second attempt, covered about 8 m before it flopped on the ground, still approximately 12 m short of the Messmate. As a rainstorm moved across the now-dark gully I placed the uninjured orphan on a leaning sapling, 2.5 m above the ground (Figure 1). This branch was chosen to enable the orphan to easily climb higher above ground and be beyond reach of Foxes *Vulpes vulpes*. I then left the area.

My research of this species has shown that when unflighted fledglings come to ground, those which display an instinct to climb are much safer from terrestrial predators. It is common for a young Powerful Owl to spend its early post-fledging days 'branching' in this way while it develops flying strength by exercising its wings without actually flying.

On 14 October I searched for an hour during the morning before locating both adult owls roosting in a Messmate about 50 m downhill from the previous roost tree. The male was holding the hindquarters of a Common Ringtail Possum *Pseudocheirus peregrinus*. Despite searching for a further 90 minutes I failed to locate either owlet.

At 1830 h I returned to find the adults had moved to another Messmate 20 m south. The orphan was perched on a shrub directly beneath them and was 1.5 m above ground. To minimise distractions to the birds I remained in cover 30 m away near the edge of a clearing which had been created a few months earlier when an ancient gum crashed down. I could not see them clearly, but could hear them quite well. The orphan trilled for 20 minutes with intermittent excited outbursts. These sounds are typical of an owlet receiving food from a parent.

The adults then met on a limb above me and had a minor altercation over which



**‘Orphan’ roosting in broken Hazel Pomaderris, 15 October**

Plate 52

Photo: E.G. McNabb

would hold the prey. At this stage other trilling was heard from 75 m up the hill behind me and the other owlet flew into treetops on the far side of the clearing. The female took the food across the clearing to her natural owlet and her mate joined her a few minutes later.

The orphan’s trilling had become very gentle by this time and although the male flew back to trees near it a few times it received no more food. The male and his owlet came and perched on a branch above the orphan at 2005 h and sat quietly as I left the area.

At this stage my identification of the two owlets was based on the flying ability of the resident fledgling and lack of same in the orphan.

The fostering attempt looked promising because:

- (1) The orphan had in fact travelled at least 40 m since its release, and was staying off the ground.
- (2) The adult owls had fed the orphan and had roosted close to it, thereby behaving protectively. In fact they seemed to be more protective of the orphan than of their own owlet, which was the stronger and less vulnerable of the two.

On 15 October a strong north wind was blowing but the orphan was roosting comfortably 4 m up in a broken Hazel Pomaderris *Pomaderris aspera* (Plate 52). A small laceration on its cere, suffered whilst flapping in the ‘cocky cage’, enabled positive identification. The band could not be seen as it was completely hidden by the leg plumage. A tail feather which had fallen beneath the previous day’s roost meant that this owlet would be easier to recognise in flight also.

The female was roosting 5 m away and the male a further 10 m away, also in the Hazel understorey where they had protection from the wind. They had no prey.



**Both owlets roosting in Manna Gum, orphan with back to camera, 2 November**

Plate 53

Photo: E.G. McNabb

Their owlet was not to be seen until it arrived trilling in the treetops at dusk. The orphan also trilled constantly through the dusk period and I watched it fly 20 m and land, still rather clumsily, in the understorey where it scrabbled to regain a normal upright posture. Both adults flew off, probably to hunt.

On 21 October I located both owlets roosting 5 m apart, 15 m up in a Messmate about 100 m down the gully (south) from the roost tree used on 15 October. They were both alert and looking well. The adults were not sighted.

At 1900 h the female arrived nearby. She had no food and disappeared 10 minutes later. The two owlets trilled vigorously and flew about quite ably, displaying normal sibling bonding by following each other from tree to tree. The orphan was recognisable because of the missing central tail feather. I had not to date made an attempt to sex these owlets but on hearing them both trilling, I noted a significant difference in pitch, the orphan's call being deeper, indicating a male, and the other owlet's call more shrill, indicating a female.

Significant extracts from my diary in the following weeks are:

**28 October:** adult female and both owlets roosting in Messmate, male a little apart from them in same tree, all about 17 m up.

**2 November:** adult and both owlets roosting in medium-sized Manna Gum *E. viminalis*. Owlets close together (Plate 53, orphan with back to camera), adult on opposite side of tree, all between 15 and 17 m above ground.

**14 November, 2030 h:** female adult feeding both owlets with Ringtail Possum carcass. The band was visible on the fostered owlet. After they had finished feeding, the adult perched with remains of prey and watched over the owlets as they sat on nearby branch.



One of them tore small strips of loose bark (Manna Gum) from the branch and ate them.

24 December, 2100 h: adult and two sub-adult Powerful Owls observed. The young birds now in sub-adult plumage i.e. similar to adult but generally paler.

4 January 1990, 2130 h: two sub-adult owls present. Female adult arrived with Ringtail Possum and fed them.

5 January: fostered owl in daytime roost, a Blackwood *Acacia melanoxylon*, 7 m up, clutching rear portion of Ringtail Possum. Band was seen when bird stood and lifted its tail to defecate.

5 February, 2100 h: two young (sub-adult) Powerful Owls heard trilling excitedly, sounds consistent with their being fed.

This was my last observation of either of these young Powerful Owls. It is normal for them to start becoming independent and disperse during February-March (pers. obs.).

### Rehabilitation by release into parental care

On 6 October 1989 a juvenile Powerful Owl was found on the ground in the Jerusalem Inlet Caravan Park near Eildon, Victoria. It was being harassed by a camper's Doberman dog so the proprietors contacted the local office of the Department of Conservation & Environment. Ms Kathy Keast, then a Parks Assistant, arrived soon after, collected the owlet and telephoned me for advice. On hearing her description of the events, I suggested that the bird be taken to Healesville Sanctuary for veterinary examination by Dr Middleton. His diagnosis was that this owlet was a little 'underfed' but otherwise in good health. We agreed that it should be reunited with its parents as soon as possible.

On 9 October, accompanied by Keast and Mr Vic Hurley, I visited the collection site. There were creamy droppings, Ringtail Possum entrails and regurgitated pellets splattered on and around a large tent fly beside a tall gum tree *Eucalyptus* sp. This indicated that it was the nest tree. I located the nest-hollow about 13 m above ground. We searched the surrounding area but failed to locate the adult owls.

The fresh signs indicated that the owls were probably still in the immediate vicinity, so it was decided that a reunion should be attempted at dusk. The owlet, which had been fasted for 24 hours, was banded with an ABBBS band and placed in the large (1x1x1.2 m) 'cocky cage' with a perching stick, c. 25 mm diameter, through it and protruding 50 cm on each side. At dusk I played the taped calls, but after 20 minutes without any sign of the parents, we moved the cage onto a makeshift verandah at a nearby campsite to shelter the owlet from the heavy rain which had begun to fall. We then left the area for 15 minutes in case our presence was deterring the parents from investigating the trilling. Soon after our return at 1900 h a soft *woo-hoo* signalled the arrival of a male Powerful Owl, which landed in front of the nest-hollow, and repeated the soft call several times as if trying to communicate with a bird in the hollow.

At this moment I stationed myself near the caged owlet and played the taped trills again. Soon after, an owl alighted upon a low branch within 5 m of the cage as the other swooped overhead and disappeared in the darkness. Soft bleating by the former indicated a parental response so, assisted by Keast and Hurley, I removed the owlet from the cage and tried to perch it on a eucalypt branch (2.5 m above ground) about 10 m away from it. The owlet was quite excited by all the activity and jumped off, fluttering to the ground. Flying was obviously beyond it at this stage. My companions had retreated to the shadows to watch as I picked up the owlet and tried again to perch it, this time successfully, 2 m up in a Native Cherry *Exocarpos cupressiformis*



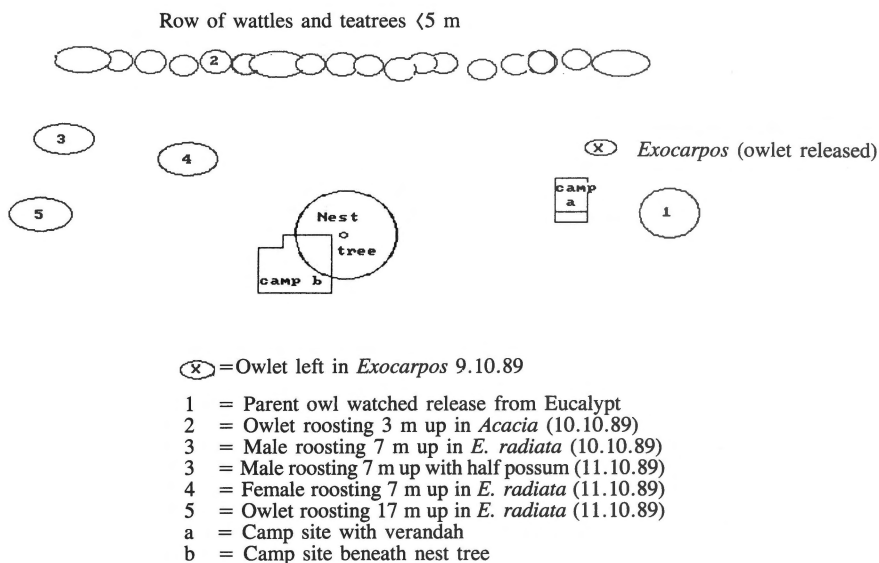


Figure 2. Diagram of owlet nest/release site at Jerusalem Inlet Caravan Park.

at the rear of the camp site. The adult was still on the low branch watching so we left the area as quickly and quietly as possible. The time was 1930 h.

On 10 October Keast located the owlet roosting 3 m up in a Blackwood approximately 25 m from the release site (position 2, Figure 2). This acacia was in a row of teatrees *Leptospermum* spp. and wattles which provides shelter for some of the camp sites. The owlet had been released into a Native Cherry tree close to this row (position x, Figure 2). The male was roosting 7 m up in a Narrow-leaved Peppermint *E. radiata* nearby (position 3, Figure 2).

On 11 October Keast and I returned to find the male roosting in the same place, this time clutching the posterior half of a *Trichosurus* possum (i.e. Common Brushtail *T. vulpecula* or Bobuck *T. caninus*). The owlet was in the top of a Peppermint 10 m south of him (position 5, Figure 2), and the female was 7 m up in another Peppermint (position 4, Figure 2) close to the nest-tree camp site.

As darkness fell the adults moved about from tree to tree, occasionally squabbling over the food. This activity continued for about 30 minutes in which time the owlet demonstrated an improvement in flying expertise by undertaking several short jumping/flying manoeuvres of up to 7 m from branch to branch, trilling excitedly most of the time.

Eventually, after the adults had satisfied their hunger, the female arrived beside the owlet and spent 20 minutes plucking pieces from the possum carcase, giving them to the owlet.

Satisfied that this family of Powerful Owls was reunited and now behaving normally, we left. No further visits were made to the caravan park but I have no reason to doubt that the Powerful Owls continued to raise this, their owlet.

## Discussion

### Case 1

The main factors contributing to this successful fostering were:

- (1) The Powerful Owl fledgling was examined by an experienced wildlife veterinarian. In the 1982 rehabilitation attempt the bird was not checked by a veterinarian and it is possible that it was compromised in some way.
- (2) The owlet fed well whilst at Healesville Sanctuary and was at a healthy weight, then fasted for 24 hours before release. Being hungry, the orphan then behaved normally in trying to seek food from its potential foster parents. It was also important that the orphan communicated with the adults during its first night back in the wild. Powerful Owl fledglings tend not to trill unless they are hungry. The parent owls react to this trilling by feeding them. It also identifies them to the adult birds and thus protects them from attack. In the previous fostering attempt the orphan wasn't fasted, so it is possible that the adults attacked it because it was just a large (quiet) bird/owl in their territory.
- (3) In retrospect I believe that releasing an orphan owl in full view of the adults in daylight stresses all the birds involved, especially when a tree is scaled twice to settle the owlet on a branch as we did in 1982 (it jumped off). This time the potential foster parents woke up at dusk and the new owlet was perched nearby as if it had been there all the time. Although I had to retrieve it and settle it on the sapling, I was able to accomplish this quietly and quickly, and left the area immediately.

In the report on the 1982 rehabilitation attempt (McNabb 1987), I outlined my reasons for not using the 'hacking' method. These same reasons apply to this recent project, and they are, briefly:

- (a) A hack box mounted on a tree in this popular national park would most likely be noticed by the public and therefore be vulnerable to interference.
- (b) To place the 'orphan' inside the owl's nest-hollow would not be practical because of the height of same and would, of course, have caused avoidable stress to the resident birds.
- (c) Hacking would, in the case of an owl, be labour-intensive; fostering requires regular observation for the first day or two only. This project showed itself to be successful within hours. My attendance was no longer necessary after this because the adult Powerful Owls had assumed responsibility for the welfare of the orphan.
- (d) In any case, hack may not work well with *Ninox* species because fledglings follow adults through the forest instead of receiving food at a central place, i.e. the nest (pers. obs.; J. Olsen pers. comm.).

### Case 2

This rehabilitation attempt had a much better chance of success because the owlet was returned to the nest area promptly, i.e. within 76 hours. Because of this the parent owls had not yet given up looking for it and were subsequently able to resume their normal parenting immediately.

The owlet, as with the Ferntree Gully bird, was fasted for 24 hours before release. Although in both cases the owlets did not vocalise at the time of release, it is likely that later in the evening when the initial excitement died down they would have trilled at least some of the time. This was indicated by the parental response of the adult owls, e.g. roosting with/near the owlet.

## Conclusions

The success of the Ferntree Gully fostering attempt was satisfying but to have rehabilitated the owlet by reuniting it with its natural parents would have been preferred. It can be seen by events described in both rehabilitations that for successful reunion of an uninjured 'brancher' with its natural parents, prompt action is absolutely essential. With such action a positive result could have been obtained in the case of The Basin owlet.

Over 17 years of observing the breeding of Powerful Owls I have noted that during the first few weeks post fledging, at least one parent usually maintains contact with its owlet(s). I have placed a grounded fledgling up in a tree or shrub and seen this contact confirmed at dusk.

Olsen (1990) also noted that:

Nestling owls are commonly brought in to us in spring because these young leave the nest and begin to follow the parents. This is part of their breeding strategy and, if placed in a tree near where they were picked up, the adults usually find them.

J.Olsen (pers. comm.) has done this successfully with Southern Boobooks *N. novaeseelandiae* and Tawny Frogmouths *Podargus strigoides*. This suggests the need to avoid unnecessarily taking such fledglings into captivity, and that well-meaning persons finding an owlet low down or on the ground should not assume it to be orphaned or deserted. Placing it on a safe perch, preferably one which offers the opportunity to climb higher, and discreetly observing events at dusk offers the bird its best chance of survival.

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