A STUDY OF REHABILITATED JUVENILE HEDGEHOGS AFTER RELEASE INTO THE WILD

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Many juvenile hedgehogs (Erinaceus europaeus) *are 'rehabilitated' with little or no previous experience of life in the wild. A study is described in which twelve such animals were monitored after release in Devon. They quickly learned their way about, built nests and found them again, and interacted normally with each other and with wild conspecifics. While several showed significant weight loss, this represented only the excess accumulated in captivity. Deaths caused by a predator (badger) and motor cars suggest that captives destined for release should not be allowed to become tame and unwary. However, deaths are to be expected in natural circumstances and at least one third of these animals survived beyond the nine-week study, despite having no previous experience of life in the wild. This supports the belief that, although deaths are to be expected, rehabilitating hedgehogs (even naïve juveniles) is possible and worthwhile.*

Keywords: *animal welfare, behaviour, juvenile hedgehogs, rehabilitation, survival*

Introduction

Increasing numbers of sick and injured hedgehogs (*Erinaceus europaeus*) are being taken into captivity, to be nursed back to health and then released into the wild. Many hundreds of hedgehogs are treated in this way each year in the UK, but little attempt has been made to find out what happens to them after release and whether their 'rehabilitation' is complete or only results in disorientation and perhaps death.

Experiments by Morris, Munn and Craig-Wood (1991, 1993) and Morris, Meakin and Sharafi (1993) suggest that *adult* hedgehogs did survive surprisingly well after release, following a period in veterinary care. The animals integrated with their wild conspecifics, found their way about, built natural nests and showed a typical (Reeve & Morris 1985) pattern in their use. They also managed to feed adequately, although there was a long period of gradual weight loss following release.

However, these animals had the benefit of previous experience of life in the wild. Large numbers of 'rehabilitated' hedgehogs are in fact juveniles that have experienced little or no independent life at all. This particularly applies to young and nestlings that have been taken into captivity in the autumn having been abandoned by their mother or because they are too small to survive the oncoming winter. Hedgehogs need to weigh at least 450g to have

sufficient fat resources to survive hibernation (Morris 1984). These rescued juveniles are normally kept active in captivity and fed well, so that they are often larger than overwintered wild hedgehogs of the same age. They are then released in the spring.

By then they may be completely adjusted to the artificial conditions of life in captivity, having known no other. They have fed from a bowl, on artificial food. They have never needed to build a nest of their own and have probably never been given the natural materials with which to do so. They have also not needed (or been able) to travel far. These animals must rely entirely on instinct to survive after release. The present study investigated the fate of a sample of these overwintered juvenile hedgehogs, after release into the wild, having had little or no previous experience of independent life.

Materials and methods

Twelve hedgehogs, six males and six females, were obtained from the Royal Society for the Prevention of Cruelty to Animals (RSPCA) Wildlife Hospital at West Hatch (Somerset), on April 2 1993. Animals were chosen that had weighed less than 350g when taken into captivity. These would thus be unlikely to have had much experience of independent life the previous autumn. Many had weighed less than 150g when first acquired and may never have been out of the maternal nest. Several of the animals had been brought in together with their mother whose nest had been destroyed. These hedgehogs would have had little or no experience of foraging, eating natural food and certainly no experience of constructing their own nest. The hedgehogs were all given a health examination under (halothane) anaesthesia by a veterinary surgeon (Sainsbury *et al* in prep) and each was fitted with a radio transmitter ('Biotrack', Wareham, Dorset) whose individual radio frequency became the animal's identity number. The radios were glued to a patch of spines on the back and each incorporated a small luminous tag to aid location at night.

They were released at Helecombe Farm near Clayhanger in Devon (National Grid Reference ST 0224) where previous uncontrolled releases had taken place. The farm is pasture on steep, rolling hills with hedges and earth banks, typical of the South West. The site is about 300m above sea level. Wild hedgehogs were present and there were also signs of badgers (a potential predator of hedgehogs), but there was no sett on the farm itself.

The animals were divided into two groups. Six animals (four females, two males) were destined for direct ('hard') release. The others (two females, four males) were to be released after a period of acclimatization in pre-release cages ('soft release'). The cages were made of 1cm weldmesh (50x50x100cm) and placed around the edges of fields out of sight of each other. The 'soft release' animals were fed in these cages for five nights before release, long enough perhaps to learn where they were and to become accustomed to the sights and sounds of the locality. They were free to return to the cages and the supplementary food which was put in them for five nights after release.

The hedgehogs were monitored every night for five weeks, with at least three position fixes being obtained (as x,y map coordinates) each night. The position of the daytime nests was also determined. The animals were weighed when first found each night, usually before midnight. Any wild hedgehogs found were also weighed and given an individually recognizable identification mark by spraying a patch of spines with paint.

A second health examination was performed on May 6, five weeks into the study. Thereafter the animals were monitored less frequently but daytime nest sites and body-weights were recorded at frequent intervals for a further four weeks.

Results

The weather during the study was wet on most nights, with temperatures falling to –2°C. After May 1, temperatures remained above freezing and many nights were quite warm. The hedgehogs were active from about 2100h until 0200-0500h.

Release of the animals was arranged so that a few were liberated each night, beginning on April 2 and spread over time to allow the observers to become accustomed to the animals and their movements and not be overwhelmed by excessive scattering of individuals, should that take place. Although each batch of hedgehogs had a different release date, results are presented here as elapsed time after release, so as to permit easier comparison between individuals and groups. Some gaps in the data resulted from the animals frequenting areas of the farm that we were asked not to enter.

Movements

Several of the animals travelled in excess of 0.5km per night and three made abrupt long-distance dispersal movements, often after being resident on the release area for several nights:

- number 228 went to Petton, 2km away to the NW;
- number 312 went to Woodlands Farm, >500m to the NE;
- number 298 went to Wellhayes Farm, 500m to the west on night 3 following release, and was retrieved after three days having spent most of the time in a barn.

In each case these animals were active around the release point and then suddenly departed, to establish themselves again around farm buildings elsewhere. Number 298 was retrieved because it departed to an area that we were asked not to enter. Both numbers 228 and 312 then remained at their new homes for the rest of the study period.

Body-weight

Details of body-weights are given in Table 1. The initial mean weight of our 12 animals was 861.7g (standard deviation [SD] = 176.4). This compares with 562.04g (SD = 114.9) for 14 wild-caught overwintered juveniles weighed in April in a previous study (P A M unpublished data). Even by May, a sample of wild juveniles (ie born the previous year) still only averaged 509g (n = 34; P A M unpublished data). Some of our animals, after overwintering in captivity, were double this size.

Substantial weight loss was observed in most animals following their release, in one case up to 38 per cent. This caused us considerable concern, but most of the animals seemed otherwise healthy and we were conscious of the excess weight that some had carried at the time of their release. Evidence that the loss was not as dire as appeared is shown in Figure 1. The heaviest animals lost the greatest amounts, both in absolute terms and relative to their own initial weight. The correlation is relatively strong, (r = 0.8325) and the relationship is statistically significant despite the small data set (n = 9; P<0.01). Thus, big animals had more to spare and lost more weight following release.

Table 1 **Body-weights of the study animals.**

Identity no	Sex	Weight when first obtained (g)	Weight at release (g)
211	m	169	560
221	f	120	1038
228	f	312	845
244	f	126	1036
256	f	173	595
270	m	120	1106
288	m	149	890
298	f	120	960
312	f	120	955
324	m	82	830
332	m	310	860
353	m	180	665

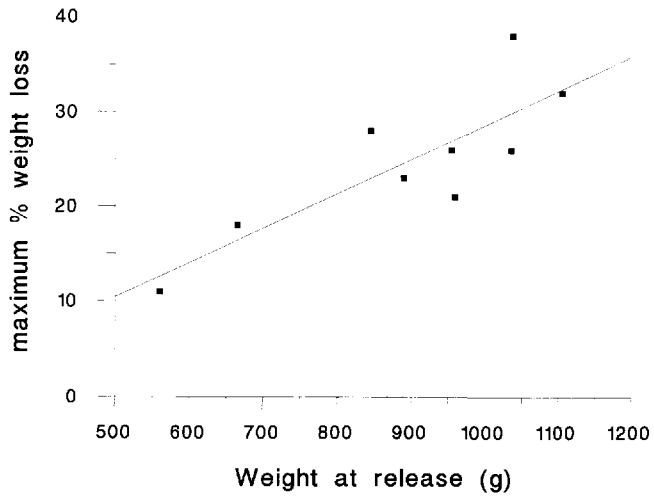

Figure 1 **The relationship between weight at release (g) and the maximum subsequent percentage weight loss, using data from animals that survived 20 days or more after release.**

Three animals (228, 298 and 353) seemed to stabilize at about 25% weight loss, but one (211) managed to maintain its weight between 90% and 107% of that at the time of release. Weight loss appeared to level off after about 30 days. Some animals were very variable in their weights from night to night, others less so. This, and typical patterns of weight loss are

shown in Figure 2. Although number 270 showed less variability in its weight than number 228, both animals exhibited a clear downward trend, losing 20-30 per cent of their weight compared with that at the time of release before levelling off. Others showed a similar pattern.

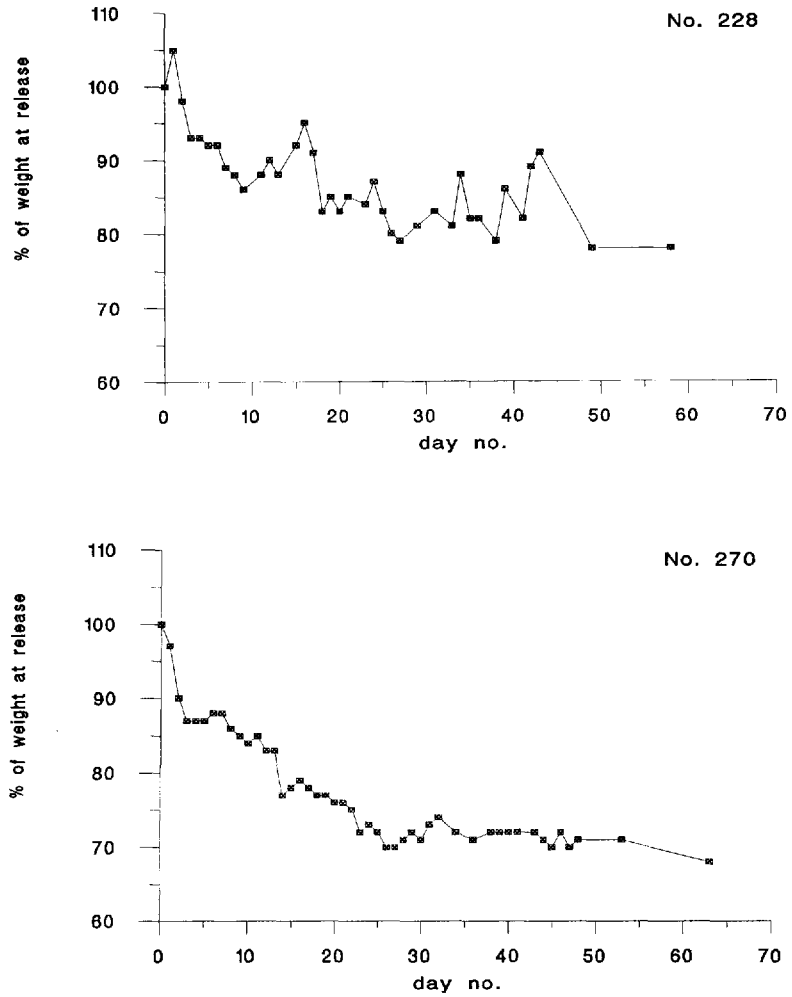

Figure 2 Weight loss with time of hedgehogs 228 and 270.

Hedgehog weights vary considerably, both between individuals and in the same animal on different occasions. Too much should not be read into changes of up to even 50g per night because of their ability to eat (or defecate) large amounts in a short period. It is the trend over time that is more significant. This was explored by regression analysis, comparing the trend over the first 30 days following release with the last 30 days. In some cases this results

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in some weights (typically about five) being common to both regressions. Figure 3 shows regressions for number 312 for example, which clearly suggest that the statistically significant downward trend in body-weight stops after about day 21. Afterwards there is still a downward slope, but this is now not statistically significant and may be considered a stable state.

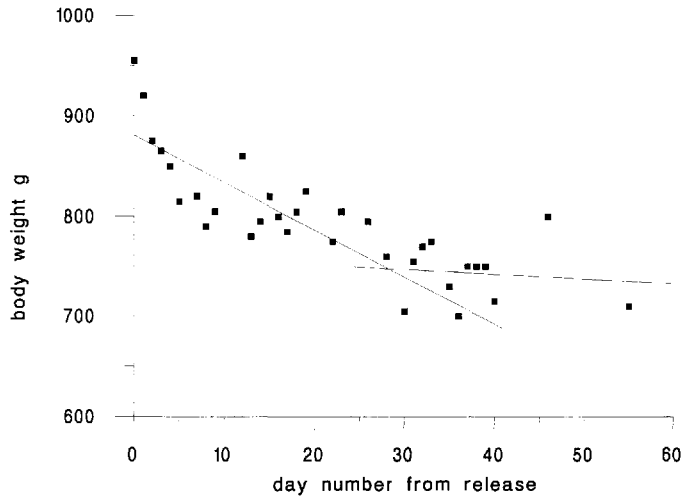

Figure 3 **Weight data for hedgehog 312 showing regression lines for the periods of weight loss and apparent stability. The slopes and their levels of significance are given in Table 2.**

Table 2 shows the slopes of the regression lines for four hedgehogs where sufficient data points were obtained for a similar analysis. A negative figure indicates weight loss; a larger value means faster loss. Where the slope is not statistically significant ($P>0.05$), the weight may be considered stable relative to the natural variability in the data. There is a very clear difference between the steep downward slope in the first period compared with the relatively small change in the second, representing the attainment of a stable weight. This suggests that it takes about 3-4 weeks for the animals to stabilize in their new environment.

Variability in weights was explored by comparing the stable weights (ie after at least three weeks) of the four long-term survivors in this study with the weights of four wild hedgehogs caught on the study area and weighed seven or more times. The coefficient of variation (CV; standard deviation as a percentage of the mean weight) was calculated for each. Weights of our released animals were slightly less variable than those of the wild ones (mean CV = 3.2%, compared with 3.85% for the wild hedgehogs).

The four animals which survived until the end of the study had a mean weight at release of 986g, compared with 799g for those that did not survive for so long. This difference is not statistically significant, and anyway the early deaths were mostly due to chance events in which weight was not a crucial factor.

Table 2 **The slope of the body-weight regressions for the first 30-day period following release (when weight loss was obvious) and the subsequent 30-day period (when there was relative stability).**

Identity no	Period	Day nos	Slope	*P*	*df*	*r*
221	1st	0-40	–8.8210	<0.001	34	0.9797
	2nd	36-63	–0.6516	0.42	11	0.2423
228	1st	0-29	–4.8635	<0.001	24	0.8223
	2nd	25-58	–0.1821	0.86	14	0.0520
270	1st	0-29	–9.5180	<0.001	28	0.9603
	2nd	23-63	–0.6057	0.03	22	0.4538
312	1st	0-30	–4.7156	<0.001	20	0.7918
	2nd	28-55	–0.4694	0.71	11	0.1127

Hard versus soft release

The experiment was designed to allow comparison of the effects of direct release into the wild (hard release) and release after a period of acclimatization in pre-release cages (soft release). The two groups are shown in Table 3. There is no evidence that the cages served any useful purpose, nor did they have any obvious effect on behaviour.

Female 298 went to Wellhayes farm early in the study. She was one of the hard released animals and might not have left the area if she had first been held captive in a pre-release cage, but this could not have been foreseen.

Table 3 **A comparison of what happened to the animals released directly into the wild with those kept in pre-release cages beforehand.**

Type of release	Identity no	Sex	Max % weight loss	Fate after release
Hard	221	f	38	Survived until end of study
	244	f	26	Radio lost after 4 weeks
	270	m	32	Survived until end of study
	298	f	19	Survived 5 weeks (badger)
	312	f	27	Survived until end of study
	324	m	35	Survived 4 weeks (car)
Soft	211	m	11	Survived 5 weeks (badger)
	228	f	22	Survived until end of study
	256	f	28	Survived 17 days then euthanased (sick)[1]
	288	m	23	Survived 5 weeks (badger)
	332	m	13	Survived 5 days (car)
	353	m	18	Radio lost after 3 weeks

[1] see Sainsbury *et al* (in prep)

Nesting

The ability to construct a nest and to find it again after a night's activity are two important criteria by which the success of rehabilitation may be assessed. Daytime nest positions were therefore obtained for all animals except when they used parts of the farm inaccessible to us or towards the end of the study when monitoring was not continuous.

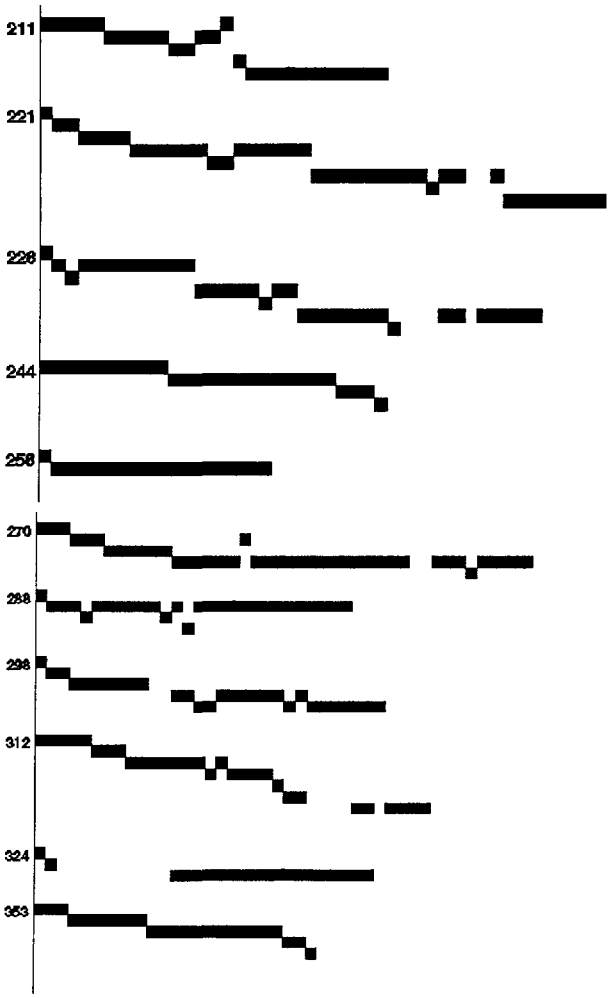

Figure 4 **Patterns of nest use for 11 released hedgehogs, from day 1 following their release (332 is omitted as it was killed after only 5 days).** The bars indicate the number of days using a particular nest. Each line represents one nest, a drop to the line below indicates change to a new nest, change to a line above shows return to a previously-used nest.

Precise construction of nests was not investigated as this would have required destruction of their surroundings. Nevertheless, the sites chosen were typical of wild hedgehogs (among hedge shrubs, under corrugated iron, among hay bales). At least two released animals found and used sites known to have been previously occupied by wild hedgehogs.

The pattern of nest use is illustrated in Figure 4, but its analysis is complicated by the fact that number 256 showed signs of sickness and behaved abnormally, number 324 was recaptured and caged again for a few days (due to suspected ill health) and number 332 was at liberty for only five days before being run over, insufficient time for a pattern to become established. Omitting data from these animals, males occupied their nests for an average of 5.45 days before moving to another one; females 6.66 days. This reflects the normal pattern in which wild male hedgehogs change nests more frequently than females (Reeve & Morris 1985), but in the present study the difference was not statistically significant (Mann-Whitney U test, $P = 0.3272$).

Six of the hedgehogs (221, 228, 256, 288, 298 and 324) used their first day's nest only once and never returned. Failure to return to the same nest means valuable potential feeding time is spent locating a site and building another, so there is good reason to return to an existing nest. That this did not happen on day two suggests that the first nest built was in some way inadequate and the animal did not wish to return to it. Alternatively, it may be evidence of navigational inability; the animals simply could not find their existing nests again. If the latter hypothesis were true, and the animals failed to learn the geography of the site, a fresh nest would be built and used every night. This did not happen. All of the animals, after the first night, did build at least one nest, often several, that was used on more than two consecutive days. This shows an ability to relocate an existing site.

Figure 4 shows that numbers 211, 244, 256, 270, 312 and 353 all managed very soon to return to their nest successfully for at least three days, indicating rapid development of navigational ability at the site. Moreover, seven of the animals changed nests and then managed to return to a previously-used nest. Three (288, 298 and 312) returned to a single nest in each case, but numbers 211, 221, 228 and 270 re-used two or even three existing nests. In many cases, return to an existing nest was after an interval of only one or two days, but number 270 returned to its second nest after an absence of two weeks.

Behaviour

Courtship behaviour was observed between released males and wild females; released females and wild males, and also between pairs of the released animals. One of the released females (244) was observed mating with a wild male.

It appears that our hedgehogs had attained sexual maturity and were behaving normally, also that they were not being harassed by wild conspecifics. Six weeks into the study, it is believed that numbers 221, 228 and 312 might have been pregnant as judged by palpation under anaesthesia, but this was not confirmed on subsequent examination.

No serious aggressive encounters were observed among any of the hedgehogs, despite the relatively high population density resulting from 12 animals being released in close proximity to each other, additional to the wild animals already present. Self anointing (Burton 1957), an enigmatic but apparently normal behaviour, was observed among the released animals.

Feeding

It is normally difficult to see what hedgehogs are eating, but a post-mortem on one of the road casualties revealed an earthworm in the stomach. Another animal was seen eating a slug.

Mortality

Three of the hedgehogs (211, 288 and 298) were eaten by badgers five weeks into the study. Two others (324 and 332) were killed by motor vehicles on local lanes 30 and 5 days after release respectively.

Discussion

Weight loss

The steady decline in weight shown by these animals suggests that they were starving, but none returned regularly to feed at the pre-release cages. Some engaged in lengthy interactions with other hedgehogs and also sometimes retired to their nests well before dawn, after a short night. These observations suggest that starvation was not sufficiently serious to make extended feeding the priority activity. None of the animals remained active in daylight, a frequent sign of starvation in wild hedgehogs. Arguably, they were not starving at all, just losing weight.

Sustained weight loss observed in the first 3-4 weeks after release (seen also in previous studies) suggests that being large is no disadvantage to a released hedgehog. Being small might well be cause for concern, particularly for animals released early in the year.

All animals were of substantial weight, mostly well above that expected for wild overwintered juveniles. Indeed three of them might be considered obese at over 1kg; this being a weight rarely seen at the end of winter, even in very old hedgehogs.

Predation

It is possible that three of the dead hedgehogs found had been eaten as carrion by badgers, but in two of these cases the remains were very fresh and the animals had been seen alive and well only hours before. There is no reason to believe that they abruptly sickened and died before being eaten. In the third case, the badger was encountered in the act. Badger predation on the translocated hedgehogs is therefore certain, not presumed, and has also been reported by Doncaster (1992).

It has been suggested that we should not have released hedgehogs where badgers were known to be present, but wild hedgehogs were present too, suggesting that the risk of predation was not great. Badgers live in high numbers throughout South West England, with records from all but two of the 10km squares between Lands End and Swindon (Arnold 1993). Avoidance of badgers was not a realistic option nor is it normally a priority when hedgehogs are released into the wild.

The fact that three of our animals were eaten by badgers was unfortunate, but it could have happened to any hedgehogs irrespective of origin. Indeed, three similarly predated hedgehogs were also found which had not been among our released captives. This was probably the work of only one badger, visiting temporarily, as all predation took place within a few nights. Moreover, the farm had been used previously for releasing hedgehogs and there were still some living there, despite the badgers.

It has also been suggested that attaching luminous tags to the hedgehogs made them more conspicuous and thus increased the risk of predation. This was not overlooked, but the problem is less serious than it appears. Firstly, badgers do not have particularly good eyesight and their eyes are also sufficiently close to the ground that even quite short grass will make it difficult for them to see distant things. Human eyesight is more acute, and we have the advantage of height. Nevertheless, the luminous tags were not easy for us to see at more than about 50m, especially on moonlit nights. Closer than this, a badger is likely to detect hedgehogs whether they are tagged or not because they are noisy and also leave scent trails. It is also a fact that four of our animals escaped predation for over nine weeks, in spite of their luminous tags.

A more significant risk factor was probably that the released hedgehogs were accustomed to being caught and handled, and had been captive almost since birth. They were insufficiently wary of 'attack' and several barely bothered to roll up when they were caught for weighing each night. This would not be an appropriate response when accosted by a badger. Thus, tameness, consequent upon their past history, may have been a greater problem than the luminous tags.

Road deaths

The death of two hedgehogs on local roads was surprising as few vehicles were seen after dark (probably an average of less than one per hour) and the lanes were very narrow, restricting vehicle speed. However, they were also flanked by steep hedgebanks, making escape difficult and leaving the animal trapped in the path of an oncoming vehicle. Hedgehog road kills are uncommon on such lanes, so perhaps wild hedgehogs normally stay off them. It is possible that the inexperience of our animals contributed to their demise, particularly if their tameness, noted above, led them to ignore the danger.

Use of pre-release cages

The pre-release cages were intended to lessen the shock of release and provide opportunity for orientation and supplementary feeding. However, the hedgehogs did not respond well and at least one seemed distressed by its confinement. None of the hedgehogs returned regularly to the cages to feed or nest, despite weight loss and heavy rain which might have increased the attractiveness of this option. Perhaps the cages were too small and unappealing. However, more elaborate cages would have been expensive and difficult to arrange. They are also not normally provided by people intent on releasing hedgehogs.

It is possible that five days' acclimatization was insufficient, but subsequent events showed that the animals soon learned the geography of the site. So the cages, and additional time spent in them, were evidently not necessary for orientational purposes.

There is no evidence that the pre-release cages were beneficial. Moreover, three out of the four hedgehogs that survived until the end of the study had been released directly into the study area, not via a cage. Nevertheless, pre-release cages probably do little harm and might still assist rehabilitated animals.

Movements

Priority was attached to studying as large a group of animals as possible, weighing them all each night and locating daytime nests. This did not allow time for detailed following of individuals and the pattern of home range use was considered less significant than weight changes (a measure of foraging success) and nest use (an index of developing navigational competence). Consequently, no data are presented here concerning home range size, and with only three or four position fixes per animal per night, such data would anyway be incomplete (Morris 1988).

The animals stayed around the farm, except for three that undertook dispersal movements. Even these then took up residence around buildings at other farms. Perhaps the released animals created such a high density locally that some were forced to move out, but there were no signs of aggression and there was abundant natural food. There was also food at the farm put out for cats and latterly for the hedgehogs themselves. One possibility is that, as the grass grew in the hayfields, it became more difficult for hedgehogs to wander freely, so some sought other areas in which to operate. It is surprising that all three animals that engaged in long-distance movements were females, normally it is males that move about most (Reeve 1982). However, no studies have yet been reported on naturally dispersing juvenile hedgehogs, so it may be inappropriate to relate the dispersal movements of young animals that have not yet established a 'home' to normal movements of adults.

Timing of release

It is obviously desirable to release overwintered animals as soon as possible in the spring. In the South of England most hedgehogs end their hibernation in April, and earlier release would risk problems with late frosts and shortage of invertebrate prey. Many difficulties faced by overwintered hedgehogs would be alleviated if they were let go a few weeks later when nights were warmer. However, spring was early in 1993 and by late March, the experimental animals had already been active for nearly a month and the males were showing signs of aggression and distress at their confinement. The RSPCA would normally (Seddon pers comm) have released them even earlier than in the experiment. This is likely to reflect the normal pattern of releases of overwintered animals, with carers letting them go as soon as they seem fit enough. Our release date was a compromise, constrained by practicalities.

The present study began only after local wild hedgehogs had been seen active, and fresh droppings and prey items found. Despite the inclement weather, there was little sign that it had adverse effects. Indeed if the hedgehogs had been released during the warmer (but dry) period in March, they may well have experienced considerable difficulty finding food which April rain brought out in abundance.

Survival

The fact that 'only' four animals survived until the end of this study needs consideration in context. Annual mortality of even experienced adult hedgehogs is about 30 per cent (P A M unpublished data). Deaths are therefore to be expected; rehabilitation cannot confer immortality. If the study had been further prolonged, recorded survival would have been proportionately even less. It is also true that five out of the 12 animals were removed by causes that were unrelated to the animals' origin and could be considered as bad luck.

Many would like to believe that released animals live long and happy lives. Such a belief persists precisely because proper follow-up studies are rare. The lack of information about so-called rehabilitated animals may also reflect the fact that many carers would probably rather not know what happens to their animals after release. The RSPCA is to be commended for having grasped this nettle, not criticized for discovering that animals face many dangers in the wild.

The key point is that at least a third of our animals survived a minimum of two and a half months after release, despite having had no previous experience in the wild. They may even have bred. If the RSPCA had not taken them into care the previous autumn, none of them would have survived at all.

Animal welfare implications

This study provides reassurance that released, naïve juvenile hedgehogs can cope with life in the wild and do not simply starve or suffer disorientation and distress. It also shows that these animals, despite lack of previous experience, can interact normally with each other and with wild conspecifics. The deaths of five animals suggest that hedgehogs destined for release should not be allowed to become too tame in captivity and lose their natural wariness. Their response to danger might then be inadequate when confronted by a predator. Resources devoted to saving young hedgehogs in captivity appear justified. Many late-born young will die in hibernation under natural circumstances through being underweight. This study suggests that support provided in captivity, followed by release into the wild, is an appropriate alternative.

Conclusions

This study indicates that:

1. Inexperienced overwintered juvenile hedgehogs can and do survive release into the wild surprisingly well. Their rehabilitation is therefore a justifiable use of resources.
2. They can find natural foods with which they are unfamiliar, build nests and find them again; they also integrate well with each other and with wild hedgehogs living on site.
3. Nevertheless, released animals are vulnerable to the same dangers that threaten wild hedgehogs, perhaps more so because of their naïvety and relative tameness.
4. Substantial and sustained weight loss is to be expected, especially if they are overweight as a result of being well-fed in captivity.

Recommendations

1. Release of overwintered animals, especially inexperienced juveniles, should not take place early in the year before evidence has been found of locally active wild hedgehogs and before invertebrates such as worms, slugs and beetles are active at night.
2. If captive animals are active before late March, they should be weighed. If their weights exceed 700g, they should be fed minimally to encourage them to go back into hibernation. Otherwise they will become (sexually) active too early in the year and may be fretful in captivity. Generous early feeding may also result in obesity.

3. The substantial weight losses in this and previous studies suggest that it would be unwise to release animals weighing less than about 500g. Otherwise a 20 per cent loss will result in a mass less than 400g, dangerously close to what appears to be the viable minimum for adult hedgehogs in the wild.
4. Badgers are probably the only predators sufficiently strong to kill significant numbers of hedgehogs, so releases should avoid places where they are common. This is becoming increasingly difficult as badgers are now widespread and numerous, especially in the South West.
5. Similarly it is desirable to avoid release sites near to busy roads, but this too is difficult. Hedgehogs often travel over 2km in a night, easily within range of a road in most parts of the country. As this study has shown, even quiet and remote lanes are an unavoidable danger.
6. Hedgehogs destined for release should not be encouraged to become unnaturally tame.

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