





## THE SPARROWHAWK A PROFILE

The sparrowhawk, (*Accipiter Nisus*) is, by any standards, notwithstanding its diminutive size, very adept at catching its quarry which is almost always other birds, of all types and sizes. Barely 330mm from head to tail tip, the female weighs an average 9 to 10 ozs. Some older haggards have been recorded as high as 11 ozs. The male, or Musket as he is known, stands at 250mm from head to tail tip and so is considerably smaller than his mate, weighing a bare five ozs. on average. This size difference is common to almost all birds of prey and the reason is nature's way of making sure these hunting birds can survive when the crucial breeding season is on. The size difference ensures that the young brood are guaranteed a continuous supply of food vital to survival. The female can and will catch larger quarry whereas the more agile male can chase the smaller and more manoeuvrable quarry, at a stage when a continuous food supply for a hungry brood is vital. Because the name sparrowhawk suggests this hawk hunts sparrows, people accept this prefix as having originated from just that. The word Sparrowhawk is really a derivation of the old medieval term sparehawk, meaning her to be 'spare' or delicate. This is so true and it requires considerable care and skill to keep and hunt a sparrowhawk for more than its first season. It is easier to neglect a sparrowhawk than a larger hawk or falcon and, in many respects, this brave little hawk's courage and tenacity belies a delicate finely honed metabolism. However, given care and proper exercise in the field and provided the falconer really cares for his hawk she will serve him well, for of all the hawks, and especially for her size, she is the best. She needs no encouragement to chase anything from wren to rook with that deadly efficiency for which she has been prized for centuries. The musket is not flown as often as the larger female. Although as efficient and possibly even better in some respects by virtue of his diminutive size and agility, he is even more highly strung than the female and so is difficult to keep really well. I do know that those who do fly the musket always have amazing stories about flights to relate.

*opposite:* First year eyass female and musket.

In today's Ireland the sparrowhawk abounds. In the agricultural landscape in County Meath, where I live, the open fields bordered by myriad hedgerows supply countless quarry for the hawk. In the West of Ireland, where fuchsia and rhododendrons and stone walls are more common than bushes, sparrowhawks are also plentiful. Unlike the midland and eastern counties where evergreen and deciduous woods are common, in the West the sparrowhawk nests very close to cottages busy with the bustle of human activity, simply because a cottage or farmhouse usually has a planted windbreak of pine trees which are ideal nesting places for this little hawk. I know a sparrowhawk and her mate who nest every year in a small tiny clump of rhododendrons not fifteen feet from the ground. The site is within fifty feet of a house in Ballycroix, a flat open tract of thousands of acres of bogland in County Mayo. Jack Mavrogordato, in his book "Behind the Scenes", mentions a similar occurrence in a small tree in a cottage garden in Belmullet, also in Co. Mayo.



## TAKING THE EYASS

*The Imprint, The Brancher*

In this part of Ireland nearer the east coast sparrowhawks nest in or near the periphery of woods. Using sometimes an abandoned rook's nest or making a new one from available twigs, it is very often built in a pine or larch tree. Nesting takes place in June, so early in the month is the time to start searching for a nesting site. Some broods can be branchers and too mobile to take by the end of the fourth week, so the earlier you begin your search the better. Sparrowhawks nest very close to the old site each year, so if a site is known then 90% of the searching is eliminated. However, either way, looking down, not up, is the best way to begin. It is on the forest floor that the giveaway clues are to be seen. All hawks will have at least started to moult by the time nesting begins. As wind is a small factor inside the shelter of a wood, as likely as not if you find a tail or primary feather lying on the ground you will be very close. Possibly the very tree above you will be the place. Another definite sign is whitewash, droppings from both adults and particularly from the young eyasses which can number from two to five. There is no guarantee that having found your nest that a brood of even five will contain one female. I have found that quite a number of nests will have a number of tiny balls of white fluff looking deceptively young, only to discover that they are all muskets.

The moulted feather could be from the adult musket and you may have discovered his plucking post. Remember this diminutive male is the sole provider during incubation and the early days after hatching. Carefully pace the surrounding area and keep a sharp eye for the remains of a kill; the tell tale clump of feathers. You have really got to look carefully. Mentally gear yourself to act like a zoom lens on a camera. Look slowly and leave nothing uninvestigated. When the male makes his kill he will take it to his favourite spot to plume and break into the flesh before attending to his mate, even indulging in a quick snack at the plucking post or branch beforehand. Again the lack of wind in the wood

is a boon as the plucked feathers will remain in a small area undisturbed. You will even find castings sometimes if you are observant and lucky. The plucking area will be in sight of the nest, so now is a good time to start looking up and scanning the tree tops for the next sign, an opaque ball of twigs tucked into the side of the main trunk. The actual size of the tree matters little. It is just as likely to be near the top of a thin larch, the base no more than 300mm in diameter, as in a large mature tree. The nest will be nearer the top as they seem to love sun and light. In extremes of either sun or rain the very young can be protected by the adult female. Unlucky for you if the larch is tall but thin as climbing to the nest could be like holding on to a metronome. If you still cannot see the nest, look around the base of each tree for the best giveaway of all, the whitewash or droppings. Within a week or two of hatching the youngsters will be able to back up to the edge of what is a relatively shallow nest and discharge over the edge. The undergrowth below will be whitewashed with the slicings, a sure sign the nest is overhead.

Now stage two begins. Assuming you are not going to fly a musket (and I would advise against it, especially if it is your first hawk) then cross your fingers and climb, praying for a female. I have no advice to give about climbing trees except to say be careful and do not ever do it alone. Assuming you have climbed the tree yourself, you are faced with two problems and they have got to be solved quickly. This I know from my earlier days, hanging on by an elbow wrapped around a branch and one foot on the remaining stump of a dry branch which has just snapped off. When you are in this position you are not in the best situation to make decisions which will set the stage for the season's hawking. Are they all muskets? Suppose you have got the average of three, is the biggest the female? Perhaps that one which was crouched down and is now backing away is the biggest? And what about age? Are they too young? Meanwhile your arm has lost all sensation and everyone below is

shouting up questions from below. What's keeping you? How many are there? How many females? How old, would you say? And you are tempted to invite the lot of them to come up and see or shut up!

One advantage is that provided the eyass is at least ten days old you cannot do any harm. So before any attempt is made to take, make your decision beforehand as to whether to imprint or not. Never be tempted to take an eyass under ten days. The best possible chance your eyass has of being well developed physically is to be fed on the variety of kills brought by the parents. Young eyass hawks will be fed on internal organs with all the vital vitamins and trace elements they contain as well as on tender flesh with the right amount of bone and marrow for calcium. Calcium is very important for the development of a tiny eyass and the parents are experts. To take an eyass less than ten days old and assume this responsibility is foolhardy. Of course it is unlikely that anything will go wrong if a well balanced diet is given, but with small eyasses you can overfeed just as easily as underfeed. You can never know if you are leaving out a vital vitamin or mineral content. Very young eyasses need constant care with diligent attention to regular meals. The parents are undoubtedly well qualified, so let them do what is totally natural and best. Remember if you do take an eyass too early you will have to hand feed and so you will end up with a screaming, over aggressive imprint which could drive you and everyone else around the bend. It is not a pretty sight to see the inexperienced falconer arrive for the day's hawking with an aggressive young imprinted eyass, not standing erect and watchful for action but rather draped over the glove, half mantling and oblivious to everything and everybody, simply screaming for food.

However, it is true that an eyass like this will eventually perk up and even stop screaming once it starts killing. It is also true that the interim is sheer purgatory which has to be endured, because of the constant screaming and unbelievably bad manners, like mantling and

leaning back on a fanned tail which soon breaks. Imprints can actually be dangerous and particularly so when it is a younger falconer who, having a hawk for the first time, wants to be sure he does not lose it. Two advantages, however, that imprints do have is that they are almost impossible to lose, as they will always keep sight of the falconer, the provider of food. Because of that fact they will come instantly to the fist with little, if any, reduction in weight. And it has to be said, too instantly sometimes! Once I took one such imprint out to hunt and she bagged the falconer. This little sparrowhawk had been taken at around ten days and was kept in constant sight of everything right from the beginning. Having put her through the normal procedure of training when she was full summed I was the proud owner of a screaming, raving lunatic. One particular day and one which I will never ever forget, she took stand high up in a tall beech tree. Leaving her in this excellent position for a chase I proceeded to beat towards her from about thirty metres along a sparse hedgerow. A blackbird got out and she was after it until the blackbird put in to a clump of hawthorn some distance away from us. The hawk, having narrowed the gap, was now standing on a stone wall but too far away for a sure kill on a reflush. Having marked the blackbird I decided to call the hawk to the fist and move in closer. I raised my gloved fist and she came instantly, but at the same time a second blackbird got out almost at my feet and was away down parallel with the stone wall. I reacted instantly and dropped my fist in the hope that the hawk had caught sight of the quarry. The hawk too reacted instantly, but did not fly the quarry. Instead, as I turned to look at her, she plunged, feet outstretched, straight into my face. One talon got my lower lip and a talon from the other foot was embedded in my nose. As the shock of what was happening dawned on me I quickly realised my gloved hand was over my eyes.

Luckily my reflexes were on automatic and I do not even remember putting my glove in that position. Anyway, there she hung simply taking the whole situation of being upside down totally for granted and screamed and screamed. She finally released one foot from the most painful area, my lip, and suffering further excruciating agony I then got the second talon out of my nose. I was using my bare right hand, not daring to leave my eyes unguarded for even a fraction of a second. As she plunged razor sharp talons into the back of my naked flesh she continued to scream her head off with that vacant expression so typical of the imprint.

Funnily enough, once I got her back on my glove and tearing at a pigeon wing, and a handkerchief applied to my wounds, all was well. Within ten minutes we were off again and blaming her little for the incident I resolved to increase her weight with a good gorge that day and the day after. My mistake, and it was mine, was that I was flying an imprinted hawk far too low in weight. For such a hawk another three quarters of an ounce in weight made a vast difference in her behaviour.

If you do decide to imprint totally, (sexual, and foodwise) the ideal time to take the eyass is at ten days. If, on inspecting the nest, small dark feather tips like paintbrushes are just appearing out of the white down, then she is about twelve to fifteen days old. If the hawks can also stand and back away and the feathers are about a centimetre down then it is unlikely you will imprint totally. However, a hawk taken at this stage, although too advanced for total imprinting, and kept in sight of everything, will scream when reduced for training, for a while at least. I have experienced a sore-hawk do the same, however she will not have the bad manners as well. I prefer to take the eyass just prior to brancher stage, when all the feathers are showing but there is still a mixture of down as well. Then she is placed in the mews out of sight until hard panned. Taking at this stage means the hawk will be easier to sex,

particularly if there are no muskets. Also the eyass will be nutritionally sound, strong and, although more nervous, not mobile enough to try and fly out of the nest as you approach. To leave it any later is risky as one or all of the hawks could attempt to fly and instead plunge to the ground and damage themselves. It is as well to remember that the rate of development of eyasses at this stage is quantum as each day progresses.

The most practical method to use when it is time to take is for the climber to take along a rucksack with a long line attached. When the eyass is placed inside on a towel, or anything soft with plenty of grip, the top can be tied and the rucksack lowered down by the helper on the ground if the line is looped over a branch. This leaves the climber free to negotiate a safe descent and being above the rucksack the climber can free it if it snags on a branch.

The bag arrives on the floor of the forest and no one can wait to open it. At this stage a tired and perspiring climber could be miles away as he makes his own way down. Everyone is focused on the newly arrived eyass, sitting wide-eyed at her new surroundings and to everyone's relief, it is a female! This part of the operation, the final decision of which one to take, was the sole responsibility of the climber who, if he knows little or nothing about hawks, needs to be carefully briefed beforehand. The safest method to use is not to rely on overall size difference between male and female but go by the size of the legs and feet. If both sexes are in the nest then the females will always be obvious by virtue of their larger legs and talons despite appearing the same in body size. This will be all the more obvious if the eyasses are over ten days. What then if the nest is all females and you cannot make a comparison? Well, nothing for it but to take a chance. Advice is never too far away so try to have someone who is experienced with you. An obvious question arises here and it is one which is much debated, at least amongst the falconers I know. Even if the nest contains all females they

## REARING THE EYASS

*The Hawk, Diet and Feeding*

can vary in size and there may very well be, as I have often found, a very large female. As each egg will hatch after thirty five days or so, because of the laying interval of two days between each egg, then the size difference can be very marked in a nest of three or even four.

Is this larger eyass the one to take? A consensus of opinion does seem to exist to the effect that the largest eyass is not necessarily the best one. The theory being that the smaller females have to be more aggressive about getting their fair share of what is going and, as a result make better hawks. I have no evidence to back this up, but I do have a gut feeling about it and so usually prefer to choose a slightly smaller one, avoiding both the tiniest and the largest. The smallest should be the best if the above deductions are correct but it could equally be retarded or simply a late hatcher. One thing is certain though, that a very high percentage of birds of prey die in their first year. All other things being equal an adult pair produce one for one; simply enough to replace themselves in their own lifetime. A variety of factors will influence such a high mortality rate. One such factor must surely be lack of success in catching quarry. The sudden onslaught of cold weather in September and onwards into Winter must be a tough test for the inexperienced hawk. One way or another the deadly game of chasing and killing, hunting in order to survive, is uncompromising. Only the fittest endure. Only the best can become the procreators of another generation. That is why the adult parents are experts and have proven their right to breed by survival in all kinds of weather and situations. An adult sparrowhawk making a living for itself day after day is agile, clever, very fit and very quick to take advantage of any situation. A superb athlete, she will carry only the minimum reserve of body fat. It is a thin line between survival or death by starvation in the wild. By comparison, a hawk taken as an eyass and fed a proper diet, with all care taken for it's welfare thereafter, does not suffer the slings and arrows of survival in the wild, but rather is

guaranteed a meal by her falconer each day.

Finally, it is very important that you familiarize yourself with whatever regulations and laws pertain to the taking of hawks. In the Republic of Ireland, at the time of writing, an eyass may be taken under licence when the process is supervised by a wildlife ranger. You must have a licence to practice falconry and a second licence to take the eyass. Once you have taken an eyass and confirmed this, a third licence is then issued which entitles the falconer to possess the hawk. This, and the licence to practice falconry, can be revoked at any time if the hawk is not being kept as it should be.

## REARING THE EYASS

*The Mews, Diet and Feeding**The Mews*

There is no reason why the young hawk should not be reared where she is to be housed permanently. So, except for minor additions at this early stage, the mews and the rearing pen are one and the same. A wooden garden type shed is ideal, however, it should be not less than 3m in length, 2m in width by 2m high to accommodate one hawk. A safety door is absolutely essential and woe betide he who insists otherwise. This is particularly so when the hawk is loose in the mews and this should be the norm rather than the exception. Most garden sheds simply have a small window on one wall and this would be totally inadequate alone. Fresh air, and sunshine as well as cool shade in summer are essential, and therefore the more open the mews the better to allow good air circulation.

The mews which I like best for a sparrowhawk is a garden shed with one side removed from about halfway up and this space replaced with vertical bars of wooden laths or dowels. These bars should be spaced so that air and sunlight can get in and the hawk cannot squeeze out, so 25mm spaces maximum will do fine. Extending from this a roofed but otherwise open area of weldmesh or chicken wire about 3m x 2m x 2m high, this serves both as a weathering and bathing area when she is on the bow perch. This wired area acts as a safety area also, as when you enter the mews if she does fly past you through the door she remains in the weathering pen, provided you did not forget to close that gate too. With a large open area like this siting should be carefully considered so as to allow plenty of warm sunshine but not for the whole day. A wooden shed with a solid roof can become far too hot in Summer. Also take note of prevailing wind and try to ensure this will not be a problem. Rain, especially with wind, can be very uncomfortable for a hawk in Winter and the ideal solution for this is a hinged flap, the other half of the open front in fact, which can be lifted up or lowered and fastened at night if

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## The Mews, Diet and Feeding

the weather is severe. Hinged at the top it can also be used as a sunshade if the roof overhang is not enough. The weathering area has several advantages over simply leaving her on the bow perch on the lawn. For example, if you are concerned about cats or dogs, she will always be safe inside the mesh and if she does get off, due to an undone knot or some other mishap, she will probably be sitting on the bow perch, even minus a swivel and leash, as there is nowhere else to go. Think of the consequences if a hawk is weathering on the open lawn and the leash becomes undone while you are away in town!

Using this system the three essential and basic items for housing are catered for: a dry, airy, comfortable mews, a safe weathering area and a safety entrance. The weathering pen can be made from chicken wire as the hawk will not be intentionally left loose in this area but will always be on the bow perch. If she were allowed loose she would damage her cere and make a mess of her tail, so never do this no matter how much you are tempted. Remember also that you will have no safety entrance if she is loose in the weathering area. Use small mesh, enough in fact to prevent small birds getting into the weathering pen and then into the mews itself. As I have previously mentioned, I usually keep my sparrowhawk loose in the mews. In this way she can choose her position in the morning or afternoon sun or move away as she desires. If the weathering pen wire is too open she could easily snatch a small bird that wanders into the mews. One August day myself and Stephen, my assistant falconer, arrived at the mews to go hawking, only to find one very satisfied sparrowhawk with a large crop and the remains of her victim on the floor. The weathering pen was 50mm mesh. (2")

There is much debate about perches and I have to say that I prefer soft ones. Not having thus far had any foot problems with my hawks I feel safe in recommending carpet covering. A wooden batten, say 130mm x 25mm can be fixed running the length of the mews, 130mm being the

height of the perch, facing the vertical bars. Cover this with an equal length of carpet the whole way and that is all that is required as a very comfortable perch.

You can fix this arrangement on a shelf which is about level with your chest. Also fix a batten all round so that the shelf can be filled with sand. In this way the hawk's perch is high up off the ground or floor away from draughts and as you enter the mews she is on your level. A hawk will settle better at this height, and you can use the space underneath the shelf for storage. As to flooring, I prefer sand, about 50mm in depth covering the shelf and a sprinkling on the floor. Outside in the weathering area I use 10mm (3/8") round washed gravel. Inside the mews the shelf sand keeps feet very clean especially if the hawk takes her food to the shelf to eat it. The sand is easily removed when needed as it is always dry and, being absorbent, dries up mutes quickly. I would never put gravel indoors as it gets fouled by mutes and then, as a result, the hawk's feet become very messy and unhygienic. The rain and regular hosing will keep the gravel outside quite clean and anyway you can always move the bow perch around. The bath and bow perch are kept in the weathering area and the bath should be changed every day. An upturned galvanised dustbin lid set into the loose gravel is perfect for the job.

Never, on any account, use straw, hay, wood shavings or sawdust on a mews floor. All such organic materials will, especially at a certain humidity, carry airborne spores of bacteria, *Aspergillus*, which are lethal to a hawk. Bare floorboards need constant hosing and scrubbing so use sand and all will be easier to maintain. If bare ground exists inside instead of floorboards sprinkle about 50mm of sand over the bare earth to prevent its becoming too dusty in Summer and making it easier to clean out. A concrete floor will also need to be hosed and scrubbed if it is not covered with a layer of sand. I do not like to use disinfectant unless

absolutely necessary. Prevention is the best dictum, so change the sand regularly and keep the carpet on the perch clean. Usually I simply throw out the carpet and tack on a new strip twice or three times a year. In between, a good scrub on a sunny day keeps the perch hygienic. If you do use disinfectant, do not use any thing that comes to hand but get veterinary advice first. It is best to always consult a vet when any, and I mean any chemicals are to be used. Using the kind of environment I have just described and having a good attitude, in the sense of regularly cleaning out and looking after the mews and weathering area, ensures a healthy hawk with no recourse to chemical sprays or even worming. I am of the opinion that a good diet, fresh air, sunlight, light rain, bathing and flying are all that is necessary to keep disease at bay.

For the newly arrived eyass a tomato box lined with twigs can be left on the shelf until she is old enough to be a 'brancher' and likes to stand. If the eyass is to be left undisturbed until hard panned then fix a wooden flap so that food can be placed on the shelf from outside. Always line a nesting box with twigs as a hawk needs to have something to grip, especially at the early stages of development. A smooth surface, or even sand alone, could cause splayed legs. Depending on the position of the front of the mews you will have a good idea of the way the sun penetrates as it moves across the sky. If shade is needed, fix some freshly cut evergreen branches so as to create dappled sunlight getting to the nest rather than exposing it to the direct sun all day. If she is to be trained at the brancher stage the young eyass will spend all her time in the mews until hard panned. You must not disturb her once she is installed in the mews, so take care of these extras before she arrives. Leave the nesting box in its position on the shelf until you have flown your hawk. Young hawks like to lie down and even adults enjoy it. The final luxury is electricity. If you can arrange it, fit a dimmer switch, which could be invaluable in a situation that requires handling a wild hawk. It is also

especially useful for the occasions when you are making a hawk to the hood.

### *Diet and Feeding*

Without doubt diet is a vital aspect of a young hawk's well-being and development. The eyass will be pale in the eyes and legs and so too her cere. The yellow colour, so typical of the sparrowhawk, will develop later. The rich cadmium yellow characteristic of older hawks probably will not appear until after the first moult at least. Some people believe the yellow colouring is helped by feeding day old chicks, and I am of the opinion this is not necessarily the case. What of the wild hawk? She is not fed on day olds. The young eyass's eyes will be greyish in colour and this is perfectly normal. At first, even for as much as a day, the newly arrived hawk will be nervous and may refuse to eat. Fret not, for when she is hungry, she will. It is best, if you are not going to be present all the time, to get out of sight and simply leave the food with her. I know that for most of us the fascination of seeing the new arrival eat for the first time is a major event. By far the best way to cater for this, if she is not being taken up until a brancher, is to be able to check her without disturbance, so fit spyholes. Again, arrange this before she arrives, checking that you can see the nest box from, say, two different angles from outside. If you use two spyholes you can avoid being panicked into thinking she is dead or ill. If you do not, you may burst into the mews thinking the very worst, only to find a very startled hawk who was just having a doze.

If you have taken the eyass at the stage when all the feathers are showing and she is to be trained at the brancher stage, then she must not be disturbed from day one. As the young eyass develops, her feathers tail and primaries particularly, are still "in the blood", meaning the hollow shaft is filled with a supply of blood vital to feather growth. As the blood

recedes and the shaft hardens the eyass becomes "hard penned" or "full summed". If she is disturbed during this period then the stress will cause "fret marks" to appear across each feather. If she is disturbed and gets a fright or is left hungry you will see the fret marks right across her tail and primaries at the point where the developing feathers were protruding out of their temporary protective shaft. It is only later when you see her tail fully grown that you will see these weak spots. It is here that a break will occur in a very short time, in a feather which is delicate at the best of times. So never disturb her and always keep food in front of her. Give her as much as she will eat.

Uneaten food can be a problem, particularly with flies in hot weather. If the hinged flap is fixed so that it opens inwards, the hinge being inside and fixed at the top, uneaten food can be removed easily by hand without disturbance. As the young hawk becomes strong on her legs she will begin to venture out further along the padded perch to explore. Curious of her surroundings she will spend a lot of time standing on one leg then the other looking about and preening. Hawks preen a lot at the brancher stage as the casings of the temporary shafts around the developing feathers are jettisoned. Also she will lie down quite often, either in the nest or on the padded perch, and it is perfectly natural and conducive to growth. Adult sparrowhawks also like to lie down and my present hawk, an intermewed female, loves a lie down in a sunny spot on the shelf, particularly in Summer during the moult. This is a very good reason for leaving any sparrowhawk, adult or juvenile, loose in the mews provided she is not subject to sudden frights. She can also be weathered on the bow perch, but in the mews can suit herself. I honestly feel to keep any hawk continuously on the bow perch is unfair. Somewhere there is a reference in a hawking book which says to beware the hawk that lies down and I do think that all else being equal this is utter nonsense. I have often approached my hawk when she is having a lie down in a sun

spot. She will look up, not even bothering to move and later in the cool of the day we can have a good afternoon's hunting together. Of course, if a hawk lies down it could indicate sickness but there would be other signs as well.

So now the young hawk's first meal is prepared and it would not consist, for my part, of day old chicks, at least until training begins at a later stage. A diet of day-olds alone would be inadequate as there is little, if any, calcium and thiamine present, despite a high proportion of protein. There is possibly, for young eyasses, too much phosphate present in the yolk sac. If you do use day-olds make sure to supplement these with calcium lactate. Bought in 200mg tablets, crush one into powder and sprinkle it over the food. SA 37 is also good but the calcium lactate needs to be given as well. Be very careful not to overdose with SA37. Only use the smallest possible amount you can pinch between two fingers, sprinkled over the food. To be on the safe side do not give SA37 more than three times a week. Use it on alternate days only. One powdered calcium tablet, however, is about right for the young hawk each day. As the hawk becomes hard penned reduce the SA 37 and calcium, but not eliminating both during training. Vitamins are essential also, so use one drop every second or third day of Abidec multivitamins. You can buy this in any chemist, and it is sold as a vitamin boost for young children. Abidec or any other equivalent is excellent and I use it regularly, say twice a week on all adult hawks, especially if they are on a diet of day-olds. It is not necessary to use supplement vitamin or minerals if you are feeding pigeons to adult hawks, but calcium addition is essential for eyasses as they will not be ingesting much bone at the early stages.

Pigeons are much richer and contain developed internal organs such as heart, lungs, liver etc. which provide much needed vitamins and trace elements for health and normal growth and development. Also they provide lots of tirings, wings for example, which take time and exercise

to pick clean. Bones also are broken up by the hawk as it gets stronger, providing marrow, calcium, and keeping beaks in good shape. The net result of feeding pigeons is that this diet is as near to a natural diet as one can get. The pulling and plucking develops the neck muscles and foot co-ordination in the young eyass, keeping even the adult hawk free from boredom and exercised and occupied for hours. The pluming does keep a hawk's cere clean and her feet clean. That said, I would sprinkle a calcium lactate tablet over pigeon until the hawk is hard panned and she is old enough to tackle bones on her own. If you have the patience to leave your eyass in the nest with the parents for the first ten days, they will, because of a natural diet, lay a healthy foundation at the stage when it matters most. Some falconers feed beef. If you do this always remove all of the fat and add calcium and Abidec. Also, because an individual has access to a ready supply of something or other like pig's heart, for instance, it then becomes the hawk's diet. This is a poor reason to adopt a diet and I am very doubtful if heart is a good diet anyway.

Frounce in pigeons is a potential danger and this is particularly so with domestic or feral pigeons. In order to avoid this infection always remove the head, neck and crop and dispose of these, including the intestines, but leaving everything else.

If you keep pigeons as a source of food in a loft, then dose the drinking water with Emtryl every time new pigeons arrive. Allow two weeks before using these birds as a food source to be sure there is no frounce present. Always check by looking into the mouth of a pigeon for white lesions, but under no circumstances would I feed the head, neck or crop. Quail are excellent food for hawks but they should be checked regularly for any signs of infection and dosed as necessary. A word of warning - it is far safer when any food source is treated for an infestation, like internal parasites or frounce, to allow two, or better still, three weeks to elapse before killing. This would especially apply to food

for breeding hawks in captivity as there is evidence to suggest that some treatments for quail and partridge, in the case of gapes for example, have a detrimental effect on the hormone balance of breeding hawks and falcons. Freezing is a good idea as it allows for greater stocks to be kept but it does not eliminate, frounce. Always check the breast of a bird intended as a food source. In any case of a thin breast discard the whole carcass as something is amiss. Some falconers use road casualties as food, but I would examine a carcass very carefully before using it. The burning question is, how did it get there in the first place?

There are falconers who feed day-olds both to young eyasses and adult hawks without supplements and will insist they have had no problems. There are also falconers who have had problems so in my view the latter are those to listen to. Beef is actually very handy as a food during training as it is easy to slice up small bechins as reward for coming to the fist, or as a little something to give a hawk as you pass her on the bow perch. This kind of reward encourages her to see your approach as pleasant. A further warning here about pigeon, if shot pigeon are used it is always possible that the young or adult hawk could ingest a piece of lead shot and, as a consequence, suffer lead poisoning and die. So use shot game at your hawk's peril.

I do use quail and beef for adult hawks, especially during the hunting season. At this stage it is easy to fill the hawks crop and still keep control of its weight for flying. After several full crops of pigeon, however, a sparrowhawk is so high and wild she is impossible to handle and certainly not quick to the fist. Never feed a sparrowhawk or falcon rabbit as a diet, but only to reduce it's weight. A full gorge of rabbit will have the same effect as washed meat. She will not even stay at the previous day's weight but will drop lower, unlike a buzzard which would thrive. A sparrowhawk would, if fed rabbit all the time, literally starve to death.

Washed meat, beef, is excellent to reduce a hawk, it has the advantage whereby she can be given a full crop - but will drop slightly in weight as well.

Simply take some pieces of beef and soak them in iced water in the fridge over twelve hours, squeezing every so often to remove the juices, i.e. the blood. Then change the water every time and put the pale meat away in the freezer for future use. Do not use washed meat for calling off a hawk. It is scant reward for her coming readily to the glove and she will hardly relish it. A word of advice on day-olds - always check for and remove any odd bits of shell, if taken by a hawk, a small piece of shell could do a lot of damage to the oesophagus.

If you have left your eyass to be trained at the brancher stage then you will not have put in a bath unless the water can be changed without disturbance. Lack of a bath up to the brancher stage will matter not at all as a wild hawk will not have experienced the pleasures of a good splash until she is well on the wing and venturing far from the nest. If you have decided to imprint she will be familiar with practically everything but again will not, in all probability, be tempted to bathe until hard penned.

There are two types of imprinting. One is sexual and for this the eyass is taken very young - up to or before ten days. The second is food imprinting which happens if the eyass is taken at after ten and up to eighteen days. With sexual imprinting the young eyass, and later as an adult hawk, will relate to the falconer as it would to another hawk. It does not regard you as being in any way different to another sparrowhawk. Also it will have absolutely no fear of humans and will scream for food on sight of you and even when you are not around as it would do in the wild. The type of fear I speak about here is that small degree of fear which is really respect; knowing when to back off. A sexual imprint will not have that respect and will relentlessly beg for food, or do almost anything to get it. You will never lose such a hawk no

matter how hard you try and after a few weeks of her, oh, how hard you will try! Well, at least sometimes.....

On the other hand, an eyass taken at, for example, fifteen or eighteen days will not imprint sexually but will become a food imprint if it is hand fed or takes its meals supervised by the falconer and is kept in sight of all and sundry. This eyass will also scream and hang upside down on the glove but will eventually settle down as will the total imprint, especially if entered and flown without delay. If either of these two types of imprinting is to be done then the system for rearing and training is exactly the same for both. I usually take the nest box, which is in either of these two cases removable, with the young eyass out into the garden so that she sees everything and everyone including the dogs, car, bikes, lawnmower, the lot. This system is good as you can take the hawk everywhere, especially in the car where she gets slightly bumped around and so learns to take everything in her stride. This can only last for about two to three weeks until, in fact, she is just about to fly. Then she must be confined to the mews until completely hard penned. This will take about another week and you can still take in her meals and generally stay in contact. I have noticed that when eyass hawks, regardless of when they were taken, get to within a week or ten days of being hard penned they can become very jumpy. The food imprint will become very nervous and at times will not tolerate your presence. However, the total sexual imprint will not usually bat an eyelid, except on rare occasions, but put her in the mews for the last week just to be safe. The eyass left alone out of sight from the day she is taken becomes very touchy and will bate about the mews in alarm at even the slightest movement at an approach. Watch for light coming through around doors for example, or the food flap. If there is a crack or gap, as you approach your movements outside will cause considerable panic and possible fret marks. It is a good idea to make a frame around the food flap so that no outside movement can be seen; also

avoid similar gaps in planking on the walls of the mews. Overlapped planking is far better for weathering anyway.

The eyass taken at ten or eighteen days, or prior to brancher stage, can be handled and shunted everywhere and as I have already mentioned you can do this for two or three weeks before she goes in the mews for a final week to be hard penned. You should be prepared to spend a great deal of time with the eyass, or to put it a better way, she should spend all her time with you. When you attempt to feed the eyass for the first time she may appear uninterested and not eat for several hours, particularly if she was fed on the nest prior to taking. For the younger eyass of ten days or less cut up the pigeon breast into small slices about 5mm long and about 3mm in width, give some of the heart, liver and lungs as well having sprinkled the meal with calcium powder. With the very young hawk use tweezers and if she appears uninterested hold a sliver of meat in the tweezers in front of her and wriggle it from side to side. She will follow your movements and make a snatch at it almost in annoyance or even defence. Then, on discovering how tasty this practice actually is, she will eat her fill thereafter. Never hold the tweezers directly pointed at the hawk but at right angles to her head. That will avoid her getting stabbed if either of you make a wrong move. This can happen very easily as an eyass will snatch at the meat and in so doing damage the inside of her mouth with the point of metal. A good trick to remember is to dip the slivers of pigeon in clean water to make them moist and the hawk will be able to swallow the meat more easily; otherwise it can take ages to get it down and unstuck from the upper mandible.

You can and should bring the young eyass everywhere and in such a way that she will see everything from her lying-down position in the nest box. If you are at home, watch out as she backs up to the edge, before you know it she will have left *her imprint* on the good living room carpet and you either get a clip on the ear or threatened with divorce, or both!

## MANNING AND TRAINING

*The imprint/The branches  
Carriage, Calling off, Weight*

For the older falconer the same system of the portable nesting box is ideal as she can be left to her own devices in a workshop situation. You could have problems if you are a bank clerk, but then you might have a tolerant boss and public! There is no better place than a busy noisy workshop or school for manning a hawk. It is as good as an eastern bazaar. The first meal is unlikely to be any problem for the eyass taken at ten days or younger. An incident which actually happened to me illustrates this. One afternoon, the 18th of June, in fact, myself and a friend took an eyass at approximately ten days. We sat, afterwards, at the base of a tree nearby discussing size of feet and reassuring ourselves it was a female, when the estate gamekeeper came along. He had shot several wood pigeons and seeing the eyass had an empty crop we decided to test its reaction to the pigeon. The second a piece of meat was offered on a finger tip, the eyass took it and filled its crop at the base of the tree, totally at one with her new foster parents. As they are more nervous say at fifteen days, she may refuse food despite an empty crop for up to twenty four hours. This gap in diet will do little harm but could cause fret marks or hunger streaks in tail or primary feathers. If you can watch the nest and take your eyass about an hour after they have been fed, so much the better.

You will find that the next two to three weeks will be easy going. The bad manners, if she is imprinted, will not appear until she is reduced for training, so now your young hawk should be exposed visually to everything and everybody that moves. Soon she will stand on the edge of her box and preen, oblivious to the continuous bustle around her, while you count the days until she is ready to be taken up.

A word or two about castings. There has been an amazing amount of attention and discussion given to this aspect of keeping a hawk and I am not sure the beginner is left any the wiser for it. If you take an eyass at ten days and feed pigeons, for example, a few bits of feather will

usually find their way into the hawk's crop and will do no harm whatsoever. By fifteen days allow her to take feathers as you will leave tirings with her. I have seen young eyasses of ten to twelve days cast the day after having been taken. Small birds will have been the diet, brought particularly by the musket, and their feathers and bits of twigs are swallowed harmlessly. Castings are vitally necessary. The feathers taken into the crop with food are held back from entering the digestive system and are regurgitated later in the shape of an oval pellet. This process of casting cleans the lining of the crop which otherwise would become coated with gleam. This fatty substance eventually builds up causing the hawk to lose appetite and, as a result, die of starvation. In Medieval times beef and similar meat was used to feed hawks and, as a result, enseaming, the giving of castings in the form of lint, was necessary to ensure a clean pannel and keen appetite. Casting should be given with as many meals as possible and anything less than three times a week could be asking for trouble for an adult hawk. Introduce small amounts of castings when the eyass is beginning to feed itself and in this way there will be no cause for concern.