

FALCONRY FACILITIES AND EQUIPMENT
Guidelines for Minimum Requirements
(Adapted from NAFA)

General

Prior to being granted a falconry license, an applicant's raptor housing facilities and equipment shall be inspected and certified by a representative of the state wildlife department. For Arizona, minimum standards are defined in the Arizona Sport Falconry Rule (R12-4-422).

The information herein has been adapted from a document by the North American Falconers Association (NAFA), and is used with permission, which is gratefully acknowledged. NAFA, in turn, acknowledged the permission of Professor E.W. Jameson, Jr., to reproduce Figures 4 and 5 from The California Hawking Club's "A Beginner's Manual of Falconry."

The following information should be considered in building, acquiring, and inspecting falconry facilities and equipment. This information is especially important for beginning falconers. Some variations are to be expected, and as long as basic principles are not violated, adaptations made by experienced falconers are typically acceptable even though not specifically included here. These pages should provide a basis upon which to apply one's common sense.

Housing

A trained hawk's housing requirements are simple. The primary need is shelter from direct sun, wind, rain and snow. Dryness, fresh air and an absence of draft are also important. These are conditions that a hawk seeks in the wild, and the closer a falconer comes to providing these conditions, the more captive hawks will benefit in health and comfort. The quarters in which the hawk is to be kept, whether indoors (mews) and/or out (weathering area), should ideally be an area set aside exclusively for the bird(s).

Indoor Facilities (Mews)

The mews may be a separate building (Fig. 1) or a room within a building. Ordinarily, sunlight and ventilation requirements make windows on the south or east exposure most desirable (care should be taken to avoid overheating in hot, desert areas). The size of the mews varies with the species kept and the space available, but a room about eight feet high and square is appropriate for a raptor up to the size of a red-tailed hawk. Here the hawk can be kept loose or tethered to an appropriate perch.

Tethering is preferable when more than one bird is kept in a mews, and is standard when the sex and species of raptors kept in the same room are different. Accipiters (sharp-shinned, Cooper and goshawks) must never be placed free among other birds (including their own kind) as they may kill all others. Even when tied, the wise falconer provides

separate mews, or partitions the facilities for Accipiters so that in the event of their escape possible disaster is avoided. When in training, raptors are generally tethered. If only 1 bird is kept in a mews, tethering is largely a matter of individual preference.

The interior of the mews should be severely plain with no beams or ledges to tempt the hawk to fly to a higher perching place (unless the bird is untethered in which case such beams/ledges become, in essence, additional perches). Anything that appears to offer a foothold above the hawk's rightful perch draws the hawk's attention. In a well-ordered mews, a hawk sits at ease when tethered because there is no other inviting perch to tempt that inherent desire for a higher pinnacle from which to survey their surroundings.

Windows should be protected on the inside by vertical bars or doweling spaced smaller than the bird's width, whether or not birds are kept tethered in the mews. If screen or chicken wire is desired for additional protection or safety, such should be placed outside the vertical barring at sufficient distance to prevent a hawk free in the mews (intentionally or otherwise) from grasping the mesh and damaging its plumage. This, incidentally, is the reason that bars/dowels are placed vertically rather than horizontally. The mews should be capable of being darkened without interfering with overall ventilation if fresh wild caught birds are to be placed in it.

Mews doors should be secured (by lock, if necessary) and should, additionally, have some sort of hook or spring so that the falconer can keep the door safely closed while inside. Doors of any mews, which open directly out-of-doors, should be closed by an additional protective covering, inside or out, to prevent escape of a bird free in the mews as the door is opened. Such protective covering can be achieved by hanging a cloth or plastic sheet. If placed at an angle inside the mews it provides the falconer a small enclosed alcove to close the outer door before entering the mews.

The floor of the mews should be constructed so as to facilitate cleaning. Pea gravel on dirt or sand is easy to clean and absorbs moisture. If newspapers are used, these must be changed frequently. Straw, hay, sawdust, or similar materials are not normally acceptable as such materials retain moisture and hence provide a medium favorable for the growth of pathogenic fungi and bacteria dangerous to the bird's health.

Although numerous variations in a captive raptor's housing may be appropriate under given circumstances, bird cages of the "pet store variety" or other such enclosures are totally unacceptable, as are any facilities which do not afford the bird proper space and/or protection.

Outdoor "Weathering" Facilities

Weather permitting, most falconers prefer to place their charges out-of-doors for sunning, etc., termed "weathering". The birds are placed on appropriate perches on some soft, resilient surface. A thick heavy lawn can be excellent. This surface should be cleanable, or in the case of the lawn, the perch moved frequently enough to prevent spoiling the area beneath it. Sand, although appearing ideal, should be avoided; it is inclined to get between the bird's legs and jesses, causing abrasion of the skin. Perches must be placed

so that birds are not exposed to direct summer or midday sun without shade also being available (very important in hot desert areas). Any site where birds are to be weathered unattended must be protected to prevent the raptors from attack by dogs, cats, other wildlife, and/or from undue disturbance by strangers/children. For this reason a weathering site normally should be protectively fenced. Without such fencing, NO bird should be weathered unless under immediate and continuous supervision of the falconer. The size of the weathering site is dependent upon the length of the restraining leash. Each bird normally requires an area approximately eight-by-eight to ten-by-ten feet to prevent its body or wings from touching the enclosing fence or other birds.

Captive raptors may be kept more or less permanently outdoors in an adequately protected and fenced weathering site. For this purpose an open-faced lean-to or open-ended Quonset or "A-frame" (such as shown in Fig. 2) is recommended, constructed of material or so painted for maximum light reflection to keep down the interior temperature. For a bird to be left out overnight using such a shelter, the weathering site must include overhead protection (see next paragraph).

In many areas attacks by wild predators (mammals or birds) on falconers' birds are not as uncommon as might be supposed, even in urban or suburban areas. This is especially true of attacks by wild owls on birds left out overnight. In areas where wild predators may constitute a problem, a totally enclosed weathering site, i.e., a site such as described above plus overhead protection in the form of wire or netting, becomes extremely desirable if not mandatory (see Fig. 3). This overhead wire or netting must be high enough (6-7 feet) so that the bird may not touch it when at the end of its leash and so that the falconer can comfortably work inside the enclosure. NOTE: Birds are NOT placed free in such enclosed weathering areas, but rather are tethered to outdoor perches (see below).

Equipment

Mandatory Prior to Acquisition of a Raptor

A. Glove: Some type of pliable leather glove is a necessity (one hand, usually the left). For smaller species of raptors a light leather gardening glove is sufficient; for larger species, an all-leather welder's glove is appropriate.

B. Leash: (Figs. 4 and 5). Varies in size and type depending on the species of raptor to be used. A thirty-inch leather bootlace is appropriate for a kestrel; a sixty-inch leather leash (1/4 to 1/2 inch wide, 1/16 to 3/32 inch thick or a 3/16 inch nylon cord with the ends burned to seal them) is adequate for a bird the size of a red-tailed hawk. A knot (called a "button") tied in the end is necessary to prevent the leash from slipping through the swivel. Figure 4 (g) shows the means of making this "button."

C. Swivel: (Figs. 4 and 5) Several types are used. The classic "Figure 8" swivel may be purchased from those manufacturing hawking equipment or a heavy-duty fishing swivel may be used. The larger the bird, the larger the swivel that is required. The swivel is used

to attach the leash to the jesses and to prevent twisting of either or both. The commercial “snap” or “dog leash” spring swivel should only be used as a temporary expedient when the bird is fully under control of the falconer and NEVER in tethering a bird to an outside perch. They simply cannot be trusted!

D. Jesses: (Fig. 4 and 5) These are soft strips of tough, thin leather, one permanently fastened to each leg of the captive raptor. Overall lengths of 4-6 inches for a kestrel or 8-10 inches for red-tailed hawk are appropriate. Jesses are fitted and placed immediately upon receipt of any raptor. Traditional jesses are shaped and attached as shown in Fig. 4. Another form, called “Aylmeri” jesses (Fig. 5) consists of a “cuff” and miniature leash for each leg. The leather cuff is placed around the leg and its ends held together by a grommet. The miniature leash is passed through the grommet and its slit end is then attached to the swivel as are traditional jesses. The use of “Aylmeri” jesses definitely is encouraged. Not only are they more efficient, but also a bird escaping with such, readily loses (or removes) the miniature leashes, leaving it far less encumbered than with traditional jesses.

E. Bells: (Fig. 4) These are especially made for falconry and are small, light in weight, with an especially loud tone. They must be purchased from those manufacturing hawking equipment (commercial “Christmas/jingle” bells are not suitable). Bells should be affixed immediately upon receipt of the bird, either on the jess or with a small piece of leather called a “Bewit”, the latter in the manner shown in Fig. 4(h). Bells provide a useful “signal” when something causes even an untrained raptor to move about unduly. In the field, they assist the falconer in locating the bird when it is out of sight, and serve to alert others that this is a captive bird. Normally two bells, each having a different tone, are used. Some falconers choose to also (or instead) bell their birds at the base of the tail or from a strip of leather around the neck. Birds belled around the neck should retain those bells only while hunting as opposed to bells on the leg(s) and/or tail, which are permanently affixed. Unfortunately, bells suitable for small species such as merlins, kestrels or sharp-shinned hawks are difficult to obtain.

F. Name Tag: A small, light metal tag bearing at a minimum the owner’s telephone number (and normally name and address as well). It should be attached to a jess or bewit and should be placed upon receipt of the bird in case of escape. The value of the nametag in retrieving lost hawks found by others cannot be overstressed. Some falconers place their names/telephone numbers on the hawk’s bell(s) or on jesses, but this is less likely to be noticed by the uninformed.

G. Bath Pan: (Figs. 1 & 2) A large, shallow pan, tub or cut-down wooden barrel, 3-6 inches deep with a minimum diameter several inches longer than the length of the bird. This provides both drinking and bathing water and should be cleaned and the water changed frequently (at least weekly and more frequently in hot weather or if dirty). If the bird is kept free in the mews, the bath pan may be installed there; otherwise the bath is provided outside when the bird is weathering. (See Figs. 1 & 2)

H. Scales: Traditionally, falconers judged their hawk's condition by the amount of flesh on its breast (sternum) and thighs. This judgment is difficult, especially for the beginner. Additionally, a lean hawk need not be hungry and a fat hawk may have an excellent appetite. The falconer seeks the ideal medium between the two to keep the bird in optimal condition, like a prizefighter. The best and safest method of determining the amount of food to be given to achieve such condition is to weigh the bird daily. Beam, balance, or electronic (as opposed to spring) scales are preferred. For smaller raptors, scales should register in grams or ¼ ounce gradations. For larger species, 1/2-ounce gradations are acceptable, though finer gradations are preferable.

I. Outdoor Perches:

- (1) Ring Perch (Fig. 6). This type of perch is used with birds that normally perch on tree limbs, i.e., Accipiters and Buteos. Overall diameter is generally about 12 inches. That portion on which the bird perches should be covered with fabric such as canvas, carpeting, or "astroturf"; thickness of about one inch is appropriate for small hawks, two inches for larger species.
- (2) Block Perch (Fig. 6). This type is used for "true" falcons as they normally perch on flat surfaces. Diameters vary, normally from 4 to 8 inches, depending on the size of the bird. The top diameter must be sufficiently broad to prevent the two jesses from "straddling" the perch (slipping over both sides simultaneously).

J. Indoor Perches:

- (1) Screen Perch (Fig. 5). This type of perch is appropriate for use with all types of raptors used in falconry and is the only perch described here suitable for use by more than one raptor simultaneously. It consists of a horizontal bar over which a strong cloth such as burlap has been draped. This bar is fastened at chest height to the walls of the mews or to upright posts. The cloth should hang down at least three feet on both sides of the bar and be fastened to a second lower bar either attached to the mews walls/upright posts or swinging free. The upper (perching) bar is normally padded with carpet and should be long enough so that the bird can reach neither the ends nor any other birds tethered on it. The means of tethering a bird to the screen perch is shown in Fig. 5 (b). Caution should be used with this type perch. It should not be used for sick (weak) raptors and no raptor should be left unattended on a screen perch until the falconer has ascertained that the bird is capable of regaining the perch after attempting to fly from it.
- (2) Round Perch (Fig. 7). This type of perch is most suitable for Accipiters or "true" falcons. It is shaped like a large garbage can. As in all perches described, its size depends on the species of raptor for which it is intended. A goshawk uses a round perch about the size of a 55-gallon drum on end, with other species requiring proportionally smaller sizes. The sides and top rim (perch) are padded and the bird is tethered to a swivel arrangement in the center of a horizontal platform below the surface of the top of the perch.
- (3) Shelf Perch (Fig. 7). The shelf perch is most appropriate for use with the "true" falcons and normally consists of a shelf approximately 1 x 2 feet with a padded edge. All exposed edges and corners of the shelf must be rounded and smoothed so as not to inhibit leash movement. The shelf is mounted projecting from an

inner wall or inside corner of the mews. A shelf perch is normally used in combination with a block perch (see above) that is set on the mews floor beneath so as to give the bird a choice of perches. The leash is either tethered to the block in the normal fashion with its length allowing access to the shelf, or to an eyebolt at the base of the wall beneath the shelf, the leash length then providing access to either shelf or block. In the latter arrangement care is required that the leash is not so long as to allow it to become entangled around the block.

Optional Equipment

A. Lure (Fig. 5e): This is a padded weight (such as a horseshoe), ordinarily covered with the wings or fur of the intended quarry (a fresh individual of such quarry will also frequently suffice as a lure). The lure is used to call the bird back to the falconer after an unsuccessful flight or for exercise. It is garnished with meat attached by short strings (unless the actual quarry is used). A four to six-foot line fastened to the lure allows the falconer to swing it in a large arc or circle, making it more visible/attractive. A raptor may or may not be trained to come to the lure. Such training, however, has much to recommend it since in essence it constitutes a safety measure. A raptor will often come to a lure when, for one reason or another, it is reluctant to come to the fist.

B. Hood: Although symbolic of falconry, use of the hood, even more than the lure, is a matter of individual preference rather than necessity. Hoods come in a variety of shapes and designs but the most important factor in any hood's suitability is its proper fit. The edges of the beak-opening should not rub or chaff the soft parts around the bird's beak, nostrils or mouth. The interior of the hood must not touch the raptor's eyes (as revealed by moisture inside the hood when removed) and the portion of the hood passing under the raptor's "chin" must not be so tight as to be constrictive.

Food

An adequate and reliable supply of proper food(s) is as important to the falconer and bird as are considerations of shelter and equipment. Although the proper type and amount of food varies considerably with the species of raptor, the time of year, and stage of the bird's training, there are certain basic principles that apply in all cases. The best food for any raptor is natural food, which should make up the principal proportion of the diet. The best and most appropriate examples of such a natural diet are English sparrows, feral pigeons, starlings, mice and rats. It is unlikely that the falconer can shoot unprotected birds or animals in sufficient numbers to provide a continuous and reliable supply, even for one hawk. (Caution: Ingestion of lead shot in birds or animals killed with a shotgun may cause lead poisoning in raptors). Day-old cockerel chicks raised to 4-6 weeks old or Pharaoh/Coturnix quail may be raised by the falconer and make useful replacements for wild varieties of natural foods. Such replacements should also be considered where unprotected wild birds/animals might contain dangerous levels of chemical sterilants, pesticides, and/or other poisons. A supplemental food supply such as butcher's meat/chicken parts should be available; however, such should be used only as a temporary expedient for the food items previously enumerated. Vitamin and mineral

supply (such as Vionate, ABDec Drops, 1-a-day tablets, etc.) are an important part of a captive raptor's diet, especially if fed more than occasionally on non-natural foods. Use of such supplements should be undertaken only after determining proper type(s) and dosages from an experienced veterinarian (since, for example, some synthetic vitamins can prove harmful to raptors, as can some supplements containing iron). Commercially prepared food mixtures specifically for raptors have been developed for zoo use. Such are very carefully balanced nutritionally and while perhaps difficult to handle during hunting/training, may be highly useful and appropriate for raptors during the moult, etc.

Illustrations

Figure 1: Open-faced mews with screen perch. A hawk and falcon are shown "weathering" with appropriate perches and bath pans.

Figure 2: "A-frame" type shelter to protect a "weathering" raptor from direct sun or severe weather.

Figure 3: Predator-proof totally enclosed "weathering" area.

Figure 4:

A: "Traditional" jess. Distance A-B is 2 inches for a red-tailed hawk; 7/8 inch for a kestrel. Overall lengths: 8-10 inches for a red-tail; 4-6 inches for a kestrel.

B: Bewit, for placing bell on raptor's leg.

C: Hawk bell.

D: "Sampo" ball-bearing fishing swivel.

E: Method for attaching "traditional" jess. The long end of the jess is pulled until the "knot" forms behind the hawk's leg. See also (F) and (H).

F: Method of attaching jesses (both types) to swivel and swivel to leash (size of swivel is greatly exaggerated).

G: Method of making the "button" (knot) at the end of the leash or "aylmeri" jess.

H: Method of attaching the bell to the hawk's leg with a bewit. The pointed tips of the bewit may be cut off after attachment.

Figure 5:

A: Screen perch.

B: Method of tethering hawk to the screen perch. Knot and ends of leash slip into the space between the double layer of cloth.

C: "Aylmeri" jess in place on hawk's leg.

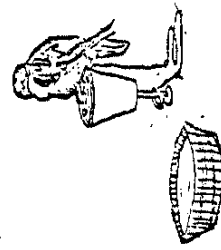
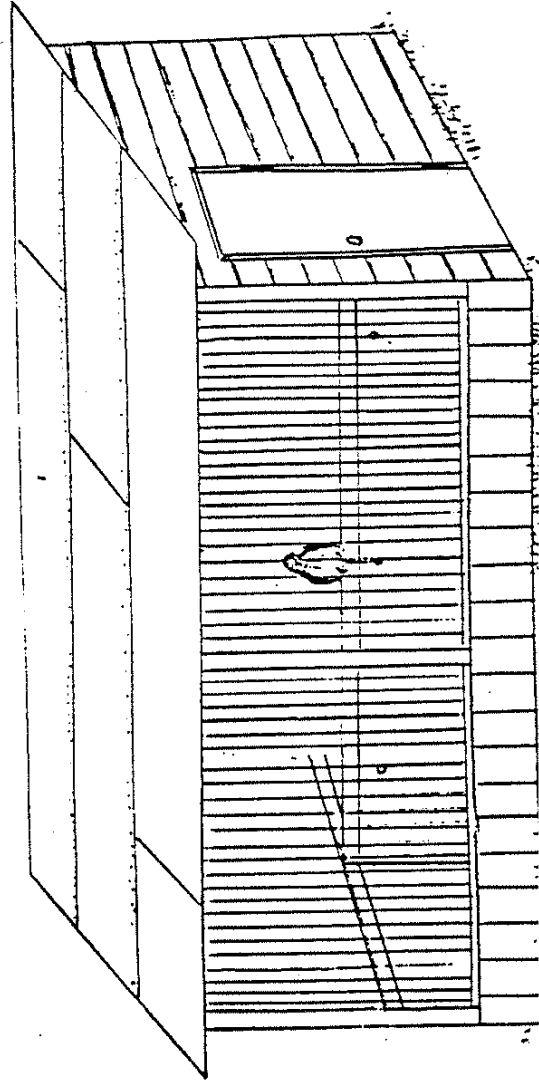
D: A hawk tied to the block perch. The leash is held in the swivel by its "button" (knot) — not shown; the free end is tied to the ring of the perch.

E: Lure.

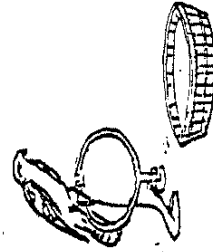
Figure 6: Outdoor perches: Ring perch and block perch.

Figure 7: Indoor perches: Round perch and shelf perch.

Figure 1: Open-faced mews with screen perch



Block Perch and Bath Pan



Ring Perch and Bath Pan

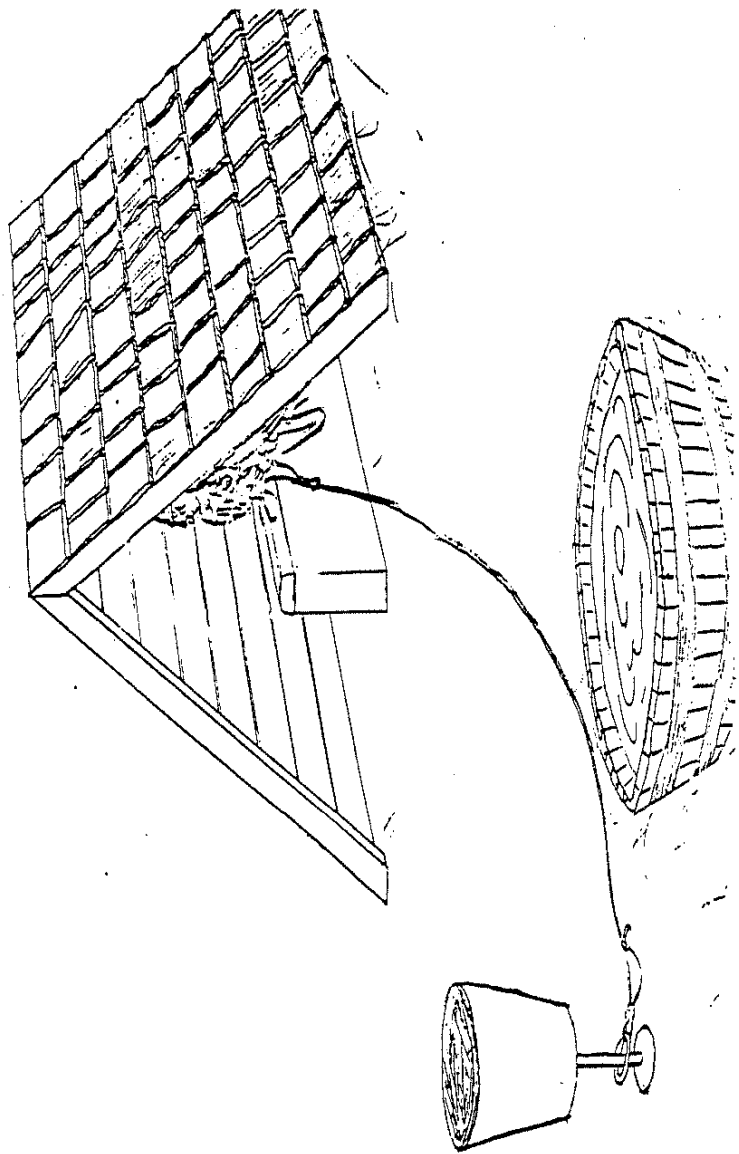


Figure 2: A-frame shelter to protect a "weathering" raptor from direct sun or severe weather.

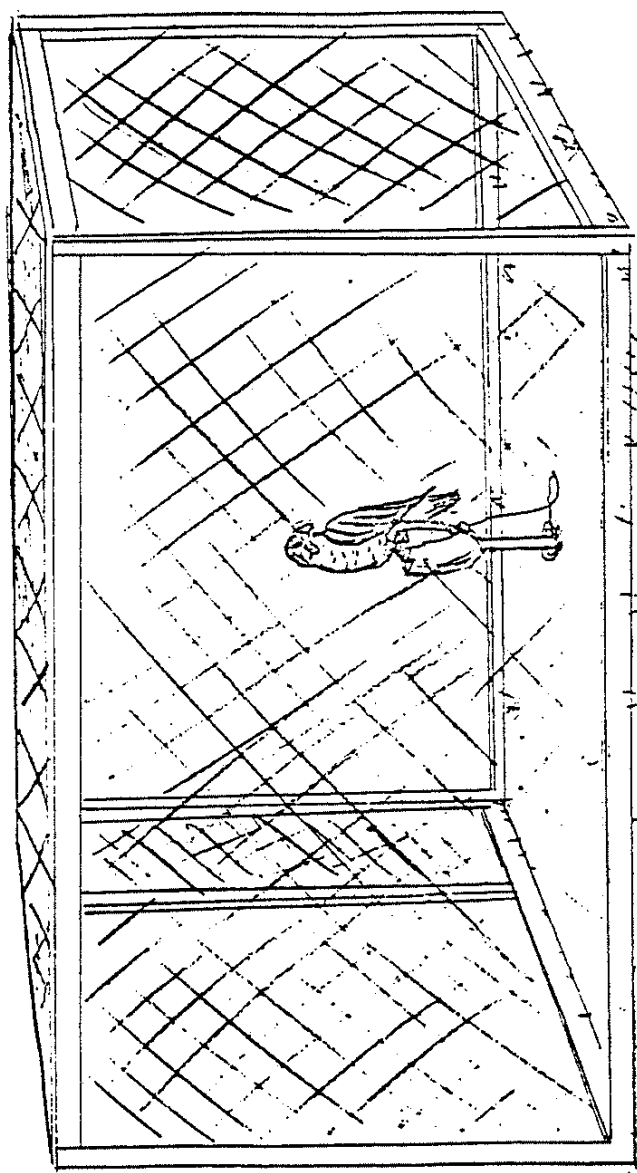
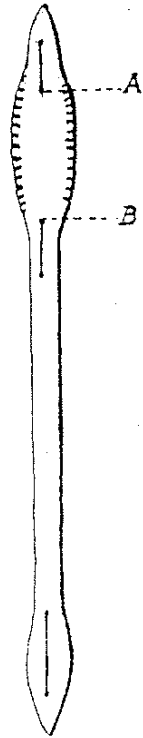


Figure 3: Predator-proof totally enclosed "weathering" area.

Figure 4



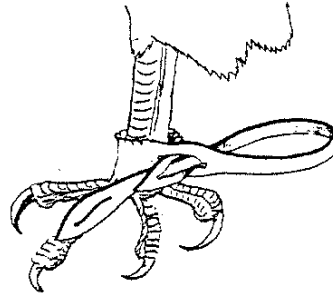
(A) Traditional jess



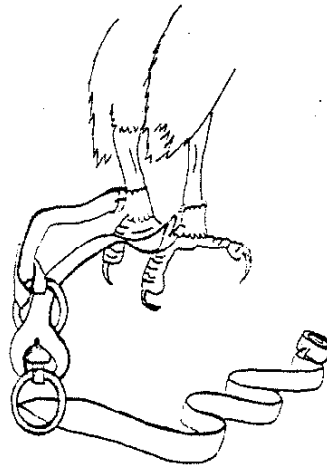
(B) Bewit jess



(C) Hawk bell



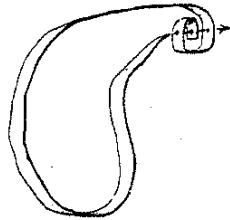
(E) Traditional jess attached.



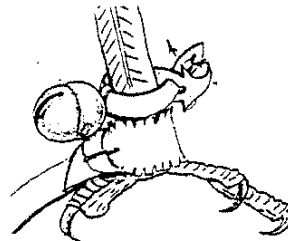
(F) Method of attaching jesses to swivel and swivel to leash.



(D) Swivel

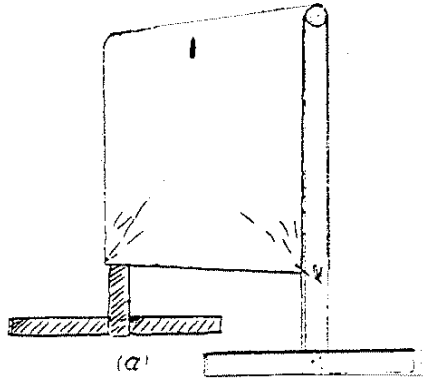


(G) Aylmeri jess; How to make button on one end.

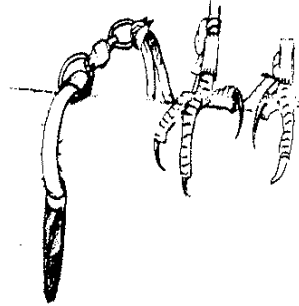


(H) Bewit and hawk bell.

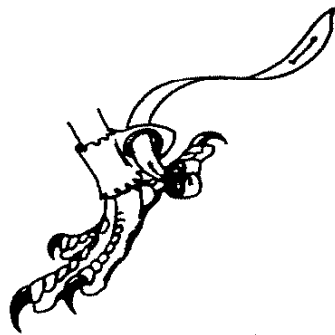
Figure 5



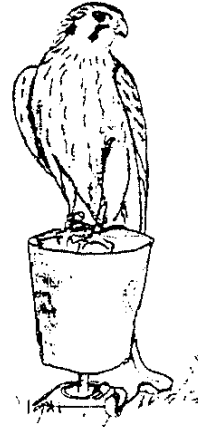
(A) Screen perch.



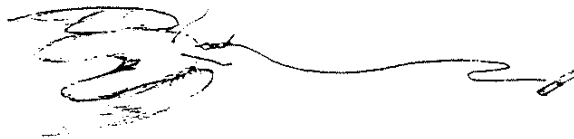
(B) Method of tethering hawk to the screen perch.



(C) Aylmeri jess in place on hawk's leg.

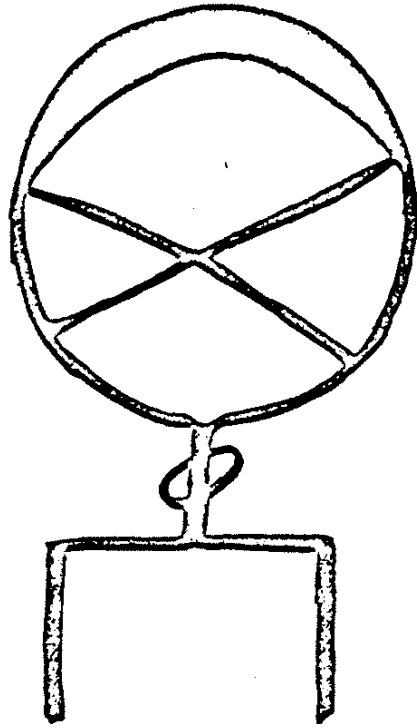


(D) Hawk tied to block perch.

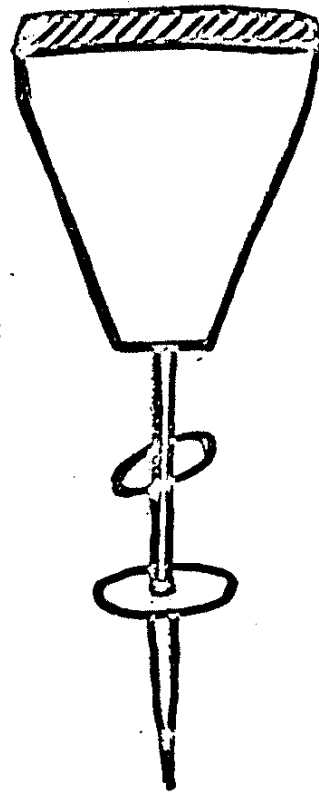


(E) Lure.

Figure 6: Outdoor Perches



Ring perch - steel ring with rope lacing at top. Crossed rubber bands prevents hawk from going through the ring.



Block perch - made out of wood or cork.

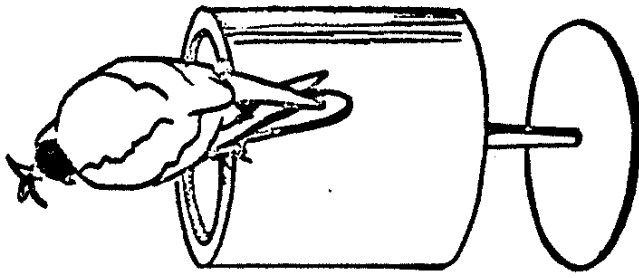
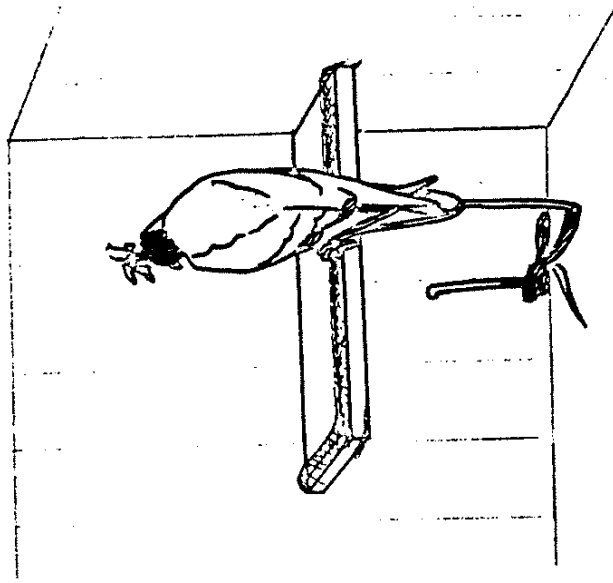


Figure 7: Indoor Perches: Round perch shown above.



Shelf perch.