

# Coping Beaks

## a guide to keeping beaks *trimmed & functional*

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### TOOLS

**A**t varying times during the life of a trained hawk the falconer will be faced with having to trim her beak and possibly her talons. Coping, as it is called, can be done in several ways. The method I learned over 25 years ago is pretty much the same method I use today and utilizes small needle files, a chain saw file, and a pair of dog toe nail clippers. I normally have five needle files with the following cross sections: square; round; triangle; and two flat files—one with a square tip and one with a pointed tip. The chain saw file, so called because it is used for sharpening chain saws, is round and  $7/32$  inch in diameter. There are typically two types of dog toe nail clippers available. The type I prefer is similar to a pair of scissors in that they have two cutting blades that cut towards each other. The second type has one blade that pinches the nail against a curved anvil. This latter type can split a beak and so should not be used. The correct type is included with this kit.

### THE NATURAL SHAPE & PROCESS

In nature, hawks keep their beaks in shape through a combination of eating the right kind of food, plenty of tough bones to grind them against, by feaking (cleaning their beaks on rough surfaces such as rocks or branches of trees) and through exposure to inclement weather (which causes the beak to flake naturally as it becomes softer with longer exposure to water). Trained hawks (particularly those fed on soft food such as chicks or young quail) that feak on leather gloves or on Astroturf covered perches do not receive the same constant wearing down of the beak. There is no simple answer as to how often a beak should be coped. I have had hawks that barely required coping once a year and others that needed it every few months.

Before coping a hawk one should have a clear idea of the end result. The best way to do this is to use the beak of a fully grown young hawk of about ten weeks of age for comparison. It would be worth taking a close up photograph of each new young hawk you fly so that you will have a reference. Young hawks of this age are a good model as they have well-shaped beaks that have not had time to become overgrown.

The beak consists of an upper and a lower mandible. In shortwings and broadwings the upper part has a hooked tip at the end used for breaking in and pulling away the flesh of their prey. Behind the tip is an obtuse curve (the festoon) which acts as the blade to cut the flesh. The hawk opens its beak, quickly removes the piece of meat by flicking its tongue forward to catch the food in the upper beak, then swallows it. This latter action happens so quickly it is hard to see with the naked eye.

Typically, if the tip is allowed to grow too long or if the festoons are allowed to become overgrown, the beak will not function properly. Hawks with overgrown beaks may have difficulty breaking into the prey, cutting the food with the

festoon, or may not be able to get the piece of meat off the tip so that it can be swallowed. While an overgrown tip on its own is normally easy to spot, the overgrown festoon is a little bit harder to notice. Generally speaking, the lower edge of the festoon needs to cover about two-thirds of the lower mandible when viewed from the side. The festoon and tip grow at approximately the same rate, so, looking at the tip on its own may not tell you how much the beak is overgrown.

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An overgrown beak is also in danger of splitting. As the beak grows longer, the pressure from tearing flesh is placed more on the end of the beak which may cause it to split. A thick and blunt festoon will not cut the flesh properly which will compound the problem. If the festoon continues to grow, it will start to flake away causing the weakened sides to split even higher and making it more difficult to eat.

Shortwings and broadwings use their feet for killing their prey while their beak is used almost exclusively for feeding. However, longwings catch their prey with their feet and use their beaks to do the actual killing by biting at and severing the vertebrae of the prey's neck. To accomplish this, nature has equipped them with a protruding notch on either side of the upper mandible (just behind the tip) which is known to falconers as the "tooth". A "step" on the lower

mandible lines up with the tooth allowing pressure to be placed from both sides on the vertebrae. Longwings are more likely to bite than the shortwings or broadwings (particularly when restrained) as they are more efficient at using their beaks as a weapon.

If a longwing's beak is allowed to grow too long it may split just behind the tooth. In extremely overgrown beaks the only remedy is to file away the tooth entirely so that no split or tooth remains (the tooth will grow back). As mentioned previously, the tip and sides of the beak normally grow at the same rate so it can be difficult to spot an overgrown tooth. Like the shortwings and broadwings, the tooth should only reach down about two-thirds over the lower mandible—any longer and the pressure will cause the beak to split.

### COPING SHORTWINGS & BROADWINGS

A hawk must be cast before coping. If she is hood trained, she can be cast while hooded but care should be taken not to do this too often. Hawks cast this way tend to become very nervous when they hear someone moving around behind them, so remember not to talk too much during the coping process to limit the chance that the hawk may, in the future, associate the sound of voices while hooded with the unpleasant experience of being cast. If you are using an assistant, go over the procedure with them ahead of time to keep talk and the time necessary to complete the task to a minimum. A thin towel (or Abba) should be used when casting to prevent damage to the feathers. Most often casting and coping require two people, but it can be done single-handedly as can be seen in the accompanying photographs. I actually prefer to cope beaks on my own, as it just seems easier with less hands and bodies in the way. Make sure the hawk's feet are securely wrapped within the towel or you might end up with some puncture wounds in your leg! Once cast, take a good look at the beak from the

## Coping Shortwings



*This Harris' hawk's beak is overgrown. If not coped the hawk will have difficulty eating and the beak is subject to flaking and cracking.*



*Using the dog toe nail clippers the excess is removed. It is always preferable to remove too little at first. If further clipping is needed it can easily be done or if only a small amount is left to be removed a flat file placed across the bottom of the tip and moved from side to side will also shorten the beak.*



*The tip of the beak after being clipped.*



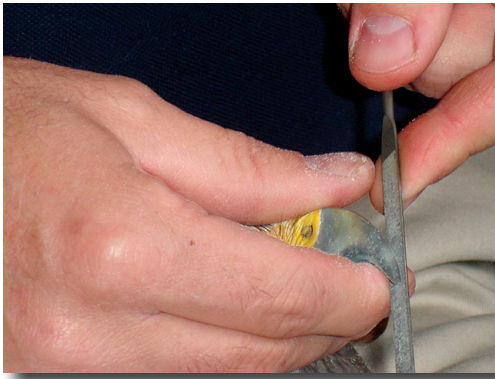
*The chain saw file is used to reshape the beak to a sharp-point.*

side. Check to see if the lower third of the lower mandible can be seen below the festoon; if not, this is the place to start.

**M**uch of the filing can be done with the chain saw file working downward at an angle of about 30° to the beak (see photo). By holding the file in this way, the beak is thinned and at the same time is brought back to where it should be. As you get close to where the festoon should be, it may be necessary to adjust the angle so that the file does not actually start to cut into the lower mandible. Make sure that the lower edge of the festoon is sharp as it is the part that actually cuts into the flesh. The festoon should be an obtuse curve (see photo) and not a straight edge. An overgrown tip will be much more obvious once the festoon has been filed to its correct shape. The clippers will not be necessary if the tip is not overgrown too much. Simply use the flat file on both sides, at the front, and across the bottom to bring it back to its required length.

**F**inally, use the chain saw file from the back to put the final point on the beak (see photo). When judging the length of the tip, remember it only needs to be long enough to break into and pull back the piece of meat cut by the festoon. If left too long, the hawk will not be able to flick the food off the tip in preparation for swallowing. It pays to use some caution if you are inexperienced as you can always remove a little more, but you can't undo what has been done. If the tip is overly long, then the dog toenail clippers are used first to remove a portion of the beak before shaping.





*To file the sides, the flat file can also be used, but remember to move it slightly from side to side so that flat spots do not appear.*



*The tip is nearly finished. Here we are using a flat file to sharpen the festoon. This area can grow thick at the bottom. This part of the beak is the blade that cuts into the flesh of the hawk's prey and needs to be sharp.*



*Final sharpening of the festoon with the flat file. Note the angle of the file which ensures that the bottom of the festoon is sharp.*



*The festoon is now where it should be with about 1/3 of the lower mandible showing and has been sharpened so that the beak operates properly. The tip still needs final shaping and sharpening.*



*Having opened the beak and placed a finger cross wise at the back to prevent the hawk closing it again, a flat file is run from side to side across the lower mandible. If this area is allowed to grow it will roll over and may cause ulcers or cuts on the hawk's tongue. There is no step as on a longwings' lower mandible, just a slight slope at the front. Make sure that the lower mandible is sandwiched between two fingers. I use the index and middle finger. If not supported in this way, a heavy hand can dislocate or break the lower mandible.*

Once the festoon and tip are where you want them, the flat file should be used over the whole of the outside of the upper mandible. File in a back-and-forth motion and keep it rolling slightly so that flat spots do not develop. Done properly this has the effect of thinning the beak which will help prevent it from flaking (the motion used is similar to that used by a women filing their nails with an emery board—constantly moving it so that no flat spots are created).

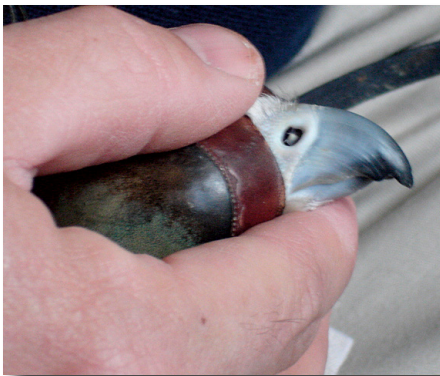
Next, the beak should be opened and a finger inserted sideways at the back to keep the mouth open (see photo). Now look at the lower mandible. When looked at tip-on, you should see an open "U" shape. Any tendency of the top of the "U" to curve in should be looked at with concern as this will interfere with the correct operation of the tongue. If left unchecked, this could cause ulcers and lacerations on the sides of the tongue. If the "U" is starting to curve in, place a flat file across it and with a side to side motion open it back up (see photo). Be careful to support the lower mandible from both the top and the bottom because overly rough filing without this support may break the lower jaw. A finger, rather than a pencil or stick, will give you a better feel for the amount of pressure you are applying. The pain is not too much to bare if you only have one or two hawks to do.



## Coping Longwings



*Here, a male gyr x saker is wrapped in a towel and secured for coping. This method of casting allows the falconer to cope his hawks on his own. The author is left handed and consequently holds the hawk in his right hand allowing the left to be used for actual coping. For right handed falconers the reverse would probably feel more comfortable.*



*The tooth on the upper mandible of this male gyr x saker is too long. Below the tooth approximately 1/3 of the lower mandible should be visible. If it is not coped the tooth will crack or split because all the pressure is being taken on the tip of the tooth instead of spread between the tooth and the tip of the beak. It is rather like trying to cut something tough with the end of a pair of scissors instead of the part close to the hinge, the angles do not allow the exertion of enough pressure.*



*The 7/32 inch chain saw file is used to file the tooth back to its proper length.*



*The tooth after filing. Note how approximately 1/3 of the lower mandible is now visible. If you look closely you can just see the overgrown tooth showing on the other side of the beak to compare just how much had to be removed.*

## COPING LONGWINGS

**C**oping longwings is slightly more difficult because of the tooth and the fact that they can exert more pressure when they bite. I deal with the tooth first. For longwings over 16 ounces or about 500 grams in weight I use the chain saw file to remove the excess tooth. The flat or square file may be needed to tidy it up. An overgrown tip becomes more obvious when the tooth is in correct proportion (see photo). The smaller round file is used in place of the chain saw file for smaller longwings.

The longwing's tip is dealt with in the same manner as a shortwing or a broadwing. If it is not too long, then files alone will be sufficient to remove the excess length before reshaping the tip. If it is overly long, the dog toe nail clippers should be used first to remove the length of the tip before final shaping. Again, as with a shortwing or broadwing, an overly long tip will make swallowing food difficult. Once the tooth and tip are finished it is time to insert a finger as far back as comfortably possible (it is here that the extra strength of the longwing's bite will be felt). The area behind the tooth is now shaped using a flat file by moving it in a back and forth motion.

**I**n my experience, the lower mandible of longwings is not usually a problem. If necessary, use a flat or square file to bring it back to where it should be in the same manner as described for coping a shortwings' lower mandible. Finally, the beak will thicken as well as grow in length, so the whole of the outside of the beak should be thinned as for the shortwing or broadwing.

Once the beak has been done, wet your fingers lightly and rub them over the beak. Any areas that show up light gray in color are probably flakes which need to be thinned down further with the flat file.



*The chain saw file is used to cope the tooth on the opposite side. Held at the correct angle this motion will also sharpen the tip of the beak as seen here. Note how the beak is secured between the fingers of the free hand.*



*This photo shows the step in the lower mandible that corresponds with the tooth of the upper mandible that act together to dislocate the vertebrae of the longwing's prey.*

## TALONS

**T**alons may never need trimming if the hawk is kept on the correct type of perch. However, they may occasionally need re-sharpening. The chain saw file may then be used on the underside of the talon in a downward and outward motion. Shape from the thick end near the toe out towards the tip. The sides can then be filed to a point using a flat file.

## CONCLUSION

**A**s with all things in falconry, prevention is better than a cure. Plenty of tough, natural food along with the correct types of perches and flooring material will go a long way in keeping a hawk's beak in shape. However, nearly all hawks need coping at some point, so it is worth taking the time to learn how to do it properly. We hope the directions, photographs, and diagrams in this article will help.

