

The Evolution of the Revolution, or The Ultimate Hawk Box By Charlie Kaiser

Most of us have spent a lot of time and effort trying to transport our birds from one place to another. We all need to take a hawk somewhere once in a while, such as education events, the vet, or even to another state. Getting a hawk from place to place can be a challenge.

For many people, a giant hood, or hawk box, turns out to be the best solution. What type of hawk box do we want to have to carry our precious cargo? There are no shortages of types, styles, sizes, or materials that can be used. Some are good designs or executions while others are questionable at best. I've seen some really beautiful hawk boxes that almost needed a forklift to carry them. I don't consider that very useful. I've seen other boxes that are downright dangerous to the bird inside. I've spent a bunch of time, as have many others, trying to come up with a hawk box that is safe, functional, durable, lightweight, and practical.

A while back, the Tom and Jennifer Coulsen falconers, rehabbers, and raptor breeders in Louisiana developed a box for carrying their Harris Hawks around, which they published in *American Falconry* in March 1999. They were made out of lauan plywood, which is strong but light. These boxes weighed in at about 13 pounds, which is quite a bit less than a solid wood box, which could easily weigh 50 pounds or more. The dimensions were what surprised everyone. They were much narrower than "traditional" hawk boxes, at around 11" wide. Using a system of newspaper hung inside with a large paper clip, they were relatively easy to keep clean.

Unfortunately, they were still made out of wood, which required a certain amount of skill and labor to put together. The parts list alone as published was somewhat daunting for the carpentry-impaired among us.

In the next issue of *American Falconry*, June 1999, Harry McElroy of Willcox AZ, wrote an article that mentioned the Coulsens' boxes as shown to him when they came for a visit. Harry had dubbed these boxes "The Coulsen Revolution". The Coulsens suggested that Harry build the boxes out of Coroplast, a corrugated plastic material used for making signs that comes in 4 x 8 sheets, like plywood (Harry had used the material to line the inside of his mews/flight pen). He did, and was ecstatic at the results.

Thanks to the power of the Internet, the idea for these Coroplast wonders spread like wildfire. It wasn't long before others were coming up with ideas and ways to spread the word about these boxes.

Randall Massey posted the idea that you could cut all the necessary pieces from one sheet of Coroplast if you set it up correctly. Ron Kumetz figured out a way to make the boxes from one sheet of Coroplast without having to cut separate pieces, much the way a cardboard box is one large piece of cardboard rather than individual cut pieces. This eliminated the need to use external hardware to connect and hold the pieces together. He said he had produced a drawing of the folds and cuts required and he could share it with anyone who was interested.

At this point, I really sat up and took notice on this. I had been following the thread with interest, but after taking about 6 months to build my first giant hood, I hated the idea of trying to fit 6 pieces of anything together and have them connect properly. I'm a computer geek, not a carpenter, and while I enjoy the idea of building my own things, I usually suck at it. But given the availability of a drawing to use as a template and the ability to fold and glue this thing together rather than using power tools and hardware, I figured I could probably be at least

With the plan in hand, I created a paper model of it, because I still couldn't really see how it all fit together. Once I started folding the model, it became obvious. A few cuts, a few folds, and it came together nicely. It was time to get started building the real thing.

Well, first I had to find Coroplast. I got together with Pam Hessey, who is wise in the ways of materials and adhesives (she restores antique carousel horses for a living) and she was able to track down some Coroplast. It seemed that there were different thicknesses and colors available. We chose a 6mm size and black in color for a few reasons.

Harry had spoken about the translucency of the material. The lighter colors were not opaque. He had used a yellow and a blue that allowed light in, and more so on the yellow. I wanted to build something that would be pretty much opaque, thus allowing the box to function as a giant hood for a couple of birds that were not hood trained. (One was a male Harris Hawk that would pluck his leg feathers when hooded, and the other one would rather eat the hood than wear it.) Anyway, we had a choice of 10mm and white, or 6mm and black. I wanted the thicker one; I couldn't believe that any plastic that thin could be strong enough; however, I wasn't willing to give up the opaque qualities of the darker one, so we went with the thinner sheet. As it turned out, the thin one was entirely adequate.

Harry provided us with dimensions he had used for his male Harris Hawk, and we scaled the plans to those dimensions. He had spoken about problems he had had trying to fold the Coroplast, especially on the axis perpendicular to the corrugations. He had tried using a both sheet metal brake and a form in order to create nice clean folds, without much success. If you've ever tried to fold cardboard on that axis, you know how frustrating it can be. We decided to try scoring the coroplast in order to make it fold nicely. Using a few scrap pieces, we found that a razor blade knife made clean cuts and scores, and once scored, the Coroplast folded like a dream! Due to the way the folding works, the scoring did not

seem to affect the structural integrity in the slightest. We dove in, made all the cuts and scores and started gluing. Contact cement is wonderful stuff. It's perfect for Coroplast and is in fact recommended by the manufacturer.

Building the first box took us about 3 hours from the first cut to the finished product. The second one took a little more than an hour, mainly waiting for the glue to set up. Once we knew the sequence of folds and gluing, it went quickly.

We added a few stiffeners or protectors (made from cut scraps) to the corners to prevent damage from bumps, and it turns out that those were worthwhile, at least for us clumsy folks. A piece of 2x4 covered with long-blade Astroturf was used as a perch, with 2 screws on each end holding it in via large diameter fender washers.

The handles are pieces of rope threaded through holes at the top of the front and back. The door is a scored piece for a hinge and a pair of Velcro closures.

There are a variety of methods that can be used for ventilation. We drilled a series of small holes at the bottom front and top rear on both sides, and this has proven adequate for us. Harry uses longer slits cut in his, and Jim Dawson has added small computer fans to his that can run off a car battery via the cigarette lighter adapter.

Total weight including hardware? Just over 4 pounds! As Harry put it, you can carry a bird in this thing on your pinky for hours and not get tired!

The birds took to these boxes well. Even though they are only 11 inches wide, it looks as though there is still room for a male Harris Hawk to get lost inside of it. I had no problem getting Mojo to hop into this box right from the beginning.

We put these boxes to the test after we'd been using them around town for a while. We packed up my truck and took off for a two-week trip to Arizona. With all the clothes, camping gear, and hawking gear, my little Toyota truck was packed to the roof. These boxes sat in the back near the window and the birds rode comfortably inside for as long as 8 hours at a time. We did stop frequently to check on them, but never noticed even a slight indication of a problem.

As could be expected, the use of black as a box color in an area with a hot climate was not considered a stellar idea. Where I live, the heat and sun are not enough of an issue to make a difference, although I wouldn't leave the boxes out in the sun for very long with a bird in them. In Arizona, using black could be dangerous (although it wasn't hot when we were there in February). For hotter climates, you can either use a light color and sacrifice the opaqueness or you can use a dark color and paint it light. Given the advantages of a box that is opaque from the inside, I'd probably go with dark and paint it white.

So far these boxes have been excellent for us. I have yet to discover a downside to them. I can keep two of them in the back of my truck in the space where one of my old boxes used to go. They're lightweight and inexpensive. They're easy to build, even for us construction-impaired folks. The birds take to them quickly.

I've attached a copy of the plan we built our boxes from. You'll notice that there are no dimensions on it; all you do is figure out how big you want it, and scale the

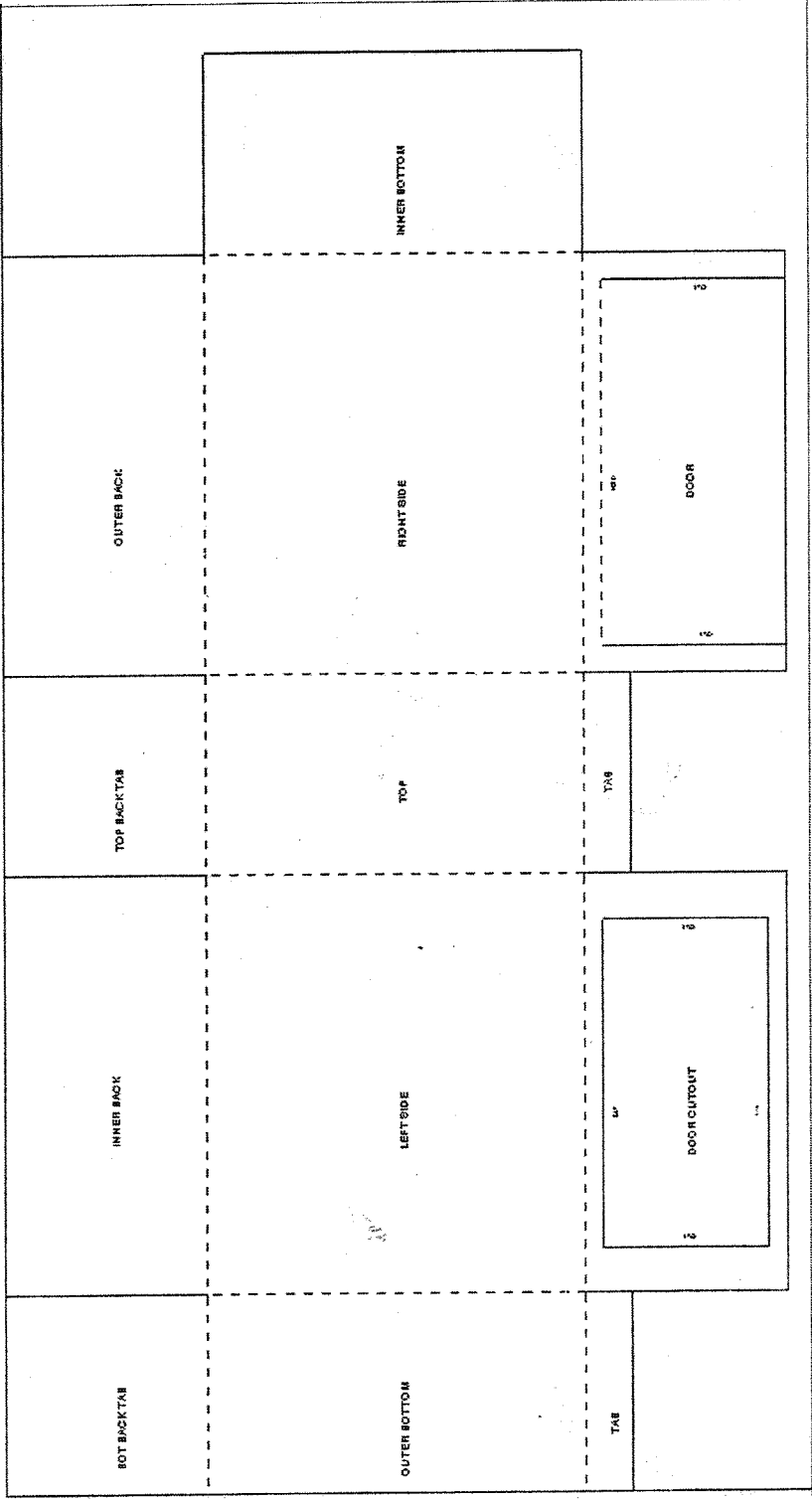
dimensions accordingly. Photocopy the plan and cut it out of paper so that you can see how it fits together, then figure out your actual dimensions and mark the coroplast accordingly.

On the diagram, the solid lines are cuts and the dashed lines are scores.

Coroplast is easily found in most metropolitan areas; it's used to make signs such as campaign signs. Look for sign makers in your phone book and you should be able to find what you're looking for. I'd encourage you to try building one of these boxes if you're at all in the market for a good hawk box!

If you have questions about building these boxes and can't figure them out from the drawings, please feel free to contact me. Email is the best, at charliek@Golden-Eagle.org. You can also call me at 925 686 6864

Enjoy!



Eunice Wong

From: Charlie Kaiser [charliek@golden-eagle.org]
Sent: Thursday, November 14, 2002 10:26 PM
To: Eunice Wong
Subject: RE: bird carrier

Hi Eunice. Of course we remember you!
Our boxes, built for a male HH, are 11" wide, 24" high, and 21" deep.
They could probably be a little narrower and still work fine. Best bet is to copy the pattern from the handout (you got that, right?) and scale it to size, like 1" = 10" or something like that, and then cut it out of construction paper or something like that. We score on the dotted lines, which lets you make nice sharp edges. It's kinda like cutting glass; you score it then "snap" it over a straight edge of some sort. Once you make the initial cuts to size, play with one of the scraps to get a feel for the scoring. Lemme know if you need more help. See ya!

Charlie Kaiser
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Concord, CA

> -----Original Message-----
> From: Eunice Wong [mailto:Uniwong@coyoteptmuseum.org]
> Sent: Thursday, November 14, 2002 11:57 AM
> To: 'charliek@golden-eagle.org'
> Subject: bird carrier
>
>
> Hey there!
>
> I'm so excited with the coroplast bird carrier and wanted to start making
> one. I don't know if you remember me, but I was one of Elaine's helpers
> from Coyote Point Museum. Could you please send me the measurements and
> dimensions that you used for the Harris Hawk? I'm not a build
> saavy kind of
> person, so I need some measurements to get me started! Thank you!
>
> Sincerely,
> Eunice Wong

→ peregrine
Falcon

Red-shouldered Hawk:

W = 16"
H = 24"
D = 21"

Great Horned Owl
Turkey Vulture
Red-tailed Hawk:

W = 21"
H = 26"
D = 27"

