Removing the bars

The judge at our recent "nature" competition talked about techniques by which you can remove the bars from the cage when taking pictures of lions at the Adelaide Zoo. As I have recently been to the zoo and had a rather difficult time with the cages, I thought it might be worth exploring these techniques further.

1. **Avoid the bars.**
   When confronted with a cage I try and put the camera between the bars and avoid any interference what so ever. This is not wise with lion cages and not possible with the fine steel mesh of most of the bird cages. Many cages are now designed for viewing of animals without bars. Sometimes you have to deal with smudgy glass. Walk-through avaries are particularly good, however I sometimes have difficulties where animals have so much habitat that you have to wait hours to see them.

2. **Blur the bars.**
   The trick is to photograph the bars so that they disappear. When the lens is focused on the animal I want the bars to be out of focus. This is easier to achieve if the animal is not too close to the bars. Eric points out that there are often bars at both the front and the back of the cage. It is best to select animals in the centre of the enclosure. I try to create a small depth of field by using a large aperture with a telephoto lens. I find it helpful to put my camera right up close to the bars (as long as the subject is not obscured by an out of focus bar.)

3. **Reduce the Contrast.**
   Out of focus bars may be noticeable if they contrast greatly with the subject, for example if there is bright sunlight on them. Sometimes they can give the picture a colour cast. I look for bars that are painted black and are in shade. If this is not available I may try to shade the bars with my shadow, or with my hand. If I have a water bottle, I might moisten the bars to make them darker. For some subjects the bars may be too dark.

4. **Photoshop – clone tool**
   My mother in Law asked me how to use photoshop to remove the bars. Unfortunately it isn't as easy as rubbing the bars out to reveal what is behind them. Instead you must

Figure 1. Blur the Bars
The bars are close to the bird: The bars are obvious and the bird is obscured
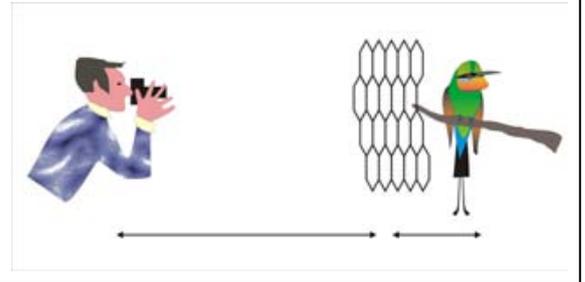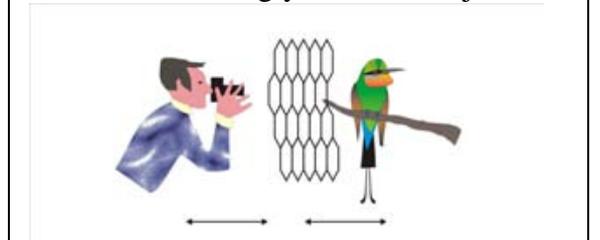

Figure 2. Blur the Bars
The bars are close to the bird and the camera: The bars are less obvious but the bird is still obscured. The bars are sunlit and contrast strongly with the subject.

paint over the bars with another image. The clone tool will paint from a selected source area onto the picture. I find that I can often choose an area of background that matches that on either side of the bars. It takes a bit of creativity to make it look natural. It is however more difficult to replace missing pieces of the animal subject of the photo. This method can be simple if you are removing an overhead wire from an area of blue sky. However it would be very time consuming and difficult to contemplate on say the wire cage in figure 1.

Figure 3. Blur the Bars
The bars are closer to the camera than the bird: The bars are not obvious and the bird is clear. The bars do however cast a grey haze over the photo that may need to be corrected in photoshop.
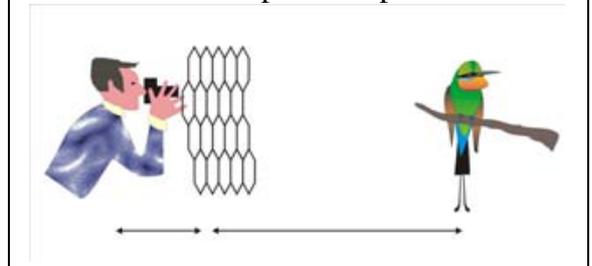
5. **Photoshop – Contrast, colour correction and sharpening**
Sometimes I have been successful in blurring the bars, but their presence is obvious as an area of desaturated and less distinct detail on the subject. (see figure 4) Unfortunately I have not always been successful at fixing this. The following technique has however been successful at times. I trace around the area with the laso tool, and then feather the edges according to the degree of blur of the original bars. This is usually a large feather in the range 25 to 45 pixels. I then adjust the contrast and or brightness of the selected area to match the rest of the photograph. This takes a lot of trial and error to get it right. What cannot be corrected with contrast and brightness might be fixed with sharpening or saturation or even colour correction (to remove a cast). There is a limit to how far you can rework the area. The most important step is to make sure that the selection is properly feathered.

Figure 4 Adjust the contrast and Brightness.
This Lady Amherst Pheasant was too close to the wire mesh when I photographed it. The details of the plumage however are still evident in the affected areas. With photoshop I brightened and increased the contrast of the mesh pattern making it match that of the rest of the image. Unfortunately the result is not perfect.

6. Photoshop – Blurring

The bars behind the subject can be made less obvious by blurring the background. Unfortunately the background has to be selected away from the subject (which you want to stay sharp) using one of the selection tools (laso, magic wand etc). This can be very time consuming. Recently I have discovered that this can be done more easily by working with layers and masking but I won't go into that now. It is wise to leave some foreground material sharp, for instance the branch a bird is sitting on along with a few leaves. Sometimes it is worth having another layer of half blurred objects. Once selected the background can be blurred using Gaussian blur. An annoying side effect of blurring is that it creates a halo around your subject. For the best effect this halo should be removed. I use the clone tool. With broad strokes I paint in towards the centre of the subject from all sides. I then blur the strokes so that they are not so obvious. It is important to give the illusion of sharpness by having fairly crisp edges on the subject of your photograph. Accordingly it is wise to keep the feathering of your selection to a minimum (no more than 3 or 4 pixels).
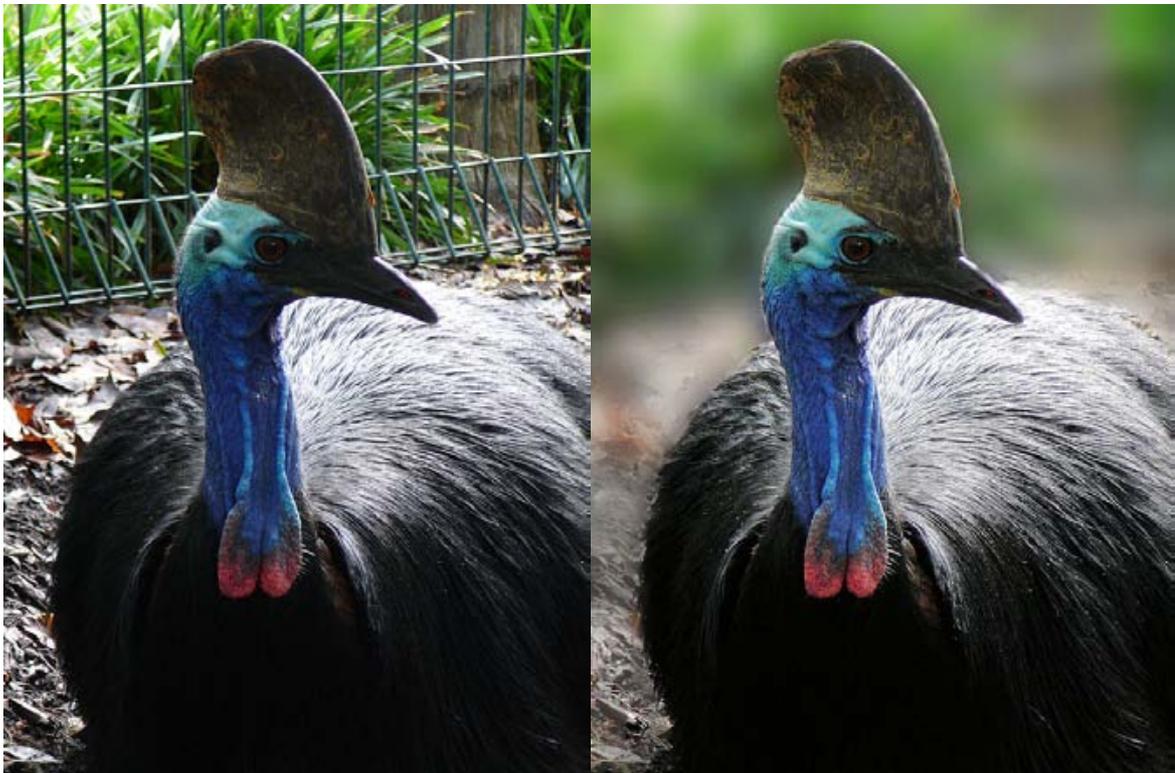

Figure 5. Blur the background with photoshop
This cassowary has a wonderful coloured wattle, pity about the fence. This however can be blurred giving a pleasing result. The impact however is lost if the edge of the cassowary is not sharp. Unfortunately I inadvertently created a halo around the cassowary when I blurred the background. (to the left of the head and black body feathers).

At the end of the day it is not wise to spend too much effort in removing the bars. I prefer to concentrate on the behaviour of the animal and try and capture something of that experience. Although it may not please the judges, I prefer a natural and interesting shot with bars than a forced and manipulated shot without bars. It is best however if I can achieve both.

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