



WILLIAMS & BYRNE

Designers Painters & Restorers of Glass

Glass Painting Techniques & Secrets from an English Stained Glass Studio

Part 2 — Glass Painting with Oil

“How You Can Use Oil to Shade Leisurely &
Effortlessly & Still Do all your Glass Painting
(Front & Back) in a *Single Firing*”





Painting with oil

In this guide, you'll learn about a technique which few other glass painters understand: how to paint glass with oil. This technique is maybe even more astonishing than it sounds. Oil paint on *bare* glass is one thing: that's easy. Once you've seen this method of mixing oil-based paint, you'll quickly see how to do this for yourself. Since that approach is so easy, what we're going to show you here is how to paint with oil on top of many layers of *unfired water-based* tracing paint. Now many people will assume this is impossible to do: they'll think that perhaps the water will repel the oil, or that the oil will disturb the unfired water-based paint. In fact, the truth is different:

- The water-based paint doesn't repel the oil for the simple reason that the water has dried and evaporated;
- The oil-based paint doesn't disturb the unfired water-based paint because the water-paint contains gum Arabic.

But these points aren't obvious until they're pointed out. And this may show us how our natural capacity for wonderful invention and discovery can easily be arrested by two main causes:

1. Other people – the consensus, widely held assumptions, common knowledge, people (often, “experts”) who say that “something can't be done”, and so forth;
2. Ourselves – taking things for granted, relying on other people's expertise, maybe even our lack of confidence, and so forth.

So other people tell us, or we ourselves imagine, that something “can't possibly work”, and the opportunity is then missed for a new horizon to emerge. Therefore, don't ever take for granted what other people tell you: try things for yourself. And don't even take for granted what you yourself instinctively believe: experiment

for yourself. When you've discovered something new, tell other people about it. We mentioned earlier that a few glass painters DO know about the techniques that we will show you in this guide, but another sad fact is that *many people keep secrets*. Many people who figure out how to do what we do just *keep it to themselves*. In business terms, we can sometimes sympathise with this. *Sometimes*. That qualification is essential. But on the whole we see things very differently. It seems a dreadful way to live, always to worry that other will discover what one knows ...

At Williams & Byrne, we're designers and painters of glass. (We're restorers, too. This is how we've come to discover so many techniques: when pushed to create a perfect facsimile or forgery, it's amazing how inventive anyone can become.) And we place great emphasis on the fact that we're “designers”. As designers, it's our job to come up with the ideas. As painters, we then figure out the techniques which are needed to realize the ideas. The designs and ideas are *ours*. They define our studio. The techniques on the other hand belong to *everyone*. People can use them or not. It's up to them. People can adapt the techniques as they please, or use them exactly as we do. Again, that's up to them. And we don't see the need – even as a commercially successful studio – to be secretive about the techniques we use.

The key benefits of painting with oil

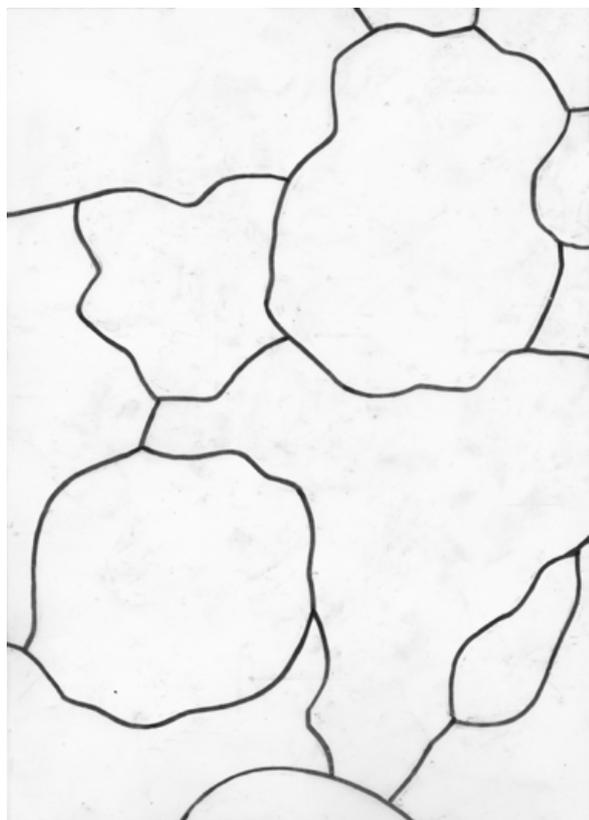
Here are the key benefits for painting with oil: It's an effect that can add a richness and depth to your glass painting which you cannot achieve in any other way;

- By virtue of the fact that oil is usually applied over the whole surface of the glass, you can create a lovely unified appearance between bare areas of glass on the one hand and painted areas of the glass on the other;
- It's possible to shade with a delicacy you cannot get from water-based paint;
- It is possible to achieve a fineness and delicacy of line that is all but impossible with water-based paint;
- It is possible to achieve a depth of line that is all but impossible with water-based paint;
- We would also say that, with a little practice, it is comparatively risk-free. This is because, as noted, the oil-based paint does not affect the water-based paint beneath;
- Finally, oil-based painting is more WYSIWYG (“What You See is What You Get”) than water-based paint on its own. Again by virtue of the fact that oil is usually applied over the whole surface of the glass, the water-based paint below doesn't “fire off” to the same extent in the kiln; *without* the oil-based coating, there is typically a paint loss of about 15% when you fire.

This will all make good sense when you've looked at some examples, so let's get going straight away with two examples of different ways of using oil on top of unfired water-based glass paint.







1. Prepare the cut-line. Our original design measures 210 mm wide by 297 mm high — roughly 8 1/4 inches wide by 11 1/2 inches tall: in other words, exactly the size of this piece of paper. Use best quality tracing paper and prepare the cut-line either for leading or for copper-foiling. We prepared ours for leading.



2. Choose and cut the glass. Choose your glass and cut it to size. You can use whatever colours you like. Clean the glass thoroughly several times. Note: in England, we don't use cutting shears (as many people do in the US, for example). Rather, we put a piece of glass on top of the cut-line. Then, with our glass cutter, we cut to the inside of the lines on the cut-line.



2. The undercoat. Now — see “Stage 1 The Foundations” — paint a medium-dark undercoat on the front of every piece of glass.



4. Copy-trace. Prepare some glass paint that is suitable for tracing light, thin lines. Place the design on your light box. Put your first piece of glass on top of the design. Load, shape and test your tracing brush. Then continue with the remaining pieces in exactly the same way.



5. Reinforce and block in. Put your design on one side where you can see it as you paint. Prepare some medium-dark glass paint. Test it on your light-box and adjust it as needed. Use the same tracing brush as before to thicken and darken lines as you see here. As needed, also block in as shown. Put the first piece of glass on one side and let it dry. Continue with the next piece. And so on.



6. Highlights. Take a pointed wooded stick. Make highlights approximately as shown. When you make highlights, it is a good idea from time to time to hold the piece of glass up to the natural daylight rather than only examining it on your light-box. Remember you can always add more highlights but that you cannot take them away. Also remember it's the spirit of your highlights which is important.



7. Softened highlights. Use the tip of a finger or the fleshy ball of your thumb to soften the highlights. It is essential that your hand is *dry*. It is also essential to be *gentle* and *light*: work slowly and respond to the glass in front of you.



8. Oil wash and oil-mid tones. Prepare some oil-based glass paint. Paint a light oil wash over the entire surface of each piece of glass. Then prepare a darker mix of oil-based paint and add some medium-dark shadows to the darker parts. Lastly, take a small round-headed blender and soften the shadows by blending them with the oil wash. Put the glass in a dust-free place, and let the paint dry overnight.



9. Reinstate the highlights. Either use a wooden stick and/or take a piece of paper tissue, shape it as needed, then dab or cut through the oil-based paint. Always remember to hold the glass carefully: although the water-based paint (underneath) has gum Arabic in it, the oil-based paint (on top) has now softened the gum Arabic. This makes the adhesion of all your painting more delicate than before. Therefore, your highlights can also now be subtler than before. This is part of the magic of painting with oil on top of unfired water-based paint: the highlights can also be more refined.



10. Fire and assemble. Choose a firing schedule which is suitable for oil-based glass painting and fire your glass. Then assemble it, cement it and polish it. Note: the colours of our panel look different because the picture above was taken against daylight and the other pictures were taken on a light-box.

Different approaches to painting with oil

As you've just seen in this case of the dog roses, the technique is you first lubricate the entire surface of the glass with a light wash of oil-based paint. This wash can indeed be so light as to contain just the smallest quantity of glass paint. You then paint lines on top, and soften them by blending them with the oil-based wash beneath.

A different approach is to paint your oil-based lines directly onto the unfired glass paint. Then you can either leave them as they are. Or, if you wish to shade them, you now surround them with a wash of oil-based paint, and blend as needed.



1. Cut a piece light-coloured glass to size. Groze its edges so they are not sharp to touch.



2. Clean the glass thoroughly several times.



3. Paint a light undercoat over the whole surface of the glass and blend it smooth as needed. Let it dry.



4. Prepare some light glass paint that is suitable for copy-tracing. Put the glass on top of the design. Take a fine tracing brush. Copy-trace the lion's head as you see here. (Design on page 11.)



5. Put the design on one side. When the paint is dry, strengthen the lines. Also fill in the mouth and eye.



6. Take a stick or needle and pick out some highlights.



7. Gently use your hand to soften some of the highlights.



9. Paint the whiskers: tiny spots.





11. Add some direct oil-based shadows.



10. Prepare some medium-dark glass paint. Take a medium-sized tracing brush. Now strengthen the outline of the lion's head. If you wished, you could fire the lion now. Or you can paint with oil-based paint on top of the water-based tracing paint, as you will see here.

12. As a general rule, add oil-based shadows around and on top of water-based tracing lines.



13. That is to say, you will use the oil-based shadows to soften the water-based lines.



14. Add these shadows carefully.



15. Also painted some oil paint around the outside of the lion's head.

16. Then dilute some oil-based paint that is very much lighter than the oil-based paint you used for the direct shadows: actually it is oil with just a LITTLE amount of paint in it. Paint *around* the oil-based shadows (not on top of them) so that the whole surface of the glass has oil on it.



17. Now gently blend the dark oil shadows with the light coat of oil which surrounds them.



18. With gentle blending, you won't disturb the water-based paint beneath. After a certain point, the oil-based paint will dry: stop there!



19. See how this softens the oil strokes. Now let the oil dry for a day (sometimes less: this depends on how warm the weather is). After that take a stick and pick out highlights through the oil. As a rule, only pick through highlights which were there before.



20. You can also take a bit of paper tissue and dab it, for example on the cheek and forehead. This is what the lion looks like now.



21. To compare: here's a close-up BEFORE we made our highlights in the oil ...



22. And here's a close-up AFTER we made our highlights in the oil.

23. And here's our fired lion. For the firing schedule that we'd use, please refer to the free guide on firing schedules.

An important consideration here is that we used oil paint. Issues therefore arise concerning whether fumes from the particular oil are either harmful or combustible. Consult with the kiln manufacturer and also the oil-provider.



How to paint with oil-based paint

With oil-based paint, you can paint on bare glass OR on previously fired glass OR on unfired water-based glass paint.

In this guide, you learn how to paint on several layers of *unfired* water-based glass paint – these layers you will have applied in accordance with the Stage 1 guide:

“HOW TO TRACE, SHADE, FLOOD AND HIGHLIGHT IN A SINGLE FIRING, AND WHY YOU ABSOLUTELY NEED A LUMP OF PAINT TO DO THIS (NOT A TEASPOONFUL)”

Here’s a quick summary of the oil-based method. (You’ll find full details later on.)

1. Mix glass paint and oil into a thick paste;
2. Allow the paste to settle and expand overnight;
3. Put some paste on your palette;
4. Use some pure/neat oil to dilute this paste a little bit at a time to suit whatever it is you want to do. This is similar to how you use your lump of water-based paint (see Stage 1 guide);

When you apply the oil-based paint, your strokes can be dark or light. Dark strokes have a high proportion of thick paste to pure oil; light strokes have a low proportion of thick paste to pure oil. Your strokes can also be thick or thin. Use a thin tracing brush for thin strokes and a thick brush for thick strokes.

Always remember that the oil-based paint is easily removed because it doesn’t have gum Arabic in it. Therefore be gentle with it. (It is possible to add ingredients to the paste or to the diluting medium which will prevent the oil-based paint from bruising. We ourselves have successfully added different types of varnish. Once again: experiment carefully and imaginatively for yourself.)

“What oils can I use?”

Here are three of the oils we often use: Lavender, Sandalwood and Clove. We use essential oils. In this guide, you’ll be using Oil of Lavender.

Note that pregnant women must not use Oil of Lavender.

ALWAYS FOLLOW THE HEALTH AND SAFETY INSTRUCTIONS OF WHICHEVER OIL YOU USE

In the simplest case, you can use the same oil both to make the paste and also to dilute the paste. You just need to be aware that it is sometimes possible or necessary to use *one oil for the paste and a different oil to dilute it*. This is a fascinating path for you to explore and develop.

You must also be aware that each kind of oil has different properties:

- Some oils are carcinogenic when you touch or smell them;
- Some oils might combust in the kiln (this may depend on your firing schedule);
- Some oils smell nice, some oils smell awful.

Always ask the manufacturer or supplier for full details. You must always consider the health and safety issues which apply to the oil you’re using.

Here’s an important example. *We* often work with oil of Tar, which we get from Reusche in the US. Now oil of Tar is absolutely wonderful to work with. We can use it to paint the finest lines and the darkest shadows. It softens beautifully. But it’s carcinogenic. So we have to take a whole raft of precautions. It’s your responsibility here to take the necessary precautions for whatever oil you choose.

“What tools and brushes do I need?”

You will need the same *kinds* of tools and brushes for oil-based painting as you need for water-based painting.

For example: palette, palette knife, tracing brushes of different sizes, an applicator for applying oil-based washes, and various round-headed badger blenders.

THESE TOOLS ARE ALL CONTAINED IN THE ADVANCED KIT FROM PELI GLASS PRODUCTS ([HTTP://WWW.PELI GLASS.EU](http://www.pelerglass.eu))

You *must* keep one set of tools and brushes for water-based painting and a *separate* set of tools and brushes for oil-based painting.

We distinguish our water brushes from our oil brushes by colouring their ends with a different colour nail varnish.

Note: you can also paint with pen and *nib*, and this is fine for some designs. But it is our general view that a line created with a brush is more expressive than one created with a nib: the reason we created our particular method of mixing oil-based paint was that we wanted to make it possible to use a brush.

“How do I clean my brushes?”

Use paper towel to remove excess paint from your brush. Work in a few drops of gentle washing up liquid and rinse under flowing warm water. Flick dry. Add a few drops of Lavender oil and work in to be sure any unwanted remnants of paint won’t dry and clog your brush.

“How do I fire oil-based paint?”

This depends on the oil. It also depends on the kind of painting you have done: you may need to treat heavy / thick painting differently from light / thin painting. As a general principle: it is a good idea to allow the oil to dry naturally in the open air or on top of a radiator. Also, it is a good idea, in your firing schedule, to allow the oil-based paint to soak and dry out as explained below.

Here is a typical schedule for oil-based paint on top of unfired water-based paint:

1. With the bungs out so that the fumes can escape, take 2 hours to go to 100⁰ centigrade / 212⁰ Fahrenheit and soak for 15 minutes.
2. Take 2 hours to go to 675⁰ centigrade / 1250⁰ Fahrenheit.
3. Soak the glass at this temperature for between 3 and 5 minutes in order to get a smooth and glossy surface.
4. Descend as fast as the kiln permits to 560⁰ c / 1040⁰ F.
5. Soak for 5 minutes.
6. Descend to 530⁰ c / 985⁰ F at 10⁰ c / 50⁰ F per hour.

7. Allow the kiln to cool at its own pace.

This firing schedule may seem to take a long time. But our approach is to apply many layers of paint and to fire the paint just once.

Note: each oil has different properties when you fire it. For example, some oils are combustible, some oils are noxious. Follow the manufacturer's instructions and fire each oil appropriately. Always with great care. Also consult your kiln manufacturer to be sure that oil-based paint is fine to fire in your kiln.

Other considerations

Here are some general points to remember:

• There are many different sequences and strategies when you work with oil-based paint. We'll summarise four different sequences below, but please remember there are many other ways of working with oil-based paint.

- When you apply a lot of paint over many layers, you must consider how lightly you should paint. Otherwise your glass might end up darker than you wanted. The great merit of our approach is that you can develop the painted image slowly and responsively over many layers.
- When you use oil-based paint, you must pay special consideration to health and safety. You must wear gloves and masks as required
- Each type of oil has drawbacks: you must research these drawbacks for yourself.
- Oil is slippery and dries more slowly than water. Therefore you need to consider how you handle it and how to deal with spillages.
- Oil is potentially combustible. Therefore you must consider how to change your firing sequence when firing oil-based paint.
- You must consider how you ventilate your kiln and how you ventilate your work-space.

4 core strategies with oil

Here are 4 core strategies for working with oil-based paint on top of unfired water-based paint:

1. Dog roses: paint the light oil-based lubrication first over the whole surface of the glass, then paint the dark strokes, then blend and soften. Pick out new highlights and soften these.
2. Lion: paint the dark oil strokes first, then entirely surround these strokes with a thin oil-based "lubrication", then blend and

soften the dark strokes with the thin lubrication. Pick out new highlights and soften these.

3. Only paint the light, oil-based lubrication over the whole surface of the glass. This can create a lovely feeling of unity across shadows and highlights. It also prevents the water-based paint beneath from "firing off" in the kiln.

4. Only paint the dark oil-based strokes.

At the end of each of these sequences, you can let the oil dry, then pick out highlights (again) as needed.

As we said before, there are also many other strategies. This is what's so exciting. You can take these points and develop them in your own way.



How to use oil to shade effortlessly and leisurely and still do all your glass painting (front and back) in a single firing

Here's how to mix oil-based paint. We propose you make a thick paste. You can then dilute this paste as you need it to the strength that you require. This makes much better sense than (as some books suggest) making a runny oil-based liquid which can only be used in one way.



1. You'll need a palette, a palette knife, some tracing paint, oil, and a container to store the paint that you will mix. You'll also need the correct health and safety gear as required by the paint you use and also by the type of oil: this is very important. Some oils have poisonous fumes, other oils are carcinogenic, yet others must on no account be used by pregnant women.



2. Measure out some tracing paint. Here we used three loads of this small palette knife. You don't need much. A little goes a long way.



3. Make a well in the centre of the tracing paint.



4. Add some drops of oil. Do not add too much oil, because you can always add more.



5. So that you know, this is the kind of mixture you want to make. It's a very thick paste.



6. Returning to where we were, here you see the tracing paint with just a few drops of oil in it.



7. With your palette knife, carefully begin to mix the oil and tracing paint together. Mix carefully and do not stir up any dust.



8. Grind and mix.



9. Mix until you are sure the oil has absorbed as much of the tracing paint as it possibly can.



10. When you're certain that the oil can't absorb any more tracing paint, add a few drops more of oil.



11. Continue to mix and grind.



12. Mix and grind ...



13. Mix and grind ... If you need to add more oil, that's fine: just add a few drops at a time so that the mixture doesn't become runny.



14. This is what you're after.



15. Here you are: a thick paste.



16. Use your palette knife to put the paste in your container.



17. Like this ...



18. Seal the jar.



19. Tidy and clean your palette. Note: you'll need to clean the palette thoroughly before you use water-based paint again.



20. If possible, leave this paste to rest for a day before you use it.

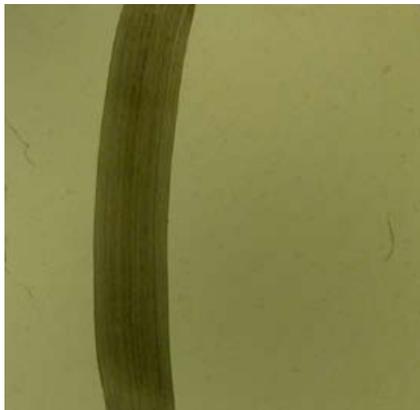


2. Cut some glass.

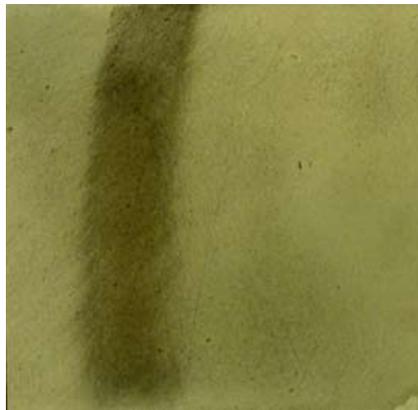


3. Clean the glass on both sides.

1. Here's a quick step-by-step example. Try this first. For steps 2 through to 19, you need the techniques explained in Stage 1 – The Foundations, “How to trace, shade, flood and highlight and why you need a lump of paint to do this (not a teaspoonful)”.



4. Paint a medium-dark line and let it dry



5. Cover the surface of the glass with a light tone of paint. Blend it while it is still wet. Let it dry



6. With the glass on top of the design, lightly trace the main details. Let the paint dry



7. Remove the design from beneath the glass. From now on, keep it on one side. Reinforce the main details and let the paint dry



8. Cover the surface of the glass with a light tone of paint. Blend it while it is still wet. Let it dry



9. Reinforce the main lines a second time. But don't paint directly over the shadow: paint either inside or outside of it



10. Paint the minor details. Let the paint dry



11. Take a sharp stick and scratch out the highlights



12. Take a soft brush and gently soften the wings



13. Take a soft brush and gently soften the background



14. Take a scrub and clean around the edge of the painted glass to make a border



15. Cover the back of the glass with a light tone of paint. Blend it while it is still wet. Let it dry



16. Flick spots of paint across the back of the glass. Let the paint dry



17. Here's a close-up of the spots



18. When the spots are dry, rub them gently



19. Here's a close-up of the effect we get



20. Cover the front of the glass with a light tone of oil-based paint. Blend it.



21. Paint a dark line of oil-based paint. Blend it.



22. Begin to blend the oil-based line with the oil-based tone that is underneath



23. This is what our glass looks like when we've finished blending



24. Leave the oil-based paint to dry overnight, then use a stick to pick out the highlights once again



25. Fire the glass. Once fired, our glass looks like this

26. Once you've practiced with this medieval moth and seen for yourself the power of this oil-based painting technique, it's time to tackle more extended projects.

In the phoenix, as with the dog roses, you apply a light wash of oil-based paint, and then apply your oil-based shadows. We've also included five other heraldic beasts for you to practice on. There's bound to be one which really takes your fancy.

In the duck, as with the lion, you begin by applying the oil-based shadows, and then you apply a surrounding wash for blending.

When you become familiar with both approaches, you'll decide for yourself on the relative merits of each one.

So first to the phoenix and the light wash of oil-based paint.

Step-by-Step Overview



1. Cut and clean the light-coloured glass.



2. Paint a light-coloured undercoat.



3. Lightly copy-trace the main lines.



4. Reinforce the main lines.



5. Add the detailed lines.



6. Thicken the outline.



9. Clean the border.



10. Paint a light-coloured undercoat on the back, and then decorate the back.



11. Paint a light-coloured oil top-coat on the front and allow it to dry. Then reinstate the highlights and fire.

How you can use oil to shade effortlessly and leisurely and still do all your glass painting (front and back) in a single firing



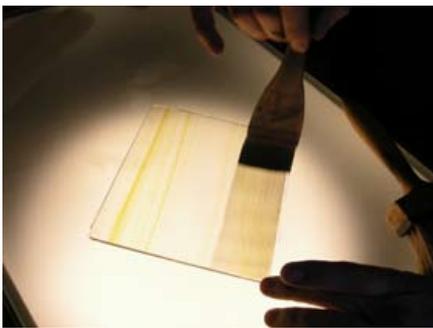
1. Prepare your palette and glass paint.



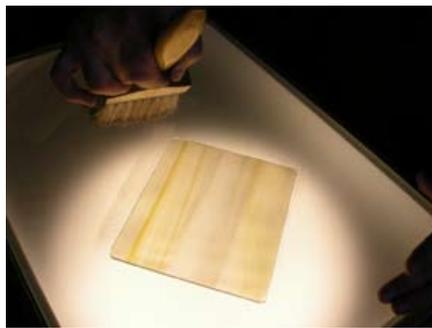
2. Test your paint. Adjust it, as needed.



3. Clean your glass on *both* sides.



4. Paint a light-coloured undercoat.



5. Use your blender to smooth the undercoat.



6. Prepare and test some light-coloured paint for copy-tracing.



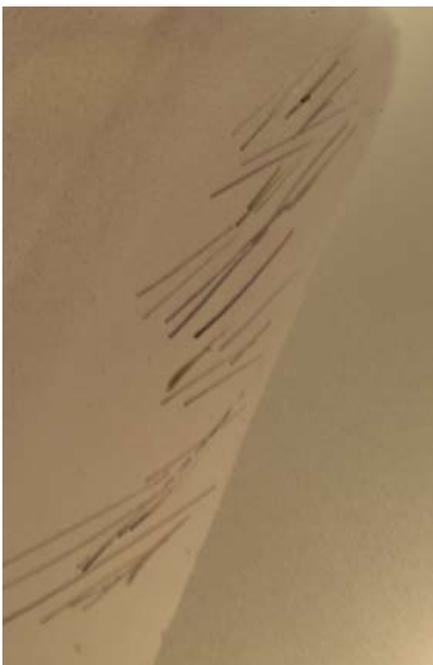
7. Place the glass on top of the design.



8. Use a fine brush: copy-trace the main lines.



9. Rotate the glass and design as needed.



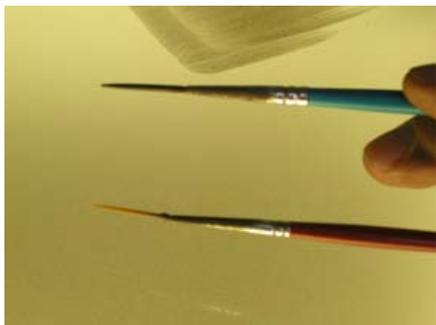
10. Keep testing your paint.



11. Work around all the main lines.



12. Here's the phoenix now. Take a rest.



13. Choose a medium-sized brush (top).



14. Prepare some darker paint.



15. Test it on your light-box.



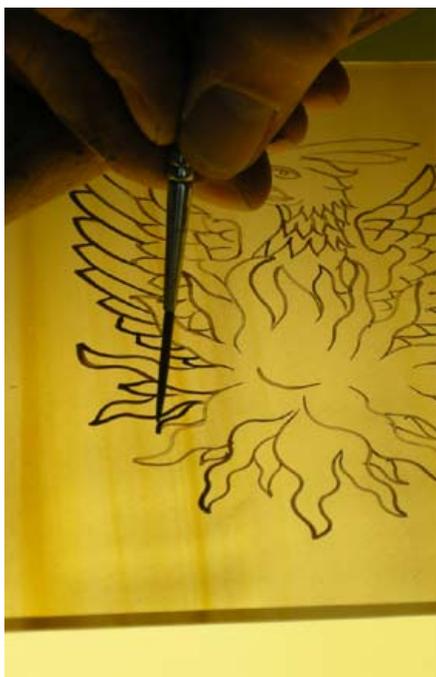
16. Put the design where you can see it.



17. Reinforce the main lines.



18. Rotate your glass as needed.



19. Work around the outline.



20. Keep testing your paint.



21. Here's the phoenix now.



22. Use your fine tracing brush again.



23. With the design where you can see it, now add details. Rotate the design as needed.



24. There's no need to copy the details exactly – what matters is their life. And here's the phoenix now.



25. Choose a thicker tracing brush (top).



26. Re-mix some medium-dark paint.



27. Thicken the outline.



28. Keep the design on one side where you can see it. As you move your glass, also move the design so that it's at the same orientation.



29. Here's the phoenix with its thickened outline.



30. Now pick out highlights.



31. Do this carefully and slowly.



32. Move the glass around so that you are always working at a comfortable angle. Also hold your glass up to the daylight from time to time.



33. Take a scrub and clean a border around the edges of the glass.



34. The phoenix now looks like this.



35. Practice how to soften highlights.



36. Very gently, rub and soften highlights.



37. Your finger must be dry and clean.



38. Rub very gently.



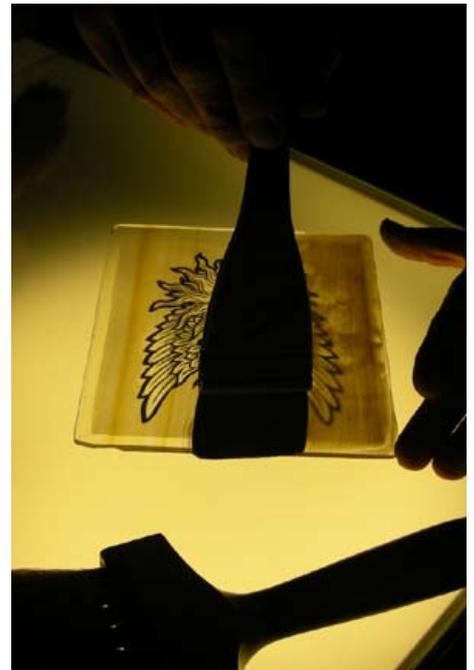
39. Slowly and carefully, you remove a little of the undercoat and soften the harsh highlight.



40. The phoenix looks like this.



41. Prepare to paint *another* undercoat.



42. *On the back*, paint a light undercoat.



43. When the undercoat is dry, use a wooden stick to pick out dots.



44. Also use a scrub to reveal the border.



45. Use a dry finger to soften the dots within the phoenix. (Leave the other dots alone.)



46. Here's the phoenix now.



47. Prepare a thick paste of oil-based paint.



48. Dilute a little of the paste.



49. On the front of the glass, paint an oil top-coat. Use a small round-headed blender to blend the oil top-coat. Then pick out highlights again.



50. Again blend and soften the highlights.



51. Use a tissue to highlight the eye.



52. The phoenix is ready to fire. Use a slow schedule which allows the oil to dry and burn off fumes.



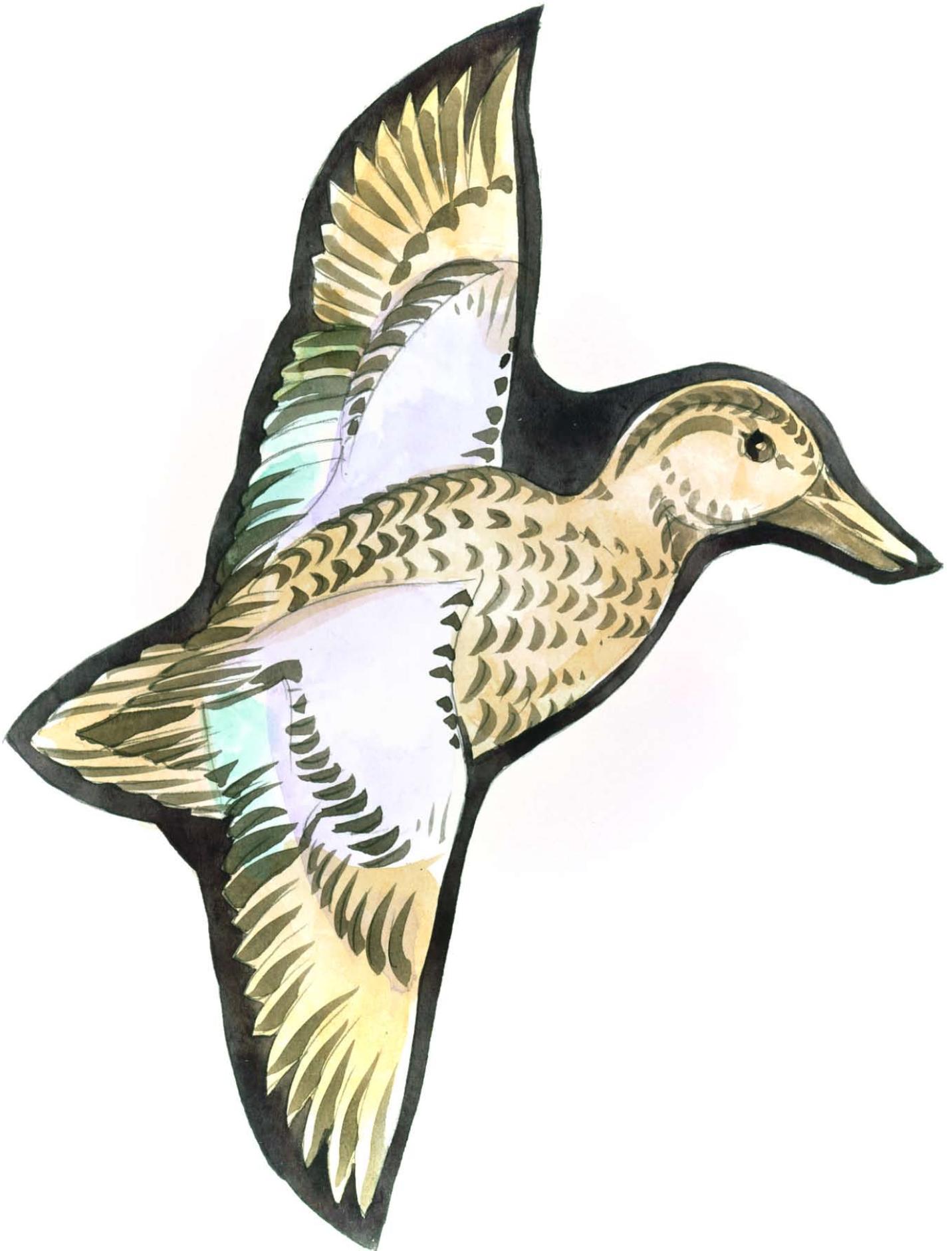




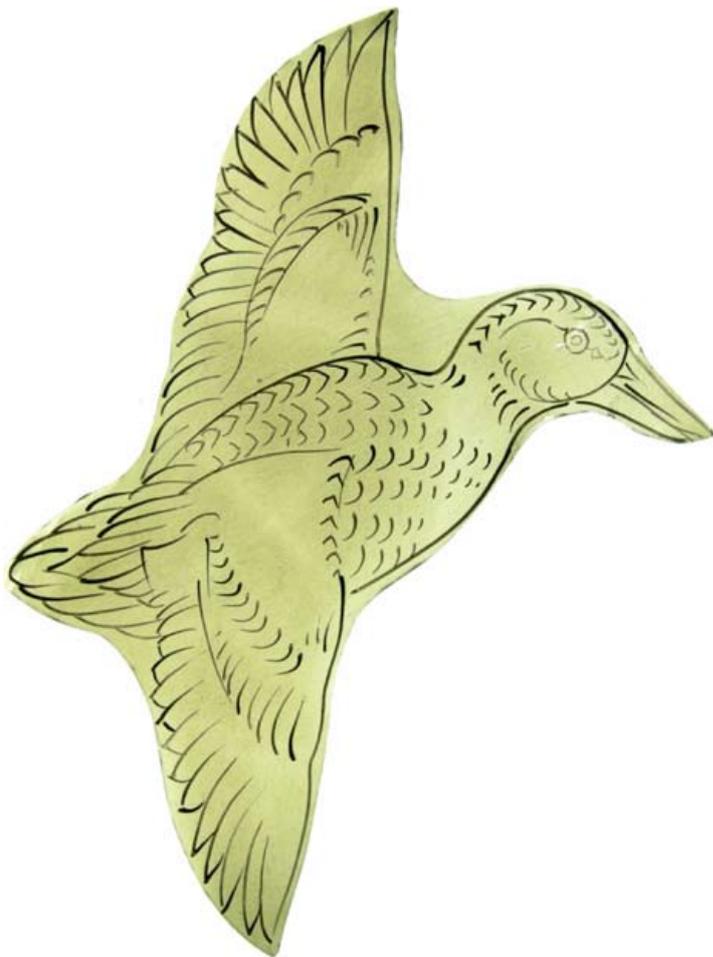








1. Here's the design for the second example. Copy it to a photographic application. Adjust it to the size you want. When you print it, make sure you instruct the printer to print a high-quality document.



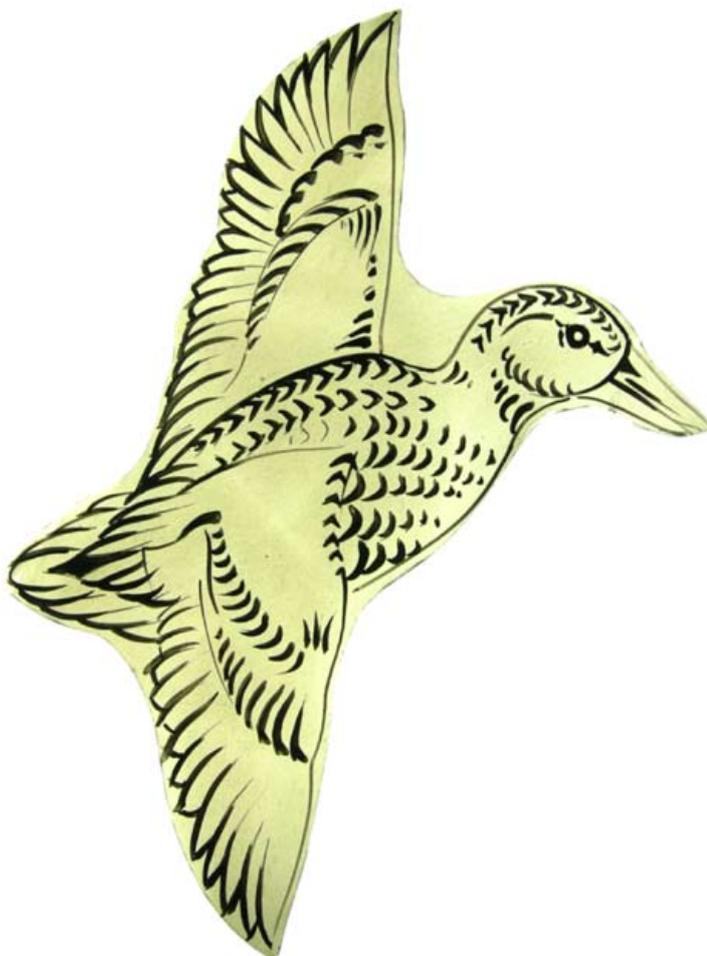
2. Choose some lightly coloured glass e.g. a light green, light yellow or light blue. Cut the glass. Groze its edges to that they cannot cut your fingers or the hairs of your brush. Clean the glass several times.

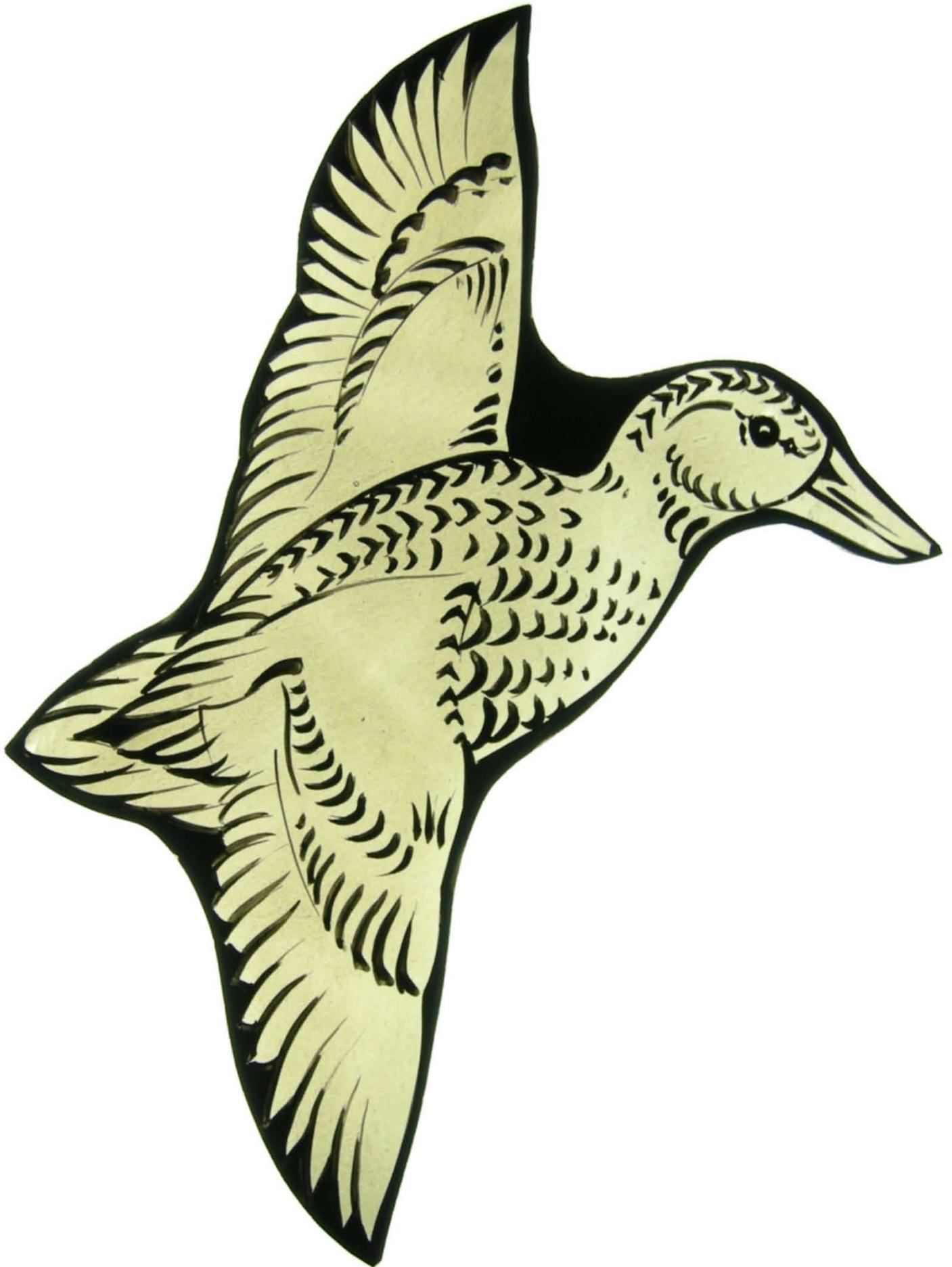
Use your hake to paint a light wash over the whole surface of the glass, blend as needed, and let the wash dry.

Lightly trace the lines you see here, and let them dry. As needed, reinforce these lines to make them medium-strength.

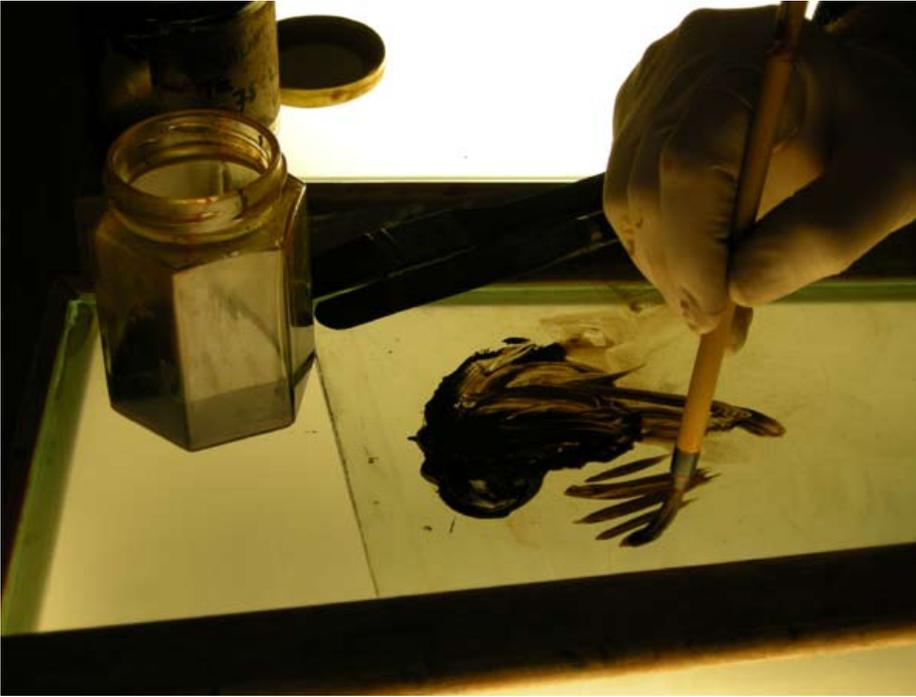
Full details in Stage 1 – The Foundations, “How to trace, shade, flood and highlight and why you need a lump of paint (not a teaspoonful) to do this”.

3. With a larger tracing brush, build up the lines. This is similar to how you built up the lines around the bee in Section 6 “How to trace, shade, flood and highlight and why you need a lump of paint (not a teaspoonful) to do this”. Use the medium-strength tracing lines as a wall: you build up paint *against* them.





4. Now it's time to flood. Mix some thick paint that's rather like runny melted chocolate. Load your brush and flood around the outside of the duck. Re-mix the paint each time you load your brush. Let the paint flow and fall from your brush. Do not interfere with your paint once it has left your brush: let it find its own level.



5. Get the oil-based paste that you prepared earlier and put it on your palette. Add some pure oil around its edges and dilute a little of the concentrated paint. Do NOT dilute all of the paste: just dilute a little of it, a little at a time.



6. Put the design on one side so that you can see it and know where to paint the shadows.



7. Now start to add some dark lines of oil-based paint.



8. Continue adding dark strokes of oil-based paint.



9. Always refer back to the design.



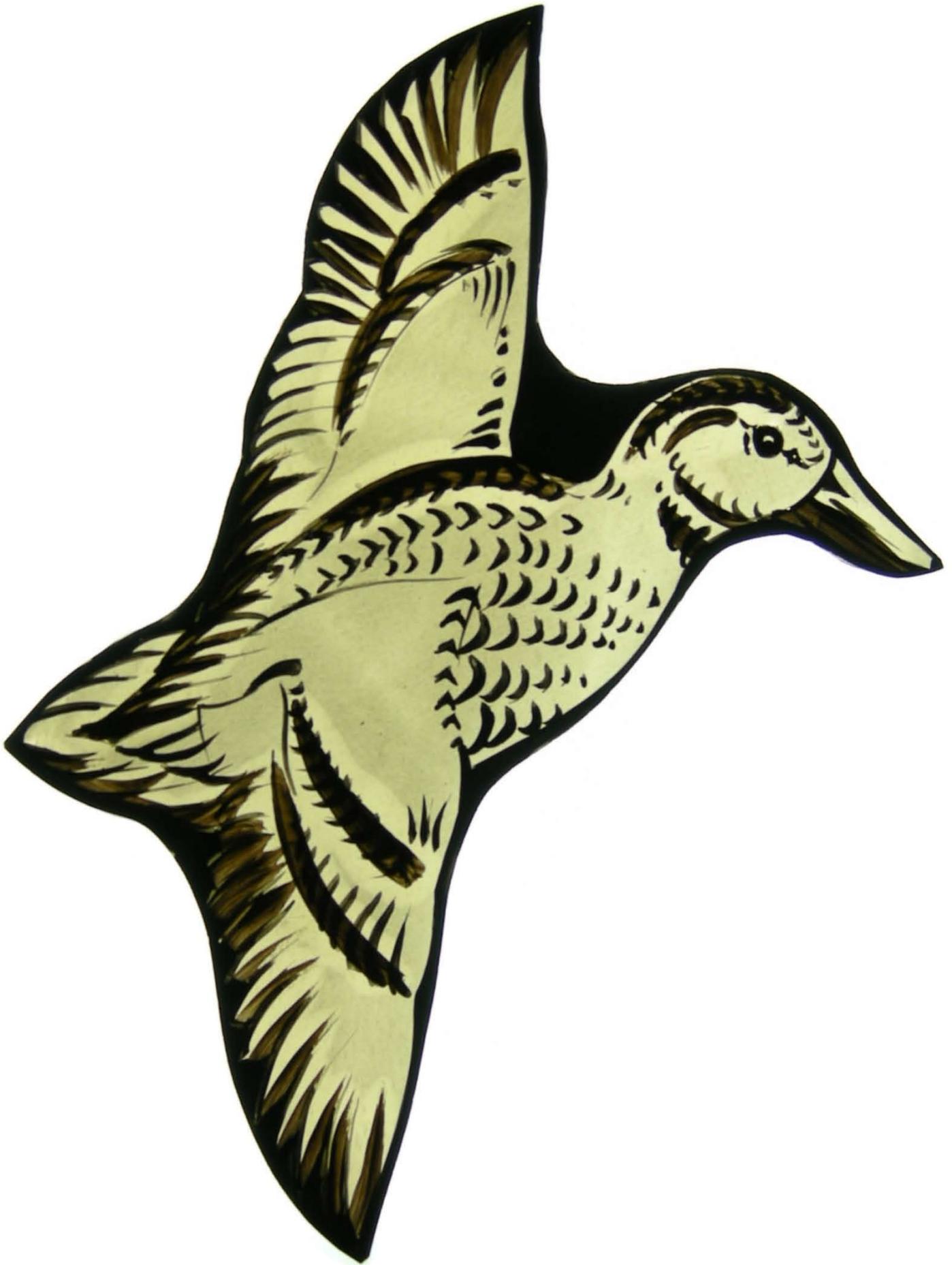
10. Add dark lines where you want to create soft shadows.



11. Be bold rather than timid.



12. You are putting down paint in order to be able to soften it in the next stage.



13. Here's what your duck looks like once you've added dark strokes of oil-based paint.



14. Add some more pure oil and make a light dry mixture. Again, do NOT dilute all of the paste: just dilute a little of it, a little at a time.



15. Mix this paint thoroughly.



16. Use this mixture to paint *all around* the duck oil-based strokes.



17. Here's a close-up: go right up to the edge of the dark strokes but do not go over them.



18. Keep mixing your paint and loading your brush.



19. Take care the paint doesn't drip.



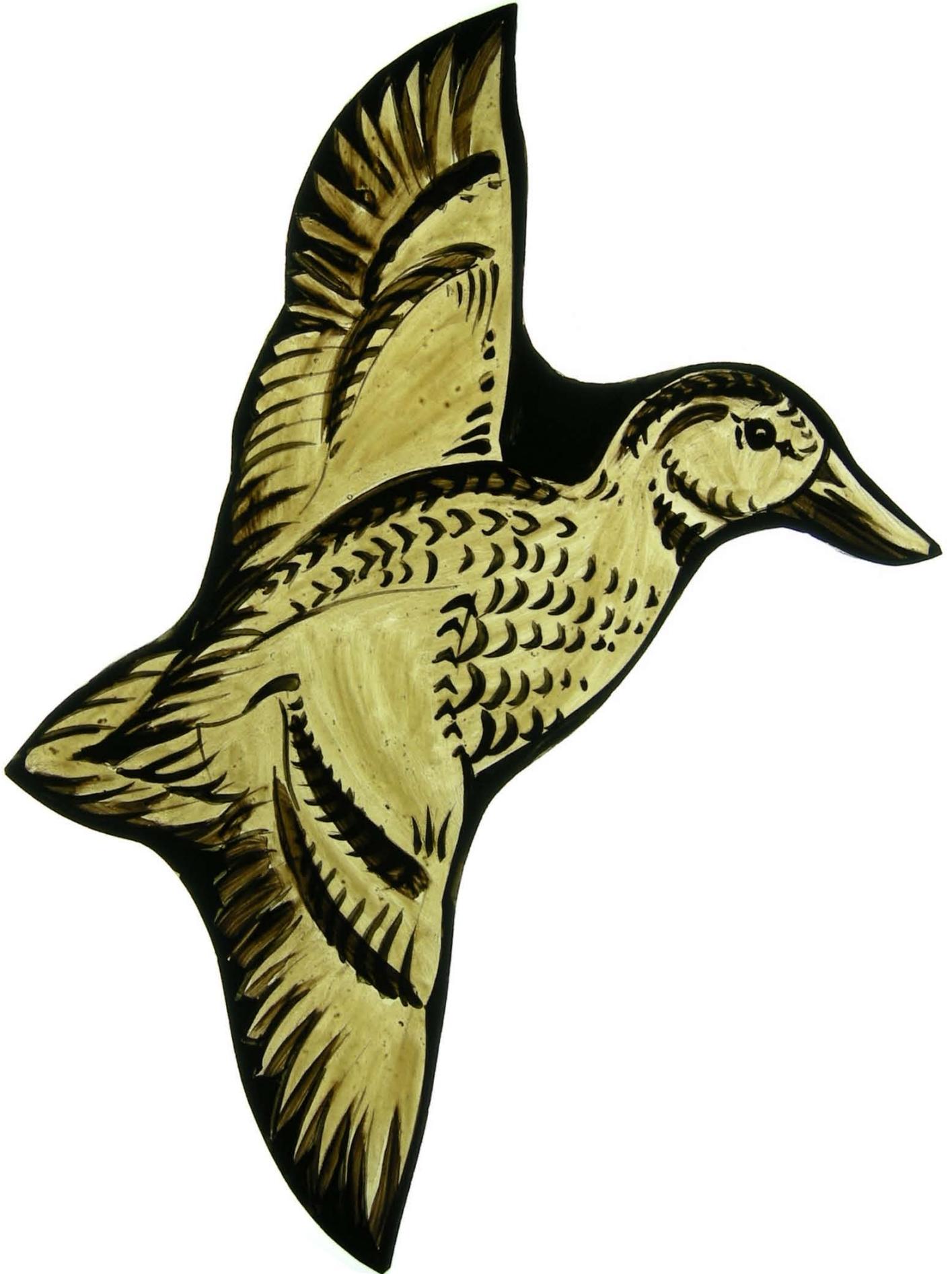
20. Paint carefully between the dark strokes.



21. Do not disturb the dark strokes of oil-based paint.



22. When you've finished, adjust the lighting to check that you have carefully covered the *whole* surface of the glass with oil-based paint. Everywhere on the glass there should be either dark oil-based paint or light oil-based paint. Here you can see an area that we missed, so we will have to paint over it.



23. Here's the duck: it's now thoroughly covered with oil-based paint. See how our light oil-based paint hasn't disturbed the dark strokes of oil-based paint: we've only taken the light paint to the *edge* of the dark paint; we have *not* painted over the dark oil-based paint.



24. Take a clean small badger-haired softener like the one you see here.



25. Gently soften the dark oil-based strokes.



26. Blend them with the light oil-based paint.



27. You can push the oil-based paint in many directions. This may surprise you to begin with. Just use your blender lightly. Also note that blending will dry the oil: eventually, your blender will begin to leave marks in the paint, so stop before you reach that point.



28. When you've softened the edges of the dark oil-based strokes, take a clean short-haired stippler.



29. Use the stippler to make some highlights.



30. Use the stippler to cut through both the oil-based paint and also the water-based paint. But only cut through light paint, not the dark strokes or any of the flooding.



31. Cut through the light oil-based paint and also the light water-based wash that you painted at the start.

Do this on the wings and neck, and also around the face.

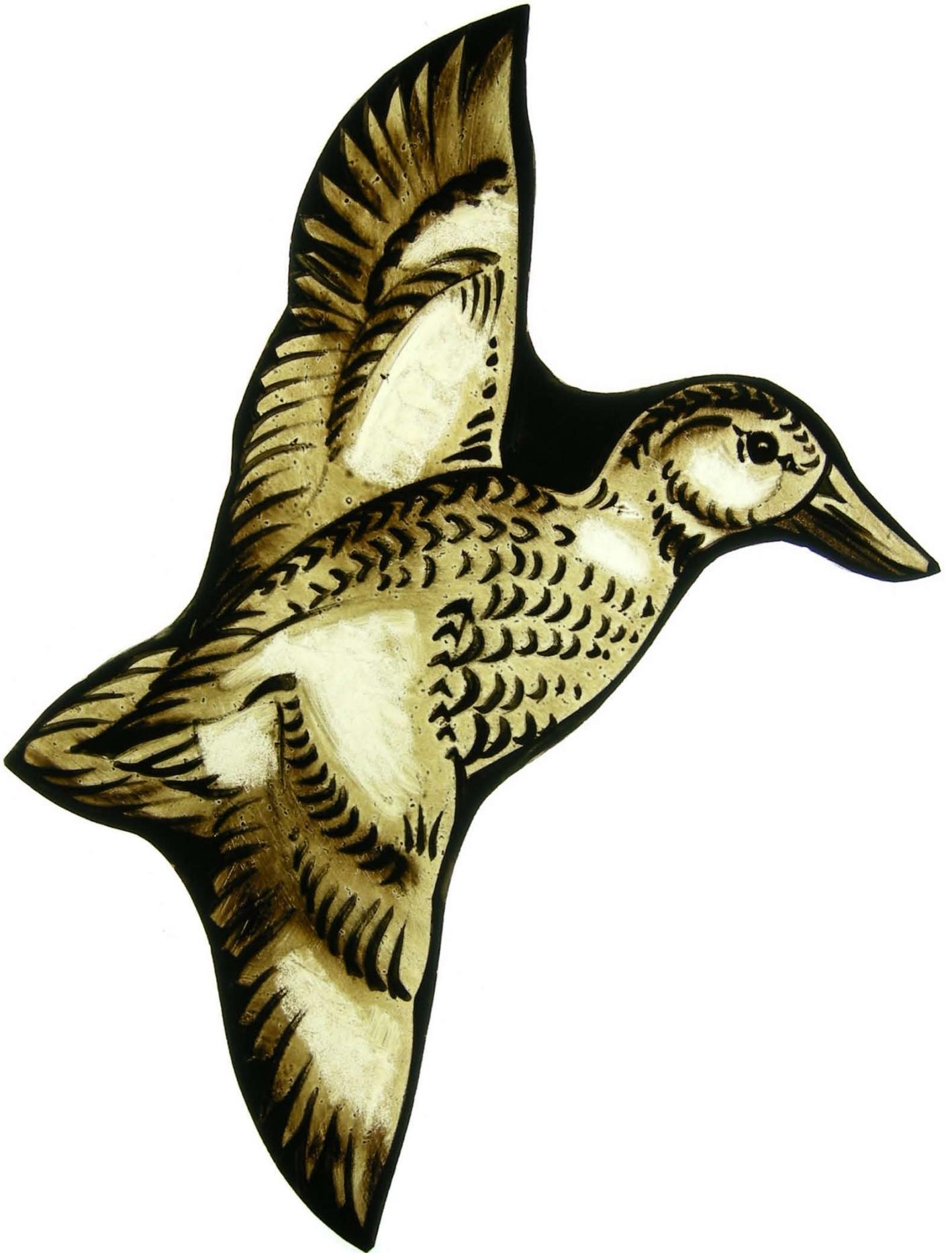


32. Take some soft tissue paper or kitchen roll: something absorbent.

Scrunch the paper up. Use it to lift off oil and paint.



33. Gently and carefully clean the areas that you highlighted with the scrub.



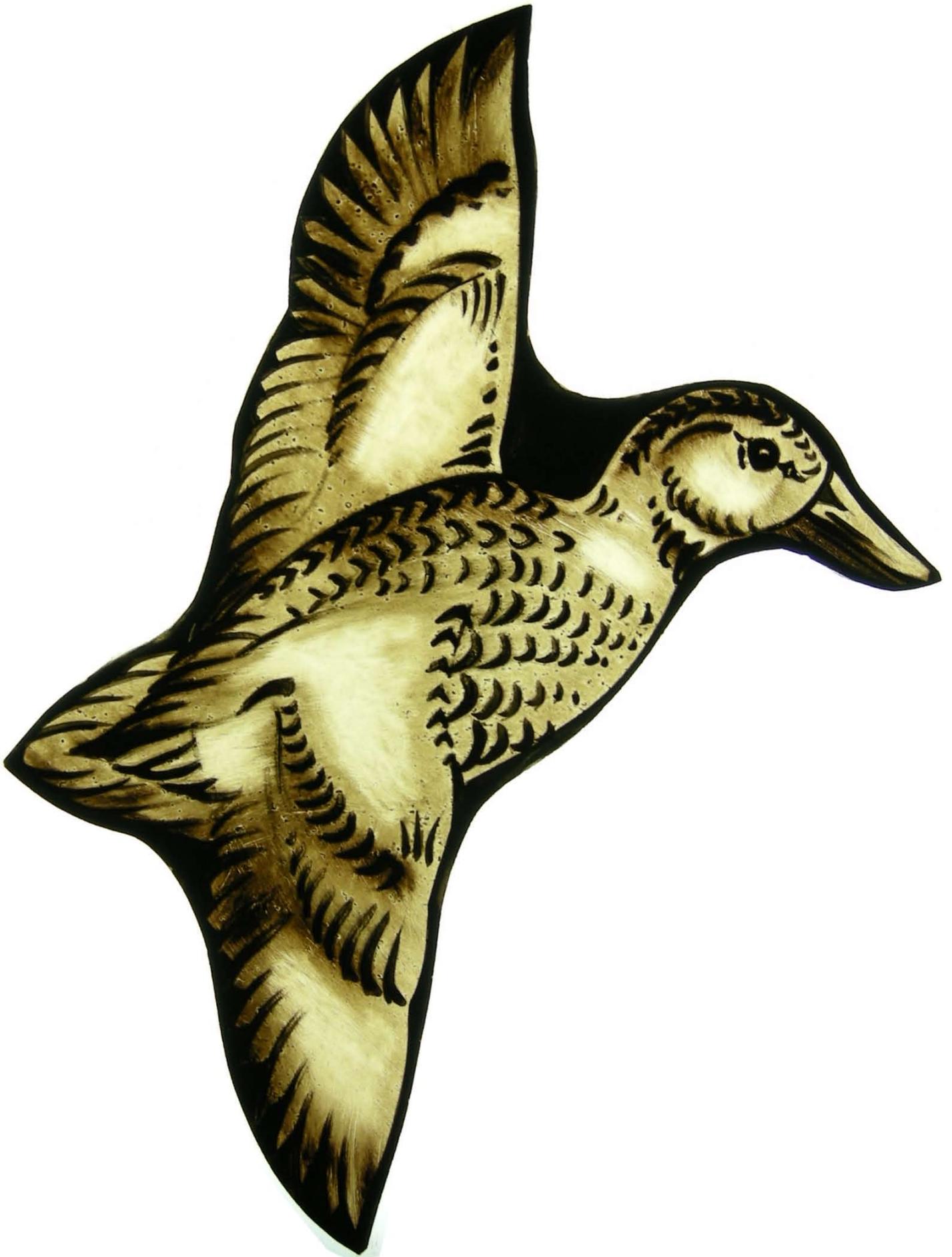
34. Once you've used the absorbent paper to dab away the paint from the lighter areas, this is what your duck looks like.



35. Now take your small round blender once again.



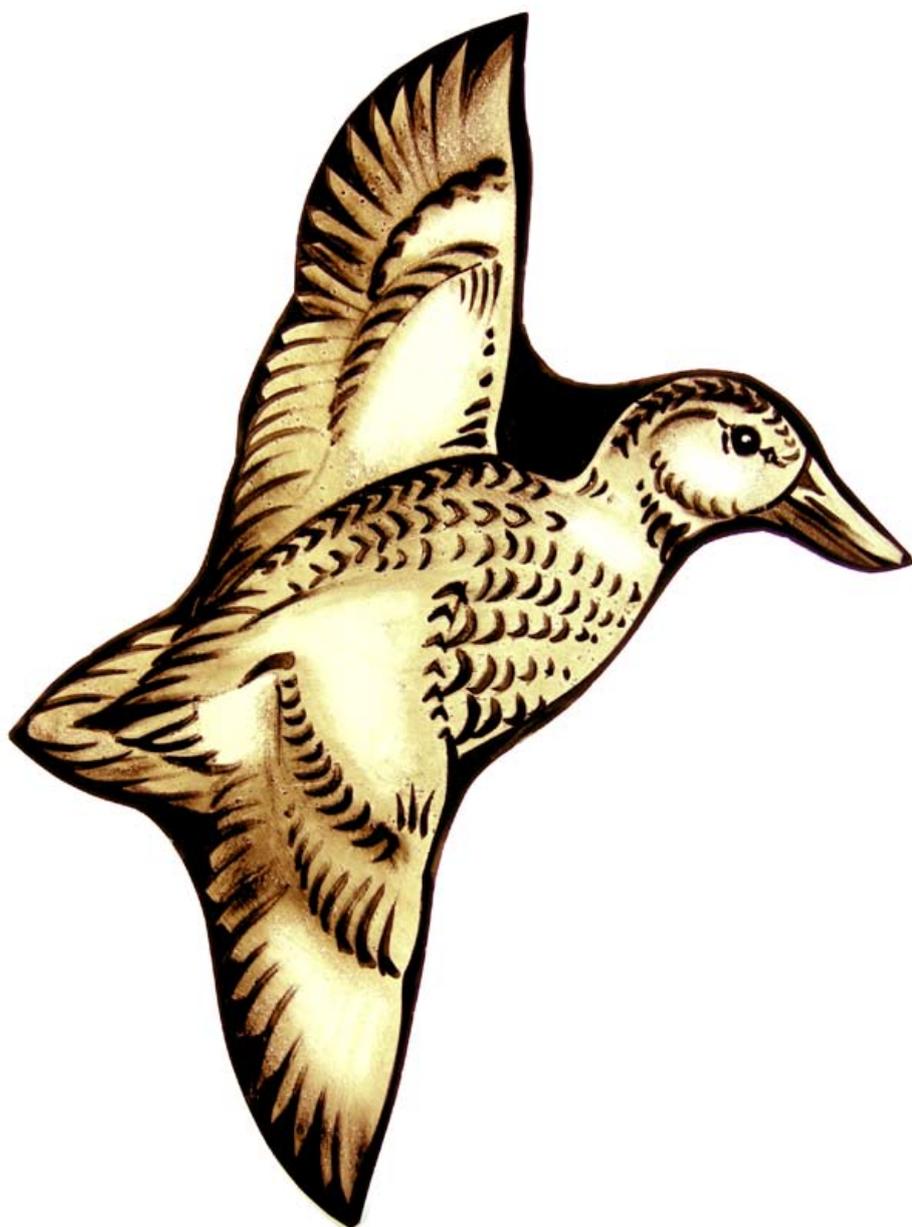
36. Blend and soften the highlighted areas with the darker areas around it. Do this very gently, because the highlighted areas are by now quite dry.



37. Now your duck looks like this.



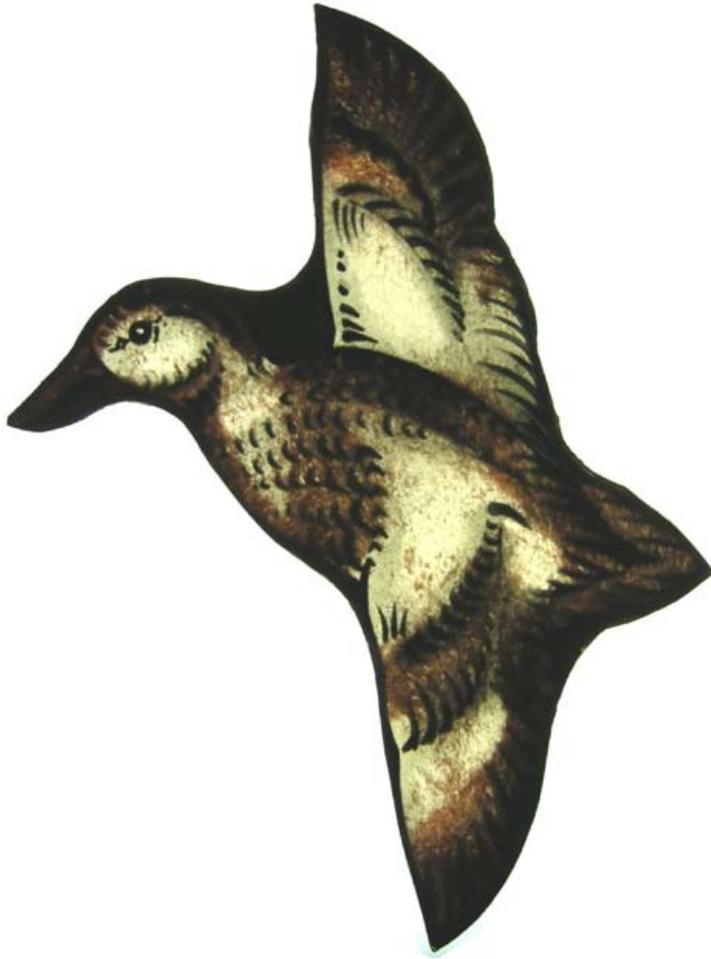
38. The last thing to do is to make a highlight in the middle of the eye.



39. Then fire your duck. This is the typical schedule that we use:

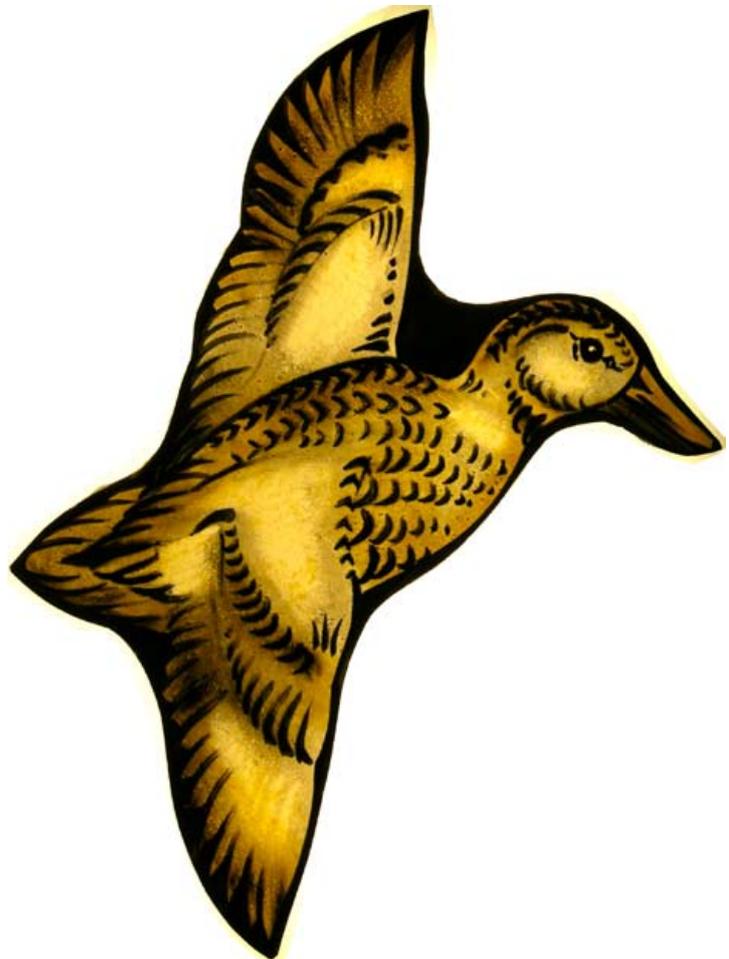
1. Take 2 hours to go to 100⁰ centigrade / 212⁰ Fahrenheit and soak for 1 hour.
2. Take 2 hours to go to 675⁰ centigrade / 1250⁰ Fahrenheit.
3. Soak the glass at this temperature for between 3 and 5 minutes in order to get a smooth and glossy surface.
4. Descend as fast as the kiln permits to 560⁰ c / 1040⁰ F.
5. Soak for 5 minutes.
6. Descend to 530⁰ c / 985⁰ F at 10⁰ c / 50⁰ F per hour.
7. Allow the kiln to cool at its own pace.

Once you've fired the water- and oil-based glass point, it is certainly possible to work with silver stain and enamels. See the following pages. Silver stain and enamels are large and important topics in their own right – particularly the oil-based approach to stain that we recommend you adopt for your own work – so they are covered in separate guides.



40. **Optional.** Once fired for the first time, we also painted some silver-stain on the back and stippled it to give it texture. Then we fired the duck a second time: this time just to 560°C / 1040°F (no soak) then straight down again. Please note: silver-stain is a “sensitive” paint, and you will need to do your own experiments here.

41. Here's the duck with fired silver-stain.

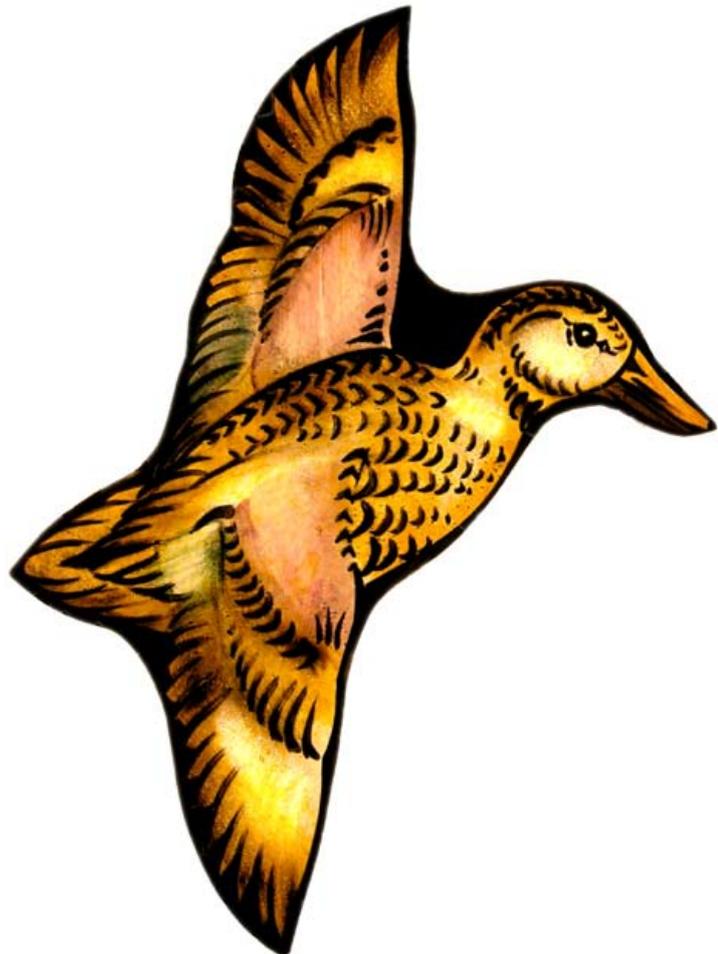




42. **Optional.** We also painted some transparent red enamel and some transparent blue-green enamel on the body of the duck. This photograph was taken with the light-box turned off so that you can see exactly where we painted the unfired enamel. This is on the front of the duck. We then fired the duck again: again to 560^o c / 1040^o F. This will depend on the kind of enamels that you use.

Please note: it is possible sometimes to fire the silver-stain and the enamel in a single firing.

43. Here's the finished duck.





1. Choose and cut the glass. Groze its edges so that you can handle them safely. Clean the glass thoroughly on both sides.



2. Apply an undercoat and blend as needed. Allow to dry

So how do you combine these oil painting techniques with painting on the *back* of the glass as you learned from “How you can trace, shade, flood and highlight (front and back) in a single firing, and why you need a lump of paint to do this (not a teaspoonful)”. Here’s how ...



3. Copy-trace the main lines



4. Strengthen the main lines



5. Add details



6. Flood



7. Pick out



8. Highlight

How you can use oil to shade effortlessly and leisurely and still do all your glass painting (front and back) in a single firing



9. Undercoat on the *back*



10. Spottle on the *back* and allow to dry



11. Rub the dried spots on the *back*



12. Oil wash and oil tones on *front*. Allow to dry (keep protected from dust)



13. Pick out oil highlights and fire



14. Fired. So the technique is: use water-based painting on the front and the back, and then return to the front for your oil-based painting

How you can use oil to shade effortlessly and leisurely and still do all your glass painting (front and back) in a single firing



1. Undercoat and copy-trace



2. Strengthen

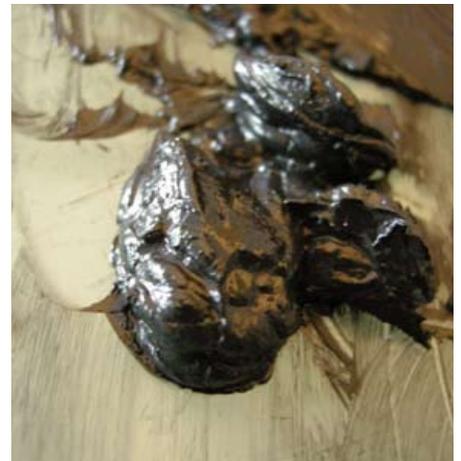
Bonus #1 – How to paint this king's head ...



3. Highlight



4. Soften the highlights



5. Prepare oil-based paste



7. Light oil wash over the whole glass



8. Blend smooth



9. Take a large tracing brush. Dilute a little of the oil paste to make a dark oil-based paint. Paint some oil-based shadows.



10. To decide where to paint the oil-based shadows, consider which parts of the face are in relative darkness.



12. Here you can see where we paint the dark oil-based shadows.



13. Take the blender that you use for blending oil-based paint. Soften the dark oil-based shadows by blending them gently into the surrounding light wash of oil-based paint.



14. Blend lightly so that the blender doesn't absorb too much of the oil and thereby dry it out.



15. Here's our king's head now that we've softened the dark oil-based shadows.



16. Take a sharp wooden stick: reveal the original highlights around the crown, above the eye, within the hair and beard and around the border. Then take a piece of paper tissue and gently dab away some highlights from the cheek. If you need to, and if the oil is still wet enough to allow you to (sometimes it isn't), you can then take the blender you use for oil-based paint and soften the highlight on the cheek. Let the oil dry overnight. Then take the wooden stick again and again reveal the same highlights as before: you do this because, as the oil dried, it may have seeped out again.



17. Fire the glass. Use a schedule that allows the glass to dry out and burn off fumes before going to top temperature.



18. Once fired, you can also silver-stain it as described in Part 3, "Silver Stain – How you can trace, blend, shade and flood from a reliable batch that lasts for months (and why water or vinegar are no good for this)".

There are many different ways of painting stained glass heads – many different techniques which you can use in many different sequences. We mention this point because we do not wish you to think that the way you see here is something that you must follow. Our own plan of attack – and it's essential that you too must always have a clear account of how you plan to paint a particular piece; it doesn't usually work to *invent* things as you go along – was necessarily dictated by our own knowledge and tastes on the one hand, and by the design on the other.

Regarding our own knowledge and tastes, you may already be aware that we have little liking for the “trace-fired” line – the line that is traced onto glass, then fired, then supplemented with matting and highlighting, and fired again. Then possibly matted (and even traced) and fired a third time. It's not the multiple firings that we especially object to. (Indeed, as you'll soon see, we ourselves opt for two firings here.) Rather, where possible and fitting, we ourselves have a taste for working with softer lines than can be produced *directly* from a tracing brush. We also have the knowledge to indulge this taste. And here – but not usually – the design was prepared with this knowledge and taste in mind.

The qualification is important.

On most occasions we design with as little thought as possible for the manner in which the image will eventually be painted onto glass. It seems to us to be a better way of working, to prepare the *right* design for the building and the client, and only then give due thought to how on earth we will achieve the desired effect. But, in this case, as you can see, our brief was to design and make a triptych of *conventional* stained glass windows, depicting Saint Francis, a Celtic cross, and Saint Martha – the patron saint of housewives – this triptych destined for a funeral chapel in a South Wales



mining town.

Now whatever anyone may think of the trace-fired approach to stained glass painting, we can all agree that it is *distinctive* to stained glass. This is an important consideration which you too must account for when you settle on the techniques that you yourself will use. The question therefore is, What degree of verisimilitude do you wish to aspire to?

And part of the answer is that stained glass painting is not photography. Nor is it printing onto glass. So it's possible to argue that there are degrees of “being life-like” which defeat the whole purpose of painting on glass. If you wish to create a perfect and unstylized likeness, then perhaps the tracing brush and badger blender are not the most appropriate means to do this. Therefore, with regard to the techniques and sequence we ourselves chose to use for Saint Martha's head, we always kept sight of the fact that the object was a *hand-painted* stained glass head, and that there was going to be just *one of its kind*. Otherwise we might as well have used various techniques described by Kevin Petrie in his useful book, *Glass and Print*.

But, having determined that the painted marks on glass would all be indisputably hand-made, we still did not feel at liberty to paint them anywhere and anyhow. Hence the labour-intensive water-coloured design that we prepared (as opposed to just painting an image straight away on glass, without working from anything else). Hence too a *graphite* representation of the design, prepared on *tracing paper*, which allows us to see key features pertaining to light and dark without the risk of distraction by colour. It's worth observing a small conundrum here. The water-colour design goes a long way to reassuring our client that we understand what they want,

and that we have the artistic skill to make them an exceptional and lovely window. This means that the client is happy. And the water-colour design is also a great help to us when we eventually come to paint the image onto glass. The sheer labour involved in its preparation somehow readies our mind for painting it on glass.

Yet we often find that the water-colour design cannot express everything that needs to be expressed *if* it is to guide us while we paint it onto glass. The truth is, there are two objectives here: reassuring the client on the one hand and guiding our own brushes on the other. Sometimes the single water-colour is sufficient both to convince them *and* to guide us. In other cases, as here with us, you will find that you, the glass painter, need a representation that is useless for the client – a representation that might indeed confuse them or make them doubt your understanding of their wishes. Whether or not this other representation looks like this graphite drawing here is not the point. What is the point is that, no matter the time and labour, it must be done, or the glass will probably fail.



Water-colour



Graphite



1

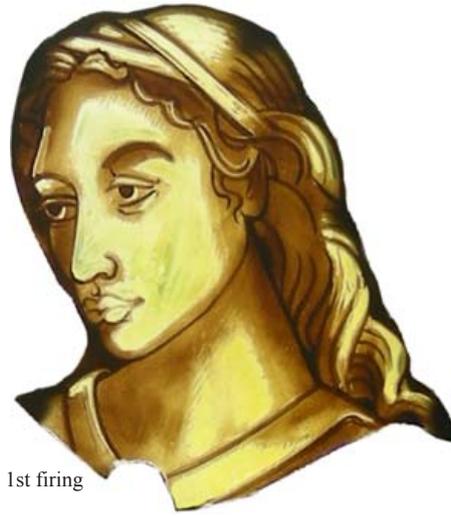
Overview

This is a long procedure, so let's begin with a summary.

Sometimes you fire a piece of painted glass because you're *absolutely certain* you've finished painting it. Equally, sometimes you fire it because it would be fool-hardy to go further without fixing the work that you've already done – you know the glass needs further shadows, for example, but you have a notion that you couldn't add them now without damaging the unfired lines and shadows underneath. Here, you regard the piece as *definitely unfinished*. A third scenario is when you fire it because, unfired, it's just too difficult to be certain whether or not it's finished. Maybe, maybe not – only the kiln will let you tell. If you were to go any further, you might just “tip the balance”. That's something you don't want to do in glass painting, for, whilst you can always fire and add another layer of paint, you cannot generally fire and then remove a layer of paint. Timidity and over-cautious firing has cramped the style of many a stained glass window, but this might seem the lesser or two evils when compared with the labour involved in re-painting a piece that you had



2



1st firing



2nd firing

taken too far. Such was also our reasoning when we chose to fire Saint Martha twice. But we also resolved that the techniques we used would *not* leave us open to the charge of being timid.

Thus, before the first firing, *we softened traced lines and half-tones into shadows: we reinstated and re-modelled particular lines and tones: we picked out highlights: then we worked with oil, briefly losing the highlights but adding yet more shadows: and finally we selectively reinstated the previous highlights.*

Then off to the fire it was for this patron saint of housewives. She was definitely unfinished – any fool could see there was much more make-up needed, but now was not the time to take that risk because it would have been easy to go too far that afternoon and then feel bad about it in the morning.

The next day we arose with a clear conscience and set to work. *We added more half-tones and softened these: picked out yet more highlights: oiled Saint Martha up again: and then, without any further highlights, bustled her off to the kiln for what we confidently judged to be her last firing.*

Thus, all in all, a diverse set of techniques, performed in one particular sequence with which we were comfortable. However, *even with a saint*, you'll find that the Devil is always in the detail.

From bare glass to first firing

Remember this, that *by the time of the first firing*, we will have established all the principle lines, shadows and highlights. Then, like a cautious gambler who banks his chips and take a rest, *we will stop before we go too far.*

So, from the cut-line, we cut the glass

(1). Once cleaned, front and back, we use a large haik to paint a light-coloured undercoat on the front of the glass, and let this dry (2). This undercoat serves several uses:

- It guarantees the whole surface of the glass is grease-free
- It reminds us not to touch the glass and accidentally dirty it – this is particularly devastating in the case of labour-intensive pieces, because you do not want to come to add a detail to the lip, for example, and find that the paint will not adhere where a careless, greasy finger got there earlier
- It provides a “key” (a rough surface) for subsequent painting, which is especially useful for the initial tracing
- It allows us to build up density step-by-step, which is easier than trying to do it in one go

But consider also this point. Imagine that you omit the undercoat. Thus, imagine that you immediately begin to trace the main lines on bare glass. When you've finished, you will place the glass in a well-lit window, stand back, and take a look. With bare glass as the “canvas”, and bright light shining through, then, when you step back past a certain point, the traced lines will go to nothing. So imagine, next, that you



3



4

strengthen the traced lines to try and make them hold their own. But you'll soon see that, *no matter how much you strengthen them*, there will always be a distance from which, with bright light shining through, they will go to nothing. Indeed, it is the pure light of the unpainted glass which is *playing tricks* on you. However, with an undercoat (or even with a light coat of paint on the *reverse*, though that's another story which you'll read about in a while), you will find that, as you step back, your traced lines remain much the same at each distance. The undercoat prevents the light from deceiving your eyes, which is useful.

On!

With the glass on top of the *graphite tracing*, we trace the main lines (3). In view of the following two steps, it's important that these traced lines, *without the aid of reinforcement*, already have a definite presence on their own. We wait for these lines to dry thoroughly, then, using a large tracing brush (a "goose"), we lay down broad bands of half-tone where the shadows lie – here, more or less anywhere except for the left-hand side of the face and neck, which is intended to present itself as being nearest to the onlooker. The whole effect is somewhat crude (4) but – what



6

would you expect? – this is always the case with work-in-progress. It is truly said that you need skill on the one hand, and, on the other, the courage of your own convictions.

From now on, the water-colour and tracing are on one side where we can see it. As we turn the glass to paint it, we also turn them both so that their orientation is the same.

We let the half-tone bands dry thoroughly. Note this: the greater the number of unfired layers of water-based glass paint, the longer the paint will take to dry. Also – the more those layers will *suck and drain* water from your brush as you paint the subsequent layers, which is point to bear in mind for the next step. Now we use the large haik once again and paint an overcoat which covers the entire surface of the glass. While this overcoat is



wet, we take the badger blender and soften the traced lines and mid-tones (5a). But we don't want to soften them to the point of obliteration: see the close-up (5b).

In the next step (6), with a medium-sized tracing brush and far darker paint than has hitherto been used, we reinstate the main traced lines and re-model them to their desired shape. Then we flood the area around the head and hair.

When the paint is dry, it's time to start making the highlights. It was helpful, here, to create a rough impression of all the specific areas that would be highlighted, such as the left-hand cheek, the near-side of the nose, the left-hand eye-lid and so



7

forth (7). So that's exactly what we did with a pointed wooden stick. Note this: highlights must not encroach on mid-tone shadows (step 4). It's a good rule of thumb that, if you ever want to place a highlight where a shadow is, either the shadow or the highlight is in the wrong place. So, if the highlight must go there, it follows that the shadow is in the wrong place. Then maybe the whole piece must be re-painted. But better that than making something unsatisfactory. Once the broad areas of highlight have been established, it's easier to bring them all along at the same rate until we get to the point at which we don't want to risk going any further (8). What is this "risk" here?

The risk is that, looking at this piece in isolation, we will take the wrong decision. The point therefore comes where it's essential to see all the pieces in their proper relationship to one another. Here, by way of context to this narrative, we need to mention two points:

- Everything except the figure was *already painted and fired*.
- Each component of the figure was at *the same stage* as the face whose development you are exploring with us here: hands, ladle, drapery, brooch etc.



5a



8



Taking care not to bruise the unfired paint, we use Plasticine to attach the glass to the easel. This allows us to get a better sense of the overall relationship between highlight and shadow across the entire window. We were unsurprised that, against the day-light, and surrounded by fired glass within the canopy, the face looked washed out and bleached (9 and 10). But you must make allowance for the fact that here you see the face against daylight, not against the light-box (which has a different colour spectrum). Always keeping the face in context on the easel, we apply a light oil-based wash to the entire surface of the glass, and we use a round-headed badger to blend the wash until it's smooth. Note that the easel is now flat. If it were vertical, the oil would run and drip.

After we've applied the oil-based wash, we turn off the light-box and make sure

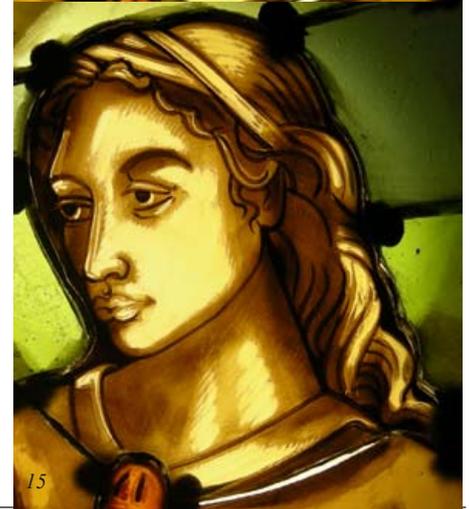
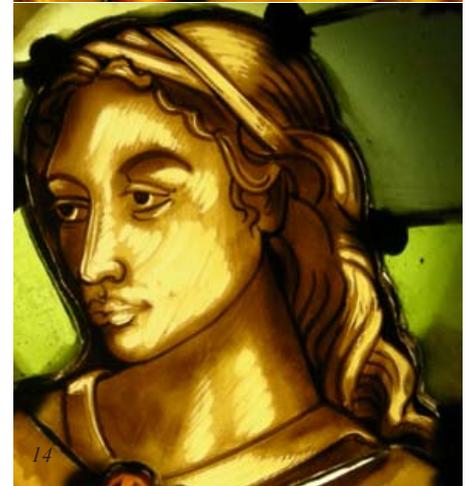


we've covered the entire surface. As you can see, we missed a few places (11), so we touched them up before proceeding. With a *very* large tracing brush, loaded with medium-dark oil-based paint, we paint a series of half-tones (12). Then we use the small, round-headed blender to soften them (13).

It's time for highlighting. Here are the points you should consider when you yourself come to make highlights on oil-based paint:

- When you highlight straightaway, the surrounding oil will often spread back, thus removing some of the initial effect
- Whether or not this happens will depend on how wet the oil still is, and on the temperature in your studio
- An interesting feature of highlighting straightaway is that you can also soften your highlights with a blender, making them gentler than they usually are e.g. by comparison with highlights made water-based paint
- You can wait until the oil has dried, then take a screwed tip of kitchen towel and now create a truly sharp (but smaller) highlight

We ourselves picked out highlights straightaway (14) and softened them (15). Then we left the oil to dry for a few days *before* we put the easel up again. There never was a question of risking any further painting at this point. Much more work was needed, but only after we had used the kiln to make firm the lines and shadows thus far established – it would have been too easy to go too far and thus to ruin the piece. Therefore all that was necessary was to be absolutely certain that we had removed as much paint as we wished to. Comforted by the knowledge that, after the first firing, it would be possible to conceal an erroneous highlight but impossible to add a missing one, we lightened Saint Martha a bit more, then placed her in the kiln for the usual slow firing that works best when oil has





16

From thin lines and shadows to the second firing

Remember this: now that we have used the kiln to fix the principle lines, shadows and highlights, we will, by the time of the second firing, use further layers of water- and oil-based paint to create a sense of depth and *volume*. Yes, it's volume that we're all after, and this takes *layers and layers* of paint.

Heaven knows what happens in our kiln as it cools down! We surmise it is inhabited by a greasy-fingered goblin who, whilst the lid is shut, strokes and begrimes our glass. At any rate, we always find that fired painted glass takes an age to clean before we can proceed. Perhaps your kiln also has a kindred goblin? If so, you'll need to clean your fired glass, back and front, as thoroughly as you did before.

Now we start again in earnest. We begin by doing something which might initially strike you as peculiar, but you'll soon appreciate the reason.

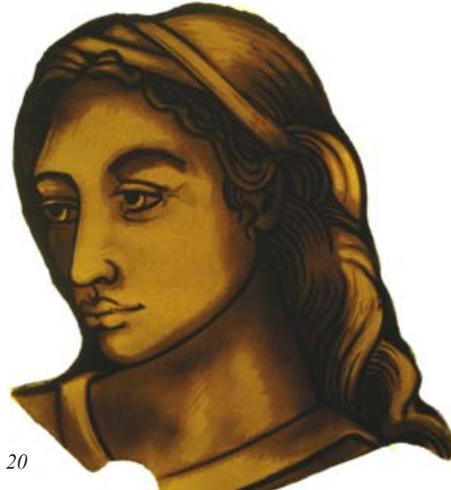
We turn the glass over, and we use the large haik to paint a temporary undercoat on the reverse (16). Like the very first undercoat, this is a way to stop pure light



18



19



20



22

from playing tricks on us: remember, after all, that there are large areas of Saint Martha's face which have no paint on them at all. We paint this undercoat on the *reverse* precisely because we want to be able to remove it later on.

When this undercoat is dry, we turn the glass face-up and, with the small haik, we paint bands of half-tone (17 and 18).

What determines where we place these bands? Here we must consult both the cartoon and the graphite sketch, and we decide for ourselves where greater depth is needed. Again, the result is superficially crude, but, if we don't like what happens next, we can simply rub things out and begin again. With the large haik, we cover the whole surface of the glass with a light wash. While this paint is wet, we take the blender and soften the half-tones (19 and 20).

Once dry, we use a tracing brush to strengthen the occasional line that was "fired out" in the kiln. We also take this opportunity to modify some shapes (21 – shown with light-box turned off).

"Highlights next!", you're thinking. Yes, highlights, but not in isolation: the strength and placement of the highlights must agree with everything else within the whole



17



21



23



window. Therefore the face is once again attached to the easel, where we work on it in its proper context (22). (By this point in time, all the other pieces were twice-fired and finished.) You can see in picture 23 where we cut back to the bare glass.

Now is the time to remove the temporary undercoat from the reverse, precisely because we are about to apply an



oil-based overcoat on the front. The oil-based overcoat will contain just the tiniest amount of pigment. As before, it's not there to darken the glass (although, covering the entire surface, we think it has a unifying effect) so much as to create a slippery surface on which we can then paint and soften a collection of oil-based half-tones.

So we clean the back, paint a light oil-based wash on the front (24) and blend this



smooth. Then, with a medium-sized tracing brush, we paint some dark, oil-based lines (25) which we blend and soften with a round-headed blender (26).

We, the glass painters of Saint Martha, must always remember this: the triptych will always be brightly lit and seen from a distance. Therefore we require a particular boldness which would be wrong if the face were in fact to be seen close-up.

Here we leave things.

Specifically, we remove *no further highlights*.

Thus the whole surface of the glass has some paint on it, even if this is just the thinnest layer of oil-based paint.

And so to the kiln goes Saint Martha for the final time.

Methods & Techniques

As we said at the start, this is just one way to paint a stained glass head.

When you come to paint one for yourself, you will have your own design to copy. It will be your own knowledge of the architectural context that will inform both your choice of techniques and your decision about the order in which to use them. The possibilities are legion. As always, the main thing is to observe and think for yourself.

And remember, this same sequence of techniques is one that lends itself to many other objects such as hands and clothing.



1. Use a large haik to paint a light-coloured undercoat. Softened with a large blender.



2. Use a medium tracing brush to copy-trace the main lines. We copy-traced them from the graphite tracing (rather than from the water-colour design).



3. Use a large tracing brush to paint light bands of mid-tone.



4. Use a large haik to paint a light-coloured overcoat. Use a large blender to soften the traced lines and bands of mid-tone.



5. Use a medium tracing brush and medium-density paint to reinstate, strengthen and re-model earlier traced lines.



6. Use sticks to delineate main areas of highlighting.



7. You can use sticks, scrubs and softeners to make further highlights. But often the best tool of all is your forefinger. Make sure it's always clean and dry.



8. Look at glass in context and adjust the highlights. Note: this is against a window that looks onto a lawn. *She isn't really green.*



9. Use a medium squirrel to paint a light wash of oil-based paint. Blend smooth with a round-headed blender. (Light-box turned off.)



10. Use a large tracing brush to paint medium-density bands of oil-based paint.



11. Blend with a round-headed blender.



12. Make initial highlights with scrubs and stabs of paper kitchen towel.



13. Use a round-headed blender to soften the highlights.



14. When dry, reinstate some highlights as necessary with scrubs and paper kitchen towel.



15. First firing.



16. After firing, clean thoroughly on both sides. Use a large haik to paint a light wash on back of glass.



17. Working again on the front of the glass, use a medium haik to paint mid-tones bands.



18. Use a small haik (or similar) to paint a wash of light-density paint. Soften everything with blender.



19. Use a medium tracing brush to reinstate and re-model some traced lines. (Light-box turned off so you can see.)



20. Remove paint from back of glass. Examine in context and restore some highlights (not all) with sticks, scrubs, softeners. (Light-box turned off so you can see.)



21. Use a small squirrel to paint a light-density oil-based wash, then blend smooth with round-headed blender.



22. Use a medium tracing brush with medium-density oil-based paint to reinstate and strengthen some traced lines.



23. Blend with a round-headed badger.



24. Make highlights as needed (we chose not to).
Second firing.









Conclusion

Oil painting on glass is very much like a liberation. All of a sudden, you are freer than you ever were before to place your shadows exactly where you want. You can also control their density. And if you don't like the result, you can adjust the paint until you do.

An important point, however, is to have the right amount of gum Arabic in the *water-based* paint you used before the oil. So we will now return to this subject and summarize what you must do. The truth is, if there is too little gum, your oil-based paint will likely remove your water-based paint. Therefore you must test your water-based paint before you start. Our own test involves making sure we can successfully follow this sequence on a small piece of scrap glass:

1. On clean glass, apply and blend a light water-based undercoat;
2. Use water-based paint to copy-trace a (small section of a) design;
3. Use water-based paint to strengthen the design;
4. Apply a light wash of water-based paint over the entire surface of the glass, then use the large badger blender to turn the traced lines into softened lines.



Now if your traced lines soften gently, you can be fairly confident your oil-based paint will also work. For the sake of certainty, complete your test. Just continue with an oil wash, then some oil lines, then check you can blend wash and lines together without damaging your water-based work beneath.

You'll find everything you need to know in Part 1, "*How you can trace, shade, flood and highlight (front and back) in a single firing, and why you need a lump of paint to do this (not a teaspoonful)*"

If on the other hand your blending in step 4 *removes* your earlier tracing, it is likely your water-based work will not sustain pressure from the oil, so it is also likely you will need to add more gum Arabic to your water-based paint.

These tests are all worth doing because of the freedom that oil painting gives you.

We hope it's a freedom you enjoy.

