



Sergio  
CALVO  
miniatures

ENGLISH 

# MANGLER SQUIGS



VOL I





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# 01 WHO WE ARE

We want to thank you for reading this digital book that we have created for you with so much love.

After 14 years as a painter of miniatures, I decided that it was time to show the world my particular way of understanding and seeing the world of miniatures. For this reason, three years ago Vanessa and I went into this new adventure of Patreon. And together with the creation of our studio, Sergio Calvo Miniatures, we decided to open the Patreon channel to show you through tutorials, techniques, tips, ideas and approaches, all the knowledge I have been developing during my professional career.

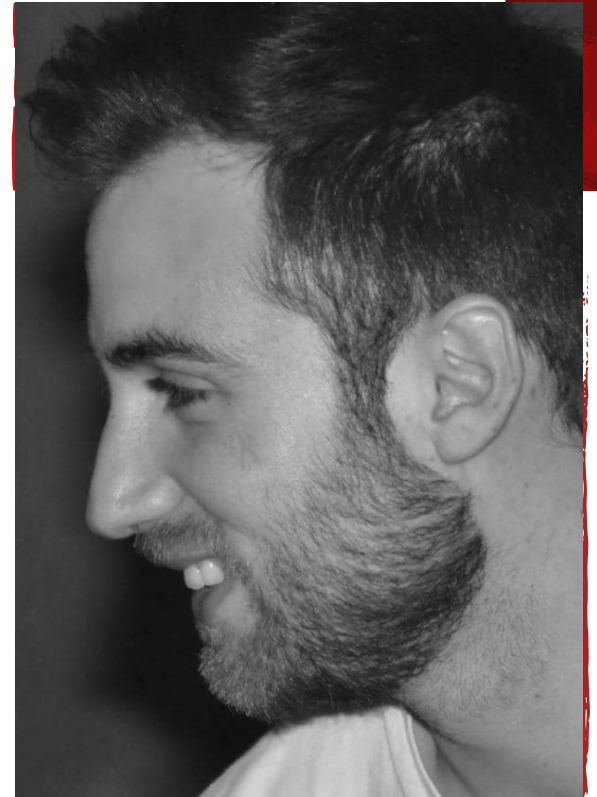
In our Patreon's channel, and specifically through the tutorials and these digital books, you will find a painting guide explained step by step, with all the details through images and texts that help to understand the concepts and ideas that I want to transmit you so that you can put them into practice. Since we started more than three years ago, we have undergone a great evolution to bring you the best material and quality we

can, and we hope that this new format will surprise and please you as much as we do.

For those of you who are new to Patreon, we would like to welcome you to this new adventure, and for those of you who have already celebrated an anniversary with us, we would like to thank you for making it possible. Vanessa and I, can only be grateful for all the love and support we receive daily through the channel, social networks or your comments.

In love with our work, we hope to be able to transmit all that love and trust that you place in us every day. We also hope that you enjoy this e-book and all the knowledge that we deposit in it.

Thank you very much to all of you.





# 02 MATERIALS



## HANDLES AND HOLDERS.

For holding small or medium sized miniatures, I recommend the Citadel holder. If we work with larger miniatures, the most effective is to use a wooden block and Blutack.



## TOOLS.

DRILL, BLADE, TWEEZERS, PIPETTE...

Tools that we will use to remove the miniatures from the moulds; to remove the mould lines (blade) and to hold small pieces or as a complement for the airbrush and the brush.



## THINNERS.

Used to break the surface tension of the paint; allows us to give more flexibility to the color without losing coverage, adherence and opacity. In addition, the color will be distributed uniformly by the surface to work. Its retardant effect allows us to work with the airbrush for longer without the need to clean it so often.





# 02 MATERIALS



## SPRAY CANS.

We use spray because with them we create a thicker surface on the miniature and we avoid that when using any abrasive product, the primer jumps or breaks.



## AIRBRUSH CLEANER.

You can use acetone, water and airbrush cleaner. If you use acetone, the airbrush cannot have Teflon or rubber gaskets, since acetone eats those materials. If you use acetone you must rinse with plenty of water and then apply the cleaner.



## PUTTY.

Milliput is the most used to be worked dry with a sandpaper or worked wet. Magic Sculpt has a higher hardness, but with a finer grain. For me, they are practically the same except that the second brand has a translucent finish (you can solve it by adding a little Milliput to the mix). Remember that if they are two-component putties you have to work with a mixture of 50%. For sealing joints we can also use acrylic putties such as Modeling Grey Putty.



# 02 MATERIALS



## MATERIALS FOR BASES.

Depending on the finish we want, we will have to use materials such as sand, stones, snow or small branches to create trees, bushes or grass. Some of the materials can be used together with white glue to compact them on the surface. Other materials, such as water, can be tinted.



## GLUE AND ACELerator

We will use the cyanoacrylate to join two pieces and we will use the accelerator to accelerate the drying process.



## PIGMENTS AND FIXER.

The pigments are applied dry, using an old brush to distribute it along the surface. Then, we must fix this material with the fixer. To do this, we will use a pipette.





# 02 MATERIALS



## **BRUSH.**

Winsor & Newton natural brushes number 1 and 2. We will use number 2 for the application of base coats or large surfaces and number 1 for small details and outlines.



## **SILICONE BRUSH.**

Used to work the putty, we will use them to seal the joints of the miniatures as well as to make small sculpting works.



## **SYNTHETIC BRUSH.**

We can use old synthetic brushes to apply our pigments or to make the paint mixtures inside the airbrush.



# 02 MATERIALS



## ART PAINTINGS.

When we want to obtain a higher color saturation, we can use this kind of paint brands because of the quality of their pigments.



## ANDREA COLOR, AK ACRYLICS, SCALECOLOR.

Designed for modeling and board games. Andrea Color and Ak Acrylics are similar in coverage, degree of color intensity and degree of matte. They are colors that we will use to give the base layers and practically 90% of the work of the miniature. Scalecolor is an even more matte range so it loses some color saturation.



## AIRBRUSH PAINTINGS.

Paintings designed to be used in the airbrush. With this Vallejo range we will obtain a lot of intensity in the color and avoid the whitening of other ranges that have in their composition matte.





# 02 MATERIALS



## OPAQUE PAINTING.

This specific range of Vallejo, we will use it when we make the base coats because of its grip on the primer. Most of the colors we will use are dark and the range is so versatile that we will be able to use it for terrains or bases.



## INKS.

They give us intensity of color and brightness to our finishes. We can use Liquitex or ScaleColor inks to replace the old Citadel inks that are now more difficult to find in the market.



## VARNISH.

We will have 3 effects; glossy, satin and matt. Both grades will serve us both brush and airbrush. It is used by replacing water with this product and joining it with the color you are going to use.



# 03 TIPS



To clean the airbrush we must simply use a pipette, squeeze to extract all the air and put it inside the bowl. Once it is inside, we release the pressure of the pipette and it will automatically collect the dirty water. Pour the contents of the pipette into the glass of water and again take clean water to be placed in the bowl. Afterwards, we can repeat the process two or three more times until we see that the bowl is completely clean. The remains of the airbrush needle can be cleaned simply by using the clean water that we have introduced into the bowl and pressing the airbrush to expel the remaining dirt on a napkin.







# 03 TIPS



Is necessary to shake the paint cans because, if they have not been used for a long time, the pigment and the thinner that compose the paint will be separated. To avoid this, we must simply shake the can a couple of times so that both components come back together.

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# 03 TIPS



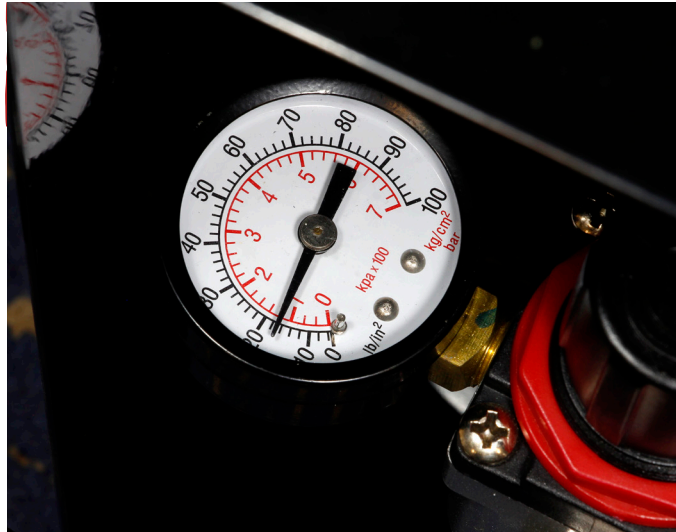
To use the acrylic, we must always have a humid surface where we can sharpen the tip of the brush and remove the excess paint without losing the humidity. To do this, we must take with the pipette a little water and throw it on the kitchen paper. On this wet surface, we can make a small turn with the brush while backing up to remove excess paint while sharpening the tip of the brush. This way we will avoid the sensation that the brush dries very fast or before it touches the figure.



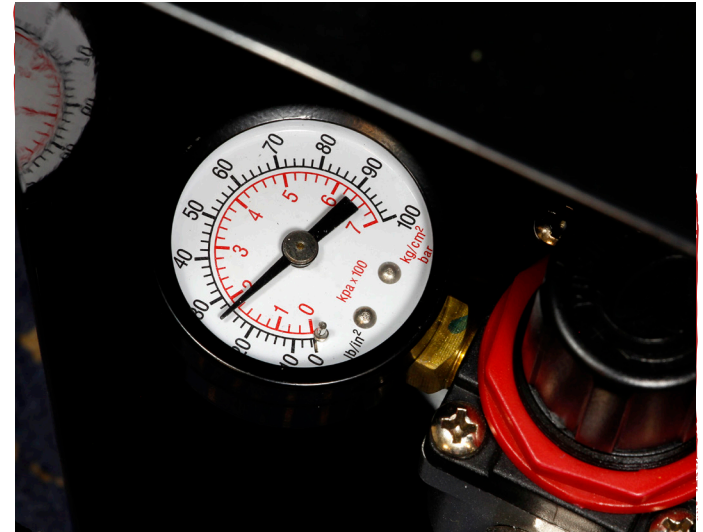
In this image you can see how the brush should look like once we have sharpened the tip of the brush and removed the excess paint without losing the humidity.



# 03 TIPS



With a low pressure of 1 kilo or 1.5 kilos we can make glazes. To do this, we must get very close to the miniature and this low pressure allows us to avoid the annoying spider legs.



In case of airbrush primer or base coats, we have to increase the airbrush pressure up to 1.8 kilos. This way, when separating the airbrush from the miniature, the air and paint flow will be continuous and we will avoid the paint to arrive dry, splashing or in non-optimal conditions.





# 03 TIPS



In a small plastic we will introduce a sponge and fill it with water and neutral soap enough to make it wet. To clean the dirty brush, we have to move it from right to left and vice versa until both the brush and its metal part (ferrule) are completely free of paint. In addition, when our brush is dry we can use this gel to sharpen the tip of the brush and thus keep our tool in perfect condition for longer.



With the medium sized plastic container (approximately 23cm x 15cm), we place the sponge on top (always white or neutral grey -never yellow) and fill it with water until the sponge is covered with water. On top of that sponge, we will place the kitchen paper folded in two or four layers and wait for the water to moisten the whole area.

Then, with the baking paper previously cut to the size of our palette, we place it on top of the kitchen paper. This way, the humidity will always be kept under the baking paper and will allow our paint not to dry so easily.



# 03 TIPS



Here you can see the final result. With this wet palette, the paint will not dry as quickly as it happens when we use other kinds of palettes.



When we are painting, the dryer helps us to speed up the drying process. We can use the cold air to dry bright colors and the hot air to be able to matt the paint. In case the miniature is made of resin or plastic, be careful with the heat of the dryer because it can bend those thinner areas of the miniature. The key will always be to maintain a distance of a couple of centimeters between the hot or cold air stream and our miniature.



# 04 METHOD

## SERGIO CALVO AND THE “CAPIBASES” METHOD

The term Capibases refers to a little joke that my students started a few years ago, and that in the end, has ended up referring to my peculiar way of painting. It is simply a play on words between “Capi” for “Captain America” and the word “base” when introducing different layers without being hardly diluted in water.

As we already know the wet palette, we can say that the paint we will use to load the brush will be the one we have poured directly onto our palette or, at most, dilute the color or mix it with a drop of water (10% water and 90% paint). Now that our brush is loaded, we will move to our “water bed” to remove excess paint, maintain humidity and sharpen the brush tip. Remember to make a small twist with the brush while you back up on the surface so that the tip of the brush is as sharp as possible.

Unlike most paint canons, we will use glazes as a finishing process so we will only use them when we have 90% of the miniature finished.

From the beginning, we will always use base coats that allow us to cover the previous layer between 85% and 90% of the surface to be worked. This means that we are making a series of cuts that could be identified with the steps of a pyramid seen from the top. These cuts between the different layers will therefore be evident at the beginning, but when we introduce the airbrush we can make

“glazes” to clean these transitions.

As for the placement of the light, we will preferably use a front light. And when I refer to the term “front light” I do not mean that it is a zenithal light itself. If we understand that every shape can be broken down into a simpler geometry (spheres, cubes, cylinders, cones) we will see that the placement of that light is not placed at the vertex of a cone, for example, but rather that it moves forward or in a frontal plane. In this way we will always have more light in the frontal plane than in both ends, where we will find areas with shadow.

Continuing with the cone example, for the application of color we will always go from shadow to light.

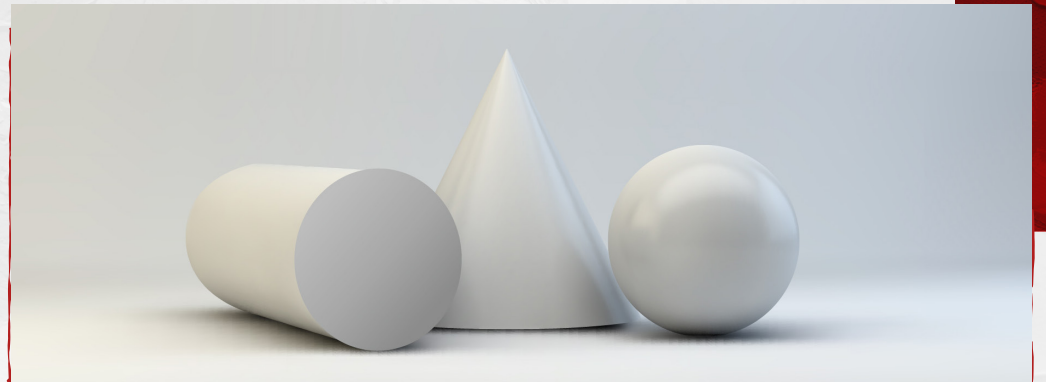
First, we would give a layer of darker color that covers all the primer of the cone and then, we would

cut the surface to work always leaving the previous layer visible at both ends of that cone until we reach the center of it, where we will place our maximum light.

This process may take between 6 to 9 layers generating a visible degradation that later, we will clean with the airbrush making saturated color filters that allow us to introduce medium tones. We can also make shadows with the airbrush to provide extra depth and strengthen the contrast.

From here, we have already worked all our cone through the brush and airbrush and we have our miniature almost finished, we can introduce the glazes to brush for those little final touches.

And as there is no other way to learn but practice, I recommend you take the brushes and start with the tutorial.



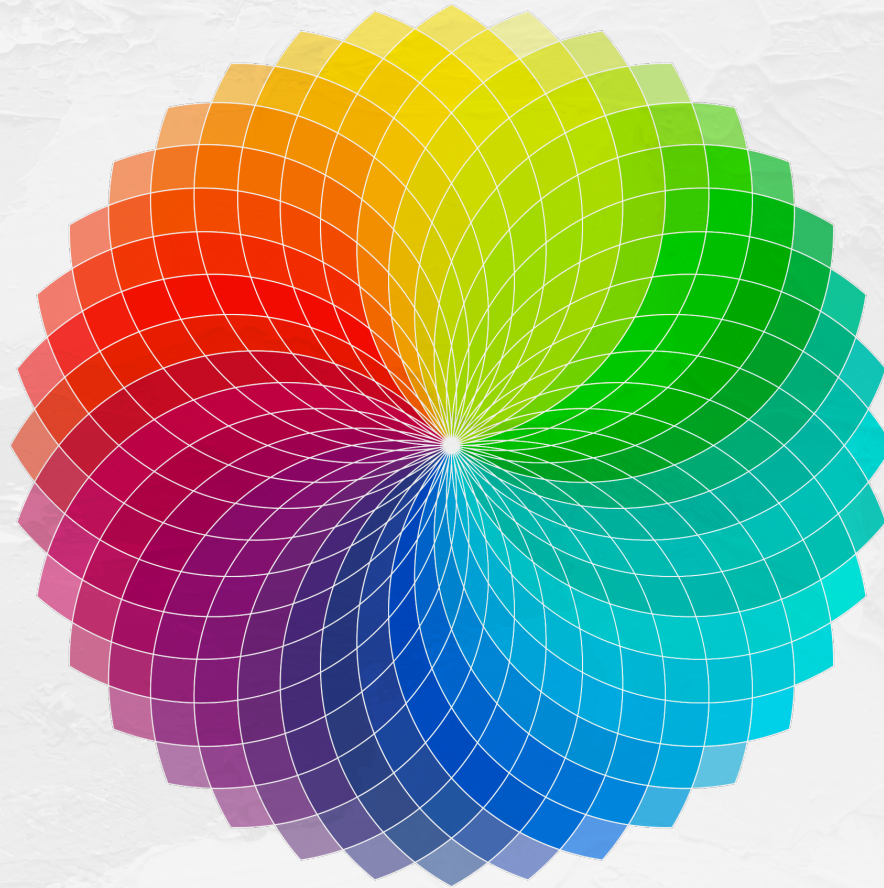




# 05 COLOR THEORY

## COLOR CIRCLE

We are going to simplify the theory of color so that you have a clear and concise idea of how we can apply it to our miniatures. I promise you that it will not be a convoluted and meaningless explanation, but just the opposite; simple and effective.

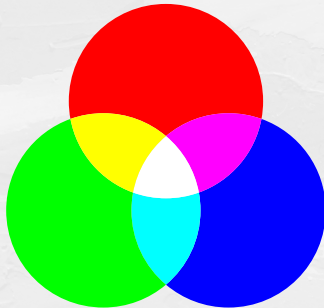




# 05 COLOR THEORY

Color is generated by the decomposition of white light (composed of red, green and blue) coming from the sun, a spotlight or an artificial light source. To make it easier to understand, Isaac Newton realized this phenomenon when he passed a ray of light (white) through a glass prism and the rainbow was detached.

In this way, we can understand that white light is composed of the primary colors; blue, green and red. If we understand that these colors depend on the sensitivity of the human eye to light, it is called additive color circle RGB (Red, Green, Blue).



If this depends on the pigments used (such as a printing ink cartridge) it is known as CMYK (Cyan, Magenta, Yellow, Black) but in this case variations come into play according to the type of pigment, dye, quality ...

The secondary colors are the union of two primary colors. Depending on the quantity of both colors used to make the mixture we can obtain up to 12 new colors. Based on the perception we have of color (HSB model), we can say that any color has three fundamental characteristics:

- **(Hue)Tone:** color reflected or transmitted through an object. It is measured in degree (from 0° to 360°) and we usually identify it by the name of the color; red, orange, yellow...
- **Saturation or chromaticity;** this is the strength of the color and is represented by the amount of gray that exists in proportion to the hue. It is therefore measured between 0 (gray) and 100 (full saturation). In any chromatic wheel we will see that the saturation increases as we approach the outer edge and decreases in the interior.
- **Brightness;** this is the lightness or darkness of the color. It is measured between 0 (black) and 100 (white)

All colors (whatever they may be) can be denominated as active or passive. Passive colors give us the sensation of advancing in front of passive colors. And of course, these passive colors seem to move backwards when they have active colors nearby.

- A color that advances (is active) has less visual weight than those that retreat (passive).
- Warm, saturated, and more luminous tones are active and therefore appear to be visually advancing.
- Cold tones, with low saturation or a darker value are passive because they are visually receding.
- Low saturation tones or shades appear lighter than more saturated tones or colors.
- There are also neutral or indifferent colors that do not feel visually forward or backward.



**SATURATED**



**BRIGHTNESS**



**COLD**



**WARMTH**





# 05 COLOR THEORY

Each color, in arts, is given a specific meaning; this will vary depending on the intensity, its tendency towards black and white, and, towards another color.

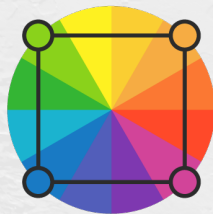
- White; it means innocence and purity. It creates a feeling of relaxation, release from stress.
- Black; means elegance, nobility, sophistication or mystery. It is a color that provokes strong emotions and represents the total absence of light.
- Grey; it represents neutrality (for being in the middle of black and white), besides transmitting elegance and luxury. If we use it in excess, we can generate sadness or melancholy.
- Yellow; means intelligence and creativity. Used to create luminosity and return to any warm color or recreate attention.
- Red; one of the most intense or exciting colors.

Often used to draw attention to something, but should be used without being abusive, as it can be visually tiring.

- Orange; it acts as a stimulant of shy and sad colors because of the strength, expressiveness and dynamism it creates when used in a small quantity. If we overdo it, it can give the opposite effect; boldness and aggressiveness.
  - Blue; it is the cold color par excellence. Associated with intelligence and deep emotions and even strength. If we put any color together with blue, it will automatically become cold.
  - Violet; represents mystery, reflection or elegance.
  - Green; it represents nature par excellence and therefore encourages balance.
  - Brown; represents the autumn season or the color of the earth. It gives us the impression of balance, comfort and masculinity.
- Therefore, we can say that the theory of color can be summarized as follows;

- Primary colors; Primary colors are those that cannot be obtained from any mixture between colors, that's why they are considered unique and absolute.
- Secondary colors; those colors obtained from the mixture of two primaries.
- Tertiary colors; colors obtained with a mixture of a primary and a secondary.
- Analogous colors; colors placed very close together within the chromatic wheel.
- Complementary colors; colors placed in front of each other on a color wheel.

## COLORS COMBINATIONS



**SQUARE**



**COMPLEMENTARY**



**TRIAD**



**ANALOGOUS**



**TETRAHEDRON**





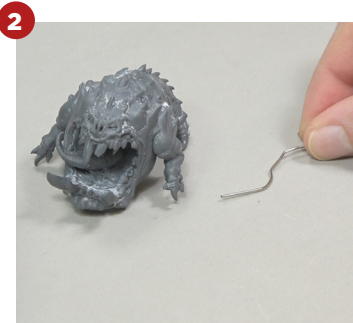
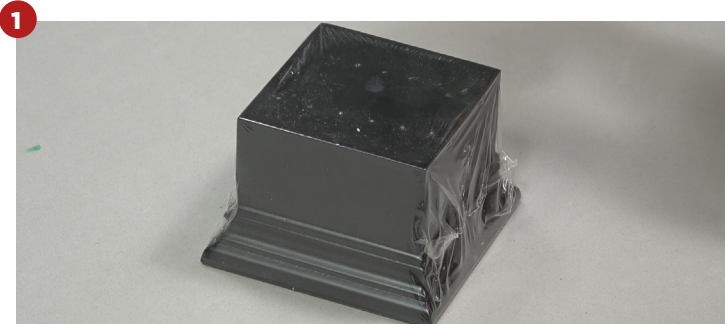
# 06 MANGLER SQUIGS

## BOLT

06/01

Let's create a jungle atmosphere for this stand.

The first thing we are going to do is to manually bolt the tick's leg to see how it would look on the land we are going to build later. Since my idea is to make it look like it's jumping, we're going to hide this bolt so that it doesn't look like it's a support but rather a branch that's jumping.



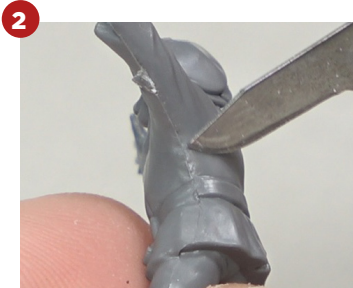


# 06 MANGLER SQUIGS

## MOLD LINE

06/02

The first step that I always recommend before starting with the painting is to prepare the miniatures. Once they are mounted, we have to look where the mold lines are and with a knife, remove them completely. I advise you to always follow the same direction with the blade to avoid imperfections or unwanted jumps that leave notches on the surface. Do not worry if you remove any detail with the blade as it will not be appreciated once it is primed. And in case you need to mark that element again, we can do it with the paint.



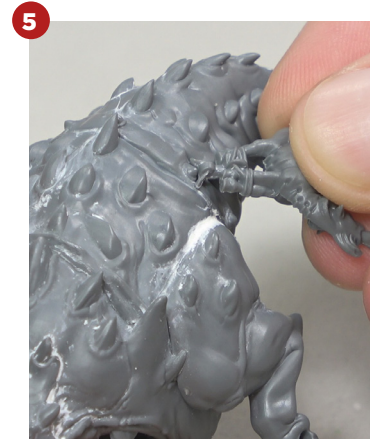




# 06 MANGLER SQUIGS

## PLASTIC PUTTY 06/03

When we join two different pieces, it is possible that there are small gaps between them. To prevent them from being seen, we are going to use this kind of putty and introduce it with the help of a lancet in those holes. You can dilute the excess putty with a brush with water or scraping directly the surface.





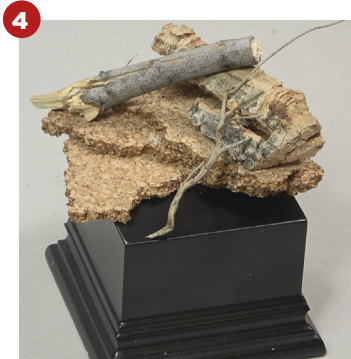
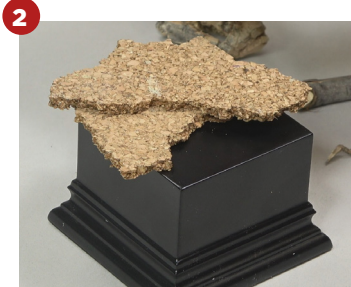


# 06 MANGLER SQUIGS

## GROUND

06/04

Before gluing all the elements that we want to introduce in the base, it is better to test them by placing them on top of each other without any glue. In my case, I want the penalty is at different heights and I will use the bark of a tree as a fallen tree. It is also advisable to place the miniatures on the ground to see how it will be. Here the best advice I can give you is to break the diagonals that are formed, always look for that there seems to be movement between the different miniatures and the own base.



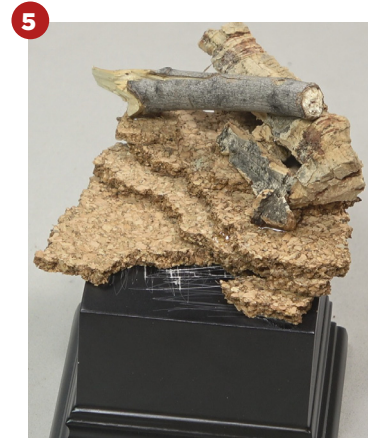
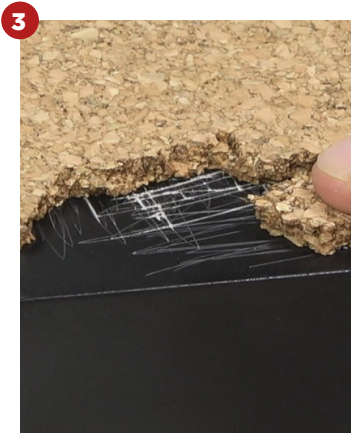


# 06 MANGLER SQUIGS

## GROUND

06/05

Now that we have the initial outline, we can paste it.





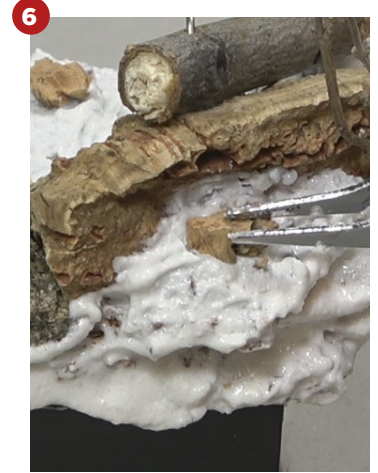
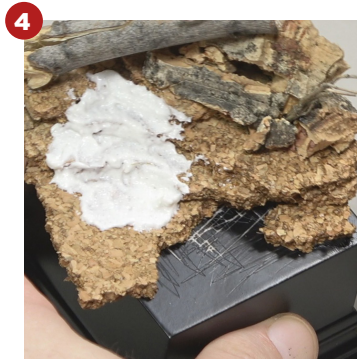
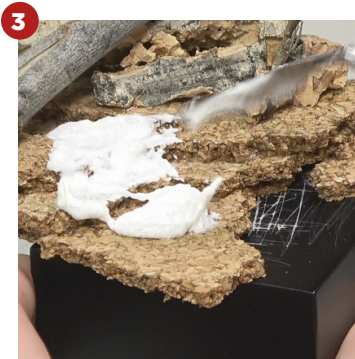


# 06 MANGLER SQUIGS

## GROUND

06/06

And then, with this paste for lands, we are going to unify all the surface. With the material still fresh, we can place elements on it, as it will serve as glue and prevent them from falling off the miniature. We will introduce the elements that we want always with a pair of tweezers to avoid both staining and that the elements are stuck on our fingers.







# 06 MANGLER SQUIGS

## GROUND

06/06

8



9



10



11



12



13



14



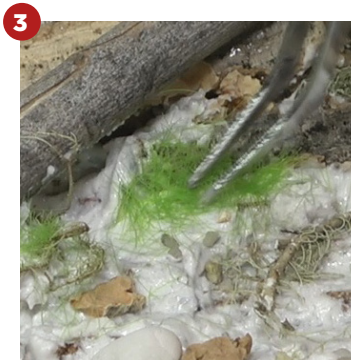


# 06 MANGLER SQUIGS

## GRASS

06/07

We have to vary the materials we want to introduce to give more dynamism to the scene; place leaves, branches, ferns and grass. In this last case, I recommend you to take a handful with the pints and hit the surface to stick directly. In some areas, we can drop it and crush it on the surface so that there is more concentration of grass. Now that we have placed all the elements of the ground, we place the miniatures again to see how all the elements would be joined.



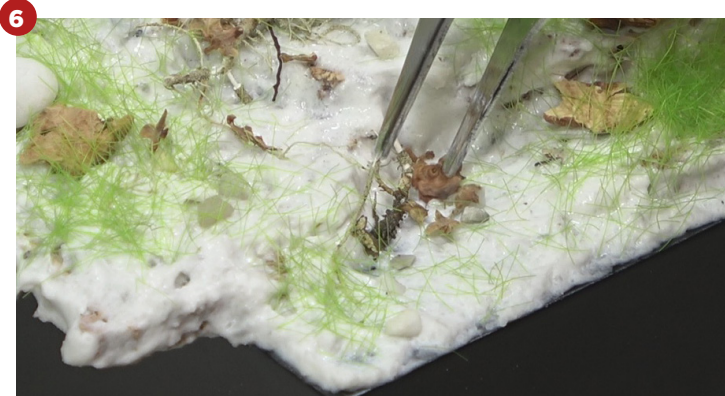




# 06 MANGLER SQUIGS

## GRASS

06/07



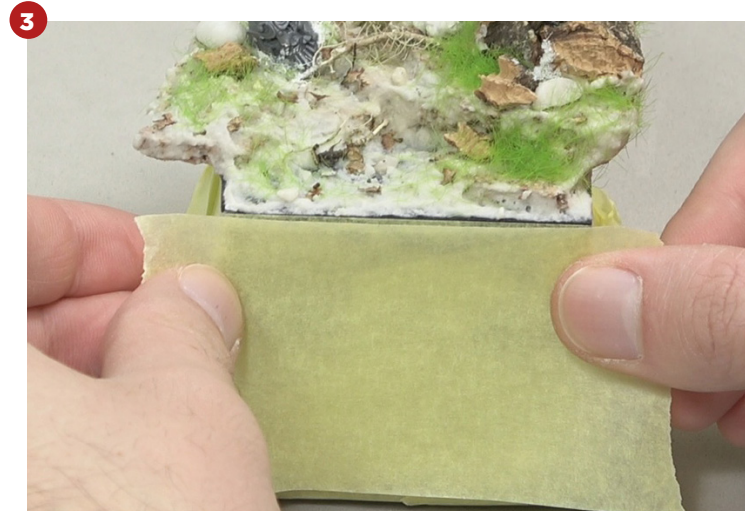




# 06 MANGLER SQUIGS

## MASKING TAPE — 06/08

Always, before going to paint, I recommend you to use masking tape and place it around the wooden block. To prevent the lacquered paint from lifting, you can stick previously the lines that you are going to use on any other surface (clothes or a table) to remove excess glue and prevent that when removed can lift the paint.



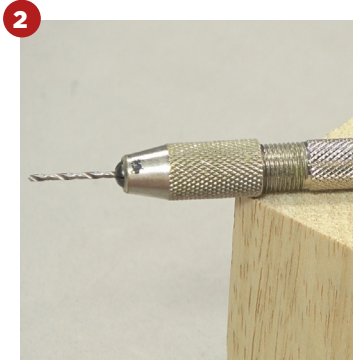


# 06 MANGLER SQUIGS

## MINIATURES

06/09

Normally, I use Blutack to glue the miniatures to the cue on which I'm going to paint them but in the case of this Squig, I need to make a manual drill on the surface and with a drop of glue, introduce it to avoid it to move.





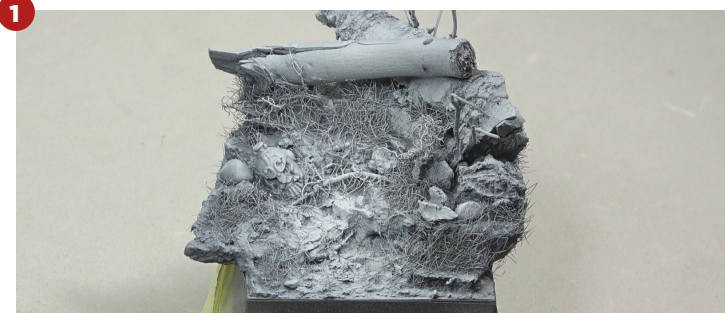


# 06 MANGLER SQUIGS

## PRIMER

06/10

Now that all the elements are ready, we can make the double primer in black and white. In this way, we will have an initial outline of where we will place the light and also, it will help us that very intense or very clear colors, can hold to the surface without changing its tone or desaturation. I hope you liked and that you have your thumbnails ready to start painting. See you in the next tutorial!







# 08 GALLERY





# 08 GALLERY





# 08 GALLERY







# 08 GALLERY





# 08 GALLERY







Sergio  
CALVO  
miniatures

# MANGLER SQUIGS

## VOL I



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