

Botanical illustration techniques

Aysegul Gurdal Pamuklu*, Department of Visual Communication Design Gölköy, Faculty of Fine Arts, Abant İzzet Baysal University, 14280, Bolu, Turkey.

Arzu Dursin, Department of Visual Communication Design Gölköy, Faculty of Fine Arts, Abant İzzet Baysal University, 14280, Bolu, Turkey.

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Abstract

In this study, basic techniques which are used in botanical illustration are examined. Undoubtedly the most basic and accessible technique for the illustration artists is pencil and ink. Artists who have been drawing for years have used this technique with the decorations on the books and although technological developments present us unlimited opportunities today, basic illustration techniques; pencil, ink and watercolour technique has kept its place. It is necessary for this basic illustration technique to contain main features such as line, tone, colour, texture, shape, size. Just as all the artists who are dealing with illustration, artists-scientists who are dealing with botanic have also benefited from these techniques. as a result, no matter if it serves for art or for science, these techniques have always had an important place in creation of visual data for the development of humanity.

Keywords: Botanical Illustration, botanical illustration techniques, watercolour techniques, charcoal drawing technique, ink technique, gouache painting technique, ekolin.

* ADDRESS FOR CORRESPONDENCE: **Aysegul Gurdal Pamuklu**, Department of Visual Communication Design Gölköy, Faculty of Fine Arts, Abant İzzet Baysal University, 14280, Bolu, Turkey. E-mail address: aysgurdal@gmail.com /
Tel.: +0-505-723-3898

1. Introduction

The most basic and accessible technic for illustration artists is undoubtedly pencil and ink. The artists who have been drawing for centuries have used this technique while writing books and decorating them. Over the years, although the technological advances offer us unlimited opportunities nowadays, basic illustration technics; pencil, ink and watercolour technique, have kept their place. It is necessary for this basic illustration technique to contain main facts such as line, tone, colour, texture, form and size within itself (Gurdal Pamuklu, 2014).

2. Pencil (Charcoal) Technique

Illustration can also be made with soft or hard pencil varieties. The most important thing here is fiction formed at the composition and the power of the design's narrative (Tepecik, 2002).

Pencil, which is used both as a basic technique and sketch of another study technique, is made of graphite. It is classified as "H" and "B" according to the hardness or softness series. The "H" series are hard-tipped, the "B" series are soft-tipped pencils (Gurdal Pamuklu, 2014).

It is the oldest, the cheapest and the most common technique ever known. The tip of the pencil can be sharpened with a craft knife or a pencil sharpener as it becomes blunt. Apart from that, it doesn't require any preparation for its use. Eraser and sharpener are indispensable helpers of the pencil. In the first phase of basic design and art education, pencil studies can be see frequently. It is possible to obtain real-like tonal gradations with pencil by using short and numerous thin lines. After all, all kinds of drawing studies from sketches to detailed, realistic drawings can be made with pencil technique. Most artists and designers benefits from pencil for their first sketches they made in order to visualize a creative idea. Likewise, illustrators also use pencils and varieties at their sketches before they start working. Dry colour pencils can also be used as pencil technique. In this technique, the pencil is used from the lightest tone to the darkest tone until the desired temperature is reached (Becer, 2011). From past to present all the artists have made illustrations with this technique and they used this technique as sketches for their works.

3. Lavi-Ink Technology

It is obtained by diluting india ink. In this technique, light, dark and grey values of the ink is used. As one colour toning is made while painting, interesting results can be obtained (Tepecik, 2002).

As a tool, besides using a brush for field painting, also tools such as rapidograph and hatching tipped pen can be used in order to provide linear textures in illustration. Hatching tip is a keen piece of metal which is attached to a special pen. Hatching tip which is used by dipping into ink can also be used easily with aniline, india ink, thinned gouache paint and special rapidograph pen ink. Illustrators have generally used this technique and its tools for detailed works, caricatures and comics. In the works made by using hatching tip, in order to obtain different tone values, vertical, cross or horizontal hatching techniques are used. In the works made with these techniques, the more the lines thicken and get closer to each other, the darker the tones taking place at the work become. Rapidograph pens are produced in different needle thickness starting from 0.1 mm up to 2.00 mm. These pens can be used with special inks in different colours. Each pen has a fixed line thickness. During the drawing, the rapidograph pen which is held in an upright position to the surface isn't used for sketches as it isn't suitable for motion drawing. However, it is possible to achieve good results at the illustration studies made using rapidograph pen by plotting (Becer, 2011). This technique which is also commonly used at botanical illustration is very effective in giving the technical details of plants.

Ton variety at ink technique can generally be obtained by using pen strokes closely or loosely and by hatching at various angles. Therefore, it is appropriate to work on a soft paper which won't be torn

or dissolve the ink irregularly. Except the ink pens, if the work will be done only by ink, colour thinning is made with water (Civardi, 2013).

4. Watercolour Technique

One of the widely used and the most preferred techniques at illustration is watercolour technique. All kinds of illustrations can be made by watercolour technique. This technique is used at introductory booklets, magazines, cultural books and many more publications group studies. Working with quality watercolour paint provides better results in colour separation and printing stage (Tepecik, 2002).

Watercolour paint includes colour pigments and gum (gum arabic) and as the name suggests it is a water-based paint. It can be used transparent or opaque. The most prominent feature of watercolour technique is its transparent and vivid colours. Although it isn't necessary to have many materials to paint in watercolour technique, it is important for the materials to be in quality to reveal the characteristics of the technique. Watercolour paints are sold in a tube or in a jar and as liquid or little solid tablets. These aniline colours which are intense can be lightened by adding water.

Watercolour painting is a technique which expects exacting and detail. First the paper is wetted or moistened by sponge and stretched, after waiting a little while drawing starts. If the materials aren't well chosen, it may give poor results. If the paper is thin, there will be undulation, if the colour is used intensively, it will accumulate, if wrong brush is chosen, it is not possible to dilate or there occurs undulation. A good watercolour paper is cotton based and absorbent. Glossy surfaced paper shows the brush traces and it causes unwanted stains. The more paper grain increases, the easy the colour transition becomes (Becer, 2011).

One of the earliest known painting techniques, watercolour usage dates back to ancient Egypt. The paints which were used at that time were diluted with water. In the medieval period, watercolour technique was used in the religious pictures and handwritten manuscripts. In the 15th Century Europe, palace artists such as Durer and Brugel benefited from this technique. Artists such as John Everett Millais who was in great demand in Victorian Era made watercolour works of their oil paintings and found favour among the public. Artists such as Van Dyck, Gainsborough, and Constable made their sketch works of the oil paintings with watercolour paint. In France, impressionists such as Gericault, Delacroix and Decamp benefited from this technique –as it is favourable for capturing temporary moments-. Later, impressionists such as Cezanne, Seurat and Signac worked with this technique. Kandinsky and Klee, who are abstract painters, benefited from the feature of watercolour paint's creating random stains. In Ottoman Period, this technique was used for book illustration. Huseyin Zekai Pasha, Osman Hamdi Bey, Hoca Ali Rıza and Malik Aksel of the Tanzimat Era were the artists who created works by using watercolour technique (Gurdal-Pamuklu, 2014; MEGEP, 2007).

Maria Sibylla Merian is a scientist lived in 17th century who used this technique in botanical illusion (1647-1717). Merian also used this technique by mixing it with the ink technique (Etheridge, 2010).

Watercolour is the most commonly used colour technique in botanical illusion. Having effective colour gradation, colour variety, ease of use and convenience of obtaining by everyone are advantageous parts of this technique.

5. Gouache Technique

Gouache paint is also thinned with water such as watercolour. However, in order to obtain a homogeneous colour and in order to prepare the paint at a consistency not to reveal brush trace, the water is added as drops. While the water is added as drops, it is constantly mixed with paint (MEGEP, 2007). The most important feature of gouache paint is that, it is a kind of paint which is prepared by adding water and resin based adhesive and which has transparent and opaque features. It is a material

suitable for all kinds of painting technique. Gouache paint especially gives good results at concealing surfaces. Besides, it is possible to work on the mistakes again. It is also possible to use this paint with airbrush as well as with scraper and brush. Gouache paint is sold in glass jars and tubes. Talens, Guitar and Pelikan are among the most preferred brands by artists (Tepecik, 2002).

Compared to watercolour paint, gouache paints which contain adhesive material can be used onto surfaces such as glass, paper, carton, cloth and plastic by using scraper, pistol, brush or sponge. Due to its feature of providing a smooth effect on the surface and its concealing feature, it is widely used at the field of graphic design. Besides, it is more practical than oil as it dries quicker and it is water-based (Gurdal Pamuklu, 2014).

At the gouache paint sets, there are generally the colours of ivory black, permanent white, spectrum violet, lemon yellow, spectrum yellow, spectrum red, alizarin crimson, ultramarine, sky blue and brilliant green (Becer, 2011).

6. Ecoline Technique

It is a liquid paint ready to use. As it isn't pigment based (except three colours), the colours are highly transparent. Thus, while making colouring applications after the works, the contour lines aren't covered. (Whereas it is covered while using gouache paint). It has got vivid and bright colours. It doesn't form a bright surface after drying. These paints, which can be thinned with water, can also be mixed with each other in order to get different colours. Although ecoline paints are a little bit expensive, they can be used for a long time. Due to its brightening and lightening features, it is preferred at botanical illustration

7. Mixed Techniques

In some works, different techniques can be used all together. When used consciously, mixed technique can provide strong effects.

Mixed techniques can create different and strong effects by using different techniques such as;

- Watercolour and pencil work,
- Ink drawing with gouache,
- Dry paint with charcoal and ink drawings,
- Gouache, ink drawings, and so on (MEGEP, 2007).

For example, see Fig. 1.

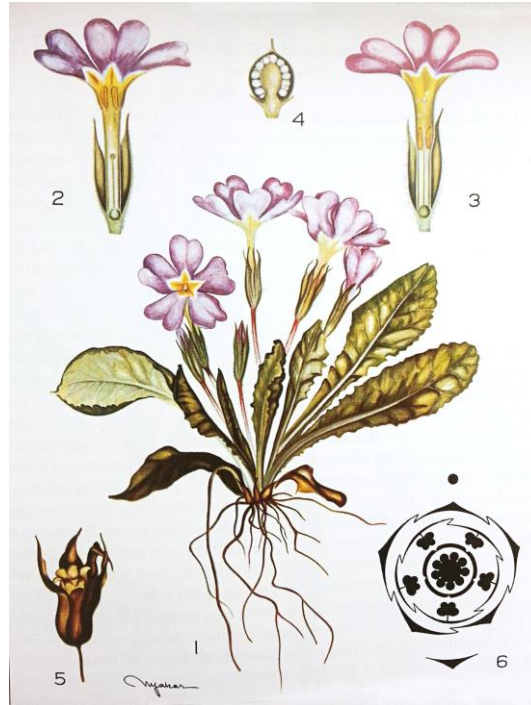


Figure 1. Nebahat Yakar, Cuhacicegi
Nebahat Yakar, Renkli Türkiye Bitkileri Atlası, s.89

8. Result

Text below continues as normal. The techniques here may include artistic terms, but here, at these works, we see that art can contribute in science as a tool. This contribution in botanical illustration is evident. Because of the fact that scientific aspects are at the forefront, technical usage is selected according to practicality, being able to give details, colours closest to reality and being able to describe the characteristics

References

- Becer, E. (2011). *İletişim ve Grafik Tasarım*. Ankara: Dost Yayınevi.
- Civardi, G. (2013). *Cicekler, Meyveler ve Sebzeler*. C. Ozturk (Cev.). İstanbul: Koleksiyon Yayınları.
- Gurdal-Pamuklu, A. (2014). *Sanatsal & Bilimsel İllustrasyonun Lisans Eğitimindeki Yeri ve Biyoloji Bölümü Öğrencilerinin Botanik İllustrasyon Alanındaki Görüşleri*. Yayınlanmamış Yüksek Lisans Tezi. Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Eskişehir
- Etheridge, K. (2010). Maria Sibylla Merian and The Metamorphosis of Natural History. *Endeavour*, 35(1)1, 16-22
- Tepecik, A. (2002). *Grafik Sanatlar*, Ankara: Detay Yayıncılık ve Sistem Ofset
- MEGEP (Meslekî Eğitim ve Öğretim Sisteminin Güçlendirilmesi Projesi), *Grafik ve Fotograf: Sulu Boya Tekniği*. Ankara 2007
- Yakar, N. (2004). *Renkli Türkiye Bitkileri Atlası*. (89), (2. bs). O. Kucuker (Eds). İstanbul: Buke Kitapları.