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Techniques in Biological Illustration

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Poster Presentation 17

TECHNIQUES IN BIOLOGICAL ILLUSTRATION

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From the very first cave paintings of the Paleolithic Era humankind has sought to express with images the knowledge of prey items, hunting techniques, medicinal plants, and life experiences. This tradition of visual illustration became a natural complement to advances in sciences and during the Renaissance and the Enlightenment periods significant developments in the printing process improved the application of illustration to manuscripts of scientific advancements. In modern times, as an art and a science, Scientific Illustration continues to play a fundamental role in translating complex verbal descriptions into a condensed more cognizant form that is also attractive to the reader.

Scientific Illustration is a mode of communicating information and thus it is critical that the technique for each representation most accurately portrays the biological subject. The diversity of techniques possible for scientific illustrations provides unique and specialized results, however, for the most accurate rendering of a subject, the limitations and capabilities of different techniques must be understood. Issues to consider when preparing an illustration include size, the printing process to be used for publication, and the limitations of the media.

Several of the techniques to be presented are watercolor, pen and ink, gouache, scratchboard, and continuous wash. Pen and ink is the most widely used medium. With the myriad of strokes possible by the pen, the line becomes the essential component of creating textures from smooth wet surfaces to rough bristled fur. Similarly, the possibilities are endless when coupled with wet or dry techniques or the addition of rubbing alcohol or salt granules. These techniques enhance the illustrator's primary goal which is to render natural subjects in the most realistic and accurate representation possible.