

HONEY BEES

Honeybee -Any of several social bees of the genus *Apis* that produce honey; especially *A mellifera* widely domesticated as a source of honey and beeswax.

Honey bees are the only insects that make food. One queen, a few drones and many worker bees make up colonies of as many as 50,000.

WATERCOLOR HISTORY

Watercolor painting, as we know it today, was first raised, full-fledged in Durer's landscapes. In the seventeenth century, Dutch landscapes and French architectural sketches were executed in watercolor. The art gradually became associated with amateur painters and was opposed by the Royal Academy in England until circa 1800.

The first exhibition of the Society of Painters in Watercolor was held in 1805. Anyone daring to smuggle opaque white into his watercolor paintings was expelled from the society.

Because of its love of moisture, honey absorbs water from the atmosphere. Colors made with honey do not dry up in the tube or on the palette and always dilute easily, often after months or years of disuse.

Nectar collected by bees placed in honeycombs. The bees flap their wings to dry the nectar and start turning it into honey. So much work is involved in processing the nectar, which is 90% water, that a bee in her entire life of from three to six weeks, can hardly make more than a teaspoon of honey.

Watercolors were known to the ancient Egyptians, who illustrated their famous Book of the Dead with them and also used them to decorate wooden sarcophagi.

PROFESSIONAL QUALITY

The use of pure honey will, because of its fluidity compared to the corn syrup commonly found in other watercolors, reduce the amount of water and glycerine needed to make watercolor. This, in turn, increases the amount of pigment that can be introduced. The result is a stronger color reminiscent of the time when artists in France, Italy and Germany made their own color.

Honey has been used from antiquity to preserve the moistness of watercolors. First used in Europe by French colormen, English manufacturers copied its use but rapidly switched to industrial sugars for economic reasons.

North Dakota is the largest honey producing state but Utah is known as the beehive state.

The combined flight of thousands of bees add up to seven million miles or 300 times around the earth to produce a pound of honey. Bees often travel more than three miles in search of flowers.

Nectar from different flowers makes different colors and flavors of honey.


Even, fluid, free-flowing washes are easily created and controlled with honey base colors. Honey is easily diluted in water resulting in the pigment being quickly taken up and deposited in a uniform fashion on the surface of the paper.

The earliest watercolor drawings produced in America were created for factual documentation of "New Worlds" plants and wildlife.

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Watercolors



Made With HONEY



Artists' Quality


Traditional handcrafted watercolor created with pure, natural Northwest honey.

As an essential ingredient in our binding medium, honey contributes to moistness for smooth, easily controlled applications, increased pigment concentrations and freedom from reliance on preservatives.

Because of its love of moisture, honey absorbs water from the atmosphere. Colors made with honey are prevented from hardening on the palette or in the tube and dilute easily, often after months of disuse.

High pigment loads combined with balanced formulations provide artists with a complete range of choice from delicate tints to dark, concentrated color.

Honey has a history of usage dating back to a time when artists' were almost entirely dependent upon the materials provided by the natural world and to this day continues to offer many advantages to the modern watercolorist.

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PIGMENT LIST

The term watercolor is generally understood to mean a water-soluble paint system containing pigments that are relatively transparent when applied.

True watercolor technique is more like applying a stain instead of a layer of paint.

Pigments and an aqueous solution of gum are combined in proportions needed to permit the paint to be greatly diluted and still adhere to a paper which is specially designed to absorb and hold the pigment.

A honey bee lands on from 50 to 100 flowers during one trip.

Honey is the only sugar compound available not manufactured by man and is the oldest sweet known to mankind. If properly stored, honey will not spoil. Pots of honey found in ancient Egyptian tombs were as wholesome as fresh honey. Used for millennia as a medicine, honey contains an antimicrobial agent that acts like penicillin and other antibiotics. Honey is a natural preservative for watercolors.

Every drop of honey is a treasure containing over 25 different sugars. Some occur in nectar but others are formed by the bees during ripening.

While 95% of honeys' components have been recognized as natural acids, minerals, enzymes, vitamins and proteins, the other 5% remain unknown, untraceable and mysterious.

Watercolors dry by evaporation involving no chemical reaction to alter the nature of the color. Watercolors may be remoistened with no ill effects.

Description	Composition	LF	ST/SD	Trans/Opaq
Alizarin Crimson	1:2 Dihydroxyanthraquinone on Alumina Base (PR 83)	III	ST	T
Azo Yellow (Aureolin)	Benzimidazolone Yellow (PY 151)	I	ST	ST
Burnt Sienna	Calcined Natural Iron Oxide (PBr 7)	I	SD	ST
Burnt Umber	Calcined Natural Iron Oxide containing Manganese (PBr 7)	I	SD	SO
Cadmium Orange	Cadmium Seleno-Sulfide (PO 20)	I	SD	O
Cadmium Red	Cadmium Seleno-Sulfide (PR 108)	I	SD	O
Cadmium Red Light	Cadmium Seleno-Sulfide (PR 108)	I	SD	O
Cadmium Yellow	Cadmium Zinc Sulfide (PY 35)	I	SD	O
Cadmium Yellow Light	Cadmium Zinc Sulfide (PY 35)	I	SD	O
Cerulean Blue	Oxides of Cobalt and Chromium (PB 36)	I	SD	O
Chinese White	Titanium Dioxide & Zinc Oxide (PW 6) (PW 4)	I	SD	O
Cobalt Blue	Oxides of Cobalt and Aluminium (PB 28)	I	SD	ST
Dioxazine Purple	Carbazole Dioxazine (PV 37)	II	ST	T
Gamboge	Benzimidazolone Yellow (PY 151) & Benzimidazolone Orange (PO 62)	I	ST	T
Hooker's Green	Chlorinated Copper Phthalocyanine & Isoindolinone Yellow (PG 7) (PY 110)	I	ST	T
Ivory Black	Amorphous Carbon/Charred Animal Bone (PBk 9)	I	SD	O
Lamp Black	Nearly Pure Amorphous Carbon (PBk 6)	I	SD	SO
Naphthol Red	Naphthol AS-D (PR 112)	II	ST	SO
Neutral Tint	Quinacridone Violet & Chlorinated Copper Phthalocyanine (PV 19) (PG 7)	I	ST	T
Payne's Gray	Amorphous Carbon & Silicates of Sodium/Aluminum with Sulphur (PBk6) (PB 29)	I	SD	SO
Permanent Green Light	Chlorinated Copper Phthalocyanine & Benzimidazolone Yellow (PG 7) (PY 151)	I	ST	SO
Phthalocyanine Blue	Copper Phthalocyanine (PB 15:3)	I	ST	T
Phthalocyanine Green	Chlorinated Copper Phthalocyanine (PG 7)	I	ST	T
Prussian Blue	Ferriammonium Ferrocyanide (PB 27)	I*	SD	T
Quinacridone Red	Quinacridone Red (PR 209)	I	ST	T
Quinacridone Rose	Quinacridone Violet (PV 19)	I	ST	T
Quinacridone Violet	Quinacridone Violet (PV 19)	I	ST	T
Raw Sienna	Natural Iron Oxide (PBr 7)	I	SD	ST
Raw Umber	Natural Iron Oxide containing Manganese (PBr 7)	I	SD	SO
Sap Green	Chlorinated Copper Phthalocyanine & Isoindolinone Yellow (PG 7) (PY 110)	I	ST	T
Sepia	Calcined Natural Iron Oxide & Nearly Pure Amorphous Carbon (PBr 7) (PBk 6)	I	SD	T
Ultramarine Blue	Complex Silicate of Sodium & Aluminum with Sulfur (PB 29)	I	SD	T
Ultramarine Violet	Complex Silicate of Sodium & Aluminum with Sulfur (PB 29) (PV 15)	I	SD	T
Viridian	Hydrous Chromium Sesquioxide (PG 18)	I	SD	T
Yellow Ochre	Natural Hydrated Iron Oxide (PY 43)	I	SD	O

LF = Light Fastness Key: I Excellent II Very Good III Acceptable (Pale tints may fade in direct sunlight)

ST = Staining SD = Sedimentary

T = Transparent ST = Semi Transparent SO = Semi Opaque O = Opaque

All colors conform to ASTM D4236 health labeling standard.

Cadmium colors are not intended for airbrush application.

All M. Graham & Co. products are certified by an independent, board certified, toxicologist for conformity to ASTM D4236 under LHAMA in a manner consistent with consumer Product Safety Commission Guidelines. For health and safety information please refer to our Material Safety Data Sheets. You may obtain a copy of our Material Safety Data Sheet by telephone, fax, email or at www.mgraham.com.

UN-BEE-LIEVABLE M. Graham & Co. Watercolors are made with Pure Northwest HONEY

Every Artist Deserves The Finest Color That Can Be Created.