What's on Your Palette - Demo Notes

Trust Your Own Eyes and Heart

Don't ask

"Could you please list the colors and brands on your palette?"

Instead, build your own personal palette
- What colors are in your house, your wardrobe, the scenes that you respond to
- there is no "right" or "best" collection of colors. There's only: this seems to be working reasonably well for me right now, on these projects and themes I'm exploring at the moment
- give yourself permission to trust your own feelings about color

there is NO SUBSTITUTE for working directly with colors, seeing how they feel in your work, in your lighting, through your eyes and heart

So you just need a starting point—and it almost doesn't matter what you start with.

I'm going to discuss color palettes first—choices of pigments
THEN I'll talk about physical palettes—what to put them on/in

So there is also no "wrong" palette of colors. Try to find a decent approximation, and then make adjustments as you go. You can't steer down the road by holding the wheel rigidly in one position—that's a recipe for a crash. And there are many roads to travel. So relax. Whatever you have is where you start. If you don't know yet whether you like the colors you have, that's fine and normal. I'm here to give you some ideas of things you might like to explore, and maybe some signposts to help you if there's something specific you're looking for, that's all.

Student vs. Pro

- student or "academy" paint is cheaper because it has less pigment load—you need more to get the same strength; you use it up faster, so it's not cheaper in the long run
- BUT — that could be fine
  - not sure you will like watercolor
  - experimenting and feel like you'll be freer with cheaper paint
- BUT ALSO—it can be frustrating

- if you wind up having to replenish too often
- you can't seem to mix stronger colors

So, I usually recommend professional quality paints and a limited palette over a full palette of student-grade colors.

if you happen have student-grade paints right now, PLEASE don't think, "Oh, crap! I did it wrong! I need to buy all new paints!"

Just know that if you DO have problems with not getting strong enough color with student paint, it's not YOU, and you can just add a few professional grade paints for the colors that seem too wishy-washy.

Tube vs. Pan (vs. Liquid)

All come in student and professional quality paints (often the very same formulation). Liquid watercolors come in dye-based (not lightfast) and pigment-based (more lightfast)

Pan colors are generally preferred for travel and sketching.

Can be a little harder to find in individual half- or full-pans (rather than sets). Some to try that can usually be bought individually: Winsor & Newton (Cotman is their student grade), Yarka St. Petersburg, Holbein, Schminke (my personal preference).

Note: There is, unfortunately, sometimes a slight difference in the size of the plastic "wells" (half-pans or full-pans). A half-pan from one manufacturer may not fit in a travel palette made by another manufacturer, so you may want to decide on a brand of pan colors first, and THEN choose a palette.

Tube colors are often more convenient for larger work.

It's easier to put them on a palette with big wells to load bigger brushes. It's also easier to use them to mix larger quantities of strongly-colored washes.

Liquid watercolors (Dr. Ph. Martins is the leading brand)
- dyes (solutions) (Radiant line) or pigments (Hydrus line) that can be ground very fine
- dye-based ones are very intense (but not lightfast)
- pigment-based ones are a rather expensive way to buy color, but may be great if you want to work with dip pens, use an airbrush or get wild wet-in-wet effects
- high transparency
- often "explode" on the page ((because of the addition of a lot of dispersant/surfactant and very fine pigment particles)
- big fun factor; maybe not the best bargain for doing larger work or big projects

Choosing A Collection of Pigments (Your Color Palette)

Consider Choosing a Limited Palette as a "Base Palette"

- 3-8 colors that you know very well and use most often
- allows you to easily pare down for travel
- helps you achieve color harmony within and among paintings
- you will quickly be able to mix colors "by eye" because you'll know your pigments thoroughly
- allows you to swap out the remaining "fun" or "spice" colors to shake things up or accommodate different seasons, regions, subjects, etc. without getting overwhelmed

Exploring Possibilities for a Limited/Base Color Palette - A Tool to Try

[Rainbow Rose Window - Project 3, Watercolor Jumpstart](#)

Some Options for Limited/Base Color Palettes

Primary Palette (one red, one yellow, one blue)
examples:
1. quinacridone rose, azo yellow, cobalt blue (all M. Graham)
2. quin magenta (QoR), azo yellow (M. Graham), phthalo blue (M. Graham)
3. aureolin, burnt sienna, ultramarine blue (all Schminke)

"Sorta" Primary Palette (one sorta red, one sorta blue, one sorta yellow)
examples:
1. quinacridone magenta(QoR), gamboge (Graham), cobalt turquoise (Holbein)
2. quinacridone magenta (QoR), quinacridone gold (QoR), phthalo turquoise (QoR)

Split-Primary Palettes

warm and cool red, warm and cool yellow, warm and cool blue

common question: how do I know if a color is a "warm" or "cool"?

Better way to think of it: You want a blue that plays nice with yellow, and a blue that plays nice with red, etc

example: quinacridone magenta and pyrrole red, gamboge and hansa yellow, ultramarine blue and phthalo blue

:
- you can more easily mix clear, bright secondaries
- you can also "cross-mix" to easily get toned down, semi-neutrals secondaries and neutrals
- can be harder to achieve color harmony (too much bright, pure color without clearly dominant colors)

common outcome—you wind up dropping one of the colors and triple up on another or add a favorite secondary/tertiary, either because of subject or personal taste in colors, or because you can "mix a primary"

example: Graham gamboge + QoR quin magenta is a pretty good substitute for cadmium red medium or pyrrole red, so I don't bother with having either of those reds on my palette

example: quin rose, quin gold, azo yellow, phthalo turquoise, cobalt turquoise, ultramarine blue is my current "base six"

Primaries plus Secondaries

one red, one orange, one yellow, one green, one blue, one violet

Example: quin rose, transp pyrrole orange, azo yellow, permanent green light, cobalt blue, mineral violet

seems logical, but doesn't really seem to give better results than split primary; most who go this route just go right into a full color wheel of 12 primaries, secondaries, and tertiaries—now we're back to complicated palettes ...

if you want to geek out about this:

Stephen Quiller, Color Choices—for setting up a full color-wheel palette
handprint.com—for info on individual pigments (somewhat dated, but a lot of good info is still there)

Primary or Split-Primary, plus semi-neutrals (or neutrals) and brights

I think this is where most people wind up eventually, because there are certain bright colors that are just hard to mix, but also hard to quiet down so not great as your base primaries (e.g. Opera pink), and always mixing greys, especially dark greys, from primaries is not very convenient, so it helps to have some colors that are already partly there

examples:

1. quin rose, azo yellow, cobalt blue, plus ultramarine blue and burnt sienna
2. quin rose, pyrrole red, gamboge, hansa yellow, phthalo blue, ultramarine blue, plus burnt umber or burnt sienna, quin gold or raw sienna, plus cobalt turquoise and Opera pink

Adding new colors to your "base palette"

- one at a time!
- same pigment from diff manufacturers can be wildly different (eg cobalt turquoise or violet, azo yellow)
- try new color with ALL your other pigments (even the ones that seem like they would be a BAD combo—you may be surprised!)
- also try with your favorite mixtures from your base palette (e.g., if you often use greens mixed with one of your blues and yellows, try adding your new color to several of those mixed greens)

If you start with a small base, and add colors one at a time, you will never have problems with mixing color. You'll just KNOW what you can mix. (And you'll know what you can't mix and would need to buy a new pigment to get, too.)

Consider pigment characteristics, in addition to hue (the "color")

The colors in your palette need to interact well as hues, but also need to serve you well in terms of behavior.

Other characteristics to consider
- degree of staining—how much do you like to lift? (nonstaining is easier) or glaze? (staining is easier here)
- transparency—do you want everything as transparent as possible (better for glazing and a more "traditional" watercolor look), or do you like the interplay of some more-opaque colors to offset the transparency?
- sedimentation/granulation—does it work for the look you want, or is it a distraction? are you trying for ultra-smooth washes (granulation makes it hard)? or do you want some subtle suggestions of texture? (granulation works well)
- how "powerful" are the colors? similar "tinting strength" helps? stronger colors (quins, phthalos, e.g.), last longer, but can easily take over; mixtures are harder to balance
- do the colors in a mixture produce a good effect for the project when dry?—some colors "separate" as they dry, or one migrates farther than the other and gives a halo effect or graduated look; can be lovely and interesting, or an annoyance if you want smooth even color

- will you be adding other media you need to coordinate with? watercolor pencils, acrylics, inks, etc. (my current palette is a compromise palette that allows me to begin in watercolor and continue in acrylic while maintaining the "look" of watercolor and color unity)
- lighting where the work will hang? (orangy incandescent light will make blues appear a little duller and oranges more intense; cool indirect daylight will make blues appear more intense and oranges calmer) — can be a small effect, but worth considering sometimes

How do you decide? Manufacturers' labels and charts give some guidance, but mostly, you need to learn by experimentation, because responses to these things are so personal and so tied up with what YOU want to express in your work and how you want it to look.

Physical Palettes

Non-palette palettes:
- dishes with small wells for mixing liquid color
- plates (Corelle is cheap and easy to clean), butcher trays, burner covers (flatter, and cheaper, than butcher trays, more easily scratched)—put color up on the side and let it dry a bit, pull down and mix in the center; cover with Press N Seal or lay a piece of plexi or cardboard on top to keep out dust

Travel palettes:
- enamel tins (Whiskey Painter; very similar avail. from Schminke, Daniel Smith, others)
- plastic sets (e.g. Koi, da Vinci, Cotman)
- folding — look for a gasket seal (Alvin or Mijello 18-well has gasket plus lift-out extra mixing area)

Class/workshop
- gasket seal or small enough to lay flat in your bag (or both) (Cheap Joe's Workhorse Traditional Palette; same as Alvin 21-well Heavy-Duty Plastic Classic Platform palette has gasket, plus extra lift-out mixing tray)
- Possum Palette (colors in individual plastic cups; great if you like to rearrange colors a lot!)—I didn't have one to show, but search online and you'll be able to see pics.

Studio

any of the above, plus larger plastic palettes with bigger wells, porcelain palettes or "muffin tins" and custard cups for mixing larger quantities of washes

In addition to the color-wheel porcelain palette I showed in the video, there are also rectangular ones. (Honestly, I have the round one because it fits better on my taboret.)

Arranging colors:

Highly recommend a "color-wheel" or "rainbow" approach, perhaps with a separate area for neutrals, or put neutrals in corners. See Stephen Quiller's book *Color Choices* to go

in-depth on a full color-wheel arrangement. (And Quiller has round palettes designed for his system.)

If you only have a few colors, space them out and leave room to add colors in between, so you can still have a rainbow arrangement. If you have to move pigment to rearrange your colors, a "color shaper" tool is great. They are basically tiny little silicone spatulas, intended for painting with heavy-body acrylics. Flexible enough to get into the corners, smooth enough not to scratch your palette. The "flat chisel" shape seems to be the best shape for this task.

Miscellaneous questions:

Breaking up and remixing "crunchy" dried-out color: Use a glass stirring rod (search online) and warm water. Remember, gum arabic is what is used to make gummi bears—it takes a while to soften, so be patient!

Why are my colors so much brighter than yours? I get this question often on my postcard paint-alongs. My colors aren't brighter than yours! I just add water a few minutes before I start painting. I'm sure you've noticed that many watercolors dry darker and duller in the palette, but they brighten back up when you get them wet again. That, plus strong video lighting directly overhead, is why my colors seem bright on the videos. (Also possibly some people have monitors that are set to make colors appear more saturated—it seems to be a trend in some brands of monitors.)

What if you open a tube and a bunch of goop runs out, but no color? Some pigments settle out from from the gum arabic over time. If you have room in the paint well, keep squeezing until you have plenty of pigment in the well, and simply remix (that glass stirring rod works well here, too, or a plastic chopstick or popsicle stick or even a coffee stirrer, since the color is still soft). If the "goop" goes all over, you can also discard it, and simply add back some bottle gum arabic. Most of the paint manufacturers sell bottled gum arabic. Any brand is fine. (I don't recommend buying the powder. It's a nuisance to mix, and won't contain preservatives, so it doesn't have a long shelf life.)

What about stuck caps? Remember, the binder ("glue") in watercolor is the same thing as in gummi bears. It dissolves more easily in warm water. Simply drop the entire tube in a container of warm water to soak for a few minutes, and the cap will come off easily.

Can you mix different brands? Yes! Each manufacturer has their own preferences for paint consistency, additives and so on, but it's all watercolor and it all works fine together. I have at least 8 or 10 brands in my studio.

Can you use paint that has dried in the palette? Absolutely! That's the great thing about watercolor. If it's so dried out that it's all crumbly, use the instructions above to crush it up and remix it and it will be fine to use.

How full should you fill palette wells? At least enough so that you don't have to constantly stop to refill them during a painting session. (Of course, that depends on how large you are working and how strong you are mixing colors, so you'll have to learn that as you go.) Beyond that, it's a matter of taste. I like to have a lot of my "base colors" on my palette. I put out less color if I'm trying out a new color or I only use it occasionally.

If you like wet, tube-consistency color, you can place a wet sponge in the mixing area of your palette to keep the color from drying. Be aware this could lead to mold growth (which is easily corrected by removing any visible mold and misting the colors with rubbing alcohol). I go into more detail about this in this video: https://youtu.be/qBW8_cgOOYI I was recently told that if you leave a copper penny in the palette, that will prevent mold growth. I can't tell you yet if it works, but it only costs 1 cent to try, so why not?

What's ox gall? Ox gall is a wetting agent. You can add a few drops to a wash to help the color flow more smoothly. It can help to even out washes, and makes color travel more easily in wet-in-wet effect. QoR (Golden) has a synthetic ox gall which is less stinky than the real thing.

Do you prefer single-pigment colors? (And how do you know if a color is single-pigment?) I guess I do, since most of the colors on my palette are single pigment colors. :) But I don't see anything wrong with colors that involve multiple pigments. Occasionally, one of the pigments in the mixture will travel farther than the other(s), and you'll wind up with a "halo effect" if the color is applied to wet paper, with one pigment settling out first and the other creating a fringe or halo around it. This can be useful (for example, ultramarine blue-violet and quin gold make a nice grey for clouds; the quin gold travels farther and creates the effect of a golden glow at the edge of the clouds). Or it can be annoying if you don't want it to happen. Personal preference and how you plan to use the color will decide. You can tell what pigments are in a color by looking for the pigment codes on the label (tiny little letters with things like "PB28" or "PY3") or for some brands, you have to look up the manufacturers' color chart. However, be aware that the same pigment can appear in different hues, and multi-pigment colors often appear different.

On the left, two versions of "gamboge yellow" (a historical pigment no longer used) with different mixtures of pigments to re-create the historical color; on the right, three different versions of "cobalt turquoise or cobalt teal", all with the same pigment, but different colors.

Some suggestions from participants about violets:

I mentioned that it's somewhat difficult to find a good violet watercolor if you want to have a primary-plus-secondary six-color palette. One of the common ones, dioxazine violet (a.k.a Winsor violet), shifts value a LOT as it dries. It's one of those colors that dries much much lighter, which makes it difficult for beginners to lay a wash that is the color they intend after it dries, so I'm not a fan. One of the participants suggested carbazole violet (I am guessing Daniel Smith). This is the same pigment as dioxazine, but sometimes one manufacturer figures out how to make things work better than others, so if you really want a violet, maybe give one to try. Another suggested Daniel Smith's Imperial Purple, which is a mixture of quin violet and ultramarine blue. It's a nice purple, but I suspect it would have that "halo effect" if used in very wet situations, so keep that in mind.

My favorite single-pigment violet is mineral violet (a.k.a. manganese violet) which is slightly on the reddish side. And ultramarine violet, which ranges all the way from almost blue to a reddish violet (so check color charts before buying).

If you want to dive deeper, have a look at this page on handprint.com:
https://www.handprint.com/HP/WCL/waterv.html

And while we're on the subject of color-shift/value-shift, this is one reason **I steer beginners away from Payne's grey**. It also (along with many watercolors that involve carbon-based blacks) shifts a lot in value from wet to dry. Besides, using mixtures of ultramarine blue and burnt sienna allows you to have a range of warm and cool greys, which is typically what you encounter in nature, so I think it leads to more interesting and natural-looking paintings.

Some resources:

handprint.com - a little out-of-date so may not have newer pigments (2005 and later), but one of the best comprehensive resources on watercolor pigments available

Stephen Quiller, *Color Choices* - all about setting up a full color-wheel palette, plus a lot of great information about color theory and color schemes for paintings

Michael Wilcox, michaelwilcoxschoolofcolour.com - books, palettes, and a lot of educational resources. I think he gets carried away with waaaaaay too many colors and fiddling around with mixing, but there is a lot of interesting info. His book, *The Wilcox Guide to the Best Watercolor Paints* was a side-by-side comparison of colors across many manufacturers. A lot has changed in many manufacturers' color lines since the book came out in 1991, so I don't feel it's a useful reference for purchasing any more, but the introductions to each color chapter, with information on the various pigments and their history, is still very interesting.

General (fascinating) reading on pigments and pigment history:

Phillip Ball, *Bright Earth*
Victoria Finlay, *Color: A Natural History of the Palette* (Finlay has a couple of other "spin-off"s from this book, both rather disappointing in comparison)

A video about some brilliant little DIY travel palettes: Palette Talk - watercolor travel palettes to buy or make - by Chris Carter, https://youtu.be/ENdM0tALS0U

A very comprehensive video about various palettes from Steve Mitchell: https://youtu.be/4qfrInJoWVE (The Mind of Watercolor channel on YouTube) Maybe a bit overwhelming, but a great information. If you aren't already familiar with this channel, it's well worth watching.

The Color Wheels from This Demo:

Primary triad I recommend for Watercolor Jumpstart (I have students add Ultramarine Blue and Burnt Sienna to this palette for mixing greys and darks more easily).
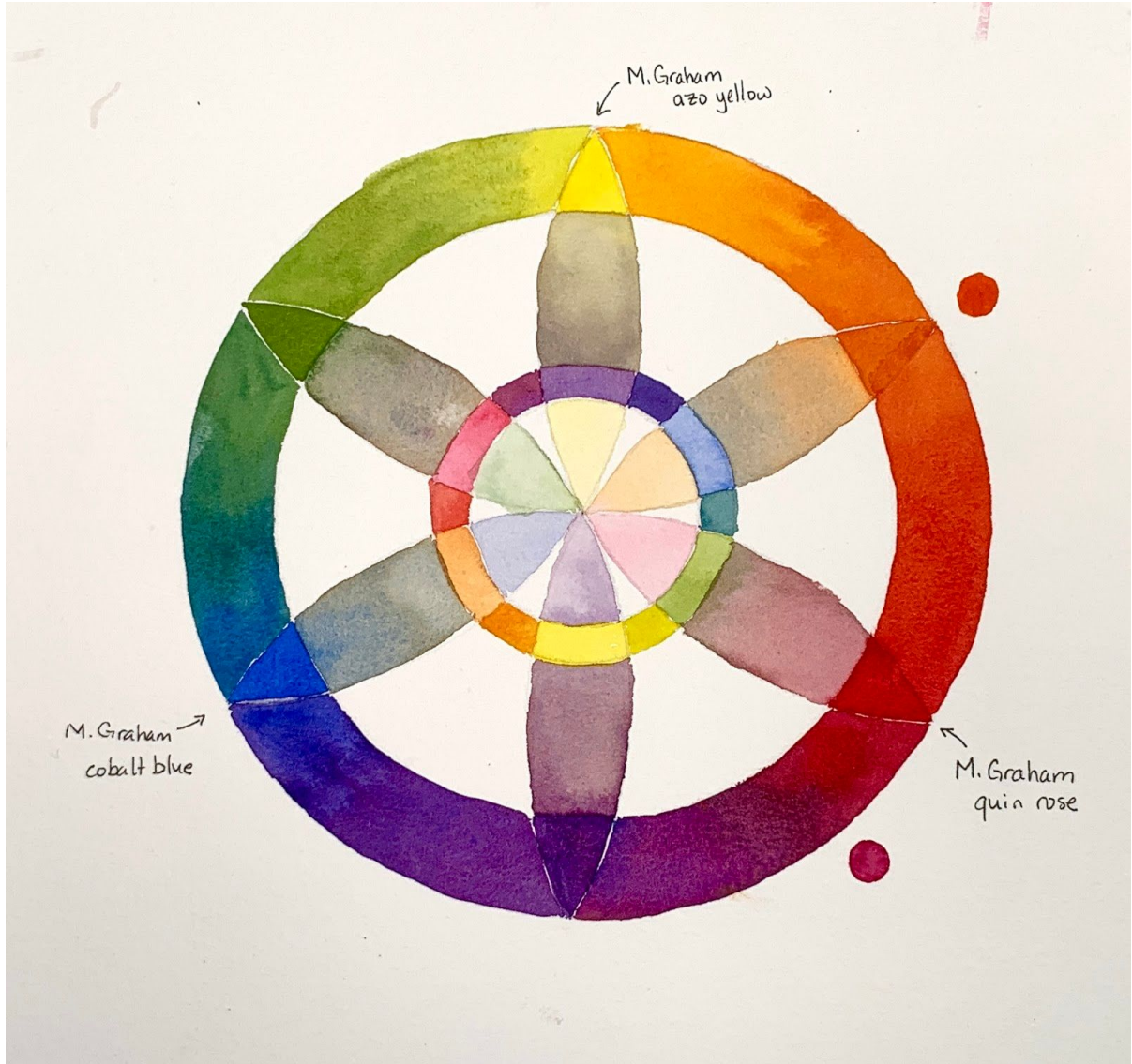
A primary triad based on printers' inks (yellow, cyan, magenta). More difficult for beginners to learn color mixing because phthalo blue and quin magenta are such strong colors. Harder to get mixtures balanced because a small amount of paint can change the color of a mixture so quickly. But, no granulating color, so may be preferred by some for that reason. Brighter greens (which can be a disadvantage for aspiring landscape painters--unnaturally bright). I think most people do better to simply add phthalo blue to the Jumpstart palette once they have some experience.
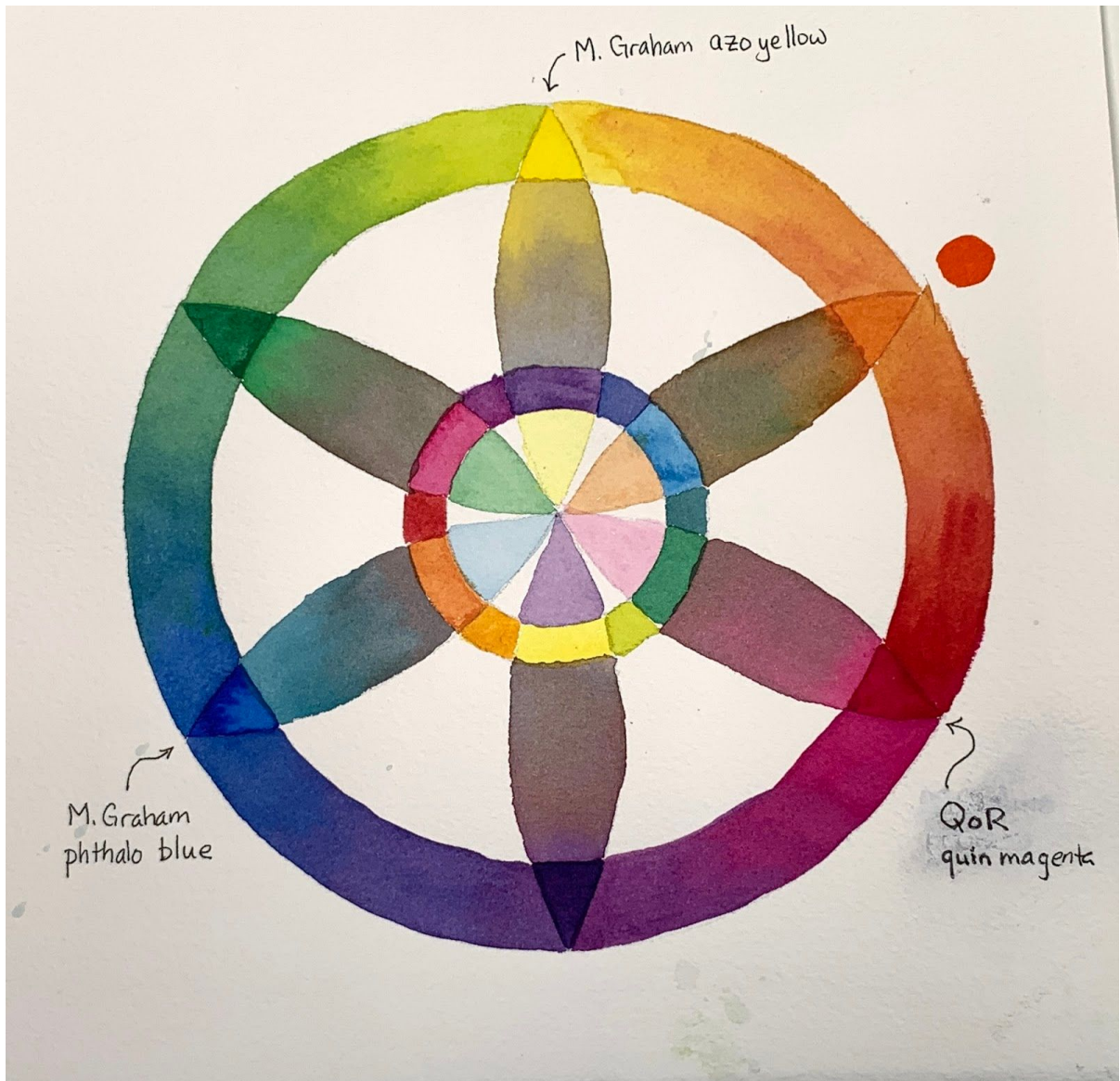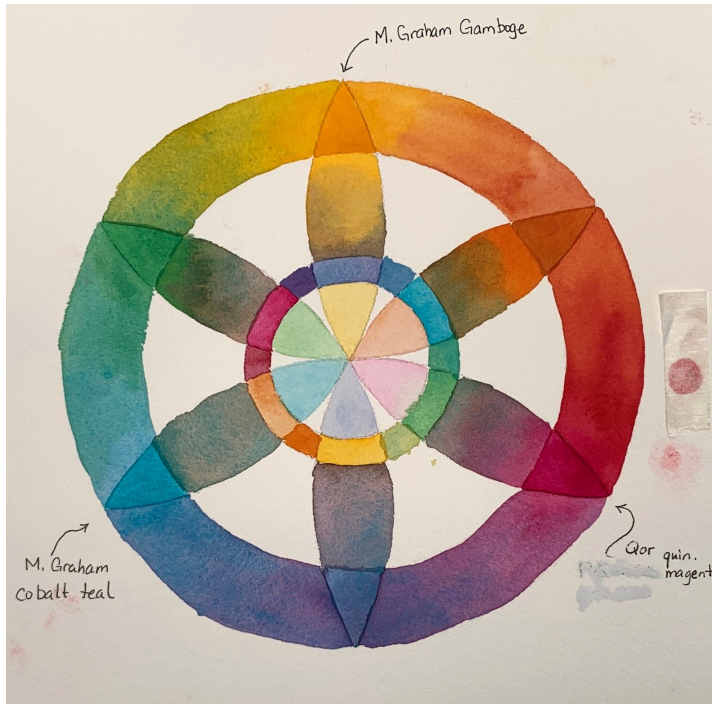
A landscape (muted) primary palette. Normally, raw sienna would be used instead of aureolin. Fast and easy to mix colors used again and again in landscape painting. No unnaturally bright colors. Easy to achieve color harmony. Can add a few brighter colors and still easily have 5-8 colors for the entire palette, with these three being the most often used.

Great travel sketching colors.
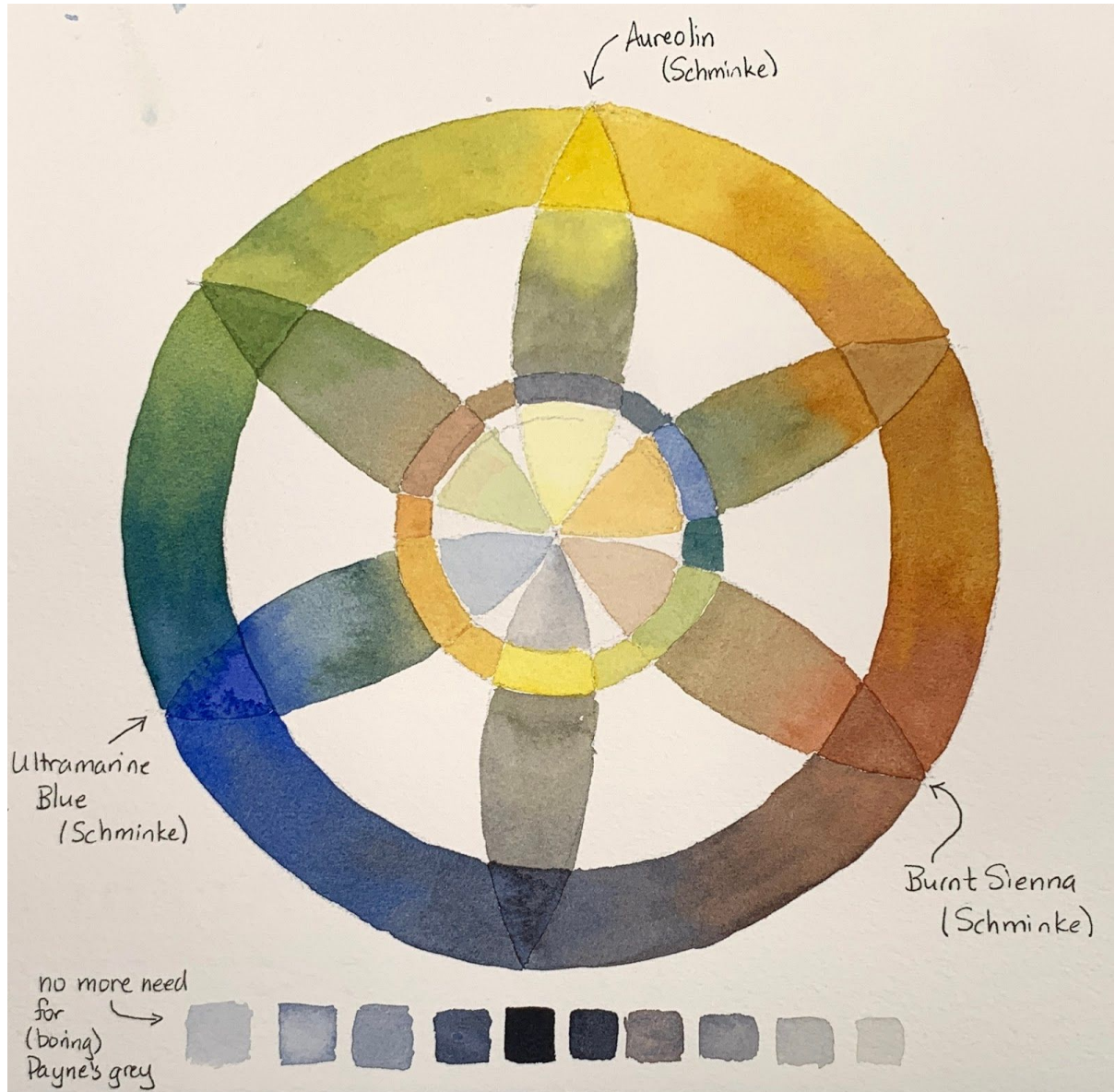
Sometimes, a sorta-primary, or not-quite-primary triad can be very effective, if it suits your style, subject or audience. Here are two examples of base palettes that aren't really primary, but still create nice, harmonious colors. This kind of base palette is often used as part of a "signature look", with a few other colors added as accents.

M. Graham Gamboge

M. Graham cobalt teal

Qor quin. magenta

QoR quin gold

QoR phthalo turq.

QoR quin magenta

A Split-Primary Palette, with a warm and cool version of each primary. Allows purer secondaries, at the cost of learning 6 colors instead of 3. I prefer to start people with 3 and add additional primaries as needed. With 3 colors, there are 6 two-color combinations. With 6 colors, there are 21 two-color combinations, so it's a lot more than double the complexity for learning.
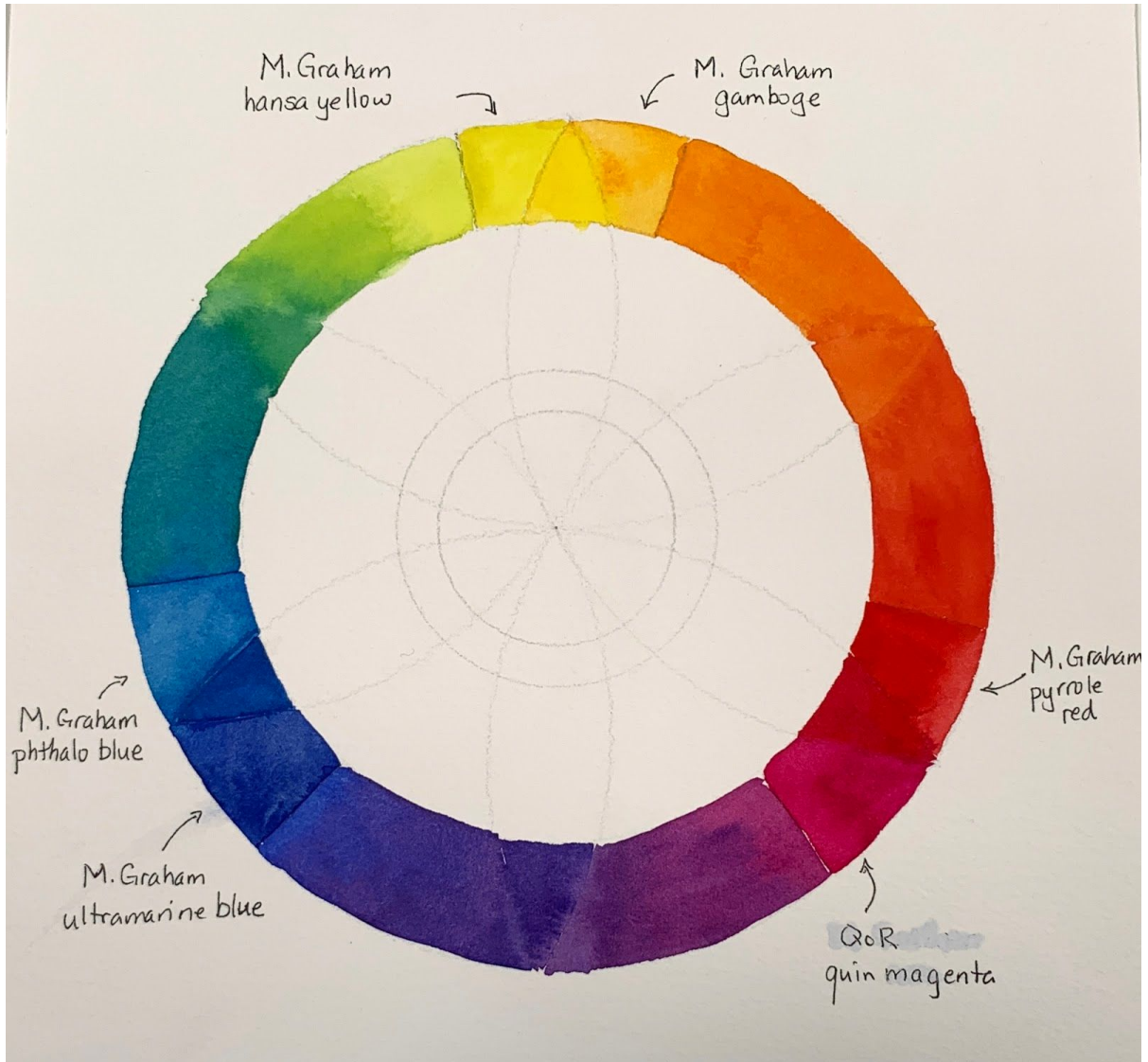
Six colors, primaries plus secondaries. I'm showing this for comparison, so you can see that it doesn't really buy you anything over the split-primary palette in terms of colors you can mix. Some people like it, but again, I think it's a more difficult place to begin because there are so many more possible combinations to understand.
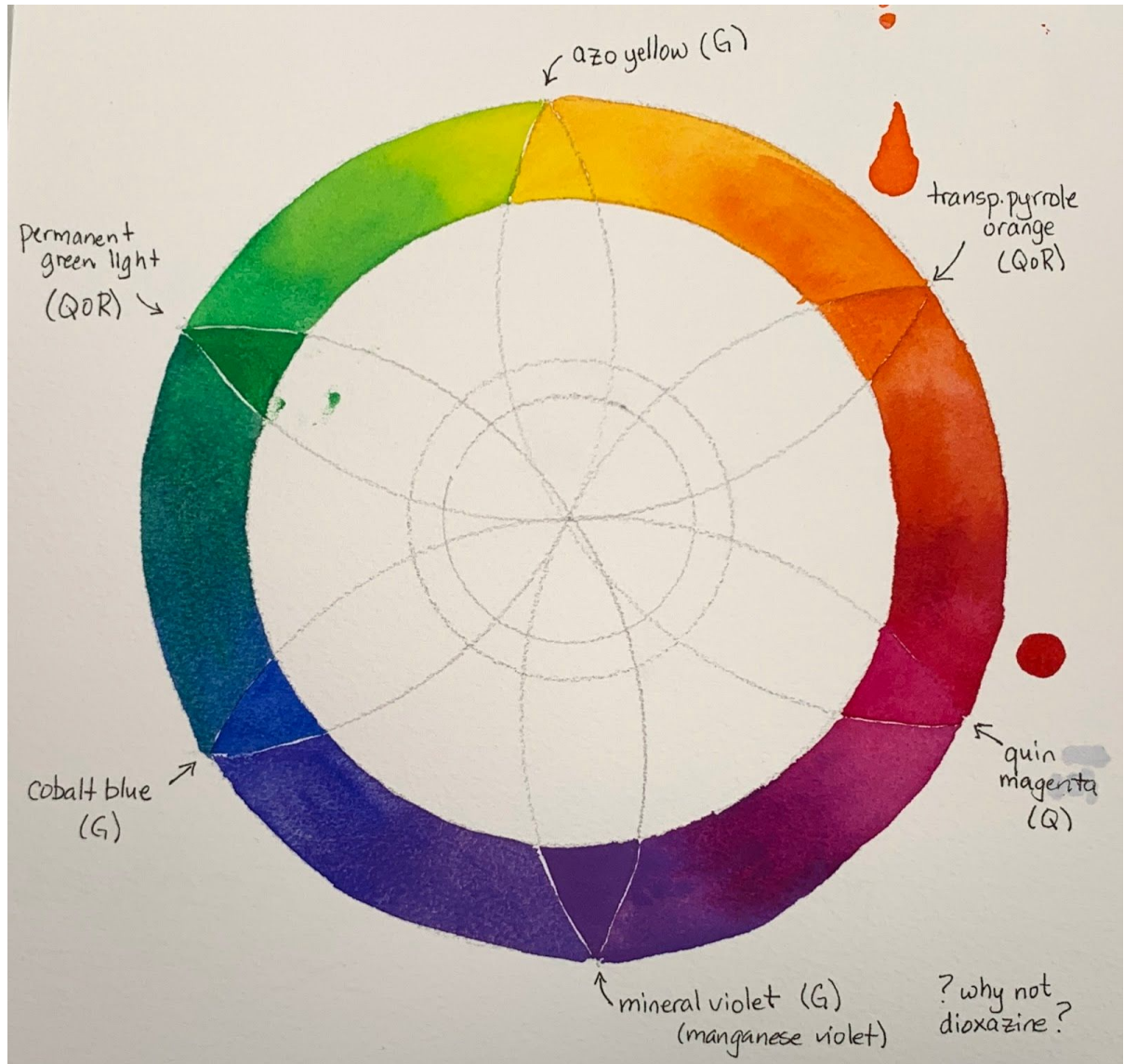
Comparison of the Jumpstart Primary palette, with the split primary and the 6-color primaries-plus-secondaries palettes. Yes, you might be able to get a bit brighter secondaries by having 6 colors, so most people will probably add some of the additional colors, but the colors on the primary palette will still be useful, so why not add colors when needed?

Can you tell I really think it's best to start with just a few colors? You can add new ones fairly quickly, because it really doesn't take long to learn the base 3—a few weeks at most. I'm biased because I've had too many people come into classes saying they can't mix color, and all of them were told to buy 15-30 colors for their first class. I really think that's why they have problems. With 30 colors, there are 465 two-color combinations to learn. And of course, that includes "a little of one color and a lot of the other" and vice versa. Plus, we often mix more than two colors. No wonder people find that overwhelming!

(What if you already have a set with 12-30 colors? No worries! Pick a limited collection of 3-8 as your "home base" and do your color mixing exercises with them. Then play freely with the rest, but don't insist on "getting the right color". Just explore what happens and how you feel about it. You'll discover combos you really like and others you don't, and you'll naturally start to gravitate to certain colors. Then you'll be able to find your own "home base".)