



Inventory of hand-drawn colored glass from the 1960s.
Photo by Lauren Garcia.

Glass at a Crossroads

Text by Paul Stankard

The garage adjacent to my studio holds my inventory of Schott optical-quality soda lime glass, along with a large cache of colored soft glass rods—all material that celebrates a 50-year involvement with working hot glass at the torch. The other day, when I rolled up the garage door to retrieve a tray of 400-gram weight S-8 gobs, I had an

intense sense of my mortality. When seeing the rows of colored glass rods, most of which was produced by the now defunct Conlan Glass Company, I wondered what will happen to my treasured colored glass when I die.

In the early 1960s, if you worked in glass, it did not take long to learn the names of, or meet, most of the glassblowers within a 100-mile radius. Two

standout pioneers nationally of the four or five who influenced my early career were John Burton, “the father of colored borosilicate glass,” and Harvey K. Littleton, “the father of the studio glass movement.” They showed me a new range of possibilities with glass beyond practical use. Burton’s creative attitudes celebrating hand skills, and his inventiveness, led to a wide range of colored borosilicate glasses that expanded the decorative opportunities for flameworking. As a factory worker, Littleton’s approach to glass was difficult for me to comprehend and be comfortable with. He was teaching glass art-making in a university art school setting and his sculptural expectation for glassblowing was strange but captivating. Both men, one functional and the other conceptual, introduced me to

higher levels of being creative in glass beyond scientific glassblowing.

For the most part, being creative with flameworking in the 1950s and 1960s meant melting and shaping clear borosilicate glass into what were then called novelties. Through the '60s, I was excited by the idea of flameworking glass giftware out of tubing and rods at the torch in shapes such as swans, spun-glass ships, pianos and animals. In 1966, I watched a program on public television called "The Creative Person—John Burton" and was emotionally energized. Burton won an Emmy for that program and went on to produce a three-part series titled *The Fires of Creation*. My fascination with Burton's unique approach to producing colored Pyrex glass on the torch was heightened when my wife Patricia gave me his book *Glass Philosophy and Method*. The creative freedom that Burton celebrated and his techniques for making glass special at a torch gave me the courage to believe it was possible to follow his path onto the creative side.

In 1967, I left a job in Alexandria, Virginia, and accepted a position in the electron optical division of Philco-Ford. It was while working at Philco-Ford that I started experimenting with Burton's technique on my lunch hours, guided by Burton's television show and book. To my delight, I experienced success with my first effort at making colored borosilicate glass. It was as if the clear Pyrex was just waiting to be colored. I started with a half-inch tube of Pyrex and introduced a small amount of chromium oxide to the bottom of the tube. I collapsed the tube onto the chromium oxide, while keeping it hot. To thoroughly mix the oxide into the glass, I twisted and overlapped it until the color was evenly distributed. When I pulled the hot green ball of glass into a six-inch long rod, I was amazed at how doable Burton's technique really was.

On St. Paddy's Day of 1968, true to my Irish heritage, I flameworked a shamrock from the green borosilicate glass rod I had made. I balled up a half-inch borosilicate glass rod to encapsulate my first pickup paperweight. Tooling a complex foot on the lathe to

hold the dome made this St. Patrick's Day paperweight special.

My experimenting with colored borosilicate glass ended abruptly when I came across a case of Kimble R6 soda lime glass 8 mm rods in a corner of Philco-Ford's storage area. It is interesting to look back at what seems like a minor happening and now realize how that event opened a new chapter in my glass life.

I was curious about the working characteristics of soda lime glass and how temperamental the material seemed compared to borosilicate. Inspired by the paperweights of Francis (Frank) Whittemore and Charles Kaziun, both scientific glassblowers and both flameworking soft glasses, I redirected my spare time to learning how to flamework this preindustrial glass, which was thought to be inferior to Pyrex glass. I traveled all over South Jersey, looking and hoping to buy soda lime glasses from the old timers, with little success.

Whittemore gave me a major break when he told me about Conlan Glass. I purchased a modest amount of colored and clear glasses, and began to focus on making paperweights because I felt an emotional need to go beyond small-production glass animals. My progress during the first six months was encouraging, and I started to believe even more that my dream of one day being on the creative side could be a reality.

I left Philco-Ford in 1969 for a job at Rohm Haas Inc., a Fortune 500 chemical company in the Philadelphia area. My responsibilities required traveling to three locations to make scientific glassblowing available to the company's research division and a few quality control laboratories. I was repairing and fabricating specialized glass apparatus for scientists and felt I had reached the pinnacle of my career in what was considered a dream job by others in the scientific glass community. In an interesting and unusual way, the job facilitated paperweight-making in earnest, because I was required to carry tools from location to location and had approval to use the equipment

at home on evenings and weekends. I would unload the Carlisle CC bench burner, Bunsen burner, rollers and a small annealing oven from the car and set up the equipment in my utility room to work on paperweights. What I remember most is how excited I would feel the next morning, taking a 1 1/2 inch paperweight out of the oven, and how proud I was with the progress I was making.

In 1973, I drove to Conlan Glass in Hicksville, Long Island, and purchased 600 pounds of hand-drawn colored and clear glass rods ranging from 4 mm to 25 mm diameters for 80 cents per pound, thinking it would be a lifetime supply. To date, I have used about half (mostly during my first 10 years of paperweight-making). Now, looking - at the rows of glass rods with their 40-year coating of dust, cobwebs and remnants of a few mouse nests, I am amazed at how much the glass world has grown.

The idea you should buy a lifetime supply of glass would seem strange today, when you have glass manufacturers like Schott, Reichenbach, Kugler, Gaffer Glass, Uroboros, and Bullseye, along with the borosilicate companies—Northstar Glassworks, Glass Alchemy, and a half-dozen small shops known for special colors and effects such as glow glass and Dichroic glass coatings by Sandberg. In the 1960s, it was a totally different glass industry, secretive and near the end of 200 years of skilled offhand work. Today, there is so much information about technique and companies offering tools and equipment that it's hard to imagine how close glassblowing in America came to losing its hand skills.

The sacrifice that Pat and I made to invest in the hand-drawn glass rods reinforced my dream to go beyond scientific glass. Before I had the knowledge and skill to do much of anything with paperweights, my colored glass rods inspired visions of work that, at the time, I could only dream of. My early attraction to color has served as a foundation for the poetic and spiritual significance of my work today. I am proud of and fascinated by the new wave of talented lampworkers being

nurtured by endless creative possibilities with colored borosilicate glass. The glass landscape is on the verge of evolving, thanks to new borosilicate material and technology.

In 2008, while teaching at the Corning Museum of Glass School, I visited the Rakow Research Library to view Burton's television series. Once I moved past the novelty of watching a '60s television segment, I was amazed at how intellectually and artistically immature I had to have been to feel overwhelmed by the ideas and processes Burton was promoting. I remember, as a young factory lampworker, being ecstatic and energized by the creative possibilities Burton was suggesting while working at the torch. In 2010, I had dinner with a group of old-timer's—Mark Peiser, Henry Halem, Marvin Lipofsky, and

Tom McGlauchlin—at the GAS conference in Louisville, Kentucky. I mentioned Burton's influence on the glass community in the late '60s and early '70s, and was surprised by McGlauchlin's negative reaction. He dismissed Burton as irrelevant to studio glass and attacked his approach to glassmaking as lightweight. According to Halem, an educator and early pioneer in the studio glass movement, "Early artists in the studio glass movement who were students of Harvey Littleton felt Burton was in a different creative realm that was about a hobby at the torch, shaping hot glass." To me, Burton celebrates being creative using hand skills while making gifts for family and friends. That is different from Littleton, who visualized studio glass artists as informed by art history and expressing contemporary issues through the language of form.

Regardless of what you think about Burton, it's clear when looking at the glass landscape today that his coloring techniques laid the foundation for a multimillion-dollar industry. Not only did his innovations spawn a highly profitable and fast-growing industry, they brought beauty to borosilicate glasses. Before Burton, it was hard to imagine that borosilicate glass could be so colorful. The growth starting in the last 20 years has been a boom to the glass community, and significantly enhanced creative opportunities. In the early stages of this colored glass revolution, flameworkers were mimicking objects made with soda lime glass. More recently, artists have begun to explore the working characteristics of borosilicate, pushing beyond production into a higher art-making realm.



Left: Compound Blackberry and buds, 1973.
Center: Bunchberry blossom and berries, 1976.
Right: Wild Rose bouquet, 1973.
Photo by Ron Farina.