



ANDREW LANG

Blowing Dichroic

Andrew Lang, Dichro Lace Donut, 12" x 4", 2018.

by Colleen Bryan

Photography by Jane Love

Andrew Lang blows dichroic glass sculptures in the Maryland suburbs of the District of Columbia. For the past year and a half, the artist has pursued his obsession with form, size, and intensity of color in blown sculptures with exteriors covered in dichro. "I'm in love with the effect of dichro on interesting forms. My perusal of the Internet hasn't shown anyone else who is taking flat sheets of dichroic glass and blowing it out into objects of the size that I make."

Lang, formerly a steel sculptor, worked copper coated welding rods into delicate animated figures but found it a challenging way to make a living. To solve the money problem, he went into accounting and stayed at it for 42 years. At his retirement, Lang's body could no longer manage the fine work of welding, so he transitioned to glassblowing and worked his way into the new medium, eventually creating a wall of blown glass pieces that most viewers assumed was made by multiple artists.

"I call my style of using dichroic glass "Dichro 360/360" to describe how I encapsulate the entire surface of my pieces. My goal is to create seamless surfaces of striking colors or fascinating patterns. Occasionally I apply nondichroic ornamentation to a piece as gold tips or nondichroic bands to give the pieces an additional 'kick.' Otherwise, I let the dichro and the shape carry the entire message."

His sense that he might be getting somewhere with his new art form was affirmed when Tony Glander, president of the American Glass Guild and fellow member of the National Capital Area Glass Guild, saw an array of dichro pieces stored in Lang's garage and urged him to get them out into circulation. Generously, Glander introduced the artist to the editorial staff of *Glass Art*.

Choice of Materials

Influenced by the likes of Walt Disney, Roy Lichtenstein, and James Rosenquist, Lang delights in art that is shiny and wildly color



*Andrew Lang, Gold Tipped Arabian Knight,
18" x 9", 2018.*



*Andrew Lang shielding Paul Swartwood
while Phil Valencia assists.*

ful. "I'm a fan of bright things." Perhaps as a result, his early work was disparaged by other artists as being a little too '60s, but Lang was undeterred in his pursuit of pop. "Once I established the overall quality of brightness that I like, I discovered that I could put small pieces of contrasting dichroic glass on the outside of my objects to further visual interest. Before long, I was covering the entire surface of my sculptures with dichro."

Dichroic glass is a multilayer coating of quartz crystals and metal oxides deposited on glass in a vacuum chamber. Crystals and oxides are vaporized using an electron beam gun and deposited on a spinning glass disc at the top of the chamber to produce a thin film that is only 35 millionths of an inch thick. Dichro tends to be manufactured in 19-inch sheets with wonderfully rich, highly saturated colors and sometimes in complex patterns.

Dichro changes with light, registering different colors as it is used against changing backgrounds or as the viewer shifts angles. Lang now chooses to use dichro, with its attendant colors and patterns, as the palette from which he conceptualizes, then creates the surface of his blown sculptures.

Problems with Fading and Cost

There are problems inherent with blowing dichro. Fragments of the material are commonly used by fusing artists to lend interesting colors or accents to jewelry or small objects, but when blown, the surface of the glass stretches and thins. The highly saturated colors and patterns that make dichro so appealing become less intense on the expanding surface. "Colors mute and patterns fade when blown too far. If I blow a piece out to 6 inches it might look pretty good, but I like to blow it out as big as I can."

Through much experimentation, Lang learned to mitigate those characteristics of dichro. "When half-inch-square patterns on a black background are blown out, they become essentially a black object with muted lines of color. I found that tiny geometrically shaped patterns stay sharper when blown than if you start with a larger pattern. If you're having trouble going large with a plain colored dichro, using multiple layers helps preserve the rich hue. I may use three or four layers of color on transparent backgrounds with one sheet of black underlay. I haven't yet hit the physical boundary of how many layers of dichro I can stack, but four layers for a large piece can easily cost \$150."

Lang says he has spent thousands of dollars experimenting to address such issues. "One in every five objects I make fails, either because it loses color intensity or it actually breaks. An artist must be prepared to fail a lot in trying to take dichro large, and I could write a travel guide to the places in the process where those failures are likely to happen."

Making sizeable blown dichroic glass sculptures requires significant investment, both in the dichroic glass itself and in labor. Lang secures this notable investment in every piece through his choice of materials. He relies on Coatings By Sandberg (CBS), a Southern California-based family business run by Howard Sandberg, for all his dichroic glass and for able consultation on proposed projects. "I make my dichroic sculptures using only glass created by CBS. Their product is reliable and consistent. Further, whenever I am using a dichroic pattern or color I don't yet know, I find that I can reach out to CBS for insight. As far as I'm concerned, they are the premier manufacturer of dichroic in the U.S., perhaps the world." Having that caliber of resource lends greater confidence to an otherwise tenuous process.

The artist's current adventure is working with a type of dichro called Splatter. "I'm on my fourth iteration now, and I'm still getting inconsistent depth and coverage. In blowing it out, I'm getting vaguely colored glass balls, so next I'll try putting solid black underneath and several more dichro layers on top. As usual, I am hunting for killer pop."

Chasing Light

Another challenge with dichro sculptures is managing how actively the surface interacts with ambient and direct light. Shape matters as much as the surface coating itself, since light bounces off the surface at different angles. Dichroic sculptures are particularly light-sensitive objects, which can be complicating in photographs or as they are taken into highly variable light for shows and galleries.

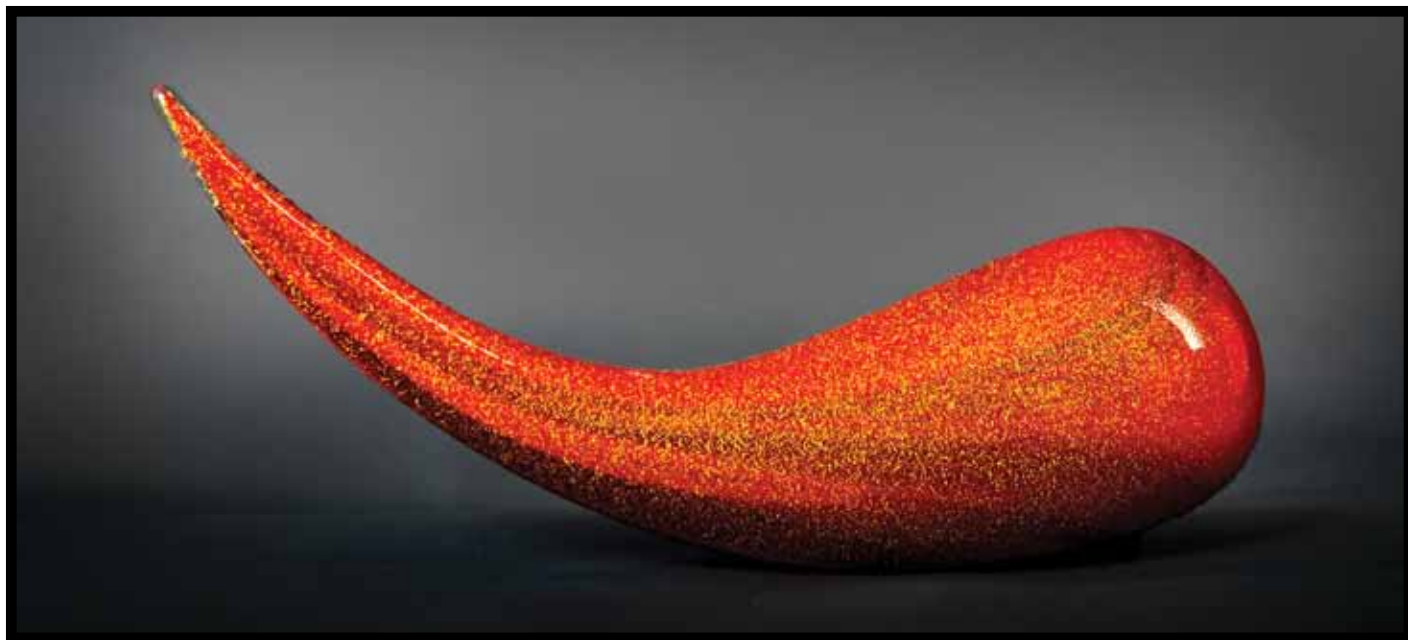
This feature creates real challenges in placement and marketing. "I've been in a number of shows where the pieces look sumptuous under a couple of good spotlights. Then I've taken the same pieces into a show with ceiling lights in a space the size of a ballroom, and they looked rather drab. Dichro is a tricky beast."

Despite or perhaps because of the challenges inherent in his chosen undertaking, Lang finds dichroic sculpting fascinating, exciting, and fun. "Trying to create pieces that are different from what the viewer has seen before, objects that intrigue and delight them—that is my goal. Being able to pursue it is worth all of the expense and missteps."



Andrew Lang, Noble Green Arabian Knight, 18" x 8.5", 2018.

Andrew Lang, Prometheus' Gift, 18" x 8.5" x 5", 2018.



It Takes a Team to Make Art Happen

Lang works out of a studio called Glen Echo Glassworks located outside Washington, D.C. The structure was built in the early 1890s as part of a Chautauqua center and morphed identities several times before reaching its current one as a National Park Service Center for the arts.

At 70 years old, with various physical maladies, Lang frankly relies on a team of people working with him to produce his designs. "My creative juices are still going strong, but mobility issues and substantial tremors mean that without these people my glass wouldn't exist."

Lang initiates each new shape by making a full-size model out of paper and masking tape. "I've found that a two-dimensional drawing doesn't give enough sense of a piece, so communicating through drawings alone is really difficult. We need a three-dimensional model." Once he is done identifying the shape of the glass to be blown, Lang relies on two or three key people to translate the model into glass.

The Glassworks is owned and run by gifted glass artist Paul Swartwood from whom Lang began taking glass lessons six-and-a-half years ago and who now serves as chief gaffer on Lang's sculptures. Swartwood has worked in glass for more than 20 years, including a four-year stint with noted glass company Simon Pearce.

When Lang's design is large enough to require shifting to a second blowpipe, Phil Valencia of Valencia Glass acts as his very capable second gaffer. The final member of the team is Sharon Moffitt, who works for Weisser Glass in Kensington, Maryland. "I call Sharon the queen of cold work. She can do magic."

Lang stays at the glory hole with the team throughout the sculpting process, both to assure that the paper model continues to guide the process and to make split-second changes if necessary. "We were making one of my donut shapes recently when it broke off of the pipe. The gaffers managed to keep it from shattering on the floor, and in that moment, I was able to tell Paul how to change the design. The hole became the mouth of a vase. If I were to be the one to create something useful from what would otherwise have been a

total fail, I had to be there. If something goes wrong, glass breaks, but if I am there, I can often draw on some hair-trigger creativity to identify a save that Paul, with his great skill, can actualize."

Since most gaffers don't want to be distracted in the middle of blowing a pipe of molten glass, Lang recognizes his good fortune in working with gaffers who engage him as part of the team. He sees it as paramount to preserving the finished object as his own design product. "The direction of the tail of a comet form, the size of the object, the intensity of color and pattern . . . my one chance to influence the direction the glass is taking it while it's hot. Once it cools you can cold work it, but only to a limited degree. Being there through the gaffing is my greatest assurance of getting the piece I'm after."

Lang is a small producer, making 75 or 80 pieces in a good year. Beyond experimentation, he and his team commonly work a single shape in brief series, but they do not reproduce identical objects. The process is iterative, building one piece upon prior ones until he feels that particular artistic exploration is complete. "Even when I repeat a shape, I don't repeat the previous color or pattern. With a palette as large as the one available to me, I see no need for replication."



Andrew Lang, Blue Dream Dichro Bowl, 8" x 4".



Andrew Lang, Blue Tower Arabian Knight, 21" x 9", 2018.



Andrew Lang, Emerald Future Arabian Knight,
18" x 8.5, 2018.

Steel Versus Glassblowing

Glassblowing contrasts with welding steel more than it compares, Lang notes, and his artistic expression is different between the two art forms. "My steelwork was additive and incremental, while my glassblowing is dynamic, moving quickly to completion while the glass is molten. My steelwork encompassed more representational designs, such as a series of acrobats, circus performers, and high-wire aerialists wrought from copper coated welding rods. My glass is abstract in easily accessible forms of an impressive and welcoming size. *Blue Tower* in my *Arabian Knight* series looks vaguely as though it might have come out of the Middle East, but it is evocative rather than representational."

The creative process is what unites the two forms. The artist's greatest pleasure is being able to create art that brings delight to the viewer.

Inspiration and Support

Lang started glassblowing in late 2012. As a relative newbie, he draws on advice from more experienced artists such as Rhoda Baer, a glass artist and photographer. Lang is also inspired by Nancy Weisser, glass artist and owner of Weisser Glass, who built a thriving business in glass retail and instruction while in serious pursuit of new and challenging glasswork.

Sculptor Anish Kapoor provides a wellspring for Lang's ideas of form. "He has an enormous silver steel bean as big as a house on the waterfront in Chicago. I made a ten-by-six-inch version of that shape out of dichro. I am also indebted to Jeff Koons, who is willing to marry outrageous concepts and banal themes with luscious surfaces."

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Artwork by Leslie Perlis

Some people work well in isolation, but Lang sought to replace the business community he left when he retired from accounting with a new one centered around glass. He found that in the National Capital Area Glass Guild, where he is now a director. The 130-member guild provides an opportunity to volunteer and a means to be involved in the larger glass world. "I joined the glass guild to meet and form community with other glass artists. I now feel very much a part of a glass movement around the country. The guild is a good organization that tries to help artists increase their knowledge, further their art, and strengthen their ability to sell art glass. It costs very little and gives access to shows and group activities."

Unlike most new glassmakers, Lang retired from his career as a CPA with the luxury of time and enough money to afford his new explorations. That also allowed him to emphasize showing his work over the need to sell his glass immediately. "I have been in half a dozen local shows, where I've made most of my sales. I maintain a pretty, simple, and updated website with contact information. I can afford not to be in a hurry, am content to make the best pieces I can, and I'm in no great rush to sell them. Clearly, I'm a lucky man."

Looking to the Future

Most of the glass Lang makes requires two or three gaffers, but he loves the impact of large work and is keen to make unusually shaped dichroic sculpture as large as possible. Currently, a boundary of 18 inches by 2 feet is prescribed by the size of Glen Echo's largest glory hole and annealing oven. "I'd love to work someplace with a larger fabricating capacity so I can push the boundaries of size. I'd have to begin by finding fellow artists with a shared sense of adventure. With them I could explore the amounts and types of dichro that needed to produce a major visual impact. Fortunately, at this point I know an awful lot about successfully working with dichro."

Toward that end, Lang is seeking a fellowship experience where he could further those explorations. "I see a lot of glass, and I have collected a fair amount of both glass and writings about glassmaking. I read voluminously and go to glass shows, but I am sheltered in some ways. I'd love a fellowship and work team who might be interested in exploring the questions of dichro and size. I'll bring the dichro, and I'm certain that together we can create awesome new pieces."

In summary, Lang reflects: "I aim to delight myself by moving toward ever better, brighter, more exciting work. I am trying to make objects that seem both of the future and mythical. My great hope is for my art to be seen as a genuine breakthrough in the field by other artists, by art collectors, and by those who display significant art glass for an appreciative public."

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(Left to right), Andrew Lang, The Bean, side view and end detail, 10" x 6" x 6", 2017.

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