

# BORO NEWS NEWSLETTER

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ISSUE 26

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## Questions?

Call Toll Free  
**1-866-684-6986**  
or visit us on the web at  
[www.northstarglass.com](http://www.northstarglass.com)

Northstar is in the fortunate situation of having some very outstanding pieces of colored borosilicate glass artwork pass through our hands, and shared with us. The enjoyment which we receive is fantastic. And then, in various ways, as through our newsletters or advertisements, we attempt to share our pleasure with others.

We really do thank each and everyone, who has taken their valuable time to create these artistic pieces for our use. It is much, much appreciated. To share with others how our colors may be expressed is important to us in our mission to share colored borosilicate glass with more individuals.

Thank you!  
From,  
Charles, Tom and the Gang  
NorthStar Glassworks, Inc.

## Announcements:

**Second Annual  
Northstar Social**

June 18th, 5pm-8pm.  
There will be a barbecue,  
glass sale, and demos by...

Brian McCauley  
Tim Carruthers &  
Freeman Corbin  
(producer of Essential  
Lampworking videos)

(Bring your didymiums  
for the outdoor demos)

## Check out our **NEW COLORS...**

Once again we are pleased to announce the release of another unique and exciting set of colors. Two of these colors are new shades of the Intense Opaque family. They are NS-84 Goldenrod, and NS-85 Poppy. Both fill out the palette nicely and offer the artist increased versatility due to their excellent working properties and desirable hues. We would also like to announce the release of NS-88 Pomegranate- our new kiln-striking Ruby, and NS-86 Garnet and NS-87 Garnet Dark- the new self-striking Rubies. This development will exponentially increase the ways borosilicate ruby glass can be utilized and worked. This is one of the most exciting developments since the creation of Amber Purple! As with all Northstar colors re-formulations will more than likely take place. We are constantly striving to refine our color palette. Our reformulations are carefully based upon a history of production as well as a history of application and workability. In this issue we will explore both the new shades of the Intense Opaque family as well as the new additions to the Ruby family. Follow closely!

Jesse Kohl

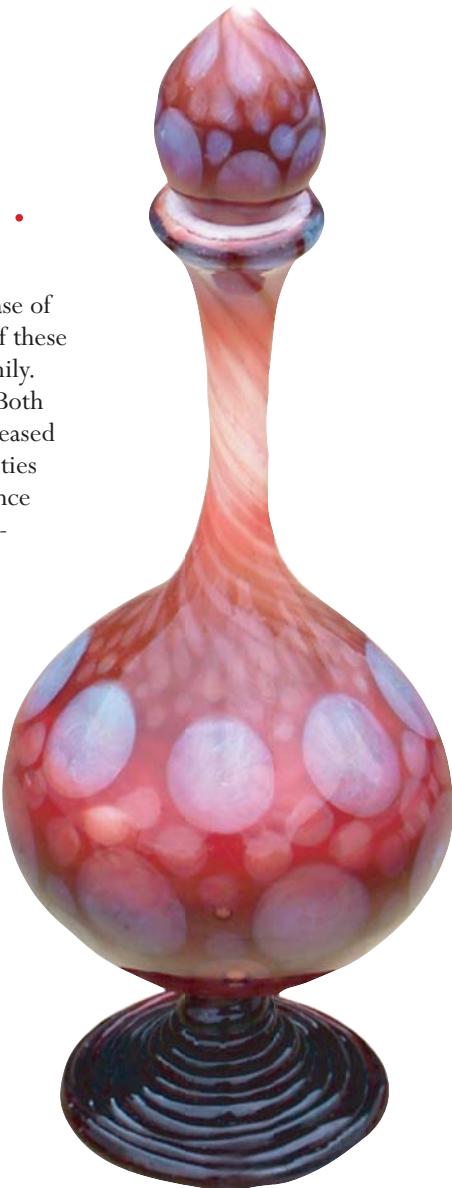


FIGURE 1

By Jesse Kohl  
6" height, 2" width

NS-86 Garnet layered  
over NS-54 Star White, then  
dotted with NS-09 Yellow.

## The Self-Striking Rubies

To gain a full perspective of the Ruby family and how best to choose which Ruby to use for the desired application we will break them into three categories. The first category is the standard Rubies which is comprised of NS-07L Light Ruby, NS-07 Ruby, and NS-08 Dark Ruby. The second category is NS-82 Ruby K, and the third category is the self-striking Rubies. Each category has unique strike characteristics and is designed for a specific application. The standard Rubies behavior is dependant upon the concentration of copper. The more copper, the more rapid the strike will be. As the consequence of this fast strike, the easier it is to overstrike the color, resulting in a dull livery red. For the NS-82 Ruby K, the color intensity is a function of strike time versus a difference in copper concentration. With the newest category in the Ruby family, the self-striking Rubies, the shade of red is a function of the copper concentration, not the strike time. The final shade of red is independent of the strike. This mitigates the chances of livering and allows the color to be re-struck to the same shade of red repeatedly.

The vessel in figure 2 was made by thoroughly encasing a heavy wall tube of Simax with NS-86 Garnet and applying lip-wraps of NS-76 Onyx. The stem and lid were each made with a solid ball of Garnet over clear, sealed to a merise of Onyx on each end.

"The Garnet is soft and smooth to work, making the encasing especially easy to perform. Although the Onyx is noticeably more viscous than Garnet at working temperature, this provided a nice tension to the lip and foot rim which helped in flaring them open on-center. In joining the body, stem, and foot, the "mechanical" devitrification that typically occurs with pairing two contrasting viscosities was quite minimal and easy to polish off.

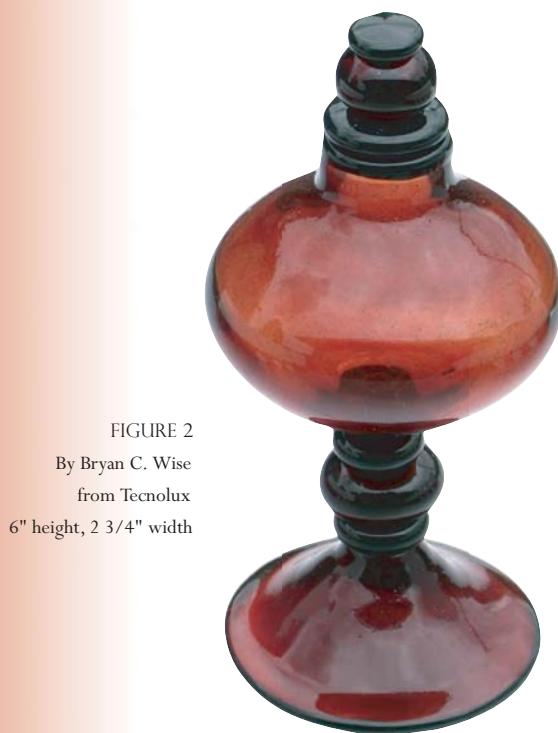


FIGURE 2  
By Bryan C. Wise  
from Tecnlux  
6" height, 2 3/4" width

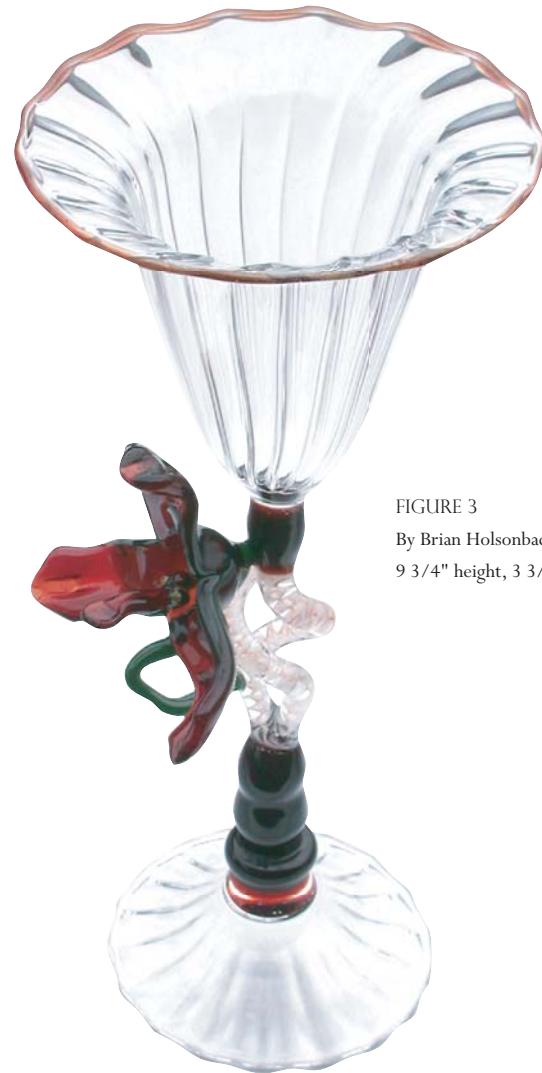


FIGURE 3  
By Brian Holsonback  
9 3/4" height, 3 3/4" width

My favorite part of working with the Garnet is the clarity of the unique burgundy color and the complete lack of copper surface reduction or "livering." Also, the automatic striking as it cools takes the guess-work out of applying the color and striking it. These features make Garnet a particularly straightforward and user-friendly color to use."

Bryan C. Wise of Tecnlux.

When working NS-86 Garnet, NS-87 Garnet Dark, and NS-88 Pomegranate, work in a hot neutral to oxidizing flame. You will note that as the glass cools, it will strike to a specific shade that is dependant on the copper concentration. NS-88 Pomegranate demonstrates all the same work properties of NS-86 and NS-87, yet it must be kiln struck. Pomegranate has a much lower concentration of copper, which makes the self-striking property of Garnet and Garnet Dark unachievable in this color. Thickness also plays a role in how the final color appears, yet even when thinned they are much cleaner and less bubbly. Repeated striking and cooling should not result in a shade change or livering. However, with the darker shades, a brown hue will develop in certain applications such as I/O work, thin work, or applications in which the heat application is uneven or limited.

In sculptural applications these colors approach a deep shade of burgundy. The lid of the urn in figure 5 exhibits this deep burgundy red. The lighter the shade, the lesser the tendency the color has to develop the brown hue. The great advantages with these new colors is the repeatability of the strike, the little if any influence from annealing the color, and the ability to view the results in real time without having to strike the piece to see the color development. Note that these colors must be heated to observe the actual shade. This is accomplished during the initial strike and will result in a slightly more intense shade of red than that of the raw rod. There is great potential in these colors and it is an exciting development to explore!



FIGURE 5

By Jesse Kohl

2 3/4" height, 2" width

### The New Opaque Colors

As a general rule of thumb, the Intense Opaque family must be worked with care to prevent boiling issues. The opaque palette that Northstar has designed works more easily and allows for greater versatility of applications than any on the market. Still, the chemical makeup of this family dictates their working property. They must be heated slowly and evenly to prevent boiling. Work in a soft neutral to oxidizing flame.

For additional information regarding working the intense opaque colors refer to Newsletters issues #14 and #19.

Taking a closer look at the newest members of the color family, NS-84 Goldenrod and NS-85 Poppy, the Goldenrod takes more care and attention to work un-encased than the Poppy. NS-85 Poppy is quite easy to work un-encased and is a smooth bubble free color. Both are well suited for stringer applications. Figure 5 was made with a background color of NS-84 Goldenrod. This lidded urn was created by encasing a solid layer of Goldenrod in NS-13 Amber Purple. The surface combing was achieved by banding the vessel with lines of NS-26 Double Amber Purple, NS-86 Garnet, and NS-84 Goldenrod. The lid was made with NS-86 Garnet and capped with a dot of Goldenrod.

With the pleasing results of using the Goldenrod as a backing, I was curious to try NS-85 Poppy as a background color. The results can be viewed in figure 6. This vessel was made by encasing NS-85 Poppy in a solid layer of NS-86 Garnet. It was then striped with NS-69 Green Amber Purple and then patterned with NS-09 Yellow. Over each dot of NS-09 Yellow a small dot of the Garnet was added. Notice how the neck thins as it gains a fiery orange hue from the NS-85 Poppy. It is a very vibrant, eye catching color pattern. It would be excellent for beadwork.



FIGURE 6  
By Jesse Kohl  
9 1/2" height, 2" width



FIGURE 7  
By Brian Holsonback  
1 3/4" height, 2 1/2" width

#### NS-89 Nile

For those of us who love earth tone colors NS-89 is a great addition. Originally an off grey color, Nile works into a darker brownish-grey depending on flame settings. When using an oxidizing or reducing flame this color does not seem to be directly affected, but can have a slight variation in the degree of color. Nile seems better used in solid or inside out applications. It holds color well when stretched thin and has a slight translucent nature giving warm tones and highlights. Externally in stringer application (thin lines) Nile can go almost transparent grey and the thicker the lines the browner they become. When using Nile for external dots it may have some color variation, streaking, and appear mostly grey-especially over dark surfaces like NS-76 Onyx. This may give the appearance of being over reduced.  
Brian Holsonback