

Vol. 76, No. 2

Summer 2023

THE Buckeye State Button Society BULLETIN

~~Our 76th Year~~



Better Buttons Through Chemistry

Gooney Birds

A Button with a Story

Simplicity Vintage Buttons

2023 Spring Show Competition Results

Buckeye State Button Society
www.OhioButtons.org
Officers

President, Laurel Weinberg, Laurel@lakenet.net, (440) 379-1800

Vice President, Helen Richwine, hlrchwine@neo.rr.com,
(330) 991-4087; (c) (330) 472-5922

Secretary, Chris Graham, graham.chris@comcast.net, (740) 425-3633

Treasurer, Judi Schuman, hey2jude@me.com, (216) 210-1420

Board of Directors

Susan Chisnell-Spires, Akron Area Button Club, bsbs_editor@hotmail.com,
(330) 464-1281

Donna McBride, Central Ohio Button Collectors, dmcbr71004@aol.com (419) 571-4170

Judi Schuman, Cleveland Button Society, hey2jude@me.com, (216) 210-1420

Connie Murphy, Lake County Button Club, cmurphy184@aol.com, (216) 587-1771

Shari Zahn, Polk Box Button Club, szahn@sbcglobal.net, (937) 294-7803

Sheila Humphreys, Zane Trace Button Club, (614) 325-5605

Appointed Positions

Data Keeper, Kit Campbell, kitcampbell11@hotmail.com, (440) 759-5714

Coordinator of Shows (VP), Helen Richwine, hlrchwine@neo.rr.com, (c) (330) 472-5922

Junior Advisor, P. Jean Champoux, peajeane@aol.com, (614) 891-0770

Bulletin Editor, Carole Koontz, skykoontz@gmail.com, (740) 745-2685

Webmaster, Kit Campbell, webmaster@ohiobuttons.org

Committee Chairs

Membership, Helen Richwine, hlrchwine@neo.rr.com, (c) (330) 472-5922

Judging, Krystin Reider, reidermor@gmail.com, (301) 357-0946

Auditing, Marilyn Regrut, pregrut@aol.com, (614) 208-4880

National Show Awards, Judi Schuman, hey2jude@me.com, (210) 210-1420

Nominating Committee, Marilyn Regrut, pregrut@aol.com, (614) 208-4880

Tray Check-in/Check-out, Susan Chisnell-Spires, bsbs_editor@hotmail.com,
(330) 464-1281

Membership Renewal is due October 31

Members—\$25.00; Junior Members—\$5.00 Make checks payable to Buckeye State Button Society and send to Helen Richwine, 500 E. Clinton St., Doylestown, OH 44230.

Dealers must be members in good standing. Members must be in good standing to compete. Please notify the Membership Chair of any changes to your address.

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Cover button: One of the “heavenly buttons” shown by Christy Mecey in her program at the 2023 Spring Show in Akron was an enamel by Diana Weiler that depicts Leonardo da Vinci.

Button Books for Button People

New!

Buckles and Clasps: Their History, Use and Design

Elizabeth Hughes, 607 pages.....\$145.00
(plus \$15.00 shipping)

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Elizabeth Hughes and Marion Lester

Price for NBS members—\$375.00 (shipping \$18.00)

Price guide to the Big Book of Buttons

(Works with both the 1st and 2nd editions).....\$15.00

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James W. Hall, 228 pages.....\$55.00

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Ellaraine Lockie, Foreword by Millicent Safro.....\$24.50

The Button Industry in the United States

Edward Newberger.....\$15.00

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Anne Flood.....\$34.50

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Anne Flood.....\$29.50

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President's Letter

Hello to all our button friends in Ohio and beyond!

This bulletin brings you lots of news about our 2023 Spring Show, which was wonderful and successful. I, of course, spent too much on buttons and won the most measles award, as I did last year; but I went home happy. Pictures and reports in this issue cover the key events.

Please check out the updated website. Kit Campbell and Bob Weinberg have been working diligently to get the site working and they have done a great job. Be patient because it is a process and they continue to tweak it. Try ohiobuttons.org to see it. Also send a thank you note to Jim and Mary Weinberg (not relatives) to thank them for all of their work for BSBS in the past. Jim created and ran the website for more than 16 years and Mary was the editor of *The Bulletin*, held many offices, and chaired many committees. Their address is 252 Queens Crossing, Centerville, OH 45458-4234.

A big thank you to Krystin Reider for stepping up to be judging chair. She will be working with Helen, and we hope that someone else will also volunteer to make this difficult and important job go more smoothly.

MRBA's 2023 show is in Normal, Illinois, October 12-14. The theme is "Pearls and Gems." Check mrba website for more info. I hope that everyone who is going to the national show also has a great time!

—Laurel

Buckeye State Button Society Show Favor Buttons

Did you know that any show favor button is considered to be a "usage" button in competition and will get a "usage" point? (See the Blue Book Appendix for explanation of class 25-2.) So we'd like your help! Below are the BSBS favor buttons for which we have photographs.

We are in search of the years 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015, 2017, and 2019. Please send photos of BSBS favor buttons to kitcampbell11@hotmail.com. We will put together a list which can be found on the new BSBS website..



2022



2018



2016



2012

If you have BSBS favor buttons from any earlier years, send those, also. All contributed photos are appreciated and welcome. Thank you!

—Kit Campbell, Webmaster

A Heartfelt Thank You to Jim and Mary Weinberg as Jim “Turns over the Keys” to the BSBS Website System.

The general public is oblivious to all the technology and changes going on behind the scenes of websites. Most also forget that the information, speed, and spread of information is so different today from the printed media we grew up with, followed by evolving television and radio broadcast systems.

For button collectors, the printed flyers and news that for many years were simply posted at the local library evolved into excellently written and printed booklets mailed during the year to members. In the past year or so, we have seen our own bulletin blossom from black and white to full color delivered to your mailbox.

Nearly all the members of the Ohio club and certainly the same for all our regional clubs have at one time or another visited and read through our internet website at www.ohiobuttons.org. Many enjoy the research they can do with the unusually full catalog of winning competition trays with full range of materials, sizes, shapes, and theme titles. But none of this would be available without the members' collections and sharing and a mountain of constant work from volunteers and their wide range of personal skills.

Jim and Mary Weinberg are the people behind our website and photo collection, Mary as a collector and Jim having professional training and work in information technology—going back to the old punch cards and computers that took up entire rooms.

Jim has been the wizard behind the curtain—designing, programming, and continuously improving the website from 2006 to the present. For many years Jim and Mary would come to the Ohio Shows and scan more than 100 winning trays. That's more than 1500 scanned images to date and more than 45,000 buttons! Next, Jim would add data to the images for division, award number, name, and place. He uploaded all this information to the BSBS website. Jim made changes to the website for each officer change, each new show, updated forms as needed, etc. The BSBS website has been awarded “Best in Class” several times. In his spare time, Jim added audio and motion to the website.

Mary was an active member of both the Polk Box and COBC clubs. She held the editor and data keeper positions for many years. Mary was always the person to make name tags/programs, etc. for COBC shows, in addition to making sure trays were scanned and identified correctly. She was enthusiastic about being editor, and *The Bulletin* evolved into the booklet with different colored covers for the seasons. We want to give a huge THANK YOU and show our sincere APPRECIATION to Jim for building and maintaining the BSBS website for 16 years. Thank you, Jim! We want to show our appreciation for Mary for envisioning the scanned winning trays to be posted on the website. Thank you, Mary!

We want to make buttons relevant to our children and grandchildren using today's technology. We are soon to unveil a modernized version of our old site and features, with new volunteers and different talents. Kit Campbell and Laurel Weinberg's husband, Bob, collaborated for several months to develop this for BSBS. Kit will now carry on as “webmaster” as well as button lover. Bob will assist in a pinch. But all of this new work stands on the shoulders and 16 years of service by Jim Weinberg. It would not have been possible without his base to grow forward.

A heartfelt thank you, from all of us.

Editor's Notes

I hope you enjoy this issue, especially Lois Kuhns' fascinating article. We have much to learn about our buttons, including their chemical composition!

We are doing a great job of displaying our little treasures at area libraries and at events. Jo Richards of the Akron Area Button Club sent these photos of her attractive display at the Portage Lakes Branch Library.



Below, members of Zane Trace Button Club display buttons at the Perry County Sewing Smorgasbord and the John McIntire Library in Zanesville. Pictured are (left to right) Carol Morris, Carole Koontz, Sheila Humphreys, Doris Scott, Carol Morris, Carole Koontz, and Susan Everett.



A Generous Donation

In the spring, I was contacted through the BSBS website by a gentle lady named Wanda Simandl. She inquired if we would like to have some of her mother's Ohio and NBS bulletins. I said yes and they were shipped to me. I asked Wanda to tell me a little bit about her grandmother, and this is what she wrote:

"My grandmother, Mildred Gallatin (Mrs. A. H. Gallatin) was an avid button collector while living in Wellington, Ohio. She was a member of the National Button Society, the Buckeye Bulletin [Buckeye State Button Society], and Wellington Button Club. I have been given copies of her button bulletins dating 1949-1972.

"I was in fifth grade when we moved to Milwaukee, so I have faded memories of Grandma and her beautiful buttons. She hosted many Wellington Button Club meetings in her home. She stored her button collection in a five-foot-tall metal cabinet that had many shallow drawers containing button-sized compartments. On rare occasions I was allowed to explore those drawers. She used a compass and fountain pen to create the button card displays. Many years later she gifted her button cards to her three adult children and seven grandchildren. I'm in the process of sharing her 60 remaining cards with her great grandchildren. Mildred was a talented quilter, wedding cake decorator, seamstress, jam maker, and wildflower collector. When I was a young bride, she graciously shared her skills with me! I was delighted!"

Below is a photo of Mildred circa 1950s and some of her button trays, courtesy of Wanda Simandl.

—Kit Campbell, Cleveland Button Society



Mildred Gallatin, center, and buttons from two of her trays.

DON'T FORGET: Awards submissions for 2025 competition in Ohio must be mailed by August 31, 2023 for publication in the winter 2023 issue. Forms will not be printed in *The Bulletin* but may be found at the website, ohiobuttons.org. Mail the forms and payment to Helen Richwine, 500 E. Clinton St., Doylestown, OH 44230-1509. Any questions about awards/competition should be directed to Krystin Reider, new judging chair, at reidermor@gmail.com. **ALSO:** Please consider serving BSBS as an officer. Elections will be held in 2024, so let the chair of the Nominating Committee know of your interest. **BULLETIN DEADLINES:** Keep those articles and photos coming! Deadlines are Oct. 1 for the winter issue, Jan. 1 for the spring issue, and May 1 for the summer issue. Each club is responsible for submitting one long and one short educational article each year.

Early 19th Century Button with a Story

One never knows what treasure awaits when sorting through the latest button box purchased at auction.

The button below was found buried in just such a lot. This plain old fabric button, while pretty with its warm coloring, was not a button that stood out among the beautiful brass picture buttons around it. It wasn't until I read the hand-written slip of paper attached to the button shank that the button's true value and sentiment were revealed.

On that paper, written in pencil, was the following poem by author unknown (original form retained):

*In 1827 a shawl I was
Worn by Mary Delight Warner
Her name to Parker was changed
and now a button I became*



Photos on this page by Leanne Watkins, from her button collection.

GOONEY BIRDS

A gooney bird is another name for an albatross of the South Pacific. They are known to be quite awkward and clumsy when taking off and landing, often times taking seven or eight tries to get airborne. They have equal difficulty in landing and usually end up tumbling over and over, their bodies bouncing several feet until they are able to gain their footing. Once in flight, though, they are as graceful as any bird with an impressive wing span of about six feet.

It is interesting to note that the C-47 Skytrain plane, used in WWII, was also referred to as a Gooney Bird, as its large lumbering silhouette shared a lot in common with the bird. With the ability to carry large loads of food, soldiers, ammunitions, and even jeeps, the Gooney Bird played a critical role in support operations that helped win the war. On D-Day, the Gooney Bird aircraft carried thirteen thousand paratroopers to the beaches of Normandy.

The card of buttons to the left was sold around Christmas time in 1964. The plastic, self-shank buttons came in either black or red and featured rhinestone eyes. The painting of the palm tree echoes the southern Pacific habitat of the bird. The buttons measure 11/16" wide.

References:

blog.museumofflight.org/the-gooney-bird-unsung-hero-of-wwii

Information also taken from an unmarked article, likely from a button bulletin, found in an auction box.

—Leanne Watkins, Central Ohio Button Collectors



Simplicity Vintage Brand Buttons

Buttons do not have to be antique to be collectible. The following six buttons from Simplicity were bought in 2019 from a JOANN Fabric Store. They feature the front drawings from vintage patterns along with the pattern number. The buttons are a resin plastic with an applied plastic shank and measure 1 ¼" x 2" in size. All six buttons in the series are shown. An iron-on patch from the same Simplicity Vintage line decorates the button display below, center.



—Leanne Watkins, Central Ohio Button Collectors

BETTER BUTTONS THROUGH CHEMISTRY

"The beauty of living things is not the atoms that go into it, but the way those atoms are put together." Carl Sagan

"I am among those who think that science has great beauty." Marie Curie

When first joining the Cleveland Button Society two years ago, I was asked what type of buttons were in my collection. Totally clueless about buttons, I had been using my grandmother's collection to create button bouquets for a local charity. Certain I was using buttons worth more than was charged for the bouquets, I put in a request to a librarian for the CBS contact person. Jan Milic, president of CBS, put me in contact with Phil Austin. He kindly agreed to look over my old buttons. When I saw what a real button collector's stash looked like, my jaw dropped. Most collectors value the beauty, rarity, craftsmanship, materials, history and/or story behind their buttons. Hmm, what was I going to collect?

Buttons that were deadly, glow under UV light, cause dermatitis, change color, and were created serendipitously—all were of great interest to me. I was an analytical chemist and, later, a chemistry teacher, so logically, I decided to look for the different chemical elements in buttons. Thus began my quest. I attended my first Buckeye State convention but discovered even the dealers had blank looks when asked for buttons that had arsenic or magnesium in them. After much research, many purchases, plus creating a few of my own buttons, I prepared for the 2022 National Button Society convention two trays containing buttons representing forty different elements. Sadly, the perception of the judges was that the trays represented a game or puzzle. Hopefully, this article will help bridge the gap between the types of buttons and the elements found in them.

First a Little Basic Chemistry

Most button collectors actually have a lot of elements already in their collections. The elements copper, tin, zinc, iron, uranium, aluminum, cobalt, lead, silver, gold, platinum, and nickel probably occupy a position on one or more of their trays.

The Periodic Table is organized according to the number of protons (1 through 118) in each element, giving it its specific properties. The table shown on my trays may be obtained at <https://sciencenotes.org/wp-content/uploads/2018/05/PeriodicTableMuted2018.pdf>. I will refer to which tray the element button is on, but the elements are not shown in numerical order. Henceforth, if a button is on Tray I, in row 2, it will be shown as (T1, R2). For my purposes, the element may be in any part of the button, including decorative finishes or OME.

Each element is represented by a symbol containing a capital letter (**H**) or a capital and lowercase letter (**He**). The **atomic number** is the number of protons shown as a subscript before the symbol: ${}^1\text{H}$, hydrogen; ${}_{13}\text{Al}$, aluminum; and ${}_{79}\text{Au}$, gold are examples. Not all elements have symbols that represent the English name, instead being named by the Greek, Latin, or other names.

Where to Find the Elements in Your Buttons

Only the elements found on my trays will be reviewed here. Unfortunately, without a chemical analysis of its materials, the exact elemental composition remains unknown unless there were documented methods and ingredients used in alloys, paints, ceramics, enamels and glazes used to create it. Reliance on the knowledge of the button dealers from whom we purchase buttons is critical. Research into chemical formulas or similar analyses were used to identify one element in each button for display.

- ¹H Hydrogen** (TII, R4) represents about 90% of atoms in the universe. This casein-topped button contains hydrogen, as do the vast majority of plastics and polymers. Most materials contain hydrogen; those that *do not* are metals, alloys, pure elements, salts such as sodium chloride, and a number of minerals, gemstones, and mineraloids.
- ⁵B Boron** (TI, R1) is shown as a cobalt blue borosilicate glass; Pyrex is also an example of a borosilicate glass. Boron can be used to tan leather, acts as a fire retardant in fabric, and is found in some ceramics, pottery, earthenware, and their glazes; consequently, there may be a small presence of boron in those types of buttons.
- ⁶C Carbon** (TI, R4, wood) found in all living things, forms mostly organic chemicals. Diamonds, coal, plastics, polymers, carbonate minerals/mineraloids, and steel all contain carbon. Carbon is the sixth most abundant element in the universe but can form over 10 million compounds!
- ⁷N Nitrogen** (TII, R1) is essential to life, present in all proteins, amines, amino acids, and plants. Nitrocellulose and camphor made the buffed celluloid shown here. Nitrogen is also found in buttons made of/containing amino resins, antler, bone, cork, vegetable ivory, hair, horn, ivory, leather, legumes, nylon, seeds, skins, tapa cloth, wicker, and some woods.
- ⁸O Oxygen** (TI, R2) is represented with a Lucite button. Oxygen is the third most abundant element in the universe, making it simpler to indicate what button substances *do not contain* oxygen: alloys, metals, polyethylene, styrene, polypropylene, polyvinyl chloride, natural rubber, and gutta percha.
- ¹¹Na Sodium** (TI, R3) is essential to life. Minerals/gemstones containing sodium include jadeite, sodalite (shown here), and lapis lazuli. Sodium is used in common glass, with the wide variety of glass button colors coming from the addition of metal ions. See references below.
- ¹²Mg Magnesium** (TI, R1) is also essential to life. It, too, is used in glass production to add durability. Magnesium is found in these minerals/gemstones: garnet, meerschaum, ricolite, rhodochrosite, and the nephrite jade swan button on Tray I.

- ¹³Al Aluminum** (Tl, R1) is the material of the enameled JHB Paddington Bear. Aluminum occurs in the silicate minerals/gemstones listed below plus garnet, turquoise, lapis lazuli, petrified wood, and sapphire. Clays, ceramics, and china buttons contain aluminum. Aluminum as a metal is most often alloyed to improve its mechanical properties.
- ¹⁴Si Silicon** (Tll, R3) is represented in black glass. All glass, silicate, and aluminum silicate minerals/gemstones plus the mineraloids onyx and obsidian contain silicon. Ceramics, clays, and china buttons, as well as silicone soft rubber, are silicon compounds.
- ¹⁵P Phosphorus** (Tll, R4) is found in bone, horn, ivory, antler, plants, and phosphate minerals.
- ¹⁶S Sulfur** (Tl, R1) was the secret to Goodyear's vulcanization process for stable rubber, a serendipitous event. Sulfur is in two amino acids necessary for all living cells. Button sources are sulfide and sulfate minerals (see below), skin, hair, feathers and plant proteins (legumes, nuts, seeds).
- ¹⁷Cl Chlorine** (Tl, R3, laser etched horn) is essential for metabolism. It is found in horn, polymer clays, and polyvinyl chloride.
- ¹⁹K Potassium** (Tl, R3) is another required element for life. Potassium is present in the coconut shell example, in the clays used to produce Arita buttons, and in catlinite, ceramics, clays, lava, stoneware, and moonstone.
- ²⁰Ca Calcium** (Tll, R2) is present in all bone and carbonate minerals, pearl (shown), soda lime glass, pottery, Arita and other ceramics, lava, plaster of Paris, and fluorite.*
- ²²Ti Titanium** (Tll, R4) is most often alloyed with a wide range of metals as in this Ti6Al4V example. Titanium dioxide is used as an intensely white pigment in paints and plastics. Star sapphire gets its star-forming shine from titanium dioxide impurities. Titanium is alloyed with gold to produce an alloy that can be marketed as 24-karat gold because the 1% titanium is insufficient to require a lower mark, but gives it the strength of 14-karat gold rather than the softer pure gold. *See Gafner reference.*
- ²⁴Cr Chromium** (Tll, R4) is used in stainless steel and other alloys or for corrosion-resistant plating. Chromium ions are used as a green pigment in glassmaking and ceramic glazes. Adding chromium to corundum produces synthetic rubies. Chrome yellow is a stable yellow pigment which was formerly used for school buses; perhaps it was used for buttons, too. Chromium is used as a mordant for dyes in fabric and in tanning leather.
- ²⁵Mn Manganese** (Tll, R1, rhodochrosite) is necessary for bones, steel production, alloys, and pigments for the coloring of ceramics and glass. Prior to 1915, magnesium was added to glass to decolorize the natural iron impurities which gave glass a green tint. When this glass is exposed to UV light or sunlight for a prolonged period, it turns into varying shades of purple.

- 26Fe Iron** (T1, R2), required for life, is used mainly in steel, stainless steel, and other alloys. Between 1800-1870, iron buttons were inexpensive, stamped, 2- to 5-holed sew-throughs, but some 2-piece self-shanked have been found. Because iron rusts easily, many early buttons are in poor shape and quite rare. These buttons are attracted to magnets.
- 27Co Cobalt** (T11, R1) gives a distinctive blue color to glass, ceramics, inks, paints, and varnishes. Cobalt as a metal is attracted to magnets.
- 28Ni Nickel** (T1, R2) is used in a large array of alloys including stainless steel and coinage. Nickel ions give a green color to glass. Nickel is the leading cause of skin-contact allergy (dermatitis). This pure metal is attracted to a magnet.
- 29Cu Copper** (T1, R4) is found in its pure elemental form and was used in coins and ornaments as early as 8000 BCE. It helped humans emerge from the Stone Age around 5500 BCE and the Bronze Age about 3000 BCE. About 900 BCE in what is now Pakistan, the first copper alloy button was made that fit into a loop. (Button holes came along in the 13th century.) *See list below for copper-containing alloys used in buttons.*
- 30Zn Zinc** (T11, R2), is commonly used as a galvanizing metal with iron or steel to prevent corrosion. Although zinc is not magnetic, the thin layer of the galvanization process will still allow the steel and iron beneath to be magnetic. It alloys with copper to produce brass and may be a minor alloy metal in some bronzes. Alloyed with copper and nickel, it produces nickel silver, German silver, or *nickel*. Many metal buttons contain zinc.
- 33As Arsenic** (T11, R4) is used in glassmaking to reduce bubbles and contributes to its functional structure. Arsenic pigments (Scheele's, emerald, and Paris green) were widely used during the Victorian era in wallpaper and textiles. This colorful green became all the rage in clothing, often with matching buttons. *See the photo on page 17.* Consider the poisonous, prolonged contact by the seamstresses. Deaths followed!
- 39Y Yttrium** (T1, R2) is a rare earth element found in the earth's crust. Yttrium is used to make synthetic garnets. Chemical analysis shows it is present in small amounts in the jasperware slip used by Rzaniski Studio Ceramics.
- 40Zr Zirconium** (T11, R3) is found in antlers, most likely due to diet that includes soil to meet mineral and salt requirements (see K. Buddhachat ...). Zirconium is used in ceramics, as an alloying agent, in lead-free crystal glass, and as a common diamond substitute (zirconium dioxide, cubic zirconia).
- 41Nb Niobium** (T11, R1) is used in high-tech alloys. In commemorative coins and jewelry, it takes on iridescent colors when anodized. The chemical analysis of the Rzaniski Studio Ceramics' jasperware slip showed a small presence of niobium.
- 42Mo Molybdenum** (T11, R4) is used mainly as an alloy material.

This pure sample was obtained from <https://chemistrycabinet.com>. Holes were drilled, then the metal scratched and inked for this hand-made button.

45Rh Rhodium (TII, R1) is the rarest and most expensive precious metal on earth costing 10X that of platinum or gold. This pewter button was electroplated with rhodium to produce the bright, silvery white luster. White gold and sterling silver are sometimes rhodium plated to reduce tarnishing but the thin layer can wear away with use.

47Ag Silver (TI, R3) is one of the native elements but is a soft metal, requiring it be alloyed with other metals to be useful. Sterling silver is 92.5% silver/7.5 % copper; "coin" is 90% silver. Used since the 16th century in buttons, silver is well known to button collectors. Many livery buttons are silver plated copper.

48Cd Cadmium (TII, R2) salts are used in paints and glass production to produce vivid yellow, oranges, and reds. A known carcinogen, care must be taken when working with these substances, especially if inhaled.

49In Indium (TII, R3) is a very soft metal with a brilliant luster. The example shown here is a hand-made button using an old shank and a fusible alloy called Field's metal made of bismuth, indium, and tin. It has a melting point of 144° F so could never be used around an oven or stove!

50Sn Tin (TI, R4) is used in many alloys. See list below. Tin is used to coat iron, zinc, and steel to prevent corrosion. Tin exists in two different forms or "allotropes" that are still the pure metal but are arranged in a different manner, much like diamond and graphite are both carbon. The one form is a malleable metal, while the other is a powdery material. Buttons of the metallic type can be transformed into the powdery form spontaneously, called "tin disease," if the temperature is sustained below 55.8°F. A persistent legend that Napoleon's Army was defeated in the 1812 Russian campaign by the failure of the tin buttons is a fun one to investigate.

51Sb Antimony (TI, R2) is often alloyed with tin and lead. This Danforth elephant is a modern pewter composed of tin, copper, and antimony. Modern pewters eliminated the lead.

56Ba Barium (TI, R3) is not used often as a metal but its salt revolutionized the pottery industry. Josiah Wedgwood spent years doing thousands of experiments to create the stoneware, Jasperware, that took color throughout its body. His secret ingredient was barium sulfate!

8Pt Platinum (TI, R4) is one of the precious native metals. Because it is so costly, it is often used as a decorative finish or plating. Platinum provides excellent resistance to corrosion. One company, Menē, sells 99.9% pure platinum buttons (\$\$\$).

79Au Gold (TII, R2) is a soft, bendable precious native element. Many buttons are gold plated to prevent corrosion and to bring

Continued on page 16

Buttons displayed with their corresponding elements:

- 82 Pb Lead**: A dark, textured button.
- 13 Al Aluminum**: A small blue button with a red figure.
- 12 Mg Magnesium**: A green, irregularly shaped button.
- 5 B Boron**: A dark blue, irregularly shaped button.
- 16 S Sulfur**: A brown, circular button.
- 28 Ni Nickel**: A brown, circular button.
- 39 Y Yttrium**: A blue, circular button with a floral design.
- 26 Fe Iron**: A silver, circular button with a floral design.
- 8 O Oxygen**: A clear, square button with red floral patterns.
- 51 Sb Antimony**: A silver, circular button with an elephant design.
- 56 Ba Barium**: A dark, star-shaped button.
- 17 Cl Chlorine**: A silver, circular button with a floral design.
- 11 Na Sodium**: A blue, irregularly shaped button.
- 47 Ag Silver**: A silver, circular button with a floral design.
- 19 K Potassium**: A brown, irregularly shaped button with a fish design.
- 78 Pt Platinum**: A green, irregularly shaped button with a lizard design.
- 6 C Carbon**: A brown, irregularly shaped button with a leaf design.
- 80 Hg Mercury**: A red, circular button with a floral design.
- 29 Cu Copper**: A brown, circular button.
- 50 Sn Tin**: A silver, circular button with a floral design.

Periodic Table of the Elements

Symbol

REDUCED SIZE

Better Buttons Through Chemistry, Tray I

7 **N**
Nitrogen

27 **Co**
Cobalt

25 **Mn**
Manganese

45 **Rh**
Rhodium

41 **Nb**
Niobium

48 **Cd**
Cadmium

20 **Ca**
Calcium

79 **Au**
Gold

30 **Zn**
Zinc

92 **U**
Uranium

Periodic Table of the Elements

1 **H**
Hydrogen

2 **He**
Helium

3 **Li**
Lithium

4 **Be**
Beryllium

5 **B**
Boron

6 **C**
Carbon

7 **N**
Nitrogen

8 **O**
Oxygen

9 **F**
Fluorine

10 **Ne**
Neon

11 **Na**
Sodium

12 **Mg**
Magnesium

13 **Al**
Aluminum

14 **Si**
Silicon

15 **P**
Phosphorus

16 **S**
Sulfur

17 **Cl**
Chlorine

18 **Ar**
Argon

19 **K**
Potassium

20 **Ca**
Calcium

21 **Sc**
Scandium

22 **Ti**
Titanium

23 **V**
Vanadium

24 **Cr**
Chromium

25 **Mn**
Manganese

26 **Fe**
Iron

27 **Co**
Cobalt

28 **Ni**
Nickel

29 **Cu**
Copper

30 **Zn**
Zinc

31 **Ga**
Gallium

32 **Ge**
Germanium

33 **As**
Arsenic

34 **Se**
Selenium

35 **Br**
Bromine

36 **Kr**
Krypton

37 **Rb**
Rubidium

38 **Sr**
Strontium

39 **Y**
Yttrium

40 **Zr**
Zirconium

41 **Nb**
Niobium

42 **Mo**
Molybdenum

43 **Tc**
Technetium

44 **Ru**
Ruthenium

45 **Rh**
Rhodium

46 **Pd**
Palladium

47 **Ag**
Silver

48 **Cd**
Cadmium

49 **In**
Indium

50 **Sn**
Tin

51 **Sb**
Antimony

52 **Te**
Tellurium

53 **I**
Iodine

54 **Xe**
Xenon

55 **Cs**
Cesium

56 **Ba**
Barium

57 **La**
Lanthanum

58 **Ce**
Cerium

59 **Pr**
Praseodymium

60 **Nd**
Neodymium

61 **Pm**
Promethium

62 **Sm**
Samarium

63 **Eu**
Europium

64 **Gd**
Gadolinium

65 **Tb**
Terbium

66 **Dy**
Dysprosium

67 **Ho**
Holmium

68 **Er**
Erbium

69 **Tm**
Thulium

70 **Yb**
Ytterbium

71 **Lu**
Lutetium

72 **Hf**
Hafnium

73 **Ta**
Tantalum

74 **W**
Tungsten

75 **Re**
Rhenium

76 **Os**
Osmium

77 **Ir**
Iridium

78 **Pt**
Platinum

79 **Au**
Gold

80 **Hg**
Mercury

81 **Tl**
Thallium

82 **Pb**
Lead

83 **Bi**
Bismuth

84 **Po**
Polonium

85 **At**
Astatine

86 **Rn**
Radon

87 **Fr**
Francium

88 **Ra**
Radium

89 **Ac**
Actinium

90 **Th**
Thorium

91 **Pa**
Protactinium

92 **U**
Uranium

93 **Np**
Neptunium

94 **Pu**
Plutonium

95 **Am**
Americium

96 **Cm**
Curium

97 **Bk**
Berkelium

98 **Cf**
Californium

99 **Es**
Einsteinium

100 **Fm**
Fermium

101 **Md**
Mendelevium

102 **No**
Nobelium

103 **Lr**
Lawrencium

104 **Rf**
Rutherfordium

105 **Db**
Dubnium

106 **Sg**
Seaborgium

107 **Bh**
Bohrium

108 **Hs**
Hassium

109 **Mt**
Meitnerium

110 **Ds**
Darmstadtium

111 **Rg**
Roentgenium

112 **Cn**
Copernicium

113 **Nh**
Nihonium

114 **Fl**
Flerovium

115 **Mc**
Moscovium

116 **Lv**
Livermorium

117 **Ts**
Tennessine

118 **Og**
Oganesson

119 **Uue**
Ununennium

120 **Uub**
Unbibium

121 **Uut**
Ununtrium

122 **Uuq**
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123 **Uup**
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beauty to them without the high cost of pure gold. Many livery buttons were gilded brass. One company, Menē, sells 24k, pure gold buttons (\$\$\$).

⁸⁰Hg Mercury (Tl, R4) is a health hazard if absorbed through the skin or by breathing the vapor. Cinnabar is its main ore. When powdered and added to lacquer it can be layered and carved as was this modern button.

⁸²Pb Lead (Tl, R1) is a cheap, soft, heavy metal which easily tarnishes to dull gray in air. Once prevalent in pewter buttons and white paints but now a known neurotoxin, lead has been greatly eliminated in modern alloys and paints, at least in Europe and the United States. Look for lead-free labels on imported buttons. Lead coloring agents are still used in ceramic glazes and glass production for red and yellow shades. Lead has a fascinating history and worth a look from 3000 BCE onward.

⁸³Bi Bismuth (Tl, R3), shown in its pure stairstep crystal with iridescent colors, is a great alloying agent as a nontoxic replacement for lead in ceramic glazes.

⁹²U Uranium (Tl, R2), present in Vaseline glass and the whitish buttons made of Czech glass during the Art Deco period, glows green under UV light but not due to the incredibly small amount of radioactivity. The reason it glows is that the UV energy is absorbed, allowing the electrons to jump to higher energy levels, releasing the energy in the green wavelength (550nm) when it returns to the ground state. (Whew, a lot of chemistry there!)

Alloys, Minerals, Gemstones, Mineraloids are limited to those found in buttons mentioned in Jocelyn Howells' book, *Button Materials A-Z: Identification Guide* or on my trays. Those mentioned above and below and marked with an asterisk are not in her book.

Alloys

Bidri (copper + zinc + lead)
 Brass (copper + zinc)
 Britannia (tin + antimony)
 Bronze (copper + tin)
 Field's metal* (bismuth + indium + tin)
 German Silver (copper + nickel + zinc)
 Gold alloys (gold + metals)
 Nickel silver (copper + nickel + zinc)
 Niello (silver + copper + lead)
 Pewter old (tin + copper + lead)
 Pewter new (tin + copper + antimony)
 Pinchbeck (copper + zinc)
 Silver (silver + copper, usually)
 Steel (iron + carbon + other metals)
 Tinned white metal (tin + iron)
 Tinned zinc (tin + zinc)



A British arsenic-laden silk dress, ca. 1870, from the Costume Collection of the Metropolitan Museum of Art, and a Catharine Breyer Van Bomel Foundation Fund, 1980, accession. Public domain photo.

Ti6Al4V* (titanium + aluminum + vanadium)

Tombac (copper + zinc + arsenic)

White metal (tin + antimony)

Mineraloids/Gemstones

Coal -- carbon

Glass -- silicon dioxide

Jet -- carbon + hydrogen + sulfur + oxygen

Obsidian -- silicon dioxide

Opal -- silicon dioxide + water

Pearl -- calcium carbonate

Mineral classes/Gemstones examples described in *Button Materials*

A-Z:

Chemical formulas for the ions making up the classification are shown in parentheses. Various colors of similar minerals/gemstones are a result of natural metallic impurities specific to the region of the world in which they are found.

Carbonates (CO_3^{-2}): coral, malachite, Petoskey stone, rhodochrosite, shell

Halides (F^- , Cl^- , Br^- , or I^-): fluorite*, tiger's eye

Oxides (O^{-2}): hematite, sapphire

Phosphates (PO_4^{-3}): dinosaur bone, lapis lazuli, turquoise

Silicates (SiO_2 , **silicon dioxide**): amethyst, carnelian, citrine, crepe stone, crystal rock, jasper, onyx, ricolite, quartz, basic glass.

(SiO_4^{-4} , **silicate**): garnet, nephrite jade, lava, meerschaum, moonstone, petrified wood, rhodochrosite, unakite, zircon

Aluminum Silicates ($\text{Al}_2\text{O}_3 + \text{SiO}_2$): jadeite jade, jasper, moonstone, unakite

Sulfates (SO_4^{-2}): celestite*

Sulfides (S^{-2}): cinnabar, galena, marcasite

Native elements are pure elements in buttons: carbon, copper, gold, iron, platinum, silver

Glossary

Alloy -- A metallic mixture of two or more metals such as copper and zinc (brass), copper and tin (bronze) or a metal and a nonmetal such as iron and carbon (steel).

Atomic Number -- The number of protons in the element used to define the element.

Compound -- Two or more elements chemically combined.

Element -- A substance that cannot be broken down by ordinary means into simpler substances. Each element has a unique number of protons in its nucleus, from 1 to 118, that identify it.

Ion -- One or more elements which carry a deficit (+ ion) or extra electrons (- ions).

Mineral -- A naturally occurring, non-living material with specific structure and characteristics. The common mineral classifications

are shown with button examples. Many precious and semi-precious minerals are referred to as **gemstones**. Many of the minerals you can buy today may not be entirely natural. They can be heat treated, irradiated, and dyed to change color. Colors of the pure minerals develop based upon the conditions of their formation and metallic impurities in the soil/stone. Much of the black onyx sold is a variety of agate that has been soaked in sugar then heated in corrosive sulfuric acid. Amethyst crystals can be heat treated to resemble citrine.

Metalloid -- Naturally occurring mineral-like elements shown in darker blue zig zag on the periodic table. These elements have both metal and nonmetal characteristics.

Organic Compounds -- Associated with life processes, containing carbon.

Plastic -- Synthetic polymers exist in two forms. **Thermoplastics** are capable of being remolded and reshaped numerous times, recycled and reused, whereas **thermosetting plastics** form a permanent solid state but cannot be reshaped or recycled.

Polymer -- Synthetic or naturally occurring materials of repeating units. All plastics are polymers but not all polymers are plastic. Natural rubber, silk, wool, cellulose and tortoise shell are natural polymers but not plastic.

Salt -- Any combination of + ions and - ions that results in a net zero charge.

References:

Brunning, Andy. "Chemistry of Coloured Glass." *Compound Interest*. 3 March 2015. <https://www.compoundchem.com/2015/03/03/coloured-glass/>

Buddhacchat, Kittisak et al. "Elemental Analysis of Bone, Teeth, Horn and Antler in Different Animal Species Using Non-Invasive Handheld X-ray Fluorescence." *PLoS One*. 19 May 2016. Accessed at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4873253/>.

Cooper, Katie. Personal correspondence, April, 2022.

Cuthbertson, Alan. "History of Wedgwood Jasper." *Collecting Wedgwood*. 15 May 2017. <https://www.collectingwedgwood.com/wedgwood-jasper>.

Gafner, Geoffrey. "The Development of 990 Gold-titanium: Its Production, Use and Properties." *Gold Bulletin* 22, No. 4, (1989): 112-122. <https://doi.org/10.1007/BF03214709> or rdcu.be/c4pXK.

Howells, Jocelyn. *Button Materials A-Z: Identification Guide*. Portland, Oregon: JossButton. 2006.

Little, Becky. "Killer Clothing Was All the Rage In the 19th Century." *National Geographic*, 17 October 2016.

Marks, Ben. "These People Love to Collect Radioactive Glass. Are They Nuts?" *Collectors Weekly*, 30 July 2014 [12]. Accessed 9 Jan. 2023 on the internet at <https://www.collectorsweekly.com/articles/these-people-love-to-collect-radioactive-glass/>.

Montanari, Riccardo and Schiavone, Salvatore. "The Early Porcelain Kilns of Arita: Identification of Raw Materials and Their Use From the 17th to 19th Century." *Open Ceramics*, Vol. 9, March 2022. Accessed from <https://reader.elsevier.com/reader/sd/pii/S2666539521001632> on 9 Jan. 2023.

General Information Websites:

<https://buttoncountry.com>
<http://geology.com/minerals> or <http://geology.com/gemstones>
<https://polymerdatabase.com>
<http://www.webelements.com> (Click on element to learn about it.)
<https://sciencenotes.org/wp-content/uploads/2018/05PeriodicTableMuted2018.pdf>
<https://wikipedia.org>

Acknowledgements

Phil and Emily Austin for being button mentors, encouraging me in my quest, assisting me with this article, and taking my trays to the 2022 National Convention.

Katie Cooper, Rzanski Studio Ceramics, for chemical analysis of the jasperware slip.

Jan Milic, CBS president, for encouraging me to undertake my concept and to write about it.

— Lois Kuhns, Cleveland Button Society

Show Coordinator's Report 2023

Our spring show was at the Hilton Akron/Fairlawn Hotel on April 1-2, with judging March 31st. The Akron Area Button Club hosted the event. The theme was Heavenly Buttons. The favor button was designed and made of jasperware by Katie Cooper of Rzanski Studio Ceramics, Uniontown, Ohio.

There were 119 guests including 8 dealers and their helpers. A total of 59 sleeping rooms were used (15 Thursday, 22 Friday and 22 Saturday). There were 3 food events. On Friday we had 43 at our lunch for judges. On Saturday we had 41 at our pre-program dinner, and at the Sunday breakfast there were 45 in attendance before the general membership meeting.

Our educational program Saturday night was focused on heavenly buttons. Christy Mecey from Michigan entertained us while she was educating us, combining music, art, and science into the study of heavenly buttons. The silent auction following the program was very successful. Thank you to everyone who contributed and who participated in the bidding. This fundraiser is essential to helping us fund our show and yearly expenses. The competition report can be found in the membership meeting notes.

—Helen Richwine

News from Gina Kohn and NBS**Volunteer Opportunity for NBS Members: Membership Committee**

A new program is beginning here at NBS and your participation is an integral part of making it a success. As you are aware, many of our clubs are having difficulty attracting and retaining new members. In fact, a significant number of our new NBS members leave our organization after their first year of membership. We hope to change that by providing personal contact. The plan is for each state to have a volunteer who will reach out, by phone, to a new member who resides in their state, to welcome them and answer any questions they have. The volunteer will be supplied with names and contact information and any needed support. This is a wonderful way for you, a current member, to be involved in NBS and to make acquaintances that might otherwise not be made.

If you like to meet new people, this is the job for you! If you're interested, or want more information, please contact me: buttondebtx@hotmail.com or 214-755-3764. I look forward to hearing from you.

—Debbie Allnutt Membership Committee Chair

Publicity Committee News

Trifold: The NBS Trifold is available for your upcoming button shows and/or library displays. NBS will provide the full-color brochure, which has ample space for you to add your information. Just contact Susan Smith (susan@wein.ca) or Nancy Cummins (nancyc02@aol.com)

April Update from Gina Kohn

At our last NBS Board meeting, the board voted to allow NBS to provide regular updates promoting the Hot Buttons Television Series for all clubs and their members (email blasts, social media and webpages). At the same time we encourage all clubs to show the Hot Buttons video to their members and their friends. We join in the excitement that the Hot Buttons team has put into button collecting, fashion, and museum displays.

In addition, the board agreed that NBS will match the first \$5,000 given to the WPBS station in support of the programs. WPBS in Watertown, NY, will assist with distributing the finished programs. We will roll out the whole fundraising program over the coming weeks with a web page displaying the names of those clubs and individuals who are contributing. If you or your members have questions, please contact publicity@nationalbuttonssociety.org. Also see <https://www.wpbstv.org/hot-buttons-to-heat-up-pbs-stations/>. and <https://vimeo.com/736956105> with the password: Buttons-aug5-2022.

—Susan W. Smith, Publicity Committee

A REMINDER ABOUT DUES

Please pay your 2024 BSBS dues by October 31, 2023. Adult dues are \$25; Junior dues are \$5. Donations are always welcome! Make checks payable to **Buckeye State Button Society** and mail to Helen Richwine, 500 E. Clinton St., Doylestown, OH 44230. Remember that the club sponsoring the most new members in 2023 will receive a \$50 cash prize. Be sure the new member marks your club's name on the membership form.

SCENES FROM THE SPRING SHOW





Krystin Reidner of the Akron Area Button Club won first place in the "Lions and Lambs" award. Many different materials and intriguing designs, as well as a balanced presentation of shapes and sizes, make this tray a visual delight.

				
Terra Cotta 2-1	Jasperware 2-4 Studio Shirley Rzanski	Enamel 4-0 BM FSBS 1997	Fabric 5-3	Black Glass 6-4.2 DF Indescent
				
C & C Glass Fused 7-4.7 Studio Kay Ferguson	C & C Glass 7-5.2.2 DF Aurora	White Metal 10-1	Pewter 10-3 DF Hand Painted	Aluminum 10-2 BM JHB
				
French White 10-1	Steel 10-5	Brass 10-10 DF Enamel	Silver Plate 10-10	White Metal 10-12.1 DF Cold Plastic Enamel
				
Brass 10-12.3 DF Japanned	Original Tint 10-12.4	Brass Twinkle 10-13.5	Bethlehem Pearl 11-1.1	Shell 11-7.2.2 Escutcheon OME
				
Casien DF Paint 12-1.2 Studio J Joyntney	Amino Resin 12-7.4.1 BM Arni	Polymer Snap Together 12-10.18	Wood 14-4.1 DF Jacques	Dyed Agate 15-5 Escutcheon OME Studio Matt Metal & Fire

Barbara Smith of Polk Box Button Club received a Merit Award in the novice division for her "Winged Creatures" tray, which featured many lovely examples of fairies, angels, cherubs, and Cupids.

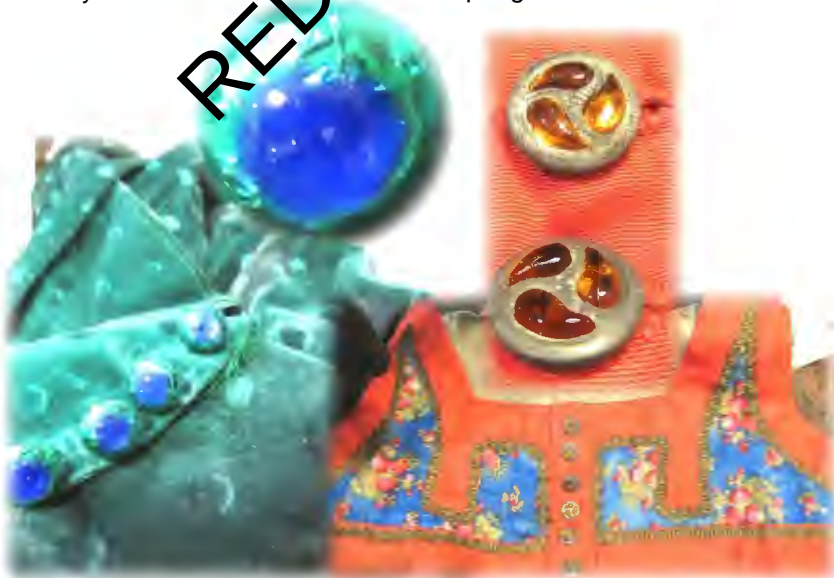
Scanned for BSBS by Dave and Barb James

Heavenly Fashions from the Collection of Barbara Weeks



What a treat to be able to see fashions and salesmen's sample cards from the mid- to late-19th century onward! Many thanks go to Barbara Weeks for sharing her wonderful collection at our Ohio Spring Show!

Photos by Carole Koontz



General Membership Meeting, April 2, 2023

The General Membership of the Buckeye State Button Society (BSBS) met on April 2, 2023 at the Hilton Akron/Fairlawn, with Laurel Weinberg presiding.

Laurel thanked everyone for coming together to make the Spring Show a success. She gave a special thank you to Helen Richwine for all the years of service to the society, holding many of the vital positions that ensured successful shows. The membership acknowledged Helen's service by standing with claps of appreciation.

Membership chair Helen Richwine reported that we currently have 134 paid state members, which includes 25 new members. A reminder was given to clubs to participate in the 2023 membership drive. Information on the membership drive can be located in the spring 2023 *BSBS Bulletin*, page 5.

Helen Richwine reported that for the 2023 competition, there were 44 competition entrants: 5 juniors, 15 novice, 16 regular, and 8 in the education category. A total of 159 trays were entered including educational trays, with 28 trays (19.3%) disqualified. The total amount paid for award placements (1,2,3,M) was \$463.00. Zero members advanced from novice status to regular status. The award with most entrants—Award 21, Twinkles, with 14 entrants—was submitted by Central Ohio Button Collectors. The three top-scoring entrants were Chris Graham (33 points), Carole Koontz (32 points), and Phillip Austin (31 points). Laurel Weinberg and Tina LaFollette received the most “measles.”

Laurel Weinberg announced changes in awards submissions, effective for the 2025 awards. Individual clubs may submit 2 awards. Individual club members may submit 1 award. BSBS members with no club affiliation may submit 2 awards. Junior awards are not included in the award count limits. It is suggested that first place winners wait 3 competition years before entering the same award.

Kit Campbell gave a short overview on what is coming on the newly improved website. One new feature will be the capability to search for specific types of button trays over a 3-year timespan.

Laurel thanked Mary and Jim Weinberg for their years of service devoted to the website.

Carole Koontz thanked all who donated money for *The Bulletin*, those who contributed articles and photos, and her proofreaders. Carole will try to keep the per-copy cost of *The Bulletin* under \$5 per copy, but some issues may go over that limit, in which case the “cushion” from donations will be used. All costs (both printing and postage) have been increasing, something over which we have no control. Eventually, we may need to eliminate hard copies and go digital, as is the case with bulletins of some other state societies. Awards will be published in the winter issue from now on.

Qualified volunteers are needed for judging chair positions. The members thank Helen Richwine and Jane Delaney for their four-year commitment of outstanding service as BSBS judging co-chairs.

Respectfully submitted,
Chris Graham

Winners of the 2023 Competition

DV	Aw ard NB R	ANR	Short Title	Last	First	Place
I	1	1R	Black Glass	Chisnell-Spires	Susan	1
I	1	1R	Black Glass	Austin	Phil	2
I	1	1R	Black Glass	Graham	Jean Chris	3
I	2	1N	Black Glass	Fouts	Pamela	1
I	3	2R	Black glass-Imitation fabric	Smith	Ruth	1
I	3	2R	Black glass-Imitation fabric	Koontz	Carole	2
I	5	3R	C&C Glass	Mock	Marti	1
I	5	3R	C&C Glass	Austin	Phil	2
I	5	3R	C&C Glass	Graham	Jean Chris	3
I	7	4RN	Golden Age	Koontz	Carole	1
I	8	5R	Brass pictorial	Reider	Krystin	1
I	8	5R	Brass pictorial	Austin	Phil	2
I	8	5R	Brass pictorial	Smith	Ruth	3
II	10	6RN	Schools	Austin	Phil	M
III	11	7R	White Glass	Smith	Ruth	1
III	11	7R	White Glass	Graham	Jean Chris	2
III	11	7R	White Glass	Reider	Krystin	3
III	12	7N	White Glass	Young	Dona	1
III	12	7N	White Glass	LaFollette	Tina	2
III	12	7N	White Glass	Young	Cheryl	3
III	13	8R	Syn polymer	Mock	Marti	1
III	13	8R	Syn polymer	Graham	Jean Chris	2
IX	16	10R	Celluloid	Graham	Jean Chris	1
IX	16	10R	Celluloid	Koontz	Carole	2
IX	18	11R	B&W Celluloid	Koontz	Carole	1
IX	18	11R	B&W Celluloid	Graham	Jean Chris	2
IX	18	11R	B&W Celluloid	Driggs	Vicki	3
IX	19	11N	B&W Celluloid	Schuman	Judi	1
IX	19	11N	B&W Celluloid	Young	Cheryl	2
IX	20	12R	Childhood Memories	Mock	Marti	1
IX	20	12R	Childhood Memories	Austin	Emily	2
IX	20	12R	Childhood Memories	Gibson	Sallie	3

IX	21	12N	Childhood Memories	LaFollette	Tina	1
IX	21	12N	Childhood Memories	Calicoat	Annette	2
IX	21	12N	Childhood Memories	Champoux	P. Jean	3
IX	22	13R	Winged Beings	Koontz	Carole	1
IX	22	13R	Winged Beings	Austin	Phil	2
IX	23	13N	Winged Beings	Smith	Barbara	M
IX	24	14R	Swans	Mock	Marti	1
IX	24	14R	Swans	Reider	Krystin	2
IX	24	14R	Swans	Lerner	Linda	3
IX	25	14N	Swans	LaFollette	Tina	M
IX	26	15R	Turtles	Graham	Jean Chris	1
IX	26	15R	Turtles	Reider	Krystin	2
IX	26	15R	Turtles	Austin	Emily	3
IX	28	16R	Crowns	Austin	Phil	1
IX	28	16R	Crowns	Reider	Krystin	2
IX	28	16R	Crowns	Mock	Marti	3
IX	29	16N	Crowns	LaFollette	Tina	1
IX	29	16N	Crowns	Everett	Susan	2
IX	30	17R	Alphabet	Graham	Jean Chris	1
IX	30	17R	Alphabet	Gibson	Sallie	2
IX	30	17R	Alphabet	Howell	Frances	3
IX	32	18R	Black Glass-Cameo, Intaglio	Smith	Ruth	1
IX	34	19R	Black Glass	Smith	Ruth	1
IX	34	19R	Black Glass	Driggs	Vicki	2
IX	34	19R	Black Glass	Austin	Phil	3
IX	35	19N	Black Glass	Everett	Susan	1
IX	35	19N	Black Glass	Carver	Cathy	2
IX	35	19N	Black Glass	Everett	Larry	3
IX	37	20N	Opaque Colors	LaFollette	Tina	M
IX	38	21R	Twinkle	Graham	Jean Chris	1
IX	38	21R	Twinkle	Gibson	Sallie	2
IX	38	21R	Twinkle	Driggs	Vicki	3
IX	39	21N	Twinkle	Hearn	Marielle	1
IX	39	21N	Twinkle	Everett	Susan	2
IX	39	21N	Twinkle	Young	Cheryl	3
IX	40	22R	Satsuma, Arita	Austin	Phil	M

IX	42	23R	Lions, Lambs	Reider	Krystin	1
IX	42	23R	Lions, Lambs	Koontz	Carole	2
IX	44	24R	Footwear	Reider	Krystin	1
IX	44	24R	Footwear	Mock	Marti	2
IX	46	25R	Autumn	Howell	Frances	M
IX	48	26R	4 hole sew throughs	Koontz	Carole	1
IX	48	26R	4 hole sew throughs	Gibson	Sallie	2
IX	48	26R	4 hole sew throughs	Reider	Krystin	3
IX	49	26N	4 hole sew throughs	Fouts	Pamela	1
IX	49	26N	4 hole sew throughs	Everett	Susan	2
IX	49	26N	4 hole sew throughs	Young	Cheryl	3
IX	50	27R	Realistics on cards	Howell	Frances	1
IX	50	27R	Realistics on cards	Koontz	Carole	2
IX	50	27R	Realistics on cards	Drepps	Vicki	3
IX	51	27N	Realistics on cards	Fulms	Lois	1
IX	51	27N	Realistics on cards	LaFollette	Tina	2
IX	51	27N	Realistics on cards	Young	Cheryl	3
IX	52	28R	Realistics	Austin	Phil	M
VII	54	29AB	Childhood	Koontz	Ava	1
VII	55	30AB	Sports	Koontz	Ava	1
VII	55	30AB	Sports	Careins	Alexander	2
VII	55	30AB	Sports	Koontz	Elaina	3
VII	56	31A	Black, White, red	Koontz	Ava	1
VII	56	31A	Black, White, red	Koontz	Elaina	1
VII	56	31A	Black, White, red	Day	Sadie	2

CLARIFICATION OF AWARD 29 FOR 2024 COMPETITION

R/N Cl. 25-6.1.2, 30 Any. Wobble shank. 15 verbal only; *15 with a pictorial component (may or may not include verbal and/or numerical components).*
 Zane Trace. \$5, 3, 2; M: \$5 [The clarifications are italicized.]

This year, the National Button Society is planning a “hybrid” convention, with online options for those who cannot attend in person. Check the NBS website at nationalbuttonociety.org for more information. Even if you cannot attend national shows, being a member of NBS has many benefits, including access to recorded programs, digitized copies of past issues of the *National Button Bulletin*, and five yearly print issues of the *National Button Bulletin*, full of educational articles and color photos of a variety of collectible buttons.

REGIONAL CLUBS IN OHIO

Visitors Always Welcome

AKRON AREA BUTTON CLUB

Founded February 1967

Meets the 2nd Monday, 10:00 a.m., St. Paul's Episcopal Church, 1361 W. Market St., Akron (330) 836-9327

President: Elizabeth Vernon, (917) 545-2866, elizabethv49@yahoo.com

CENTRAL OHIO BUTTON COLLECTORS (COLUMBUS AREA)

Founded November 1970

Usually meets the 4th Sunday, 2:00 p.m., Hilliard Library, 4500 Hickory Chase Way, Hilliard (614) 645-2275. *Please call or email to check location, dates, and time.*

President: Linda Lerner, (614) 946-6761, llerner66@gmail.com

CLEVELAND BUTTON SOCIETY

Founded February 1943

Meets the 3rd Sunday, 1:30 p.m., South Euclid Library, 1876 South Green, South Euclid, OH 44121

President: Jan Milic, (216) 932-4658, janmilic@yahoo.com

LAKE COUNTY BUTTON CLUB

Founded February 1943

Meets the 2nd Saturday (except Dec.-Mar.), 12:30-2:30 p.m., Kirtland Library, 9267 Chillicothe Rd. (Rt. 306), Kirtland, (440) 256-7323

President: Laurel Weinberg, (440) 256-0835, Laurel@lakenet.net

POLK GROVE BUTTON CLUB (DAYTON AREA)

Founded April 1966

Meets the 2nd Sunday, 1:30 p.m., Polk Grove Church, 9190 Frederick Rd. (US Rt. 40), Vandalia (937) 890-1821

President: Shari Zahn, (937) 294-7803, Szahn@sbcglobal.net

ZANE TRACE BUTTON CLUB

Founded October 1960

Meets the 1st Thursday (except on holidays), gathering at noon; meeting begins at 1 p.m. Muskingum County Center for Seniors, 160 N. 4th St., Zanesville, (740) 454-9761

President: Doris Scott, (330) 704-9079

STUDY GROUPS

ABC STUDY GROUP

Founded October 2008

Usually meets the 2nd Monday, 1:00 p.m., Ontario Branch Library, 2221 Village Mall Dr., Ontario, (419) 529-4912. *Please call or email to check location, dates, and time.*

Contact: Roberta Klaus, (419) 886-3116, buttonbell@neo.rr.com



The buttons of the late Ann W. Rudolph were displayed in conjunction with Flower Power: Flora in Fashion, an exhibit at the Decorative Arts Center in Lancaster, OH, from February 4-April 23, 2023. The exhibit was curated by Gayle Strege of the Historic Costume and Textiles Collection of The Ohio State University.



The exhibit featured frames of floral buttons placed upon colorful floral panels on the walls in the lower level and with some of the Fashions on the second floor.

Photos by Carole Koontz

