

# Glenn Dale Azaleas on Mt. Hamilton— The Long and Winding Road to Today, Part II.

By Barbara L. Bullock—Riverdale Park, Maryland

[Part II of this article concludes Bullock's article begun in the Spring 2017 issue of *The Azalean*.<sup>1</sup> This portion describes the challenges of curating a large, long-established hybrid group over the past 26 years and some conclusions drawn from that detailed study, Ed.]

## Curator's Record-keeping Strategies

While a few were found attached, most of the Bell-numbered labels the author found on the Mt. Hamilton hillside were found in the soil underneath the plants. The wire used to affix the labels had degraded and the azaleas' branches had grown to over two inches in diameter, forcing the wire to break! Made of cut strips of Venetian blinds spray-painted blue, the labels themselves persisted with numbers still legible, since they were scratched into the blue paint (see Fig. 1). They are still flexible today. Every label found has been preserved and is in storage after mapping.

Since 1992, the author has carefully maintained a map with the locations marked where the Bell numbered labels were found. Aided by a few well-trained volunteers, each azalea grouping has been tagged, counted, measured, and photographed. In order to document the planting, the author created a set of new labels using "MH-GD" (Mt. Hamilton-Glenn Dale) beginning at #001 through #400, one for each clonal grouping. Along with her own collection of images, the author used ASA member Dan Krabill's image collection of the Glenn Dale azaleas as a useful tool for this process.<sup>2</sup> A spreadsheet of results enabled the author to draw some conclusions about Morrison's ideas and goals for the hillside planting. (See also Table 4 for the complete listing of 535 Glenn Dale selections.)<sup>3</sup>

In some cases, finding a plant that looks like a known cultivar and finding its associated Bell number have prompted the author to make several educated guesses at

identification (see Fig. 2 and 3). For example, every year inside the Morrison Garden at the USNA, the Glenn Dale cultivar 'Antares' produces its beautiful red flowers in November, and so does MH-GD #231, near where the Bell number for 'Antares' was found, also blooming in November. Eighteen of the groups have flowers measuring over three inches in diameter. MH-GD #215 is a large group



▲ Figure 1—Bell-numbered labels.

▼ Figure 2—MH-GD #038 (left) looks like 'Mayflower', MH-GD #058 (right) is probably 'Duenna'.





Photo Barbara Bullock

▲ Figure 3—Glenn Dale 'Mayflower' NA 66880-H (left), Glenn Dale 'Duenna' 67003-H (right).

▼ Figure 4—Glenn Dale 'Ivory'.



Photo Barbara Bullock

with white flowers having diameters averaging 3.5" that the author believes could be 'Ivory' [see Fig. 4].

### Trends and Types of Azaleas Observed

Every April when the Glenn Dale azaleas come into bloom, the color that is represented the most is pink. The author has identified over 50 separate groupings of pink azaleas with single flowers on Mt. Hamilton, each having unique characteristics that distinguish one from another. Morrison was enamored with the pink-flowered clones, which are some of the first to bloom each spring on Mt. Hamilton. The author has found numerous Bell-numbered labels from two significant crosses (seed lots B13582 and B13732). The first, B13582 (*Rhododendron mucronatum* [syn. 'Indicum Album'] × *R. simsii* "Yeung shaan hung") yielded Glenn Dale introductions 'Concordia', 'Dawning', 'Desire', and 'Vision', all azaleas with pink flowers. To date,

three labels were found on Mt. Hamilton for plants from this same cross that were never introduced; namely, B32363, B32358, and B32352. They are true "sister seedlings" of 'Concordia', 'Dawning', 'Desire', and 'Vision'.

B13732 is the reverse of this cross (*R. simsii* "Yeung Shaan Hung" × *R. mucronatum* [syn. 'Indicum Album']) from which 'Chloe', 'Circe', 'Concordia', 'Dream', 'Modesty', 'Temptation', 'Tokay', 'Echo', 'Roselight', 'Witchery', 'Serenity', and a personal favorite of the author, 'Allure', were selected. At the time of publication, the author has found the Bell numbers for 'Serenity' and 'Modesty' on Mt. Hamilton, as well as sister seedlings B32318, B32322, B32332, B32335, and B32326 from this same seed lot and can be seen in Table 2 as was shown in Part I of this article.<sup>1</sup> All selections are pink with slight variation in color, form, bloom time, and flower size. Ultimately, ten selections were introduced from B13782, and four more introduced from B13582 seed lots.

The author has found the label for an old Kaempferi cultivar 'Lohengrin' underneath one of the large pink azaleas now labeled with the temporary number MH-GD #053. This cultivar was never used in the breeding of the Glenn Dales but was most likely included in the planting for comparison purposes. It is large and tree-like in habit, with brilliant pink frilly flowers, two and one-half inches in diameter, and is attributed to Koster, from around 1920. To this writer, it looks very similar to some of the other pink azaleas that Morrison introduced, such as 'Tokay', 'Dream', 'Modesty', and 'Chloe', not far from where the Bell number for 'Favorite' (B32261) was found. The author noticed the Kurume cultivar 'Ima-shojo' (MH-GD#057) planted near the large group of similar color, MH-GD#216, and 'Amoenum' (MH-GD#085) planted next to MH-GD#152, another similarly-colored selection. Like 'Lohengrin', neither of these two azalea cultivars were used in Morrison's breeding work and must have been planted simply for comparison purposes.

Why did Morrison make so many pink selections? When raising azaleas to maturity, the breeder would ideally make a determination of which of these clones stand up to the test of time by comparing plants in close proximity after they



▲ Figure 5—Photos of several pinks found on Mt. Hamilton: MH-GD #001 (left), MH-GD #006 (center), MH-GD #

▼ Figure 6—Photos of hose-in-hose azaleas found on Mt. Hamilton: MH-GD #066 (left, 'Magic' maybe), MH-GD #085, probably 'A



have reached a level of maturity, girth, and spread and have weathered storms, droughts and winters. How do they come back after a tree lands on them or after they have been cut back? Are some more likely to have winter damage than others? Which have good fall color? Which have disease and/or pest resistance? Which will be leggy and which ones will be spreading? Which are easy to propagate? These questions constitute the breeder's rationale for making numerous selections of plants that at first glance, might appear similar. Ultimately, Morrison may not have bred more pink selections as much as it is probable that they may just be stronger and better survivors [see Fig. 5].

Morrison was also intrigued with the plants yielding flowers known to the trade as "hose-in-hose" (abbreviated as H-H); i.e., flowers with two floral whorls nested together and usually lacking a calyx, making the individual flower appear

fuller and "doubled." The Bell numbers that have been found support the fact that most of these are the result of crosses using hose-in-hose Kurume hybrids introduced by R. Kent Beattie in 1928.<sup>4</sup> Most notably are 'Momozono' (PI77108) and 'Azuma-shibori' (PI77076), used in crosses resulting in several popular Glenn Dales such as 'Fashion', 'Coralie', and 'Coquette'. The seed lot B13615, (Macranthum [syn: 'Macrantha Orange'] × 'Momozono') yielded 26 named Glenn Dales alone; and the seed lot B13613 which used 'Azuma-shibori', yielded five introductions including 'Paradise'. The author has found the Bell numbers for sisters 'Paradise', 'Fanfare', 'Sebastian', 'Fairy Bells', 'Touchstone', 'Melanie', and 'Thisbe' as well as numerous unselected clones from these crosses on Mt. Hamilton, all H-H. The author has identified over 78 groups of azaleas on Mt. Hamilton with hose-in-hose flowers [see Fig. 6].



Photo Barbara Bullock

053 (right, probably Glenn Dale 'Lohengrin').

'Amoenum' (middle), MH-GD #217, probably 'Alabaster' (right).



Photo Barbara Bullock

Of these, a few are named cultivars such as 'Ima-shojo', 'Amoenum' and 'Kyu-miyagimo', which, incidentally, are parents of many of the earlier Glenn Dale introductions.

### Azaleas Today and Beyond

The azaleas on Mt. Hamilton continue to thrive and surprise us with their longevity, endurance and beauty. But active research of the Glenn Dale azalea breeding program concluded by the end of the 1950s, and new goals in breeding were making their way into azalea research. Older cultivars, such as the Kurume azaleas, had made their way into commerce from Japan early in the 20th century through E. H. Wilson, (known collectively as "Wilson's 50") in 1918, and again in 1928 by USDA plant explorer R. Kent Beattie. The Kurume azaleas have indeed proved to be worthy garden subjects with their multitude of color

choices, beautiful compact growth form and hardiness. They remain in commerce today as one of the benchmarks of successful azalea breeding. The Gable azaleas, results of crosses of *R. yedoense* var. *poukhanense* × *R. kaempferi*, are still found in the trade. Other breeders would incorporate Satsuki parentage into their programs, notably Robert Gartrell with his Robin Hill azaleas. The numbers of azalea cultivars available for sale in the nursery trade had, by the early 1960s, grown to epic proportions. By the mid-1960s, the government emphasis on breeding azaleas had switched focus to breeding smaller-statured azaleas, evidenced by the work of collaborators Guy Yerkes and Robert Pryor on their Beltsville Dwarf azaleas. Today, there is renewed interest in the deciduous North American native azaleas, as well as interest in fall-blooming forms of evergreen azaleas. Needless to say, the world of azaleas in the United States is still expanding, and yet the Glenn Dale azaleas and what they added to our understanding of the program that produced them remain as important as ever.

The author is proud to work among the dedicated staff and volunteers at the US National Arboretum, and will continue to preserve the work that has gone on before us, making the Arboretum a destination for people interested in azaleas and will continue to curate the Azalea Collection with the utmost care. It is the author's hope that at some time in the future these azaleas will then be useful for possible future breeding and selection efforts. Some of the unique older cultivars and species found could even help us to learn more about the genetic relationships among azalea species and the complex cultivars that we grow and enjoy today.

### References and Notes

1. Bullock, Barbara. "Glenn Dale Azaleas on Mt. Hamilton—The Long and Winding Road to Today, Part I." *The Azalean*. Spring 2017. 39(1): 4-19.
2. Krabill, Dan. Digital photo study of all known living and collected Glenn Dale azalea cultivars; in CD format, given to ASA convention participants in 2009. His photo collections were very helpful to the author for comparison of cultivars and his study of sisterhood of the Glenn Dale azaleas.
3. Table 4 (available on the ASA website) is a condensed version of an unpublished document found in the files at the Glenn Dale Plant Introduction Station ("Bell Station") that lists *Morrison's 1939 Rhododendron Selections, May, 1939, "selected from plants in the woods planting by Mr. Morrison, Mr. Bradford and Mr. Hope."*—The author expanded the list into an Excel spreadsheet format indicating the list of 535 selections. [The originally submitted spreadsheet size has been condensed by *The Azalean* editor to conserve space, but all information has been preserved.] Mr. Bradford was Frederick Charles "F. C." Bradford, superintendent at the Glenn Dale Plant Introduction Station and Morrison's boss.



Photo Barbara Bullock

▲ Figure 7—Pale pink 'Caress'

Mr. Hope was Claude Hope, horticulturist/plant breeder, eventually responsible for introducing the “Elfin” series of Impatiens to the nursery industry. (Link to this table is available on the ASA website at: Glenn Dale Azaleas in the Legacy Project pages.)

4. Morrison, Benjamin Y. “The Beattie Azalea Introductions.” *The Azalean*. December 1987. 9(4): 70-75.

Horticulturist Barbara L. Bullock works for the USNA in Washington DC and has been curator of the extensive azalea and rhododendron collections there since January 1990. She was a recipient of the Brookside Gardens Chapter’s Frederic P. Lee Commendation in 1997. She participated in both the Glenn Dale Preservation Project and the Ten Oaks Glenn Dale Project with Dick West and Bill Miller. The author is deeply indebted to Don Voss for friendship and his assistance in reviewing this paper. Much appreciation goes to botanist Stefan Lura for his careful review of this paper, as well. The author would also like to express sincere gratitude to the following people for their assistance and support of the azalea collections over the years: Ron Springwater, Lynne Fitzhugh, Kathryn Powers, Ted Munter, Sam Schwartz, Harold Belcher, Gabrielle Scott, Marshall Miller, Allen MacDonald, Dan Krabill, and Frank Daspit, for volunteering their talents and time in the garden; and to Donald Hyatt and Steve Henning of the American Rhododendron Society and the Azalea Society of America for their fondness for the Glenn Dale azaleas at the National Arboretum. And finally, special thanks goes to the Friends of the National Arboretum for their ongoing and consistent support of legacy collections at the USNA.



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▲ Figure 8—Warm pink hose-in-hose MH-GD #192.



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◀ Figure 9—Rosy-streaked 'Pied Piper'.



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