

# Grafting: 2019 Specimens Part 3



Three of the GBald-on-MGeo grafts (2019DEF<sup>1</sup>) in October 2020, about 18 months since they were grafted. By this time, all six have produced at least one flower.

*The following piece is part of a collection of writings published on the [Practical Small Cacti Malaysia site](https://practicalsmallcacti.com/).*

## Introduction

The following material covers the progress of the six GBald-on-MGeo grafts from August 2020 to October 2020. 2019D and 2019F produced their first flower in early September 2020, while 2019A and 2019B finally flowered in late September 2020.

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<sup>1</sup> See the first chapter in this series, Grafting: 2019 Specimens Part 1 for an explanation of these specimen labels.

## Nicknames for Scientific Names

PMag = *Parodia magnifica*

PClav = *Parodia claviceps*

GStella = *Gymnocalycium stellatum*

GBald = *Gymnocalycium baldianum*

MGeo = *Myrtillocactus geometrizans*

GSteno = *Gymnocalycium stenopleurum*

This naming scheme is purely for convenience. Just think of them as webchat nicknames.

## First Buds for 2019D and 2019F



2019D with its first bud barely visible (blue arrow) around mid-August 2020. The diameter of the GBald scion is 2.8 inch while its height is about 2.3 inch. Note the stretch marks on 2019D in the picture at right.

Buds were finally seen on 2019D and 2019F in August 2020. The diameter of their stems were over 2.5 inch. By contrast, the diameter of 2019E was 2.0 inch when the first bud was seen. It's unclear if GBalds have any triggers for starting flower production. Here, 2019D and 2019F may simply be large enough for flower production to commence.

2019F produced its first bud from an older areole (see picture on the next page) not long after that. Generally one would expect almost all flower buds to be produced by new areoles near the apex or growing point. But buds and flowers emerging from older areoles do happen, though they are not very common. Perhaps there is some deviation from the usual hormonal balance – remember, these are max-speed bloated GBalds stems and they would not occur naturally in habitat.



Nine days later, a bud was spotted on 2019F. Instead of producing a bud from near the apex or growing point, it appeared from out of an older areole. (August 2020)

When the flowers on 2019D and 2019F finally opened at the beginning of September 2020 (see pictures on the next page), there were no pollen on the stamens of either flower, so the two specimens also had hybrid GBald scions. It makes sense that I would have so many of these descendants of a hybrid GBald of unknown provenance, because they appear to be somewhat more vigorous than regular GBalds. It's nice to have plenty of offsets – and flowers.





2019ABC at the beginning of September 2020.



2019DEF on the same day. The flower on 2019D is open on its second day. 2019E is in the midst of another flush of flowers. (September 2020)



Two days later. The flower on 2019F is open on its first day. (September 2020)



Top view of three grafted specimens (2019DEF) in bloom. All three have no pollen in their flowers, a trait of the hybrid GBalds that I have. (September 2020)



## First Buds for 2019A and 2019B



Buds on 2019A (left) and 2019B (right) were detected on the same day, 2020-09-05.  
The bud on 2019B is ahead by two days.

The last two of the six GBald-on-MGeo grafts to flower were 2019A and 2019B. Flower buds were detected on both specimens in early September 2020 (picture above). Interestingly, the 2019A scion is clearly larger than 2019B, but both decided to flower at the same time.

One factor that may have influenced the size of the scions is the quality of the grafted joint. Both of these were joined using the shrink wrap method, and it didn't go all that well. As such, one or two of these grafts were joined by very little tissue. This may have influenced their growth rate. Recall that 2019E was the smallest scion and it overtook all the other scions in size and was first to flower.

Both 2019A and 2019B have MGeo stocks with a few scars, because during the past 1½ years, the MGeo stocks produced a number of offsets that were subsequently removed. One suspects this may either be due to the slow growth of the GBalds – these are regular GBalds and not the faster-growing hybrid GBalds – or it may be due to the poor grafted joint.



The diameter of 2019A is 2.7 inch while its height is 1.9 inch. (2020-09-06)



The diameter of 2019B is 2.0 inch while its height is 1.6 inch. (2020-09-06)

From the pictures above, one can see that 2019A is more like the fat stems of 2019CDEF, those vigorous hybrid GBalds. Compared to the hybrids, 2019A has a more even dark green colour, and its skin is better-looking without any of those strange-looking stretch marks.

2019B looks to be doing poorly compared to 2019A, but as of mid-2021, I would say that it's just as healthy as the other scions. It produces flowers regularly like the other scions, but fewer in number because of its slower growth rate. It has even produced multiple seed pods. Perhaps the joint really is a poor one, but no matter, having different behaviours means more useful data for me.





2019CBA three days later. The buds on 2019A and 2019B are just visible. (Sep 2020)



2019B with its first flower 12 days later. The planter box had been rotated. 2019C is just about finished with its flush of flowers. (September 2020)





The flower bud on 2019A opened two days later. (September 2020)



Top view of 2019AB showing healthy stamens with plenty of pollen inside the two flowers. (September 2020)



Another view of 2019AB the next day, late September 2020.

And so by the end of September 2020, all six of the GBald-on-MGeo grafts were in business. Two are normal GBald scions that have normal flowers with pollen in them. It's "mission accomplished" after just under 1½ years. The challenge now is to keep the GBald scions healthy and productive.



## Flowers Galore in October 2020



2019F trying to push out eight flower buds in late September 2020. The pictures were taken five days apart. Six buds made it and two were aborted.

There weren't any bug attacks until January–February 2021, so the rest of 2020 was mostly plain sailing. Detailed flower production performance for each specimen will have to wait until I get my spreadsheet data set processed.

Sometimes a specimen can be wasteful. The most vigorous specimens, 2019CDEF, have at times pushed out too many flower buds and some had to be aborted. It always seem to be a wasteful act to me, since one areole can only produce one flower bud ever. I reduced their nutrient and water supply somewhat, without any visible effect. I didn't want to totally shut off nutrient and water supply because I can't get these specimens to go dormant in the hot and humid tropical weather – I might end up with ugly-looking shrinking specimens instead. I do the little that I can to keep them healthy.

An abundance of GBald or cactus flowers can also skew your mind in interesting ways. After some nice big flushes of flowers, lower paced flower production<sup>2</sup> leaves me wondering if there is something wrong with the plants. Then later when I check my spreadsheet, it turns out that there has been over 30 flowers in that month. So my brain is now generally biased towards “plenty of flowers” as normal – it's fine as long as you know that your brain is messing with your thoughts.

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<sup>2</sup> Possibly due to wet weather, because often flower lifetime shortens a bit during an extended bout of wet weather.



2019DEF in early October 2020. The specimens are not flowering in a synchronized manner; they are just mature and big enough to flower. Weather did not influence the timing of flowers, because these specimens did not stop flowering at all.



2019DEF the next day. (October 2020)





A day later, more flower buds were starting to open. (October 2020)



2019DEF with a total of nine flowers open the next day. (October 2020)



Another view of 2019DEF with nine flowers open. (October 2020)





Four GBald-on-MGeo specimens in bloom the next day. There are six flowers on 2019F; two flower buds did not make it. Note the scars on 2019E. (October 2020)



The next day. 2019F with six half-open flowers. (October 2020)





2019ABC at the end of October 2020. The normal GBald scion of 2019A managed to produce four flowers on its second flush of flowers. The smaller scion of 2019B managed two flowers; and there is another offset growing out of its MGeo stock.



2019DEF at the end of October 2020. 2019E is starting yet another flush of flowers. There are a lot of buds on 2019F, but ultimately this flush of flowers numbered seven.



Flowering GBalds posed in a group picture in mid-October 2020. Since their flowers are not synchronized, one has to wait for opportunities to take nice group shots. But it's hard to have a lot of specimens simultaneously at the peak of their flower flush.

There were no new black patches during these three months. Perhaps the weather did not favour the fungal spores. One thing that I could not do is to get them to stop flowering and rest or recover. An area to explore is the grafting of GBald scions on MGeo areoles. There are cacti growers who are grafting seedlings on areoles. Since the slow growth of 2019B may be due to a poor grafted joint, small GBald scions on juicy MGeo areoles might just work. ♦



## Version Information

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