

# Borrego Desert 2018-19 "Season"

## Bloom Analysis and Prediction as of February 19, 2019

Kate Harper, Desert Research Botanist

**Bottom line, more flowers for longer!**

**The big Valentine storm event (2.98 inches) will extend the flower season and increase the diversity of flowers.**

### **The 2018-19 Borrego Desert Season will have 2 overlapping BIG WAVES of FLOWERS**

Borrego's 2019 Valentine gift was a storm leaving an additional 2.98-inches of rain! This amount of rain in one storm will trigger a 3<sup>rd</sup> germination of annuals that will **extend the Spring Bloom Wave and add new species to the Bloom.**

**The first BLOOM wave has peaked and will now begin to wind down as the second wave of flowers begins.**

#### **What triggered the first wave of flowers?**

We had **significant** rain in **spotty areas** of the Borrego Desert with the October 12, 2018 storm. It was still hot in the desert, but it was cooling off from the peak summer heat. It appears that the temperature was still warm enough to trigger the germination of some monsoonal annuals (seeds triggered by summer storms), and just cooled-down-enough to trigger the germination of some "spring" annuals (calendar winter, but what we in the desert call spring). Along with the annual flowers, the shrubs and subshrubs have responded with new leaves and their own beautiful blooms.

So here now in the third week of February 2019, we are past the peak of flowers from the first wave, and as that wave winds down, the more widespread second wave of Spring flowers has begun.

#### **For FLOWER EXPERIENCES:**

For flower areas easiest to access from Christmas Circle right now, drive out S22 between mile markers 30-37. **In particular, at mile marker 31**, on the left (north) side of the road is a sweeping south-facing sandy area brimming with color and blooms. Further along, **Smoke Tree Wash is flower-filled** (park roadside at **mile marker 34.5** and walk left [north]). Immediately east of Smoke Tree on S22 are Coach Whip (to the left--can drive in) and Arroyo Salado to the right (can drive in AND bathrooms at 0.2 mile).

#### **What has triggered the second wave of flowers (our more typically-timed Spring Bloom)?**

The Borrego Valley desert floor received 0.39 inch of rain in a November 29-30, 2018 storm. This is not enough rain to trigger widespread germination, BUT it is enough rain to soften the dry surface of the soil and to make the soil receptive to additional rain without run off. And, so what do you want after such a preparatory rain? A storm of **at least 1 inch** in order to trigger the germination of annual seeds. And, the desert got it! A storm event on December 5-7, 2018 brought 1.06 inches of rain.

- Think of the desert in the Spring like you would think about planting and watering a garden.
- After you have the seeds in, all experts advise, "Give your garden a good soaking." That is what the December 5-7, 2018 storm did that delivered 1.06 inches.

- Then, what do the garden experts say? “Water at regular intervals.” And, voila! The skies have delivered just such a watering regime. ***The well-timed interval rains have also allowed the October-germinated plants to grow bigger, have more flowers, and last longer.***
- Rain to date:
  - **A germination-triggering monsoonal downpour on October 12, 2018 in spotty areas.**
  - A soil-preparing rain on November 29-30, 2018 of 0.39 inch.
  - **A germination-triggering rain on December 5-7, 2018 of 1.06 inches.**
  - An interval watering on December 31, 2018 of 0.52 inch.
  - An interval watering on January 6, 2019 of 0.11 inch.
  - An interval watering on January 12, 2019 of 0.14 inch.
  - An interval watering on January 14-17, 2019 of 0.71 inch.
  - An interval watering on January 31-Feb2, 2019 of 0.74 inch.
  - **A germination-triggering rain on February 13-18, 2019 of 2.98 inches.**

**So, does this guarantee us a special Bursting-with-Blooms Spring this year? Yes!**

Pretty much nothing can derail the bloom now. Before the 2.98 inch Valentine storm, multiple really hot days could have affected the bloom. Now however, the soil has enough water stored that even unusually hot weather won't wither the plants. In addition, the other danger—back to back days of freezing temperatures—is likely behind us. So, even if the wind and caterpillars will soon be upon us,

**a special Bursting-with-Blooms Spring is coming!**