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First flower on a Hopin oca plant

Yesterday, I wrote of my surprise at finding June flower buds on some of our oca (*Oxalis tuberosa*) plants. Today's events were not quite as surprising, but still unexpected. We have our first oca flower. It opened on a plant of the Hopin variety sometime between 10AM and 11:30AM during a rain shower. Of course, it opened on a plant that I missed in my search for buds yesterday (note the stick next to the neighboring plant, indicating that I found buds on it.) Nature likes to keep me humble and that is probably for the best.

This quickly precipitated a dilemma: leave it on the plant, or remove it in order to identify its flower type? Since we seem to have a lot of buds forming and no immediate candidate to receive its pollen, I opted to sacrifice it for science. It may still be useful for crossing; I'll put it in the refrigerator and if we find another flower opening in the next couple of days, I will use the anthers to try to pollinate.



Hopin oca flower

I pinched the flower and transferred it to that indispensable piece of lab ware: the paper plate. I carefully

pulled the petals to expose the stamens and styles and can now pronounce that Hopin oca is a mid-styled variety.

If you take a look at the following pictures, you will see that there are two tiers of stamens, bearing the darker (orange) tips (anthers). In between is a single tier of styles, bearing lighter (yellow) tips (stigmas).

In a long-styled oca, there would be two tiers of stamens below the styles and in a short-styled oca, there would be two tiers of stamens above the styles - only the mid-styled type has the styles sandwiched in between two tiers of stamens.



Denuded Hopin oca flower, showing mid-styled arrangement

The best odds for producing seed are achieved by crossing two different flower forms, so I will hope to find that at least one of the other varieties that are beginning to flower is either short-styled or long-styled. Mid-styled plants are supposed to be the most common and may be able to cross with other mid-styled plants, but the odds of seed set are much lower.

So, there you have it. One variety down and 19 or so to go. If all goes well, I should have a chance to look at Sunset in a day or two. One step closer to my goal of providing the information necessary for aspiring oca breeders to purchase the right varieties to maximize their time and money.

The odds that any individual oca breeder will stumble upon a day length neutral variety are probably slim, but the odds that hundreds or thousands of people breeding oca will find the right combination are, well, hundreds or thousands of times better.



Same flower with some sepals removed for better visibility

Update: As of the next morning, I can also see that there is at least one OE Orange and one Mexican Red plant getting ready to flower as well, so if my luck holds, we should have four varieties flowering simultaneously. Perhaps flowering will continue for a while, but I am a bit concerned that we are supposed to have an unusually warm and dry period starting in a few days. Unusually warm for here means up to the mid-70s, so I doubt it will be harmful, but I would have liked a longer continuation of conditions until I know that at least a few seeds have had a chance to set.

Oca seeds and tubers are sometimes available in our seed shop.

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