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I suppose there is a risk of boring you all to death with the non-stop oca (*Oxalis tuberosa*) posts, but most of my garden time right now is focused on trying to get seeds from our oca plants and removing a plague of slugs from our potatoes. I thought about doing a post on the 1.5 gallons of slugs that I removed from our potatoes last night, but it was dark and my flash didn't work, so you're stuck with more oca.

If you were to do a pollinator study in my oca plots, you might be surprised to never see a honey bee land on an oca flower, particularly since we have hives in the same yard. You would probably be surprised to see bumble bees all over flowers of every sort in the garden, except the oca, on which they only occasionally and briefly light. In fact, the main pollinator that you would observe is one clumsy human on his hands and knees with tweezers and a tiny paintbrush. But, there is a contender for distant second place: a very small, solitary bee which I think is a member of the genus *Panurginus*. I'd have to catch one and put it under the microscope to be sure, but I'd rather leave them to their work.



Panurginus spp. bee on oca flower

This bee is small enough to crawl all the way down into an oca flower to access the lowest tier of styles or stamens, which I have observed a number of times. That makes it a very valuable bee, since it is difficult for this clumsy human to access those parts without damaging the flower. As you can see in the picture (if you enlarge it), this bee's legs are covered in oca pollen from crawling around in the tight quarters of the oca flower. Now, if I only had about a thousand more of them, I might never need to attempt another manual pollination. You can bet that I'll be studying up on *Panurginus* spp. to find out if I can do anything to increase their population.

As for this bumbling wanna-bee, I seem to have managed a few successful pollinations, although not as many as I would like. As you can see from the following pictures, these denuded oca flowers seem to have gone through considerable enlargement of the ovary, which I interpret as a sign of imminent seed development. It looks like I may have produced 5-10 of these over the course of 100 pollinations, which is kind of depressing, but if I get just one pod to mature seeds, I'm sure that I will be reenergized and back out pulling flowers apart every morning. As I understand it, I would be doing very well to get three seeds per pod. I have space to grow 1000 oca plants next year if I had the seeds, which would be a pretty good size for an amateur breeding program. That would require 334 mature pods, which, at my current rate of success, would necessitate 3,340 hand pollinations. Of course, not all the seeds are likely to germinate, so double that. So, let's just make it a nice, round 7,000 pollinations to go.

Yeah, that is not going to happen. I had better work on those bees.



Maturing oca pod (I hope)



Two denuded and pollinated oca flowers

Note how the upper flower (with the tag obscured) has a thicker flower stem and a widened ovary  
I predict that the upper flower will mature and the lower (with the 2x8 tag) will drop

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

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