

**From:** Mike Cardwell  
**Sent:** Sunday, September 07, 2014 6:51 PM  
**To:** Cardwell, Mike  
**Subject:** Baby rattlesnake update

Female #39's babies are older than I thought!

When we discovered that she had delivered her kids last Thursday evening, I assumed that they had been born within the previous day or two. It turns out that they are at least a week old.

Rattlesnakes are born with clear eyes but they go into their first shed cycle almost immediately, which causes their eyes to become bluish-white within a couple of days as their bodies produce a new corneal skin layer beneath the original one. When the new layer is ready in about a week, they secrete a fluid between the old and new layers that separates them and lubricates the old layer. The fluid also makes the bluish-white eyes clear again. Within another day or two, they shed for the first time and leave the birth site to find their first meal.

When we checked on mom and her kids Saturday morning, we found fresh shed skins from babies inside the refuge. So it turns out that her babies were not new on Thursday; they were already about a week old and ready to shed! The new unmarked adult was still in the refuge on Saturday and still had a baby laying on top of him. After finally teasing the burrow camera around the sharp 90 degree turn within the refuge where mom has often hidden (we could tell from her radio signal), we could see her deep in the hole, as well as another baby and a couple more sheds from babies (plus an old adult shed skin; see photo below). The baby laying on top of the unmarked animal had not yet shed but clearly most or all of its siblings had. Only the nose of the baby deeper in the refuge with mom was visible, so I couldn't tell if it had shed or not. But, unmistakably, this litter was born in the last week of August, around the 27th. As I mentioned before, this is at least a month earlier than the four litters we documented in El Dorado Hills in recent years, which were all born in late September or early October.



This is also a great opportunity to point out the value of injecting the rattle with colored paint. Using the burrow camera on Thursday night, we were easily able to identify female #39 by the red over blue paint in her rattle. I knew the other snake was not one of our telemetered males (because there was no radio signal except #39's) but I was hoping that it was our missing male #36. But once we got a look at this snake's rattle, we could see that it contained no paint. Male #36 is marked with red/red. See photos below.

Best,

Mike

