



**GLOBAL
WILDLIFE
CONSERVATION**

FAQ

Holy croak! You found Juliet! How did you manage that?

It wasn't easy! We spent months doing an analysis of historic records of where the species had originally been found and looking at the current threats to those areas. We also spent some time talking to locals. They didn't recognize the species and were amused that we had come looking for a frog. But when we showed them video and photos of the species, they became very interested in Romeo and wanted to learn more about him and other amphibians in the area.

On our second expedition we spent days looking for Sehuencas Water Frogs in protected habitat that seemed perfect—yet we didn't find any frogs of any species. It wasn't until we were just about to give up after a long day that we saw any sign of amphibian life, the first Sehuencas Water Frog that we rescued. We came back after that and found the other four frogs that we rescued, including Juliet!

When will Romeo meet Juliet?

All of the recently rescued frogs, including Juliet, are currently in quarantine so they can acclimate to an environment that replicates the conditions in the wild. They will also be treated for chytridiomycosis, which is partly responsible for the steep decline of this species and other amphibians that share the same streams. Then Romeo will meet his Juliet. We also want to make sure we set up the perfect conditions for their blind date!

So then what happens if Romeo and Juliet don't...click?

We down a tub of ice cream, watch *The Notebook*, and then get back to it. We have a number of pairings that we can try between the six individuals we now have for the conservation breeding program, and we have some knowledge about how to breed them based on our success with other water frog species at the K'ayra Center.

And as a last resort, GWC and the museum will also be working with a lab at Macquarie University in Sydney, Australia on collecting and freezing sperm from Romeo and gametes (eggs and sperm) from the other individual frogs so that we can potentially try in vitro fertilization.

Are you still planning to go on the other expeditions you had planned?

We are, but our objective will be a bit different now that we have found Juliet. How we move forward will depend on whether we find any more frogs during our trips, just a handful at another site or two, or if we find lots more frogs (which we think is unlikely based on how few we were able to find on this trip and the degraded condition of much of the habitat).

Ideally we would find one or two healthy populations so that we could focus on mitigating chytrid and on conservation measures in the field. But if we only find one or two tiny populations, we would want to rescue some, or potentially all, of those individuals from chytrid by bringing them into captivity as part of the conservation breeding program.

If there are other sites that still harbor Sehuencas Water Frogs, we want to know what habitat they prefer, and what threats each population faces. By understanding their habitat preferences, we can take even better care of the individuals in our conservation breeding program.

Does Romeo know yet? What's he been up to?

We will tell Romeo about Juliet right before we tell the rest of the world. Overall he's been doing really well since his 15 minutes of fame in February. He's healthy and has taken up swimming in the afternoons to maintain that health (and his good looks, of course). In addition to making international headlines, he's become a bit of a local star in Cochabamba, which is a little overwhelming for a guy who has always been shy. But he's getting used to the fame. The Museo de Historia Natural Alcide d'Orbigny has also made a few home improvements for him, including adding a darker floor to his aquarium so he can blend in more easily to hide from the paparazzi.

Why was it so important to find a Juliet?

Romeo's been living in the museum on his own now for more than 10 years. During that time he has called for a mate, but the last time we heard that call was at the end of 2017. We didn't want him to lose hope! But more than that, we didn't know of any other living Sehuencas Water Frog, which means that if we didn't find Romeo his Juliet—and additional individuals to start a conservation breeding program—this species would go extinct.

Why did you decide to wait until now to do expeditions?

In looking at the historical records and talking to the experts, we discovered that Sehuencas Water Frogs have only ever been found during Bolivia's rainy season, which goes from November to February. We wanted to make sure to spend our donors' generous funds wisely, so this seemed like the best bet. We also wanted a little more time to map out where, specifically, we'd be going on those expeditions to up the odds of finding Romeo his love. This strategy paid off in a big—and hopefully romantic—way.

How do you look for a water frog?

Very carefully! Members of the expedition team have been walking through slippery rivers on uneven ground looking for the frogs. Sehuencas Water Frogs very rarely come out of the water, so the scientists get used to wearing rubber boots and raincoats. They've been lifting rocks and

looking for the frogs in the water. The good news is that the expedition team includes individuals who have past experience finding Sehuencas Water Frogs in the wild before the population crashed. So they know what to look for and how to do this.

If you rescued the five frogs that you found, are you worried about a negative impact on the wild population?

There are likely too few water frogs in the wild for them to retain a viable population over the long-term at this point. Much of their historical habitat has been destroyed and their numbers are badly impacted by invasive trout that eat their eggs and by the deadly amphibian disease chytridiomycosis. Chytrid appears to have wiped out all frogs from these streams (not just water frogs), so the highest conservation priority is to rescue the animals for a conservation breeding program so that one day, once the threats have been mitigated, we are able to return this species to the wild. If we don't act now, it will be too late and the species could be lost.

It's a numbers game. Even under the best of conditions, very few frog eggs become tadpoles, fewer become froglets, and a minuscule number become adult breeding frogs. Predatory aquatic beetles, fish, snakes, and birds, to name a few, love to eat eggs and baby frogs. That's why the Juliets of the world have to lay so many eggs! In contrast, nearly 100 percent of eggs, tadpoles, and froglets survive in captivity. This provides much better odds for any genetic resistance to disease that may exist at a low frequency to survive the predatory gauntlet, and will be studied as part of the conservation of this species.

Ultimately, this assurance colony provides a major boost to a wild population or opportunity to reestablish the species if it disappears entirely in the wild. In this way, we can potentially boost the genetic resistance of a population even if the threat of disease persists, depending on whether these individuals just got lucky and managed to avoid the wave of chytrid or are exhibiting tolerance of or even resistance to chytrid. Not all the reintroduced animals will survive, but the ones that can will be in significantly larger numbers than they would be if they'd all had to run the entire gauntlet in the wild.

And although field evidence shows us that there are likely to be very few left in the wild, if we do find a healthy population on future expeditions—which is ideal—then we can implement a mixture of measures for the species, including a combination of conservation breeding in captivity and developing and implementing a plan for their protection in the wild.

We have examples of this approach working. The Mallorcan Midwife Toad in Spain is a good model for how captive breeding and reintroduction can form part of a larger strategy to recover a species in the wild. At least 10 populations of this species have been successfully reintroduced as part of a conservation breeding program. There's also the Kihansi Spray Toad in Tanzania, which has been successfully bred at zoos in the United States and is part of soft releases and a program for full reintroduction.

Is there anything we can do to help Romeo, Juliet and his new friends?

Now is when the real work begins! By [making a donation](#), Romeo's adoring fans can help us build a new home for Romeo, Juliet and their friends at the Museo de Historia Natural Alcide d'Orbigny's K'ayra Center with all the modern furnishings necessary for a Sehuencas Water Frog community. Donations will also go toward the conservation of other Sehuencas Water Frogs in their home in the wild, should we find them. Even if we don't find more, we need to prepare some streams for the return of Romeo's offspring. Either way, you'll be helping save the Sehuencas Water Frog from extinction.