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Community Dye Workshops 2013

Report prepared by Leah Hughes – March 2013

Objective

In March 2013, day-long dye workshops were held in each of Q'ente's six partner communities. The objective was to obtain a sample of each colour the weavers can produce using natural dyes. In the future, Q'ente will use these samples as a reference to ensure we are buying textiles that contain only natural dyes. Once we have the full palette, we will also be able to use the samples to place textile orders with exact colour preferences. The results of these dye workshops can be seen in the two Q'ente Dye Books put together in March and April 2013. One book is in Cusco and the other is in the Victoria office.

Planning

Sarah had previously done a dye workshop with Daniel Soncco in Parobamba. I used information gathered at this workshop to get a general idea of the supplies we would need and the process involved (see "2010 Dye Project" on podio). I based my project estimate on the costs of this 2010 workshop.

On Februay 24th, Sarah and I travelled to Calca for a workshop with master dyer Martin Solis. Martin has developed natural dyes in powder form. He has perfected the ratio of cochineal, oxides and plant materials to create 6 base powders. By combining these preparations in different amounts, Martin estimates he can dye over 50 colours. His powders are unique because they use less water and fuel than dyeing with raw materials. He dyed 12 colours in two pots of water, and didn't change the water each time, simply added a bit more when some boiled off. Martin estimates he used 10kg of firewood, instead of the 40kg he'd need to dye the same number of colours using raw materials. This is because the powder method saves him from having to change the water and heat it up to boiling each time. Our workshop with Martin was very different from the dyeing undertaken in each community. However, it was good preparation as it was my first time witnessing the dyeing process. I got an idea of the range of possible colours and the basic ingredients needed to dye.

I introduced the topic of the March dye workshops in the January and February weaving meetings in each community. We discussed how many colours they knew how to dye, which materials they would need, and how long it would take. The majority of the communities opted to dye on the same day as the regular meeting, but started much earlier in the day than usual. We agreed that I would provide 100g of chullpa wool (80% Alpaca, 20% Sheep) per colour they could dye. Leah, Sarah and Jose Luis prepped the skeins in Cusco and Leah

brought them to the communities ready to dye. We attempted to divide each cone into 10 even skeins, to produce equal skeins of approximately 100g each. I also purchased ¼ kg of cochineal, 500g of piedra de alumbre, and 500g of sal de limon per community (see attached Expense sheet). In turn, the weavers brought the plants necessary to dye. In the February meetings, we made a list of the colours they would dye and the plants necessary to do so. This gave me an idea of how many skeins to bring to each community, and helped the weavers organize who would collect and supply each dye plant.

Expected Results

The number of known dyes ranged by community. Some associations are capable of dyeing as few as 5 colours, while others have mastery of over 20 possible shades. I expected some overlap of colours, especially those using the same plants or basic ingredients (i.e. cochineal). However, given the different palettes seen in each community's weavings, I also expected some colour variation by region (eg. Parobamba vs. Amaru). According to the estimates they had given me in the February weaving meetings, I was expecting the following colours from each community:

Huaran: projected 10-15 colours:

- Bright red (rojo claro)
- Dark wine red
- Dark orange (with qaqasunkha)
- Dark yellow (culi plant)
- Grey-green (ccuchu (kinsacuchu) plant)
- Lime-green (ccuchu (kinsacuchu) plant)
- Bright yellow (like Fairplay bags)
- Violet (cochineal)
- They can also make peach and pink with cochinilla, but seemed unsure about whether they could dye those in March
- Another purple may be produced by combining a series of dyes

Cancha Cancha: 5 colours:

- Green (ch'illka)
- Yellow (qaqasunkha)
- Light yellow (qolle t'ika)
- 2 with cochineal

Parobamba: 13 colours:

- 6 colours with cochineal: 6 colours (had a hard time clarifying specific colours)
- Yellow: yanali

- Yellow: tt'ire
- Dark green: qu'insa ccuchu
- Light green: qu'insa ccuchu
- Dark red: mut'i mut'i
- Orange: chapi
- Lime green: qu'insa ccuchu + tt'ire

Bombon: 6 colours:

- Yellow (1st dye): yanali
- Yellow (2nd dye): yanali
- Teal green: kinsaccuchu
- Red: mo'te mo'te
- Yellow: ñuñunq'a
- Yellow: tt'ere

Pitukiska: estimated 20 colours, but went through the names in Quechua and didn't want to repeat them for me

Amaru: 20 colours:

- Bright red (cochinilla)
- Dark red (cochinilla)
- Cherry red "guinda" (cochinilla)
- Navy blue (cochinilla)
- Maroon "granate" (cochinilla)
- Pink (cochinilla)
- Orange (cochinilla)
- Light yellow (flor de retama)
- 3 different shades of green (chillca)
- Yellow (chillca)
- Light green (flor de k'eratarwi)
- Golden yellow (colly)
- Green (colly)
- Grey (eucalipto)
- Brick red "ladrillo"' (saniunku)
- Green (tayanka)
- Yellow (tayanka)
- Green (wallwa)

Results

It was interesting to see how the colours actually dyed met with or differed from the expected results. In Huaran, for example, they were very accurate in their estimate (10-15 colours) and dyed a total of 13 colours. In Bombon, however, they far exceeded their expected total (6 colours) and successfully dyed a total of 25 shades! This discrepancy between estimated total and resulting colours may have been due to a misunderstanding about number of plants used vs. number of colours produced. Overall we were very pleased with the results, and impressed by the range of tones produced in each community. The following are the colours dyed in each community, in chronological order. Differences in spelling for plant names are due to the fact that each student in attendance wrote the names down differently for me (Quechua is an oral language, after all!). I have kept the differences in spelling here because these are the results as transcribed directly from my field notes.

Huaran:

Friday, March 8th, 9:00-1:00

Weavers in attendance:

Andres Sallo
Bonifacia Condori
Juana Paola Sicos
Pilar Quispe
Sabina Ccana Tacuri
Santusa Qusipe Quispe

Q'ente representatives/Mosqoy students in attendance: Leah Hughes, Adrian Jimenez

Colours dyed: 13

Summary:

The weavers began dyeing at approximately 9 a.m. They built four small pits and fires in Juana Paola's yard, and had four pots dyeing at a time. Andres seemed to have the most knowledge about the dye process and instructed the others when to start each colour. On the whole, they had everything planned quite well and had a predetermined order to dye each colour. This was a strategic move to maximize their materials. It was also necessary to dye certain colours first, then add more ingredients to a pre-existing dye in order to produce a new colour. I was impressed with how quickly they managed to dye 13 colours. For some colours, they only dyed our sample skeins. However, for others (most notably the colours produced using cochineal), they also dyed some of their own wool. There was a good level of cooperation among the weavers, and they worked quickly and efficiently together. They also seemed to be enjoying themselves and were joking

with each other throughout the process. Once all the colours were dyed, we hung the wool to dry in the yard while we had our weaving meeting.

All wool was rinsed in water before dyeing. The ingredient amounts are calculated to dye 100g of wool.

1. **Bright red (rojo claro)**
   40g cochineal
   1 large spoonful piedra de alumbre
   1 large spoonful sal de limon

Water boils, then add 1 large spoonful of piedra de alumbre and 1 large spoonful of sal de limon.

2. **Purple-pink (morado)**
   Second water: Bright red
   40g cochineal
   1 large spoonful piedra de alumbre
   1 large spoonful sal de limon
   +Fermented urine

Wool is dyed bright red using the dye to produce colour #1. It is rinsed with water, then placed in fermented urine. The urine rapidly changes the colour from red to purple. Wool is then rinsed again in water.

3. **Verde Celeste**
   150g Kinsa Kuchu

Wool is boiled for about a half an hour.

4. **Verde Mas Celeste**
   Second water: Verde Celeste
   150g Kinsa Kuchu* No added ingredients

Wool is put in 15 minutes after Verde Celeste, and removed after 15 minutes.

5. **Cafe Naranja**
   150g Kaqa Sunkha Dried

Wool is boiled, then washed with water. The end result is more orange than brown.

6. **Rojo mas claro**
   Second water: Bright red
   40g Cochineal
   1 large spoonful of piedra de alumbre
   1 large spoonful sal de limón
   + 1 large spoonful sal de limon

7. **Orange**
   Kaqa Sunkha
   Cochineal

Wool is first placed in the kaqa sunkha pot, then in the cochineal pot.

8. **Amarillo**
   Thiry
   Culli
   Orin (for stronger colour)

9. **Canary**
   Molle
   1 Handful of alum

10. **Verde Oscuro**
    Chillka
    Molle
    Tayanka

11. **Yellow**
    Flor de Retama
    Suncha flower

12. **Dark Green**
    Molle
    1 Handful of alum
    1 Handful of Collpa

13. **Lighter Purple**
    Cochineal
    Alum
    Sal de limón
    Orin

The Huaran weavers say they are also capable of dyeing the following:

- Orange: cochineal, orin and sal de limon
- Blue: macha macha , which is harvested from May onward
- Purples: m'ote m'ote – (grows in Machu Picchu area; they have to buy it)
- Green-gray: tayanka

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Cancha Cancha:

Saturday, March 9th, approx.11:00-3:00

Weavers in attendance:

Alejandrina Mamani Ccarhuani
Dorotea Quispe Hancco
Juana Ccarhuani Ccorcca
Julian Quispe Quispe
Julian Melo
Lucia Ccarhuani Huaman
Vicentina Quispe Ccorcca

Q'ente representatives/Mosqoy students in attendance: Leah Hughes, Raul Mamani Melo, Raul's cousin Elmer

Colours dyed: 4

Summary:

Leah, Raul and Raul's cousin Elmer were already in Huaran for the students' field weekend. We left the Huaran house before 6 am and arrived in Cancha Cancha just before 9 a.m, which was the time we had set for the dye workshop. However, when we arrived we found that nobody was around. We had agreed to have it at Lucia's house, but she was out of Cancha Cancha that day for her child's soccer tournament. We ended up proceeding with the meeting and dyeing at Lucia's house even though she wasn't home, but didn't get started on anything until 11:00. This was very frustrating for us because we had gotten up so early and made an effort to have an early start with the dye workshop. We also wanted to get back to Huaran quickly to join in with the other students' activities, but instead waited for hours in the yard. We ended up having the meeting while the dye pots were still on the fire to save time, which may have actually delayed the dye process even further, but we didn't want to have to hike back down to Huaran in the dark.

The Cancha Cancha weavers only dyed four colours. They had two pots on the fire, so only worked on two colours at a time. However, the process was very slow, and they almost seemed to be guessing at some colours. The Huaran weavers had dyed 13 colours in less than 4 hours the previous day, but in Cancha Cancha they took nearly 4 hours to dye 4 colours. Julian Melo was present (although the president Victoria was absent, even though we had been assured she would attend). Julian Melo directed the dye proceedings, but did not seem to understand that we wanted a swatch of every possible colour. They began with the cochineal, but after they had dyed the two colours Julian Melo wanted to leave. I had already seen the plants the weavers had with them and knew the others had expected to dye more colours, so I asked them to do so. They reluctantly dyed the yellow-

orange and the orange. They had said they would dye 5 colours, so I brought 5 skeins, but they ended up accidentally dyeing two of our skeins the same colour (#2 Rojo). As they only produced 4 colours in the end this worked out fine that day, but we could have used the leftover skein in another community if they had not mistakenly dyed it.

Julian Melo directed the proceedings, although Julian Quispe Quispe and a few of the women seemed to have nearly the same dye knowledge as him. Julian Melo claims he can dye many more colours, but did not elaborate and said we didn't have time that day. Their mastery of dyeing definitely seemed inferior to that of Huaran. In Huaran, for example, they calculated how much cochineal they would need for each colour and used it sparingly. In Cancha Cancha, they dumped the entire ¼ kilo of cochineal I brought into the first pot all at once! However, I think the workshop was a good activity for them to practice dyeing.

The Cancha Cancha weavers also happily provided us with samples of undyed wool from their own alpacas, which we incorporated into the Dye Book.

NOTE: When I passed around the Dye Book at the Encuentro, the representatives from Cancha Cancha seemed genuinely surprised at how many colours the other communities had produced. They seemed almost embarrassed at their page with only four, and expressed their desire to learn to dye more colours.

1. **Morado**
   - 1/4kg cochineal
   - 5g alum

2. **Rojo**
   - 1/4kg cochineal
   - 5g alum
   - 1/2kg sal de limón

3. **Yellow-Orange**
   - Kiko
   - 1g alum

4. **Orange**
   - Kaqa sunkha
   - Alum

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Parobamba:

Friday, March 15th, 2013, approx.. 12:00-4:00 p.m.

Weavers in attendance:

Aleja Quispe Jalanoca
Brigida Melo Mamani
Celestina Soncco Mamani
Feliciana Chino Condori
Giovanna Chino Condori
Hilaria Quispe Chuquichampi
Jacinta Mamani Ccallo
Leondarda Chuquichampi Tapara
Lucia Melo Mamani
Luzmarina Mamani Ttupa
Maria Magdalena Vargas Ttupa
Maruja Quispe Tapara
Rufina Puma Mamani
Uvaldina Mamani Huaman
Alejandrina Taco Mamani
Celestina Puma Mayo
Cipriana Chipa Huahuasoncco
Geronima Huanca Yupanqui
Hermenegilda Quispe Mamani
Isidora Vargas Melo
Juana Quispe Puma
Libia Ttupa Chipa
Luciana Quispe Huanca
Maria Chuquichampi Tapara
Maria Magdalena Puma Jalanoca
Roxana Huahuasoncco Vargas
Ruth Pimentel Quispe

Q'ente representatives/Mosqoy students in attendance: Leah Hughes, Sarah Confer, Carmen, Clayda, Jose Luis Jimenez, Dana (Threads of Peru)

Colours dyed: 17

Summary:
There was a very good turnout at the dye workshop, with the vast majority of the weavers present. A notable exception was Dina, who was in Cusco! When we arrived at Dina's house we found all the other women waiting and prepared to dye. Samuel was home and said it was fine to use their house as usual. We had the weaving meeting first, indoors, since everybody was already assembled. The weavers then built four fires outdoors, up against the wall of the house, while Samuel set up a shelter with tarps to protect everybody from the rain. They managed to dye 17 colours very quickly. It helped to have four pots and lots of women. The weavers worked in groups of 3 or 4 on each pot or to prepare each dye plant. This made the process very quick. It was actually difficult for me to keep track of what was going into each pot while other colours were being pulled out a few pots down! In Parobamba it was definitely good to have many Q'ente volunteers present to record the recipes, since everything happened very fast. Dana was also a huge help collecting plant samples before the dye plants were added to the pot.

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I was impressed with the weaver's level of co-operation and coordination. Carmen was an excellent translator, and was kept very busy explaining what was going on in each pot at all times. Ruth was also particularly knowledgeable and helpful. She helped us sort out which dyes were which once they were hanging on the line to dry. In Huaran and Cancha Cancha, I had been able to keep the colours straight simply by keeping detailed notes. However, in Parobamba, we began to label each skein as it was drying to avoid confusion. This is an essential step, as some colours would have been impossible to identify later. Two colours that vary slightly in tone, such as a first and second wash, could easily have been confused had they not been tagged. We wrote the number and colour name on a piece of masking tape, then attached this tape to the cord that held the skein together. This technique also proved very useful in Bombon, Pitukiska and Amaru.

While the weavers dyed an impressive range of colours (more than expected), they still did not seem to understand that we wanted a sample of ALL possible colours. They dyed their own wool, as well as our sample skeins, in many of the dye pots. This was fine, except we noticed some weavers had dyed their own wool a few colours that we didn't get. They said they thought we were out of skeins. We did have more, but they had been mistakenly hidden under a manta. They dyed our skeins the missing colours for us, and even attempted to re-make a certain pink dye for us. Other missing colours were obtained by trading our undyed wool skeins for a skein of their own dyed wool. In the end we were fairly confident that we had obtained a sample of all the colours dyed that day. Overall they seem to be quite skilled dyers and worked well together as a group.

NOTE: In the evening, we used Daniel Soncco's "madejadora" to make skeins for Bombon and Pitukiska. Daniel has made this contraption himself, although they can also be bought. Daniel's madejadora consists of a bicycle wheel frame with four nails sticking out. The nails form pegs that the wool is wound around as the wheel is turned with a stick. This allowed us to make many skeins very quickly and saved a lot of time and effort. I showed Rolando Huillca photos of Martin Solis' madejadora, as Sarah suggested that he could make one for each community as his Kallpa K'oj project.

1. **Dark Seafoam**
   Pure Kinsa Kuchu

2. **Orangey Mustard Yellow**
   Pure Yanali

3. **Lipstick Red**
   1/8Kg Cochineal
   150g sal de limón

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4. <u>Orangey Red</u>
Second Water: Lipstick Red (#3)
1/8kg Cochineal
150g sal de limón *No added ingredients

5. <u>Rosado</u>
Third Water: Lipstick Red (#3)
1/8kg Cochineal
150g sal de limón
+ 250g alum

6. <u>Amarillo Marigold</u>
Second Water: Orangey Mustard Yellow (#2)
Yanali *No added ingredients

7. <u>Light Seafoam</u>
Second Water: Dark Seafoam (#2)
Kinsa Kuchu *No added ingredients

8. <u>Green - Verde - Limon</u>
Third Water: Dark Seafoam (#2)
Kinsa Kuchu *no added ingredients
Ttire
First, dyed in kinsa kuchu water then placed in ttire and water.

9. <u>Fluorescent Yellow</u>
Pure Ttire

10. <u>Sorbet Orange (Dark)</u>
Chapi
Five large spoonfuls sal de limón

11. <u>Sorbet Orange (Medium)</u>
Second Water: Sorbet Orange Dark (#10)
Chapi
5 large spoonfuls sal de limón
+ 3 large spoonfuls sal de limo

12. <u>Sorbet Orange (Light)</u>
Third Water:Sorbet Orange - Dark (#10)
Chapi
8 large spoonfuls sal de limón

+ 10 large spoonfuls sal de limón

13. <u>Green Malogrado</u>

Third Water: Dark Seafoam (#2)
Kinsa Kuchu
Ttire

Wool is first dyed in the third water of kinsa kuchu, and then overdyed in first water of ttire.

14. <u>Mulberry</u>

Pure Mote Mote

15. <u>Cranberry</u>

Cochineal
1/4 large spoonful sal de limón
1/4 large spoonful alum

Wool was first dyed in a cochineal bath. After removed from that bath, it is overdyed in the alum and sal de limon.

16. <u>Bubblegum</u>

Fourth Water: Lipstick Red (#3)
Cochineal
Sal de limón
+ Handful of alum

17. <u>Rosado Almost Coral</u>

Third Water: Lipstick Red (#3)
1/8 kg Cochineal
150 g sal de limón
250 g alum
+ 3 Handfuls sal de limón

<u>Bombon:</u>

Saturday, March 15th, 2013, approx. 10:00a.m.-1:00 p.m.

<u>Weavers in attendance</u>:

Alberta Quispe Quispe
Nicario (son of Concepcion Mamani Ttupa)
Florentina Ttupa Mamani
Bernardina Quispe Rojo
Egidio Quispe Ttupa
Incarna Ttupa Tapara

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Grimanesa Leon Soncco
Lucia Soncco Quispe
Mercides Quispe Rojo
Natividad Mendoza Illa's daughter
(name?)
Pascuala Tapara Quispe
Simeona Quispe Tapara
Victoria Quispe Rojo

Q'ente representatives/Mosqoy students in attendance: Leah Hughes, Sarah Confer, Carmen, Clayda, Jose Luis Jimenez, Dana (Threads of Peru)

Colours dyed: 25

Summary:
We arrived in Bombon just before 10:00 to find that the weavers were waiting for us and all ready to go to begin dyeing! They were gathered outside the weaving centre, and Egidio told us that they had been waiting since 7:00 a.m. There was a great turnout, with nearly all the weavers present. After a quick breakfast at Egidio's house, we started the dye workshop. The weavers worked together very well and we were pleasantly surprised by their high level of cooperation and efficiency. They built four fires up against the wall of the weaving centre, two on each side of the doorway. Later in the day they actually added a fifth fire, which was going for the last part of the dye workshop. As in Parobamba, it was raining steadily so they also constructed a makeshift tarp shelter to protect everybody from the rain. Groups of 2 or 3 women worked together on one pot at a time, while other groups prepared the plants or made skeins of their own wool to dye. They dyed skeins of their own wool for most of the colours they produced. Egidio was present but did not "direct" the proceedings as I had seen Andres do in Huaran and Julian Melo do in Cancha Cancha. The women seemed to be quite knowledgeable about dyeing and had a very good system to dye quickly together. They were also quite happy to explain the plants to us, give us their names, and provide a sample. Carmen again proved invaluable in translating all this information!

The Bombon weavers dyed an impressive 25 colours, which was the most I had seen so far. This was particularly remarkable since they told me in the February meetings that they would only dye 6 colours. The huge difference between estimated colours and actual colours dyed was likely the result of a misunderstanding. It is possible that in February they meant they would use 6 dye plants, each of which could produce 2 or 3 shades. I understood this as 6 colours, but clearly they are capable of dyeing many more! It was fortunate that we had not yet made all the skeins for Bombon and Pitukiska, because we had to quickly make more as we saw how many colours they were prepared for. As we had a limited amount of wool with us, we had to make the skeins smaller. Some of the skeins for Bombon and nearly all for Pitukiska were quite thin, probably weighing

around 50-60g, but they were sufficient for our sample. We also ran into a similar problem as in Parobamba, where we noticed that they had dyed their own wool certain shades we did not have. When we pointed this out, however, they were quick to dye us a sample as well. Overall the Bombon dye workshop was a great success. I was very pleasantly surprised by the results, and the weavers all had a great attitude throughout the day and were enjoyable to work with.

1. **Autumn Orange**
   Pure Yanali

2. **Sea Mist**
   Pure Kinsa Kuchu

Put in the same pot as teal (#7), but only put it in for 2 minutes, then pulled out while the teal continues to boil.

3. **Marigold**

Second water: Autumn Orange (#1)
Yanali* No added ingredients

4. **Manta Orange**
   Chapi
   20g sal de limón

5. **Vibrant Pumpkin**

Second water: Manta Orange (#4)
Chapi
20g sal de limón* No added ingredients

6. **Creamsicle**

Third water:Manta Orange (#4)
Chapi
20g sal de limón* No added ingredients

7. **Teal**
   Pure Kinsa Kuchu

8. **Icy Mint**

Third water:Teal (#7)
Kinsa Kuchu* No added ingredients

9. **Piña Colada**
   Ñuñunka
   Puro

Just dipped in.

10. **Seaweed Green**
    Kinsa Kuchu
    Ñuñunka
    10g alum

Wool is first dyed in the kinsa kuchu water (first water), and then overdyed with ñuñunka and alum.

11. **Mulberry Wine**
    Pure Mote Mote

12. **Dusty Rose**
    Second Water: Mulberry Wine (#11)
    Mote Mote *No added ingredients

13. **Lemon Yellow**
    Second Water: Seaweed Green (#10)
    Ñuñunka
    10g alum *No added ingredients

14. **Burnt amber**
    Kaqa sunka

15. **Lion's mane**
    Second Water: Burnt Amber (#15)
    Kaqa sunka *No added ingredients

16. **Pistachio**
    Second water: Seaweed Green (#10)
    Kinsa Kuchu
    Ñuñunka
    10g alum *No added ingredients

Wool is first dyed in the kinsa kuchu, and then overdyed in the ñuñunka and alum water.

17. **Dusty Lilac**
    Third Water:Mulberry Wine (#11)
    Mote Mote *No added ingredients

18. **Sunshine**
    Pure Ttire

19. **Lilac**
    Pure cochineal

20. <u>Strawberry Jam</u>
Pure cochineal
Handful of alum

21. <u>Wine</u>
Second Water: Strawberry Jam (#20)
Cochineal
Handful of alum *No added ingredients

22. <u>Licorice Red</u>
Third Water: Strawberry Jam (#20)
Cochineal
Handful of alum
+ Handful of sal de limón

23. <u>Coral</u>
Second water: Licorice Red (#22)
Cochineal
Handful of alum
Handful of sal de limón *No added ingredients

24. <u>Bubblegum</u>
Third water: Licorice Red (#22)
Cochineal
Handful of alum
Handful of sal de limón *No added ingredients

25. <u>Cotton Candy</u>
Fourth water: Licorice Red (#22)
Cochineal
Handful of alum
Handful of sal de limón
+1/2 Handful of alum

Bombon says they also know how to make more colours. They didn't have all the plants available that day since they had a faina and weren't able to collect all the known plants. The other plants they dye with are:

- Nogal: 3 shades of brown
- Awaypili: 3 shades of purple and "granate" (pomegranate) They buy their awaypili because it doesn't grow in Bombon
- Qiqu: produces the same colours as ñuñunka, so often just use ñuñunka instead because it is better

- Chillka: yellow and 2 shades of green. They can make more colours with chillka by combining it with other plants, but don't know exactly how many

Pitukiska

Monday, March 18th, 2013, approx. 8 a.m. – 12:30 p.m.

Weavers in attendance:

Alfonsa Mamani Huahuasoncco
Florencia Quispe Huahuasoncco
Francisca Tapara Quispe
Gavina Ttupa Arriaga
Guadalupe Layme Tapara
Juana Quispe Mendoza
Margarita Mamani Tapara
Melchor Ttupa Quispe
Valentina Chuy Mendoza
Valentin Ttupa Quispe
Victoria Tapara Quispe
Bonifacia Quispe Mendoza
Florencio Tapara Illa
Froctoso Ttupa Quispe
Geronima Huahuasoncco Mamani
Jacinta Quispe Mendoza
Julian Quispe Huahuasoncco
Maruja Illa Leon
Narcisa Quispe Rojo
Valentina Quispe Tapara
Victoria Mamani Leon

Q'ente representatives/Mosqoy students in attendance: Leah Hughes, Sarah Confer, Carmen, Clayda, Jose Luis Jimenez, Dana (Threads of Peru)

Colours dyed: 27

Summary:
We arrived in Pitukiska on Sunday, March 17th and held the weaving meeting that afternoon. We agreed to meet outside the church at 7 am the next morning to begin dyeing. During the weaving meeting they told us they would dye at least 8 colours the next day, which surprised me because in February they had told me 20. Again, this must have been due to confusion about number of plants vs. number of colours, as they proceeded to dye an impressive 27 colours! Pitukiska dyed the most colours out of all the communities. We didn't actually start dyeing until 8:00 in the morning, but they managed to dye that remarkable number of colours relatively quickly. Like in Bombon, we had to make more skeins while they dyed in order to have a sample of every colour. These skeins were also thinner than in the other communities, but thankfully we had sufficient wool to make 27 skeins.

I was impressed by the Pitukiska weavers' expertise in dyeing. They also worked in small groups on each pot. It was a bit difficult to keep track of what was happening because their fires were quite spread out. In all the other communities

so far, the dye fires had been lit all in a row. However, in Pitukiska they had two fires inside the stone building next to the church, one fire outside against this building's wall, and another two outdoors against a low stone wall. In addition, they dyed the cochineal colours inside Melchor's house, over his cooking fire. This meant there was a total of 6 dye pots on the go all at once, and it was impossible to see what was happening in every location at any given moment. To observe the cochineal dyeing, it was necessary to cross the river and go to Melchor's house, which was quite a distance from the rest of the dye activity. This also created a few complications in sharing materials, since the sal de limon and piedra de alumbre had to be carried back and forth across the river a few times. However, the set-up was ultimately quite efficient for the weavers' goal of dyeing many colours in a short period of time. The number of dye pots meant that 3 or 4 completed colours were being hung up on the line to dry all at once!

All the weavers seemed quite knowledgeable and worked well together in small groups. It didn't seem that there was a single leader directing the others, and they had clearly planned everything together beforehand to ensure that the dyeing ran as smoothly and efficiently as it did. Melchor's two brothers, Valentin and Froctoso Ttupa Quispe, were very helpful in identifying the colours and listing the recipes for me. Overall I was pleased with the level of organization, cooperation and skill I saw at the Pitukiska dye workshop. I was expecting a successful and efficient workshop as they had seemed very organized and cooperative from the beginning, and they exceeded my expectations.

As in Cancha Cancha, the Pitukiska weavers gladly provided us with tufts of their undyed alpaca wool so we can also have an idea of the natural alpaca colours available from Pitukiska.

1. **Rapunzel**
   Pure Yanali

2. **Victorian Lace**
   Pure Mote Mote

3. **Field of Gold**
   Second Water: Rapunzel (#1)
   Yanali *No added ingredients

4. **Forest Green**
   Chillka
   20 g White Ccollpa

5. **Squash**

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Pure Kaqa Sunkha

6. Deep Turquoise

Pure Kinsa Kuchu

7. Papaya Juice

Chapi
20g sal de limón

8. Aqua

Third Water: Deep Turquoise (#6)
Kinsa Kuchu

9. Pink Panther

Pure Chapi

10. Maracuya

Second water: Squash (#5)
Kaqa Sunkha *No added ingredients

11. Moss Green

Second Water: Forest Green (#4)
Chillka
20g White Ccollpa *No added ingredients

12. Ocean Breeeze

Second Water: Deep Turquoise (#6)
Kinsa Kuchu

13. Edwardian Pink

Second Water: Victoria Lace (#2)
Mote Mote
+ 1 large spoonful sal de limón

14. Peach

Second water: Papaya Juice (#7)
Chapi
Sal de limón *No added ingredients

15. Silver Green

Third water: Forest Green (#4)
Chillka

20g White Ccollpa *No added ingredients

16. **Palta**
Kinsa Kuchu
Ñuñunka

Wool is first dyed with kinsa kuchu, and then overdyed with Ñuñunka.

17. **Guava**
Chapi
1 large spoonful alum

18. **Boysenberry**
1/8kg Cochineal
1 large spoonful alum

19. **Cherry**
Second water: Boysenberry (#18)
1/8kg Cochineal
1 large spoonful alum
+2 large spoonfuls sal de limón (per 300g of wool)

20. **Pomegranate**
Third water: Boysenberry (#18)
1/8 kg Cochineal
1 large spoonful alum
2 large spoonfuls sal de limón
+2 large spoonfuls sal de limón

21. **Soft Raspberry**
Fourth water: Boysenberry (#18)
1/8 kg Cochineal
1 large spoonful alum
4 large spoonfuls sal de limón* No added ingredients

22. **Antique Pink**
Fifth water: Boysenberry (#18)
1/8 kg Cochineal
1 large spoonful alum
4 large spoonfuls sal de limón* No added ingredients

Wool is only dyed in this wash for 10 minutes without adding anything else.

23. **Strawberry Shortcake**
Sixth water: Boysenberry (#18)

1/8 kg Cochineal
1 large spoonful alum
4 large spoonfuls sal de limón* No added ingredients

Wool is dyed in this wash for only 5 minutes without adding anything else.

24. <u>No name</u>

Ñuñunka
1 large spoonful alum (per 300 g of wool)

25. <u>Mint</u>

Fourth water: Deep Turquoise (#6)
Kinsa Kuchu
Third water: (#24)
Ñuñunka
1 large spoonful alum (per 300 g of wool)

Wool is first dyed in the fourth kinsa kuchu water, and then overdyed in the third water ñuñunka with the alum.

26. <u>No name</u>

Third water: Pink Panther (#9)
Chapi *No added ingredients

27. <u>No name</u>

Fourth water: Boysenberry (#18)
1/8 kg Cochineal
1 large spoonful alum
4 large spoonfuls sal de limón* No added ingredients

Wool is boiled for a half an hour instead of 5 to 10 minutes.
The Pitukiska weavers also said they are capable of dyeing more colours with plants they didn't have present that day, most notably with :

- awaypili
- macha macha
- kiko qora

<u>Amaru:</u>

Monday, March 25th, 9:30 a.m.-6:00 p.m.

<u>Weavers in attendance</u>:

Gregorio Sotalero Tacuri
Segundina Maque Huaman
Gregoria Chipa Ccana
Celia Chipa Puma

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+1 male and 4 other female weavers (failed to take proper attendance, did not get names from Alex as intended to)

Q'ente representatives/ Mosqoy students in attendance: Leah Hughes, Alex Sotalero

Number of colours: 20

Summary:
I arrived in Amaru at 9:30 a.m., our agreed meeting time. I was pleased to see that they already had the pots going when I got there, and that they had all the plants gathered. However, I was a bit disappointed by their low attendance, which has been occurring often lately. Of the 16 weavers on the association members list, only 9 were present. However, this was better turnout than many of the recent weaving meetings.

The Amaru weavers have a great deal of knowledge about the dye plants, especially Gregorio and Alex. Gregorio didn't direct the others though, and all the women seem to be very skilled dyers as well. Alex provided me with a great deal of information about the plants they used that day, such as where they grow, when they are harvested, and their medicinal uses (see "Dye plants" document). Amaru used many plants that I hadn't seen previously in any other communities, and produced a different set of shades. Overall the tones were more muted or earthy than in other communities. Amaru was also the only community to dye with copper oxide, iron oxide, and various ccollpas (white, yellow, dark yellow and green ccollpa). They say they know how to dye countless other shades, but didn't have the materials or time to do them all. However, despite their apparent mastery of dye plants, they worked very slowly. It took them all day to dye 20 colours, while other communities dyed the same amount in half the time. This was likely due to the fact that they had fewer weavers and only 1 or 2 pots in use at a time. Two fires were lit in the covered "weaving centre" area, and another was lit later in the day outside in the yard. However, they did not dye in all three pots at the same time.

Their progress was slow but very precise. The amount of fixative was calculated as per 100g of wool and weighed to have an exact ratio. They also had small test swatches of wool (approx. 10 g) which they dipped into each pot to see how the colour would turn out before they added the real skein. In addition to dipping the test wool into the pot, they also dipped a metal cup into the pot to collect a small amount of dye (approx. 10 mL). To this dye, they added a couple grains of the fixative and mixed it to see how it would affect the colour before they added the fixative to the actual pot. They then repeated the process of dipping the test yarn into the cup to see how the final colour would turn out. Only after these tests did they add the fixatives and wool skeins to the dye pot. Unlike most of the other

communities, Amaru only dyed their own wool a few of the colours, most notably those that used cochineal. My overall impression was that they are very skilled dyers and are very precise and methodical in their work. They also cooperate well together and were in good spirits throughout the long day of dyeing.

NOTE: Blue. In previous conversations with Sarah, Gregorio said they were capable of dyeing blue with cochineal. When Gregorio met with Sarah on other business the Friday previous to the dye workshop, he told her that they would dye it for us on the 25th. However, they did not produce blue in our workshop. When I asked Gregorio about it, he said they did not have all the necessary materials and had not had time to properly prepare the wool to dye it blue. He was a bit vague about the materials that were lacking. However, he said that to dye blue it is necessary to soak the wool overnight in water and piedra de alumbre. The ratio is 150g of piedra de alumbre per 1 kg of wool, and there should be sufficient water to completely cover and soak all the wool. To dye blue, it is better to soak the wool in this mixture for as long as possible, even up to 2 days prior. He mentioned it is also very time consuming to dye blue, as the wool may have to boil in the pot for a number of hours.

NOTE: Wool preparation. Gregorio said that they use the above wool preparation for all the colours they dye (150g of piedra de alumbre per 1kg of wool in water, to soak overnight). This makes the colours more vivid and prevents the dye from washing out or rubbing off. Gregorio's daughter Rosa came to Casa Mosqoy the day before the workshop with the intention of bringing the wool and fixatives back to Amaru with her. Their intention was to prepare the wool for dyeing in this way. However, I was not in Cusco that day and there was confusion about who would be accompanying me to the workshop in order to bring the wool. As a result, nobody was at the house to give the wool to Rosa, and I did not understand that they wanted the wool in order to prepare it until I was already in Amaru and it was too late. In future dye workshops, we should bring the wool to them in advance in order for them to soak it overnight. Amaru is the only community that mentioned this method of preparing the wool.

Colours:

All wool was rinsed in water before dyeing. The ingredient amounts are calculated to dye 100g of wool.

1. **Mustard yellow**

    40 g k'olle
    15 g piedra de alumbre

40 g of k'olle per 100g of wool, plus 15g of piedra de alumbre. The mixture can't be boiled for too long, or the dyeing properties will escape in the steam. The wool was in the water for approximately 20 minutes.

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2. **Nogal**
   Second water: Mustard yellow
   40 g k'olle
   15 g piedra de alumbre
   + 40 g White ccollpa

Wool is dyed in the second water of the k'olle mixture used to produce colour #1 (40g of k'olle + 15g piedra de alumbre). 40g of white ccollpa is added to this mixture.

3. **Light yellow**
   K'illca
   15 g piedra de alumbre

4. **Dark green**
   Second water: Light Yellow (#3)
   k'illca
   15 g piedra de alumbre
   + 15 g iron oxide

5. **Petrol green**
   Third water: Light Yellow (#3)
   k'illca
   15 g piedra de alumbre
   15 g iron oxide
   +0.8 g yellow ccollpa

6. **Yellow green**
   Fourth water: Light Yellow (#3)
   k'illca
   15 g piedra de alumbre
   15 g iron oxide
   0.8 g yellow ccollpa
   +0.8 g green ccollpa (already in their possession, not brought by Q'ente)

7. **Plomo**
   40 g Eucalyptus
   0.8 g dark yellow ccollpa (already in their possession, not brought by Q'ente)

8. **Polo polo yellow**
   Polo polo
   15 g piedra de alumbre

9. **Lime green**
   k'era tarwi
   0.15 g iron oxide

10. **Purple-pink**
    Cochineal
    0.15 g alum

11. **Blood red**
    Second water: Purple-pink (#10)
    cochineal
    0.15 g alum
    + 0.15 g sal de limon

12. **Purple**
    Third water: Purple-pink (#10)
    cochineal
    0.15 g alum
    0.15 g sal de limon
    + 10 L urine/ kg of wool

Wool is dyed bright red using the dye to produce colour #11 (Blood red). It is rinsed with water, then placed in fermented urine. The urine rapidly changes the colour from red to purple. Wool is then rinsed again in water.

13. **Mermelada**
    Fourth water: Purple-pink (#10)
    cochineal
    0.15 g sal de limon
    +0.15 g sal de limon (additional)
    (total 0.30 g sal de limon)

14. **Dusty pink**
    Fifth water: Purple-pink (#10)
    cochineal
    0.15 g sal de limon
    0.15 g sal de limon
    +0.15 g sal de limon (additional)
    (total 0.45 g sal de limon)

15. **Antique pink**
    Sixth water: Purple-pink (#10)
    cochineal

0.15 g sal de limon
0.15 g sal de limon
0.15 g sal de limon
+0.15 g sal de limon (additional)
(total 0.60 g sal de limon)

16. No name

Second water: Plomo (#7)
40 g Eucalyptus
0.8 g dark yellow ccollpa
+0.8 g yellow ccollpa
Seventh water: Purple-pink (#10)
Cochineal
0.6 g sal de limón

Wool is dyed in the second water of Plomo (#7) with additional ccollpa, removed and then rinsed. It was then overdyed in the seventh water of cochineal.

17. No name

200g K'echincha
40g yellow ccollpa

18. No name

Kaka unka
20g yellow ccollpa

19. No name

40 g cochineal
Second water: No name (#18)
Kaka unka
20g yellow ccollpa
Second water: Plomo (#7)
40g Eucalyptus
0.8g dark yellow ccollpa
0.8g yellow ccollpa
+40g yellow ccollpa

This colour seemed to have been invented on the spot. The wool was first dyed in a new pot of cochineal (this was a brand new pot that was put on the fire). It was then over-dyed in the second water of kaka unka (#18), which had been removed from the fire and was standing in the pot. It was then rinsed and placed in the second water of Plomo (#7), with the addition of 40 g of yellow ccollpa.

20. No name

Third water: Ploma (#7)

40 g Eucalyptus
0.8 g dark yellow ccollpa
0.8 g yellow ccollpa
40 g yellow ccollpa
+10 g iron oxide
+10 g copper oxide

In addition to these plants and colours, Amaru says they can dye with the plants known in other communities (m'ote m'ote, kinsakuchu, chapi, awaypili, flor de retama, ñuñunka etc), as well as the following:

- Llaque: Dye with the root of the plant (a thorn). Produces shades of yellow
- Sani unku: Very similar to kaka unka, but much larger. Produces shades of orange
- Murmusqui: Dye with the fruit of the murmusqui tree. Dyes shades of brown (café)
- Rosa blanca: Use the flower of the white rose. Dyes yellow
- Ñucchu: A red flower. Dyes red
- Labrán: Leaves. Dyes brick and cherry shades (ladrillo y guindo)
- Tayanka: Leaves. Dyes dark green.
- Marq'o: Leaves. Dyes dark green.
- Ke'eche: Use the fruit of a thorn. Dyes purples.

Conclusion

I was very impressed with the dye workshops overall and thoroughly enjoyed seeing the dye process happen in each community. Our original intention was to obtain a complete list of all known dyes in each community. However, this proved to be impossible to undertake in one day of dyeing. Nearly all the communities said they could dye more colours, but lacked the time or necessary materials. In some cases the missing dye plants were not in season, or have to be bought from other regions. We followed up on the dye workshops in subsequent weaving meetings and at the Encuentro, and heard from all that they are willing and able to dye more colours for us. We discussed the possibility of future dye workshops, and the communities were enthusiastic about holding more in the spring or summer of 2014.

The weavers take great pride in their skill as dyers. During and after each workshop, community members asked me if they had "done well" or if I liked the colours. Of course I always responded that I did and told them how much we appreciated their efforts. In many communities they pulled skeins out of the dye

pots and asked me if they were "good" or if I wanted them darker, lighter, or different in any way. At first I thought they didn't understand that I wanted a sample of EVERY colour, even though I had repeated this numerous times. I took their questions to mean that they were simply trying to make colours they thought I would like, and not all the colours they knew. However, as I participated in more dye workshops, I began to realize that the number of colours they can make is nearly endless. For each shade we have in the dye book, they probably could make a very similar dye that was just a bit darker, just a bit lighter, or just a bit brighter. In fact, I believe that in some of the communities, the same colour would turn out ever so slightly different every time they make it. This leads me to the conclusion that our original goal of obtaining a sample of every colour the weavers are capable of dyeing would take years of dye workshops. A more practical goal may be to have samples of a few shades from each plant the weavers regularly dye with.

That's not to say that we shouldn't encourage the weavers to experiment with colour and learn to dye with new plants. I think the dye workshops are an excellent way to do just that. All the weavers were fascinated by the dye books when we showed them in the communities and at the Encuentro. They were all eager to know how other communities produced shades they didn't. The excitement generated by the dye book reaffirmed the value of the whole exercise for me. It proves that the weavers are eager to continue learning more about dyes and to enhance their skill as dyers. It was great to see the knowledge exchange that spontaneously happened between community members at the Encuentro as I passed around the dye book. Certain communities could definitely teach the others a great deal. I know that Cancha Cancha, for example, has expressed a strong desire to learn how to dye more colours. Communities like Pitukiska, who dyed 27 colours in a few hours, or Amaru, who used different plants and a very methodical technique, could teach communities like Cancha Cancha how to improve their knowledge, skill and efficiency.

The differences in the total number of colours produced in each community are not solely due to knowledge or lack thereof. I noticed that communities with larger weaving associations (i.e. Parobamba, Pitukiska) dyed many more colours than smaller associations (i.e. Huaran, Cancha Cancha). There is an evident correlation between number of people present and number of colours produced. I feel that they would have dyed a lot faster in Amaru if more people had been present. Likewise, I suspect they would have dyed many more colours in Huaran if they had as many people present as in Pitukiska. The number of weavers who participate also determines how many plants they have available. In most communities each participant was assigned a certain plant to bring, so in larger associations they had a larger variety of plants or a greater quantity of each one.

As the number of colours dyed often exceeded the estimated number (especially in the Mapacho River), I would recommend always bringing extra wool or extra skeins. When we had to stretch our limited wool supply to last in Bombon and Pitukiska, we found that thinner skeins worked in a pinch. As mentioned previously, some of the skeins used in these two communities were around the 50-60g mark instead of 100g. This size was fine for our purposes, although the weavers do say that it is difficult to dye a skein if it is too thin. Another important tip I learned is that the string used to fasten a skein must be very loose. If it is too tight, the dye will not penetrate the wool in the part where it is tied, and the result will be an unevenly dyed skein. Upon weighing our skeins and some cones on a digital scale, I discovered that there was some variation in the store-bought, machine-spun cones we used. Although they were all supposed to be 1 kg of wool, some were a bit heavier and some a bit lighter than 1 kg. The vast majority of our "100g" skeins were actually closer to the 80g mark. I would recommend trying to make skeins as close to 100g as possible, since the weavers calculate the amount of plant matter and fixative needed for a pot of dye based on the amount of wool, and often work with 100g as a baseline. If they absolutely need to be smaller skeins, it would be preferable to half the size as accurately as possible so they could make calculations for 50g skeins.

This dye project was very labour-intensive and time-consuming for the Q'ente volunteers who participated. Making the skeins by hand takes a long time. We found it worked best to make a skein around the back of a chair or on table legs. Another option is to wrap the wool around a partner's outstretched hands. Skeins can be made by one person moving their hands in a scooping motion (the method used by the weavers), but this creates an X-shape in the skein which is very challenging to unwind when it has to be balled later. After the dye workshops, balling the wool was another very time-consuming step, which is still ongoing at the time of writing this report. My advice for balling wool is to recruit as many friends as possible! I found the best way to ball was actually with two people. One person holds the skein on their outstretched hands and keeps it from tangling while the other balls the wool. Making the dye books was a long and involved process, but we were very happy with the end results. The wool that was not put into the dye books is to be balled, weighed and sold at textile fairs. Although the dye workshops were certainly a large and involved project, I found it to be incredibly rewarding and definitely worthwhile. All involved were very impressed with our final results. The pride I saw on the weaver's faces as they admired their community's page in the dye book confirmed that these workshops were very important for them as well. I hope that we can continue with further Q'ente dye workshops in the future.