



• Creativity • Collaboration • Continuity • Community

IN THIS ISSUE:

FEATURE STORY

▶ SEED SWAP IN BEIRUT [Page 1](#)

LET'S FOCUS

▶ AFIR TAKES ITS FIRST STEPS:

BEEKEEPING CAPACITY-BUILDING WORKSHOP [Pages 2-3](#)

UPCOMING EVENTS [Page 3](#)

LET'S SHARE OUR NEWS

▶ STORK LOVERS OF LEBANON CRY FOR HELP [Page 4](#)

▶ MAKING EARTH PLASTERS... AND LOVING IT [Page 5](#)

PHOTO OF THE MONTH [Page 6](#)

FEATURE STORY

SWAPPING SEEDS AND SHARING STORIES

On **April 2, 2016**, the **Beirut Art Center** invited **SOILS Permaculture Association Lebanon** to organize a seed exchange event at its premises - one of the few such events in Lebanon. The event was intended to mark the conclusion of the 2-month exhibition by Nigerian artist *Oto-bong Nkanga: Landversations - Beirut*, in which SOILS also participated (see [L.E.T.S. Lebanon Issue 31 - February 2016](#)).

As luck would have it, our new friends from **Graines et Cinema (France)** happened to be in town as part of their mission to bring heritage seeds to Syrian refugee camps in the country. They were grateful for the chance to be part of this exchange and share some of their seeds.

We also decided to hold a seedball workshop, since there would definitely be families participating in the event - and we knew how much children (and adults) enjoy playing with mud!

Around 50 people showed up that afternoon, and many of them brought interesting seeds. *Mustapha Itani* (a master's student at the American University of Beirut) brought seeds from threatened endemic plants in Lebanon. Our friend *Alex Ikonomidis* from **A Seed for Change** also joined us and shared some of the heirloom seeds (seeds of old, traditional varieties of food crops) which his NGO has been working on preserving.

In general, seed swaps require participants to put their seeds in labeled paper envelopes, but it is always the case that someone brings quantities of seeds in a bag, jar or box. It turns out that making envelopes and labeling them on-site is as fun as swapping seeds! Alexis Baghdadi from SOILS had just learned how to make origami envelopes that day - a method also used by Graines et Cinema. Together they had fun teaching participants how to make these envelopes.

It was also the occasion to share seed stories. Our friend Chawki Boustani from Souk El Tayeb, for example, shared an interesting piece of lore about the seeds of the native *Styrax officinalis* tree. It turns out that fishermen used to grind the seeds and make dough balls out of them which they would throw into rivers. Fish who ate these balls experienced dizziness and floated to the surface where the fishermen could easily pick them up with a net or by hand.

The huge - and frankly, unexpected - success of this first seed swap has definitely encouraged us to hold others throughout the year. You could organize one in your region too!

Shared by the Editorial Team



▶ [back to contents](#)



LET'S FOCUS

AFIR KICKS OFF WITH A BEEKEEPING CAPACITY-BUILDING WORKSHOP

We are very proud to announce that work on our AFIR project has kicked off!

We have completed the preliminary assessment for establishing this environmental center focused on permaculture and beekeeping, and we have secured 2 early partners. The **PACA region (Provence-Alpes-Côte d'Azur)** approved funding for providing technical support to local beekeepers and purchasing beekeeping equipment.

The first part of this collaboration involved the purchase of 8 demonstration and learning hives, as well as basic tools for beekeepers (costumes, smokers, a refractometer for measuring moisture content in honey, etc.). It also included a workshop for a dozen beekeepers from Saidoun and neighboring villages. *Bassam Khawand* from SOILS helped put together the program of the workshop with *Paul Bonaffé*, a French beekeeping expert and member of the [Apiflordev association](#). The workshop took place from **April 23 to 26, 2016**, and focused on hive sanitation. It also aimed build a long-term relationship with these beekeepers who were identified as potential partners of AFIR.

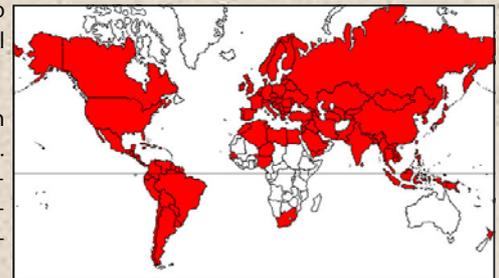
While *Rita Khawand* was managing the **Permaculture Design Certificate (PDC) course** in Saidoun, it was up to Bassam and me to coordinate with Paul and the beekeepers on the ground. We took turns translating from French to Arabic and back, but for me it was a great learning opportunity. So far, Bassam had been my only link to the beekeeping world, and while his knowledge and mentorship were invaluable, I was interested in finding out how other beekeepers practiced their passion. Paul's presence and expertise was an added bonus for all of us as well.

On the first day, Paul spent the morning giving a thorough exposé on the **varroa mite** (*Varroa destructor*), the most common bee parasite, present in virtually every country in the world except Australia and some central African countries where the climate makes bees more resistant and strict quarantine procedures are enforced to lessen the chance of an accidental importation of the mite. This tiny reddish mite (2-3 mm) attaches itself to bees and bee larvae, feeding on them and transmitting diseases to them. A number of chemical and natural measures exist to limit the numbers of varroa mites in beehives, but these cannot be applied year-round. Besides, they mostly only affect mature impregnated females that live outside brood cells. Around two thirds of varroa mites (males and immature females) remain inside cells and may surface after the treatment period. There is also the risk of bees becoming too dependent on the treatment and the mites developing an immunity. Of course, the biggest problem is that most beekeepers assume their hives do not contain varroa mites because they simply don't see them or check at the right moment. Of course, checking 20,000 (or up to 50,000) bees in each colony individually is impossible. This is where Paul came in and introduced beekeepers to a simple test that would help them determine approximately the percentage of varroa infection per colony in order to decide which control measures they should instate.

In the afternoon, we visited Bassam's beehives and had the chance to see a live demonstration of the varroa test. The procedure involves gathering around 300 young bees (not yet able to fly), which amount to around 3/4 of a cup. These bees are then placed in a jar with a special lid fitted with a metal sifter. Around 1 heaving teaspoon of powdered sugar is then dropped inside the jar, and the contents are shaken vigorously for quick results. The action of the sugar on the mites causes them to detach from any infected bee. The jar is then turned over and shaken like a salt shaker for a few seconds, causing the mites to fall through the sifter, but not the bees. The total number of mites fallen off is divided by 3 to get an approximate percentage of the number of mites. Anything under 6%-7% is no cause for drastic measures. For sure, this is a much more efficient method of measurement than the one beekeepers usually use (opening larvae cells to check for the mites' presence).

To this, Paul added an interesting method of controlling varroa populations. This involves placing half a frame in the beehive, which prompts the bees to build larger male (drone) cells in the empty space. These cells attract large concentrations of varroa mites that enter them to lay eggs and reproduce. The beekeeper then cuts open these cells to check for mites. Infected cells are easily cut out and disposed of, or fed to chickens who love larvae. Again, beekeepers found this method much easier and faster than the way they usually cut out male cells from a full comb, working their way around the wire structure. This procedure is repeated up to 4 times, or until no mites can be seen inside the cells.

Continued on Page 3



Varroa mite distribution worldwide (red zones)



Demonstrating the varroa test



Breeding queen bees



How to mark queen bees (practicing on male)

[▶ back to contents](#)



Continued from Page 2

Over the next 3 days, we visited 4 more beehive sites in Saidoun, Anan, Rimat and Bkassine. *Hadi Khawand* and *Roger Helou* showed us their methods of breeding queens for specific genetic traits. Hadi specializes in supplying queens to beekeepers in the region. Roger, on the other hand, keeps a "bank of queen bees" close at hand to guarantee his own self-sufficiency. Brothers *Amer* and *Issam Raad* were excited about the sharing of expertise, and were looking forward to extending this collaborative approach to more beekeepers in South Lebanon.

On the final day, Paul addressed another disease affecting bees: **American foul brood**. This fungal infection is as deadly as it is infectious, causing ravages in bee colonies for miles around if left unchecked. It causes bee larvae to rot and liquefy before they are born, putting a heavy strain on a colony's population. As a fungus, it spreads by microscopic spores, so that when healthy bees are cleaning up dead cells, they propagate the spores to new brood cells. In France, beekeepers who identify this disease in their hives have to declare it so a quarantine can be put in place - basically, no bees within a large radius may leave their hives until the disease is burnt out. However, it is possible to stop the disease's progression at an early stage and limit its damages. But the problem is that inexperienced beekeepers often do not recognize this disease, or treat it with antibiotics (these only stop the vegetative form of the fungus, but do nothing against its spores, plus bees eventually develop a tolerance to it, so it no longer has any effect on them). Treatment for this disease almost always requires destroying the infected colonies and burning or sterilizing the wooden boxes and frames with fire.

By the end of the workshop, I had learned a lot, and so had the beekeepers who stuck with the program until the end. Paul was also pleased with the practices he had seen in action (including Bassam's method for melting beeswax) and with the results of his intervention.

But, as Bassam pointed out, the most important result we achieved was bringing so many beekeepers together and getting them to share their skills and expertise among themselves for the first time. This was no small feat. Beekeepers are almost exclusively self-taught, or learn the trade from their fathers or an older relative. They have virtually no local resources to lean on, nor any support from government organizations, so they are understandably proud of their knowledge and they guard it jealously. The drawback is that this doesn't leave much room for cooperation... until now. Paul's encouraging remarks, and the demonstration of good intent from everyone involved changed things dramatically. This alone was enough to qualify the workshop as a resounding success.

For us, this was the best news we could have gotten as we begin preparations for our AFIR project. The success of this center depends on the involvement of all stakeholders in the region, starting with beekeepers who will be the main trainers and experts. For now, we will follow up with the beekeepers and purchase the equipment in preparation for a second workshop planned with Apiflordev in September 2016. This workshop will focus on hive products (candles, propolis, etc.) and will involve mostly women from the region in the production process.

We will also develop educational flyers in Arabic, based on learnings from the first workshop, as well as documents for children.

Stay tuned for updates, it's really happening!

Shared by Alexis Baghdadi



An example of brood diseases



Bassam demonstrating how to melt beeswax



The Bee-Team!

[▶ back to contents](#)

UPCOMING EVENTS

"FISH FOSSILS OF LEBANON" EXHIBITION



MAY 8 - October 8, 2016

**Tuesdays to Sundays
10:00 a.m. - 6:00 p.m.**

MIM Museum, Beirut

Private collection on display at the minerals museum

<http://www.lebtivity.com/event/les-poissons-fossiles-du-liban-exposition-au-mim-musee-des-mineraux>

"ARMENIAN DAY AT UNIVERSITÉ ANTONINE" CULTURAL EXHIBITION



MAY 20, 2016

12:30 p.m. - 9:30 p.m.

**Antonine University,
Baabda**

Exhibition of Armenian art, culture and food.

<https://www.facebook.com/events/1683115635286403>

"THE GARDEN SHOW & SPRING FESTIVAL" GARDEN AND OUTDOOR EXHIBITION



MAY 24-28, 2016

5:00 p.m. - 11:00 p.m.

Beirut hippodrome

Plants, garden and outdoor decoration, crafts, food and nutrition.

<https://www.facebook.com/TheGardenShowandSpringFestival/timeline>

[▶ back to contents](#)



LET'S SHARE OUR NEWS

RESCUING WOUNDED STORKS IS NOT ENOUGH: THE KILLING MUST STOP

They came in peace! This is how storks, the most beautiful and peaceful birds I have known my whole life, came to this country. I still remember the first time I saw them crossing the sky over my town. I was 6 years old, and I was running after them trying to invite them to land. Then I lied on my back on a big rock and put my hands behind my back to feast my eyes on the blue sky, trying to count and contemplate these beautiful creatures flying above my head.

These birds are symbols of luck in some countries like Poland. They are also the birds that bring babies in the stories we were told when we were kids. Sadly, they are not welcomed well in our country. Every year during the migration season, uneducated amateurs shoot them by the dozens, and litter the landscape with their bloodied bodies. At the same time, there is no one to take any concrete measures to stop these massacres and blood rivers.

This why I dedicated a big part of my life, of my time, to stop these criminally irresponsible acts by people who dare call themselves hunters. I receive daily calls about injured birds. Some are found in the woods suffering from gunshot wounds, others are left tied to a tree or locked in a basement, bleeding or starving to death.

2 weeks ago, someone called me and told me he had found 2 storks, shot severely in many places of the body. I grabbed my car keys drove as fast as I could to his place. I immediately brought back the 2 birds to my house to administer urgent first aid to them. They had been shot in the wings and were unable to move. One of them had lost a lot of blood and its wounds were infested with maggots. I started cleaning their wounds using disinfectant products. Then I tried to give them analgesic pills to reduce the pain. One of them wouldn't cooperate, while the other couldn't even swallow water to recuperate the blood and fluids it had already lost. Both were shaking with fever, infection, pain or fear. It didn't seem like either would survive.

That night, I couldn't sleep. I couldn't comprehend how a human being could find it in his heart to hurt such beautiful souls. Then the morning came. One of them hadn't made it through the night, unfortunately. The other was still alive, and its wound was looking better, but it was clear that it would never fly again.

12 hours later, I received a second call about another stork that had been shot and was severely hurt. It had a gaping wound and was losing a lot of blood. It seemed impossible that it would survive. I tried to dress its wound but the bleeding wouldn't stop. It was then that I had to do the most horrific thing I have ever done in my life... I amputated the wing to save the bird. I sewed the artery up and used some powder to stop the bleeding, then I waited. Luckily, this bird survived and began recovering after it had lost an impressive 250 cc of blood. With the help of antibiotics, it regained its health and has started adapting to its new lifestyle with one wing in my garden.

I keep wondering what would drive people to hurt these birds. When I come across them, I ask them why? They reply that they do it for fun or because they feel bored and want to have some action. Some say it's basic human instinct. Worse, some don't even know why.

I wonder why the Ministry of Environment is not taking more measure against these people. So far I haven't seen any live or realistic or practical action from any environmental organization. Lots of them promised to help, but no one acted. No one has done anything.

To be honest, I cannot afford the expenses that come with taking care of wounded birds. I try to find homes for the ones that are hurt too severely, and if I can't find any, I keep them in a big aviary that my friend and I have built in the wild. There, we keep rescued birds of prey like eagles, hawks and buzzards along with storks, and they live the rest of their lives "caged" together because they are no longer able to continue their lives and migrate normally. Why? Because someone shot them needlessly and gratuitously.

We don't need to treat these birds *after* the damage is done. We need to stop the killing and stop disrupting their migratory routes.

Shared by Michel Sawan



Try to walk with broken toes and ankles, or hold a heavy bag with broken fingers... I don't think it's fun! Neither does a stork or any bird with half-broken wings trying to fly across more than 40,000 km from one continent to another.



[▶ back to contents](#)



LET'S SHARE OUR NEWS

MAKING NATURAL EARTHEN PLASTERS... AND LOVING IT!

I love the whole DIY aspect of building stuff, as long as it involves basic tools (cutting, nailing, screwing and gluing) and it is feasible for as many people as possible with minimum training. Heavy construction work doesn't qualify as DIY for me, because conventional methods are too energy and labor intensive, plus they require a little higher level of skill. So far, I mostly worked with wood (reclaimed) and the occasional metal or tin piece, but I've always been interested in experimenting with new materials. When our friend *Joanna Parker* organized her first **earth plastering workshop** on the weekend of **April 7-8, 2016** she made it sound interesting and easy - while still useful and practical. Joanna and I worked on the communication for the workshop and I was the first to sign up for it.

Amani Dagher and *Ghassan Salman* from SOILS also signed up for the course, so we shared a car to Lassa, in the mountains above Jbeil, where Joanna's family-in-law owns a farm and agricultural land. Joanna's husband, *Raed Chami*, took over the family orchard some 3 years ago, and has been making the transition from conventional agriculture to more natural and holistic methods of farming. There were 8 of us participating in the workshop and we immediately felt at home there and were eager to start.

Joanna started with a presentation about earth building to give us an idea about the possibilities of this material. After that, we proceeded to experience earth with our senses, from sight to touch, smell and even taste in some cases. The basis for earthen construction is clay; without it, building is impossible. Of course, different soils have different clay contents, so we measured that content in different samples and mixed them with water to test their building properties.

On the first afternoon, we made a "**cob**" mixture of equal parts of soil and straw with water to create a basic interior **covering plaster** for a shed near Joanna and Raed's land. We dug the soil up on location and sifted it coarsely to remove big rocks and break down clumps. The straw helps keep the mud together and gives it both structure and malleability. To find out of the consistency is right, we perform a "mud ball test"; we make a ball and drop it on the ground from a few centimeters, the ball should break but not entirely (it should keep some of its "round" shape). If it remains intact, the mixture needs more water, if it collapses, it needs more soil and straw. Of course, the best way to mix the ingredients together is by trampling over them barefoot - and it's fun too! To apply the plaster, we simply make balls and splat them on a wet wall structure then spread the cob evenly to about a 2 cm thickness. The right way to apply plaster is from bottom to top. At the end of the day, we had a good shower and amazing home-cooked dinner to reward us for our efforts. That night, we all went to bed early in the Chami farm's guesthouse, as we had a long second day ahead of us.

On the next day, we made a **finishing plaster** for another section of the shed that was already covered with dry cob plaster. The composition of this type of plaster is different in that it contains both clay and sand (70% sand, 30% clay) and no stones. We had to sift the soil very finely to get an almost powdery product. It may contain straw, but usually doesn't, depending on one's aesthetic preference. It should also have a softer consistency. This plaster is applied with a trowel on the wet base plaster from bottom to top. In this case, it should be applied evenly in thin layers (maximum 1 cm thickness) and spread flat without leaving any holes. Once a wall is entirely covered, it can be smoothed out with a wet sponge float to get rid of any small holes left. However, this causes the sand grains to pop out of the plaster, so we must be careful to push them back in with the trowel. We plastered on entire wall, and also experimented with different soil plasters inside bamboo frames on another wall. The results were nothing short of amazing, and the wall turned out really beautiful. This is definitely something I would like to apply again soon.

Without a Facebook page, Joanna and Raed only rely on their blog [Les Racines du Ciel](#), direct contact, word-of-mouth and the mailing lists of networks like SOILS or The Mansion to draw in customers for their natural products or participants in their events. Apparently, this is beginning to work, several people have already contacted Joanna to ask about natural plasters, and she has decided to conduct a second workshop in May 2016.

Shared by *Alexis Baghdadi*



PHOTO OF THE MONTH

You sent us your submissions and you voted for your favorites. Here it is, the PHOTO OF THE MONTH:
To send us your photos, email us on contact.soilslebanon@gmail.com



Thistle flower near Bkassine, Jezzine - South Lebanon
Photo by Alexis Baghdadi

[▶ back to contents](#)

GET IN TOUCH, GET INVOLVED

Do you enjoy reading this newsletter?

Send us your feedback and suggestions, share your news, photos, tips or thoughts, or find out more.

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A THOUGHT TO SHARE ...

**“When the world wearies
and society fails to satisfy,
there is always the garden.”**



**–Minnie Aumonier
(Photo: Samen Eco Gardens)**

[▶ back to contents](#)

