

Learn Something Small about Lady Bees in Winter: A Dark and Twisted Valentine's Day Story!

Listen at www.JacquelineRaposo.com/podcasts/learn-something-small

Audio Story Transcript:

Sound: Twinkling windchimes

Jacqueline Raposo:

Hi, friends. It's Jacqueline. I invite you to listen to this story when you're warm and cozy and quiet. Rest. And let yourself daydream. And go deep. It's just a few minutes. Relax. And rest. Okay? Here we go...

Sound: Gusty winter wind underscores the following.

Jacqueline: whisper reads February by Jane Goodwin Austin

I thought the world was cold in death;
The flowers, the birds, all life was gone,
For January's bitter breath
Had slain the bloom and hushed the song.

Jacqueline:

It is February, and I am not of myself.

I am cold yet my skin is electric, my nerves jumping with anger and angst and unsettled energy that crackles away from me like lightening. People request things of me that I cannot give, and I want things that I cannot have. So I reject and I desire.

Some nights, I walk the city streets thanking the moon for these eleven months of solitude. But then, I lay awake and I yearn and I ache without a body wrapped around mine. It is February, friends, and I itch for life and justice and flight. I want sunlight.

Sound: The light buzzing of bees comes in as the wind fades out.

Jacqueline:

It is February and I am *not* of myself...

A lady bee in her winter body.

An Interview Clip:

Jacqueline Raposo: What are they literally doing... are they sleeping? Are they...

Marina Marchese: They're sort of shivering and shaking their muscles to create body heat...

Jacqueline:

That's [Marina Marchese](#). Marina's the owner of [Red Bee](#), a honey farm in Connecticut. She's authored several books on beekeeping and honey, is a honey sommelier, and I've written several articles about such things that heavily rely upon her expertise.

This year, emotion feels more demanding to me. Those of us in cold winter climates often struggle during these deep winter months, and I hope you have good moments and days, like I do, amongst the darkness. But *this* winter... *this* particular powerlessness... how we can't just *be* around people? Or *show up*? Or *get it done*? Even as a chronically ill and disabled woman used to barriers and building new tools for myself, I can't *shift* the unsatisfied, unbridled energy that seems to simmer below some unfinished business in my life.

So, I invite you to turn your attention away from that, with me. Let's tunnel our vision. Let's slide into a story and learn from our honeybee friends who also have a hard go, this time of year. And learn something small about their survival, and satisfaction.

We start in summer.

Sound: Wind chimes and then sounds of insects, bees, and birds in summer come in and underscore the following

Jacqueline:

Let's envision an imaginary season at Red Bee in Connecticut. Let's pretend nothing threatens our honeybee friends this summer. [Birds and mice and bears](#) stay away from the hives. As do beetles, moths and mites. Flowers blossom. The sun shines. Gentle rain falls. Everything just... works together.

Marina:

There's so many interesting, intriguing things about honeybees in general and the worker bees. The worker bees really are resilient. Everything that we associate with honeybees, it's really the females. They're hard workers, they're determined, they're productive. I used to always tell people that a honeybee or specifically a worker bee never has a bad day. They wake up, the sun shines on the hive, the heat of the sun warms the hive, and they are out there working. They're doing what nature made them do.

Jacqueline

The first thing we need about honeybee societies is that they're communal and *eusocial* – one Queen bee lays eggs to make all the bees in a colony. And their populations are dominated by generations of [genetically similar](#) female bees that make up 85-90% of the population.

Marina:

At the peak of the season — which would be June, July, during the summer — there could be up to sixty, eighty-thousand bees in a colony. If it's a really strong colony, it could be a little bit more. Every colony has its own personality and their life revolves around making honey. And the reason they're making honey is to survive for the winter.

Jacqueline:

When Marina says their lives revolve around making honey, she *really* means it -- bees eat honey year-round and will *die* if in short supply. Within each hive, beekeepers add trays called “honey supers” above the stores that bees eat, and they only collect those for human consumption. The rest is for the bees.

To make all of this honey, it's vital that the Queen bee, female worker bees, and male drone bees spend the busy summer months summer doing exactly what they're biologically made to do.

Marina:

So they're constantly in a state of producing honey to feed themselves and survival — for survival of long term survival of the colony.

A worker and a drone live for forty-five days, so every single day you have a handful of bees that are dying...

Music: A light and gentle royal waltz

Marina:

Under normal circumstances, there's one queen.

Her job is to stay inside the hive and lay eggs, which she does throughout the season. That's really her major job, is an egg laying machine.

Music: Brisk, quick, building staccato strings.

Marina:

Female bees are called workers. They really perform every single activity within the hive. They have different jobs throughout their life: From the minute they're born, they begin cleaning out the wax cells; they start feeding other young bees. At the next point, they'll actually secrete beeswax from their abdomen and start molding it into a honeycomb to create the cells, those hexagon cells. They'll guard the hive from predators or other insects that try to get inside. Undertaker bees drag out dead bees that just expire for whatever reason.

At the last three weeks of their lives, they basically become foragers. So those are the bees that we see in the garden on the flowers, looking for nectar to make honey. They will forage for water. They'll also forage for propolis — the sticky resin that they caulk up all the little holes in the hive that they do in the fall to prepare for the winter, to keep bacteria out and any kind of draughts or any predators from getting in.

So, the worker bees really do everything to maintain the hive. The female workers do *everything*...

Music: A slow, cheeky mid-century musical chairs.

Marina:

The male drones, their job is to mate with the queen. They don't mate with their own queen. But they go out on mating flights and they will try to meet up with other honeybees local in the area.

They don't participate in any activities in the hive. They do not make honey. You never will see a drone in a garden on a flower. Basically... they're mating.

Jacqueline:

This trifecta intrigues me. Here is an entire species of which the men are housed and fed and literally contribute only their reproductive *potential*, because not every drone even mates in his lifetime....

Marina:

I should also mention that in the act of mating—if they successfully mate with a queen, when they mount the queen and then they separate from the act of mating, their apparatus basically is ripped out of their abdomen.

Sound: A strong, cascading electric ripping sound.

Marina:

They die in the act. So, they never actually make it back home to the hive. It's kind of an awful way to go. But it's nature. It's been going on for thousands of years that way.

Sound: Steady rain on leaves and insect, bees, and birds chirping continues.

Jacqueline:

So, some poetic justice there.

During these blissful and busy summer months, the worker bees burn so much energy that they live only 5 or so weeks. This means to keep the colony thriving, the Queen must lay an egg every 40 to 60 seconds, 1500 to 2000 a day, or more...

Marina:

When there's no queen present, the whole system collapses: There's no incentive for them forage for nectar and pollen. They have no children to feed. So, they become a little bit edgy, and eventually things fall apart. So, with no new bees being born, eventually the colony reduces to a very small size and then they completely expire... to nothing.

Jacqueline:

As long as the weather is warm, the workers keep collecting, the Queen keeps laying, the babies keep thriving, the honey keeps coming....

But when the temperature starts to drop... below 55 degrees... then 50... then 45...

When "January's bitter breath / Had slain the bloom and hushed the song" ...

Sound: Rain and summer sounds shift to deep winter wind.

Marina:

They are not capable of activating the flight muscles in their wings. They can't activate their muscles and they can't fly. So, when it's really cold, they're sort of frozen.

As the temperature drops, the bees stay inside the hive. In order to stay warm, they form a cluster.

Sound: Closeup sounds of bees buzzing in a tight, moving swarm underscores.

Marina:

They make a big ball around the queen. And as the temperature gets colder, the cluster gets tighter. They're sort of shivering and shaking their muscles to create body heat. And they're also sort of rotating the big ball; so the bees on the outside go into the inside and get a little warm and then they the ones on the inside, go to the out. So, it's like a moving cluster. It's always in motion. The temperature is ninety-two, ninety-three -- which is ideal to stay warm. They've got to keep that queen warm, in that ball.

As the temperature goes up to maybe 50, 55, and maybe it's a little too cold or dark to go out, the cluster gets looser and they can walk around within the hive and access the honey to feed themselves and feed the queen. So basically, they're spending the time inside the hive, staying warm — clustering.

Sound: Bees fade out, wind continues.

Jacqueline:

Right now, eggs already laid are still being tended to and hatching, and these bees can live around five or so months, as they'll burn far less energy in winter than their honey-making summer cousins. But since the queen can't freely move around the frozen hive, she stops laying. Older bees are still dying. And the population drops...

Marina:

In the winter, it can go down to 40, 50, 20.... Depending on the health of the colony, can be very small.

Jacqueline: 12

But there's another reason for this decrease in population... An intentional decrease...

Sound: An ominous cello stinger.

Marina:

Most of the drones are kicked out of the hive because they don't contribute to any hive activity. And they would eat up a lot of honey more necessary for the workers to have.

Sound: Insects, birds, and bees with an underscoring of light, curious piano, cello and flute music.

Marina:

So, in the fall, you'll see worker bees pushing the drones out. They basically starve to death.

Jacqueline:

These male drones haven't done anything "wrong" to the female workers, per se. It's not like they cheated on their worker bee and then lied about it to her face and she found out anyway and so his slow death is her revenge. No. They did the little that biology required of them. But the workers are justified here, too. Because biology demands that they do *more*. That they excel at *everything*. And so, this disposal of the underserving drones...?

Marina:

It's survival again. If you watch a hive in the entrance in the in the fall, you will see drones being pushed out. They'll push them out, and they'll just fall to the ground. And since they can't really feed themselves — they're not capable of taking care of themselves like a worker, they don't know how to forage for water — they end up starving.

Jacqueline:

Enough drones get to stay so that the queen can mate in the spring and start the birthing and foraging and honey-making cycle again. But if more were kept in the winter hive? They'd eat more of the honey stores. Again, honey they didn't make.

If still not convinced that the worker bees don't have the biological or moral superiority I'm tapping into here — and that nature isn't cruel and wise and kind altogether —

consider this: In her entire lifetime, a busy summer worker bee will contribute to the raising of young, the creation and cleaning of beeswax cells, the foraging of materials, the chemical transformation of honey, and the caretaking of the old — all those things Marina told us and more — all to make her 1/12th teaspoon of honey. That's it. It takes 12 female worker bees to make 1 tsp of honey.

Now, who are you going to thank for that teaspoon the next time you pour or swirl or sip?

Sound: Wind chimes join the insects, birds, and bees.

Marina:

It's inspiring to see that they're always doing something. They're “busy as a bee.” They're always occupying themselves with an activity. And as a creative person myself, our brains are always working, our hands are always working. And we just want to create, we want to be busy and keep ourselves occupied. I really love that — that it's the female that's capable and just doing everything all the time. It really parallels the creative female entrepreneur — so interesting and inspiring to me.

Sound: Bees and windchimes fade as a sweet and slow oboe and piano piece comes in and underscores the rest of the story.

Jacqueline:

Turning my attention to what female worker bees are doing right now in their hives helps me remember that even this unbridled, unresolved energy coursing through my body can have a purpose: I can use it just to keep warm in my solo pandemic hibernation. I can use it to create things about and for the people I most admire and value. I can use it to push those from my life who do not deserve my energy or production.

And now, I invite you to ponder your connection to the clustering bees? Use the music leading us out of this small audio story to envision how your winter energy can help you crawl even deeper inside yourself for rest or warmth, or how their constant and purposeful humming can help you blossom and express.

You can find resources around this story, including a full transcript and articles and photos, under the Learn Something Small page at jacquelineraipo.com. And I'd love to hear what this story stirs up in you. The poem read up top was *February* by Jane Goodwin Austin. And this small audio story was created with the support of Bear Biscuit Bakery.

[Kisses.] Bye.

Learn Something Small About Lady Worker Bees in Winter:
A Dark and Twisted Valentine's Day Story!
Copyright WordsFoodArt LLC
Contact: Jacqueline@WordsFoodArt.com

Sound: Music continues for one more minute, and bees fly through twice more, until all fade.