

“Slovenians are emotionally attached to bees.”

— from the website of the Slovenian Beekeepers Association

Note from Randall Austin: Suzy Spencer is a guest columnist this month to share what she learned on a beekeeping trip to Slovenia in May 2018.

I want to thank Randall for allowing me to have this extended space to tell my story. It’s a long article. However, it’s not a travelogue but an attempt to distill down what I have learned into ten reasons for why I think Slovenia is the honey bee capital of the world. I struggled with the title because it’s really more about a love affair that Slovenia has with honey bees. It is a country in which love, respect, and reverence for the honey bee is beyond extraordinary.

I had good reasons for wanting to visit Slovenia. For one thing, I’m half Slovenian. My Mom’s parents immigrated to the United States in the 19-teens but did not maintain strong ties with their families in Slovenia. When I saw several 2011 *American Bee Journal* articles about beekeeping in Slovenia, I was intrigued but still had a job and was busy with other things. After I retired and had more time to explore my Slovenian genealogy, I saw a 2-part article in the Slovenian Genealogy Society newsletter about the same subject, including information on a U.S.-based company that arranged beekeeping tours there (www.SlovenianBeekeeping.com). At that point, I knew I had to go -- someday. When the May 2018 tour was announced and included the first World Bee Day (which was established due to the efforts of Slovenia), I knew it was time to send in my reservation.

First, there are a few things you should know about Slovenia. **It is a very small country** compared to the United States. It has ~15% of the area of North Carolina (7,827 mi² vs. 53,819 mi²) and 20% of the population (2.1 million vs. 10.3 million, based on 2017 values). Slovenia’s area and population are 0.2% and 0.6% (respectively) of that of the U.S.



Relative-size of Slovenia compared to North Carolina (rough estimate; it should be shown a little smaller). See some other map comparisons on page 13.

Starting from the capital of Ljubljana in central Slovenia, one can be anywhere within 2 hours by car. It has its own language (which remains very difficult for me to read and pronounce), but English is taught in schools starting in 4th grade so that you can usually find someone who speaks English. It is bordered by Italy, Austria, Hungary, Croatia, and the Adriatic Sea.



Slovenia (in green) and its European neighbors. Image taken from www.geology.com

The **geographical diversity** in such a small area is amazing. About 60% is forested and much is mountainous. There are alps to the north and northwest but also mountains more like the Appalachians as well as rolling hills. There are also large expanses of farmland and vineyards, enormous cave systems, marshlands, salt pans, and a Mediterranean-type climate near the Adriatic Sea.



Topographic map of Slovenia. The tan color indicates higher elevations; green is lower. Image taken from www.freeworldmaps.net

I could go on and on about this beautiful, clean, friendly, interesting, culturally-rich, accessible country, but that's not the point of my article. Still, I wanted to share at least three scenic pictures that show some of its beauty and geographical diversity.



Lake Bled



Soča River (note aquamarine water)



Piran on the Adriatic Sea

Now, let's get to it!

10 reasons why Slovenia is the honey bee capital of the world

1. At least 1 in 250 people are beekeepers.

Around 8,000 out of ~2.1 million people are beekeepers (1 per 250 people, or 4 per 1000). Some sources say there are closer to 10,000. Beekeeping is taught as an extracurricular activity in some schools if there is a beekeeper willing to sponsor it. Sometimes these students form beekeeping teams that then compete with student teams from other schools and even other countries. We visited a school with an on-site bee house where we saw children grafting larvae into queen cups to raise queens.



12-year-old girl grafting larvae into queen cups.

Note: she was not using her magnifiers. 😊

2. The Slovenian Beekeepers Association (SBA, or ČZS in Slovenian) is very organized, strong and influential.

According to the SBA website, it has around 7500 members, 207 societies, and 14 regional beekeeping associations. They support their members in ways you would expect, but we were told they also have a forecasting system to alert beekeepers when nectar flows are starting and ending throughout Slovenia (more about that later). We visited their large, beautiful headquarters in Lukovica that had meeting rooms, a lab, library, store, and bee houses.



SBA headquarters (image taken from its website).

At the SBA headquarters, we heard a presentation by Franc Sivic, a well-known Slovenian bee authority, about studies to control varroa mites and other innovative approaches to beekeeping. The SBA has a lot of influence when it comes to governmental policy and pesticide usage. Slovenia was one of the first countries in the European Union to prohibit the use of certain pesticides harmful to bees.



A Slovenian beekeeper at one of our stops demonstrating the “vaping” of Amitraz (Varidol formulation) which is not a legal application method in the U.S. Oxalic acid is an example of a miticide that was used for years in Europe before being approved for use in the U.S.

The SBA has a members’ uniform that is worn on special occasions. It also has a standardized shirt for more casual events with distinctive yellow and lime-green colors that you can see from a distance. They looked great and unified.



Some SBA members in uniform at the dedication of the Carniolan bee monument. You cannot see this in the picture but the vests have a honeycomb design.

The smaller associations within the SBA have a unique flag and designated flag-bearer who attends special events. We saw these at a parade that I will mention in the next point.

3. Slovenia was the force behind the establishment of a World Bee Day.

I already mentioned that the Slovenian Beekeepers are influential, but this particular effort was over-the-top and stands on its own. Slovenia made a proposal to the United Nations to have a World Bee Day, and it passed. The first was held on May 20, 2018 when we were there (images below are from promotions).



May 20 is the birthday of Anton Janša (1734-1773) who was the father of Slovenian beekeeping. We were at “ground zero” (near Janša’s village of Breznica in the municipality of Žirovnica) for World Bee Day, but it was also observed in many villages throughout Slovenia as well as in the rest of Europe and the world. [Bee Culture magazine’s May 2018 issue had an article about it.] The event was open to all, with speeches by high-ranking officials, music, and food. A street market was within walking distance where vendors sold honey, other hive products, and bee-related items. A €2 (euro) coin was issued to commemorate the day (more about that later).



Flag-bearers at World Bee Day lining up to escort the dignitaries. I counted over 100 flags.



Inside the tent at World Bee Day before the crowd became standing-room-only.

Two days earlier, the one-day World Bee Day Conference titled “Global Challenges in Beekeeping” was held nearby. We heard presentations by speakers from all over Europe in either Slovene or English -- speaker’s choice. Attendees received headsets so they could hear the real-time translations in Slovene or English.



World Bee Day Conference.

4. The Carniolan race of honey bee originated in Slovenia and is revered.

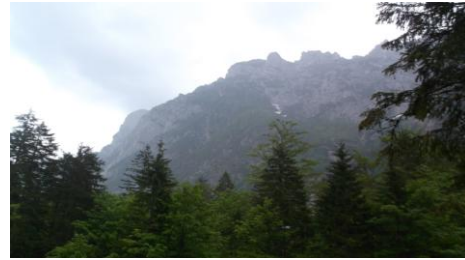
The Carniolan race of honey bee (*Apis mellifera carnica*) not only originated in Slovenia but it is the only race that can be raised in Slovenia. Among other traits, it exhibits a high sense of orientation, a small over-wintering population, fast spring buildup, calmness on the comb, and decreased brood production when nectar and pollen availability decreases.



Carniolan queen and workers.

Photo taken from www.queencarnica.si website.

Slovenia works to ensure that Carniolan genetic traits are preserved and has established government-approved mating stations for this purpose. We visited one in the Triglav National Park where virgin queens are taken to mate with selected drones raised there. Brane Kozinc runs this station. He told us that Dr. Sue Cobey (artificial insemination expert from the U.S.) has visited him to obtain drone sperm for use in her New World Carniolan breeding program.



Isolation of mating stations helps to preserve true-to-type genetics (view from B. Kozinc's station).

Slovenia now has a monument to its beloved Carniolan honey bee. We attended the dedication in Višnja Gora on May 18, 2018.



People gathering before the Carniolan bee monument dedication.

This was a lovely outdoor event with speeches and orchestral music. The monument itself is both beautiful and modern.



Carniolan bee monument at dusk after the unveiling.



Closer look at the Carniolan bee monument, lighted.

The after-party for the monument dedication was inside a large tent with food, drinks, and more music.



I had to include the following picture of me with the SBA President and Secretary. I approached the Secretary at the after-party to ask about their uniforms, not knowing who he was. What a surprise! The president gave me one of the World Bee Day €2 coins in a presentation box. I did not hesitate to interact with the Slovenian people whenever possible, which added to the depth of my experiences.



SBA President Boštjan Noč, me, and SBA Secretary.

5. Slovenia has its own type of hive (the A-Ž) and bee house in which to keep them.

The Slovenian A-Ž hive (pronounced ah' zhah, and various other ways) was introduced in 1903 by Anton Žnideršič. He called it the Alberti-Žnideršič hive because it was modeled after the Alberti leaf hive. They open in the back (not the top) with frames that slide out horizontally from the back (not vertically from the top). The hives are set directly adjacent to each other -- both horizontally and vertically -- and are usually kept in a bee house. The A-Ž hives usually have two (sometimes three) levels. The beekeepers need to plan ahead because they can't just add another super onto the top during a heavy nectar flow. A-Ž hives and bee houses are found all over Slovenia. Some beekeepers also have Langstroth hives.



The back of a 2-level A-Ž hive with the door open (for illustration; no bees and not in a bee house). When checking the bees, the cross-supports and screen are removed and the frames slide out. Photo used by permission from Suzanne Brouillette.



A-Ž hive with screens and some frames removed. Frames set upon 3 metal bars, making removal easy. The frames are concave on the top and bottom surfaces and are not readily propolized in-place. Note the room in the foreground to feed syrup. Photo used by permission from Suzanne Brouillette.



Inside a bee house looking at the backs of A-Ž hives. See the smaller nuc boxes on the top and side.

Most beekeepers keep detailed inspection records for each hive. In many cases, the record sheet is attached to the back door of that hive where it can be quickly and easily reviewed. It is important to monitor population levels to prevent swarming as well as for other reasons.

I've only scratched the surface of this subject. I know of at least one person in North Carolina who is keeping bees in A-Ž hives in a bee house. If you want to try this, you can contact Suzanne Brouillette at www.slovenianbeekeeping.com who imports and resells A-Ž hives. She also sells all the A-Ž accessory equipment and has the only Slovenian bee store in the U.S. (in New Hampshire). The only book about A-Ž hives in English is *A-Ž Beekeeping With the Slovenian Hive* by Janko Božič, available through Amazon.

The following are just a few of the bee houses we visited.



Bee houses can be small...



...and bee houses can be large.



An old bee house (no bees in there now),



Bee houses are always colorful...



A bee house belonging to the town of Idrija.



...and they often also have pictures, especially on painted panels (more about those later).



These A-Ž hives are not in a walk-in bee house but are still protected and still open from the back.



Langstroth hives on the left are in the same apiary as A-Ž hives in a bee house on the right. The bee house was also used for apitherapy (more on that later).



When Slovenian beekeepers do have Langstroth hives, they are often colorful and close together.

These few examples illustrate some of the different ways that Slovenian beekeepers use various colors and picture combinations on their hives. I won't get into a discussion here about what visual and other sensory cues are used by honey bees in navigating back to their own hive in a crowded apiary. Different colors, image patterns and angles, and their relative arrangements are believed to help bees do that.

Just one more thing: the A-Ž hive frame is shorter in width (horizontally) and longer in length (vertically) than a deep Langstroth frame. There are no wedges to hold in the foundation, but the frames are wired vertically (Langstroth frames are wired horizontally). We saw how one large beekeeper recovered wax and installed foundation into the A-Ž frames. I have usually avoided heating wax over ~160°F to prevent discoloration. But this beekeeper was lifting and dunking stacks of frames with old wax (via a pulley system) into what appeared to be boiling water. If it wasn't boiling, it was still really hot because it took less than a minute to clear all wax from the frames. Wax was recovered through a series of trays, filters, and drains and finally into 5-lb buckets. He said through a translator that the wax is not damaged because it is not heated to high temperatures for a long period of time. The cooled wax in the buckets was deep-yellow.



Dunking wired frames with old wax into "very hot" water to melt and recover wax.

To attach foundation, they lay the wax sheet onto the wired frames and pass a battery current through the wire from one end to the other. This heated the wire enough to cause the wax to melt and sink onto the wire.



Embedding wires into the foundation with current. Note the beautiful yellow wax which was very common in Slovenia.

6. There are 5 distinct, large nectar flows; varietal honeys are common.

There are several nectar plants that bloom in Slovenia dependably and widely. When one stops, another starts -- maybe not in the same area but nearby (remember how small the country is). Mobile bee houses on trucks or A-Ž hives on trailers are common. We were told that the Slovenian Beekeepers Association posts on its website the dates when nectar flows are starting and stopping in various areas of the country. Due to the configuration of the A-Ž hives and an inability to continue to add honey supers, honey is harvested more often during the season between flows. For this and other reasons, varietal honeys are very common and easy to find in addition to the standard "wildflower".

The major nectar flows are

- Acacia (black locust)
- Linden (or basswood; also called "lime")
- Chestnut
- Fir (honeydew)
- Spruce (honeydew)

You can also find a few other specialty honeys like cherry. When we were there in early May, the Acacias were in full bloom. They were everywhere on the mountain slopes and along the roads and rivers – really dense and obvious. Black locust is hit or miss in my area of North Carolina, but when it hits, its addition to my early spring honey adds a delightful, delicate aroma and flavor and lightens the overall color. Slovenia's Acacia honey is similar but more likely to be unifloral.



Acacia in bloom.

By the end of May, the lindens were starting to bloom in the western coastal area but not yet in the central region. I feel very fortunate to have witnessed this. The name of the newsletter of the Slovenian Genealogy Society is *The Linden Tree*, which tells you something about how important this tree is to Slovenians. The trees are prominent at churches and in villages where people used to convene. When they bloom, the profusion of flowers and the sound of the bees working them is a sublime and profound experience. Even at 8 am, I saw the trees covered with bees. I don't know if this same thing occurs when the basswood/linden species that we have in North Carolina is in bloom. The basswood honey of NC tastes similar to the Slovenian linden honey.



Linden flowers.



Linden tree in bloom (dense flowers all over it).

We in the U.S. don't have much experience with producing and tasting chestnut honey, another prized honey in Slovenia. Some like it, some don't. It's thought to have medicinal value.

Two major Slovenian honeys (fir and spruce) are actually due to honeydew collection by bees and therefore are dependent on the success of other insects feeding on those trees. I had previously read that honeydew honey is inferior to floral-source honey, but now I think that's debatable. I suspect this may have been a generalization based on honeydew honey from some other plants (pine, oak or several other possibilities). The bottom line, though: it's all based on your own taste preferences.

Some beekeepers follow these primary flows with trailers and trucks.



A trailer with a dozen A-Ž hives.



A-Ž hives on a truck in use for over 40 years (hives on both sides).



Inside the old truck (i.e., mobile bee house).

7. The value of apitherapy and use of hive-products for health are widely accepted.

Apitherapy (i.e., the medicinal use of honey bee products) is widely practiced in Slovenia. Several beekeepers we visited had their bee houses configured so that people can come in, sit or lay down, breath in the smells of the hive (the curing nectar, honey, pollen, and propolis), listen to the sounds, watch the bees, and/or feel the vibrations (by lying directly on top of the hives). Many believe that bees themselves -- in addition to honey and other bee products -- have therapeutic health benefits. Pollen as well as lotions and other products made with hive products are widely available for sale alongside of honey at many locations.



Pollen traps on A-Ž hives. The beekeeper said this amount was collected in less than 1 day.



Inside the window of this bee house is a bench upon which one can sit and watch the bees.



*Inside an apitherapy bee house showing a side bed that extends beyond the front of the bee house. A person can lie down and watch bees come and go.
Note: The beekeeper is wearing the Slovenian Beekeepers "casual" members' shirt.*



Breathing in aromas from the hive for health. I saw this hose attachment being sold by a vendor at a street fair, suggesting its use is "main-stream".



A bee house with a front window (see below).



A bed on top of hives and a view to the outside.



This apitherapy room was inside of a bar. The tops of the 4 hives shown were screened.

I got my first "honey massage" in the bee house of one of the farms where we stayed. To do this, the masseuse spreads a small amount of honey on your back and then rocks the bottoms of her hands over the tacky honey which grips the skin. Easy at first, the gripping tension increases with each "ungluing" of her hands until the palms no longer stick and the honey "disappears". It is intended to be a soft-tissue massage and to pull out impurities from pores.

8. Slovenia has a long, proud history of beekeeping which is preserved in museums. Painted bee hive panels are a folk art-form unique to Slovenia –both past and present.

Slovenia's beekeeping history goes back hundreds of years, and artifacts are preserved in museums – both public and private. These collections include bee boxes, skeps, honey extractors, wax presses, queen cages, and anything else you can imagine related to bees and beekeeping.



One of my favorite displays from the many we saw in the museums: antique queen ("mother") cages.



An exhibit at the beekeeping museum in Radovljica. The mannequin is shown transporting a kranjič (traditional Carniolan) beehive on his back.

One of the most recognizable images associated with Slovenia is the painted bee hive panel -- a folk art form unique to Slovenia which started in the mid 1700's. You can read much more about them by doing a web search. The traditional Carniolan beehive (kranjič) in use at the time were small and stacked tightly in bee houses like drawers. The fronts were painted to illustrate history, stories and jokes as well as religious figures. The classic images are reproduced by modern-day artists and sold throughout Slovenia. Many artists also paint whatever they want to on these panels, using them as a canvas for their artwork.



An old carriage loaded with kranjič bee boxes with painted fronts (in private museum).

The bee-hive panel reproductions made today are generally the same size as when they were the actual fronts of the kranjič hives -- too small to cover the front of an A-Ž hive. But they are often attached to the A-Ž hives as decoration. The largest collection of panels is at the public beekeeping museum in Radovljica, where we saw hundreds in glass cases.



A reproduction of an old bee hive panel (~5"x 12") leaning against the front of an old kranjič bee box.

9. Honey bee and honeycomb images are on Slovenian money.

Slovenia has a complicated political history, having existed under (or been part of) numerous rulers/empires for centuries. For most of the 20th century, it was part of Yugoslavia. After it became an independent country in 1991 and started minting and printing its own currency, it placed a picture of a honey bee and its Latin name on a 50 stotin coin (half-tolar). It also placed a bee and honeycomb on its bills (tolars). All bill denominations in that series show a honey bee behind the denomination number (vertically) and a background of honeycomb.



An old Slovenian tolar bill showing a honey bee (behind the denomination number) with a honeycomb background.

Slovenia started using European Union currency in 2007. Countries of the EU can have coins issued with designs of their choice. Slovenia had a €2 (euro) coin minted to be issued on the first World Bee Day (May 20, 2018). It features a honeycomb image of western Europe and Africa to illustrate the origins of the honey bee races and the words "Svetovni Dan Čebel" ("World Bee Day" in Slovene) and "Slovenija 2018".



Left: An old Slovenian coin with bee image.

Right: The new €2 coin issued on World Bee Day.

10. Slovenians show reverence and respect in how they speak about honey bees.

Words matter. The way Slovenians refer to honey bees indicates a deep reverence and respect for them. When some Slovenian beekeepers on our tour spoke to us in English, their translation for “bee colonies” was usually “bee families.” They referred to the “queen” as the “mother”. The “mating flight” of the queen was called the “wedding flight”. The old saying that “beekeeping is the poetry of agriculture” was first used by the residents of the Slovene lands (according to the SBA website). But I think the best indication of how they feel about honey bees involves their words for “death”. The Slovenian word that refers to the death of a human is “umre”. There is a different word that refers to the death of all other living things (“pogine”) with one exception: honey bees. The word for the death of honey bees is “umre”, the same as for humans. Please reread those last three sentences so it sinks in, and then just sit with it for a minute. This usage is found in ancient literature references and so it is not something more recently contrived. I think it shows how Slovenians truly think and feel -- down deep -- about honey bees.

And with that, I’ve finished laying out my case for why Slovenia is the honey bee capital of the world and some ways that Slovenians show their love for honey bees. If you know of other contenders, please let me know.

All photos and images are mine unless otherwise indicated.

More about the beekeeping tour itself

The tour was arranged by Suzanne Brouillette of Slovenian Beekeeping LLC, her company in New Hampshire that imports Slovenian A-Ž hives for resale (www.slovenianbeekeeping.com). She normally has two tours every year – one in May and one in September. She says the tours are different every time although several “got to go to” locations are always included. Suzanne is very adaptable, and on at least three occasions made changes to our itinerary on the spot to maximize our experiences.

There were twelve on our tour. Of these, three were non-beekeeping spouses who were along for the ride, company, and food. The ages ranged from a college student to a retiree (me). There was a lot of walking but mostly by choice. We traveled in a very comfortable, small bus/van and stayed in four different field-to-table “farmhouses” where we usually had our breakfast and dinner meals.



One of the farmhouses where we stayed. The lower right area (row of windows) was the eating area.

Although English is taught in Slovenian schools starting in 4th grade and most Slovenians have some English skills, we had an interpreter with us the entire time. In the 12 days of the tour, we visited 23 bee-related locations as well as 7 major tourist attractions and 4 food-related places that even a non-beekeeper would enjoy.

People’s experiences will be different depending on the locations and beekeepers visited, their own expectations, ability to be adaptable and go with the flow, how much they engage with the people, their interpretations, and how much they want to learn and are interested in bees and beekeeping. Based on my experiences, I highly recommend her tour. I was not paid or compensated to say that. ☺

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Most people don't know where Slovenia is located. Can you point to it on this map of Europe? (It's green in the picture, just east of northern Italy.) Image taken from www.freeworldmaps.net



Overlay of a US map onto a map of Europe to roughly illustrate the relative sizes of countries. Image from www.travel-made-simple.com.

About the author

Suzy Spencer is a NC Master Beekeeper who takes care of a few honey bee "families" in her backyard in Raleigh, NC (USA). She has served as the Membership Secretary of the North Carolina State Beekeepers Association (~ 4400 members, www.ncbeekeepers.org) and is also active in the Five County Beekeepers Association (her local NCSBA Chapter). She can be reached at NCHoneyTasting@gmail.com.