Abstract:
The Schmidt Sting Pain Index rates the painfulness of 78 Hymenoptera species, using the honey bee as a reference point. However, the question of how sting painfulness varies depending on body location remains unanswered. This study rated the painfulness of honey bee stings over 25 body locations in one subject (the author). Pain was rated on a 1–10 scale, relative to an internal standard, the forearm. In the single subject, pain ratings were consistent over three repetitions. Sting location was a significant predictor of the pain rating in a linear model ($p < 0.0001$, $DF = 25, 94$, $F = 27.4$). The three least painful locations were the skull, middle toe tip, and upper arm (all scoring a 2.3). The three most painful locations were the nostril, upper lip, and penis shaft (9.0, 8.7, and 7.3, respectively). This study provides an index of how the painfulness of a honey bee sting varies depending on body location.

Keywords:
Pain index, Apis mellifera, Honey bee, Schmidt sting pain index, Body location

Introduction:
Popularly called the Schmidt Sting Pain Index (Berenbaum, 2003; Schmidt sting pain index, 2013), Justin Schmidt judged the painfulness of stings from 78 species of Hymenoptera (Schmidt, Blum & Overal, 1984; Schmidt, 1986; Schmidt, 1990). Schmidt’s 4-point scale ranges from 0, a sting that cannot penetrate the skin, to 4, the most painful insect sting known (Schmidt, 1990). Only the bullet ant, Paraponera clavata, and the tarantula hawk, Pepsis grossa, were awarded a painfulness of 4 (Schmidt, 1990). A honey bee sting, Apis mellifera, which most people have experienced, was given a rating of 2 (Schmidt, 1990). It was used as an internal standard: a base point for investigators to rate the other stings. Knowing how sting painfulness varies among species is useful, but how sting location influences pain remained unanswered. Schmidt (1986) recognized this, commenting that: “pain levels from particular stings do, of course, vary and depend on such features as where the sting occurred (…)” (Schmidt, 1986). However, they lacked a model for understanding how pain varies depending on sting location. If sting location is important in pain perception, how important is it? For example, are certain sting locations more painful than others? Which locations are the most painful and which are the least?
From the Editor

Contact: aasoffice@apitherapy.org

Hello AAS Members,

It has certainly been a very busy and fruitful winter for the AAS bringing in almost 50 new members in the past three months along with a big flurry of renewals. We want to thank each and every one of you for your continued support and know that it is greatly appreciated. We also had an unusual amount of donations come our way in response to our annual appeal back in December and we are very thankful that so many people out there are interested in Apitherapy and the work that we do.

In the last few weeks we have been working hard to put together our annual Charles Mraz Apitherapy Course and Conference for 2016. It will be held in Los Angeles, CA some time in the fall and we will be announcing the exact place and weekend that it will be held in the next couple of weeks. We are very excited about the potential venues at which CMACC 2016 may be held, this could very well be one of the best ones ever! Stay tuned and make sure you don’t miss the April Newsletter.

At CMACC 2015 we had a fabulous turn out of some very amazing people. The AAS recently had several board members leave over the last couple of years and we are very fortunate to have gotten interested, qualified, and committed candidates all of whom attended CMACC 2015. Please join us in welcoming our three new AAS Executive Board Members Dr. Frank Yurasek, PhD, L.Ac, Kathy Genova, RN, BSN, and Michael Szakacs, we are very excited to have brought them on board. We encourage you to read their biographies featured on pages 13-14 in this issue of JAAS. We are still looking for a few more board members to join AAS so if you are interested please submit your resume to the AAS office at aasoffice@apitherapy.org.

Bee Happy,

Marilyn Graham
Dear AAS Members,

Hello Everyone,

Happy Spring!

The AAS is in the midst of organizing the next CMACC 2016 in Southern California for some time in the fall and the board members are in the throes of putting together a preliminary program to include the core apitherapy knowledge presentations as well as the practical sessions and more advanced material. The post CMACC NewYork 2015 afternoon practical session went extremely well and participants really got a lot out of it especially in being able to handle the bees, sting themselves and others while in a comfortable, safe and supportive setting. It really brought the practical aspect of the conference to a new level.

This year we are thinking of addressing the vast subject of Lyme Disease and its co-infections in an attempt to adequately and appropriately demystify all the information and protocols that are floating around out there leading to much confusion. So many individuals are suffering from Lyme and need proper education and guidance to receive the help that they need. Other presentation ideas that have come forward are the Apitherapy intake including useful body charts, Api cosmetics such as an intro to facial rejuvenation, and veterinary apitherapy such as was demonstrated at CMACC 2007 in Raleigh Durham where dogs were treated for hip dysplasia. The practical sessions will include topics such as the art of micro stings, making herba miel preparations, and cosmetic creams and masques.

It would be useful and very much appreciated if AAS members and past CMACC participants could write in what their favorite courses were and what they would like to see again. We welcome any suggestions on new topics that may be of interest, your input is vital to us putting together a well rounded, informative and enjoyable learning experience. Please send in your ideas or comments to aasoffice@apitherapy.org ASAP!

Save the date for this event!

AAS Board Members Dr. Patrick Fratellone, MD, and Frederique Keller, L.Ac will be doing an Apitherapy Day at the Eastern Apiculture Society event on July 27, 2016 at Richard Stockton University in Galloway, New Jersey. We would love to see you there if you are in the area or if you are attending the beekeeping course and conference.

We are looking forward to a great Apitherapy year and we are hoping to see many old and new AAS members at this year’s CMACC in Los Angeles!

Peace, Bees & Great Health,

Frederique Keller, L.Ac.
President, AAS
To address this question of location-based pain perception, one requires a standard stimulus. The present study used the sting of the European honey bee (Apis mellifera) as its standard. A sting from a honey bee is familiar to many because of its worldwide distribution. The sting can be reliably provoked, and standardized, making it an ideal experimental stimulus. Furthermore, its rating as the center point of the Schmidt pain scale suggests it may be a useful standard. The present study therefore used honey bee stings to determine whether sting location impacts painfulness, and how painfulness varies by location.

Pain is notoriously difficult to quantify. Many pain-rating scales have been developed to bridge the gap between a patient’s perceived pain, and the medical practitioner who is trying to relieve the patient’s pain. Different scales use numerical ratings, verbal ratings, questionnaires, visual depictions, or a combination of these measurements (see review by Williamson & Hoggart, 2005). In practice, each scale has its own advantages and disadvantages. Experimental testing of four commonly used pain scales found that all were valid, with low variability within a single scale (Ferreira-Valente, Pais-Ribeiro & Jensen, 2011). Previous research also found that numerical rating scales are the most responsive, relative to other pain scales (Ferreira-Valente, Pais-Ribeiro & Jensen, 2011). This study used a numerical rating scale, to simplify comparisons between sting locations.

Sting locations were randomly ordered by the statistical program R (R Core Team, 2012). When applicable, the left and right side of the body were alternated. Some locations required the use of a mirror and an erect posture during stinging (e.g., buttocks). Stinging occurred before the author did any other honey bee work, to prevent unintentional stings during routine bee work from interfering with the experimental stings. The author had received approximately 5 stings per day for three months before the experiment, so no changes in his immune system were to be expected over the course of the experiment (Light et al., 1975).

Materials and Methods:
Cornell University’s Human Research Protection Program does not have a policy regarding researcher self-experimentation, so this research was not subject to review from their offices. The methods do not conflict with the Helsinki Declaration of 1975, revised in 1983. The author was the only person stung, was aware of all associated risks therein, gave his consent, and is aware that these results will be made public.

Twenty-five sting locations were selected throughout the body (see Fig. 1). One location (forearm) was selected as an internal standard, with the a priori assumption that stings to the forearm would induce a median level of pain. The author self-administered five stings per day. The first sting and last sting were the internal standards (forearm). These stings were given a score of “5,” and the three “test” stings were rated relative to the pain of the forearm stings. All stings occurred between 0900 h and 1000 h, to avoid time of day effects. At least 5 min of delay was given between stings, longer if pain from the previous sting persisted. The pain was rated by the author as precisely as possible on a scale of 1–10, relative to the internal standard (score of 5). Lower scores denote less pain; higher scores denote more pain. A numerical rating scale was used to simplify comparisons between sting locations. Previous research has found that numerical rating scales are the most responsive relative to other pain scales (Ferreira-Valente, Pais-Ribeiro & Jensen, 2011).
Synthetic melittin was not used because this study focuses on natural honey bee stings. Although it is impossible to fully standardize natural honey bee stings, the following measures were used. Honey bees were collected from the hive entrance and only guards were selected, as identified by their stance (Seeley, 1985). Guarding is a specialized defensive task (Moore, Breed & Moor, 1987), so these bees are more likely to sting under natural settings (Breed, Guzmán-Novoa & Hunt, 2004). Guard bees were collected in a cage, and used immediately. Bees were taken from the cage haphazardly with forceps. To apply the sting, the bee was grabbed by the wings and pressed against the desired sting location. The bee was held against the sting location until the sting was first felt, and kept at the location for 5 seconds to ensure that the stinger would penetrate the skin. The bee was pulled away after 5 seconds, leaving the stinger in the skin. The stinger was left in the skin for 1 min, and then removed with forceps. In total, three full stinging rounds were conducted at the Liddell Field Station of Cornell University in Ithaca, New York (42°27.6′N, 76°26.7′W). The author was stung over a total of 38 days, between 20 August 2012 and 26 September 2012. To keep the author as blind to the ratings as possible, notes were kept hidden from previous days. After two stinging rounds had been conducted (each stinging round covered all anatomical sting locations), the scores were reviewed, to see if there was a large discrepancy between scorings per sting location. Only one location differed by 3 units (foot arch), and two locations by 2 units (upper thigh and behind the ear). Even though the consistency between the first two rounds was high, a third round of stinging was performed.

Continued on page 6
Honey Bee Sting Pain Index by Body Location

Continued from page 5

Statistical tests and linear models were analyzed using R, and the packages stats and lme4 (R Core Team, 2012). Descriptive statistics (mean and standard deviation) were summarized for each body location. A linear model was constructed after checking that the data satisfied all linear model assumptions: normality of residuals, constant variance of errors, and no serial correlation. The linear models were used to determine if there were any significant differences in pain rating (response variable) according to the body location, the side of the body, the stinging round, or the stinging date (predictor variables). Models were compared using AIC values, with lower AIC values indicating a better fit.

All the pain ratings collected in this experiment came from one person (the author), to minimize the number of people stung. Statistical testing was used to describe the results, and determine if body location would predict the pain rating. However, because only one person was stung, these data are repeated measures of a single subject (n = 1). The data should therefore be taken to represent only this person, and not be generalized for the public.

Results:
All the stings induced pain in the author. The pain rating for each location was averaged over the three rounds, and ordered from lowest to highest (see Table 1). The three least painful locations were the skull, middle toe tip, and upper arm (all scoring a 2.3). The three most painful locations were the nostril, upper lip, and penis shaft (9.0, 8.7, and 7.3, respectively).

Sting location was a significant predictor of the pain rating in a linear model (p < 0.0001, DF = 25, 94, F = 27.4). Whether the sting was on the left or right side of the body was not significant (p = 0.58, DF = 1, 106, F = 0.30). The stinging round (1st, 2nd, 3rd) was not significant (p = 0.90, DF = 2, 117, F = 0.12). Stinging date was not significant (p = 0.92, DF = 23, 96, F = 0.59). Comparing the sting location model, which only takes into account sting location, with a null model, the RSS was significantly lower in the sting location model (RSS = 34.00 vs 281.97, p < 0.0001), and the AIC values were lower in the sting location model (243 vs 447). If stinging date and stinging round were added to the sting location model, the AIC increased from 243 to 252, so they were not included in the model.

Discussion:
It was found that the location of the sting had a significant impact on the level of perceived pain in the single subject tested. Sting location was a significant predictor of the pain felt (see results). This result is expected; a honey bee sting is expected to induce more pain depending on where it occurred.

The variability of pain perceived at a given site was low, often only a unit or two between the three rounds (see Table S1). This suggests that pain receptors are uniformly sensitive in a given body area, contrary to the common saying: “hitting a nerve.” Again, this result only holds for the single subject tested.

The controls in this honey bee sting pain index closely mirror results from pressure pain studies. For example, there was no difference in pain perception between the left and right side of the body, as reported previously for pressure pain response (Fischer, 1986; Fischer, 1987). It is unlikely that the author habituated to stings over the experiment, because both the date of stinging, and the stinging round, were not significant predictors of the pain perceived. These control results match previous work in pressure pain response, but do not explain why certain locations were the most painful to honey bee stings.

The three most painful sting locations were the nostril, the upper lip, and the penis shaft (average pain scores of 9, 8.7, and 7.3, respectively) (see Table 1).

Continued on pages 7 and 8
### Table 1: Average Pain Ratings

<table>
<thead>
<tr>
<th>Body Location</th>
<th>Medical Terminology</th>
<th>Layperson Terminology</th>
<th>Average Rating</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anterior vertex</td>
<td>Skull</td>
<td></td>
<td>2.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Third distal phalanges (foot)</td>
<td>Middle toe tip</td>
<td></td>
<td>2.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Proximal humerus, dorsal aspect</td>
<td>Upper arm</td>
<td></td>
<td>2.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Buttocks</td>
<td>Buttock</td>
<td></td>
<td>3.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Dorsal aspect of leg</td>
<td>Calf</td>
<td></td>
<td>3.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Posterior trunk, lumbar region</td>
<td>Lower back</td>
<td></td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>Anterior aspect of proximal thigh</td>
<td>Upper thigh</td>
<td></td>
<td>4.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Anatomic wrist, ventral aspect</td>
<td>Wrist</td>
<td></td>
<td>4.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Foot, plantar surface</td>
<td>Foot arch</td>
<td></td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>Distal arm, dorsal aspect</td>
<td>Forearm</td>
<td></td>
<td>5</td>
<td>N.A.</td>
</tr>
<tr>
<td>Popliteal fossa</td>
<td>Back of the knee</td>
<td></td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Posterior neck, cervical region</td>
<td>Back of the neck</td>
<td></td>
<td>5.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Post auricular</td>
<td>Behind the ear</td>
<td></td>
<td>5.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Hand, dorsal aspect</td>
<td>Top of the hand</td>
<td></td>
<td>5.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Foot, dorsal aspect</td>
<td>Top of the foot</td>
<td></td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Abdomen</td>
<td>Abdomen</td>
<td></td>
<td>6.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Third distal phalanges</td>
<td>Middle finger tip</td>
<td></td>
<td>6.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Nipple</td>
<td>Nipple</td>
<td></td>
<td>6.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Axilla</td>
<td>Armpit</td>
<td></td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Buccal aspect of face</td>
<td>Cheek</td>
<td></td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Hand, anterior aspect</td>
<td>Palm</td>
<td></td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Scrotum</td>
<td>Scrotum</td>
<td></td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Body of penis, dorsal aspect</td>
<td>Penis shaft</td>
<td></td>
<td>7.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Tubercle of superior lip</td>
<td>Upper lip</td>
<td></td>
<td>8.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Anterior nares</td>
<td>Nostril</td>
<td></td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>
The nose and lips are orifices, so they may also have lower pain thresholds for protection. Stings to the nostril were especially violent, immediately inducing sneezing, tears and a copious flow of mucus. The sting did autotomize in the nostril (self-severed when the bee was pulled away). The copious mucus flow, however, may help prevent subsequent stings to the area during a natural attack.

Skin thickness, however, does not fully explain how painful a location will be. For example, the palm of the hand has twice as many skin layers as the dorsum (Ya-Xian, Suetake & Tagami, 1999), but the palm received a pain score of 7.0, and the dorsum, a 5.3. Furthermore, the least painful locations did not have the largest number of skin layers- the skull and upper arm have approximately one fourth the number of skin layers as the palm (Ya-Xian, Suetake & Tagami, 1999). Clearly, skin thickness is not the only factor for predicting painfulness. Perhaps receptor thresholds are lower depending on the 'importance' of certain locations, or the CNS reaction is amplified depending on the location of the sting.

The somatosensory homunculus, a drawing of the human form scaled according to cortical area devoted to that body region, could explain which areas are more sensitive, although it focuses on mechanosensory neurons. The tongue and thumb, followed by the lips and digits, are the most sensitive areas, as measured by neural activity (Hämäläinen, Hari & Ilmoniemi, 1993; Nakamura et al., 1998). The present study did not sting the tongue or the thumb, but the upper lip was one of the most painful locations. However, the neural activity range for the upper and lower lip overlaps with that of the middle finger, suggesting that all three locations would have similar sensitivity. In this pain index, the middle finger and the upper lip were not similar, scoring a 6.7 and 8.7, respectively. The differences in sensitivity suggest that even if neurons map to specific body locations, they may not be the same for different sensory information. It is plausible that a 'pain' homunculus would look different from a somatosensory homunculus.

This study is limited by its low sample size: one person, the author. It is possible that if other people were tested, they would not rank the painfulness of the stings in the same way, or perceive pain similarly by location. Although these findings cannot be generalized, they are still interesting. Some locations only apply to male anatomy (i.e., scrotum and penis), and males are known to have differing pain thresholds compared to females (Berkley, 1997). This index is only meant as a first approximation of how sting pain varies by location. In support of this pain index, the pain ratings per location were similar between the three rounds (see methods and Supplemental Information). This suggests that the index is accurate for rating sting painfulness by body location in the single subject. Other factors, such as sting duration (Visscher, Vetter & Camazine, 1996), and sting depth, would also influence pain perception (Topazian, 1957). This experiment serves as an orthogonal extension of the Schmidt Sting Pain Index, and a rough map for painfulness based on body location.

Author Contributions:
Michael L. Smith conceived and designed the experiments, performed the experiments, analyzed the data, contributed reagents/materials/analysis tools, wrote the paper, prepared figures and/or tables, reviewed drafts of the paper, and was the experimental subject.

Ethics:
The following information was supplied relating to ethical approvals (i.e., approving body and any reference numbers):Cornell University's Human Research Protection Program does not have a policy regarding researcher self-experimentation, so this research was not subject to review from their offices. The methods do not conflict with the Helsinki Declaration of 1975, revised in 1983. The author was the only person stung, was aware of all associated risks therein, gave his consent, and is aware that these results will be made public.
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A funny thing happened to me a few years ago on a flight home to Boston. I was returning after a visit with family and friends in my former hometown of Munich, Germany, and I was deeply buried into the book a friend had given me for the seven hour plane ride. The book was titled Doktor Biene, “biene” being the German word for bee. My friend had given it to me because she knew of my beekeeping passion. What she didn’t know was that I had become very interested in the medicinal aspects of propolis, the sticky stuff the bees line their hive with. I had been a beekeeper for about three years, and every once in a while I would come across some information about its ancient uses. I would see creams and tinctures in the health food section of some grocery stores, and at times collection procedures for propolis would be discussed in meetings with my fellow beekeepers. “Someday I’ll want to learn more about that and all the rest of the wondrous medicinal virtues woven around honeybees,” I told myself, but first things first. Let’s perfect my beekeeping skills before I dabble in apitherapy.

When now reading this book while stuck on a plane, the time for dabbling had come. I was immersed in the chapter on propolis, much to my neighbor’s chagrin. He finally tried to strike up a conversation by asking, “So, are you a physician?” He had seen “doktor” in my book’s title. “No,” I said. “I am a beekeeper, and I am reading about the medicinal uses of honeybee products, and specifically I am reading about propolis.” I couldn’t help but share all that I was learning. “Propolis is a resin-like material which is collected by honeybees from the trees. Trees coat the vulnerable areas in their bark and their buds with it to prevent infection and the bees collect it and line the inside of their hives with it, thus keeping their hives free of germs. Over the course of centuries propolis has been successfully used for a myriad of afflictions, deriving its medicinal powers mostly from its flavonoid content, the same antioxidant compound quoted lately in many articles for the health conscious. For the interested reader, I recommend Jacob Kaal’s Natural Medicine from Honey Bees (available from Wicwas Press), a collection of empirical knowledge and summaries of scientific articles recently written about the medicinal use of honeybee products.

I decided to key in to the germ-killing and wound healing properties of propolis, especially in light of the ever increasing resistance of micro-organisms against our modern phalanx of antibiotics. In fact, propolis has become the premier germ killer in my family. Mixed into my beekeeper salve of beeswax and olive oil, we use it for treating all kinds of wounds from the superficial like scrapes, cuts and burns to the more involved large types of wounds that you get from rollerblading, bicycle mishaps, and really nasty ironing burns.

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Propolis does a trusty job on all of these. Aside from disinfecting, propolis provides a kind of seal over the injured area while keeping the wound supple allowing for the healing process to take place.

My 15 year old swears by it; she uses it to treat her acne. Since propolis is known to kill the influenza virus, we chew it to ward off bouts of the flu and colds. Here the success is not clear cut. Would we have gotten sick if we had not taken it? Was its use essential for curbing the severity of the cold? These questions are hard to answer, I have to take another scientists’ word for it. What about the claim that propolis kills herpes simplex virus, the one that causes the common cold sore making its victims miserable for weeks in severe cases? Here it is easy to demonstrate the antiviral effects of propolis. Cold sores don’t appear in my family but when my daughter was 11 years old she had a friend who suffered from cold sores during periods of stress. She would break out most severely at the beginning of each school year, just around school picture time. I gave my daughter’s friend Andrea my salve with propolis in it as part of my experiment. She was ready for anything, as conventional medicine had proved to be insufficient. Her destroyed school pictures bore witness to that. A few weeks later I got a call from Andrea’s mother who sounded elated. The propolis cream had worked as nothing had previously. The before and after letter that I received from Andrea spelled it out in detail and can be summarized as follows: With conventional medicine applied five times per day, the cold sore would build up to two blisters with redness within a day. After five days it would start to look healthier and around seven or more days it would be gone. The 11 year old wrote to me, “I put the propolis cream on right away, and the next day it looked like it would look on the seventh day if I had used the medicine the doctor gave me. There is a tremendous difference in using the propolis cream.” This is not a scientific report by any means, but it bears witness to the anti-herpes properties of propolis. Since then, Andrea has become a regular user of propolis to fight off her herpes simplex outbreaks. Whoever I have provided the propolis salve to has enthusiastically come back for more with the same results of a vastly shortened course of the virus.

*Birgit de Weerd is a chemist by profession. She is committed to expanding the understanding of, and the respect for honeybees in our environment. This article was originally published in Bee Informed, the JAAS Summer 1998, Vol 5, No. 2.*

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News from the Field

Canadian Apitherapy Conference In Nelson B.C.

By Frank Wiedemann, AAS member info@thehappyapi.com

I was honored to attend the very first Canadian Apitherapy Association organizational meeting and conference. The event was held from February 19-22, 2016 in beautiful Nelson British Columbia. The town of Nelson is nestled amongst snow capped peaks, large wilderness areas, and a very scenic Kootenay Lake, a perfect setting to study apitherapy.

Speakers at the conference included: Nelson's mayor Deb Kozak welcoming the apitherapy group, Christina Yahn of the Queen Bee Project, Yann Loranger and Adrian Thibault of Happy Culture, Inc., and herbalist Marie Pierre Fortier. The featured speaker at the conference was Dr. Stefan Stangaciu, President of the Romanian and German Apitherapy Societies and Secretary General of the International Federation of Apitherapy.

My first day attending the conference I was delighted to see a very young group of participants from different areas of Canada, Europe, Asia and the United States. I am always encouraged to see young enthusiasts interested in beekeeping and apitherapy, As bees are a mirror of ourselves, equally such young beekeepers are a mirror to the future of bees. The conference covered many aspects of apitherapy including: Medicinally oriented beekeeping, apitherapy and traditional Chinese medicine, beehive air therapy, propolis air, api cosmetics and herbs, honey detox massage, and bee venom health. Also covered at the conference were rules and principles for apitherapy treatment. Of special interest to me were the topics of beehive air, propolis air, and honey detox massage.

Dr. Stangaciu explained the role that beehive air plays in European apitherapy. Cabin style bee houses are rented to people with respiratory and other conditions. Usually these bee houses have five beehives on opposite sides of two exterior walls. The interior will have a cot of some type or a sofa on which the patient sits. A hose is then attached to the top of a hive at one end and a face mask at the other end through which one breathes in the healing air. Some therapists have used fans on the top of the hives to speed airflow but due to vibration and noise there is evidence that it slows queen egg production and therefore is not recommended. Beehive air therapy sessions normally last 20 to 30 minutes and may be administered daily. Some people prefer spending the night in the bee houses breathing the sweet smell of the hives while listening to the symphony of their sounds.

Another version of beehive air therapy is propolis air. By gently heating propolis, a sweet resiny aroma fills the air. This air is very medicinal with antiviral, antibacterial, antibiotic and anti-fungal qualities. In Europe, test studies have shown that students in classrooms where propolis air was emitted had less sick days and 60% higher attendance. During the conference I purchased a propolis air car unit that plugs into your lighter socket. It is a great little device that sterilizes the interior of the car and fills my lungs with medicine from nature. I also purchased a room unit that is turned on during sleeping hours. For more information on propolis air units see www.propolair.com or contact Yann Loranger at: happycultureinc@gmail.com.

Honey detox massage has been shown to extract fats and toxins from the body. In Europe honey detox massage is a big business. First, warm manuka honey, thyme, or other organic raw honey is applied to the back. The skin is then massaged until it is very sticky using a rolling, upward, cupping motion which creates suction. After continued massage the honey literally draws a white grayish matter from the skin, I was amazed to see this. You can check it out on U-tube, see: “honeymassage.honigmassage” by Dr. Stefan Stangaciu. Honey detox massage is also used on various parts of the body including facial detox.
AAS News Briefs

Introducing our Three Newest AAS Executive Board Members

Frank Yurasek, L.Ac. PhD, MSOM
Frank left a 22-year career in marketing in 1985 to begin the study and practice of Eastern Medicine after his wife experienced miraculous pain relief following her first acupuncture treatment. Beginning with a preceptership in acupuncture and tui na with Yin Lin Hand, TCM for 18 months, Frank then continued on at the Midwest College of Oriental Medicine, where he received a MS in Oriental Medicine, and his PhD in 2002. He was also a Professor of Tui Na there, and a clinic supervisor since 1996. Frank has interned in China and Japan, lectured and taught at schools and conferences throughout the United States. Dr. Yurasek is currently Chair and Chief Clinician of Acupuncture and Oriental Medicine at National university of Health Sciences in Chicago. Frank also has a Masters of Science in Herbal Medicine from The Midwest College of Oriental Medicine, where he also teaches Tui Na and supervises student clinics. He is the first American inducted into the Japanese Oriental Medical Society and is trained in Japanese Herbal Medicine as well as Western Herbs. He has also been studying and practicing Tai Qi and Qi Gong since 1985. Frank has also attended and lectured at several of our very own Charles Mraz Apitherapy Course and Conferences sharing his amazing and revolutionary work with Apitherapy and war veterans. His most recent interest is bringing Apitherapy into people’s homes focusing on helping others to help themselves. Frank will be a great asset to the AAS board bringing in new ideas and enthusiasm to help others.

Kathy Genova, RN, BSN
Kathy started out as a staff nurse in 1984 at St. John’s Hospital in Smithtown, NY after 5 years in the medical surgical unit and ICU step down. Kathy has since worked for over 20 years at the Visiting Nurse Services and Hospice of Suffolk county, NY serving as the Clinical Manager for hospice and she is currently the Director of Operations for both hospice field and hospice in-patient house in East Northport, NY. Kathy has a Bachelor of Science degree in Nursing from Farmingdale State University of New York and she is a member of the National Hospice, the Palliative Care Association, as well as the Hospice and Palliative Care Association of New York. She is passionate about educating the staff in expanding their knowledge in order to better care for the patients and their families. Kathy has been practicing yoga now for 25 years and has been a certified yoga instructor for the past 7 years. She also practices and teaches Reiki and meditation. For the past couple of years Kathy has taken up beekeeping, her work as a beekeeper stems from a deep caring and concern for the frigility of the honeybee population. “Honeybees have a structure that has a deep impact on mother earth and the health of our planet, not to mention the amazing healing properties of the hive.” It is her belief that it is our responsibility to raise awareness of the care that is needed for these amazing creatures. Kathy attended CMACC (Charles Mraz Apitherapy Course and Conference) 2015 held in NY last spring where she expressed her interest in becoming more involved with the AAS. In the past, Kathy completed some secretarial courses where she learned shorthand and she will be serving on the AAS board as Secretary.

Continued on page 14
Michael Szakacs

The year was 1996 and Mike was living and working in Hungary when he became so ill that he was admitted to the hospital. His sister from Connecticut was inspired to send him Charles Mraz's book, "Health and the Honeybee" and the rest he says is history. “Apitherapy changed my life in an incredible way and I have been captivated and amazed by this approach to healing ever since.” Mike was born and raised in Fairfield, Connecticut where he received a BS degree from the University of Bridgeport. Upon graduating he moved to Europe and spent 10 years working in Hungary and Scotland completing an MBA degree at the University of Edinburgh. Presently Mike lives in Boynton Beach, Florida with his wife Katalin, his daughter Roxanne, and their dogs, cats and honeybees. Michael has worked in the field of finance and accounting for his entire career and currently works as the Revenue Manager for the Palm Beach County Parks and Recreation Department. Michael is an apitherapy patient, a therapist, and a beekeeper from when it all started back in 1996. “I was my first patient and successfully treated myself for psoriatic arthritis. I have been an AAS member since 1998 and attended my first CMACC in 2004 (Stamford, CT).” Additionally Mike is an associate member of the Hungarian Apitherapy Society (Magyar Apiterapias Tarsasag) since 2013 and in his spare time enjoys cooking and playing ice hockey. Michael recently attended CMACC 2015 in New York where he offered his services to become an AAS Board member joining us as Treasurer.

Canadian Apitherapy Conference In Nelson B.C.

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I thank all the speakers at the conference for a very rewarding experience. Dr. Stefan Stangaciu’s lectures added a supernatural understanding to apitherapy, his somewhat spiritual approach towards the medicine of the bees gave me new energy in my quest of understanding the essence of bees. A very special thank you to the Canadian Apitherapy Association. www.apitherapeutics.com
New Members

California
Leslie Medberry
Ken Yip
Hans Johsens
Cathrin Fitzer
Melody Ziko
Mary Monroe

Colorado
Carola & Bob Tschiemer
Cristina Kocking

Florida
Cynthia Cole

Hawaii
Alicia Wills

Indiana
Dr. Ami Rice, MD
Don Tucker

Kansas
Ellie Lobel

Maryland
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Mary Judith Longnecker
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Wisconsin
Vera Pawlak

Canada
Anton Miles

Mexico
Valente Marin Rebollo

Network List
Share your experiences with Apitherapy with other AAS members, Join the Network List! Click on the Members Only tab on the website, choose My Profile and opt in, or email the AAS office at aasoffice@apitherapy.org and we will do it for you.

Donors
Brande Falzett, PA
Alden Marshall, NH
Michelle Forrester of Beehive Botanicals, WI
Announcing the 2016 Charles Mraz Apitherapy Course and Conference (CMACC)
To be held in Los Angeles, CA

Details coming soon via the AAS Monthly Newsletter, the AAS website, and the next Journal of the American Apitherapy Society.