

The Different Tastes of Honey

Peter Lewis

A variety of Italian honeys for sale in downtown Bologna

Within minutes of each other two non-beekeeping contacts called me to ask if I'd seen the fabulous article about tasting honey in the weekend newspaper. Published to coincide with the timing of the UK National Honey Show and written by Hattie Ellis for the *Financial Times* (FT) magazine, the review extolled the variety of unique aromas, tastes and flavours to be found in indigenous honeys.

As with a bottle of wine, whereby the type, style, grape, region, producer and the vintage (collectively the 'terroir') are assessed, it is the end product that is the principal

point of interest. Increasingly we are all becoming more interested in provenance and traceability, concerned to enjoy and be aware of the importance of knowing more about everything that we eat. Why, where it's from, who produced it, when, how, etc.

Honey Choices

Which honey, for example, might go better drizzled over natural yoghurt and berries for breakfast? What is an ideal sweet foil dressing to a refreshing salad of sliced raw chicory, quartered fresh figs in season, a sprinkling of walnuts, prosciutto and some scoops of blue cheese, such as Gorgonzola (try it!)? Or that cooks well in recipes, not just in cakes?

Baked thick butchers'

sausages, roasted together with a whole fennel bulb split into sections, then smothered in a heated sauce reduced from the juices, some dry white wine or vermouth, whole grain mustard and a generous tablespoonful of rich sweet and earthily bitter Yorkshire lining heather honey make a divine autumnal supper.

Italian Beekeepers

To improve the quantity and quality of yields through insect pollination in a country famed for its range of fine foods – fruit, vegetables, wine, olive oil and a whole gamut of agricultural produce – as well as produce honey, bees wax and hive products, there are an estimated 70,000 beekeepers in Italy. They produce in total about 16 to 23,000 tonnes of honey each year (20,000 professionals account for 80% of the honey sold), which is about 8 to 10 times as much honey as is produced in the UK.

By comparison, in Britain there are around 450 bee farming businesses and approximately 25,000 small-scale beekeepers registered with the BBKA

As a way of addressing the perceived threat of cheap, sometimes adulterated, honey imports, for 25 to 30 of their

monofloral honeys that regularly yield a crop of commercial potential, the Italians have established certifiable 'types', uniquely defined by a triangulation of taste (gustatory appreciation), pollen content (melissopalynology) and chemical profiles. As well as reducing the level of poor quality imports, an immediate benefit to beekeepers has been higher pricing: €8 to €10 per 500 g jar is realised at retail level for accredited mono and multifloral honeys (equivalent to £7 to £9 per 1 lb in the UK).

Honey Analysis Course

The FT article included details of the first course to be presented in English by the Italian pioneers of the systematic sensory analysis of honey or *organoleptics*.

Based in Bologna (known as *la grassa* – 'the fat' in gastronomic terms), the food capital of the fertile and productive Po valley of north-east Italy, the expert course leaders Dr Gian Luigi Marcazzan and Dr Raffaele Dall'Olio keep bees. Both are professional honey tasters and panel leaders for the Italian National Register of Experts in the Sensory Analysis of Honey.

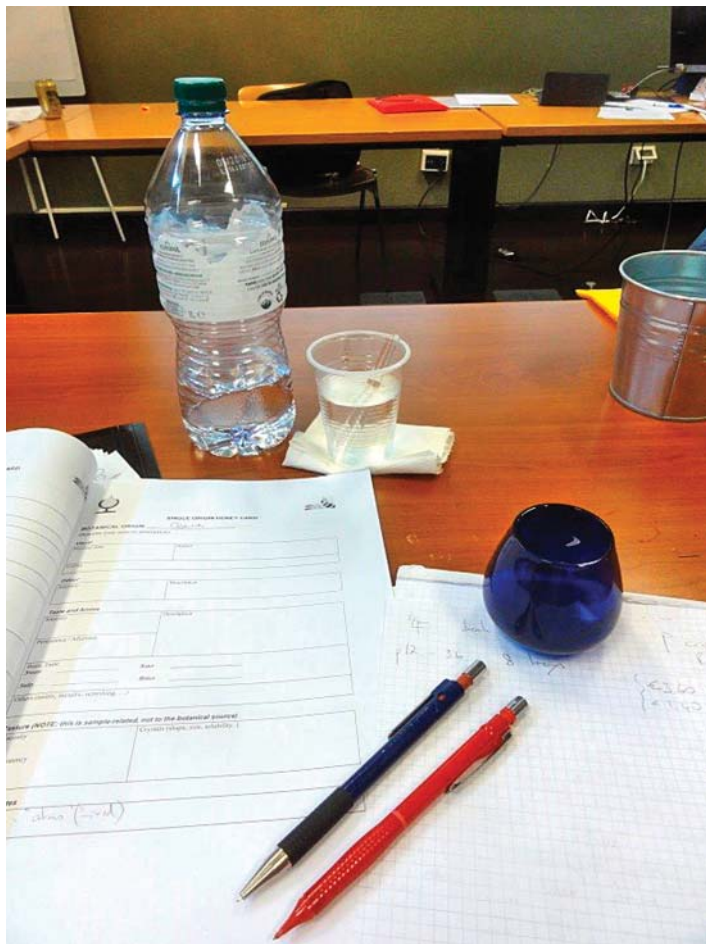
Test samples lined-up for taste test appreciation, with fellow course attendees Dr Pierre Giovenazzo (left), President, Apimondia, Montreal 2019, from Quebec, and Rustam Engineer, director and co-founder of 'Wild about Honey' (Portugal)



Over an intense full four days the international group of attendees were introduced to the concepts, themes and methodologies for systematically and consistently appreciating a honey's individual merits. In my group, we had two participants from New Zealand, six from Quebec (in anticipation of next year's Apimondia Congress in Montreal), one from North Carolina, USA, one from Colombia and eight from all around Europe.

Dr Lucia Piana is one of the founders of the Italian National Register of Honey Sensory Experts and organises the annual Grandi Mieli d'Italia honey show. She presented a fascinating half-day guest session on the phase diagram physics of the crystallisation of honey sugars (soft-set, granulation) and storage implications, HMF, etc.

A blind tasting (orange citrus honey as it happens) in an official olive oil tasting glass, coloured blue so that you can't see the sample itself



Educating the Palate

The starting point of the course was the basic education of the palate to detect and discern levels of sweet, sour, bitter and salt plus savoury umami. We compared different types of honey, including honeydews. The faults, defects and problems that might generally be associated were explained and tried (fermentation, metallic, smoke or thymol contamination etc).

Talks interspersed with ever-more sophisticated tastings of known honey types enabled us to build up profiles of about 18 typical Italian honeys (including sunflower, acacia and citrus). Some were familiar such as ubiquitous canola or oilseed rape and dandelion. Others were similar, such as lime (*Tilia* spp) though this was darker and more intense than the

Orange

Citrus spp.

Extra white to light amber; from white, sometimes pearly, to light beige when crystallized.

Different crystals might occur.

ODOUR

medium, floral, citrus flower, fresh, turns to fruity with aging.

FLAVOR

same as odour (floral-fruity). Moderate Persistence.



International "Pfund" Scale ≤ 30

0	Water white	8
8	Extra white	17
17	White	34

Citrus Fruit Honey (Citrus spp.)

Remarkable quantities are produced in the vast southern and insular citrus orchards. The most common variety is mixed citrus honey; only rarely is single-species honey (orange, lemon, grapefruit, tangerine, etc) obtained.

Physical features: it crystallizes spontaneously sometimes with a coarse and sandy texture. **Colour (Pfund scale):** very fair/pale water-white when liquid, white to light beige when crystallised. **Smell:** medium intense, distinctive, floral, fresh, reminds of orange flowers, zesty. **Taste:** very aromatic, deeply floral and fruity. **Usage:** is one of the most popular types of table honey because of its floral aroma; it matches perfectly to any sweet foodstuffs.

The results: organoleptic profiles of a citrus honey (what we're looking for, and should find, in a 'type' example).

British variety, which is very light, slightly green in colour and has hints of mint.

Some were downright confusing: the Italian 'heather' honey is based on a much earlier flowering *Erica* species. Their 'honeysuckle' is from a fodder crop (*Hedysarum coronarium*, sulla or sweet vetch) grown mainly in southern Italy and not related to *Lonicera* honeysuckle at all!

To differentiate accurately, Latin plant names were essential.

Taste and Smell

Flavour is a combination of taste on the tongue and aroma sensed through the nose – try eating something with your nostrils pinched together first, then release them and notice the different experience.

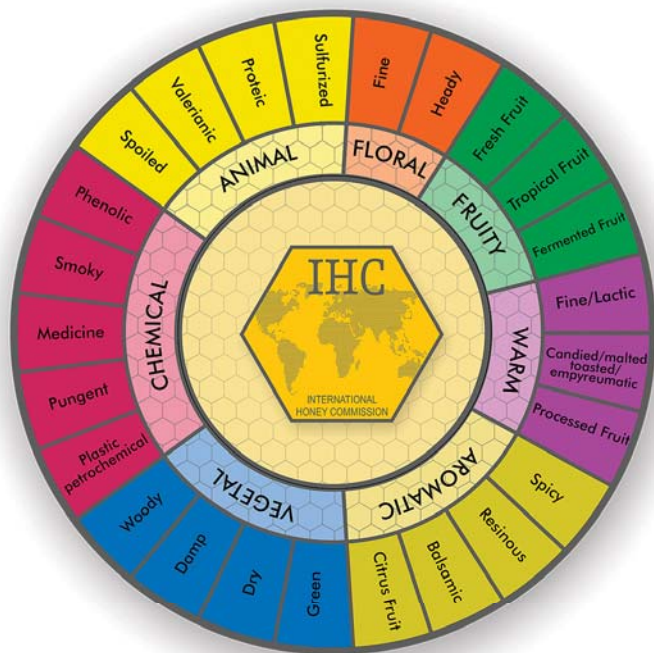
The Honey Wheel

In profiling honey types, we were introduced to the Honey Wheel. This was originally published by the International

Honey Commission (IHC) in 2004 and has since been adapted and developed by others. It is a guide to consistent descriptions of the flavours and aromas of honeys in universally understandable terms.

We were all testing, tasting and evaluating the same known type of honey at the same time, so we started to use the same adjectives to describe our tasting experiences. Thus a common vocabulary discipline (of seven major categories, 23–25 sub-families and a third further subordinate set) developed through which we could communicate flavours effectively to a trained taster, chef, cook or honey judge.

It's the equivalent of the oenophile or vintner's 'I'm getting berries and cherries with a hint of spice' applied to a spoonful of honey instead of a glass of wine. After proper training, it becomes systematic, serious and unpretentious.



The current 2013 version of the IHC Honey Wheel, which is under further review and likely to be revised

Trying Different Honeys

The international nature of the group led to a lot of networking and considerable insights from the inevitable cross-pollination of experience, thoughts and ideas. We'd each brought some representative honeys to show, tell and try. We had Ethiopian honey, where inclusion of larvae is seen locally as a positive protein addition, Korean honey with preserved hornets, manuka from New Zealand and fabulous pure sourwood honey

Samples of fabulous pure sourwood honey from North Carolina, USA, and Great Yorkshire Show prize-winning heather honey from the North Yorkshire Moors, UK. Note the use of glass tasting rods, with water and tart green apple slices to cleanse the palate between different tastings.



from the high Appalachian mountains to the east of North America. Of course, I took some of Yorkshire's finest heather honeys.

In a blind-test exercise, we were shown how 'heather' honey (monofloral examples of *Erica* spp and *Calluna vulgaris* (ling)) can be confused with sea lavender honey (*Limonium vulgare*), while in such an assessment, Scottish heather honey with whisky might incorrectly be thought to be showing signs of fermentation.

Courses

Sensory analysis of honey has established considerable resonance worldwide, especially in North America, though not yet here in UK. The American Honey Tasting Society and The University of California, Davis, Honey and Pollination Centre at the Robert Mondavi Institute, California, have offered formal structured courses for several years already.

The next honey tasting courses in English in Bologna are in

November 2018 (already fully booked), 11–13 June 2019 and 12–14 November 2019. For further details, see www.cibo360.it/catalogo/prodotti/honey_tasting_course.php

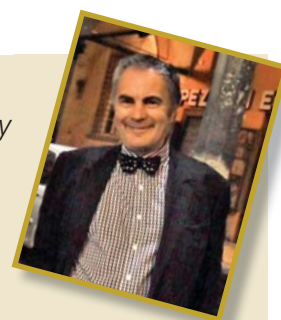
Acknowledgement

The author would like to thank and gratefully acknowledge the generous sponsors that helped enable his course participation: Yorkshire BKA, Yorkshire Agricultural Society and Harrogate & Ripon BKA.

Wine glasses used for bulk sample tasting, with 25–30 g of different 'type' honey examples per glass



Peter Lewis lives in the Yorkshire Pennines, where he has kept honey bees for about 12 years. Currently he is the Chief Hives & Honey Steward at the Great Yorkshire Show, as invited and appointed by the Yorkshire Agricultural Society.



Further Reading

- Marazzan, GL, et al (2017). A review of methods for honey sensory analysis. *Journal of Apicultural Research* **57**(1), 75–87. <https://doi.org/10.1080/00218839.2017.1357940>
- Marazzan, GL, et al (2014). Sensory profile research on the main Italian typologies of monofloral honey: possible developments and applications. *Journal of Apicultural Research*, **53**(4), 426–437. doi 10.3896/IBRA.1.53.4.09
- Piana, ML, et al (2004). Sensory analysis applied to honey: state of the art. *Apidologie*, **35**, S26–S37. doi: 10.1051/apido:2004048
- Marchese, CM and Flottum, K (2013). *Honey Connoisseur: Selecting, Tasting, and Pairing Honey, With a Guide to More Than 30 Varietals*. Black Dog & Leventhal