

PROLOGUE



Honey and healing through the ages.

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Honey, along with other products from the hive, is once again becoming accepted as reputable and effective healing agents (Okhiria *et al*, 2009). This is not just amongst the general public but also amongst those that practice conventional medicine. This widespread acceptance and increased curiosity in the therapeutic powers of honey must be due to the increased awareness of the very positive and encouraging results that are being obtained in clinical tests. Amongst others some most noteworthy is the work being done by Professor Peter Molan in New Zealand and in Cardiff by Professor Rose Cooper.

It is known from evidence such as bees trapped in amber that the honey bee has been around for about 50 million years (Fig.1). Mankind, in recognisable form, has been around for less than 2 million years but, from the very beginning, it would not be hard to conclude that honey has figured somewhere in his diet.

Stone age rock paintings in several different locations show honey hunting and these have been dated 6000BC or earlier. Thus giving between 8 and 10 thousand years of international evidence that the human race has recognised honey as a precious product. In southern England there is evidence of honey being stored in earthenware pots around 2500BC (Crane, 1999).

It is difficult to know when honey became recognised as more than a welcome food supplement, a treat, or something used for special religious ceremonies. The oldest written record is a prescription written on a clay tablet from Nippur, the religious centre of the Sumerians in the Euphrates valley, *circa* 2000BC (Fig.3). This prescription states:

"Grind to a powder river dust and...(here the words are missing)... then knead it in water and honey and let plain oil and hot cedar oil be spread over it"

(Kramer and Levey, 1954)

It is thought that this might be a cure for some skin infection or ulcer. There is certainly evidence from about the same period of similar medicines being used to treat eye and ear disorders. A honey and butter paste was often used after surgery, or to help the healing of stretched or pierced ears. Sometimes, depending on its purpose, the paste was enriched with other ingredients such as barley or herbs.

In Asia, where there are other sources of sweetness, honey has always been recognised as of prime medicinal value. It is mentioned as such in Chinese literature dating from about 2000BC.

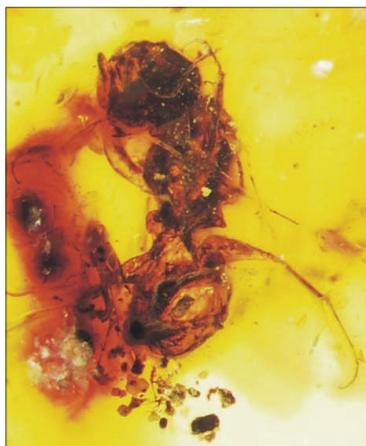


Fig. 1. Bee in amber.



Fig. 2. Ancient Roman honey pot.
Ref. B61 1 of the Eva Crane Historical collection

The Veda, the sacred books of the people occupying the Indus and Ganges valleys about 1000BC, records:

"Let one take honey to beautify his appearance,
develop his brain faculty and strengthen his body"

(Mullick, 1944)

In Ancient Egypt honey bees and honey were important and are to be seen in many hieroglyphics. The Egyptians have kept bees in hives, similar to those still used in that part of the world today, for over 4000 years and honey was, and is, much used in medicine.

Various papyrus records have been found and transcribed. The Ebers Papyrus (c.1550BC) included 147 prescriptions for the external application involving honey. One example mixes honey with red ochre, powdered alabaster and a couple of other ingredients to cure "spotted baldness" – known today as alopecia. Similar mixtures were used to: dress wounds, burns, abscesses, sores and skin conditions resulting from scurvy. Other uses included: application after surgery including circumcision, as a suppository and to reduce inflammation and loosen stiff joints.

Honey has been used as a contraceptive: an Ancient Egyptian prescription used powdered crocodile faeces, salt-petre and honey. Another prescription substitutes elephant dung. Allegedly, cotton soaked in honey and lemon juice was still being used as a contraceptive in Egypt in the 1990's (Crane, 1999)

The Smith Papyrus, gives a remarkable picture of medicine and surgery over 4000 years ago including 48 case studies. One of these describes a gaping eyebrow wound penetrating to the bone. The treatment was as follows:

"Now after you have stitched it, you should bind
fresh meat upon it the first day. If you find the
stitching of the wound is loose, draw it together
and treat it with grease and honey everyday
until the patient recovers"

(Manjo 1975)

The same papyrus gives many other prescriptions such as the treatment of wounds and ulcers with linen soaked in frankincense and honey, while aniseed, sycamore and frankincense could be used as a gargle for treating mouth ulcers and sores. A most improbable mixture is that of malachite (hydrated copper carbonate) and honey used for eye conditions such as conjunctivitis and as an eye makeup as a prophylactic against such infections. (Manjo, 1975; Ovington, 2002).

There are, of course, Biblical references to the use of honey and some of these can be dated. In about 1700BC Jacob told his sons to take "...a little balsam, a little honey..." as a present when they set off to visit their brother Joseph (Genesis 43.11) The Koran too mentions honey when it says that God inspired bees to eat from all fruits to produce liquids of different colours in which there are cures for man (Manjo, 1975).

So the remedies of Egypt passed to Ancient Greece and although Hippocrates, sometimes known as the father of modern medicine, does not give it much space he does extol the virtue of honey saying that it:

"....cleans sores and ulcers, softens hard ulcers of the lips,
heals carbuncles and running sores."

He refers to "Oxymel" (honey and vinegar) applied topically as a cure for pain and "Hydromel" (honey and water) for thirst perhaps associated with fever.

Honey was the most useful substance in the Roman pharmacopoeia where it was often prescribed alone or in combination. Pliny wrote that it was good for afflictions of the jaw, the throat, quinsy, complaints of the mouth, pneumonia, pleurisy and snakebites. It is also interesting that he too notes some honeys had a distinctly unpleasant effect if taken internally but that these same honeys, when mixed with aloes, made a fine treatment for bruises. (Pliny XXI, 44 quoted by Snellgrove, 1922)

A medical writer, Marcellus Empiricus, living in Bordeaux about AD 400 recorded that:

"Honey, butter and oil of roses, of each a like quantity,
warmed helps the pain of ears, dullness of sight and white
spots in the eyes"

(Crane, 1999)

There is a rich source of information through texts written between 200 BC and AD 400 covering not just that period but the previous 2000 years as well. Then we come to the Dark Ages where there are hardly any records. Dr Crane refers to *The Leech Book of Bald* of about AD 1000 where honey is again recommended as an eye salve, also for treating sties, dirty wounds, internal wounds, application after amputations and to help the removal of scabs.



Fig. 3 Clay Tablet

Ref. B58 17 of the Eva Crane Historical collection

Medieval Times are generally regarded as a period of medical stagnation due probably to the stifling influence of the church. However, an anonymous surgical treatise from 1446 has come to light (Kirkpatrick, 1997) and this includes a detailed description of ulcer care enumerating 7 steps in their treatment Step 4 is called "Mundification" – this is the cleansing of the ulcer. The prescriptions given are interesting as they include other hive products, namely beeswax and propolis.

So we can see similar uses and applications of honey spanning the centuries and crossing the known world. Generally there is very little written until we come to the 17th Century. In 1623 the Rev. Charles Butler wrote *The Feminine Monarchie* (Fig. 4) that has become a seminal treatise on bees. He goes into detail on the production and extraction of honey and describes its medicinal uses as follows:

- For cleansing and disinfecting
- As a laxative and diuretic
- A cough medicine
- An eye balm
- A highly nourishing restorative
- An aphrodisiac
- A preservative
- A mouthwash for ulcers
- A gargle for quinsy and sore throats
- A treatment for snakebites
- A sobering agent for those that have partaken of mild narcotics
- A calming agent after stomach upsets

(Butler, 1623)

The first book solely on the topic of honey in the English language was written by John Hill M.D. in 1759. It has a very remarkable title:

The virtues of honey in preventing many of the worse disorders; particularly the gravel, asthmas, coughs, hoarseness and a tough morning phlegm.

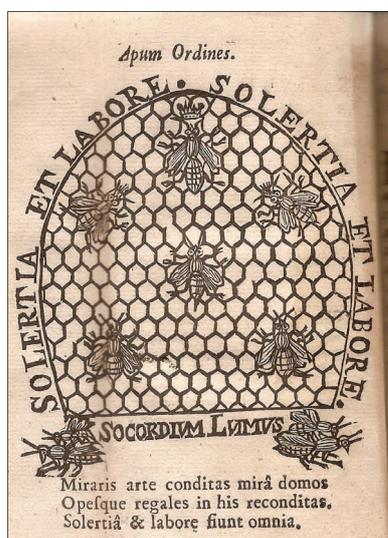


Fig. 4. Frontispiece of Butler's Book

The opening paragraph is particularly apposite at this time when IBRA is launching its new *Journal of ApiProduct and ApiMedical Science*:

"The slight regard paid at this time to the medicinal virtues of Honey, is an instance of the neglect men shew to common objects, whatever their value: acting in contempt, as it were, of the immediate hand of providence, which has in general made those things most frequent, which have greatest uses; and for that reason, we seek from the remotest part of the world, medicines of harsh and violent operation for our relief in several disorders, under which we should never suffer, if we would use what the bee collects for us at our doors."

(Hill, 1759)

There is some irony that also in the IBRA library there is a paper that makes the same point that honey is grossly under utilized in conventional medicine. That paper originated in the Medical School of Hammersmith Hospital and was published in the *Journal of the Royal Society of Medicine* (Zumla and Lutat A, 1989). This publication is exactly 230 years after Hill, himself a medical doctor, published the same plea. It would be encouraging to think that those that influence our medical practices and procedures in the coming 230 years will look more seriously at the curative properties of honey.

Although honey, and other hive products, have a long and respected history of effective medical usage they fell from favour during the middle decades of the twentieth century when many thought that infectious diseases had been conquered by the almost ubiquitous use of antibiotics. In 1969 no less a contributor than the US Surgeon General went on record saying: "The time has come to close the book on infectious disease" (Nelson, 2003). The perspective of 40 years shows the statement to be, if looked at kindly, premature. Today, infectious disease is a major killer with frightening increases in the number of infections that have become resistant to antibiotic application. The whole concept of applying traditional bee products is now under close scrutiny, their modes of operation the subject of multi-disciplinary study and their effectiveness clinically assessed (Cooper, *et al*, 2009).

Many hundreds of tonnes of honey are used each year in manufactured commercial pharmaceutical products. Many parts of the world put a great deal of reliance on this golden harvest of the industrious bee as a dependable source of healing and curative products. In the remote areas of Nepal, where modern transport rarely penetrates even today, the beehive is looked upon as a self-replenishing medicine chest. Similarly in Africa, where medicines are unavailable for reasons of cost or remoteness, honey and other hive products are important ingredients in the potions of the traditional healers.

In Russia and Eastern Europe, which have perhaps lacked the wealth necessary to develop highly specialized pharmaceutical products, honey is regularly used to treat burns, open wounds and septic infections. Being non-adhesive it has proved to be not only effective but also more comfortable than other dressings.

Honeys vary according to their plant origins and the conditions under which they are produced. Processing and storing may bring about physical and chemical changes. Therefore, honey will differ and may have varying curative powers.

Up to this point the word "honey" has referred to the honey produced by *Apis mellifera* the major producer of the honey that enters commerce worldwide. There are other honey-producing bees such as the stingless bees of the tropics. Their honey too has been prized through history for its medicinal properties. The Mayan civilization in Central America used such honey in the treatment of eye disorders and it is used today with proven benefits in the treatment of cataracts (Vit, 2000).

It should not be forgotten that honey is not the only product to be found in the beehive with either nutritive and or medicinal benefits. The others are:

| | | |
|----------|---------|-------------|
| Pollen | Beeswax | Royal Jelly |
| Propolis | Venom | |

The greatest problem with this subject is to disentangle the folklore from the serious research and then to seek out reports arising from that research. This is the aim of *The Journal of ApiProduct and ApiMedical Science*. By gathering together the names of the leading specialists the journal will report only peer-reviewed material from around the world. The content will cover all the products of the hive, the standards that are being set for those products and their application in medicine, nutrition, health promotion – in fact any verifiable scientific or clinical usage will be covered.

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