

## **Historical notes on manna / by Daniel Hanbury.**

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BY DANIEL HANBURY, F.R.S.

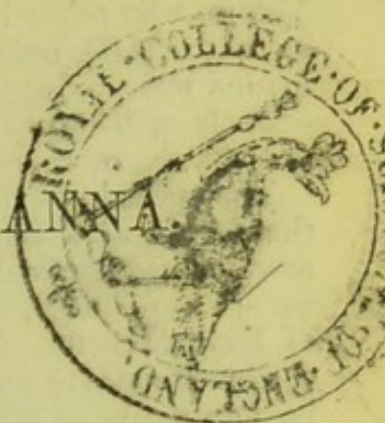


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## HISTORICAL NOTES ON MANNA.

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Whatever was the true nature of the substance provided for the sustenance of the ancient Israelites and termed by them *Manna*, that name has in subsequent ages been used to designate certain saccharine exudations produced in hot countries upon the stems, branches or leaves of trees, shrubs, or herbaceous plants, belonging to various families. Thus in the peninsula of Sinai, a sweet substance called *manna* is exuded by a species of tamarisk; in Persia, a manna is produced by a small, thorny, leguminous plant, known to botanists as *Alhagi Maurorum*; and in Kurdistan, an evergreen-oak affords an analogous product. These substances have from a remote period been employed as food or medicine, and they are still found, though in small quantities, in the bazaars of the East. The Cedar of Lebanon, the Larch, a *Cistus*, and certain Australian species of *Eucalyptus* likewise yield at certain seasons, saccharine exudations in more or less abundance; and those derived from the cedar and larch have occasionally been collected for use.

The manna of modern times is well known to have a very different origin, being a product obtained in considerable abundance from the stems and branches of a species of ash, cultivated in Calabria and Sicily. With this manna, Europe is wholly supplied, and it likewise finds its way into the markets of the East.

During some conversation last summer with my friend Dr. Flückiger of Bern, he drew my attention to this curious fact,—that in the early history of Sicily, no mention is made of manna as a production of the island. This induced me to look around for further information, the result of which has been the collection of a few notes on the history of this drug, which seem of sufficient interest to be presented to the Pharmaceutical Society.

In the first place, I must thank Colonel Yule, to whom I wrote thinking that his familiarity with historical research, and actual residence at Palermo, might enable him to impart some hints for my guidance. But he has been good enough to render me still greater service in furnishing extracts from several authors whose works I might otherwise have overlooked.

With regard to manna which has fallen from the atmosphere, or as it is termed *Meteoric Manna*, the grand example is that described in the book of Exodus. Of this it may be safely affirmed, that accepting the Mosaic account as the simple narrative of a real event, no phenomenon is known which is at all adequate to explain it.

But there are other examples of meteoric manna which come fairly within the range of natural phenomena, and which it would be interesting to consider, did space permit. I may observe that the notion that manna is not the juice of a plant, but that it is of the nature of dew and falls from the sky, is very ancient, and still lingers in the East. In the case of the manna-ash, it was disproved by the Franciscan monks Angelus Palea and Bartholomæus ab Urbe

Vetere, who relate how they caused some of the trees to be covered with sheets, so that nothing could fall upon them; and that notwithstanding this precaution, manna was produced as before.<sup>1</sup> But this reasonable conclusion was regarded as scarcely orthodox, and the learned Matthioli was at much pains to supply an explanation more, as he thought, in accordance with Scripture.

The special point however which I desire to discuss in this paper, relates to the *period* at which ash-manna began to be collected. Manna is mentioned more or less particularly by most of the Arabian physicians with whose works we are acquainted, but the allusions are all to Oriental manna and not to that of Italy or Sicily. This is manifest from the writings of Ebn Beithar<sup>2</sup>, one of the most eminent and learned men of his time and a great traveller; and who being a native of Malaga, would probably when speaking of manna, have named that of Sicily, the more so as that island, having been for nearly 250 years under Saracenic rule, must have been familiar to the Arabs of Spain. Ebn Beithar is moreover in the habit of quoting extensively from other authors. He died about A.D. 1248.

One fact may be held to prove that the Saracens could not have been entirely ignorant of the production of manna in Sicily, and it is this:—There exists a mountain near Cefalu which is called by the Arabic name *Gibil-manna*, literally *Manna-mountain*<sup>3</sup>. Other mountains in the island retain the Arabic name of *gibil*: whether the word *manna* was affixed subsequently to the Saracenic occupation, or whether, as is more probable, the whole name was bestowed by the Arab population in virtue of the trees of the mountain yielding manna, is a point I am unable to decide.<sup>4</sup>

In the 13th century, Sicily was under the dominion of the Emperor Frederic II., a sovereign who appears to have been very solicitous to develop its resources, as is proved by many documents extant, relative to the affairs of the island. Thus in a letter dated A.D. 1239, he directs that certain Jews settled at Palermo are to farm his date plantations at Favara, and to cultivate them after their own manner. He also writes about the cultivation of his vineyards and the introduction of indigo and henna, and of divers other plants of Barbary, not then known to grow in Sicily. But so far as I can discover, there is no allusion to manna.<sup>5</sup>

Pegolotti, an Italian who wrote a sort of mercantile handbook *circa* A.D. 1340, has a chapter on Messina and Palermo, but does not mention manna as a production of Sicily; yet in enumerating the articles sold by the pound at the former city, he names manna apparently as a foreign production, since he couples it with cloves, cubebs, rhubarb, mace and long pepper.

Further evidence of a negative sort is afforded by Giovanni di Antonio da Uzzano, who in his work called *Libro di Gabelli*, written *circa* A.D. 1442, mentions the exports of Naples and of Calabria as wine, oil, corn, cheese, salted meat, nuts, chestnuts, soap, and oranges, but makes no reference to manna.<sup>6</sup>

The earliest actual mention of manna as an Italian drug that I have found, is in

<sup>1</sup> Geoffroy, *Tractatus de Mat. Med.* II. 587. The whole disquisition of this author *De Mannâ solutivâ*, is replete with information.

<sup>2</sup> Ed. Sontheimer, 1840-42., I. 207., II. 533.

<sup>3</sup> Amico, *Lexicon topographicum Siculum*, III. (1760). 242.

<sup>4</sup> Colonel Yule has remarked that Salmasius in his *Exercitationes Plinianaë* alludes to *Σικελικὸν μάννα* as mentioned by the *Medici recentiores Græci*, but without specifying more particularly who they are.

<sup>5</sup> *Historia diplomatica Friderici Secundi*, par J. L. A. Huillard-Bréholles, IV. 213; V. 571.

<sup>6</sup> Pegolotti's work forms the third volume and Da Uzzano's the fourth, of the book published anonymously by Gian Francesco Pagnini under the title of *Della Decima e di varie altre Gravezze imposte dal Commune di Firenze* etc., Lisb. e Lucca, 1765-6, 4<sup>o</sup>, III. 99; IV. 96-98. Some valuable information on Pegolotti and his writings may be found in Colonel Yule's *Cathay and the way thither*, Lond. 1866. (Hakluyt Society) Vol. II. 279.

the *Compendium Aromatariorum* of Saladinus, printed at Bologna in 1488. Saladinus was physician to one of the Princes of Tarentum in Calabria: neither the date of his birth nor that of his death is known, but it would appear that he was living between A.D. 1442 and 1458; for he states that during his time, the King of Arragon punished his druggist at Naples by a fine of 9000 ducats and degradation from office, because the king's physicians having prescribed *white coral* as an ingredient of a cordial electuary, the druggist not possessing it, substituted *red coral*. This incident affords a clue to the age of Saladinus, for it was Alphonso V., King of Arragon who laid siege to Naples, captured it in 1442, and died in 1458.

The work of Saladinus to which I have alluded, is a sort of handbook for the *aromatarius* or druggist, and is remarkable for much practical good sense. Besides numerous formulæ and descriptive notices of drugs, it contains a calendar enumerating the herbs, flowers, seeds, roots and gums to be collected in each month:—and in terminating the list for May, there occurs the following passage:

“Collige etiã in isto mēse mǎnã tã in oriēte qm̄ in Calabria quia tunc ros ille  
“preciosius de celo cadit.”

Contemporary with Saladinus lived Giovanni Gioviano Pontano (A.D. 1426–1503), a celebrated historian, statesman, philosopher and poet. Among his numerous writings is a work entitled *Liber Meteororum*, in which there is a poem headed *De Pruinã, et Rore, et Mannã*; this effusion notices in very circumstantial terms the collection of manna by the peasants on the banks of the Crati in Calabria, describing the production of the drug in language which I may render thus, subjoining the original passage in a foot-note:<sup>1</sup>

\* \* \* There in the middle of summer under a burning sun, while heat prevails, and the cloven earth gapes,—when no breeze is stirring and the humid air is still, it [the manna] gradually exudes and, condensed as a viscid fluid, runs into drops and thickens on the thirsty leaves,—and further hardened by successive suns, it acquires the appearance of wax and the taste of honey. Such as the bees obtain by their instinctive art and mutual aid, this, nature produces for the medicinal use of mankind.

In the second half of the fifteenth century flourished Raffaele Maffei, called also Volaterranus, a learned and voluminous writer, who among other works has left one entitled *Commentarii Urbani*, in which we find a sentence in the following words<sup>2</sup>:

“Manna nostra ætate cœpit in Calabria provenire: licet orientali inferior.”

<sup>1</sup> Quinetiam Calabris in saltibus, ac per opacum  
Labitur ingenti Crathis, qua cœrulus alveo,  
Quaque etiam Syriis sylvæ convallibus horrent  
Felices sylvæ, quarum de fronde liquescunt  
Divini roris latices, quos sedula passim  
Turba legit, gratum auxilium languentibus ægris.  
Illic æstate in mediã, sub sole furenti  
Dum regnat calor et terræ finduntur hiantes

\* \* \* \* \*

Cum nullæ spirant auræ, et silet humidus aer  
Contrahitur paulatim, et lento humore coactus  
In guttas abit, et foliis sitientibus hærens  
Lentescit, rursumque diurno a sole recoctus  
Induit et speciem ceræ, mellisque saporem.  
Quodque et apes præstant arte, ingenitoque favore  
Hoc medicos natura hominum producit in usus.

*Pontani Opera*, Venet. 1513, *Lib. Meteor.* p. 113.

<sup>2</sup> Volaterranus (Raph.) *Comment. Urban.*, Paris, 1515, fol., lib. 38. f. 413. I have not been able to consult an earlier edition of his works published, it is said, at Rome in 1506.

The signification of this I take to be, that manna first began to be collected in Calabria, within the author's recollection, but that it was not considered so good as the Eastern manna.

It is to be observed that Saladinus, Pontano and Maffei all speak of manna as a production of Calabria, and it is evident, I think, that for a long time the drug was afforded by that region and not by Sicily.

Brasavolus of Ferrara, describing the drugs found in the shops *circa* A.D. 1537, mentions manna as a production of Calabria.<sup>1</sup>

Matthioli (1548) remarks that of manna he has only seen two sorts, the Levantine and the Calabrian.<sup>2</sup>

Alberti in his *Descrittione di tutta Italia*, published at Bologna in 1550, mentions manna as found in Calabria.<sup>3</sup>

Garcia d'Orta (1563)<sup>4</sup> and Christopher Acosta (1578)<sup>5</sup> describe different kinds of Oriental manna, contrasting them with that of Calabria.

The *Ricettario Fiorentino* (edition of 1573) states that manna is of two kinds, namely that of Syria, and that produced in the kingdom of Naples, especially about Cosenza in Calabria.

Still more significant is the fact that Fazelli, a well-known writer on Sicily (1558), in a chapter on the productiveness of the island, boasts of its wine, oil, sugar, honey, fruits and saffron, but says not one word of manna or the manna-ash.<sup>6</sup>

The manna collected in these early times was undoubtedly that which the trees produced spontaneously, but it was neither abundant nor cheap.<sup>7</sup> That which exuded from the leaves was esteemed the best, and was called *manna di foglia* or *manna di fronda*; it is described as being in the form of solid, translucent, white grains, resembling little grains of mastich, and having a sweet and agreeable taste. The second sort was that which flowed spontaneously from the trunk and branches, and was termed *manna di corpo*; while the third or commonest kind was that picked up from the ground.

Towards the middle of the sixteenth century, it was found that a much more copious supply of manna could be obtained by notching the bark of the tree, and this new method of procuring the drug began to be adopted.<sup>8</sup> But the innovation did not pass unnoticed, for in the year 1562 Marino Spinelli, being *protomedico* of the kingdom of Naples, set about inquiring as to the article sold by the druggists as *Manna*: and as he doubtless found it no longer corresponded with that of former days, he declared in concert with other learned physicians, that it was by no means good; and further to enforce his opinion, he procured the issuing of a public edict, prohibiting the druggists under a severe penalty from using any other manna than that of the leaf. This law proved very injurious to the Calabrians; it was felt also to be both severe and unjust by many of the physicians, one of whom, Annibal Briganti, took up the question in a philosophical spirit, made many visits to the manna-districts, and investigated the differences alleged to exist between one sort of exudation and another. This resulted in the discovery that manna, whether spontaneously yielded by the

<sup>1</sup> *Examen omnium simplicium*, Lugd. 1537, 8°, p. 335.

<sup>2</sup> Comment. in Lib. I. Diosc. cap. 70.

<sup>3</sup> P. 198.

<sup>4</sup> *Colloquios dos Simples*, etc., Goa, 1563, 4°, p. 132.

<sup>5</sup> *Tractado de las Drogas y Medicinas de las Indias Orientales*, Burgos, 1578, 8°, p. 399.

<sup>6</sup> *De Rebus Siculis*, Dec. I. lib. i. ch. 4. *De Ubertate Siciliae*.

<sup>7</sup> Fiore da Cropani in his *Calabria Illustrata*, Napoli, 1691, says (p. 253) that the *manna di fronda* has been sometimes sold even in Calabria at 50 *scudi* for 6 ounces.

<sup>8</sup> In Bauhin's edition of the Commentaries of Matthioli, published at Basle in 1574, the practice of making incisions in the bark of the tree is distinctly alluded to, as being followed in Apulia and Calabria "*hac ætate*."

leaves or stem, or obtained from the latter by aid of incisions, is essentially the same substance and possesses like virtues. These observations were recorded by Briganti in a long discourse written in Latin, for which, I am sorry to say, he has had very little credit:—for not wholly trusting his own judgment on a subject so grave and controversial, he sent his MS. from Chieti where he lived, to another learned man, Donatus Antonius ab Altomari of Naples, who so entirely approved of it that he immediately published the whole of it in his own name!<sup>1</sup> Under the assumed authorship of Altomari, we have then this essay as a quarto pamphlet of 46 pages, printed at Venice in 1562 and entitled *De Mannæ differentiis ac viribus deque eas dignoscendi via ac ratione*: and as if to give the work greater weight, it is in the form of an epistle addressed to Hieronimus Albertinus, Neapolitan prime minister of Philip II., a monarch whose connection with the English crown and the Spanish Armada has caused his name to be well remembered in our annals.

The custom of promoting the exudation of manna by wounding the stem and branches of the trees, must have occasioned a great increase in the production of the drug, a proof of which we have in the statement of Fiore (1691) that the sole district of Campana and Bocchiglioro affords annually 30,000 lb. with great profit to the gatherers and 1100 ducats of excise to the government.<sup>2</sup> Of the period when the traffic in manna commenced in Sicily, I have no information. Paolo Boccone of Palermo mentions in his *Museo di Fisica e di Esperienze* which appeared in 1697, several localities in Italy whence manna is obtained, adding that *manna forzata* (that from incisions being thus called) is also produced in Sicily.<sup>3</sup>

In conclusion let me recapitulate the points in the history of manna, upon which I have endeavoured to throw light:

1. That the manna known in Europe in very early times was probably all of Oriental origin.

2. That manna of the ash (*Fraxinus Ornus* L.) began to be collected in Calabria in the first half of the fifteenth century.

3. That the practice of making incisions in the tree in order to promote the exudation, was not commenced until about the middle of the sixteenth century, previous to which period, the only manna obtained was that which exuded spontaneously.

4. That although the existence in Sicily of a mountain called by the Arabic name *Gibil-manna*, would seem to indicate that manna was collected during the period of Mussulman rule in that island (A.D. 827 to A.D. 1070), evidence has not been produced to prove the fact:—but that on the contrary, it appears that manna was gathered in Calabria long anterior to its collection in Sicily.

<sup>1</sup> “*Senza pure un minimo segno di gratitudine.*”—The account of this shameless piracy is related with much moderation by Briganti himself in his Italian edition of Garcia D’Orta, published at Venice in 1582 (p. 50). Consult also Toppi, *Biblioteca Napolitana*, p. 20.

<sup>2</sup> *Della Calabria illustrata*, Nap. 1691–1743, fol. p. 253.

<sup>3</sup> Obs. xiv.–xv.



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