

## Herbal medicine and herbal magic in Pliny's time

Both medicine and magic are considerably older than Rome and, as might be expected, they were inextricably bound up with religious beliefs and rituals<sup>1</sup>. The interrelations between medicine and magic are especially evident in traditional Roman folk medicine, that is, the kind of medicine practiced, often if not usually within a domestic context, prior to the widespread adoption of the more sophisticated Greek medicine with its pronounced philosophic bases<sup>2</sup>. Though it cannot be summarized in a few words without gross over-simplification, a large part of the old Roman folk medicine is entailed by Pliny's phrase, *ars herbaria*<sup>3</sup>. This meant, essentially two things: (i) the use of *simplicia*, primarily but not exclusively of plant origin, for a wide range of therapeutic and preventive purposes and (ii) the healing properties of the *simplicia* were often enhanced by or subjected to various ritual and magical practices<sup>4</sup>.

In view of the deep-seated Roman suspicion of Eastern cults and practices —characterized, for example, by Pliny's scornful remarks about the Magi— it is not always easy to distinguish herbal medicine from herbal magic. But probably the majority of Romans themselves did not make a sharp distinction between them either; for while they

1 Cf. Eugene Tavenner, *Studies in Magic from Latin Literature* (New York 1916) pp. 61-123 and Xavier François Wolters, *Notes on Antique Folklore. Proefschrift* (Amsterdam 1935).

2 Jerry Stannard, 'Medicinal Plants and Folk Remedies in Pliny, *Historia Naturalis*', in *History and Philosophy of the Life Sciences* 4 (1982) 3-23.

3 *NH* 7, 196. All references to Pliny are to the edition of H. Rackham et al., 10 volumes (London 1938 ss., Loeb Classical Library).

4 The Marsi, noticed by Pliny, *NH* 28, 19 and Aulus Gellius, *Noctes Atticae* 16, 11, 1 ss., were infamous for such practices; cf. Concezio Alicandri-Ciuffelli, 'La Medicina nei Marsi e Peligni', *Abruzzo* 9 (1971) 165-88.

decried the Eastern cults and associated practices, they willingly accepted indigenous folk remedies whose superstitious origin is no less obvious than that of the *Magorum vanitates* so scornfully denounced by Pliny<sup>5</sup>. And yet, to indicate the Roman ambivalence toward magic, Pliny himself did not hesitate to recommend *remedia Magorum* when the older Roman folk remedies failed<sup>6</sup>.

Because of the abundance of contemporary material at our disposal, plus an enormous secondary literature, it will be possible here to deal with only portions of the problem. For purposes of convenience, therefore, four aspects of the relations between herbal medicine and herbal magic will be emphasized in the following pages:

1. The substances used.
2. Their collection, preparation and administration.
3. The purposes served by herbalism.
4. The rationale for the use of *simplicia* in herbal medicine.

#### 1. SUBSTANCES USED

In order to appreciate herbal practices and to understand their successes, as well as their failures, one must, first of all, recognize their physico-pharmacological bases. In Roman times, and for many centuries to follow, herbalism rested upon many hundreds of different natural substances. Their properties, both real and imaginary, were exploited for many different purposes, not all of which were directly therapeutic.

The substances so employed can be divided into six sub-classes of which the first three are the *simplicia* of plant, animal, and mineral origin. As such, there is nothing esoteric about them, though their modern scientific identification occasionally presents a problem. The questions later to be asked about these *simplicia*, for example, their

<sup>5</sup> NH 28, 89; cf. also the phrase, *magicae vanitates*, 26, 18; 30, 1; 37, 118.

<sup>6</sup> «In quartanis medicina clinice propemodum nihil pollet. Quamobrem plura magorum remedia ponemus», NH 30, 98. For a similar belief, cf. Celsus, *De medicina* 6, 6, 8E: «cum secunda vana fuerunt, contrariis adiuvantibus».

efficacy or their deleterious side effects need not concern us here.

a) Many of the plant substances of Roman herbalism continued to be used for centuries and some of them continue to be employed in modern folk medicine<sup>7</sup>. Good examples are *allium* (*Allium sativum* L.), *anethum* (*Anethum graveolens* L.), *ruta* (*Ruta graveolens* L.), and *salvia* (*Salvia officinalis* L.). To that list may be added another 200 or so species, either indigenous to or naturalized in Southern or Western Europe by Roman times. In addition, a heavy use was made of exotica, the species and gums of Near-Eastern provenance, for example, pepper (*Piper nigrum* L.), ginger (*Zingiber officinale* Rosc.), cinnamon (*Cinnamomum aromaticum* Nees), and, of course, myrrh (*Commiphora opobalsamum* (L.) Engl.) and frankincense (*Boswellia sacra* Flueck.).

b) With respect to the *simplicia* of animal origin<sup>8</sup>, the picture is somewhat different, for most of them have disappeared from herbal medicine for one reason or another. Thus hyaena dung, crocodile fat, eagle legs and lizard eyes—all of which appear in Roman medicine—are today primarily pharmaceutical curiosities. A few animal substances, also noted by Roman writers, still find a limited place in herbal medicine, for example, goose grease, chicken eggs, goat's milk, unwashed sheep wool and perhaps others occur, here and there, in folk medicine.

c) *Simplicia* of mineral origin pose a difficulty because they were not classified, until modern times, on the basis of their chemical composition but rather on the basis of color, shape and geographical origin.

Consequently, mineral or organic impurities may disguise their chemical identification. At any rate, common salt, alum, sulphur, and lead, copper and iron salts can be identified as playing an important role in Roman medicine.

7 For example, Gigliola Magrini, *Curarsi con le piante* (Novara 1977) and W. B. McDaniel, 'Some Roman Remedies in Italian Folkmedicine', *Transactions, College of Physicians of Philadelphia* 12 (1944) 72-87.

8 Cf. Léon Moulé, 'Le folklore médical de Pline', *Bull. Soc. Franç. d'Hist. Méd.* 17 (1923) 71-85.

d) A fourth sub-class of therapeutic substances is composed of *praeparata*, that is, substances which functioned in herbal practice as *simplicia* but whose preparation required human intervention. Herbal remedies have always depended upon vinegar, wine, olive oil, wheat flour, cheese, and the like. Not only did these *praeparata* possess therapeutic properties in their own right, they also commonly served as the basis or vehicle for *composita*, the fifth class of substances.

e) As the name indicates, *composita* are the result of compounding or mixing several *simplicia* and/or *praeparata* for therapeutic purposes. Some of the *composita* were simple mixtures of an herb with honey or vinegar, known probably to most rustics. Others, however, required the skill, experience and specialized equipment of an artisan, or later the apothecary, to prepare properly.

f) A last sub-class, finally, must be noted if only because of the attention it received from Pliny and others, viz. magical plants and other fabulous or imaginary substances, such as one finds in the *Physiologus* or some of the gems of early lapidaries. While it is possible that such *res magicae* rested ultimately on real, physical substances or were a conflation of several such substances, the form in which they appear in our texts does not always permit a positive identification. It must be borne in mind, however, that to some of these *fabulosa*, medicinal, as well as magical properties were attributed; moreover, they functioned in herbal medicine as if they were no different from, say, *verbena* (*Verbena officinalis* L.) or *vettonica* (*Stachys officinalis* <L.> Trev.), each a typical magiferous plant<sup>9</sup>.

## 2. COLLECTION, PREPARATION AND ADMINISTRATION

The second component of herbal practices is actually a tri-partite affair: Collecting the necessary substances, preparing them, and finally, administering them to the

9 Cf. Jerry Stannard, 'Magiferous Plants and Magic in Medieval Medical Botany', *Maryland Historian* 8 (1977) 33-46.

patient or to oneself. What unifies this process is the fact that normal domestic activities such as digging, cutting, grinding, boiling, straining and the like often alternate with magical and ritualistic practices, all of which, however, frequently were designed to subserve an eventual therapeutic purpose<sup>10</sup>.

This can be illustrated by considering the first stage of this process, viz. collection. On the one hand, collecting plants for a therapeutic purpose was no different from collecting them for alimentary purposes: Roots were dug from the earth, leaves stripped off the branchlets or seeds and fruit picked and placed in a suitable container. On the other hand, those very activities were often accompanied by various rituals, designed either to ensure or to increase the efficacy of the *medicamen* or to avert *veneficia* which came in many forms.

Collection rituals, as might be expected, also took many forms; *circa* forty are described, some in considerable detail, by Roman writers. But certain characteristics stand out: the time when the plant is to be collected (often determined by a lunar calendar); left or right hand is stipulated; the choice of implement is specified (iron tools are often prohibited), plus other ceremonial behavior, all of which must be scrupulously obeyed. Such a ritual is described by Pliny for the collection of *selago* (*Lycopodium* spp.). «It should be collected», he writes,

with the right hand, without the use of iron. The right hand must be put through the left hole of the tunic furtively. The collector should be dressed in white and his feet should be washed. Before collecting the plant, a sacrifice should be made of bread and wine. The plant is then placed in a new piece of cloth<sup>11</sup>.

After the desired substance has been collected, with or without rituals and *carmina*, some preparation may have been required prior to administration. Probably that did not always occur, for there are references to chewing

<sup>10</sup> For illustrations of these herbalistic activities, cf. Armand Delatte, *Herbarius*, 3<sup>e</sup> ed. (Bruxelles 1961).

<sup>11</sup> *NH* 24, 103. On this medical ritual, cf. Max Höfler, 'Die Verhüllung. Ein volksmedizinischer Heilritus', *Janus* 18 (1913) 104-8.

the roots or leaves of plants for toothache, headache and the like. But even there, dung or excess mud was shaken off prior to mastication. This preliminary cleaning, whether a routine matter or pardoned *praecationibus terrarum*<sup>12</sup>, was succeeded by further preparation if the substance was designed for internal use. But for external application, further preparation for amulets was minimal. The root of *malva* (*Malva rotundifolia* L. and *Althaea officinalis* L.), for example, simply carried on oneself prevented the bite of venomous beast<sup>13</sup> while an unspecified portion of *eryngium* (*Eryngium campestre* L.), attached to the body was thought to cure *albugo*<sup>14</sup>.

Amulets, like rituals took many forms and were employed for an equally wide range of complaints. Moreover, amulets were composed of plant, animal, or mineral substances<sup>15</sup>. Often the substance selected, whether suspended from the neck, tied about the arm or leg, or merely carried, served one or more specific therapeutic purposes. As one of several species of apotropaia, an amulet promised its owner comfort and/or safety. Among the most popular uses of apotropaic devices in general were those reputed to prevent the sting of a scorpion or to cure various minor complaints; they were also used in the case of certain diseases whose etiology was a philosophic puzzle, for example, epilepsy and scrofula<sup>16</sup>. If ready availability or cost was a problem in procuring an amulet, substitutes were possible just as they were for herbal remedies. Hence a twig or chaplet of laurel (*Laurus nobilis* L.) served many a need<sup>17</sup>. Equally as abundant was the fig tree (*Ficus carica* L.). A knot, bitten off unobserved, thence suspended

12 Cf. Charles Joret, 'Les incantations botaniques', *Romania* 17 (1888) 337-54. Though post-Augustan, they contain traces of much earlier beliefs, cf. Eduard Norden, 'Über zwei spätlateinische praecationes', in Th. Siebs, ed., *Festschrift zur Jahrhundertfeier der Universität Breslau* (Breslau 1911) pp. 517-24.

13 *NH* 20, 223.

14 *NH* 22, 22.

15 Cf. Giuseppe Bellucci, 'Amuleti italiani antichi e contemporanei', *Annali della Facoltà di Medicina e Chirurgia di Perugia* (ser. ii) 12 (1900) pp. 239-63.

16 *NH* 20, 192 (epilepsy); 23, 103; 26, 26 (scrofula).

17 For laurus as an apotropaion, cf. *NH* 15, 127, 133 ss.; *Martialis*, 10, 10, 1; *Juvenalis* 10, 65 and, in general, Ludwig Deubner, 'Die Bedeutung des Kranzes im klassischen Altertum', *Arch. f. Religionswiss.* 30 (1933) 70-104.

from the neck, was regarded as useful for swellings, a good example, incidentally, of *similia similibus curantur*<sup>18</sup>.

With the collection of a reputed therapeutic substance and its preparation, we have crossed the boundary between the collection and the administration of a *simplex*. But all the while the collecting and preparing were proceeding, another kind of *therapeusis* might be carried on simultaneously. This latter refers to the uttering of charms and spell, the *carmina* and *precationes* of which the Roman authors have left many reports<sup>19</sup>.

But it is again Pliny who is our chief source for incantamenta and the plants associated therewith. Among the best known is the *reseda* charm, perhaps a survival of pre-Roman folk medicine<sup>20</sup>. Numerous other examples also occur which the disease to be cured, the plant to be used, and the magical mechanism are all made explicit<sup>21</sup>.

Although these *vanitates magicae*, as Pliny sometimes terms them, are interesting, it must not be forgotten that much medical care probably was less dramatic. For, after all, many medicaments were prepared and administered in a straightforward manner. In this respect they differed little from the techniques associated with the preparation of foods and beverages. Consequently, our texts contain many references to procedures that are commonly identified with kitchen technology. *Medicamenta*, in all senses of the term, were, like many foods, prepared by boiling in an earthenware vessel, usually in a vinous, aqueous or acetic base. Unguents and salves were thickened with *axungia* while to provide the proper consistency for a plaster, a mixture of herbs was combined with honey and meal.

The close connection between medicaments and foods was of great importance to the *herbarius* and to the *medicus* alike. For not only did they prohibit the ingestion

18 NH 23, 125; cf. also 23, 130: «medullam ipsam adalligatam ante solis ortum prohibere strumas».

19 Cf. Georgius Appel, *De Romanorum Precationibus* (Giessen 1909) (Religionsgeschichtl. Versuche u. Vorarbeiten, VII/2).

20 NH 27, 131. Cf. W. H. S. Jones, 'Ancient Roman Folk Medicine', *Journ. Hist. Med.* 12 (1957) 471-72.

21 Cf. Ricardus Heim, 'Incantamenta Magica Graeca Latina', *Neue Jahrbücher f. Philol.*, Supplmbd. XIX/2 (1893) 465-576.

of certain foods, they also recommended that, for therapeutic purposes, certain foods be eaten<sup>22</sup>. Fruits, vegetables, nuts, dairy products, bread and wine were as much a part of the herbalist's armamentarium as they were of the cook or housewife<sup>23</sup>. Pliny was so enthusiastic over the therapeutic potential of wine that he stated that the uses of wine were exceeded only by the power of the gods<sup>24</sup>.

### 3. PURPOSES

Since the remote beginnings of herbal medicine, its primary aim has remained the same: The restoration of health and well-being. But, it was not always easy to accomplish that goal. In Roman times as in modern folk medicine, a wide range of complaints faced the healer. This included not only the cure of specific diseases, for example, gout, jaundice and dropsy, but symptom complexes, wound repair, numerous minor inconveniences and finally a set of psychosomatic states whose appropriate therapy is still a controversial issue.

But the strictly therapeutic uses of herbal remedies—the leaves of blackberry (*Rubus fruticosus* L.) chewed for sores in the mouth<sup>25</sup> or the *liquidum cum plasmate*, mentioned by Persius for a sore throat<sup>26</sup>—were not the only function of the *herbarius*. He was also consulted in matters of personal hygiene, for example, in ridding the body of lice or scabies<sup>27</sup>. Presumably he was also consulted in order to prevent sickness and disease. Much more com-

22 For example of alimentary plants with medicinal properties, cf. *NH* 20, 67 (lactuca); 20, 85 ss. (brassica); 20, 260 (ferula), etc. Even Apicius, *De re coquinaria* includes the medicinal properties of urtica, II, 17, p. 21; 1-2 edd. Giarratano et Vollmer (Leipzig 1922).

23 A good example is provided by *garum*, as much a medicamen as a *salsamentum*, cf. Claude Jardin, 'Garum et sauces de poisson de l'antiquité', *Rivista di Studi Liguri* 27 (1961) 70-96.

24 *NH* 23, 38.

25 *NH* 24, 118.

26 Persius, *Sat.* 1, 17.

27 On remedies for an infestation of lice, phthiriasis, cf. *NH* 20, 53; 25, 61; 26, 138. On remedies for scabies, cf. Columella, *Rei Rusticae*, 6, 13, 1; 6, 31, 2. That recipes for domestic animals can also be used by humans, cf. Celsus, *De medicina*, 5, 28, 16 C. For scabies as a common social disease, cf. Martialis 5, 60, 11; 6, 37, and Horatius, *Ars Poetica*, 453.



mon, judging from the frequency of references to *cosmetica* was the use of *simplicia* for those complaints which, though not lethal, were unattractive or disfiguring. Recipes for the teeth<sup>28</sup> and sweetening the breath<sup>29</sup> alternate with those for various skin complaints: *lentigo*, *impetigo*, *lichen*, *mentagra*, *lepra* and the like<sup>30</sup> —some of which made use of both herbal medicine and herbal magic. And finally, the herbalist, in addition to attending sick animals<sup>31</sup>, may also have been a practitioner of magic in the darker sense. Canidia, for example, was probably not unique and her skills, whatever may have been their outcome, were essentially those of the herbalist turned to antitherapeutic ends<sup>32</sup>.

#### 4. RATIONALE

The last component of herbalism to be considered, viz. its rationale, is in some respects the most difficult. Whatever value herbal medicine may have today, it is based on an understanding of the chemical properties of the substances employed and their physiological action upon the human body. That kind of explanation, obviously, was not possible in classical antiquity. On the other hand, some

28 Judging from references in the poets, discolored, rotten and loose teeth were not uncommon and hence led to toothache (cf. Martialius 1, 19; 5, 28; 6, 74; Horatius, *Od.* 4, 13, 10-11). Thus, there were natural remedies for toothache: *milifolium* (Pliny 24, 152), *plantago* (25, 165), *allium* (20, 53) but also amulets, for example, 28, 178.

29 Various aromatic plants are naturally recommended by Pliny as breath-sweeteners, for example, *anisum* (20, 186) and *myrtus* (25, 175). *Cinis hordei* recommended both as a breath-sweetener and as a *dentifricium* (22, 134); this recipe is similar to Scribonius' use of *farinae hordeaceae*, *Compositiones* 59 (ed. Helmreich, Leipzig 1887, p. 26). Pliny even cites the Magi for a compound *dentifricium*, 30, 27.

30 Magical remedies for dermatological complaints are rare, but cf. Plin. 27, 100, an *incantamentum* for impetigo.

31 The paterfamilias, who functioned as a herbalist domestically, was responsible for remedies for sick animals, cf. Cato, *De agricultura*, 70, 83; also cf. 139, 141 for other examples in which ritual and magic are put to use in agrarian context. Pliny notes that that domestic ass can be used as a transferandum in case of scorpion sting, 28, 155.

32 The attribution to Canidia, *carminibus atque venenis* (Hor., *Sat.* 1, 8, 19), can be paralleled by other references to *veneficia et herbae*: Plin. 25, 10; 37, 124; Ovidius, *Remed. Amat.* 290; Seneca, *Epist.* 9, 6; Virgilius, *Aen.* 4, 514, etc., all of which indicate the pervasiveness of herbal medico-magic. Since a separate study on this subject will soon appear, further citations are unnecessary, but, cf. E. Riess, 'Zu den Canidiagedichten des Horatius', *Rhein. Museum* 48 (1893) 308, 310.

herbal remedies did, in fact, provide a modicum of relief: *anisum* (*Pimpinella anisum* L.) for flatulence or *petroselinum* (*Petroselinum crispum* (Mill.) Nym.) as a diuretic. Thus, there was a recognition of drug action and attempts were made to explain it<sup>33</sup>.

Those explanations took many forms, only a few of which can be mentioned here. A particularly good example is provided by the belief in sympathia<sup>34</sup>. If one accepts such a belief as a premise, then it follows that a plant exuding a milky latex would serve as a galactagogue<sup>35</sup> or that some naturally-occurring red substance would be of benefit in those pathological conditions characterized by redness; for example, the leaves of sumach (*Rhus coriaria* L.) for jaundice, erysipelas and even blood-shot eyes<sup>36</sup>. After all, if cutting an onion promotes tears, and if those tears wash out a foreign object, thereby providing relief, a rationale is established for onion as an eye medicine<sup>37</sup>.

In conclusion, permit me to note other characteristics of herbal medicine not mentioned above. Classical texts provide a fragmentary account of what was a craft or *techné*, portions of which were familiar to everyone. The knowledge which the herbalistic crafts entailed was disseminated widely, from emperors and consuls down to the nameless rustic who put warm olive oil in his ear to ease the pain of ear ache.

Certainly a part of the success of herbal medicine was that it provided medical care to those who would

33 The necessity of knowing the effects of medicinal plants thus underlies Horat., *Epist.* 2, 1, 114-15: «abrotonum aegro / non audet nisi qui didicit dare». Cf. also Plin., 19, 189.

34 Cf. *NH* 37, 59; 28, 147. Elsewhere Pliny uses the expression «concordia rerum aut discordia», 24, 1; 29, 61. For Pliny's role in the development of the doctrine of sympathetic magic, cf. Theodor Weidlich, *Die Sympathie in der antiken Literatur* (Stuttgart 1894) p. 47 ss.

35 For examples, see Jerry Stannard, 'The Multiple Uses of Dill (*Anethum graveolens* L.) in Medieval Medicine', in *Gelerter der Arzenie, ouch Apoteker, Festschrift zum 70. Geburtstag von Willem F. Daems*, Hrsg. v. Gundolf Keil (Pattensen 1983) pp. 411-24.

36 *NH* 24, 94. For similar reasons, the latex of lactuca, «cum lacte mulierum sanat argema», etc., 20, 61.

37 *NH* 20, 40. The use of onion juice, in place of the more expensive exotica, especially in collyria, bears out Pliny's remarks about using garden plants as medicines, 24, 5. For the exotica incorporated in collyria, cf. C. L. Grotefend, 'Drei und siebenzig Stempel Römischer Augenärzte', *Philologus* 13 (1858) 122-64.

not or could not consult a *medicus*. But it is also likely that for many complaints herbal remedies were as effective as the prescriptions of the physician, less painful than those of the *chirurgus* and usually, provided the stipulated ingredients could be obtained locally, considerably less expensive.

Herbal medicine, however, was not just a pot pourri of superstitions and rituals held together by a belief in the healing power of nature. As a craft, herbalism possessed rules; there was a written literature, and descriptions and illustrations of medicinal plants and other substances were available to the literate public<sup>38</sup>. At least one garden was devoted to growing medicinal plants<sup>39</sup> while a standardized Graeco-Latin botanical nomenclature was taking shape<sup>40</sup>. Moreover, tests had been devised to detect adulterated and fraudulent merchandise sold in Roman markets. Both herbal medicine and herbal magic enjoyed imperial patronage, for Suetonius reports, unfortunately with no details, that Titus attempted to control an epidemic by means of medical remedies and sacrifice<sup>41</sup>. And finally, because of the close connection between plant species as foodstuffs, *salsamenta*, and medicine—and given a countryside where they could be collected—the same plant substances were collected and prepared by many different *experti*: cooks, dyers, garland makers, shepherds, professional poisoners and, of course, the *rustici* whose praises were sung of every Roman poet. It was the latter, perhaps as much as the *literati* such as Pliny, Varro, Columella, Gargilius, Scribonius *et alios*, who kept alive the herbalistic traditions in face of the more sophisticated, philosophic brand of Greek medicine *en vogue* in the urban centers<sup>42</sup>.

38 On contemporary herbals, cf. *NH* 25, 8; 24, 150; 26, 51.

39 *NH* 25, 9. For the plans of different kinds of gardens, cf. Pierre Grimal, *Les Jardins Romains*, 2<sup>e</sup> ed. (Paris 1969).

40 Pliny was a keen student of plant names and recorded many new names and synonymies, cf. 23, 166 (from Castor's herbal), in general, cf. Jerry Stannard, 'Pliny and Roman Botany', *Isis* 56 (1965) 420-425 and especially Jacques André, 'Pline l'Ancien Botaniste', *Rev. Et. Lat.* 33 (1955) pp. 297-318.

41 Suetonius, *De vita Caesarum, Titus* 8.

42 Cf. Umberto Capitani, 'Celso, Scribonio Largo, Plinio il Vecchio e il loro atteggiamento nei confronti della medicina popolare', *Maia* 24 (1972) pp. 120-40.

The corpus of recipes and *secreta* that has survived, especially when supplemented, on the one hand, by herbals and, on the other hand, by analogous practices in later and in extra-Roman folk medicine, provides sufficient data to reconstruct the main outlines of Roman herbalism. It is obvious, of course, that much more remains to be said but, in the end, the medicinal plants and the herbal remedies did provide *plurimis vitae operibus* <sup>43</sup>.

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43 *NH* 16, 42.