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## GALEN

*On the Properties of Foodstuffs*

This book presents a translation of and detailed commentary on Galen's *De alimentorum facultatibus*, his major work on the dynamics and kinetics of various foods. It is thus primarily a physiological treatise rather than a *materia medica* or a work on pathology. Galen commences with a short section on the epistemology of medicine, with a discussion on the attainment, through *apodeixis*, or demonstration, of scientific truth – a discussion which reveals the Aristotelian roots of his thinking. The text then covers a wide range of foods, both common and exotic. Some, such as cereals, legumes, dairy products and the grape, receive an emphasis that reflects their importance at the time; others are treated more cursorily. Dr Powell, a retired physician, discusses Galen's terminology and the background to his views on physiology and pathology in his introduction, while John Wilkins's foreword concentrates on the structural and cultural aspects of the work.

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GALEN  
*On the Properties of Foodstuffs*  
(*De alimentorum facultatibus*)

INTRODUCTION, TRANSLATION AND COMMENTARY BY

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WITH A FOREWORD BY

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*To the memory of my parents*  
*Herman Powell (1889–1964)*  
*and*  
*Mary Powell née Eaton (1891–1974)*

ὀφείλοντα γὰρ ἀποδοτέον, οὐθὲν δὲ ποιήσας ἄξιον τῶν  
ὑπηργμένων δέδρακεν, ὥστ' αἰεὶ ὀφείλει. *Arist. EN 1163b20–1*

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## *Foreword*

*John Wilkins*

Owen Powell is the latest in a long line of scholarly doctors who have interpreted the works of Galen for later practitioners and readers. Oribasius in the fourth century and Kühn in the nineteenth are two of the most famous, but behind these two lie many others who commented upon, translated or commissioned treatises or excerpts that still, in some cases, survive as manuscripts and printed books. All these doctors continue the work that Galen himself set in place as he tried to make the texts of the Hippocratic and Hellenistic doctors work for his own time. Powell in his introduction and commentary describes clearly the physiology of Galen's digestive system, and how that system compares with human digestion as now understood by medical science. Galen does not explain his system in full in this treatise, but refers to it in the introductory chapter and at various later points. It is a feature of the work to define its terms of reference and direct the reader elsewhere if an item falls outside those guidelines. I return below to navigational aids provided by Galen in his text. The purpose of this foreword is to complement Powell's introduction by exploring some points that he makes only in passing. The two major areas I aim to address concern the social and cultural world in which Galen was writing and the methods he used in attempting to collect and classify foods in the treatise.

The work is divided into three books: the first contains cereals and pulses, the second other plants and the third animals and fish. The largest number of items is to be found in the plant book. How did Galen decide on his order and what to include and what to leave out? 'Value' (something *chrēsimos*, literally 'useful', is the term Galen uses) appears to be the main criterion. Dietetics as a whole is declared the most valuable form of medicine (K. 453), and wheat the most valuable (that is, widely used) food (K. 480). At the beginning of the second book (K. 555), Galen explains that some authors move on from cereals and pulses to consider meat from animals, birds and fish, placing other plants last, since they are

the least valuable nutritionally. One of those authors was the Hippocratic author of *Regimen II*, on which more below. Galen elects to differ, and has plants follow the seeded plants of cereals and legumes.

It is not always clear what belongs where. There is a revealing chapter near the beginning of book III (K. 669–70):

**On the snail.** It is quite clear that we should count this animal among neither the winged nor the aquatic creatures. But if we do not include it among terrestrial animals either, we shall be saying absolutely nothing about the food from it. Nor again is it sensible to ignore it as we ignore woodworms, vipers and other reptiles that they eat in Egypt and some other countries. For none of those people will read this, and we ourselves would never eat any of what to them are foods. But all Greeks eat snails on a daily basis . . .

The comment on snail consumption is only part of the interesting content of this passage. In trying to find a place for the anomalous snail, Galen reviews other creatures which do not come into consideration at all, namely woodworms and reptiles. This treatise is no more a work of zoology than of botany, so Galen does not explore the classification of the snail any further. He might have cited a zoological source, just as he resorts to a botanical source, Theophrastus, for problematic plants in K. 516 and elsewhere. For Galen, though, in this treatise, the key question is not biological but cultural, in two senses: do we eat this? Who are ‘we’, the community of writer and readers? Woodworms and vipers are beyond the pale, since they belong to another culture, namely Egypt, whose people, apparently, will not be reading Galen’s book. There is no sharing of cultural practice, whether of food or of text, with these Egyptians. Galen has other problematic cases for the received diet in the world of the eastern Roman Empire in the second century AD. Again, these help to shape his terms of reference. At K. 615 we read:

**On carobs.** Carobs [*keratia*], which have the third syllable spoken and written with the letter *tau*, are nothing like cherries [*kerasia*], with the letter *sigma*. They are a food that is unwholesome and woody, and necessarily difficult to concoct for nothing woody is easy. But the fact that they also are not excreted quickly is a considerable defect with them. So that it would be better for us not even to import them from the eastern regions where they are produced.

Carobs are a bad food, not to be recommended by the doctor; but, because people do eat them, they are included. The comment on the spelling of the term I address below. A third example will complete the picture (K. 664):

However, some people also eat the flesh of very old donkeys, which is most unwholesome, very difficult to concoct, bad for the stomach, and, still more, is distasteful as food, like horse and camel meat; which latter meats men who are asinine and camel-like in body and soul also eat!

Some people even eat bear meat, and that of lions and leopards, which is worse still, boiling it either once only, or twice. I have said earlier what twice-boiled is like.

As to dogs, what must I also say? That in some parts very many people eat young plump dogs . . .

These extraordinary foods, the carob, donkeys, camels, bears and dogs, define the limits of the civilized diet as far as Galen is concerned. These foods are eaten, but are all open to question. To eat old donkeys and camels betrays less than full human faculties. Bears, lions and leopards are so much wild animals that they need to pass through the civilizing process of cooking twice before they are suitable for human consumption. It is not quite clear who the dog-eaters are. Galen refers to certain *ethnê*, but where these tribes or peoples live and whether they are Greek-speaking is not made clear. The dog-eating peoples may be outside the Greek world altogether, like those Egyptians who eat woodworms. Galen is attempting to set boundaries, even though they cannot be clearly defined, since the Roman Empire included so many peoples and languages. Alexandria was largely civilized in its diet (K. 486, donkey- and camel-eating; K. 539, a young man on an uncooked vegetarian diet; K. 540, consumption of *lathyroi* (grass peas); K. 612, pistachios; K. 616, sycamore fruit; K. 617, *persea*-fruit), some other parts of Egypt apparently were not. Galen is not much interested in what might be termed excessively civilized, that is, luxurious foods, that had concerned Plato when he was discussing food and medicine (*Gorgias* 517a7–518c1). There is the odd puzzled comment, as on the livers of red mullets (K. 716), but there appears to be no objection to doctors and chefs pursuing similar interests (K. 638). Galen quotes twice from a *Symposium*, a medical work by his predecessor Herakleides of Tarentum, the important Empiricist, which also ranged more widely than a strict medical brief might suggest.

Galen's interests, surprisingly, turn out to focus on the reverse of the luxurious diet, namely the food of half-starved peasants. At K. 685–6, on milk, he turns his attention to wet nurses:

For unwholesome milk is so far from producing healthy humour that even when people with healthy humour use it, it makes them full of unhealthy humour. Indeed, in an infant, when the first nurse had died, and another who was full of



unhealthy humour was providing the milk for him, his whole body was obviously infected with numerous ulcers. When famine had taken hold in the spring, the second nurse had lived on wild herbs in the field. So she and some others in the same country who had lived in the same way were filled with such ulcers. We observed this in many other women who were nursing children at that time.

Galen rarely addresses gender-specific dietary questions in this treatise. When it comes to working people, however, he has much to say. These wet nurses, like many of the poor in Mediterranean countries, often faced food shortages in the spring. (Galen comments on the phenomenon also at the beginning of his treatise *On Good and Bad Humour*.) In this season, the economically vulnerable also ate tare and vetch, which the farmers normally stored as cattle food (K. 551). The same went for oats (K. 523) which 'is food for draught animals, not for men, unless perhaps at some time when, being at the extreme of hunger, they are forced to make bread from this grain'. These are not foods that are *chrêsimoi*, 'valuable' or 'useful', at least for nutrition. They may, however, have other uses, as Galen observes of another bad seed (K. 546)

**On bitter vetch.** With ourselves and many other countries [*ethnê*], cattle eat bitter vetch which has first been sweetened with water, but people absolutely avoid this seed; for it is distasteful and produces unhealthy humour. But sometimes in a severe famine, as Hippocrates wrote, from force of necessity they come to it. We ourselves use bitter vetch with honey as a drug...

It can cut through thick humours, and so can have a pharmacological benefit, as can also the nutritionally poor caper (K. 615). One reason, then, for the inclusion of these plants is that the treatise shares an interest in the pharmacological powers of plants with Galen's extensive treatise *On the Mixtures and Powers of Simple Drugs*. A comparison between the two is instructive. Another reason for including these unpleasant seeds normally used for cattle food is that they help to define a further boundary for the human diet in the Graeco-Roman world. Like the dog and the bear, these foods are not normally eaten; in this case, only under dire duress. This idea is supported by Galen's term for the seeded plants, the plants of Demeter. These are the plants of life, supplied by the great corn goddess who oversees Greek culture and agriculture. Demeter presides over the cereals of cultivation. Galen is happy to include wild plants in his list in book II, but some of these are harmful, as the wet-nurses revealed; others turn out to be marginal, for example the extremely astringent nightshade (K. 635) and curled dock (K. 635), which no one would eat except pregnant women and curious children in country areas. Here,

Galen's approach is inclusive of all classes of citizen and the full range of the diet (compare the assessment of Garnsey (1999) 36–41). Only, in a secondary sense, he is using these peasants as a kind of guinea pig for the elite to discover what the human frame can stand, as my colleague David Braund once suggested to me.

Broad cultural concerns bring us to the second point. In discussing a further unpleasant plant, *arakoi*, or wild chickling, Galen observes (K. 541),

We find that the final syllable of the name of *arakos* is written with a *kappa* in *The Merchant Ships* of Aristophanes, where he speaks of 'wild chickling, wheats, ptisane, emmer, darnel and *semidalis*'. The seed is very like the seed of the grasspea, and indeed some think they are of the same family. In fact its every use and property are close to those of grasspea, except to the extent that it is harder and more difficult to cook; and consequently it is more difficult to concoct than grasspea is. People in our region call the wild one that is spherical, hard, smaller than bitter vetch, and found among cereals, *arachos*, pronouncing the final syllable with a *chi* and not a *kappa*; and they pick it out and throw it away as they do axeweed.

Many of Galen's forays among the country people who lived around Pergamum were undertaken for the purpose of autopsy, that is, personal observation and verification. He went to inspect the plants with his own eyes, for a double purpose: to see how the plants were eaten by country people and how they named and commented upon them. Dioscorides in the preface of his *De materia medica* had emphasized the importance of looking with your own eyes at the way plants and other drugs changed according to season, location and other factors. For Galen, such autopsy complemented his own research. He could observe medical phenomena, such as the effects of a vegetarian diet (K. 539) or vomit after eating certain mushrooms (K. 656); but much research came from reading. The importance of books and his own library is made clear in, among other places, his treatise *My Own Books*. The present entry on *arakoi* is remarkably scholarly. Galen begins with the spelling of the last syllable and justifies his spelling with a quotation from a lost play of Aristophanes. What has such a sentence to do with medicine? The problem concerns correct identification of the plant, which in different forms is spelt in different ways. Correct identification *is* a medical matter, for error may lead to a plant with the wrong powers being administered to the patient. Compare the entry on carobs above, where the confusion rests clearly in the sound of the word, not in botany. The plant is similar to the grasspea (*lathyroi*), we are told, while some claim it is a variant or at least of a related

species (*genos*). In practice it is like the grasspea but worse, particularly for the digestion. There is thus some difficulty with identification, which may lead to error. There is also a wild variety, but this is spelt differently and is apparently discarded, 'like axeweed'. This wild variety grows 'in our region'. As often, Galen uses the testimony of Pergamum and its hinterland, which was part of Mysia.

A number of things need to be said about Galen exercising his autopsies principally in Asia Minor rather than in Greece or Italy. There is some autopsy from Italy, particularly on the variation in pollution of the Tiber and its tributaries (K. 722), but Asia Minor and the East are much more important. The country people in his area provide the evidence for, among other things, wheat and milk mixtures (K. 495), what wheat porridge does to the stomach (K. 499), and the effects of chickpeas (K. 533) and grasspeas (K. 540). Evidence comes too from Alexandria (see above), Syria, Bithynia and Thrace. And the evidence, we should note, is not only physical and physiological. Galen notes the different spelling of *arachos* in his area. When he goes to Thrace to try to identify wheats, he learns of a cereal called *briza* (K. 514), and describes it and spells the local name. Terminology is as much a concern as botanical categories: the right name must be applied to the right plant.

Sometimes his research extends over many centuries of Greek thought. The names for *arakos* (K. 541) and for *zeia* (K. 522) are partly confirmed by Aristophanes and Homer respectively. In other words, in the search for the true term, a literary author can make a contribution as well as a technical author in a relevant field, such as Theophrastus or Dioscorides. Aristophanes is an interesting choice since his testimony is to the term in use in the Attic dialect in the fifth century B.C. We know from Galen's list in *My Own Books* that Galen had studied comedy. He had also written essays on political terms in Eupolis, Aristophanes and Cratinus as well as *Examples of words specific to the writers of comedy* and *Whether the texts of ancient comedy are a worthwhile part of the educational curriculum*. Comedy, then, for Galen was an educational cornerstone something like Homer. Nevertheless, Aristophanic usage brings him into the realm of the Atticists who insisted on pure Attic even in the second century A.D., and against whom, as Powell notes, Galen regularly fulminates. Examination of the places where the Atticists are referred to makes it clear that Galen's concern was a matter of clarity rather than of principle. They are often contrasted with medical needs or the more useful names used 'by us' in Pergamum and Mysia, by 'all Greeks' or by peasants: see K. 490, K. 585, K. 605, K. 606, K. 612 and K. 633. There are more neutral references at 1.12

and 2.41. The Atticists, according to Galen, simply got in the way of accurate identification and good medicine through the obfuscating effect of archaizing terminology.

It remains the case, however, that for Galen in this treatise, the Athenians are people with a dialect and not people with a diet that he wishes to examine. The treatise is not addressed to a great Roman patron, as are many of Galen's treatises. It draws little on Rome, but at the same time talks in broad and general terms. It is addressed to Greeks and what is current in Greek; this does not seem to be at the expense of a Roman audience. It seems that the great court doctor can address a problem as easily from his homeland in the Greek East as from metropolitan Rome. Nutton's comments (1991) on the contrast between the first part of *On the Therapeutic Method* (composed in Rome) and the second part (composed in Pergamum) are revealing in this respect.

When discussing *arakoi*, Galen noted that they were similar to grasspeas (*lathyroi*) (K. 541), the previous item in the treatise, which in turn are said to be similar to cowpeas and birds' peas (*phasêloi*, *ochroi*, K. 540). Galen orders his items by botanical relationship, placing similar with similar. This was the system of order in Dioscorides, as that author sets out in his preface. But this was not the only order that Galen had at his disposal. He could have followed an alphabetical order, as he does in the related treatise *On the Mixtures and Powers of Simple Drugs* (see Barnes (1997) 10–11). That he did not may suggest a more skilful clientele, who could find their way round the text and did not need the ready terms of reference afforded by alphabetical order. There are aids to navigating the text. First, there are references forward and back to tie in a point with something relevant said elsewhere. Then there are references to other works by Galen, in particular to the closely related *On the Mixtures and Powers of Simple Drugs*, *On Mixtures* and *On Hygiene*. The first two in particular set out some of the physiological background to which the reader may need to be referred. Then there is reference to predecessors. Galen's treatment of them is most interesting. Galen covers a number of these topics in an important passage in K. 457. He refers his reader to *Mixtures* for what they need to know about the 'mixtures' [*kraseis*] of humours in human beings and their foods and to *On the Mixtures and Powers of Simple Drugs* for various properties of foods. He then comes to the Hippocratic *Regimen II*, which was written, according to Joly, the Budé and CMG editor, in about 400 BC. Galen reviews the difficulties of this text. The authorship is disputed; the text of the beginning of the treatise is disputed; the texts with which it is bundled up are of varied quality. Galen gives the opinion that

*Regimen II* is worthy of Hippocrates (whether he wrote it or not); the whole discussion is a scholarly review of sources. Galen saw, as we can, that, whatever its authorship, this was a perfectly serviceable treatise which said broadly what he wanted to say in a very brief compass. What it says in nineteen Budé pages of Greek text Galen says in two hundred *CMG* pages. What was the need for this massive inflation? There are many things that Galen wishes to take into account. He does not contradict the Hippocratic text but often amplifies properties of foods to cover a wider range of needs, or to provide colour from his own observation. Foxes provide an example of the latter. *Regimen II* declares that ‘foxes have a moister flesh than hares and are diuretic’ (46.4). Galen writes, ‘amongst ourselves, hunters often eat the meat of foxes in the autumn, for they are being fattened by grapes’ (K. 665). Personal observation is not used here to contradict, but confirms and gives a location, the now familiar one of Pergamum and Mysia, ‘amongst ourselves’. Galen refers to the Hippocratic author elsewhere. It is notable, though, that later medical authorities are criticized for confusions and omissions in a way that the Hippocratic author is not. If the Hippocratic author omits an item, the fact is passed over less harshly (K. 511). *Regimen II*, however, is not the only Hippocratic text used. Galen refers in K. 743 to his commentary on *Regimen in Acute Diseases*, and, as we saw on bitter vetch (K. 546), he also refers to a passage in the *Epidemics*, one of the Hippocratic texts for which Galen produced a written commentary.

Diocles of Carystus and Mnesitheus of Athens are sometimes criticized for confusions and omissions but elsewhere they are referred to respectfully. Less so are Phylotimos and his teacher Praxagoras of Cos who are frequently censured. This links with the other main concern, difficulties of identification. Two cases in which this is evident concern the classification of fish and the identification of the beans known as *dolichoï*.

Galen has this to say on Phylotimos on fish with soft flesh (one of the categories of fish used by Aristotle and Diocles, among others, K. 720):

In the third book of *On Foodstuffs* Phylotimos wrote as follows about soft-fleshed fish, in these very words: ‘Gobies, wrasse, rainbow wrasse, perch, Murry eels, *kichlai*, *kottyphoi*, horse-mackerel and again, hake; and, as well as these, bonito, sole, *hepatoi*, *kitharoi*, maigre and the whole family of tender-fleshed fish are dealt with better in the stomach than all others.’ So it is worth wondering how he neglected the parrot wrasse, although they hold first place in the rock-fish family, all of which have flesh that is very soft and most friable when compared with other fish.

Clearly this is a problem of classification. Galen has various views on the strictness or otherwise that is required. He sometimes says that he is not concerned with detail but with the general principle, or it does not matter which term is used provided everyone understands it. A particular example occurs in K. 464:

It will make no difference whether we refer to things eaten as ‘eatables’ or as ‘nutriments’. In fact, so too do people call them ‘foodstuffs’ or ‘comestibles’ just as often as the former names, in the way that Hippocrates also wrote in the *Epidemics*: ‘Comestibles and drinks need trial as to whether they persist for the same time . . .’ And again elsewhere: ‘. . .labours, foods, drinks, sleep and sexual activity – all in moderation’. Now, as I always say, we should not concern ourselves with names [*onomata*], nor worry about which to use, since they are familiar to every Greek, but it is proper to strive to understand the matter.

At other times, he censures an Atticist or a wrong attribution, or a wrong *onoma*, as here. Jonathan Barnes (1997) has commented on this kind of inconsistency. We have to accept that Galen is looking for clarity, but at times gives a little leeway. Such licence is rarely accorded the unfortunate Phylotimos, who is censured again later in K. 720, 724 and in K. 727, 728, where he has failed to take account of the Roman *galaxias*, to which I return below. In K. 732, he and Praxagoras are found to be in error over physical processes rather than classification. Galen’s verdict on Phylotimos is damning, but not completely so.

Clarity is patently what is lacking in the case of *dolichoï* (K. 542). Here there is a confusion of both terminology and plant that is difficult to resolve. The terminology is particularly problematic:

The name *dolichos* was included in the writings of Diocles, together with the names of other seeds that nourish us, and also in the *On Regimen* of Hippocrates, which work I have already discussed. I think that they were speaking in this way about the seed of a cultivated plant which nowadays is referred to by most people in the plural, in two ways. For some call them *loboi* [pods] but others *phasêloi*, producing a word with four syllables and in this way making a name different from *phasêlos*, with its three. Some say that *phasêlos* [cowpea] is the same as *lathyros* [grasspea], but others say that it is a species of it.

Galen quotes Theophrastus in an attempt to identify the plant, and then refers again to the Hippocratic author and Diocles to establish where in the natural and medical order they place *dolichos/dolichoï*. Phylotimos and Praxagoras do not mention the plant at all. Galen presents the evidence and implicitly concurs with his quoted predecessors by placing *dolichoï* next after the members of the cowpea and grasspea families. He also adds

further material of his own, on storage, using as evidence the practice of his own father, and, characteristically, on a local variation: ‘One of my friends who lives in Rome used to say that in Caria, in his own city which is called Ceramos, *dolichoī* are planted in cultivated land like the rest of the legumes, and have a more elongated shape than grasspeas.’ In his attempt to be as clear as possible, Galen draws on the standard combination of the books in the library, both medical and botanical, and on the testimony of ‘most people’ and a report from his friend, who, like him, was a man of Asia Minor who spent some time in Rome. There is also the report of his father’s storage policy. He has again extended a passing reference in the Hippocratic text into a major item. He makes it his own with his autopsy and observation of local practice, as in the case of *briza* (K. 514). He extends over classes to a greater extent than we can detect elsewhere, and reports peasant names as readily as any other class’s terms.

Confusion over names continues with the telling case of *seris*, which Powell translates as ‘chicory’. Galen’s entry on these plants is quite brief. He says (K. 628): ‘I cannot say precisely whether the earlier Athenians gave the name chicory to what among the Romans are called endive, or to some other wild vegetable plants. Chicory has a property very much like lettuce, while being inferior to them in flavour and the other features previously mentioned concerning lettuce.’ Once again, Galen includes a wild plant of no apparent status, and the slight difficulty of identification between the old Attic name and the current term in Latin. He had in fact said more on *sereis* in his earlier treatise *On the Thinning Diet*, and appears not to wish to repeat that material, though we might at least have expected a cross-reference at this point. The version in *On the Thinning Diet* runs as follows:

There is another kind of ‘wild herb’ which is less cutting than those mentioned; this kind appears to belong between the two, having neither a definitely cutting nor a thickening effect. The general name for these is *seris*; but the individual species are given different names by rustics, such as lettuce, chicory, the Syrian *gngidia*, and the countless similar ones in every region. The Athenians use the term *seris* indiscriminately for all of them; for the ancients did not allot any names to the individual species. (trans. Singer)

In addition to noting a similar approach to problems of terminology in *On the Thinning Diet* to those we have seen in the present treatise, we might note, also, that once again rustics’ names for plants need to be taken into account. Terminology is not the sole preserve of scientists and

taxonomists, as far as Galen is concerned. The Roman perspective brings new complications, and, apparently, new refinements in taxonomy, presumably either because the plants were more widely used or because more varieties had been brought on since the fifth century B.C. Why did Galen not draw on Roman authors to assist with some of these problems? Pliny might have been of assistance on the identification of both *seris* and the problematic *zeia* of K. 511 (Pliny, *Natural History* xviii.19). Certainly, he, Celsus and Columella faced the difficulty of identifying Greek plants in Latin, for which see, for example, Celsus ii.18, 19, 33, Columella viii.14.2, André (1985) and Langslow (2000: 76–139). We might explain the absence of Latin authors in our treatise by supposing either that Galen believed that technical medical language should remain a Greek preserve or that he rejected these authors as insufficiently incisive technically, when compared with authors he does use, such as, for example, Theophrastus or Dioscorides. The latter is, however, only quoted once. It is certainly the case that Galen is more interested in Rome than in Athens or mainland Greece since he reviews food consumed at Rome (K. 507, K. 603, K. 637, K. 697, K. 727) and not merely Roman terms (K. 484, K. 628, K. 638). Other references to Rome are to Galen's Carian friend who resided there (K. 546), and to the polluted Tiber (K. 722). It is notable that, as the great metropolis, Rome is considered in these passages in terms of its language, environment, army and markets, and as a place to stay for a time; but for country life and reference to the practices and terminology of peasant farmers Galen draws exclusively on Mysia. He has no interest in Latin or the Roman idealization of the Italian countryside, so prevalent in Latin literature. That said, Italy is referred to (K. 524, K. 620, K. 650, K. 666), whereas mainland Greece is not, with the exception of a reference to the consumption of acorns in Arcadia when all the other Greeks were eating the grains of Demeter (K. 621).

Galen's relationship with the countryside may explain why he lists more plants as separate items with headings in book II than fish in book III. Many of the plants in the first two books are unpleasant to eat, as I remarked above. Galen seems to have included them not so much in order to achieve a full coverage of every plant imaginable but rather to link them with the related pharmacological work *On the Mixtures and Powers of Simple Drugs*, to which I referred. A plant may be 'useful' even if it tastes nasty and has negligible nutritional value. The plants may also have been more likely to be consumed by most people than the myriad varieties of fish. It may also be the case that Pergamum, like



Rome, traditionally identified itself with its surrounding farmland and did not see itself as a major centre for the consumption of fish. It was, after all, some 24 km from the sea. If Galen had wished to present the greatest list of foods that anyone had ever seen, then fish would have been a prominent element of that list, because of the many species and names of Mediterranean fish. But that is closer to the project of Galen's near-contemporary Athenaeus of Naucratis (*Deipnosophistae*, book VI) than to Galen's in this treatise. Pergamum is not mentioned in Athenaeus' list of fish and cities where fish were eaten. Unlike Athenaeus, however, Galen has no interest in cheap, small fish. For him, fish tend to be large and at the luxury end of the market, such as the *galaxias*, which he claims was so beloved of Roman gourmets. Galen claims to list the fish that 'men regularly eat' (K. 708). It is his usual claim about utility. But, in contrast with his treatment of cereals and other plants, this time 'men' appears not to include all classes.

What is Galen trying to do in this treatise? It seems, in the first instance, that he is writing a practical guide that includes all the foods that a physician is likely to come across in his patients or an interested amateur in his own diet. A patient is more likely to eat lettuce than a rare form of crayfish. We have seen from the example of the snail that Galen is interested in a coherent classification; but we have also seen that he does not try to include absolutely everything. The work is partly practical, identifying as clearly as possible a terminology and classification for the modern imperial world. Mnesitheus and Diocles were no longer sufficient. In addition they may have had a narrow geographical range, as does the author of *Regimen II*. Hippocratic authors have a large interest in geographical matters, as can be seen in *Airs, Waters and Places* and *Epidemics*, but this is less evident in *Regimen II*, in which place names give way to general geographical considerations. Galen covers the whole empire, as we have seen, from a Mediterranean perspective. He has almost no interest in mainland Greece and the islands; rather more in Rome and Italy; his terms of reference extend to Spain and Syria, Thrace and Alexandria, with the main evidential base set in Asia Minor, in Bithynia and the part of Mysia closest to Pergamum. He also covers the normal diet, with the limits of civilization being set. Lions and donkeys are preferably not eaten, nor are certain pulses except in times of famine. Extremes of poverty and foreignness thus define the foods of 'civilized' diet, which human beings can expect to eat without ill effect if they are in good health. The point of the travelling identified in Nutton (1995) and of the anecdotes that do not involve travelling is that Galen

is bringing to bear what van der Eijk (1997) has identified as ‘qualified experience’. He has seen the effect of wheat porridge on his own bowels; he has seen the student who ate no meat for four years; he is well aware that capers are not nourishing but are beneficial in other respects, whether as medicine or food. His theoretical approach enables him to judge correctly one piece of evidence against another, as in the case of the rock fish mentioned above. Foods are complicated and challenge neat classification. Above all, the human body depends on its humours and the ways in which they assimilate the juices of plants and animals. This is perhaps best seen in the case of the wet nurses. So a correct understanding of the complicated picture presented by observation is Galen’s key aim. Fieldwork complements research. With this method, Galen is also claiming authority and status. When placed beside his predecessors, he has gone to places they had not included, and he has spoken to classes of person not normally considered, such as the ditchers and harvesters of Mysia (K. 498). In addition, he has the command of Greek literature and thought from Homer, through Aristophanes to the Hellenistic period, that enables him to out-gun any critic who comes his way.

Powell notes some interest in the treatise in specific conditions that derive from bad or inappropriate diet. Sometimes this relates to morbidity among the poorer classes, but normally the concern is fairly specific: the focus is on thick and sticky foods, which damage the channels of the liver and kidneys. I note this since the area of concern is the same as that treated in his earlier treatise *On the Thinning Diet*. The item on milk in book III (K. 687) is a good example. It is not clear to me whether the dangers of thickening the humours far exceed those of thinning them (this would explain why Galen emphasizes what he has already treated in detail) or whether there is some other reason for not giving space to the dangers of excessive thinning of the humours, and the conditions that arise from that. Conditions derived from excessive thickening include arthritis, liver and kidney conditions, headaches and epilepsy. But now I trespass on the territory of Dr Powell.

## *Preface*

*Owen Powell*

The text of *On the Properties of Foodstuffs* upon which this translation is based is that edited by Georg Helmreich in 1923 for the *Corpus Medicorum Graecorum* series. As has now become conventional, the pagination of the much older edition of Karl (sometimes Carl) Gottlob Kühn is given in the margin. This has advantages both for greater precision in internal cross-referencing where this is needed, and for tying the commentary to the text. Items that receive mention in the commentary are identified by asterisks in the text.

The titles of all ancient sources are given in English. These, with the more traditional Latin titles, appear in a separate list of ancient sources. Throughout the translation and commentary, all Greek words and phrases are given in conventional transliteration. I have kept transliteration of terminology to a minimum but, given Galen's frequent discussion of alternative spellings (or names), some transliteration is necessary to make sense of his statements, as it is for the very few terms that resist satisfactory translation. In a few footnotes the Greek font is used where this seems likely to be helpful. All translated quotations from ancient sources are attributed to their translators, and where there is no such attribution the translation is my own.

Throughout the translation I have made use of both round and square brackets. The former enclose what I take to be in the nature of parenthetical remarks by Galen. The latter are used where Galen's statements need the actual Greek in order to be understood. These are generally matters to do with peculiarities of spelling, or with the etymological questions that were one of his particular interests.

Throughout the book several abbreviations recur:

- CMG    *Corpus Medicorum Graecorum* (Leipzig and Berlin, 1908–)  
 K.      Kühn, C. G., *Claudii Galeni opera omnia* (Leipzig, 1821–33; repr. Hildesheim, 1965)

- LSJ Liddell, H. G., Scott, R. and Jones, H. S., *A Greek–English Lexicon* (9th edn, Oxford, 1968)  
 OCD<sup>3</sup> Hornblower, S. and Spawforth, A. (eds.), *Oxford Classical Dictionary* (3rd edn, 1996)  
 SM Marquardt, J., Müller, I. and Helmreich, G. (eds.), *Claudii Galeni Pergameni scripta minora* (Leipzig, 1884–93; repr. Amsterdam, 1967)  
 SOED *Shorter Oxford English Dictionary* (3rd edn, revised 1969).

I am, of course, indebted to a number of people. Quite early in the exercise Dr John Vallance looked at a draft of the translation and the commentary on book 1. His comments re-directed me to a more thoughtful and rigorous approach. It was not to be as simple as I had thought. I am most grateful to him.

In dealing with a work of such diversity no one person can hope to be expert across the board. I am therefore grateful to Emeritus Professor Trevor Clifford for advice on botanical taxonomy and for pointing me to a modern definitive work on that subject; to my daughter Dr Judith Powell for the same attention to fish; and especially to Dr Hilton Deeth, Director of the Food Science and Technology Unit of the University of Queensland, for giving up time to discuss all manner of things to do with dairy products. It would also be remiss of me not to mention the help I received from the suggestions of the two anonymous readers of the Press. Without the careful attention of the copy-editor, Jan Chapman, whatever value this book has would have been greatly diminished. Jackie Warren, too, has handled its production (to say nothing of myself) with efficiency, patience and good humour. I thank them both.

In particular, I must thank Dr John Wilkins, of the University of Exeter, for agreeing to contribute a foreword that stands against a background of scholarship quite different from my own, but which greatly enhances whatever value this book has. Dr Michael Sharp of Cambridge University Press suggested this and for that, as well as other courtesies, I am most appreciative.

Above all I owe so much to my erstwhile supervisor and present friend, Michael Dyson of the Department of Classics and Ancient History at the University of Queensland. His influence throughout the translation may be hidden to others but I am very aware of it, and grateful for it, as I am also for his capacity for lateral thinking, which so often helped me to make sense of Galen's sometimes convoluted discussion.

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Nevertheless, with all that help so generously given, the responsibility for errors of omission or commission, or of interpretation, remains with me.

Finally, it is no mere formality to thank my daughters for their continued enthusiasm for the project, and my wife Glenda, who has supported and encouraged me from the outset – not, it must be admitted, in the expectation of a deathless work of classical scholarship, but rather because, as a geriatrician of long experience, she is a committed member of the ‘use it or lose it’ school of preventive geriatrics!

## *Acknowledgements*

*Owen Powell*

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