Classical Quarterly **50.1** 230–237 (2000) *Printed in Great Britain*

WHAT WAS *ULPICUM*?*

The Latin word *ulpicum* is attested thirty-one times.[1] The literary texts in which the term occurs range in date from the second century B.C. to the seventh century A.D. It denotes a plant used in antiquity both as a foodstuff and as an officinal substance in human and animal prescriptions, but discussions of *ulpicum* in the work of classical scholars show that there is no agreement about its identity. This lack of clarity consequently obfuscates the understanding of the passages in which reference is made to the plant. Furthermore, those students of ancient medicine, botany, and horticulture who depend on translations receive an inaccurate and even misleading impression of the original Latin sources.[2] I propose to demonstrate the present unsatisfactory state both of translations of the term and of efforts by classical scholars to identify the plant, then to review the data supplied by the ancient sources. Following this, I shall suggest that what Latin writers referred to as *ulpicum* is, in fact, the plant known to modern botanists as *Allium ampeloprasum* L., 'great-headed garlic'. Finally, I shall investigate its function in the Roman diet and pharmacopeia.

I

The valuable work of Jacques André, among others, has done much to expand our understanding of the botanical terms used by writers in Graeco-Roman antiquity and to assist in the identification of many plants mentioned in ancient texts.[3] In a useful discussion tracing the long history of progress in identifying plants, André alludes to some of the difficulties that prevent the successful application of modern Linnaean nomenclature to Greek and Latin phytonyms.[4] Some plants, for example,

* I wish to express my thanks to Brian Mathew of the Royal Botanical Gardens, Kew, Pat Lorber of the Bolus Herbarium at the University of Cape Town, and *CQ*'s referee for advice and helpful suggestions. Financial assistance provided by the Centre for Science Development (Human Sciences Research Council, South Africa) is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the Centre for Science Development.

[1] Pl. *Poen.* 1314; Cato, *Agr.* 70.1, 71; Col. 6.4.2, 10.113, 11.3.15, 11.3.16, 11.3.20, 21, 22; Plin. *N.H.* 19.112 (twice), 19.114; Garg. Mart. *Curae boum* 1, 3; *Med.* 39; Arnob. *Nat.* 2.59; Pallad. 2.14.5, 3.24.2, 4.9.5, 12.6, 13.3, 14.3.5, 14.4.2; *Mul. Chir.* 199, 204; Veg. *Mul.* 1.18; Isid. *Orig.* 17.10.14; Gloss. III 185.56, 430.47; *Not. Tir.* 104.47. I gratefully acknowledge the assistance given by Dr P. Flury of the Thesaurus Linguae Latinae in confirming these testimonies.

[2] For another example of errors of interpretation created and perpetuated by mistranslation of Latin terminology, see M. R. Mezzabotta, 'The meaning of *spica* in Cato *Agr.* 70,1', *Glotta* 70 (1992), 100–5.

[3] For example, J. André, 'Les noms latins de l'hellébore en latin', *REL* 32 (1954), 174–82; 'A propos des noms de la consoude', *RPh* 30 (1956), 62–7; 'Les noms grecs et latins de la momordique', *LEC* 24 (1956), 40–2; *Lexique des termes de botanique en Latin* (Paris, 1956), 'Confusions botaniques dans les textes des médecins et vétérinaires latins', *Latomus* 17 (1958), 488–92; commentary in the Budé editions of the botanical books of the *Naturalis Historia* of Pliny; 'Noms de plantes et noms d'animaux', *Latomus* 22 (1963), 649–63; *L'alimentation et la cuisine à Rome* (Paris, 1981); *Les noms de plantes dans la Rome antique* (Paris, 1985); 'Les érables de Pline l'ancien', *RPh* 68 (1993), 7–20. For recent discussions of botanical vocabulary by other scholars, see *Actes du colloque international 'Les phytomymes grecs et latins'* (Nice, 1993) and M.-Cl. Amouretti and G. Comet (edd.), *Des hommes et des plantes: Plantes méditerranées, vocabulaire et usage anciennes* (Aix-en-Provence, 1993).

[4] André, *Les noms de plantes* (n. 3), vii–xiv.

were too well known to an ancient author's readers to require verbal description. Moreover, even where a writer judged it necessary to record details of the appearance of a plant or its constituent parts, such descriptions are frequently deficient in terms of modern phytography. In these cases, the study of references to the plant in other texts, which may include comments on habitat, climate, and use, may point to a possible identification. Then there are additional problems that confront the investigator. For example, the likelihood that several Latin synonyms could denote the same plant complicates the issue further, as does the possibility of the generic application of a single Latin term to different species of plants.[5] Finally, since cultivated plants change over time, attempts to identify many plants named in classical texts with extant ones rest on unstable foundations. It is not surprising, therefore, to find dictionary definitions of the word *ulpicum* couched in vague and cautious terms. Riddle offers 'A kind of leek or garlic',[6] while Lewis and Short give 'a kind of leek' and the *OLD* has '[perh. Punic] A kind of garlic'.[7]

A perusal of renderings and comments by translators and editors of passages in which the word *ulpicum* occurs reveals a similar imprecision, illustrated by some translations and discussions of the term in Plautus, Cato, and Columella.

(i) In Pl. *Poen.* 1313–14, one character is vilified by another for being (among other things):

plenior/ ali ulpicique quam Romani remiges.

More stuffed/ with garlic and *ulpicum* than a bench of Roman oarsmen.

Nixon translates *ali ulpicique* as 'garlic and leeks',[8] Duckworth as 'onions and garlic',[9] while Ernout renders the phrase as 'd'ail et d'oignon'.[10] Maurach dismisses the suggestion of 'Zwiebel' as an unsatisfactory translation of *ulpicum* and, citing Cato, *Agr.* 71, Col. 11.3.20, and Plin. *N.H.* 19.112 and 114, states that the word refers to 'eine Art Knoblauch', of the Punic variety.[11] Most recently, Burroway's translation of the phrase as 'You reek of leeks like a row of Roman rowers!'[12] achieves pleasing rhyming effects but is semantically inaccurate.

(ii) Cato mentions *ulpicum* twice (*Agr.* 70.1 and 71), prescribing it as an ingredient in bovine veterinary treatments. Brehaut translates the word as 'bulbed leek' and 'leek', respectively,[13] and Hooper and Ash as 'leek'.[14] Thielscher offers '(Lauchart)' as a tentative gloss,[15] while Goujard retains the Latin term in the text of his translation into

[5] See E. de Sainte-Denis, 'Des vocabulaires techniques en latin', *Mémorial des études latines . . . offert à Jean Marouzeau* (Paris, 1943), 56–7.

[6] J. E. Riddle, *A Copious and Critical Latin–English Lexicon* (London, 1868), 1313, s.v. *ulpicum*.

[7] See also A. Walde and J. B. Hofmann, *Lateinisches etymologisches Wörterbuch*, vol. 2 (Heidelberg, 1954[3]), 112, s.v. *ulpicum*; A. Ernout and A. Meillet, *Dictionnaire étymologique de la langue latine* (Paris, 1932), 1078, s.v. *ulpicum*.

[8] P. Nixon, *Plautus*, vol. 4 (London and Cambridge, MA, 1932), 133.

[9] G. E. Duckworth, *The Complete Roman Drama*, vol. 1 (New York, 1942), 778.

[10] A. Ernout, *Plaute*, vol. 5 (Paris, 1938), 251.

[11] G. Maurach, *Plauti Poenulus* (Heidelberg, 1975), 382.

[12] J. Burroway, in D. R. Slavitt and P. Bovie (edd.), *Plautus, The Comedies*, vol. 3 (Baltimore and London, 1995), 87.

[13] E. Brehaut, *Cato the Censor on Farming* (New York, 1933), 87.

[14] W. D. Hooper, *Marcus Porcius Cato on Agriculture, Marcus Terentius Varro on Agriculture*, rev. H. B. Ash (London and New York, 1936), 79, 81.

[15] P. Thielscher, *Des Marcus Cato Belehrung über die Landwirtschaft* (Berlin, 1963), 99.

French, noting in the commentary that *ulpicum* is a kind of garlic.[16] The anonymous 'Virginia farmer' renders *caput ulpici* (*Agr.* 71) as 'the head of an onion'.[17]

(iii) Most translators of the seven examples of the word in Columella are inconsistent in their rendition. Forster and Heffner have 'leek' (Col. 6.4.2), 'leeks' (Col. 10.113), but also 'African garlic' (Col. 11.3.15, 16, 20, 21, 22).[18] Richter's German version likewise demonstrates imprecision and inconsistency, giving 'Lauch' (Col. 6.4.2, 10.113) but 'Schnittlauch', 'punische Lauch', 'punische Knoblauch', and *ulpicum* (twice) for the cluster of incidences in the eleventh book.[19] Ahrens, however, gives 'Ulpicum' for every occurrence.[20] De Sainte-Denis translates *ulpica* (Col. 10.113) as 'l'ulpique'.[21]

These translations and comments suffice to show that the comprehension of the term *ulpicum* is flawed. Translators of individual passages have not, in general, compared the other passages in which the word occurs to gain additional insight into its meaning. The most honourable course, in terms of scholarship, is taken by those who do not attempt to translate the term at all, thereby alerting the reader to the fact that the identity of the plant has not, for the translator/editor at least, been securely established. Those versions that offer 'onion' or 'leek' mislead the reader, since, as will be seen, *ulpicum* is neither, and create further grounds for misconception when they are taken over on trust and used as a basis for scholarly discussion.[22] An examination of the full range of testimonies is called for, to discover whether the sum of available data may enable a definite identification to be made.

In the majority of instances, and in all the examples with a horticultural context, *ulpicum* is mentioned together with *alium* (sometimes spelled *allium* or *aleum* in the Latin sources), which is common, cultivated garlic (referred to today by the botanical name *Allium sativum* L.),[23] but the ancient authorities clearly regard *ulpicum* and garlic as separate plants. Isidore states that *ulpicum* smells like garlic ('Ulpicum appellatum quod alii odorem habeat', *Orig.* 17.10.14). In almost all the testimonies the word occurs simply as an item in a therapeutic treatment or in a list of vegetables or herbs, but in two of these passages, the plant is described in some detail. The first is an extract from a lengthy passage in Columella treating garden vegetables and herbs that require special care:

Ulpicum, quod quidam alium Punicum vocant, Graeci autem ἀφρόσκορδον appellant, longe maioris est incrementi quam alium, idque circa Kalendas Octobres, antequam deponatur, ex

[16] R. Goujard, *Caton, De l'agriculture* (Paris, 1975), 59, 244.

[17] 'A Virginia farmer', *Roman Farm Management. The Treatises of Cato and Varro. Done into English with Notes of Modern Instances* (New York, 1913), 46. This translator did not include *Agr.* 70 in his selection.

[18] E. S. Forster and E. Heffner, *Lucius Junius Columella on Agriculture*, vol. 2; *Lucius Junius Columella on Agriculture and Trees*, vol. 3 (London and Cambridge, MA, 1955), ad loc.

[19] W. Richter, *Lucius Junius Moderatus Columella, Zwölf Bücher über Landwirtschaft*, 3 vols (Munich, 1981–3) ad loc.

[20] K. Ahrens, *Columella über Landwirtschaft* (Berlin, 1972), 197, 296, 329–30.

[21] E. de Sainte-Denis, *Columelle de l'Agriculture, Livre X* (Paris, 1969), 34.

[22] For example, W. H. S. Jones, 'Ancient Roman folk medicine', *JHM* 12 (1957), 463–4; J. Janiszewski, 'Veterinärmedizin Catos des Älteren', *Hist. Vet. Med.* 4 (1979), 43; J. H. Phillips, 'Cato on the prevention and treatment of animal disease', *Hist. Vet. Med.* 6 (1981), 58; W. Hausmann, 'Die Tierheilkunde bei Cato', *Tierärztliche Praxis* 13 (1985), 274, 279, but cf. the reservations of J. Scarborough, 'Roman medicine to Galen', *ANRW* 2.37.1 (1993), 16–17 and n. 48.

[23] André, *Les noms de plantes* (n. 3), 10.

uno capite in plura dividetur. habet enim velut alium plures cohaerentis spicas, eaeque cum sunt divisae, liratim seri debent, ut in pulvinis positae minus infestentur hiemis aquis.
(Col. 11.3.20)[24]

Ulpicum, which some people call Punic garlic, but which the Greeks call ἀφρόσκορδον, is of far greater growth than ordinary garlic, and around October 1st, before planting, it will be divided up from a single bulb into several parts. For, like garlic, it has several cloves which stick together and when these have been separated, they should be planted out along ridges, so that being placed in raised beds, they may suffer less disturbance from the winter rains.

The second passage is excerpted from the elder Pliny's account of different kinds of garlic and their distinctive features, which commences with a description of the bulb and then supplies instructions for the plant's propagation, cultivation, and storage:

Ulpicum quoque in hoc genere Graeci appellauere alium Cyprium, alii antiscordon, praecipue Africae celebratum inter pulmentaria ruris, grandius alio. Tritum in oleo et aceto mirum quantum increscit spuma. Quidam ulpicum et alium in plano seri uetant, castellatimque grumulis inponi distantibus inter se pedes ternos; inter grana digiti <IIII> interesse debent, simul atque tria foliae eruperint, sariri . . . (Plin. *N.H.* 19.112)[25]

Ulpicum also belongs in this category, called Cyprian garlic by the Greeks, *antiscordon* by others; especially in Africa it is famous among relishes used for flavouring rustic dishes; it is larger than garlic. Beaten up in olive oil and vinegar, it is amazing what an increase in volume and foam it produces. Some people instruct that *ulpicum* and garlic should not be planted in level soil, but in mounds of earth three feet away from each other, like a chain of forts; there should be a space the width of four fingers between the cloves, and as soon as three leaves have sprouted, they should be hoed . . .

Pliny's description draws on Theophrastus' presentation of the characteristics of different varieties of garlic and particularly on the passage quoted below:

καὶ τῷ μεγέθει γένος τι διάφορόν ἐστι, μάλιστα δὲ τὸ Κύπριον καλούμενον τοιοῦτον, ὅπερ οὐχ ἑψοῦσιν ἀλλὰ πρὸς τοὺς μυττωτοὺς χρῶνται, καὶ ἐν τῇ τρίψει θαυμαστὸν ποιεῖ τὸν ὄγκον ἐκπνευματούμενον. (Theophrastus, *H.P.* 7.4.11)[26]

And there is a variety which excels in size, especially the kind called Cyprian, which people do not cook but use for relishes, and when it is pounded up it foams up and produces an amazing increase in bulk.

From these reports and from the contents of the other testimonies,[27] it may be deduced that *ulpicum* is a kind of garlic: it is similar in appearance to ordinary garlic; it smells like garlic; it is propagated in the same manner as garlic (the cloves are planted in drills); and its cultivation is the same as that of ordinary garlic. However, though it shares these similarities with common garlic it is distinct from it, being bigger and having a different name; its synonyms (*alium Punicum*, ἀφρόσκορδον, *alium Cyprium*, *antiscordon*) suggest that the Romans regarded it as being of foreign origin.[28]

A search for reflexes in the Romance languages sheds little additional light on the identity of *ulpicum*. Meyer-Lübke gives a conjectural diminutive Latin form, *ulpiculum*, giving rise to early Italian *upiglio*, the last syllable being formed from the final

[24] Text cited from Richter (n. 19). *Alium* and *ulpicum* are discussed in Col. 11.3.20–3.

[25] Text cited from J. André (ed.), *Pline l'ancien. Histoire naturelle, Livre XIX* (Paris, 1964).

[26] Text cited from Wimmer's 1854 Teubner edition, printed in A. E. Hort, *Theophrastus, Enquiry into Plants* (London and New York, 1916).

[27] For example, Pallad. 12.6, which gives detailed instructions on the planting and cultivation of garlic and *ulpicum*.

[28] As noted by André, *Les noms de plantes* (n. 3), 275.

sound of Italian *aglio*.[29] D'Ovidio's excursus on *upiglio*[30] identifies it simply as a 'specie d'aglio' and states that the word exists only in a translation of the instances of *ulpicum* in Palladius.[31] D'Ovidio remarks both on the isolation of the parent term from any connection with other Latin words and on the absence of any record of an Italian word, obsolete or living, related to *upiglio*. Von Wartburg treats the medieval French word *ulpic* as a loan-word derived from *ulpicum* and explains it as 'ail sauvage'.[32] Both *upiglio* and *ulpic*, then, exist as loan-words employed as translations of *ulpicum* and have no living presence in modern Italian or French.[33]

III

Taken together, the various ancient testimonies appear to furnish sufficient details for an attempt to be made at a confident identification of *ulpicum* with one of the varieties of garlic known today, thus contributing to a fuller understanding of the passages in which the plant is mentioned. Although changes brought about in cultivated plants by selection and hybridization advise caution in attempting to match up plants named in classical texts with extant ones, there are no grounds for supposing that the various kinds of garlic have been subjected to the same extensive and intensive cultivation as, for example, apples, pears, or lettuce have been. It is, therefore, a reasonable assumption that they have not changed to any significant degree. So the next step is to see whether any kind of garlic known today fits the data obtained from the Latin sources.

The genus *Allium* comprises several hundreds of species and includes varieties of leek, onion, and garlic among the numerous alliaceous plants cultivated for culinary purposes.[34] The search for a variety of garlic whose essential features correspond with surviving descriptions of *ulpicum* reveals only one possible candidate, *Allium ampeloprasum* L., commonly referred to among English-speakers as 'great-headed garlic', or, less frequently, as 'Levant garlic'.[35] In the course of various discussions of the possible identity of *ulpicum*, André suggested both *Allium ampeloprasum* L. and *Allium scorodoprasum* L., before deciding in favour of the latter.[36] But the single

[29] W. Meyer-Lübke, *Romanisches etymologisches Wörterbuch* (Heidelberg, 1935), 752, no. 9037. F. Dietz, *Etymologisches Wörterbuch der romanischen Sprachen* (Bonn, 1887[5]), 408, cited by Meyer-Lübke, derives *upiglio* from *ulpicum*, *ulpiculum* and translates the term as 'Knoblauch'.

[30] F. D'Ovidio, *Archivio glottologico italiano*, vol. 13 (Torino, 1892–4), 423.

[31] See n. 1 above.

[32] W. von Wartburg, *Französisches etymologisches Wörterbuch*, vol. 14 (Basel, 1961), 7; cf. R. Cotgrave, *A Dictionary of the French and English Tongues* (London, 1611) [no page numbers], who glosses *ulpic* as 'Great, or wild Garlick'.

[33] I was unable to find any words related to *ulpicum* in Romance languages or dialects other than Italian and French.

[34] For information on the distribution, names, and classification of the genus, see W. T. Stearn, 'Notes on the genus *Allium* in the old world', *Herbertia* 11 (1944), 11–34; J. Helm, 'Die zu Würz- und Speisezwecken kultivierten Arten der Gattung *Allium* L.', *Die Kulturpflanze* 4 (1956), 130–80; J. W. Purseglove, *Tropical Crops. Monocotyledons* I (Essex, 1972), 37–57.

[35] See G. Bonnier, *Flore complète illustrée en couleurs, de France, Suisse et Belgique*, vol. 10 (Neuchatel, Paris, and Brussels, n.d.), 78 for vulgar names of *Allium ampeloprasum* L. in other languages. These include: 'ail à cheval', 'ail d'orient', 'ail faux-poireau' (French); 'Pferdelauch', 'Wildlauch' (German); 'porrandello' (Italian).

[36] In André, *Lexique de termes de botanique* (n. 3), 334, both species are suggested; in his 1964 commentary on Plin. *N.H.* 19.112, André preferred *Allium scorodoprasum* L., which he identified with rocambole; in *L'alimentation et la cuisine* (n. 3), 20, n. 69, *Allium ampeloprasum* L. is rejected; but in *Les noms de plantes* (n. 3), 275, André states only that *ulpicum* was a 'Variété d'Ail à grosse tête (*Allium sativum* L.), distinct d'*allium* dans Columelle et Palladius . . .'.

characteristic, as noted by the ancient writers, that distinguished *ulpicum* from ordinary garlic was its superior size. *Allium scorodoprasum* L. is therefore ruled out as it is too small to fit this criterion, leaving *Allium ampeloprasum* L., 'great-headed garlic', as the sole contender.[37]

Great-headed garlic is splendidly depicted by Pierre Joseph Redouté, the renowned botanical artist.[38] Under the heading 'Ail faux-poireau', the text facing the illustration of the plant supplies a full description,[39] from which the following salient observations are excerpted:

> La bulbe de cet Ail atteint, dans les individus cultivés, la grosseur du poing. Elle est arrondie, bosselée et formée comme celle de l'Ail ordinaire, d'un gran nombre de bulbes plus petites, ovales, oblongues, anguleuses, rassemblées autour d'un axe commun en un faisceau qu' enveloppent des tuniques lâches, membraneuses, blanchâtres. . . .
>
> L'Ail faux-Poireau est indigène du midi de l'Europe et de l'Orient. . . . On le cultive dans les jardins, soit comme plante d'ornament, soit surtout pour remplacer l'Ail vulgaire dont il a la saveur, et sur lequel il l'emporte par la grosseur de sa bulbe. . . .
>
> Quelques auteurs pensent que cet Ail n'est pas qu'une simple variété du Poireau ordinaire, dont il se rapproche beaucoup par le port. Il diffère de cette dernière espèce par sa bulbe beaucoup plus grosse, et divisée en un grand nombre de petites bulbes ovales, par ses feuilles nullement glauques et plus larges, du moins dans les individus cultivés, par son ombelle de fleurs moins sphérique. . . . L'odeur que les feuilles de ces deux plantes exhalent quand on les écrase est très différent.

Modern botanical descriptions yield the following information: *Allium ampeloprasum* L. has the appearance of a large, robust garlic plant; the bulbs are 3–9 cm in diameter, with numerous yellowish bulblets (cloves) encased in membranous outer tunics; it has 4–10 leaves, sheathing the lower one-third to half of the stem; the stem is 45–180 cm; the umbel is 5–9 cm, with up to 500 pinkish, mauvish flowers; distribution: Southern Europe, Caucasus area, Iran, Turkey, Northern Africa; it is spread by human activity. *Allium porrum* L., the cultivated leek, is a cultigen derived from the wild *Allium ampeloprasum* in remote antiquity and was already regarded as a separate species in Roman times.[40]

Actual specimens of *Allium ampeloprasum* exhibit all the characteristics mentioned by the ancient authorities and in Redouté's work. Cloves that I planted in Cape Town matured in the Mediterranean climate of the Cape and grew into plants of impressive size, with bulbs attaining the fist-like dimensions remarked upon in Redouté's publication and noted by Theophrastus, Columella, and Pliny. *Ulpicum*, therefore, may confidently be identified as *Allium ampeloprasum* L., great-headed garlic, and should be translated as such, or by one of its other popular names, in discussions and modern-language versions of the passages in which the plant is mentioned.[41]

[37] This identification has been confirmed by Brian Mathew, VMH, Principal Scientific Officer i/c Petaloid Monocotyledon Section, The Herbarium, Royal Botanical Gardens, Kew, UK (personal communication).

[38] P. J. Redouté, *Les liliacées*, vol. 7 (Paris 1813), t. 385.

[39] Written by A. Raffeneau Delile (Stearn [n. 34], 16).

[40] Culled and condensed from Purseglove (n. 34), 50–1; L. H. Bailey and E. Z. Bailey, (compilers), *Hortus third* (New York and London, 1976), 48; T. G. Tutin *et al.* (edd.), *Flora Europaea*, vol. 5 (Cambridge, 1980), 63–4, D. I. Mabberley, *The Plant Book* (Cambridge, 1987), 19; A. Huxley *et al.* (edd.), *The New Royal Horticultural Dictionary of Gardening*, vol. 1 (London and Basingstoke, 1992), 108.

[41] After reasoning that *ulpicum* should be identified with *Allium ampeloprasum* L., on the basis of comparisons of the ancient testimonies with modern botanical descriptions, I discovered that

IV

It has been speculated that the Latin name *ulpicum* is derived from Punic.[43] One of the plant's synonyms, *alium Punicum*, suggests that the Romans got to know of it through contacts with the Carthaginians. Its Greek synonyms, however, and its alternative nomenclature of *alium Cyprium* may indicate that the Romans were made aware of it from Greek quarters as well. Perhaps the introduction of *ulpicum* into Roman society provides another example of that culture's indebtedness to Greece and Carthage in matters relating to agriculture and to animal husbandry and health.

The alliaceous flavour of great-headed garlic made it a suitable complement to or substitute for ordinary garlic for culinary purposes, though the consumption of both tended to be restricted to rustics, provincials, and the lower orders of Roman society.[43] Upper-class cuisine avoided garlic, because of the taint that it imparts to the breath.[44] The chemical composition of great-headed garlic, similar to that of garlic, explains its use in medicinal remedies. These treatments are grounded in the tradition of Roman folk medicine, in which a curious blend of experience and magico-religious beliefs imbued herbs and other natural substances with curative powers. While later scientific advances have disproved many of the more extravagant claims made for various plants by the ancients, the therapeutic value of garlic has been firmly established by modern pharmacological research.[45] It contains several sulphur-based compounds, including allicin, which is bactericidal and disinfects the gastrointestinal tract. This and other chemical compounds present in garlic cause it to have antibiotic, antihelmintic, antithrombotic, febrifugal, and carminative properties. So Roman confidence in the protective and healing action of garlic is now known to be scientifically well founded, although in antiquity it may have depended, at least in part, on entirely unscientific assumptions derived from the plant's pungent odour. It may have been reasoned that if garlic-laden breath kept other humans at bay, garlic could also repel noxious animals and invisible diseases.[46] Pliny's comprehensive catalogue of the conditions cured by garlic, which include snakebite, bruises, retention of the placenta, asthma, dropsy, jaundice, colic, delirium, quinsy, toothache, hoarseness, coughs, headaches, tapeworms, sprains, skin disorders, epilepsy, insomnia, lack of libido, chicken pip, and

E. L. Sturtevant, 'History of garden vegetables: great-headed garlic. *Allium ampeloprasum* L.', *American Naturalist* 22 (1888), 427–8 had come to the same conclusion. Sturtevant, however, wrote as a botanist and as a horticultural historian and did not engage in a detailed examination of the Latin sources. It is a pity that Sturtevant's observations of over a century ago went unnoticed by classicists and so failed to be incorporated into their discussions of classical texts which mention *ulpicum*.

[42] Walde and Hofmann (n. 7), s.v. *ulpicum*; *OLD* s.v. *ulpicum*. But for what the information may be worth, the term is not listed in G. Nencioni, 'Innovazioni africane nel lessico latino', *SFIC* 16 (1939), 3–50.

[43] J. K. Evans, '*Plebs rustica*. The peasantry of classical Italy II', *AJAH* 5 (1980), 153, 158 supplies details of the composition and nutritional value of garlic, evidently a staple food of the Roman peasantry.

[44] For additional comments, see E. Gowers, *The Loaded Table* (Oxford, 1993), 289–92.

[45] See e.g. H. Flück and R. Jaspersen-Schib, *Medicinal Plants and their Uses* (London, 1976), 37; P. Schauenberg and F. Paris, *Guide to Medicinal Plants* (Guildford and London, 1977), 84; P. Simons, *Garlic. The Healing Herb* (Wellingborough, 1980), *passim*; R. Chiej, *The Macdonald Encyclopaedia of Medicinal Plants* (London and Sydney, 1984), 18; E. Block, 'Antithrombotic agent of garlic', in R. P. Steiner (ed.), *Folk Medicine: The Art and the Science* (Washington, DC, 1986), 125–37.

[46] Gowers (n. 44), 295–6.

strangury in animals (Plin. *N.H.* 20.50–7, cf. Diosc. 2.152, *Geop.* 12.30), demonstrates the high standing of garlic in the pharmacopoeia of the ancients.

It may be significant that in the eleven passages in which *ulpicum* is listed as a medicinal substance, it is specifically of veterinary application in ten of them.[47] Ordinary garlic, as has been noted, enjoyed a reputation for combating various afflictions of animals. It is possible that great-headed garlic, being larger, was felt to be even more efficacious. Some support for this proposition may be found in Cato's bovine remedies. In *Agr.* 70 and 71, three cloves of great-headed garlic and three of ordinary garlic are two of a total of twelve items prescribed (all in multiples of three units each) per head of healthy cattle, in a prophylactic treatment with magico-religious overtones. The mixture is to be divided into three doses and given to each animal once a day for three days. But *Agr.* 71 sets out instructions for medicating an animal that has already fallen ill: one whole, raw egg is to be administered immediately and, the following day, the animal must be dosed with an entire bulb of great-headed garlic, mashed up in a *hemina* of wine. As Thielscher has observed, this passage contains an abridged, improved version of the remedy given in the previous chapter, with the twelve substances of the first prescription reduced to two: great-headed garlic and wine.[48] Since wine was a common medium for administering such drenches, it appears that great-headed garlic was, in this remedy, considered as *the* active ingredient. The animal was evidently to be given a single, concentrated dose of a large amount of great-headed garlic (a whole bulb, rather than three cloves administered a clove at a time in three doses spread over three days), in the expectation of curing it. Belief in the power of great-headed garlic to protect against the dreaded scourge of *Morbus maleus* in equines is attested in *Mul. Chir.* 199 and 204 and, drawing on this source, in Veg. *Mul.* 1.18.[49] The surviving evidence suggests, therefore, that the therapeutic function of great-headed garlic came to be applied more to veterinary medicine than to the treatment of human ailments.

Because of the paucity of accompanying description and the likelihood of changes brought about subsequently by selective cultivation, many ancient plant-names will doubtless continue to baffle scholars and to resist identification. But in the case of *ulpicum*, however, it is clear that sufficient information has been provided by ancient writers to save it from being consigned to this category, and that it may confidently be identified with *Allium ampeloprasum* L., great-headed garlic. It is hoped that this identification will inform future translations and discussions of the texts in which the word occurs.

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[47] Cato, *Agr.* 70.1 and 71; Col. 6.4.2; Garg. Mart. *Curae boum* 1, 3; Pallad. 14.3.5, 14.4.2; *Mul. Chir.* 199, 204; Veg. *Mul.* 1.18. The eleventh example, Garg. Mart. *Med.* 39 ('Ulpicum indigestibile est. cum vino tritum potui datum calculosis prodest') does not exclude veterinary use (cf. *Mul. Chir.* 228; Veg. *Mul.* 1.46).

[48] Thielscher (n. 15), 278.

[49] Discussed and identified as glanders by K.-D. Fischer, '*Genera huius morbi maleos numero VII*: eine Infektionskrankheit (*Malleus*) und ihre Unterarten im Spiegel des antiken veterinärmedizinischen Schrifttums', in G. Sabbah (ed.), *Le latin médical*, Centre Jean-Palerne, Mémoires 10 (Sainte-Étienne, 1991), 351–66. See also J. N. Adams, *Pelagonius and Latin Veterinary Terminology in the Roman Empire* (Leiden, 1995), 41–2, 49, 141, 295–302, 665; and G. Viré, 'La description de la morve dans la *Mulomedicina Chironis* et dans la *Mulomedicina* de Végèce', in C. Deroux (ed.), *Maladie et maladies dans les textes latins antiques et médiévaux. Actes du V^e Colloque International 'Textes médicaux latins' (Bruxelles, 4–6 septembre 1995)* (Bruxelles, 1998), 260–75.