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Abbreviations

ADS Archaeology Data Service

ASPNS Anglo-Saxon Plant-Name Survey

BML British Medieval Latin

BSBI Botanical Society of the British Isles CGL Corpus Glossariorum Latinorum

CNo. Catalogue Number

COD Concise Oxford Dictionary

DMLBS Dictionary of Medieval Latin from British Sources

DOE Dictionary of Old English (Toronto)

DOEPN Dictionary of Old English Plant Names (online)
DOEWC Dictionary of Old English Web Corpus (online)

DOI Digital Object Identifier; Dictionary of the Irish Language Based Mainly

on Old and Middle Irish Materials

DOST Dictionary of the Older Scottish Tongue
DSL Dictionary of the Scots Language (online)

EDD English Dialect Dictionary

EPNE English Place-Name Elements (A. H. Smith)

Gk, Gr. Greek

HTOED Historical Thesaurus of the Oxford English Dictionary

IPA International Phonetic Alphabet LAE Linguistic Atlas of England

Lat Latin

MCOE Microfiche Concordance to Old English

ME Middle English

MED Middle English Dictionary
MHG Middle High German
MLG Middle Low German
ModE Modern English
ModIce Modern Icelandic
ModLG Modern Low German

ODEE Oxford Dictionary of English Etymology

OE Old English

OED Oxford English Dictionary

OF Old French

OHG Old High German

OI Old Irish
OIce Old Icelandic

OLD Oxford Latin Dictionary

ON Old Norse OS Old Saxon

PASE Prosopography of Anglo-Saxon England (online)

PIE Proto-Indo-European

PN W Place-Names of Wiltshire (J. E. B. Gover et al.)
PN Wo Place-Names of Worcestershire (A. Mawer et al.)

RCHM(E) Royal Commission on the Historical Monuments (of England)

TLL Thesaurus Linguae Latinae spp. species (botanical, singular) ssp. species (botanical, plural) TOE Thesaurus of Old English

VEPN Vocabulary of English Place-Names

Short Titles

Old English source texts may be indicated by short titles assigned by the *Dictionary of Old English* and *Microfiche Concordance to Old English*, which refer to specific editions of the texts. They occur particularly in the appendices, and examples include: Lch II (1); Med 3 (Grattan-Singer). The key to these references can be found at the DOE website under 'Research Tools' then 'List of Texts'. See http://www.doe.utoronto.ca.

Botanical Latin

Plant-names in botanical Latin aim to provide an international identification for a particular plant or group of plants. They are followed by abbreviations indicating the botanist who assigned and/or reassigned the name, and the most common abbreviation is 'L.' indicating 'Linnaeus', the famous Swedish botanist. Examples include: *Bellis perennis* L. (daisy); *Betula pendula* Roth. (silver birch).

Dates

Manuscript dates are often given in a form beginning 's.' (for *saeculo* 'in the century'). Some examples follow:

- s. xiⁱⁿ beginning of the 11th century
- s. xi¹ first half of the 11th century
- s. xi^{med} middle of the 11th century
- s. xi² second half of the 11th century
- s. xiex end of the 11th century

'Garlic and Sapphires in the Mud' 'Leeks' in their Early Folk Contexts

Tom Markey¹

1. Introduction

The so-called 'leek-inscriptions' in Germanic runes pose numerous unanswered questions, the most important of which are ethnobotanical in scope. As this is the only botanical term recorded in runic inscriptions, one immediately asks why leek-terms were uniquely tied to runes and, particularly, to inscriptions on bracteates that were presumably talismanic amulets, or on other luxury items for women, rather than, say, on rune-stones proper. Did the leek promise some particular magical power or medical benefit? Did it hold some particular saliency for women in early Germanic ethnobotanical tradition? If so, what was the nature and origin of that tradition? How widespread was it? Was it an exclusively Germanic tradition or one deeply embedded in Indo-European culture generally? If borrowed, then what was its source? How was the leek classified and appreciated in early Indo-European ethnobotany? Was it a native cultivar in Germanic Europe or an introduction? If an introduction, then what was its source?

To answer these and related questions we necessarily visit ethnobotanical archaeology, for our goal is historical, to uncover and/or reconstruct a substantial chapter in the ethnobotanical history of Europe. By seeking the ethnobotanical significance of Germanic *laukaz, the parent of leek, we enter a demanding interdisciplinary arena, one that bridges ethnobiology and historical linguistics. Given the essentially diachronic nature of our problem, we are fundamentally deprived of various avenues of inquiry open to those concerned with synchronic issues. Fieldwork is rarely an option. Quite simply, the historian of ethnobiology is compelled to reconstruct folk biology without immediate access to the 'folk'. Instead, he or she must proceed indirectly by 'interviewing' texts, archaeological artifacts and paleobotanical data. Even though infrequently applied to ethnobiological problems, our primary heuristic tools are necessarily those of comparative linguistics (see Friedrich 1970; Witkowski and Brown 1981, 1983; and Diebold 1985). We may find, however, that we must refine conventional tools or even develop new approaches, a tack suggested here in our analysis of ethnobiological

¹ The title quotation is from T. S. Eliot, *Burnt Norton* (Part II, line 1).

Bracteates are coins or ornaments of thin metal, often found with a suspension loop so, presumably, intended to be worn around the neck as an amulet.

'respecification cycles' (Section 7). Nevertheless, throughout our discoveries, our most powerful tools will remain those of traditional etymology. The plan for this paper is to proceed from the earliest evidence, as found in runic inscriptions, through the place of these 'leek'-named plants in ethnobotanical classification, to consideration of the long-term roles of, particularly, the leek in European magic and medicine, as illustrated by various texts and etymologies.

2. Runic inscriptions

The Proto-Norse and runic word *laukar* 'leek' is descended from a Proto-Germanic parent form which historical linguists reconstruct as **laukaz* (whose etymology is discussed in Sections 7.2–8).³ As a result of perfectly regular, indeed predictible, phonological changes, *laukar* became Old Icelandic (OIce) *laukr* (Modern Icelandic (ModIce) *laukur* 'onion, garlic'). Proto-Germanic **laukaz* became: Old English (OE) *leac* (not a Norse loan), the anterior form of *leek*; Old Saxon (OS) *lok* (Modern Low German (ModLG) and Modern Dutch *lok* 'leek'); and Old High German (OHG) *louh* (Modern High German *Lauch* 'leek').

Proto-Norse laukar occurs in numerous runic inscriptions that are typically highly formulaic. In these inscriptions, laukar either occurs in combination with a limited set of other words known to be formulaic, or in solitary splendor. It never appears in a sentence, and it is never 'glossed'. Runic laukar is either written out in full or abbreviated as follows: lakr, lkar, laur, lir, or simply l. The l abbreviation is ambiguous, for l alone could stand for laukar or the runic 'mystery' word alu, a word that apparently denoted protection. It cooccurs with laukar on the Skrydstrup bracteate, on which these are the only lexemes of the inscription (Krause and Jankuhn 1966: 247–8; Markey 1998: 188–9).

The majority of runic 'leek-inscriptions' are on gold bracteates of accomplished artistry. In round numbers, these 'leek'-bracteates date from about 400 to about 600 AD and most are from Denmark. Runic bracteates, whether inscribed with *laukar* or other words or abbreviations, are generally thought to have had some talismanic or other numinous purpose as amulets.⁵

Other objects on which 'leek'-inscriptions occur, such as hide- or meat-scrapers (Norwegian *kjøtkniv* 'meat-knife'), must have belonged to women. The woman in southwestern

- ³ Germanic *laukaz has never received an acceptable etymology, and runological discussions of the ethnobotany of 'leek' are typically cursory and frequently ill-informed. The following statement by Krause and Jankuhn (1966: 85), in reference to the inscription on the Fløksand meat-knife, is representative: 'and the "leek" is a plant which is regarded by many people as a means of preservation, for retaining freshness and youthfulness' (und der Lauch ist eine Pflanze, die bei vielen Völkern als Mittel zur Konservierung, zur Bewahrung von Frische und Jugendlichkeit gilt).
- See Nos. 37, 38, 109–15, and 120–1 in Krause and Jankuhn (1966). See Düwel (1988), particularly pages 103 passim and 106, where he inventories the canonical abbreviations (*l* occurs ten times on No. 38 in Krause and Jankuhn), and see Hauck (1985–) for an annotated research history, noting particularly his useful distribution map (Fig. 2, p. 45).
- The gold bracteates have been inventoried, photographed, classified as to artistic and representational format (into Types A, B, C and so on), and tediously described with runological commentary by Düwel in the magnificent multi-volumed *Die Goldbrakteaten der Völkerwanderungszeit* under the general editorship of Hauck (1985–). Runology is, to be sure, a rich and well-documented field, but only the bare bones, or operative facts of the runic evidence are surveyed here. These facts, nonetheless, are sufficient for the task at hand. For detailed discussions of individual inscriptions, the reader is referred to secondary literature such as that cited in the references at the end of this article.

Norway who owned the so-called 'Fløksand meat-knife' with its formulaic *linalaukarf* 'linen-leek-f' inscription from about 350 AD, was apparently so fond of it that she took it with her to the grave (Krause and Jankuhn 1966: no. 37).

The Norse acrophonic letter name for runic *l* is 'leek' (Proto-Norse *laukar*). 'Acrophonic' refers to a name which begins with an appropriate letter, such as *l* is for leek, like our *a* is for apple (see, for example, Musset and Mossé 1965: 111, 134, 151). The runic acrophonic letter names are, however, comparatively late historically and are generally considered pedagogical.⁶

3. The ethnobotanical context

In addition to the medical-magical-fertility associations of the leek in runelore, particularly the runelore of Stanza 8 in the mid-twelfth-century Old Norse Eddaic poem Sigrdrífumál (see Section 5), there are also flashes of such associations in the precious evidence provided elsewhere in the Poetic Edda; in Óláfs saga Helga (The Saga of Saint Olaf, see below) by the medieval Icelandic warrior-poet, Snorri Sturluson (1179–1241); in the so-called Volsa þáttr (Volsi Episode, see Section 4.7), a near contemporary of the Canterbury Tales; and in skaldic verse. In Snorri's Óláfs saga Helga we read: 'there in the stone kettle she had fixed diced leeks and other herbs, and she gave it to a wounded man to eat, so that the leeks might heal the wound, as he was pierced to the innards' (hón hafði þar gort í steinkatli strappalauk ok onnur gros, ok gaf at éta einum sárum monnum, þvíat kenndi af laukinum út ór sári því er á hol var) (Snorri Sturluson 1945: line 223).

The citation from Snorri is of both ethnobotanical and anthropological interest: it tells us that leeks were used in internal, rather than external, homeopathic medicine and that leeks were classed as herbs (*qnnur grqs* 'other grasses and herbs'): OIce *gras* denoted 'grass', 'herb' and 'weed'. In ethnobotanical terms, OIce *gras* was the life-form taxon that Brown (1984: 13–14) and others have termed *grerb* (indicating 'grass+herb+weed'), an ethnobotanical class that includes small herbaceous (leafy, green, non-woody) plants. To provide contextual scaffolding, we necessarily next chronicle Indo-European grerb-terms.

3.1 Latin

Latin had one basic, all-purpose grerb-term: herba 'herb' (glossed by Greek $phorb\bar{e}$ ($\phi op \beta \eta$) 'fodder'), and herba was diligently handed down as the major grerb-term to each of Latin's Romance successors; so, for example, Rumanian iarba, French herbe, Italian erba, and Spanish hierba.

3.2 Baltic and Slavic

Baltic has two basic grerb-terms: Lithuanian *augalas* 'plant, herb' (equivalent to Latvian *augs*), and Lithuanian *zole* 'grass, herb' (equivalent to Latvian *zale*). Slavic also has two basic grerb-terms: *trava* (for example, Bulgarian *treva*, Polish *trawa*) for 'grass, herb', and *zelje* (for example, Russian *zelie*, Slovene *zelje*, Polish *ziolo*) also for 'grass, herb'. A Venn diagram of Slavic *zelje*: *trava* would necessarily show the two sharing significant semantic space as grerb-terms. Etymologically, Lithuanian *zole* is cognate with Latin *holus* 'vegetables, greens,

⁶ There are no 'leek' (*laukr*)-inscriptions in the Latin alphabet.

⁷ For an extensive survey of rune magic, see Andersson (1997), critically reviewed by Williams (1997).

cabbage, colewort, turnips'. Bulgarian contextually specifies *treva* 'grass' as 'herb' (*lekoviti trevi* 'medicinal herbs'), and Lithuanian does the same for *zole* (*vaistines zoles* 'medicinal remedy, herbs'). So too does Old Icelandic with its *læknis-gras* 'herb' (literally 'healing grass').

3.3 Albanian

Albanian bar 'grass' also covers 'weed' and 'herb'.

3.4 Armenian

The Armenian grerb-term is *xot*, which covers 'grass, weeds, herbs', but which, despite Pisani (1944), still lacks a convincing etymology.

3.5 Sanskrit

Vedic Sanskrit trna, later trina (cognate with Gothic paurnus 'thorn') covers 'grass, weeds, herbs', but the Vedic grerb-term par excellence is omegastar (from H_2us - $dheH_1$ -) literally 'to place in the light' (Nagy 1990: 150, footnote 25), denoting some unspecified medicinal plant or herb. This word occurs ninety-five times in the Rig-Veda.

3.6 Hittite

For GRERB, Hittite has *welku*- (neuter) 'grass, herb', a word that is also contained in personal names (compare French *Malherbe*) (Laroche 1966: 339).

3.7 Germanic

Germanic is remarkable for having the largest arsenal (three) of grerb-terms in Western Indo-European: *gras-, *wurt-, and *krud-. Two of these terms were pan-Germanic: *gras- and *wurt- are attested from all dialects, but *krud- is strictly West Germanic. From this, one infers that Germanic continued to encode GRERB after the break-up of Common Germanic (c.100 AD). Latin herba 'herb' and Germanic *grasa- 'grass' are ultimately from the same Indo-European root.

Old English wyrt 'herb, plant, root' is cognate with Gothic waurt-, Olce urt 'herb', OHG wurz 'herb, plant', and Middle High German (MHG) würze 'spice, brewer's wort'. Old English wyrt is featured in the Nine Herbs Charm, and became wurt (wort) in Middle English. The word is preserved in contemporary compounds such as mugwort and colewort, but it was generally replaced by herb or plant from Norman French after the Conquest. This word stems from Indo-European *wred-, a North European radical that also supplied Latin radix 'root'.

German *Kraut* (singular), *Kräuter* (plural) from **krúdis* : **krudizá* respectively, 'herb, vegetable, weed' was a Continental Germanic, and, by later immigration, Anglo-Saxon term. ¹⁰ It has a near congener in Lithuanian *grudas* 'grain, corn', with a plural *grudai* 'grain (cereals)', *grudinis* 'cereals', cognate with the Latvian verbal adjective *grudenis* 'mashed hemp'.

⁸ See the commentary on *Rig-Veda* 10.97.1–6 in Section 9 below.

State I *ghér-dh- gives herba, and State II ghr-é H2-so- gives *grasa-.

Compare Dutch kruid, OS krud 'weed' (attested only from the ninth-century Heliand), OHG krut, and English crowd in crowd-weed, crowd-grass.

The weed sense of Scandinavian gras is marked by the negative prefix u-, as, for example, in Norwegian ugras, literally 'non-herb', a strategy that is paralleled in German by Un- in Unkraut 'weed'.

Obviously, it was the special purpose application feature [+/- magical-medicinal] that distinguished grerbs as 'weeds' [-], from grerbs as 'herbs' [+]. As shown by the Baltic and Slavic examples above, specification of this feature periodically entailed disambiguating descriptive text.

3.8 Celtic

Celtic must have exercised the same grerb classification for 'leek' as Germanic. The etymological evidence is as follows. Old Irish (OI) *lus* is a general label for any herbaceous plant or vegetable (compare the cognate Middle Welsh *llys* (plural *llysiau*), Old Cornish *les*, Middle Cornish *leys*, Breton *louzou* 'plant, herb, remedy, balm'). However, in passages in which there is a contextual reference to plants or herbs as dietary items, the typical lemma of OI *lus* is Latin *porrum* 'leek', and both Old and Middle Irish *lus* sometimes specifically signified 'leek' (*Dictionary of the Irish Language*, under *lus*)

3.9 Classification strategies

As Brown (1984: 59) summarizes, four major semantic strategies are typically employed in ethnobiological classification:

- 1. metaphor: 'spear-leek' denotes 'garlic';
- 2. description: 'white leek' denotes 'garlic';
- 3. expansion of reference: Germanic *lauk- denotes 'onion, garlic, leek', evidenced by polysemy (more than one meaning);
- 4. restriction of reference, typically by contextual deterrence: OI *lus*(*s*) signified 'leek' only in dietary contexts.

Germanic (as evidenced by Old Norse) and Celtic (as evidenced by Old Irish) employed diametrically opposed strategies for ethnobotanical classification of the leek as a grerb: expansion (Germanic) versus restriction (Celtic) respectively.

4. Fertility and sexuality

In Germanic Europe, the leek had medical-magical-fertility associations, and was deployed as a metaphor for sexuality, virility, or even nobility. These associations were apparently concentrated in Scandinavia and Anglo-Saxon England. None of them is found in Gothic, which is but fragmentarily attested from the fourth century AD, or in Old High German or Old Saxon (both c. 750–c. 1050 AD), and but rarely in later medieval Netherlandic or medieval German. This is the conclusion of Petrus Tax (personal communication), after an intensive search, and I am also grateful to him for several of the citations below. However, as Tax insightfully notes, textual silence (irrevocable testimony) in Continental Germanic does not necessarily imply absence.

All early Germanic peoples, particularly commoners in the Middle Ages, may well have been conversant with these folk customs but did not write about them for reasons (especially) of taboo or simply because they could not write at all. And taboo there must have been, for, as pointed out in the conclusion, the earnestly Christian Prudentius (348–c. 409 AD) persistently railed against the pagan leek, which, as we shall see, was a well established Greco-Roman symbol for, and reputed stimulant of, female fertility. As detailed below, Greco-Roman tradition also considered the leek an able assistant in childbirth.

4.1 Anglo-Saxon sources

The leek is frequently prescribed as a medicinal herb in Anglo-Saxon folk medicine, but mention of its powers for enhancing fertility or desire are often carefully covert and, hence, enticingly oblique. The Anglo-Saxon *Herbarius* of Pseudo-Apuleius glosses *satyrion* as the 'raven's leek' (*refnes leac*), perhaps the 'ravenous leek' (De Vriend 1984: Chapter 16), but for further elucidation one has to know that the *satyrion* (σάτυριον), sometimes identified as the common ragwort (*Senecio jacobaea* L.), was the legendary Greco-Roman plant that supposedly excited lust (Pliny the Elder 1942–83: VII.338–41; Bk 26.63). The *Herbarius* also informs us (De Vriend 1984: Chapter 49) that:

Deos wyrt þe man temolum & oðrum naman singrene nemneð þæs þe Omerus sægð ys wyrta beorhtust & þæt Mercurius hy findan sceolde ðysse wyrte wos ys swyðe fremful & hyre wyrttruma ys synewealt & sweart eac on ðære mycele þe leaces.

This [is] the herb which some call *temolum* [Latin *temulentis*] and others *sengreen* [houseleek] of which Homer says it is the brightest herb and that Mercury should find this herb's juice is very useful, and its root is rounded and dark much like that of the leek,

and the dalliances of Mercury were well entrenched in medieval lore.

4.2 German sources

In his *Buch der Natur* (composed about 1349–50), Konrad von Megenberg, who was not known for his originality as he based his work on Latin sources, says, in part, of the leek that: 'it brings urine and the intimacy of womankind and brings lack of chastity and most of all its seed' (*er pringt daz harmwazzer und der frawen haimleichait und pringt unkäusch und allermeist sein sâm*) or, quite simply, leeks make men urinate and women both horny and fertile (Konrad von Megenberg 1861: 415–16; *Von dem pforren* 63). These are features to which, in an oblique fashion, the pious Hildegard of Bingen (1098–1179), authoress of the *Ordo Virtutuum*, alluded in her *Physica*: 'and in humans it causes the disquiet of desire' (Hildegard of Bingen 1991: 104). Similar assertions were made by Albrecht von Scharfenberg (c.1270) in his *Titurel* (line 3256).

4.3 Chaucer

In his *Canterbury Tales*, good old Geoffrey Chaucer (c.1340–1400) gives us a glimpse of the 'folk' in a piece of what German folklorists termed *gesunkenes Kulturgut* ('sunken cultural value').¹¹ In the prologue to his tale, the Reeve presents himself as an old man — 'Gras tyme is doon; my fodder is now forage' (Chaucer 1987: 77, line 3868) — who is well beyond the

¹¹ I am grateful to Siegfried Wenzel for this information.

rowdy tale of the Miller, his predecessor. He then slips into pure bawdiness by saying (lines 3876–80):

We hoppen alwey, whil that the world wol pype.

For in oure wyl ther stiketh evere a nayl,

To have an hoor heed and a grene tayl,

As hath a leek; for thogh oure myght be goon,

Our wil desireth folie ever in oon.

Ave we hop when the world will pipe.

For in our will there sticks ever a nail.

To have a hoary head and a green tail,

As hath a leek, for though our might be gone,

Our will desireth folly ever anon,

which demonstrates that the leek must have survived as a sexual metaphor well into the late fourteenth century. We dance to the world's tune, and *grene* 'green' here is, presumably, a pun on *green* in its senses of 'young' and 'randy'.

Chaucer was ever careful to use earthy images entirely familiar to his prospective audience, several of whose dialects he could ably imitate. He is, however, known to have traveled extensively on the Continent, though never to Scandinavia.

4.4 Scandinavian sources

In early Scandinavian folklore, as we shall see, the leek apparently had strong associations with sexuality, physical well-being and perhaps general prosperity, the thing the Germans call *Gedeihen*. The one occurrence of leeks in the Eddic Volospa (Stanza 4)¹² is in the creation sequence, a strophe that has been read by some as an allusion to the leek's powers of fertility and healing:

Áðr Burs synir bigðom um ypþo,

þeir er miðgarð, mæran, scópo

sol scein sunnan á salar steina,

bá var grund gróin grænom lauki.

Before Bur's sons lifted the bottoms,

When they created mighty Midgard,

The sun shone from the south upon the stones of the hall,

Then was the earth grown (healed) with green leek.

In the 'heroic' poems of the *Edda*, leek (also garlic) is used as a metaphor for virility and as a symbol of power and nobility. The occurrences are: *Guðrúnarqviða in fyrsta* (Stanza 18)

Svá var minn Sigurðr hiá sonom Giúca,

sem væri geirlaucr ór grasi vaxinn,

eða væri biartr steinn a band dreginn,

iarcnasteinn yfir oðlingom.

So was my Sigurth among Gjuki's sons,

As if he were a spear-leek (garlic) grown from the grass,

Or the bright stone placed on the band,

Or a glittering jewel over princes.

Guðrúnarqviða onnor (Stanza 2)

¹² All Eddic passages which follow are taken from Neckel (1962).

Svá var Sigurðr af sonom Giúca, sem væri grænn laucr ór grasi vaxinn, eða hiortr hábeinn um hvossom dýrom, eða gull glóðrautt af grá silfri. So was Sigurth to Gjuki's sons, As if he were a green leek grown from the grass, Or a tall-legged stag to nipping beasts, Or glow-red gold to grey silver.

and Helgaqviða Hundingsbana in fyrri (Stanza 7)

Drótt þótti sá doglingr vera, qváðo meþ gumnom góð ár komin; siálfr gecc vísi ór vígþrimo ungom færa ítrlauc grami

The king's host thought that to be a king (a descendant of Dag), They said to the men the 'good times are come,'

Then the prince himself went forth from battle tumult,

To bring the young warrior a noble leek

where *itrlaukr* 'noble leek' has been seen by some as a kenning for scepter or sword (or the sword-lily plant). The etymology of *itr*- remains contested, but it is contained in the Odin epithet *ltrekr*, and it designated the king in board games. Other than with *-laukr*, it is found compounded only with *-borrin* 'well born', *-scapaðr* 'nobly shaped', *-vaxinn* 'of fair stature', *-mannligr* 'noble, manly bearing', and *-bveginn* 'clean washed, well scrubbed'.

4.5 Celtic, Baltic and Slavic traditions

In Celtic tradition, the leek was a victory talisman and a protection against wounds, and it was the emblem of the god Aeddon. The leek is the Welsh national plant; it is worn on St. David's Day (March 1st), and its symbolic association with Wales is said to date back to the sixth- and seventh-century struggles against the English. There is, however, nothing in Celtic tradition that suggests an association between leeks and sexuality or fertility.

The same is true of Baltic and Slavic. Moreover, leeks are simply not, as Maruta Lietins Ray (personal communication) informs me, part of Baltic culinary culture, nor, for many Balts, is garlic. Latvian *loki*, a late borrowing from Low German *lok*, signifies 'green onion tops or chives', a garnish. Latvian *puravs* 'leek' (also as a surname) is clearly a recent nativization of a ModLG dialectal *purs*, while Latvian *luoks* 'leek' is marginal for many Latvian speakers. Lithuanian *lúkai* is derivationally ambiguous: either from Slavic *luku* or Germanic **lauk*- (or **luk*-), while Latvian *luoks* is from Low German *lok*. As a garlic and leek phobic culinary area, the Baltic is comparable to Hungary. Hungary knows the leek, but uses it only for flavoring; there is no leek soup.

4.6 Classical sources

In Western Europe it is Greco-Roman tradition (later introduced to Armenia) that provides the closest parallel with the early Scandinavian veneration of the leek, but particularly so in Italic tradition as recorded by Pliny the Elder in his *Natural history*. This erudite naturalist was born at Como (ancient Comum) in 23 or 24 AD and died in the eruption of Vesuvius in 79 AD. He must certainly have been versed in early north Italian, including Rhetic, Venetic and Etruscan,

traditions. He tells us (1942–83: II.98–9; Bk 3.20) that the Rhetic peoples were Etruscan, and contemporary linguistic inquiry has shown him to have been correct (Markey 2001). Pliny, who had held a military command in Germania and was governor of Spain, was not an original thinker, but an epitomist, a derivative encyclopedist, who recorded Classical 'knowledge'. He nevertheless provides a window on the Classical, primarily Greek, ethnobotany known in Rome during his day.

Pliny considers the benefits and properties of two kinds of leek which he terms *Porrum sectivum* (1942–83: VI.28–9; Bk 20.21) and *Porrum capitatum* (VI.30–31; Bk 20.22), the latter being a calque on Greek *prason-kephaloton* (πράσον-κεφαλοτον), which is the leek proper as we know it. The former (perhaps the chive or some more temperate garlic leek) stops, so he informs us, hemorrhaging after miscarriages or abortions (*item ex abortu profluuia poto suco*). When crushed in honey it cures ulcerations, but when mixed with vinegar it detoxifies the bites of snakes and other venomous animals (*ulcera cum melle trito, uel bestiarum morsus ex aceto, item serpentium aliorumque uenatorum*). As for the leek proper (*porrum capitatum*, today's *Allium porrum* L.), Pliny states that Hippocrates¹³ prescribed that it be given to women without any accompanying ingredient, and thought that it opened the contracted womb (in childbirth) and, when taken as nourishment, that it increased female fertility (*Hippocrates et sine alia mixtura dari iubet uuluasque contractus aperire se putat, fecunditatem etiam feminarum hoc cibo augeri*). The reference is to Hippocrates' *De morbis mulierum* (Bks 2.89 and 6.98, on intercourse and pregnancy, see Hippocrates 1923–95: V), which must have been accessible to Pliny as a source.

Comparable information is detailed by Dioscorides (c.20–70 AD) in his *De materia medica* (Dioscorides 2000: Bk 2.149), which, among other things, tells us that leeks rubbed with (salt) water produce a sort of sexual slime that dilates the womb, a practice considered particularly beneficial at childbirth. In this, he continues the folk medicine of Hippocrates. Thus it was that Greco-Roman folk medicine ascribed womb dilation and/or female fertility enhancement to leeks, but not to onions or garlic. As detailed in our conclusion, these conventions were later incorporated intact into Armenian folk medicine.

4.7 Horse magic

Perhaps the most telling evidence for the leek's role as a fertility emblem in early Scandinavia is provided by the so-called *Volsa þáttr* (Heusler and Ranisch 1903: 124), an early fourteenth-century *þáttr* (short tale or episode), and thus a near contemporary of Chaucer's *Reeve's Prologue*. This *þáttr* relates how a farmer's wife in northern Norway had covered a horse's penis with leeks and then wrapped both in linen, presumably as a phallic fetish. At each evening meal in the autumn, the time of harvesting and butchering, the annual culmination of fertility, she passed the fetish around the table, and each person who received the fetish was to recite a strophe over it. One of these strophes reports:

Aukinn ertu, Volsi, ok upp tekkin, líni gæddr, en laukum studdr. You're distended, Volsi, and picked up, endowed with linen and by leeks supported

which contains the same formulaic components, linen and leek, as were inscribed (*linalaukar*) on the Fløksand meat-knife (see Section 2).

Hippocrates (c. 460 BC-c.377 BC) was the Classical world's most famed mortal physician, as opposed to the

Although the matter has been debated, these lines are traditionally considered by runologists as an illustration of fertility magic (Musset and Mossé 1965: 151; Krause and Jankuhn 1966: 85–7). *Volsi* meant 'horse dick', a word as vulgar in Old Icelandic as it is in English, and formed from OIce *volr* 'a round stick, staff or cylinder'. The combination 'linen (as a blanket) + leek + horse penis' probably implies affiliation with the Indo-European fertility ritual known as the *Asvamedha*. This was what many consider to have been the most spectacular ritual of early Indic tradition, a horse-centered celebration of public copulation *more ferarum* that involved intoxication (Puhvel 1987; Mallory 1989: 135–7; Watkins 1995: 265–76). In the course of the *Asvamedha*, a virgin stallion was suffocated by a woollen or linen blanket (no blood was shed), after which the king's chief wife 'co-habited' with the victim under covers. The horse was then dismembered into three parts, and each part was dedicated to a deity assigned one of the three (Dumézilian) estates of Indo-European society.¹⁴

An Asvamedha was recorded in Celtic society in medieval Ireland by the Norman Giraldus de Barri ('Gerald of Wales'), and from the Feis Temro 'Feast of Tara'. ¹⁵ In Rome it was known as the October Equus, and it is seemingly represented in both Hittite and Venetic plastic art. Venetic implementation of the Asvamedha's copulation more ferarum is signaled by the Adrian terracotta 'Asvamedha vase', prominently displayed in the Museo Archeologico Nazionale di Adria in Italy, but unpublished. This vase is a composite figurine with a female nude astride a horse, the tail of which is unmistakably shaped like an exaggerated penis erectus. The contents of the vase were poured through an opening in the rider's head and consumed through a spout in the horse's mouth. Moreover, horse sacrifices (by smothering) are well attested in the archaeological record of the pre-Roman necropolis of Canal Bianco at Adria, a cosmopolitan trading center comprised of Venetians, Etruscans and Greeks. A Hittite Asvamedha is seemingly presented in the friezes of appliqué relief figures and images depicted on a large vase from Inandik, Turkey (Özgüç 1988). The initial frieze shows preparation of food by cooks, but the leek is absent, though the garlic-onion (šuppi-wašhar) is known to have been used for Hittite ritual purification.

A horse penis held erect by leeks and wrapped in linen would definitely seem to be a *pars pro toto* representation of an *Asvamedha*. Note that it is a woman who passes the fetish around, not a male priest (OIce *goði*). Note too that, as in comparanda *Asvamedha*, public, rather than individual, mantra-participation is mandatory.

An inversion of the *Asvamedha*, with its goal of fertility, is rendered by the Nordic 'scorn pole' cursing rite with its parallels in medieval England (Markey 1972). In this ritual, the severed head of a horse was mounted on a scorn pole (níðstong) pointed in the direction of an accursed person's home. The pole carried the message that the man so scorned was to be *argr/ragr* (metathesis variants, and metathesis is typical of Indo-European taboo formulas) 'an effeminate coward'; that is, that the accursed was to be afflicted with a lack of fertility.

As a demonstration of the leek's persistent sexual connotations in Norse, we note that, in Modern Icelandic, the word *lókur* (from OIce *lókr*), ¹⁶ a vocalic (apophonic, ablaut) variant of the Germanic root **lauk*- that supplied Proto-Norse *laukar*, is slang for 'penis'.

divinized Aesculapius.

Georges Dumézil, a twentieth-century French philologist and mythographer, proposed the Trifunctional Hypothesis whereby early Indo-European society was divided into warriors, priests and farmers.

¹⁵ For textual details, see Watkins (1995: 265–6).

¹⁶ Compare Färoese *lókur* and related Old Swedish *lok*, *luk*, *luuk* 'grass, herb, weed'.

5. Medicine

Leeks and their relatives can also be found in early contexts in which the medical content is more evident than the magical. From the runelore regarding the leek that Brynhild (Brunhild) delivers to Sigurth (Siegfried) in Stanza 8 of the Poetic Edda's *Sigrdrífumál*, it seems as if Brunhild had read both Homer and Pliny or taken an advanced degree in Classics:

Full scal signa oc við fári siá
oc verpa lauki í lǫg:
þá ec þat veit, at þér verðr aldri
meinblandinn miǫðr.

A toest shall von dedicate and thus k

A toast shall you dedicate and thus keep unharmed, And cast a leek in the liquid,

Then shall I know will never befall you,

Harm-blended mead,

that is, 'venomous, poisonous' mead, literally, mead blended with 'harm', although OIce *mein* also signified 'disease' or 'sore', and is contained in *meinburgir* 'impediments, hindrances (that make a marriage unlawful)', the very thing which Brunhild had a vested interest in avoiding. Then too, *mein* denoted the venom of vipers, perhaps an oblique reference to Siegfried as a dragon-slayer. The Homeric krom(m)uon ($\kappa\rho \acute{o}\mu(\mu)vov$) 'onion/garlic' (see Section 6.2.1) is an ingredient of a guest-friend ritual refreshment while the *laukr* 'leek' of the *Sigrdrífumál* is preventive/curative medicine.

'Leeks' are included in various early English recipes for internal medical treatments, and an example can be found in the Old English translation called the *Peri Didaxeon* (Löweneck 1896: Section 38).¹⁷ It reads: 'Then shall you do thus for him. Take a leek and pound it and wring the sap out [and] give him soup, and he will soon be better' (*Pæt scealt þu hym þus don: Nim leac and cnuca hit and wring þat wos of, syle hym supan, and hym byð sona bet).*

Further, in Bald's *Leechbook* (Cockayne 1864–6: Bk 1, 39.3): 'A tonic for swelling: sigsonte (some kind of plant), onion, leek, the nether part of the plantain; boil it all in water and sweeten with honey' (*Drenc wip onfeallum, sigsonte, cipe, leac, wegbræde niopoweard, wyl ealle on wætre & geswet mid hunige*). And for leprosy, again in Bald's *Leechbook* (Cockayne 1864–6: Bk 1, 32.3): 'For leprosy, plantain, 'medicinal herb', leek, mint, chamomile, elecampane (field inula), sulphur; beat with lard; the sulphur should be two thirds that of the herbs' (*Wip hreofle, wegbræde, læcewyrt, leac, minte, magþa, eolone, swefl, gecnuwa wip rysle, do þæs swefles swilcan þara wyrta twæde*). There are further Anglo-Saxon remedies that prescribe the leek for fever and headaches, and as a component in plasters for wounds.

6. Alliums and their names

6.1 Botanical background

As any reputable handbook tells us, the leek (*Allium porrum* L.), believed to derive from the wild Eurasian *Allium ampeloprasum* L., originated in western Anatolia and the South Caucasus. It is closely related to both garlic (*Allium sativum* L.) and the common onion

Not all scholars believe the language of the *Peri Didaxeon* to be Old English. Some regard it as transitional between Old and Middle English.

(Allium cepa L.). All three are members of the Liliaceae family. Domestic garlic (Allium sativum) is believed to have originated from Allium longicuspis Regel, the wild garlic of central Asia, northern Iran, and southeastern Turkey. Allium porrum is known only from cultivation. All varieties of leeks require frequent watering and are known to have been native to swampy, bog-like environments. They do not like acid soils. They can, however, be grown under a wider range of conditions than onions. Most early, summer-ripening varieties are frost resistant, although they prefer temperatures ranging between 13 and 24 degrees centigrade. The leek could, therefore, have been cultivated in early southern Scandinavia, the probable Germanic homeland. In fact, some modern American varieties, such as Blue Solaise (105 days to maturity), survive the heavy frosts of Vermont and northward, and there is no reason to doubt but that some early cultivars could have done the same. The distribution of wild ancestors of the onion, garlic and leek definitely points to their collective origin in southwest Asia. The Egyptian domesticates of wild forms of these vegetables, which are fortuitously evidenced archaeologically, were clearly not native to the Nile Valley (Zohary and Hopf 1993).

The onion, garlic and leek were late introductions to Northern Europe as an *Allium* crop package from the Mediterranean. There are, for example, no remains of these plants in the Swiss lake dwellings (inhabited until c. 800 BC), the sites (such as Bienne, Morat, Neuchâtel) that have so far provided the best evidence for early organic remains in Europe.

6.2 Etymological background

For all of Western Indo-European there were but three primary labels for 'leek' (*Allium porrum*): Celtic *kanena and cognates, Latin porrum and cognates, and Germanic *lauk- and cognates.

6.2.1 Celtic *kanena and cognates

Celtic *kanena from *kapena (or the like), gives Brittonic *cinnin, OI cainnenn, and Welsh cennin 'leeks', also 'daffodils'. (Compare Middle Breton quinghen attested in Balbus' Catholicon from 1286, and in Cornish as kennin.) Compare also *kapena as a Celtic protoform with Hesychius of Alexandria's kapia (κάπια) in his authoritative lexicon, which he glosses as 'garlic': 'ta skoroda Kerynitai' (τα σκόροδα Κερυνυται). ¹⁸

Homer does not attest prason (πράσον) 'leek' or skorodon (σκόροδον) 'garlic', but he does attest krom(m)uon (κρόμ(μ)υον) 'onion/garlic', ¹⁹ considered by some an assimilation outcome of Hesychius' kremuon (κρεμυον) (compare Modern Greek kremmydi (κρεμμύδι) 'onion'), ultimately from an Indo-European *krémHu-. This is supposedly $Allium\ cepa$, but cognate Germanic descendants of Indo-European *krémHu-, such as OE hramsa (singular), hramsan (plural), which gives Modern English ramson, denote the $Allium\ ursinum\ L$. (German $B\ddot{a}rlauch$). This is the bear-garlic or wild garlic that is still common in European herb gardens today, also called dog-leek (compare the French $poireau\ de\ chien$, first recorded in 1611), crow-leek, house-leek, or corn-leek. The same Indo-European root is reflected in the (originally Gallic) north Italian city-name Cremona and the Greek city-name $Krem\bar{o}n\bar{e}$ (Κρεμώνη).

Indo-European *krémHu- supplied the Western Indo-European word for 'onion/garlic',

The lexicon partially survives in a single manuscript: Venice, Biblioteca Nazionale Marciana, Gr. 622.

¹⁹ It occurs in the *Iliad* 11.630 and the *Odyssey* 19.233.

but Western Indo-European and Indo-European in general originally lacked a term for 'leek', a plant that Indo-Europeans apparently did not know until they were introduced to it, presumably firstly in the leek's native Anatolia and/or the South Caucasus. In Homer's Odyssey (19.233), krom(m)uon 'onion/garlic' occurs as a simile for tanned skin, and, while this passage may be of interest to the literary historian, it sheds no light on the topic at hand. It is Homer's Iliad (11.630) attestation that is supremely interesting in the present context, for it looks like a ritualistic analog of Hippocrates' knowledge. In welcoming Nestor and Eurymedon, Hecamede, the daughter of Arsinous, sets forth an onion/garlic (krom(m)uon) as a relish for their drink along with pale honey, the ground meal of sacred barley, and a huge cup which Hecamede proceeds to fill with Pramnian wine, after which she makes a potion of the lot.

6.2.2 Latin *porrum* and cognates

Conventional wisdom has to date considered this group as descendants of a 'Mediterranean', that is, a pre- and, therefore, non-Indo-European, *pr-so- (or the like) that is said to have been realized in Greek as prason (πράσον) (consider prasia (πρασία) 'bed of leeks', and the name of a frog: Prass-phagos (Πρασσ-φάγος) 'leek eater'). *Pr-so- is also said to have independently entered Italic, whence Latin porrum (from *porsom). 'Mediterranean' *pr-so- is said to have eventually spread to Turkish (prasa, pirasa), Albanian (presh), Romance, Armenian (pras) and thence to the Caucasus (for example, Georgian prasa, Laz prasa, and Tsova-Tush (also called Batsby) pras). It also penetrated Germania (German Porree, OS porro) and Balkan Slavonic (Old Church Slavonic, Bulgarian, Macedonian, and also Bosnian with its praziluk), as well as Balto-Finnic (Finnish purjolaukka), Hungarian (póréhagyma), and Basque (porro).

The supposedly 'Mediterranean' *pr-so-, the presumed parent of Greek prason and Italic porrum, is unknown from any recorded ancient Middle Eastern language. Other than as a loan from Greek, it is unknown from any Eurasian language: it is not even remotely reconstructible for 'onion/garlic/leek' in any Eurasian language. The Altaic protoform for 'garlic/onion' is surely *soYEnV-, that for Proto-Tungus *seYkuk, for Proto-Mongolian *soYgina-, for Proto-Turkic *sogan (for example, Turkish sogan, and so on in numerous other Turkic languages with the legendary inter-dialectal homogeneity that typifies this phylum). Note further, Manchu seÿgule/seÿkule 'garlic', Mongol songino 'onion', Chuvash suŋəan alternating with soŋəan 'onion'. Hungarian hagyma (with h- from s- as in a well-known set of historically intermediary loans) stems from a Turkic source (*sogan), which is also the case with Lithuanian s(v)ogunas.

Herodotus (5.15–17) refers to a Lake Prasias (*Prasias limnē*, Πρασιας λιμνη), literally 'leek-bed mere', in Thrace, which is the modern Lake Tachino on the lower Struma. Duridanov (1976: 45) suggests that *Prasias* is a Hellenized form of a Thracian **Prausias* comparable to Lithuanian *prausti* (*prausiù*, -*siau*) 'to wash (oneself)', *prausynes* 'washing, laundry'. As demonstrated below, it is much more likely that the lake was named *Prasias* because it was

One might well anticipate a generalized Doric (Adriatic) *parson (*πάροον) as the input for an Italic *pors-giving Latin porr-um. For an account of the mechanism behind ra (ρά) ~ ar (άρ) in Greek, see Kuryłowicz (1956: 181). Note paradigm internal alternation of ra and ar in Pindar's Olympian (13.81): 'stout-footed', a kenning for 'bull', has a nominative singular kartaipous (καρταύπους) but a nominative plural krataipode (κραταύποδε). Compare also Attic kratos (κράτος) and Ionic kartos (κάρτος), both meaning 'strength'. Cretan generalized ar occurs (beside er), and the same appears to have been true of Corcyrean and Doric in general (Buck 1955: Article 49.2).

shallow and green with vegetation and surrounded by hills like a recessed garden-plot, a *prasiē* ($\pi\rho\alpha\sigma_1\dot{\eta}$), as Homer (*Odyssey* 7.127 and 24.247) calls such gardens.

Herodotus also informs us that garlic is distinct from onions and leeks, for garlic consists of several separate cloves, and that the workers on the Egyptian pyramids were fed radishes, onions and garlic (2.125.6), a myth long since proven a fabrication. But why does Herodotus even bother with such information unless he is describing exotics, particularly so in the case of the leek, like telling Eskimos about papayas? Is this because the leek was a relatively new plant in early Greece?

Greek *prason* 'leek' must be reconciled with *prasiē* which, in post-Homeric times, signified a 'bed of leeks', but in Homer, it means a 'garden-plot' or 'garden-bed' and had nothing to do with the leek. There are just two occurrences (*Odyssey* 7.127 and 24.247) in Homer, but it is the passage in the seventh book of the *Odyssey* that provides a firm clue for a convincing etymology: 'there to well-ordered garden plots beside the lowest (last) row of vines (or fruit trees)' (εμηα δε φορλγοαι πθαρια παθα μειασομ οθωομ παμοσιαι πευταριμ, επγεσαμομ χαμοξρα). Any Mediterranean farmer even today would instantly recognize this as referring to the shaded, scooped out garden-plot at the edge of a vineyard, that gathers moisture and manages run-off nutrients so that vegetables may grow at their best (Moody 1992). Anyone who has even attempted leek cultivation knows that they must be 'trench grown', with earth gradually mounded up around them as a rampart (inverted hilling) as they mature.

Semantic narrowing of prasia from 'garden-bed' to 'leek-bed' was occasioned by the one vegetable that presumably dominated early Greek prasia-type furrow gardening, namely, the leek. Homeric prasia (Lesbian, Attic-Ionic) points to a Doric *pratia (* $\pi p \alpha \pi u \alpha$) from a Proto-Indo-European * prH_2 -ti-ya- (a participial noun rebuilt as an abstract collective, presumably after Gk skorodon 'garlic', which accounts for -s-), which permits relationship with Latin pratum 'meadow' (compare Italian prato, Spanish prado and French prairie, the source of English prairie, which presumes a related Vulgar Latin *prataria). Latin pratum actually denoted an indentation in the ground and ultimately derives from Indo-European * prH_2 -to-. Compare Middle Irish pratio from * prH_2 -ti- 'earthen rampart, burial ground (within an earthen rampart)', later 'garden-bed'; Breton pratio burial place, cemetery'; Middle Welsh pratio bed-pratio grave, grave mound, hillock'; Gallic (French) place names such as pratio and so on (Pokorny 1959: I.843–4). Precision of the details of syllabification and elimination of the initial p- in Celtic would constitute an excursus, and these matters are both peripheral and inessential to the task at hand.

I conclude that Lat. *porrum* was yet another item of garden-plant nomenclature taken from Greek, the primary source for such labels in Latin. The conjectured 'Mediterranean' **pr-so*-'leek' may now be confidently expunged from our handbooks.

Latin-based monastic culture with its Mediterranean-type herb gardens and non-native plant names evidenced by early glosses such as OS *porro* 'porrum' (*St Peter Glosses*, c. 900–1000, see Gallée 1894: 301), introduced Latin *porrum* to the medieval Netherlands, Switzerland, Bavaria, Saxony, Scandinavia and Anglo-Saxon England, as a competitive, unambiguous alternative to a native 'leek'-term (*louh/lok/leac*). So we find: Middle Dutch *poreye* (*porreye*, *pareye*, *pureye*), *poret(te)*, *poreilooc*; MHG *porre*, *phorre*, *pforr*, *pfarren*, *por*, *pork* (from *porlok*); Middle Low German (MLG) *por*, *porlok*; and OE *por*, *porr*, *porleac*.

Presumably, it was a Frankish *lok that was replaced by *porro in concocting a word for 'leek' in early Gallo-Romance. In the Rhineland we find the 'fusion form' öllich 'onion',

a tautological composite formed from Latin *unio* 'onion' plus Ripuarian/Saxon *lok* 'leek'. German dialects in language contact zones display an incredibly rich inventory of variants; for example: East Frisian (Low German) *prei*; Schleswig-Holstein *Borre*, *Burri*; Rhenish *purets*, *pore*, *purs*, *purat*, *prei*; Swabian *Bores*, and so on. This wealth of variation betokens competing classifications of 'leek'.

French *poireau* 'leek' represents analogical alignment (in the nineteenth century?) of an earlier **porro* with *poire* 'pear', a process that began as a regionalism, but which is now accepted as the standard: Old French (OF) *porre* giving Middle French *poret* (*porette*, beside *porre*) giving ME *poret*, which, as we have seen, Chaucer shunned. In a snobby pretense to be provincial, some contemporary Parisians (who probably contrived *poireau* in the first place) may now say *porreau*, but this is officially regarded as a *patois* pronunciation that is found in Geneva, Savoy, eastern France, and parts of Belgium, with similar pronunciations throughout southern France, such as Gascony's *pourret* and Provençal *por*, and in northern Spain, where Basque and Catalan *porro* contrasts with Standard Spanish *puerro*.

The Latin neuter *porrum* (plural *porri*) is paralleled by an early masculine *porrus* (plural *porri*). As shown by the citation above (see Section 4.6), for Pliny, *porrum* referenced two kinds of 'leeks': *porrum capitatum* 'leek proper' and *porrum sectile* 'chives(?)'. For Pliny, *porrum* is a generic taxon. Gender distinction with masculine or feminine (animate) to designate a plant versus the neuter (inanimate) to designate its fruit was a common strategy in Latin. For example, feminine *pyrus* designated the pear tree, the plant itself, while neuter *pyrum* designated its fruit. This is the same marking strategy that Greek used, and it was simply carried over into Latin, so important was Greek nomenclatural influence on Latin botanical tradition.

Given masculine *porrus* and neuter *porrum*, one might well expect a (rustic, regional) feminine *porra. Although such a Latin feminine is unattested, it may be inferred from *porraceus* 'leek-like, pertaining to a leek'. If there were no *porra, then one would expect *porreus or even *porrucus, but not porraceus. One therefore infers that porraceus was formed from a (rustic, regional) *porra, just as rosaceus 'of roses, rose-like' was formed from rosa, or cretaceus 'chalky' from creta 'chalk', and so on. Moreover, porrus/porrum has a pattern like acinus/acinum, 'berry, particularly, grape', and acinus/acinum also includes, though it is but feebly attested in early Latin, a collective feminine acina. One therefore anticipates a collective feminine *porra' 'leekness'. Note further, porrina (feminine) 'bed of leeks', and compare rapina 'bed of turnips' to rapum (neuter) 'turnip (plant)' versus rapa (feminine) 'turnip (fruit)'.

Here too belongs *Porrima*, a goddess of childbirth, presumably also of sex determination. Porrima was an epithet of Carmentis, who was credited with having prophetic powers. The superlative suffix *-ma-* is isomorphic with the *-ma-* that formed Roman women's names. This permits the inference that Porrima was the personification of *leekness*, 'great leekness' if you will, as an epithet of Carmentis, and the Roman penchant for personification is well known. Incidentally, the Carmentalia festivities were celebrated on January 11th and 15th; that is, just after the 'delivery' of a new year (Varro 1951: 6.12).

Porrima is a hapax in the *Carmentalia* of Ovid's *Fasti* (I.633) where the context is a rite in which divines were invoked to determine a child's sex and secure its successful birth:

Si quis amas ueteres ritus, adsiste precanti, Nomina percipies non tibi nota prius: Porrima placatur Postuertaque, siue sorores,

If you love the old rites, stand near those praying, And you will hear names unknown to you before: Porrima is being appeased, and Postverta, or their sisters.

The dichotomy, Porrima (good) versus Postverta (evil), is ritually significant. Postverta is an epithet for the evil manifestation of Carmentis in birthing, as Postverta ('inverted end') denoted a breech birth, while Porrima is an epithet for the good, the normal birth, and thus the benefactive manifestation of Carmentis. A breech birth meant death. The normal birth, over which Porrima presided, was that in which the womb might be dilated with the leek (porrum) as prescribed by Greco-Roman folk medicine.

6.2.3 Germanic *lauk- and cognates

The basic *allium* term and *allium* plant for Germanic was *lauk-, which supplied Slavic (for example, Slovene lók), Baltic (for example, Lithuanian lúkai, in which u is equivalent to Germanic au), and Balto-Finnic (for example, Estonian lauk). Germanic *lauk- was later extended with prefixed qualifiers (yielding binominals) to cover garlic; for example, *gair-lauk- 'spear leek'. In other words, gair was apparently taxonomized as a varietal with reference to a basic, generic lauk- in a manner that approached Linnean classification.

We seek early attestation, turning first to Gothic, but the Bible translator Wulfila is notoriously uninformative about plants. In Matthew 6.28, for example, he turns *krina* (κρινα) 'lilies' into just plain 'flowers' (*blomans*). Deprived of evidence from Gothic, Old Icelandic and Old English are considered diagnostic: a basic generic Germanic **lauk*- was simply retained for 'leek' and then secondarily metaphorically specified by **gair*- 'spear' to fill the GARLIC-slot in both Old English and Old Icelandic. In Old English, binominalization was carried one step further into the ONION-slot. After introduction of Vulgar Latin *cipe* from Lat *cepe* 'onion', Old English forged binominal *cipe-leac* 'onion', literally 'onion-leek'. After the introduction of Lat *unio* producing OE *ynne*, Old English forged *ynne-leac* (*enne-leac*), again 'onion-leek'. In both *cipeleac* and *ynneleac* (*enneleac*), the generic point of reference is obviously *lauk*-. Binominalization was continued in later Scandinavian with *vit* 'white' as a replacement for *geir*- 'spear' (so Swedish *vitlök*), and binominalization was also applied in German: early OHG *louh* 'leek' became later OHG *chlobo-louh*, literally 'the cloven leek' (garlic), Modern German *Knoblauch*.

Bulgarian (presumably indicative of a general trend in early Slavic) represents reverse polarity as a starting point. In Bulgarian, the borrowed term, *luk* 'onion' (not 'leek'), is basic (generic), and qualified versions of *luk* were deployed in the GARLIC and LEEK-slots:

	\downarrow	\downarrow	\
Old English	cipeleac/ynneleac	garleac	leac
	'onion'	'garlic'	'leek'
Bulgarian	luk	cesnov-luk	praz-luk
	'onion'	'garlic'	'leek'

Table 1. A comparison of naming patterns for alliums in Old English and Bulgarian.

An ultimately satisfying Indo-European source for and etymological explanation of Germanic *lauk- has yet to be given. Since the days of the Grimm Brothers, *lauk- has been

associated with 'to lock (a door, etc.)' or 'lock (of hair)' or compared with Greek lygos (λύγος) 'pliant rod or twig, willow-like tree'. None of these 'root etymologies' has ever been entirely appealing.

In Norwegian dialects, *lok*, a vocalic (apophonic, ablaut) variant of **lauk*-, signifies 'fern' (regarded as an invasive weed in pasture land), while its Faroese counterpart (*lok*) signifies 'weed' (Torp 1919: 388b). In fact, Faroese *lok* is used as a cover term for any invasive plant, or so we experienced it during fieldwork on Hestö some thirty years ago (compare Swedish dialectal *luk* 'weed(s), pulled weeds'). So too, OIce *lok*, a word that is considered archaic in this sense in the modern language, was a cover term for weeds, especially weeds in low-lying cultivated fields.

7. Cycles of respecification

7.1 Snakes and ferns

A relic pocket of central Swedish dialects in contiguous areas of Värmland, Närke and Västergötland along the northeastern littoral of Lake Vännern presents *lok* in the compound orm(e)lok, literally 'serpent fern'. The corresponding Standard Swedish (*riksspråk*) word is *ormbunke*, the supra-dialectal term for the common bracken (Friesen 1940: 95; Hellquist 1948: 1.593b, under *luka*).²¹ In view of such regional diversity, it is small wonder that Uppsala's Carl Linné found the Swedish countryside's ethnobotany his very best laboratory for classification. Dialectal orm(e)-lok and Standard Swedish orm-bunke merit further attention.

Despite Faroese *frænarormur* 'speckled snake or dragon (in ballads)', equivalent to OIce *inn fráni ormr* 'the speckled snake' (an Eddic formulaic phrase), and Norwegian dialectal *frånarorm*, meaning the same, the Faroese, Icelanders and Norwegians know of no snake that fits this term or description. They fail to discern a reptile designator, but recognize a literary formula: *pecavit* De Vries (1962: 140a). Semantically, compare *frånarorm* and Greek *argēs ophis* ($\alpha \rho \gamma \eta \varsigma$ $\alpha \sigma \varsigma$) 'glistening, bright serpent' (Hippocrates 1923–95: VII; *Epidemics* 5.86), and see Watkins (1995: 383–4) for a discussion of the Greek and Norse formulas, though Watkins is oblivious of Norse fern designations.

What is at stake here is obviously respecification resulting from semantic transfer precipitated by metaphoric extension: $från \text{ snake} \rightarrow från \text{ (snake-like) Plant} \rightarrow \text{ (snake-like) } lok \text{ (weed)} = \text{fern } (orm(e)lok)$. This can be compared with the formation of snakeroot (Sanicula canadensis L.). The derivational dynamics that engendered Swedish orm(a)bunk(e) and orm(a)lok (orm(a)låk) involved idiosyncratic restructuring of an archaic formula in an ethnobotanical 'respecification cycle': *lok som frånarorm 'a weed that looks like the speckled snake (of ballad and myth)' \rightarrow *frånarorm(a)-bunke 'a heap or pile (bunke) of such speckled snakes' \rightarrow orm(a)-bunke 'snake heap' (or the like), that is, 'a fern-clump that looks like a heap of speckled serpents'. This echoes Aeschylus' $arg\bar{e}st\bar{e}n \dots ophin \text{ ($\alpha\rho\gamma\eta\sigma\tau\eta\nu$ opiv)}$, 'bright serpent' (Aeschylus 1971–3: II; Eumenides lines 181–4), a highly adequate description of Pteridium (bracken) during the fall or winter. The same metaphorical respecification procedure is paralleled in Icelandic by that language's production of terms for particular

I am grateful to the Kungliga Gustav Adolfs Akademien for a generous travel grant that made it possible to visit Uppsala, Sweden, use its invaluable archives (SOFI: Språk- och Folkminnes Institutet, Dialektavdelning), and consult with dialectologists there during November, 1998. I was thereby able to define the orm(a)lok-isogloss and review literature otherwise unavailable. Thanks are particularly due to SOFI's Gunnar Nyström and Gerd Eklund.

types of heather: *lyng-ormr*, literally 'heather snake' and *lyng-áll*, literally 'heather eel'. Ethnobiological respecification cycles, particularly those involving color terms (see Section 7.3), are detailed below. In this present case, however, we note deletion of *från*, the color term.

7.2 Weeds and the new alliums

As pointed out above (Section 7.1), OIce *lok* is a cover term for weeds. Consider, further, Norwegian *luke* 'to weed', *lukehakke* 'weeding hook', *lukekone* 'weeder', literally 'a woman who weeds'; Danish *lug* 'weed, any invasive plant', *luge* 'to weed', *lugejern* 'hoe'; OE *lucan* 'to weed, to pull out' (including the third person singular preterite *leac* 'weeded' from **lauk* (and thus homonymous with *leac* 'leek')), the preterite plural *lucon*, and past participle *locen* (and compare Gothic (*us*)*lukan* 'to draw, pull out (a sword)'). Old English *lucan* 'to weed, to pull up weeds' persisted into Middle English (*luken*, *lowken*) and was even maintained in some modern British dialects as *louk* 'to weed', *louking* 'weeding', *louker* 'one who weeds' (OED, under *louk*(2)).

Uppsala's Adolf Noreen (1904: Article 170) related Old Swedish *luk* (*lok*, *luuk*), presumably a neuter, to Old Swedish *löker* (from **laukr*) 'bulb, onion, leek' as follows: an originally verbal zero grade (Old Swedish *luk*) confronted an originally nominal *o*-grade (Olce *laukr*).²² Thus, in addition to the *o*-grade deverbative root noun **lauk*- 'leek' (from Indo-European **loug*-), Germanic had a zero-grade verb **luk*- (from Indo-European *lug*-) 'to pull out, break off, eradicate', the ultimate source of the Norse deverbative nouns *lok* (*luk*) 'weed, fern'.

At the outset, Germanic rigidly observed the apophonic arrays of the Indo-European parent language: verbal *luk*- and appellative *lauk*- beside *luk*- and *-lauk* in compounds. Norse compounds in *-lok* such as orm(e)lok are clearly secondary versus original compounds with o-grade *-lauk* giving Swedish *-lök* as in vitlök 'garlic', literally 'white leek'. Use of the o-grade for compounds is notably archaic; compare Latin simplex terra 'earth' with -e-, versus compound ex-torris 'exiled' with -o-.

Old Swedish *lok* resulted from dialectal lowering of short u (luk), though many modern Swedish dialects (Västergötland, Småland, Halland, Blekinge, northeastern Skåne) display lengthening of u before k (or g from k in Skåne). This lengthening is probably due to analogical influence from luka 'to pull up weeds' borrowed from MLG lûken. Compare Old Swedish luuk (if not a scribal error) with lengthening, a change that may have begun before 1300 (Wigforss 1913–18: 661–62).

Aspects of this verbal-nominal apophonic relationship (zero-grade *u* : *o*-grade *ou* respectively), are discussed in more knowledgeable detail than was possible in Noreen's day by Kuryłowicz (1956: 76–82; 1968: 257–80). We may summarize as follows. The Indo-European *o*-grade (Indo-European *ou* to Germanic *au*) perfect tense of zero-grade aorist present-tense forms founded barytonal deverbative root nouns (for example, **lóug*- develops into Germanic **lauk*- 'leek'). Oxytonal zero-grade denominal adjectives (**lugó*-) were extracted from the weak case forms of such nouns, for example, strong accusative singular **lóug*-m with -*ou*- versus weak dative singular **lug-éi* with -*u*-. These zero-grade denominal adjectives (*lugó*-) were secondarily resubstantivized as oxytonal o-grades (*lougó*-) in compounds. Thus, the Germanic *o*-grade nominal **lauk*- 'leek' from Indo-European **loug*- 'that which is pulled out or broken off, debris, weeds' was founded on the Indo-European perfect (equivalent to the Germanic preterite) of a zero-grade verbal **luk*- from Indo-European **lug*- 'to pull out, break off, eradicate'. In turn, the zero-grade denominal adjective **lugó*- founded a Germanic neuter *a*-stem: **luka(n)* (nominative and accusative singular) and **luko* (nominative and accusative plural), the source of Olce *lok* (nominative and accusative singular and plural neuter) 'weed, fern', equivalent to Old Swedish *luk* (*lok*, *luuk*), meaning the same.

Persson (1910–12: 204) considered Old Swedish *lok* (or *luk* (*luuk*)) to have originally been a cover term for (invasive) weeds, particularly in pasture land, and particularly in the diction of medieval laws concerning land tenure and rights. Note the Norse adage 'to spread like weeds (*lok*) over fields' (*ganga sem lok yfir akra*; Jónsson 1914: 110; Fritzner 1954: 2.256; compare Kock 1899: 93). The Old Swedish alliterative legal formula *løf ok lok* (*luk*, *luuk*) 'leaves and weeds' was subjected to insightful analysis by Friesen (1940: 85), who convincingly concluded that, in this particular formula, *luk* meant 'cut brushwood as trash', specifically in reference to the right of a poor soul who owned less than an eighth part (one 'oxgang') of one eighth of a plowland (roughly a carucate in England), that is, approximately 1.89 acres, or a fenced portion of a town's common woodlot to cut and gather there and, in this way, make use of leaves and brushwood (for fuel). Such legal formulas, with their ossified semantics, provide precious evidence for both the historical linguist and the ethnobiologist reconstructing classifications. The suspicion is that Germanic *lauk*- may originally itself have been a grerb-term that passed through an ethnobotanical 'respecification cycle'.

Such cycles may well be a universal feature of ethnobiological diachrony, though they have been largely ignored in recent important work on ethnobiological classification.²³ These cycles generally unfold as follows:

Stage 1 (*
$$X + -lauk$$
) > Stage 2 ($lauk$ -) > Stage 3 ($Y + -lauk$)

where, hypothetically, *X could have been *ker(e)m-/*kr*e/om- (the anterior form of English ramson) and where Y could be geir- as in OIce geir-lauk- 'garlic', literally 'spear leek'. Consider, as examples of Stage 3, the rich inventory of Old English leac- varietals: crop-leac 'garlic', secg-leac 'sedge-leek', refnes leac 'raven's leek', hwit(e)-leac 'white-leek' ('garlic'), hus-leac 'house-leek'; por-leac 'leek' (a tautology), crawan leac 'crow-leek', and hol-leac 'holleke (Allium fistulosum L.)' or 'scallion (shallot) (Allium ascalonicum auct. non L.)', Modern German Hohllauch.

In Stage 2, *lauk*- is considered polysemous and unmarked, denoting *X as primary referent and Y as secondary referent. In fact, Witkowski and Brown (1983) have amply demonstrated precisely this staging and its concomitant marking reversals in a compelling survey of terms for domesticates introduced to Native American cultures (deer: horse, bison: cattle, peccary: pig, opossum: pig, turkey: chicken) as examples of realignment whereby a native term covered a non-native introduction, for example, the native word for 'deer' was also used for 'horse' (a non-native introduction). As Witkowski and Brown point out (1983: 572): 'a common way of encoding an introduced low-salience item is by extending referential application of a native term to it, thereby producing a polysemous label'.

It seems as though Mediterranean *Allium*-types (onion, garlic, leek) were introduced to Germania at a point of transition or, in fact, actually precipitated a point of transition, exemplified by Stage 2; that is, a stage in which *lauk- was deployed as a generic taxon in a respecification cycle. Obviously, Stage 2 is the stage that is least adept at assigning species-specific or varietal taxa to introductions. Alternatively, of course, the introduction of Mediterranean *Allium*-species, as was the case with the introduction of domesticated animals to Native American peoples, must have provoked re-analysis of the semantics of *luk*- versus those of *lauk*-, and (periodic) overt marking of either or both. In the example cases presented by Witkowski and Brown, in Stage 3 the unmarked native term denotes the introduction (for example, the unmarked native word for the peccary now signifies 'domestic pig'), and the

See, however, Witkowski and Brown (1983), and the pertinent sections addressing diachrony in Berlin (1992:

native term plus overt marking denotes the native animal (the peccary) in a manifestation of marking-reversal.

With reference to the case of our *Alliums*, the unmarked native term *lauk*- designated the introduction, the leek (*Allium porrum*), while the native term plus overt marking (*geirlauk*-) may have designated something considered akin to **krémHu*- (the native bear- or wild garlic, *Allium ursinum*), but which was, in fact, yet another introduction (*Allium sativum*). Meanwhile, of the apophonically bifurcated forms, *lauk*- versus *luk*-, the basic founding form (in Kuryłowicz's terms; see note 22) *luk*- (OIce *lok*) was retained as a grerb-term for (invasive) weeds or ferns. The findings of Witkowski and Brown, concerning the introduction of European domesticated animals to native North Americans, are thus reconfirmed by a scenario with a time-depth from Indo-European to Germanic that is approximately ten times as great as that for the example from Witkowski and Brown.

7.3 Berries, 'cabbage' and colours

A further illustration of such cycles is provided by a chapter from the history of Indo-European berry-names. Prefatory to this illustration, consider the following general, but hardly absolute, linguistic principles that pertain to the diachrony of ethnobiological classification.

Simplex names are considered unmarked, are typically generic taxa, and are usually demonstrably older than compound names, which consist of genus plus species. Compound names are typically formed with generics as a head noun, for example, *blueberry* consists of *blue* (the specifier) plus *berry* (the generic head noun). Simplex names are more likely to reveal substratal influence (loans or loan translations) than compound names: plant introductions tend to be initially classified as generics rather than species, subspecies, or varietals of an established genus. Finally, generic taxa tend to be more open to borrowing than varietal taxa. Recall, as documented above (in Section 6.2.2), rampant diffusion of Greek *prason* as a generic. Diachronically certainly, and sometimes even synchronically, simplex names (as generic taxa) tend to be etymologically opaque and/or morphologically aberrant in some fashion. For example, simplex Swedish berry-names suffixed in the diminutive *-on* (for example, *smultron*, *hjortron*, *odon*, *hallon*, *mjölon*) tend to be etymologically opaque, as, for example, in *od-on* (*Vaccinium uliginosum* L.), in which *od* is not transparent (but see Dahlstedt 1950-: 55–74).

The general rule that governs respecification cycles is that earlier specifiers (for example, -lauk in hypothetical Stage 1 as argued above) later become generics (as with lauk- in Stage 2 as argued above), which, in turn, may be respecified (for example, geir-lauk- in Stage 3 as argued above). This occurs typically with reference to an 'unmarked' generic specifier (as with -lauk), thereby setting up the process to be repeated all over again in a continual derivational chain. The output of one respecification cycle is thus the input of the next, and so on. Some cycles may be short-lived, others may not be. The dynamics of the cusps of such cycles merit further investigation.

The principles described above may be illustrated as follows. Many of the most archaic western European berry-names are (generic) simplex forms. They are not, unlike English *blueberry*, compounded with a varietal specifier. The majority of such generic names reflect (archaic) color terms (indicating RED, BLUE, BLACK, and shades and intensities of same). Now

260-90) and Brown (1984: 43-58).

consider the respecification cycle diagrammed below in which Stage 2 results from deletion of the head noun (*berry* in the Model, X in the Russian example) of Stage 1:²⁴

Recognition of the systematics that underlie ethnobiological naming typologies as they interface with the dynamics of respecification cycles *per se* also permits clarification of some hitherto problematic Indo-European material. For example, given color as a classificatory matrix for generic berry-names, previously etymologically opaque Latin *fragum* 'strawberry' (French *fraise*) may now be correctly related to an underlying Indo-European *dherg- 'red', as in Irish derg 'red'. The conclusion is that Latin *fragum* emerged from Stage 2 in a respecification cycle.

A further example can be given. Indo-European *\$\hat{g}hel-/*\hat{g}hol-\$ 'yellow, green, gray, blue', ultimately the source of German \$gelb\$ 'yellow', is contained in the Latin neuter \$s\$-stem \$holus\$, (genitive singular \$holeris\$)\$^25\$ 'vegetables, greens, cabbage, colewort, turnips', and \$holusculum\$ 'small cabbage'. Cato (1935; \$De agri cultura 156.1-7\$) classified cabbage (\$brassica\$) as the most significant member of the 'genus' \$holus: 'It is the cabbage that is superior to all greens' (\$Brassica\$ est quae omnibus holeribus antistat\$). As pointed out above, in Lithuanian, Indo-European *\hat{g}hel-/*\hat{g}hol\$- is reflected as \$zole\$ (Latvian \$zale\$) 'grass, herb' (versus Lithuanian \$zalias\$, Latvian \$zals\$, both meaning 'green'), and in Slavic by \$zelje\$ 'herb', a grerb-term as we have seen. In Czech and Bulgarian, however, \$zeli\$ and \$zele\$ respectively, can alone signify 'cabbage', as opposed to \$kapusta\$ (or the like) for 'cabbage' elsewhere in Slavic. The culinary saliency attached to 'cabbage' in Slavic prompted (dialectal) merger of a generic taxon with a life-form term that was originally a 'generic' color term (at Stage 2) in the ethnobotany of the proto-language.

Model	Russian
Stage $1 = dark_1 + berry$	*smorodina + X 'blackberry'
Stage $2 = dark_1$ 'berry'	smorodina 'currant (small edible berry)'
Stage $3 = (\text{new colour term}) + dark_1 \text{ 'berry'}$	ch'ernaya + smorodina 'black currant'

Table 2. An example of a respecification cycle in Russian.

8. 'Leeks' and ethnobotanical classification

Given the dynamics of ethnobotanical respecification cycles, particularly when confronted with plant introductions, one might suggest that *lauk- may once have syntagmatically classified native Allium-like plants, perhaps varietals of Allium ursinum, such that there may once have been a Germanic *hramu-laukaz from an Indo-European *kromu-lougos. Subsequently, -lauk- could have been segmented off from such a binominal as a generic cover term (Stage 2 in the respecification cycle) for an introduced Allium crop package (onion+garlic+leek). However this may be, diffusion of the introduced package apparently occasioned progressive marginalization of Indo-European *krémHu- in western Europe.

Further to Slavic smoro- (signifying any dark blue or red color), compare: Rumanian zmeura 'raspberry'; French mûre both 'mulberry' and 'blackberry' (which requires de ronce for disambiguation); Latin morum 'blackberry'; Irish smear (older mer, equivalent to and alternating with smer) '(black)berry'; Finnish marja 'berry' (generic taxon), an early loan from Northwest Indo-European; and, again, compare the diffusion of Greek prason as a generic taxon (Section 6.2.2).

The earlier form was *helus*, *helusa*, according to Paul the Deacon's epitome of Sextus Pompeius Festus' version

Moreover, any thesis that 'leek' may once have been considered a form of *hramus- (Allium ursinum) is vitiated by the empirical fact that it was (and is) nowhere classified as such.

As demonstrated above (Section 6.2.3), the utility of Germanic *lauk- as a generic taxon for Allium-type introductions was seized upon by Baltic, Slavic, and Balto-Finnic. Promotion of *lauk- as a generic taxon must have been due to particularly compelling cultural associations (high saliency) centered around the introduction of Allium porrum. Recall, similarly (from Section 7.3), that culinary saliency orchestrated the special purpose applications that promoted implementation of a grerb-term as a generic taxon for cabbage in Czech and Bulgarian.

Bear in mind that the special purpose applications of leek, reiterated by Pliny for Rome as shown above (Section 4.6), were centered around appreciation of the leek's role as a fertility herb in Greek folk medicine. At the outset, this appreciation was necessarily an expressly Mediterranean mannerism: the leek was originally unknown in early northern Europe. Early Mediterranean association of the leek with fertility may have derived from observing it as a highly invasive (fertile) plant in the wild. Indeed, imitative magic and experiential logic are driving forces of folk medicine.

Germanic *luk-/*lauk- from Indo-European *lug-/*loug- originally covered the semantic fields weed and Herb, but then secondarily denoted *Allium*-type 'herbs', though not 'grass'. Therefore, *luk-/*lauk- must have shared a significant portion of the semantics of prominent Germanic grerb-terms: *gras- ('grass, herb, weed'), *wurt- (wort) ('herb, weed'), *krud- ('crowd grass, crowd weed').

Basing himself on a survey of data collected from 188 languages to ascertain uniformities in ethnobotanical encoding practices, Brown (1984: 118, synthesized from Brown 1977), demonstrated that, once languages have encoded both grerb and grass, then grerb 'tends to include only non-grass herbaceous plants'. This holds for Germanic *luk-/*lauk- which therefore appears to be a secondary, though pan-dialectal, grerb-term.

Drawing from genetically unrelated and geographically widely separated languages, Brown (1984: 62–5) showed that, in an overwhelming majority of instances, grerb-terms evolved from words that either synchronically or diachronically reference(d) rubbish, debris, trash, litter, garbage (often rotted), and then 'weeds'. Brown showed that the common semantic focus of progenitors of grerb-terms is (PEJORATIVE) VEGETATION.

Germanic *lauk-, from Indo-European *loug-, finds an exact correspondence in Lithuanian láuž-as 'rubbish, debris, heap of broken branches'. ²⁶ Note, further: Latvian láužni 'broken trees'; Lithuanian lúzenos 'breakage, wreckage, debris' (equivalent to Latvian lúžni 'scraps, debris (usually of plants)'), both verbal adjectives in -eno- (equivalent to Germanic participial *-ina-); Lithuanian láuz-ti 'to break' (transitive, equivalent to Latvian láuz-t 'to break'); Lithuanian lúž-ti 'to break' (intransitive, equivalent to Germanic *luk- 'to pull or draw out, to weed, break off' in, as noted above in Section 7.2, Old English lucan).

With respect to the emergence of Germanic *lauk- as a grerb-term, Baltic preserves the anterior semantics predicted by Brown (1984). Baltic litiz- is immediately comparable to Old Swedish luk (lok, luuk) with the ossified semantics 'brushwood' in legal contexts (see the discussion in Section 7.2 with reference to Friesen 1940: 85). The same semantic history, PLANT DEBRIS to GRERB, is recapitulated within the history of Greek: Classical Greek $phorb\bar{e}$ ($\phi op \beta \eta$) 'fodder (debris)' to Modern Greek $phorv\bar{e}$ ($\phi op \beta \eta$) 'herb, grass'.

of the De significatu verborum (Pieroni 2004).

²⁶ Láuž-as has an acute accent in compliance with Werner Winter's Law to account for Indo-European *g becoming Baltic ž.

I conclude that *lauk- was originally a generic grerb-term ('that which is pulled up, eradicated, broken off, debris, a weed') which came to denote 'grass, herb, weed'. The term was subsequently deployed as a polytypic generic taxon to identify not only the contents of an introduced Allium crop package (onion+garlic+leek), but also a particular member, the leek. This package must have been introduced from the Mediterranean during the final phases of Common Germanic. The exclusive 'leek' meaning of Germanic *lauk- is demonstrably secondary to its original use as a grerb-term. To reiterate for emphasis, *lauk-was originally a grerb-term that secondarily came to designate what must have been considered the prototypical, unmarked member and focal mainstay of an introduced Allium crop package, the leek.

Diachronically, as Berlin (1992: 274–5) suspects from his ethnobiological evidence and, as the Indo-European evidence clearly shows, the development of life-form taxa (such as grerb) is followed by development of generic taxa. Diachronically, the hierarchy universally evolves as: generic to species to varietal.

In terms of this hierarchy, 'leek' should have been represented by a generic term and not by what was originally a life-form taxon. We hypothesize that generic status was arrogated by life-form status due to the leek's exalted cultural rank (high saliency), a direct result of its role as a fertility herb. Similarly, dialectal Slavic plugged in a grerb-term for 'cabbage'. It might also be argued that, as an imported plant, 'leek' lacked a native Germanic counterpart in a competition for generic status labeling.

As pointed out by Berlin (1992: 276), Whistler (1976) was apparently the first to contend that societies with hunting and gathering subsistence patterns tend to have a preponderance of monotypic taxa of generic rank and a general lack of subgeneric and varietal taxa. Berlin (1992: 288-90) then adduced the Seri (peoples along the Sonoran coast of Mexico and the islands of the Gulf of California) as a clear counter-example to Whistler's conclusions drawn from his Patwin data. The fact is that early peoples and contemporary native societies alike, irrespective of particular subsistence or cultural patterns, were and are ignorant of Linné (Linnaeus) and/or cladistics. Yet both conduct(ed) ethnobiological classification in terms of hierarchical sequencing. The only logical conclusion is that hierarchical classificatory sequencing results from some universal predisposition in human biology. In an enviably clear and widely circulated, but regrettably yet to be published, presentation of competing classificatory systematics (numerical versus phylogenetic), Zegura (1990: 14) closes with a reference to Ambros-Ingerson, Granger and Lynch (1990). These investigators demonstrated that 'a neural network model of the olfactory paleocortex connected to its primary input structure (the olfactory bulb) has striking correspondences in how it organizes input stimuli with two widely used statistical techniques: hierarchical clustering and principal components analysis'. How we identify odors and how we conduct biological classification are mechanically identical processes.

The universality of the classificatory sequence 'generic ... to ... varietal' confirms the operation of these pre-wired behavioral mechanisms. In making this connection, Zegura (1990) anticipated and substantiated by nearly a decade what Gould (1998: 77) still calls a 'something': 'something deep in the human psyche leads us to impose simple taxonomic schemes of distinct categories upon the world's truly complex continua'. To which, with a

Further support for interpreting *lauk- as a grerb-term is supplied by the incisive commutability of OE leac 'leek' and wyrt 'wort': OE leactun 'herb [not leek] garden' is equivalent to OE wyrttun 'herb garden'. Compare OIce laukagarðr versus jurtagarðr (archaic Swedish örtegård).

profound sense of yawning, we say amen.

How humans conduct ethnobiological classification versus what they classify, and how they rank what they classify are, of course, distinctly different issues. Finalization of relative rank assignment (monotypic generic, or polytypic generic, and so on) to what is classified is a subsidiary issue dependent upon intervening complexities posed by social structures, subsistence patterns and cultural attitudes, as well as differences in ethnobiological knowledge and environments.

9. Grerbs in literature

It is the definition of *lauk*- as 'grerb', as a life-form term, rather than a generic taxon, that ultimately opens the final hemistich of Stanza 4 of the Eddic $Volosp\acute{a}$ to a valid interpretation:

þá var grund gróin grænom lauki

Then was the ground grown (healed) with green 'leek'

where *lauki* is contrapuntally appositive to *gras* as grerb in the final hemistich of the preceding stanza:

gap var ginnunga, enn gras hvergi

There was the Ginnungagap [primordial void], but still no grass anywhere,

such that both *gras* and *lauk* are appreciated as categorical mass nouns and synonymous grerb-terms. The intentionality is not 'there was no grass', but 'there was no grerb (prior to the earth's creation).' As Shakespeare worded it in his *Venus and Adonis*: 'No flower was nigh, no grass, herb, leaf, or weed'.

In line with this interpretation, Stanza 4 of the $Vqlosp\acute{a}$ informs us that grerb came after the earth's creation, but before Bur's sons (Odin, Vili, and Ve) 'lifted the bottoms, when they created mighty Midgard'. In some traditions, Bur (or Bor) is the grandfather. In either case, vertically (X – Bur – and then his three sons) or horizontally (Odin – Vili – Ve), three generations or three lives respectively are said to have elapsed with no grerb prior to the appearance of the gods and their creation of Midgard.

This is arrestingly reminiscent of a passage in the *Rig-Veda* (Aufrecht 1968: II; Bk 10.97.1–6) in which a doctor praises his medicinal herbs, calculates his possible fee, and then selects and blesses the particular herb prescribed for a patient. The motif is unique for the *Rig-Veda*. The pertinent line is: 'Now I will consider a hundred and seven kinds of brown (that is, ripe) ones, those grerbs which were born (came into being) first, three generations (three life-spans) before the gods' (*ya ósadhih purva jata devébhyas triyugám pura/manai nú babhrunam ahám satám dhamani saptá ca*), where GRERB is denoted by *ósadhi-* (compare Middle Indic *ausadha* 'grerb', and Punjabi *ouhur/auhur* 'grerb').

From the comparison above, one infers that the *Volospá* tradition and its formulaic *lauk*-context are both highly archaic; employment of *lauk*- as a grerb is necessarily anterior to identification of *lauk*- as 'leek'. This demonstration seemingly renders *lauk*- in Stanza 8 of *Sigrdrífumál* ambiguous, meaning either 'grerb' or 'leek'. This equivocation is scrupulously avoided in the three remaining Eddic occurrences of *lauk*- (cited in full above, in Section 4.4) by disambiguating specification with *geir*- 'spear' to yield 'garlic', and by sub-classification as a 'genus' of *gras* (that is, a grerb) in *Guðrúnarqviða in fyrsta*, Stanza 18 (so too, by Snorri in *Óláfs saga Helga*, 223, cited above in Section 3). Disambiguation also occurs by specification with *ttr*- in *Helgaqviða Hundingsbana in fyrri*, Stanza 7, while *Guðrúnarqviða onnor*, Stanza

2, parallels *Guðrúnarqviða in fyrsta*, Stanza 18, in which the only difference between the two is substitution of *grænn* 'green' in the former for *geir*- 'spear' in the latter.

The point is that *lauki* in *Sigrdrífumál*, Stanza 8, is homeopathically disambiguated only by extra-Germanic reference to Classical sources such as Pliny (1942–83: VI; Bk 20.21), who, as we saw above in Section 4.6, prescribed the (garlic) leek as an antidote for poisons. In denoting *Allium (porrum)*, rather than grerb, Germanic **lauk*- was initially dependent on Mediterranean dictionary entries for ultimate clarification of its homeopathic significance. But then, if not an independent development on the part of early Germanic peoples, how, when and where did they acquire their knowledge of the homeopathic values that Mediterranean peoples had assigned the leek?

10. The Germanic acquisition of medical-magical leek associations

As noted by Rivers (1924: 108), one of the first professional anthropologists to be concerned with such matters, it is very difficult to adduce a general thesis of transmission for medicinal-magical-religious practices. However, as Rivers himself demonstrated, it is comparatively easy to correctly theorize a specific transmission, particularly when that transmission pertains to specific practices associated with a specific item. Here the specific item is the leek as a correlative of a particular magical-medicinal-religious fertility practice or set of practices.

With this principle in mind, and informed by the etymological accounts detailed above, we proceed to glance at a particular ritualistic horizon in northeastern Italy that may have involved the leek, a horizon that was also a point of contact for early Germanic peoples and one of the probable sources of the runic alphabet. The particular horizon is that of the Venetii, an ancient Italic (Indo-European) group that gave their name to Venice and that thrived as a literate culture in the surrounding area (from Venice westward to Vicenza, from Adria in the south to Gailtal in southern Austria in the north) from about 550 BC until romanized about 90 BC.

It is Latin *Porrima* as an epithet for Carmentis that suggests association with the weakly attested Venetic *Pora* (= *porra*; only four examples), an epithet of the Venetic goddess Reitia, a protectress of fertility and childbirth and a healer of women's diseases; that is, seemingly a local version of Artemis-Orthia who was celebrated at the women's sanctuary of Baratella at Este (ancient Ateste). Reitia may be safely assigned to the Artemis-Hekate/Diana/Cybele/Luna range of early Mediterranean fertility goddesses that belonged to the moon cycle, divinities in whom the contrasting principles of virginity and motherhood were fused together. As Anna Marinetti of the University of Venice (personal communication) kindly informs me, no further *Pora*-inscriptions have come to light since the appearance of Lejeune's *Manuel* in 1974. One example of a *Pora*-inscription will suffice; they are all very similar.

Es 45 is a 'talking text', in other words, the reader-beholder is addressed in the first person by the inscription on the votive object.²⁹ It is inscribed as four lines on the four sides of a rectangular bronze writing stylus with a finely molded top, a woman's luxury item (compare the Fløksand meat-knife with its formulaic *linalaukarf*), and it comes from the women's

²⁸ For philological discussion of these texts, see Pellegrini and Prosdocimi (1967: I.100, 105–7, 149–50, 164–5, and 174–5.

Es 45 is the catalogue number assigned in Pellegrini and Prosdocimi (1967). This inscription is Lejeune's No. 26 (1974: 205), and Pauli's No. 61 (1885), with an illustration.

Baratella Sanctuary at Este (Es), from the phase dated to c.300–150 BC.

SIDE ONE: mego dona.s.to sa.i. SIDE TWO: nate.i. re.i.tiia.i. pora.i. SIDE THREE: .e.getora .r.i.mo.i. ke lo

SIDE FOUR: .u.derobo.s.

(Literally: me gave (dedicated) to Sainati to Reitia to Pora, Egetora for Aimus and (their) children.)

Egetora dedicated me to Sainati, to Reitia, to Pora, on behalf of her husband Aimus and their children.

This refers to the progeny (*louderobos*, equivalent to Latin *liberis*) of Egetora, the dedicant, and of her husband, Aimus (as perceptively emended by Lejeune). Whether or not the children are already born or yet to be born (hence unnamed), or both unborn and born, poses an interesting question. Presumably it is future progeny; hence inclusion of Pora as the pertinent epithet of Reitia in her particular function as the goddess of prospective childbirth and, thence, immediate comparability with Porrima. This interpretation is supported by a second *Pora*votive (Es 23), 30 which reads: 'me gave (dedicated) e- (?) b- (?) Fabaitsa to Pora on the occasion of (in the season, or at the time of) births', in which e... and b... remain obscure abbreviations.

There is nothing linguistically that militates against assuming that an early Italic *porsa developed into Venetic pora = [porra] or [pora]. Venetic lacks instances of geminate -r- and does not indicate vowel length.

Given archaeologically documented early Venetic/Rhetic-Germanic contact (c. 150 BC until romanization), also within the context of Reitia veneration throughout both the Venetic and Rhetic horizons (particularly at Magrè near Schio in the hills northwest of Palladio's Vicenza), Germanic could well have translated Venetic *pora* as *lauk*-, originally a grerb-term expropriated as a culturally significant generic taxon.

As demonstrated above (Section 6.2.2), the creation of Greek *prason* as 'leek' resulted from a uniquely Greek semantic event. The word's subsequent diffusion was rampant; from the Iberian Atlantic to the Caucasus and from the Mediterranean to the Baltic. The form *prason* (*parson) gives Italic *pors-om/*pors-os/*pors-a which denoted a culturally significant member of an *Allium* crop package that was originally unknown in Germania (as well as in the early western Mediterranean at some point in prehistory). The leek's associations with female fertility, if not originally Hellenic, were certainly deeply entrenched in Greek folk medicine at a very early date and were condoned by none other than the celebrated Hippocrates. These associations were presumably not Anatolian in origin. As Beckman (1983: 254–5) concludes: 'Hittite practitioners had no real practical acquaintance with the use of medicines in gynecology'. Whatever healing agents (*huišu wašši*) were brought to those on the Hittite birthing stool, they did not include the leek, though the garlic/onion (*šuppi-wašhar*) was a plant of ritual purification.

Greek herbalist practice apparently accompanied diffusion of the term and the plant. This was certainly the case in Italic as shown by Greek-derivative Roman herbalist folk medicine chronicled by Pliny. There was no *Allium porrum* and therefore, of course, none of its fertility associations, in early Germania (and there were never such associations in Celtic, Baltic, or Slavic), yet the usage grid and the fertility associations of *Allium porrum*

³⁰ Lejeune's No. 8 (1974: 197), and Pauli's No. 54 (1885), with an illustration.

in the early Mediterranean and later in Germania are strikingly similar. These features are: internal medicinal consumption, (female) fertility, identification as an *Ersatz*-penis (to dilate the womb) and/or as a *pars pro toto* emblem of an *Asvamedha* analog in the *Volsa þáttr*, and a venom remedy in *Sigrdrífumál* (Stanza 8) and in Pliny's *Naturalis historia*. Given the rarity-of-agreement rule established by Rivers (1924: 108) and subsequently corroborated by hordes of cultural anthropologists, this identity may be appreciated as evidence of transmission rather than parallel independent development. And, to reiterate, Germania originally had no *Allium porrum* for a parallel, and no member of the *Allium* package is more phallic than *Allium porrum*.

The runic *laukar* bracteates as amulets, and the inscription of *laukar* on women's luxury items seemingly had the same significance as the Venetic *Pora* votives: a fertility and/or birthing charm. If so, then *laukar/Pora* present an *ex voto* epigraphic practice that is unattested anywhere else in western Europe. Ovid died in 17 AD, but, by his day, Porrima was all but a distant memory, a hapax. There is no Roman *ex voto* tradition with an epigraphic *porrum*, *Porrima*, or *Porra* (*Pora*)/*Prorsa*. Venetic *Pora* is thereby uniquely isolated as a possible source for formulaic *laukar*. A *laukar* 'leek' equivalent to *Pora* 'leek' identification must have been contracted within the context of northern Italian Reitia veneration. It would stretch credulity to the extreme to assume mere coincidence. It was when he had eliminated all other possibilities that Sherlock Holmes identified his culprit.

Collocation of runic *laukar* and *alu* on the Skrydstrup bracteate (Krause and Jankuhn 1966: no. 109) appears to continue a cross-cultural epigraphic practice and belief system, namely, Venetic *Pora* and Rhetic (North Etruscan) *alu*-, which may be roughly glossed as 'dedicated and therefore protected by the mysteries', just as the runes themselves must have originated in the cross-cultural epichoric epigraphies of early northern Italy. Furthermore, the 'framing abbreviation' of runic *laukar* as l_R , indicated at the outset, is an inherently Etruscan graphic convention that was carried over into Rhetic, for example, where re stands for [r[iti]e], a Rhetic equivalent of Venetic *Reitia*. Moreover, repetition of salient abbreviations, either 'framing' or 'content' (either re or iti respectively), for Reitia in the case of Rhetic, and l_R for laukar in the case of runic, points to a common origin.

I conclude that the runic *leek*-bracteates appear to evidence protracted continuation of belief in a particular brand of cult-assisted (female) ethnobotanical folk medicine that had a lengthy and well defined Hellenic and thence Mediterranean pedigree. And Indo-European medical practice is, after all, the central message of the runelore in the Poetic Edda's *Sigrdrífumál*. Hence, runic *laukar* (*lr*) 'leek', like the immutable runic *alu*, a term borrowed from Rhetic (North Etruscan), a *hosanna*-word, became part of *langue* rather than *parole* (that is, part of innate language rather than just a loan-word).

The Venetic Reitia-Pora association must itself have been a product of cultural transfer, transfer to Venetia and thence Rhetic Italy of an Adriatic Doric Artemis-Orthia veneration centered around female fertility and the establishment of women's sanctuaries for the accomplishment of same. Doric Artemis-Orthia veneration was centered on the Orthian sanctuary at Sparta, which dates from the tenth century BC, where Orthia (Reitia) was primordial, and her association with Artemis entirely secondary (Rose 1929).

11. Late traces of the medicinal-magical leek

11.1 Armenia

As John A. C. Greppin has kindly pointed out (personal communication), Germanic reception of the leek from Classical ethnobotanical folk medicine is neatly paralleled in Armenian. The major differences between the two are that:

- 1. Armenian borrowed its major term for 'leek' directly from Greek (*pras* from *prason*), beside the later synonym *k'urat'*;
- 2. the genesis of Armenian folk medicine is well documented.

Armenian folk medicine was based on Dioscorides' (c.20–c.70 AD) *De materia medica*, and on Galen's (c.130–c.200 AD) works. In the Armenian fifth-century *Book which is Called Learned*, we find: 'we read of garlic, leek, and onion' (*handerj soxovn ew xstoriw ew praxiwn*). A millennium later, in Amirdovlat Amasiati's fifteenth-century *Angitats' anpet kam baranan bzshkakan niwt'tots* ('Worthless for the Ignorant: Or a Dictionary of Medical Substances'), which is based on Greek ideas via Arabic, there is an entry (No. 3634) that twice involves leek (denoted by *k'urat'*) and the womb. The first statement reads: 'and the (leek's) leaf heals the moistures of the womb' (*ew ir terewn awgte argandin gicut'ean*) where *gec* 'moisture' (more commonly *gej*) is a sexual moisture, a word that is also used for 'sperm' and 'onanism'. The second statement reads: 'when a woman sits in (leeks) that have been cooked in sea water, the vigor of her womb will be restored, and the pain there will diminish' (*ew t'e ep'en covu jrov ... ew kanayk' i mijn nstin, awgte argandin c'awin, ew pndut'ean*). These pieces of wisdom apparently wandered out of Dioscorides' *De materia medica* (Bk 2.149), probably with the help of some Arabic redactor and/or epitomator such as Sulayman ibn Hassan ibn Juljul (born c.943) (Dietrich 1993).³¹

11.2 Spain

In far off Spain shortly after the good lady of Fløksand had been laid to rest in Norway with her *leek*-inscribed meat knife, Prudentius (348–c.409 AD) was inveighing against the pagan leek (Prudentius 1949–53: II.246–9; II.74–7). His *Peristephanon* (Hymn 10: *Passio Romani*, lines 256–65) says:

Venerem precaris, comprecare et simiam.
placet sacratus aspis Aesculapii:
crocodillus, ibis et canis cur displicent?
adpone porris religiosas arulas,
venerare acerbum caepe, mordax allium.
Fuliginosi ture placantur lares,
et respuuntur consecrata holuscula?
aut unde maior esse maiestas focis
quam nata in hortis sarculatis creditur?
si numen ollis, numen et porris inest.
If you pray to Venus, then why not supplicate a monkey too?
You accept the sacred asp of Aesculapius:

For important, reference-rich surveys of Armenian folk medicine, see now Greppin (1990: 92–3; 1998).

Then why not accept crocodile, ibis, and dog? Serve up your sacred mini-altars with leeks, Venerate the biting onion and stinging garlic. Are not your sooty household gods pleased by incense And yet consecrated vegetables spat back? Or whence is more grandeur thought to be in fireplaces Than that born in weeded gardens, If a divinity be in them, then why not in leeks?

And, in *Contra Symmachum* (Book II, lines 865–72), in opposition to the request by Symmachus, the senator, that the altar of Victory be restored to the senate house:

sunt qui quadriviis brevioribus ire parati vilia Niliacis venerantur holuscula in hortis, porrum et caepe deos imponere nubibus ausi, alliaque et senapin (serapin?) caeli super astra locare. Isis enim et Serapis et grandi simia cauda et crocodilus idem quod Iuno, Laverna, Priapus. hos tu, Nile, colis, illos tu, Thybris, adoras; una superstitio est, quamvis non concolor error. Some are prepared to fare by shorter cross-roads, And venerate vile vegetables in gardens by the Nile, Daring to ensconce leek and onion in the clouds as gods, And place garlic and mustard (?) above heaven's stars. For Isis and Serapis and the big-tailed monkey. And Crocodile too are but the same as Juno, Laverna and Priapus: The former, O Nile, you worship; the latter you venerate, O Tiber; The superstition is the same, though the appearance but differ,

in which the oblique reference behind lines 263–64 in the *Peristephanon* and line 867 in the *Contra Symmachum* is sourced in lines 9–11 the *15th Satire* of Juvenal (died c. 140 AD), 'On Egyptian Outrages': 'but it's an impious offence to crunch leeks and onions with the teeth. What a sacred race to have such divinities born in its gardens!' (*porrum et caepe nefas violare et frangere morsu*; *o sanctas gentes quibus haec nascuntur in hortis numina*!) (Juvenal 1940).

11.3 Germany

Some six centuries after its composition, Prudentius's Hymn 10 would be glossed by a Saxon scribe (Hand C) at the North German cloister of Werden. The scribe inserted *hallóc* (equivalent to OE *holleac*) beside *caepe* and *clvflóc* beside *allium* at line 260 (Gallée 1894: 126–31). Latin *porrum* had presumably already entered his speech as *porro* (or the like) beside his native *lok*, for it was *porrum* that no longer required a gloss (compare German *Porree* and Dutch *prei*). In the temporal world outside that scribe's cloister, the runes had long ago fallen into disuse. Then too, the leek as a fertility fetish, though not as an important herb, was being displaced, ousted by the powers behind the very message the Saxon scribe so industriously glossed. Nevertheless, a further four centuries were to elapse before Chaucer's reeve could render the leek's pagan fertility associations innocuous in the eyes of a reigning religiosity by, as Northrop Frye might have said, displacing them from the precincts of the sacred to the provinces of the profane, from high seriousness to low comedy. In a Christian-resistant Norway contemporaneous with the reeve's ride to Canterbury, a Norwegian farmer's wife

could still be found passing her leek fetish around a harvest table in emulation of a long-forgotten Venetic Pora's ethnobotany. Such indeed is the endurance of folk medicine and ethnobotanical classification.

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