The Arabic Origins of English and Indo-European "Floral Terms": A Radical Linguistic Theory Approach

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Abstract: *This paper aims to trace the Arabic origins or cognates of English, German, French, Latin, Greek, and Sanskrit "floral terms" from a radical linguistic (or lexical root) theory perspective. The data comprises 163 such terms like "arboreal, beans, cabbage, carrot, cauliflower, daffodil, elm, flower, garden, grove, horticulture, lilac, maize, orange, orchard, peas, plant, radish, rose, sprout, sprig, tree, vegetable, wheat, zucchini", and so on. The results clearly show that all such words have true Arabic cognates with the same or similar forms and meanings, whose differences are due to natural and plausible causes and different routes of linguistic change, especially lexical or semantic shift. Therefore, the results support the adequacy of the radical linguistic theory according to which, unlike the Family Tree Model or Comparative Method, Arabic, English, German, French, Latin, Greek, and Sanskrit are dialects of the same language or family members, renamed Eurabian or Urban family, with Arabic being their origin all because only it shares the whole cognates with them all and because it has a huge phonetic, morphological, grammatical, and lexical variety, wealth, and versatility. Also, they indicate that there is a radical language from which all human languages stemmed and which has been preserved almost intact in Arabic as the most conservative and productive language.*

Keywords: *floral terms, Arabic, English, German, French, Latin, Greek, Sanskrit, historical linguistics, radical linguistic (lexical root) theory, language relationships*

1. INTRODUCTION

Jassem (2012a-f, 2013a-q, 2014a-k, 2015a-h, 2016a) has shown in forty six studies so far that Arabic, English, German, French, and the so-called Indo-European languages in general are genetically related very closely phonetically, morphologically, grammatically, and semantically or lexically to such an extent that they can all be regarded as dialects of the same language. More precisely, the Arabic origins or cognates of their words were successfully traced in twenty six lexical studies in key semantic fields like numerals, religious, love, democratic, military, legal, and urban terms (Jassem 2012a-d, 2013a-q, 2014a-k, 2015a-h); in three morphological studies on inflectional and derivational markers (Jassem 2012f, 2013a-b); in nine grammatical papers like pronouns, verb 'to be', wh-questions, and case (Jassem 2012c-e, 2013l, 2014c, 2015d); and in one phonetic study about the English, German, French, Latin, and Greek cognates of Arabic back consonants (Jassem 2013c). Furthermore, the theory was extended in another five even wider studies to the examination of the Arabic origins of pronouns in Chinese (Jassem 2014h) and Basque and Finnish (Jassem 2014i), demonstratives (Jassem 2015i), negation (Jassem 2015j), and plurality (Jassem 2016a) in eleven major (and minor) language families in the last three, making up 95% of the total world population. Finally, two papers applied the approach to translation studies (Jassem 2014e, 2015b).

The above forty six studies have initially utilized the lexical root theory (Jassem 2012a-f, 2013a-q, 2014a-g, 2015a-h) and subsequently its slightly revised and extended version, called radical linguistic theory (Jassem 2014 h-k, 2015a-j, 2016a), both deriving their name originally from the use of lexical (consonantal) roots or radicals in retracing genetic relationships between words in world languages. The theory first arose as a rejection of the Family Tree Model or Comparative Method in historical linguistics for classifying Arabic as a member of a different language family than English, German, French, Latin, Greek, Sanskrit, and the so-called Indo-European languages (Bergs and Brinton 2012; Algeo 2010; Crystal 2010: 302; Yule 2014; Campbell 2004: 190-191; Crowley 1997: 22-25, 110-111; Pyles and Algeo 1993: 61-94). In all the above forty six studies, the tightly-knit genetic relationship between Arabic and such languages was, on the contrary, categorically established phonetically, morphologically, grammatically, and semantically or lexically so much so that they can be really

considered dialects of the same language, where Arabic was found to be their source or parent language for several reasons (Jassem (2012a-f, 2013a-q, 2014a-k, 2015a-g). In other words, Arabic, English, German, and French words of all types and sorts, for example, were shown to be true cognates with similar or identical forms and meanings, whose apparent differences are due to natural and plausible causes and diverse routes of linguistic change. This entails that all such languages developed, in fact must have developed, from an earlier single, perfect, suddenly-emerged Radical Language from which all human languages emanated in the first place, and which could never have died out but rather has fully, though variably, survived into today's languages, to which they can all be traced, with Arabic in particular being the closest or most conservative and productive descendant. To aptly capture the close genetic linkage between Indo-European and Arabian languages in general, a new larger language family grouping has been proposed, called *Eurabian* or *Urban* (Jassem 2015c: 41; 2015d).

This paper continues the quest by examining the Arabic origins and/or source cognates of *floral terms* in English, German, French, Latin, Greek, Sanskrit, and the so-called Indo-European languages. The remainder of the paper includes four sections: (ii) research methods, (iii) results, (iv) discussion, and (v) conclusion.

2. RESEARCH METHODS

2.1. The Data

The data consists of 163 *floral terms* like *arboreal, beans, cabbage, carrot, cauliflower, daffodil, elm, flower, garden, grove, horticulture, lilac, maize, orange, orchard, peas, plant, radish, rose, sprout, sprig, tree, vegetable, wheat, zucchini*, and so on in English, German, French, Latin, Greek, Sanskrit, and Indo-European languages as well as Arabic, now all generally called *Eurabian* or *Urban*. Their selection has been based on the author's knowledge of their frequency and use in today's fully natural English, German, and French conversations and/or texts as well as English dictionaries and thesauri. For ease of reference, the data will be arranged alphabetically together with brief linguistic comments in the next Results section (3).

As for etymological data, all references to English and Indo-European languages are for Harper (2016) despite, like all other similar dictionaries upon which it was based, its severe shortcomings owing to the many unknowns, uncertainties, and the seemingly illogical derivations or meanings of many words such as *acorn, bean, bloom, bud, chick peas, daffodil, farm, fig, forest, fruit, harvest, husk, mow, plant, pulp, rose, stalk, watercress, wither, zucchini* and so on which make more sense if derived straight from Arabic as shall be seen in section (3) below. Therefore, it, along with similar dictionaries, has to be used with extreme care and discretion.

Concerning Arabic data, the meanings are for Ibn Manzoor (2013) in the main, Ibn Seedah (1996: 10/170-225, 11/1-222), Altha3alibi (2011: 329-335), Albabidi (2011: 229-320), e-dictionaries like *mu3jam alama3ani* (2016), and the author's knowledge and use of Shami (Syrian) Arabic as a native speaker. All the genetic linkages between Arabic, English, German, French, Latin, Greek, Sanskrit and so on are exclusively mine, unless otherwise stated.

In transcribing the data, normal Romanized spelling is used for all languages for practical purposes. Nonetheless, certain symbols were used for unique Arabic sounds: namely, /2 & 3/ for the voiceless and voiced pharyngeal fricatives respectively, /kh & gh/ for the voiceless and voiced velar fricatives each, /q/ for the voiceless uvular stop, capital letters for the emphatic counterparts of plain consonants /T (t), D (d), Dh (dh), & S (s)/, and /'/ for the glottal stop (Jassem 2013c). Long vowels in Arabic are usually doubled- i.e., /aa, ee, & oo/.

2.2. Data Analysis

2.2.1. Theoretical Framework: Radical Linguistic Theory

Data analysis shall utilize the Radical Linguistic Theory (Jassem 2014h-l, 2015a-j), a slightly revised and more generalized version of the original Lexical Root Theory (Jassem 2012a-f, 2013a-q, 2014a-g). For the sake of economy and brevity, the inquisitive reader is referred to any earlier work for a fuller account of principles, precepts, and procedures (e.g., Jassem 2015a-c, 2014a, 2013a, 2012a-b).

In short, however, the main principle states that Arabic is not only related to Indo-European languages but also is their immediate ancestor or origin all. In practice, the most appropriate procedure for genetically relating English and Arabic words to each other can be summed up as follows:

(i) select a word (in any given semantic field), e.g., *tree, rose*;

(ii) Identify the source, daughter, or sister language meaning (e.g., English or Latin) on the basis of especially word history or etymology. It is essential to start with meanings, not sounds or sound laws as the former are more stable and change a lot less than the latter which do so extensively and drastically; for example, all the sounds of a given word might change beyond recognition while meanings very much less so and in a rather limited way; so the meaning will often lead you to the correct cognate naturally whereas the sounds will get you lost definitely;

(iii) Search for the word with the equivalent meaning and form in the target, parent, or reference language (e.g., Arabic), looking for cognates: i.e., sister words with the same or similar forms and meanings; and

(iv) Finally explain the differences, if any, in both form and meaning between the cognates lexicologically, phonetically, morphologically, and semantically as indicated. As a matter of fact, finding the right cognate on the basis of its meaning first often leads one to the resultant changes automatically.

That is the whole story simply, briefly, and truly. No fuss, no mess. For example, consider *tree, rose, flower* or any word in Section 3 below.

2.2.2. Statistical Analysis

The percentage formula will be used for calculating the ratio of cognate words or shared vocabulary (Cowley 1997: 173, 182), which has been fully described in earlier papers (Jassem 2012a-f, 2013a-q, 2014a-k).

3. RESULTS

The results will mainly focus on the Arabic lexical (consonantal) radicals or roots of English, German, French, Latin, Greek, and Sanskrit *floral* words and the changes that affected them. The exact quality of the vowel is, therefore, of generally secondary importance for having little or no semantic impact whatsoever on the final output (Jassem 2012-2016).

Acorn via Old English *æcern* 'nut; originally the mast of any forest tree' and German *Ecker*, related to *æcer 'field*, open land', from Arabic *qarn* 'a horn; such a plant; acorn', turning /q/ into /k/.

Agrarian *(agricultiure, grow)* via Old English *æcer* 'a field', from Latin *agrarius* 'of the land', from *ager* 'a field', from Greek *agros* ' a field', from Arabic *3aqaar* 'a field, earth' or *2aql* 'a field' via /3 (2)/-loss and passing /q & l/ into /g & r/; or *qira2, qurwaa2, qiryaa2* 'farm; unbuilt and unplanted area', *qira2i* (adj.) 'city dweller' via /2/-loss and passing /q/ into /g/.

Almond via Old French, from Latin *amandula, amygdala* (pl.), from Greek *amygdalos* 'an almond tree', from Arabic *jadaala(t)* 'a date when round and green' and related *majdal* 'braided; twisted' via lexical shift and passing /j/ into /d/; or *al-naidaman* 'a plant' via reordering and lexical shift.

Apple via Old English *æppel* 'apple; fruit in general; any kind of fruit' and German *Apfel*, from Arabic *bala2* 'dates' via /2/-loss and lexical shift; *3abal* 'mountain rose; tree leaves or fruit' via /3/-loss and lexical shift; or *'athl* 'a kind of strong, good tree' via lexical shift and turning /th/ into /p/.

Apricot *(abrecock)* via Catalan *abercoc* and Portuguese *albricoque*, Greek *berikokkia*, Latin *praecoquum* 'early-ripening fruit', from Arabic *al-barqooq* 'apricot', turning /q & q/ into /k & t/ (Harper 2016).

Arboreal from Latin *arboreus* 'pertaining to trees', from *arbor* 'tree', from Arabic *3ubri/3umri* 'a kind of tree', *3abhar* 'a kind of wild, poplar-like tree', *abhar* 'a dry small thorny plant; good earth above water level', or related *bahaar* 'sweet-smelling plant' via lexical shift, /3 & h/-loss, and /r/-reduplication; *'arbiaan* 'a kind of vegetable; fish' via lexical shift and passing /n/ into /r/; *rabee3* 'herbs, grass' via lexical shift and turning /3/ into /r/; or *rabeel (rabl, reebal)* 'a kind of tree' via lexical shift and changing /l/ into /r/. (Cf. **pure** from Arabic *buhaar, baahir* 'white, brilliant' via /h/-loss; and **rib** from Arabic *'irb* 'organ' and *'arib* 'part of a finger'.)

Aubergine via French, diminutive of *auberge* 'a kind of peach', variant of *alberge*, from Spanish *alberchigo* 'apricot', or from Catalan *alberginera*, from Persian *badin-gan*, from Sanskrit *vatigagma*, from Arabic *al-badhinjan* 'the egg-plant' (cf. Harper 2016) where /al/ became /au/ while /dh & r/ merged into /n/. However, it comes from Arabic *alburqaan* 'anything white and black' or related *barwaq(un), al-barwaqan* 'a bad vegetable with a long stalk and black fruit; a weak plant or tree with black fruit' where /l & q/ became /u & g/ besides lexical shift. See **prick**.

Banana *(combine, compound, bone, pen)* straight from Arabic *banan* 'finger' via lexical shift.

Barley *(barn)* via Old English *bere* 'barley', from Arabic *burr* 'wheat' via lexical shift and /l/-split from /r/.

Basil via Old French *basile* 'aromatic shrubby plant', from Latin *basilicum,* from Greek *basilikon (phyton)* 'royal plant', from *basileus* 'king', from Arabic *baSal* 'onion' or *basil* 'brave' via lexical shift and turning /S/ into /s/.

Bean *(coffee beans, green beans, broad beans)* via Old English *bean* 'bean, pea, legume', from Old High German *bona* (Modern *Bohne),* (related to Latin *faba* 'bean' and Greek *phakos* 'lentil'?), straight from Arabic *bunn* '(coffee) bean'. See **broad, green**.

Berry *(rose berry, blackberry, goose berry, strawberry)* via Old English *berie*, German *Beere* 'berry', straight from Arabic *bareer* 'a kind of black and sweet fruit' via /r/-loss; *barboor* 'fresh, green almonds' via lexical shift and syllable merger; or *barri* 'of plants and animals, wild and small' via lexical shift.

Bloom via Old Saxon *blomo*, German *Blume*, from Old Norse *blomi* 'flower, blossom; flowers and foliage on trees', probably from Greek *rhodon* 'rose', from Arabic *bur3um* 'bud' via lexical shift and /r &3/-merger into /l/.

Blossom via Old English *blostma* 'flower, fruit, blossom', German *Blust* (Middle Low *blosom*) 'rose', from Arabic *balsam* 'a kind of medical juice-secreting plant; to shut up for fear' via lexical shift.

Botany *(botanical, botanist)* via French *botanique*, from Latin *botanicus*, from Greek *botanikos* 'of herbs', from *botane* 'a plant, grass, pasture, fodder', direct from Arabic *nabat* 'plant', *al-nabat* 'the plant'; reordering and /l/-insertion applied.

Bough via Old English *bog* 'shoulder, arm; branch, twig' and German *Bug* 'shoulder, joint', Greek *pakhys* 'forearm', direct from Arabic *boo3* 'wrist/elbow bone' via lexical shift and passing /3/ into /gh (Ø)/.

Branch via Old French *braunche* 'branch, bow', from Latin *branca* 'a footprint; later a claw, paw', direct from Arabic *3arboosh* 'a branch of tree' via reordering and passing /3/ into /n/.

Broad Beans *(breadth, abroad)* via Old English *brad* 'broad, flat, open', from German *breit*, straight from Arabic *ba3eed* 'far, extended', turning /3/ into /r/. See **bean**.

Bush via Old English *bysc* 'many-stemmed woody plant', from German *Busch* (Old High German *busc*), from French *bois* (Old *busche*), from Latin *busca*, direct from Arabic *'ashib* 'with many trees' via reversal; or *3ushb* 'grass' via reversal, /3/-loss, and lexical shift.

Cabbage *(capital)* from Middle French *caboche* 'head; cabbage in dialect', from Old French *caboce* 'head', a diminutive from Latin *caput* 'head', direct from Arabic *qubbat* 'top' or *jabhat* 'forehead' via lexical shift, turning /q (j)/ into /k/, and deleting /h/.

Camomile *(chamomile)* via Old French, from Latin *c(h)amomilla*, from Greek *chamaimelon* 'lit., earth apple', from (i) *chamai* 'on the ground; dwarf', from Arabic *qazam* 'dwarf' by merging /q & z/ into /ch/ and (ii) *melon*, from Arabic below.

Cane *(sugar cane)* via Old French, from Latin *canna* 'reed, cane', from Greek *kanu*, perhaps from Assyrian *qanu* 'tube, reed', direct from Arabic *qana* 'tube, reed; club, stick; spear, arrow' (Jassem 2015f; cf. Harper 2016a), turning /q/ into /k/. As to **sugar**, it comes direct from Arabic *sukkar* 'sugar', turning /s & k/ into /sh & g/ (Jassem 2014a; cf. Harper 2016).

Carrot via Middle French *carrotte*, from Latin *carota*, from Greek *karoton* 'carrot', straight from Arabic *jazar(at)* 'a carrot' via reordering and merging /j & z/ into /k/.

Cauliflower originally *cole florye*, from Italian *cavoli fiori* 'flowered cabbage', plural of (i) *cavolo* 'cabbage', from Arabic *baql* 'any vegetable or plant' via reordering, lexical shift, and turning /q & b/ into /k & v (u)/ and (ii) *fiore* 'flower', from Latin *flora* 'flower', from the Arabic for **flower** below.

Cedar via Old English, from Old French, from Latin *cedrus*, from Greek *kedros* 'cedar, junniper', from Arabic *sidr* 'a kind of tree or plant' or *jidr* 'a kind of plant' via lexical shift and turning /j/ into /s/; or from *sindian* 'oak tree' via lexical shift, reordering, and merging /n & n/ into /r/.

Celery via French *celeri*, from Italian, from Latin and Greek *selinon* 'parsley, celery', from Arabic *Silliaan* 'a vegetable' and related *Silaal* 'grass, a plant' via lexical shift and passing /S & n/ into /s & r/; *'asl* 'a plant' via /r/-split from /l/; *sal3* 'a bitter plant' or *sar3* 'any non-thorny plant' via /l (r)/-split, /3/-loss, and lexical shift; *lisaan* 'a (tongue-shaped) plant' via lexical shift and reordering; or *silq* 'a broad, leafy vegetable' via lexical shift and turning /q/ into /r/.

Cherry via Old French *c(h)erise*, from Latin *ceresia*, from late Greek *kerasian* 'cherry', from *kerasos* 'cherry tree', direct from Arabic *karaz* 'cherry', merging /k & z/ into /ch/.

Chick peas *(pease)* via French *pois chiche*, from (ia) Latin *cicer* 'pea', from Arabic *jashar(at)* 'spring vegetable; wheat skin' via lexical shift and turning /j & sh/ into /s/ or from (ib) a shortening of Old English *cicen, cicenu* (pl.) 'young fowl or chicken', from Arabic *SeeSan* 'young fowl' in which /S & S/ became /ch & k/ and (ii) Old English *pise*, from Latin *pisa*, from Greek *pison* 'the pea', direct from Arabic *bizr(at)* 'a seed' via lexical shift and /z & r/-merger into /s/ or *2abba(t)* 'a seed, a pea' via reversal and turning /2/ into /s/.

Chili *(chilli)* from Nahuatl (Aztecan) 'peppers', from Arabic *qulqas* 'a kind of chili-tasting plant' via lexical shift and merging /q & s/ into /ch/; or *Sali* 'hot, sizzling' where /ch/ replaced /S/.

Chrysanthemum *(mum)* via Latin, from Greek *khrysanthemon* 'marigold; lit., golden flower', from (i) *khrysos* 'gold', from Arabic *khurS(aT), khurSaan* (pl.) '(a) gold or silver (ring); arrow; dagger; stick' where /S & kh/ became /s & k/ or *kursanna(t)* 'a kind of legume' via lexical shift and (ii) *anthemon* 'a flower', direct from Arabic *thumaam (thumma(t), thuma(t))* 'a kind of short desert plant; a grasp of grass' or *nu3maan* 'a flower' via /3/-loss.

Cinnamon via Old French, from Latin *cinnamum*, from Greek *kinnamomon*, direct from Arabic *sanam(at)* 'a (fruitless) tree; plant, flower' via lexical shift; or *kammoon* 'cumin' via lexical shift and passing /m/ into /n/.

Citrus Fruit *(citrine, citron)* via Latin *citrus* 'citron or aromatic lemon-like tree', from Arabic *sidr* 'a tree or plant' via lexical shift and turning /d/ into /t/. See **cedar & fruit**.

Corn *(pop corn)* via Old English *corn* 'grain' and German *Korn*, from Arabic *qarn* 'a horn; such a plant; acorn', turning /q/ into /k/.

Crop via Old English *cropp* 'bird's craw; head of a sprout or herb' and German *Kropf*, direct from Arabic *bidhr/bizr* 'seeds'; lexical shift, reordering, and turning /dh (z)/ into /k/ obtained.

Crust *(crustaceous)* via Old French, from Latin *crusta* 'crust, shell, bark', (Greek *kryos* 'frost', Old High German *hrosa* 'ice, crystal', Old English *hruse* 'earth'), direct from Arabic *qishra(t)* 'crust, shell, outer skin' via reordering and turning /q & sh/ into /k & s/.

Cucumber via Old French, from Latin *cucumerem* (nom., *cucumis*), direct from Arabic *kamkam* 'bark of a certain nice tree', *qimqim* 'dry dates', *'akmaam* 'date covers', or *kam'a(t)* 'underground mushroom' via lexical shift, reordering, and /b/-insertion.

Cumin via Old English *cymen*, from Latin *cuminum*, from Greek *kyminon*, direct from Arabic *kammoon* 'cumin' (Harper 2016).

Daffodil via Middle English *affodill* 'asphodel', from Latin *affodillus*, from *asphodelus*, from Greek *asphodelos* 'asphodel, king's spear', direct from Arabic *saif* 'sword' + *dhail* 'tail' via lexical shift and turning /dh/ into /d/; or *dufla(t)* 'a bitter-tasting herb' via lexical shift, reordering, and turning /t/ into /d/.

Date via Old French, from Latin *dactylus*, from Greek *daktylos* 'date; originally, finger, toe', direct from Arabic *daqal(at)* '(a bad type of) dates' via /q & l/-merger into /t/ (cf. Harper 2016); or *dajat* 'finger, hand' via lexical shift and merging /j & d/ into /d/. However, because it has several meanings, all come from formally similar but semantically different Arabic cognates, which are (i) *qoot* 'food' via lexical shift and turning /q/ into /d/, (ii) *waqt (geet* in Palestinian Arabic) 'time' via reordering and turning /q/ into /d/, and (iii) *qawad* 'a pimp' via lexical shift and turning /q & d/ into /d & t/ (see Jassem 2013j, 2014a & g).

Egg Plant via (i) Old Norse *egg*, from Germanic *ei*, probably from PIE **oyyo* 'egg' (Russian *jajco*, Greek *oon*, Latin *ovum*), direct from Arabic *dajaj* 'chicken, hens' via lexical shift and /d & j/-merger into /g/; or *qeeq* 'chicken, egg' via lexical shift, reordering, and turning /q/ into /g/; and (ii) **plant** below.

Elm via Old English *elm*, German *Ulme*, and Latin *ulmus*, from Arabic *malm* 'a palm tree about to ripen' via lexical shift and /m & m/-merger; or *malool* 'a kind of wild tree' via reversal and lexical shift.

Farm *(farmer; firm, confirm)* via Old French *ferme* 'a rent, lease', from Latin *firma* 'fixed payment', from *firmare* (v) 'to fix, settle, confirm, strengthen', direct from Arabic *thamar* 'fruit; farming' via reordering and passing /th/ into /f/; *Saram* 'to reap; to be strong; to close', *Sarim* (adj.) 'firm, strong; reaper' where /S/ became /f/; or *karm* 'farm, orchard', turning /k/ into /f/.

Fig via Old English *fic*, from Old French *figue*, from Latin *fica/ficus* 'fig tree, fig', (Greek *sykon*), from Arabic *tuffa2a* 'apple' via lexical shift, /t & f/-merger, and turning /2/ into /g (k)/; or *faakiha(t)* ' fruit' via lexical shift and merging /k & h/ into /g/.

Fir via Old English *furhwudu*, from Old Norse *fyri-* 'fir' or Danish *fyr*, from Proto-Germanic **furkhon* (like German *Föhre*), from PIE root **perkwu* 'oak (forest)', giving Sanskrit *paraktah* 'the holy fig tree', Latin *quercus* 'oak'), direct from Arabic *saroo* 'fir tree', turning /s/ into /f/; or *farwa(t)* 'any dry plants' via lexical shift. (Cf. **fur** from Arabic *faru* 'fur'.)

Flora *(floral, flower, deflower)* from Latin *Flora* 'goddess of flowers; later plant life of a region or epoch', from *flos* (acc. *florem)* 'flower', from Arabic *fulla(t)* 'flower' via r/-insertion. See **flower**.

Flower *(floral, flora, deflower)* via Old French *flor* 'flower, blossom; heyday, prime; elite; virginity', from Latin *florem* (nom. *flos)* 'flower', from Arabic *fulla(t)* 'flower'; /r/ was inserted.

Folio *(foliage, phyllo-, foliate, portfolio)* via Latin *folio* 'leaf or sheet of paper', from *folium* 'leaf', from Greek *phyllon* 'leaf', from Arabic *leef* 'fiber', *loof* 'a broad-leaved chili vegetable', or *laff* 'folding, turning'; reversal and lexical shift applied.

Forest *(forestry, forestation)* via Old French, from Latin *forest(em) silvan* 'the outside woods', perhaps from Old High German *forst*, from Latin *foris* 'outside', from Arabic *barri* 'outside, wild', *barriat* 'the wild; unbuilt land' where /b/ became /f/ and /s/ split from /t/ besides lexical shift; *2ursh, a2raa(sh/j)* (pl.) 'forest', turning /2/ into /f/ and splitting /sh (j)/ into /st/; or, most likely, from *farsh/wirsh* (n) 'a small surface creeping plant' via lexical shift and turning /sh/ into /s/.

Fruit *(fruity)* via Old French, from Latin *fructus* 'an enjoyment, delight; fruit, produce, crops', from *frug-*, stem of *frui* 'to use, enjoy', German *Frucht* 'cattle', from Arabic *far2(at)* 'happiness' or *far3(at)* 'of plants, flowering' via lexical shift and turning /2 (3)/ into /k (Ø)/, *farwat* 'any dry plants in a spot' via lexical shift, or, more properly, from Arabic *thamar(at)* 'fruit', merging /th & m/ into /f/. See **fir**.

Fungus *(fungal, fungi)* via Latin *fungus* 'a mushroom', from Greek *sp(h)ongos* 'sponge', from Arabic *isfanj* 'a tree root or branch good for treating bad wounds; sponge' via /s & f/-merger and lexical shift; *faq3* 'mushroom' by reordering and turning /q & 3/ into /g & n/; or *fijl* 'radish' via lexical shift, reordering and turning /j & l/ into /g & n/.

Garden *(yard)* via Old French *gardin/jardin* 'garden, palace grounds', from Latin *hortus gardinus* 'enclosed garden', from Old High German *garto* (German *Garten*) 'garden', Old English *geard* 'fenced enclosure, garden, court; house', Gothic *gards* 'enclosure; house', direct from Arabic *jidar, judran* (pl.) 'wall; garden' via reordering and passing /j/ into /g/; or *jannat* 'garden' via reordering, turning /j & t/ into /g & d/, and /r/-insertion. See **zoological**.

Garlic via Old and Middle English *garlic, garlek*, from (i) *gar* 'spear', from Arabic *qurra(t)* 'watercress' or *ghaar* 'laurel' via lexical shift and turning /q (gh)/ into /g/ and (ii) *leac* 'leek, onion, garlic', from the Arabic for **leek**. Or, as a whole, from Arabic *kurrath* 'a garlic-like vegetable', turning /r & th/ into /l & k/.

Ginger via Old English *gingi(f/b)er*, from Latin *gingiber*, from *zingiberi*, from Prakrit *singabera*, from Sanskrit *srngaveram*, direct from Arabic *zanjabeel* 'ginger'; /z & l/ became /g & r/ and /b & n/ merged.

Gourd via Old French *coorde* (Anglo-French *gourde*), from Latin *cucurbita* 'gourd', from Arabic *qar3(at)* 'pumpkin' via lexical shift, /3/-loss, and turning /q & t/ into /g & d/.

Grain *(granular, granulation)* via Old French *grain, grein* 'grain, seed', from Latin *granum* 'seed, grain, a small kernel', from Arabic *qarn* 'a seed, corn; early/last grass', *qarnia'* 'broad leaf plant', or *qaroona(t)* 'a grain', turning /q/ into /g/ besides lexical shift. See **green**.

Grape *(grapefruit)* via Old French *grape* 'grape', Spanish and Italian *grap(p)a*, probably from *graper* 'grasp; catch with a hook', from Old High German *Krapfo* 'hook', from Arabic *karaba* 'to tighten; to hold tight'; however, it really comes direct from Arabic *karm(at)* 'grape, vine tree' buy turning /k/ into /g/; or *3inab* 'grape', turning /3 & n/ into /g & r/.

Grass via Old English *græs, gærs* 'herb, plant, grass' and German *Gras* from Arabic *ghars* 'plants, anything planted' or *qurraaS* 'a thorny grass' where /gh (q)/ turned into /g/. See **green**.

Green Beans via Old English *grene* 'green, young, raw, immature; a field; grassy place' and German *grün* from Arabic *ghareen* 'river mud' via lexical shift and turning /gh/ into /g/; *karm* 'orchard; vine (or fruit) tree field; stone-free land' where /k & m/ became /g & n/; *qarn* 'early/last grass', *qarnia'* 'broad leaf plant' via lexical shift; *zarqum* 'dark blue' via lexical shift, /z & q/-merger into /g/, and turning /m/ into /n/ (Jassem 2014f). See **bean**.

Grove via Old English *graf* 'grove, small wood', from Arabic *ghareef* 'a group of trees' or *khareefa(t), khara'if* (pl.) 'palm trees', turning /gh (kh)/ into /g/.

Grove of Academe *(academy, (academic)* via French, from Latin, from Greek *academeia* 'garden, grove', from Arabic *ajama(t)* 'dense trees, grove' via reordering and changing /j & t/ to /k & d/ (Jassem 2013i).

Grow *(growth)* via Old English *growan* 'of plants, to flourish, get bigger', Old High German *gruoen*, direct from Arabic *kabur* 'to get bigger' via reordering, turning /k & b/ into /g & w/; alternatively, from Arabic *zar3* 'sow; growth', turning /z/ into /g/ and deleting /3/; or *karra, karab* 'to plough, sow' via lexical shift and passing /k/ into /g/.

Gum tree via Old French, from Latin *gumm(a/i)*, from Greek *kommi* 'gum', from Egyptian *kemai*, from Arabic *Samgh* 'gum' via /S & gh/-merger into /g/; or *qam3* 'the sticky bottom dates' via lexical shift, turning /q/ into /g/, and deleting /3/. See **tree**.

Harvest via Old English *hærfest* 'autumn', German *Herbst*, Old Norse *haust*, direct from Arabic *khareef* 'autumn, fall; harvest', *kharaf* (v), *khirfat* (n), turning /kh/ into /h/ and inserting /s/, or *2aleesha(t)* 'harvesting with hands' where /2, l, & sh/ became /h, r, & s/; alternatively, the Old Norse form, is from Arabic *2aSad* 'harvesting', passing /2, S, & d/ into /h, s, & t/ or *2awash* 'to harvest or cut (olives, figs, vegetables)' where /2 & sh/ became /h & s/.

Hay *(hew)* via Old English *heg, hieg, hig* 'grass cut for fodder', German *Heu*, direct from Arabic *2ash, 2asheesh* (n) 'to cut grass; cut grass' or *heesh* 'forest, grass', turning /2 & sh/ into /h & g (y)/.

Hazel *(hazelnut)* via Old English *hæs(e)l* and German *Hasel*, from Arabic *lawz(at/h), lawz* (pl.) 'a hazel' via reversal.

Herb *(herbaceous, herbal, herbage)* via Old French (Modern *herbe*) 'grass, plant, herb', from Latin *herba* 'grass, an herb; herbage', direct from Arabic *3ushb* 'herbs, grass', passing /3 & sh/ into /h & r/; *rabee3* 'herbs, grass, spring' via reordering and turning /3/ into /h/; or *'ibb/'abb* 'grass', turning /'/ into /h/ and inserting /r/.

Horticulture *(culture, cultivate, cult)* via Latin (i) *hortus* 'garden', from Arabic *2arth* 'farming; garden' where /2 & th/ became /h & t/ and (ii) *cultura* 'a cultivating, agriculture', *colere* (v) 'tend, cultivate, till', from Arabic *qal3* 'uprooting, removing plants', *qulla3* 'a good plant; dry mud' via /3/-loss and changing /q/ into /k/; *2aql(at)* 'growth, plantation; farm' via /2 & q/-merger into /k/; *kala'* 'herbs, grass; pasture' via lexical shift; *ka2l* 'grass turning into green' via /2/-loss and lexical shift. See **garden**.

Husk *(husky)* via Old English *huske* 'dry, outer skin of seeds or fruits', perhaps from Middle Dutch *huuskyn* 'little house, case', direct from Arabic *2asak* 'husk; skin of wheat', passing /2/ into /h/. The Dutch form is from Arabic *2awsh* 'house; courtyard' where /2/ changed into /h/ while /sh/ split into /sk/.

Jasmine *(Jessamine)* via French *jasmin* (Middle *jessemin)*, (Persian *yasmin*, Greek *iasme)*, from Arabic *yasameen* 'jasmine', passing /y/ into /j/ (Harper 2016).

Jungle via Hindi *jangal* 'desert, forest', from Sanskrit *jangala-s* 'arid, sparsely grown with trees', direct from Arabic *daghal, 'adghal* (pl.) 'jungle', turning /d & gh/ into /j & g/ and inserting /n/ (cf. *qaa2il* 'arid' where /q & 2/ became /j & g/).

Leaf *(leafage, leafy, tree leaves)* from Arabic *leef* 'fiber' via lexical shift; or *laff(at)* 'a roll', *loof* 'a kind of chili vegetable with large leaves'; or Arabic *riff* 'tree leaves' where /r/ became /l/. See **tree**. (Cf. **live** and related words in Jassem (2015h)).

Leek via Old English *læc/leac* 'leek, onion, garlic', German *Lauch*, from Arabic *3aaqool* 'a plant' via lexical shift, reversal, and /3/-loss; *3illaiq/3alqa* 'a kind of berry shrub' via /3/-loss and lexical shift (cf. **leech** from Arabic *3alaq* 'leech' via /3/-loss and replacing /q/ by /ch/).

Legume *(leguminous)* via French, from Latin *legumen* 'pulse', direct from Arabic *qullam* 'a type of sour plant' via lexical shift, reversal, and passing /q/ into /g/; *3alqam* 'a bitter plant; myrrh' via lexical shift, /3/-loss, and turning /q/ into /g/; or *baqool* 'legume' via reversal and turning /b & q/ into /m & g/. See **pulse**.

Lemon *(lime, leomonade)* via French and Italian *lymon/limon*, from Arabic *laimoon* 'lemon' (Harper 2016).

Lentils via Old French, from Latin *lenticula*, diminutive of (i) *lens* (gen., *lentis*)' 'lentil', from Arabic *lussaan* or *lisaan* 'a medically edible plant' via lexical shift and reordering, and (ii) *cula* 'small, little', from Arabic *qal(eel)* 'small, little' where /q/ became /k/ (Jassem 2014g).

Lettuce probably from Old French *laities*, plural of *laitue* 'lettuce', from Latin *lactuca* 'lettuce', from *lac* (gen., *lactis*) 'milk', direct from Arabic *waleekha(t)* 'yogurt; sour milk' via reordering and turning /kh/ into /k/; *lak, luk* 'a red dye for tanning goats' skin' via lexical shift; *2aleeb(at)* 'milk' via reordering, /b/-loss, and turning /2/ into /k/; or, more properly, from *3ilt* 'a vegetable' via lexical shift and /3/-loss or *luft* 'turnip' via lexical shift and passing /f & t/ into /t & s/.

Lilac via French, from Spanish, from Arabic *lilac*, a variant of *nilac* 'bluish', from *neel(i)* 'Nile, blue' or *laili* 'nocturnal, dark' via lexical shift and /k/-insertion.

Lime *(limestone, lemon)* via Spanish *lima*, from Arabic *laimoon/limah* 'lemon' via /m & n/-merger; or *mil2* 'salt' via lexical shift, reordering, and /2/-loss.

Log *(logging, log-book)* via Old Norse *lag* 'felled tree', direct from Arabic *qal3* 'felling (trees, stones); a baby palm tree cut off from its mother for replanting' via reversal, passing /q/ into /g/, and deleting /3/.

Lotus via Latin *lotus*, from Greek *lotos*, direct from Arabic *lait* 'a nice-smelling flower; a fibrous plant from which ropes are made', or *lutat* 'dropped tree leaves or barks' via lexical shift.

Maize from Cuban Spanish *maiz*, from Arawakan (Haiti) *mahiz*, direct from Arabic *2ummuS* 'chick peas' via lexical shift, /2/-loss, and turning /S/ into /z/; or *mash* 'a kind of pulse' via lexical shift and passing /sh/ into /z/.

Melon *(malic)* via Old French, from Latin *melo(nem-* acc.), from *melopeponem* 'a kind of pumpkin', from Greek *melopepon* 'gourd-apple', from (i) *melon* 'apple', from Arabic *laimoon* 'lemon' via lexical shift and reordering, or *rumman* 'pomegranates' via lexical shift, reordering, and passing /r/ into /l/ and (ii) *pepon* 'a kind of gourd; ripe', from Arabic as in **pumpkin**. See **watermelon**.

Mint *(mintage)* via Old English *minte* and German *Minze*, from Latin *menta/menthe* 'mint', from Greek *minthe*, from Arabic *nammaam(at)* 'a mint-like plant' via reordering; or *tannoom* 'a medical plant' via lexical shift and reversal.

Mow via Old English *mawan* 'to mow, cut' (and *mæd* 'meadow'), German *mähen* (Old *maen*), Greek *amao*, and Latin *metere* 'to cut, reap, crop', direct from Arabic *'am3a* 'of palm trees, to bear fruit or rearrange its fruit' via lexical shift and changing /3/ into /w/; or *jamma* 'to cut' via reversal and passing /j/ into /w/; alternatively, the Latin form is from Arabic *matara* 'cut' (Jassem 2013m)**.**

Mushroom via Anglo-French *musherun*, French *meisseron*, perhaps from Latin *mussirio(nem)*, direct from Arabic *mashr(at)* 'any growth over a plant; a young (palm) leaf; a plant' via lexical shift; or *mushmush* 'apricot' via lexical shift and turning /sh/ into /r/.

Myrrh *(myrtle)* via Old English *myrre*, French *myrrhe*, from Latin and Greek *myrrha*, direct from Arabic *murr(at/h)* 'bitter' (Harper 2016); or *mirraar* 'a bitter vegetable'. See **myrtle**.

Myrtle *(myrrh)* via Old French, from Latin and Greek *myrtus/murtos* 'myrtle tree', direct from Arabic *murr(at/h)* 'bitter'. See **myrrh**.

Nut see **walnut**.

Oak *(oaken)* via Old English *ac* 'oak tree', from Proto-Germanic **aiks*, German *Eiche* (OHG *eih*), from Arabic *'aika(t)/(3aikat)* 'a kind of tree' via lexical shift.

Oasis via French, from Latin, from Greek *oasis*, from Arabic *waa2a(t/h)* 'oasis; a desert green', passing /2 & t (h)/ into /s/ (cf. Harper 2016).

Oat via Old English *ate, atan* (pl.) 'grain of the oat plant, wild oats', possibly from Old Norse *eitill* 'nodule, a single grain', from Arabic *waDee3a(t)* 'crushed butter-mixed wheat' or related *Da3a(t)* 'a sour plant eaten by camels; pettiness' via lexical shift, reordering, /3/-loss, and turning /D/ into /t/ (cf. Arabic *'atta* 'of plants, to increase').

Olive via Latin *oliva* 'olive (tree)' and Greek *elaion* 'olive (tree)', from Arabic *ihaala(t)* 'liquefied, melted fat' via /h/-loss or mutation into /v/; *fool* 'broad beans' via lexical shift and reordering.

Onion *(one, union)* via Old French *oi(n)gnon* 'onion', from Latin *unio(nem)* 'a kind of onion; pearl; lit., one, unity', from Arabic *'awal(an), 'ul(an)* 'one, first' via lexical shift and turning /l/ into /n/; or, more properly, from Arabic *na3na3* 'mint' via lexical shift and /3/-loss (see Jassem 2012a, 2014g).

Orange via Old French, from Latin *orange*, Italian *arancia, narancia*, Persian *narang*, Sanskrit *naranga-s* 'orange tree', direct from Arabic *narinj* 'orange' (Jassem 2014a).

Orchard via Old English *orceard* 'fruit garden', from *ortgeard*, from *wortgeard*, from (i) *wort*, Old English *wyrt* 'vegetable, plant root', from Arabic *farsh/wirsh* 'any small surface creeping vegetable or plant' where /sh/ became /t/ and (ii) *geard* 'garden, yard', from Arabic *jidar* 'wall, garden' via reordering and turning /j/ into /g/. Otherwise, as a whole, straight from Arabic *3areesha(t), 3arsh, 3uroosh* (pl.) 'trees; throne' via /3/-loss and turning /t/ into /d/; *'arak* 'a kind of tree' via lexical shift. See **orchid**.

Orchid via Latin *Orchideæ (Linnaeus)* 'a plant's family name', from *orchis* 'a kind of orchid', from Greek *orkhis* 'orchid; lit., a testicle', from Arabic *'arak* 'a kind of nice-smelling plant' via lexical shift; or *3irq* 'branch; root; vein' via lexical shift, /3/-loss, and turning /q/ into /ch/. See **orchard**.

Oregano via Spanish, from Latin *origanus, origanum*m from Greek *oreiganon*, from (i) *oros* 'mountain', from Arabic *ra's* 'head, top' via lexical shift and (ii) *ganos* 'brightness, ornament', from Arabic *naqaa'* 'purity' via reordering and turning /q/ into /g/; or direct from Arabic *rai2an* 'any aromatic (henna) plant' via lexical shift and /2/-mutation into /g/.

Palm tree via Old English, from Middle French *palma*, from Latin *palma* 'palm tree; originally palm of the hand', Greek *palame* 'open hand', from Arabic *al-bahim/ibham* 'the-finger, thumb' via lexical shift, reordering, and /h/-loss; or *bala2* 'dates' via lexical shift and turning /2/ into /m/. See **tree**.

Parsley via Old English *petersilie* and Old French *peresil*, from Latin *petrosilium*, from *petroselinum*, from Greek *petroselinon* 'rock parsley', from (i) *petros* 'rock', from Arabic *batra* 'soft earth or stone' via lexical shift (Jassem 2014f), and (ii) *selinon* 'celery', from Arabic *silq* 'a long leafy vegetable' via lexical shift and turning /q/ into /r/. See **celery**.

Pastoral *(pasture, pastor)* via Latin *pastor* 'shepherd', *pastus, pascere* (v) 'to lead to pasture, cause to eat', from Arabic *baSSa(t)* 'pasture, growth', turning /S/ into /s/; *bassa(t)* 'eat'; or *baseeTa(t), basaT* (v) 'flat land; eating', passing /T/ into /t/ (Jassem 2014e).

Peach via Old French *pesche*, from Latin *pesca*, variant of *persica* 'peach (tree)', from *malum Persicum* 'lit., Persian apple', from *Persis* 'Persia', from Arabic *faris* 'Persian; horseman'; /f/ became /p/ and /r & s/ merged into /ch/.

Pepper via Old English *pipor*, from Latin *piper*, from Greek *piperi*, from Middle Indic *pippari*, from Sanskrit *pippali* 'long pepper', direct from Arabic *filfil* 'pepper' via reordering and turning /f & l/ into /p & r/; or *buhar* 'pepper, spice; a nice-smelling herb', turning /h/ into /p/.

Petal via Latin *petalum*, from Greek *petalon* 'a leaf; thin plate', direct from Arabic *batala* 'a baby plant or bud' via lexical shift; or from *balaaTa(tun)* 'thin plate or rock' via reordering and passing /T/ into /t/.

Pineapple via (i) Old English and French *pin*, from Latin *pinus* 'pine, pine tree, fir tree', direct from Arabic *baan* 'a kind of tall, soft tree' or *labaan* 'pine tree' via /l & n/-merger; and (ii) **apple** above.

Plant *(plantation, implant)* via Old English *plante* 'young tree or shrub', from Latin *planta* 'sprout, shoot, cutting; side of the foot', perhaps from Latin *plantare* (v) 'to drive in with the feet; push into the ground with the feet', from *planta* 'side of the feet', direct from Arabic *nabat* 'plant', *al-nabat* 'the plant' via reordering and /l/-insertion. The Latin form is from Arabic *labaT, labT(un)* (n) 'to kick with the foot' via reordering and /T/-split into /t & n/.

Plough *(ploughman, plow)* via Old English *plog, ploh* 'plow; plowland', Old High German *pfluog* (Modern *Pflug*), direct from Arabic *fala2/falaj* 'to plough; to cut' where /f & 2/ passed into /p & w (g, h)/; *balaj* 'to appear, come out' via lexical shift and passing /j/ into /g/; or *zabal* 'to level plants' via lexical shift, reordering, and passing /z/ into /g/.

Plum via Old English *plume* 'plum (tree)', German *Pflaume*, from Latin *prunua/prunum* 'plum', from Greek *prounon*, *proumnon*, from Arabic *bur3um* 'rose bud, flowering' via lexical shift, /3/-loss, and passing /r/ into /l/.

Pomegranate via Old French *pome grenate* (Modern *grenade)*, direct from Latin *pomum granatum* 'lit., apple with many seeds', from (i) *pome* 'apple, fruit', from Arabic *baamia* 'okra; lady's fingers' via lexical shift and (ii) *grenate,* from Latin *granata* 'seedy', from *granum* 'grain', from Arabic *qarn, qarniaa'* 'a corn; horn; seed, grain' via lexical shift and turning /q/ into /g/. See **corn, grain & green**.

Poplar via Old French *poplier* (Modern *peulplier*), from Latin *populus* 'poplar', Greek *pelea* 'elm', from Arabic *lablab* 'a kind of tree' via reordering; or *3abhar* 'a wild poplar-like tree' via lexical shift, /3 & h/-loss, and /r/-split.

Potato via Spanish *patata*, from a Carib language of Haiti *batata* 'sweet potato', straight from Arabic *baiDat* 'egg' or *baTTa(t)* 'a bulge; duck' via lexical shift and turning /D/ into /t/; *Taabat* 'a ball' or *Taiyeb(at)* 'delicious' via lexical shift, reordering, and turning /T/ into /t/.

Prick via Old English *prica* (Middle *prikke*) 'point, puncture; particle; small portion of space or time' and Low German *prik* 'point', direct from Arabic *baqr* 'a cut' or *bazr* 'a pierce, cutting' via lexical shift, reordering, and turning /q (z)/ into /k/; or *barwaq* 'a weak inedible plant or tree' via lexical shift and passing /q/ into /k/. See **aubergine**.

Pulp via Latin *pulpa* 'animal or plant pulp', perhaps from the same root as *pulvis* 'dust', *pollen* 'fine flour', direct from Arabic *lubb* 'pulp, heart, mind, inner part' via reversal.

Pulse *(impulse, pulsation)* via Old French *po(u)ls*, from Latin *puls* 'thick gruel, porridge, mush', direct from Arabic *baqool* 'legume' via reordering and turning /q/ into /s/. See **legume**.

Pumpkin via altered Middle French *pompone, pumpion* 'melon, pumpkin', from Latin *pepo(nem-* acc.) 'melon', from Greek *pepon* 'melon', from *peptein* 'to cook', from Arabic *2ab2ab(un)* 'melon' via lexical shift and /2/-loss.

Quinaquina *(quinine)* via Old French, from Spanish *quina* 'cinchna bark', from Quechua (Peru) *kina*, from Arabic *keena* 'such a tree'; or *qinoo*/*qinaa, qinwaan* (pl.) 'a branch; a palm tree' via lexical shift.

Radish via Old English *rædic* 'radish', from Latin radicem (nom., radix) 'root, radish', straight from Arabic jadhr 'root' or jazar(at) 'a carrot' via reversal and turning /j & z (dh)/ into /sh & d/; or rashaad 'a spicy leafy herb' via lexical shift and reordering. See **carrot.**

Raisin via Old French *raisin* 'grape; raisin', Spanish *racimo*, Italian *racemo*, German *Rosine*, from Latin *racimus* 'cluster of grapes or berries', from Arabic *2iSrim* 'unripe, sour grapes' via lexical shift, reordering, merging /2 & S/ into /s/, and turning /m/ into /n/.

Reap *(ripe)* via Old English *reopan, ripan* 'to cut grain with a hook or sickle; to reap', Old High German *rifi* (Modern *reif* 'ripe'), direct from Arabic *'abara* 'to treat or mend plants' via lexical shift and reversal; *raba* 'to grow, to cut', *rayeb* 'of yogurt, ripe', *'irb* (n) 'piece, organ' via lexical shift (cf. **rape**, from Arabic *'irb* 'intercourse, vagina' via lexical shift; **pray** from Arabic *'ariba* 'prostrate, pray, fall' via reordering; and **arboreal** above).

Reed via Old English *hreod* 'reed, rush', Old High German *hriot* (Modern *Ried*), direct from Arabic *riaD* 'herbs and plants' via lexical shift and replacing /D/ by /d/; or *'urTi* 'a rather tall multi-stemmed, sticklike plant' via lexical shift and turning /T/ into /d/. See **rod**.

Rod via Old English *rodd* 'a rod, pole', probably cognate with Old Norse *rudda* 'club', direct from Arabic *durra(t)* 'a rod, stick' via reversal; or *3ood* 'a piece of wood, stick', turning /3/ into /r/. See **reed**.

Root *(radical)* via Old English, from Old Norse *rot* 'root', direct from Arabic jadhr 'root' via reversal and merging /j & dh/ into /t/.

Rose *(rosary)* via Old English, from Latin *rosa*, probably from Greek *rhodon* 'rose', from Arabic *zahr(at), zuhoor* (pl.) 'flower' via reversal and /h/-loss; the Greek form is from Arabic *rauDa(t/h), rauD(un)* (pl.) 'herbs and vegetables; nice orchard' via lexical shift or from *ward(un)* 'rose' via reordering.

Rosebud from (i) *rose* above and (ii) *budde*, perhaps from Old French *boter* 'push forward, thrust', from Germanic or Dutch *bot* 'bud', German *Beutel*, or Old English *budd* 'beetle', from Arabic *batala(t)* 'a baby plant coming out of its mother; offshoot, budding; cutting' via /t & l/-merger into /d/; or *badh, budaha(t), badeeha(t)* 'the beginning of everything' via lexical shift and /h/-loss.

Saffron via Old French, from Latin *safranum*, Spanish *azafran*, direct from Arabic *za3faran* via /3/-loss (Harper 2016); or *3iSfir(un)* 'saffron' via /3 & S/-merger into /s/.

Sesame via Middle French, from Latin *sesamum*, from Greek *sesamon*, direct from Arabic *sumsum/simism* 'sesame'.

Sheath *(sheathe)* via Old English *sceadh*, German *Scheide* (Old *skaida*), direct from Arabic *kees* 'bag, covering'; /k & s/ became /sh & th/.

Shell via Old English *sciell, scill* 'seashell, eggshell' and/or *scealu* 'husk, shell', direct from Arabic *jill* 'of plants, leg, stalk' or *jilal* 'cover' via lexical shift and passing /j/ into /sh/.

Shoot via Old English *sceotan* 'to hurl missiles, strike', direct from Arabic *shaT'* 'of leaves, to come out from seeds; baby leaves, ends; shoot, young branch, stock, leg'; /T/ passed into /t/.

Shrub *(shrubbery, Shrewsbury, scrub)* via Old English *scrybb* 'brushwood, shrubbery', from Danish *skrub* 'brushwood', direct from Arabic *shaarib* 'a young plant; moustache' via lexical shift.

Sow *(sown, semen, seed, season)* via Old English *sawan* 'to scatter seed upon the ground or plant it in the earth', Old High German *sawen* (Modern *säen*), direct from Arabic *zara3* 'to sow' via /z & r/-merger into /s/ and passing /3/ into /w/; *sawwa* 'to level (the ground)' via lexical shift; or *shaqqa* 'to cut, plough', turning /sh & q/ into /s & w/.

Spear *(spire)* via Old English *spir* 'shoot, spike, blade of grass' or *spere* 'lance, spear', direct from Arabic *sabal (sunbula)* 'a spear of wheat; arrow' via lexical shift and passing /l/ into /r/; *siffeer* 'a spear of wheat', turning /f/ into /p/; or *Sabr/Sabbar* 'a thorny fruit' via lexical shift and passing /S/ into /s/.

Spinach via Old French *espinache* (Modern *epinard*), from Catalan *espinac*, from Arabic *sabanikh* 'spinach', passing /kh/ into /ch/ (Harper 2016).

Sprig *(spray, sprog)* via Old English *spræc* 'shoot, twig or spray of a plant, shrub', direct from Arabic *shibriq* 'a kind of a small, low thorny plant' via lexical shift and passing /sh & q/ into /s & g/.

Sprout via Old English *sprota* 'shoot of a plant; twig' and German *Sproß*, direct from Arabic *Sabr(at)* 'a kind of sweet thorny plant' or *bizra(t)* 'a seed' via reordering and lexical shift; or *shibriq* 'a kind of small, low thorny plant' via lexical shift and passing /sh & q/ into /s & t/.

Squash via Algonquian *askutasquash* 'lit., the things that may be eaten raw', from (i) *askut* 'green, raw, uncooked', from Arabic *aswad* 'black' via lexical shift, /s/-split into /sk/, and turning /d/ into /t/ and (ii) *asquash* 'eaten', from Arabic *haqash/faqash* 'eat, crush' where /h (f)/ became /s/ or, alternatively, from Arabic *saqa* 'drink' via lexical shift where /-ash/, the plural suffix, came from the Arabic plural suffix /-at/ which became /sh/ (Jassem 2016a).

Stalk via Old English *stalu* 'wooden part; stem of a plant', from Arabic *qaSala(t)* 'a stalk' via reordering and passing /q & S/ into /k & s/.

Stem via Old English *stemn, stefn* 'stem of a plant, trunk of a tree', from Arabic *qa'ima(t)* 'leg' or *qaama(t)* 'upright posture'; /q/ split into /st/.

Stock via Old English *stoce* 'tree trunk, log, post', direct from Arabic *saaq/sooq* 'trunk, leg', passing /q/ into /k/ and inserting /t/.

Tamarind direct from Arabic *tamr hindi* 'lit., dates (of) India' (Harper 2016).

Thorn via Old English for 'a sharp point on a stem or branch; thorny tree or plant' and German *Dorn*, direct from Arabic *dareen, duraana(t)* 'dry grass, plants, or trees' or *daran* 'plant root; a swelling' via lexical shift and replacing /d/ by /th/.

Thresh *(thresher)* via Old English *threscan, therscan* 'to beat, sift grain by trampling or beating', Old High German *drescan* (Modern *dreschen*), direct from Arabic *daras* 'to thresh (wheat, barley)', turning /d & s/ into /th & sh/.

Thyme via Old French *thym, tym*, from Latin *thymum*, from Greek *thymon*, direct from Arabic *thoom* 'garlic'; lexical shift happened.

Till *(tiller)* via Old English *tilian* 'cultivate, work at; originally, aim at, strive after', German *zielen* 'to aim', direct from Arabic *dhallal* 'of farm fruits, to hang down or be arranged; to level the ground', turning /dh/ into /t/; *thalm* 'a cut in the ground, a furrow', passing /th/ into /t/ and merging /l & m/; *fala2* 'to till; to succeed', turning /f & 2/ into /t & Ø/; or *Tala3* 'of plants, to come out; grow out' via lexical shift and turning /T & 3/ into /t & Ø/.

Tomato via Spanish *tomate*, from Nahuatl *tomatl* 'a tomato; lit., the swelling fruit', from *tomana* 'to swell', straight from Arabic *tamaddad, tamaTTaT* 'to stretch' or related *middaida(t)* 'a stretching plant' via lexical shift, reordering, and turning /d (T)/ into /t/; *Tumma(t)* 'a little grass; overwhelming' or related *Timm* 'tree leaves' via lexical shift; or *daami(at)* 'red blood; bleeding' via lexical shift and turning /d/ into /t/.

Tree via Old English *treo, treow* 'tree, wood, log, timber', Greek *drys* 'oak', and Sanskrit *dru* 'tree, wood', from Arabic *shajar* 'tree'; /sh & j/ merged into /t/.

Trunk *(truncation)* via Old French, from Latin *truncus* 'trunk of a tree or body', direct from Arabic *Dinaak* 'width of a tree's lower part; trunk' via /D/-mutation into /t/ and /r/-insertion; or *qarTa(tun)* or *Tarqa(tun)* 'a piece of wood' via lexical shift, reordering, and turning /q & T/ into /k & t/.

Tulip via German *tulpe*, French *tulipe* 'tulip', from Turkish *tülbent* 'a turban; gauze, muslin', from Persian *dulband* 'turban', direct from Arabic *dalab* 'a kind of white tall tree with grape-like leaves'; /d/ mutated into /t/ besides lexical shift.

Turmeric via Middle English *turmeryte*, from French *terremerite* 'saffron', from Latin *terra merita* 'lit., worthy land', from Arabic *thara* 'dust, earth' where /th/ became /t/ (Jassem 2013f) and *maree'at* 'good, nice, delicious'; *kurkum* via reordering and turning /k/ into /g/ (Harper 2016); or *marmariat* 'a kind of herb; lit., bitter' via reordering and lexical shift.

Turnip probably from (i) *turn*, from Arabic *dawaran* 'turn' where /d/ became /t/ (Jassem 2013n), and (ii) Old English *næp*, from Latin *napus* 'turnip', from Arabic *3inab* 'grapes, berries' via lexical shift and /3/-loss; otherwise, direct from Arabic *kurnub* 'a kind of vegetable' via lexical shift and passing /k/ into /t/.

Twig *(twiggy)* via Old English *twig* 'branch, twig, shoot, small tree', Old High German *zwig* (German *Zweig*) 'branch', from PIE **dwi-ko-*, from **dwo-* 'two', direct from Arabic *thani*, from *ithnan*, *thawan* (pl.) 'two' via /th & n/-merger into /t (d)/ (Jassem 2012a, 2014g); *Tawq* 'a fold, necklace' via lexical shift and turning /T & q/ into /t & g/; *jadh3* 'trunk' via lexical shift, reversal, and turning /j, dh, & 3/ into /g, t, & Ø/; or, more likely, from *diqq (duqduq)* 'small trees and plants; small dry pieces of wood', turning /d & q/ into /t & g/.

Vegetable from Arabic *baql(at)*, *buqala(t)* 'any (sour) vegetable; thyme' via reordering and replacing /b & q/ by /v & g/; *bajl* 'small or big plants' via lexical shift and passing /b & j/ into /v & g/; or *faakiha(t)* 'fruit' via lexical shift and merging /k & h/ into /g/; or *quffa(t)*, *qaffa(t)* 'dry vegetables or plants' via reordering and turning /q/ into /g/. See **vegetarian.**

Vegetarian *(vegetation, vegetable, Vegan)* via Latin *vegetare* 'to enliven, quicken, grow', *vegere* 'to be active, alive, quicken' *vegetus* 'vigorous, active', from Arabic *faaqa* 'wake up, become bigger' or *fakiha* 'to eat', merging /k & h/ into /g/; or *qawi* 'strong, powerful' via reordering and turning /q & w/ into /g & v/.

Verdure *(verdant, vert)* via Old French, from Latin *viridis*, related to *virere* 'to be green', direct from Arabic *khaDra* 'green' via reordering and passing /kh & D/ into /v & d/.

Vineyard *(vinegar, vintner, wine)* is a compound of (i) *vine* 'grape-bearing plant', from Old French *vigne*, from Latin *vinea* 'vine, vineyard', from *vinum* 'wine', from Arabic *wain* 'grapes' where /w/ became /v/ (Harper 2016; Jassem 2014a); or, more properly, from *3inab* 'grapes' via /3 & b/-merger into /v (w)/; and (ii) *yard* below.

Walnut tree *(Wales, Welsh)* via Old English *walhnutu* 'nut of the walnut tree; lit. foreign nut', from (i) *wealh* 'foreign, roman, Welsh', from Arabic *wali* 'close, ally, follower' via lexical divergence and (ii) *hunutu* 'nut', from German *Nuss* (Old *hnuz)* 'nut', (Latin *nux*), from Arabic *nuwaa(t)* 'nut, nucleus'. See **tree**.

Watercress is a compound of (i) *water*, from Old English *wæter*, German *Wasser*, Sanskrit *udrah*, Greek *hydro*, Russian *voda*, from Arabic *wird* 'water' via reordering and replacing /d/ by /t/, *maTar* 'rain' by changing /m & T/ into /w & t/, or *qaTr* 'water, rain' via turning /q & T/ into /w & t/ (Jassem 2013d) (cf. **write** from Arabic *qira'at* 'reading' through lexical shift and the change of /q/ to /w/ also (Jassem 2013i)) and (ii) *cress*, from Old English *cresse,* originally *cærse*, German *Kresse*, from PIE root **gras-* 'devour', direct from Arabic *qurra(t)* 'watercress', turning /q & t/ into /k & s/.

Watermelon See **water** & **melon**.

Wheat *(white)* via Old English *hwæte* 'that which is white; white' and German *Weizen*, from Arabic *waD2* 'white' where /D & 2/ became /t & Ø/; *baiDaa' ('abiaD)* 'wheat, white, pot' where /b & D/ became /w & t/ (Jassem 2014a); or *2inTa(t)* 'wheat', passing /2/ into /h/ and merging /n &T/ into /t/.

Wither *(weather)* via Middle English *wydderen* 'dry up, shrivel', probably from *wederen* 'to expose to weather', direct from Arabic *fatar* 'to weaken', passing /f & t/ into /w & th/; or *dhawa* 'wither' via reordering and /r/-insertion.

Wood *(wooden, woody)* via Old English *wudu (widu)* 'tree, trees, forest, grove', Old High German *witu*, Welsh *gwydd*, from Arabic *wajda(t)* 'cut (fire) wood' via /j & d/-merger; *diqq* or *judaada(t)* 'young trees' via reversal and turning /q (j)/ into /w/; *3ood* 'a stick, a piece of wood' via /3/-loss and lexical shift; *daff* 'thin, flat, long wood' via reversal and turning /f/ into /w/; *daw2a(t)* 'big tree' via reversal and /2/-loss; or *3aDaa(t)* 'any valley plants' via lexical shift and turning /3 & D/ into /w & d/.

Yard *(garden)* via Old English *geard* 'fenced enclosure, garden, court; residence, house', Old High German *garto* (German *Garten*) 'garden', Gothic *gards* 'enclosure; house', direct from Arabic *jidar, judran* (pl.) 'wall; garden' via reordering and passing /j/ into /g/; or *2ujrat* 'room, (stone) house', merging /2 & j/ into /y (g)/ and passing /t/ into /d/. See **garden**.

As 'a measurement unit', it comes from Old English *gerd/gierd* 'rod, staff, stick, measure of length', from Arabic *qarTa(t)* 'rod; a cut', turning /q & T/ into /g & d/ (Jassem 2014g).

Zucchini via Italian plural of *zucchino*, diminutive of *zucca* 'gourd, squash', perhaps from Latin *cucutia*, from Arabic *koosa* 'zucchini' via reversal and turning /s/ into /z/.

In short, the total number of *floral terms* in this study amounted to 163, all of which have true Arabic cognates: i.e., 100%.

4. DISCUSSION

As can be clearly seen in the results, *floral terms* in Arabic, English, German, French, Latin, Greek, Sanskrit, and all Indo-European languages are true cognates for sharing identical or similar forms and meanings, whose differences, however, are all due to natural and plausible causes and different routes of phonetic, morphological, grammatical, and semantic change. So, since the percentage of shared *floral* words between Arabic, English, Latin or Greek, for example, amounted to 100%, this indicates their membership to or being dialects of the same language, for which a much lower 60-80% ratio is usually set according to Cowley's (1997: 172-173) 100-word list-based classification.

In light of the above, the results are in full harmony with the findings of previous studies (Jassem 2012a-f, 2013a-q, 2014a-k, 2015a-j, 2016a) in which English, German, French, Latin, Greek, Sanskrit and Arabic were all found to be not only members of the same family but also rather dialects of the same language. More precisely, they lend further support to the radical linguistic (or lexical root) theory on all theoretical and procedural levels of analysis. Theoretically, the main principle which states that Arabic, English, German, French, and the so-called Indo-European languages are not only genetically related but also are dialects of the same language is, therefore, verifiably sound and empirically true. Because of this, a larger language family grouping has been proposed and termed *Eurabian* or *Urban* as a blend of Indo-European and Arabian languages (Jassem 2015c: 41, 2015d).

Moreover, the above picture entails that all the above languages must have descended from an earlier, perfect, suddenly-emerged language, called *radical (world) language* from which all human languages initially came and which has incessantly and variably survived into today's languages, though getting simpler and simpler over time. In other words, the radical language could never have died out beyond recognition. With proper methodology, it can be easily recovered as shown in this work (cf. Campbell 2004: 360). As this work demonstrated, it seems that its closest or most conservative and productive descendant is Arabic for having preserved almost all its features (Jassem 2014h-k, 2015a-d). In fact, all Indo-European languages can be safely aid to have descended directly from Arabic for reasons outlined earlier (Jassem 2015a-b, 2015d: 131-132; 2014a-b, 2014e).

As a consequence, *reconstructing* an old world language is needless; rather that proto-language, called radical language here, is still very much alive, having variably survived into today's languages, with Arabic being its closest descendant as the above data clearly shows (for detail, see Jassem 2014h: 254-256, 2014i: 116-117; 2014k, 2015a-b). Thus, in lieu of reconstructing hypothetical, fictitious languages, the quest should be concerned with relating those languages to it as shown here (cf. Campbell 2004: 360). Because the relationships amongst such languages are self-evident and because linguists deal with language first and foremost, the exact time and place of the split-up between Arabic and the so-called Indo-European languages is immaterial and of no concern here (for details, see Jassem 2015e-f).

Analytically speaking, the procedures of the theory operated neatly and smoothly on all levels. Phonetically, the entire changes were natural and plausible, cyclic and multi-directional, including processes like substitution, deletion, reversal, merger, split, reordering, reduction, and so on. The results are replete with examples which need not be repeated here.

Morphologically, the affixes, whether inflectional or derivational, had true Arabic cognates as well. For example, the commonest affixes and their variants in English and all Indo-European languages like (i) *–n (-an, -en, -ene, in-, -ine, -ing, -ness, -ar)*, (ii) *-t (-ate, -ette, -ite, -ity; ad-, de-, -ed; -s, -ess, -ous)*, (iii) *-tion*, and (iv) *–al (-eal, -ile, -elle)* have true identical cognates in Arabic (for detail, see Jassem 2012f, 2013a-b, 2013l, 2015d, 2016a).

Semantically, almost all types of lexical relations were attested. Lexical stability was the commonest pattern where most *floral terms* preserved their basic meanings across the languages, e.g., *tree, flower, rose, herb, grass, pepper, what, zucchini*. Lexical convergence recurred a lot in the data due to formal and semantic similarity between Arabic words, on the one hand, and their English, German, French, Latin, and Greek cognates, on the other. For instance, all the words for which more one cognate was provided are a case in point such as *agrarian, arboreal, berry, farm, forest, fruit, horticulture, onion, reap, wood,* each of which might derive from several Arabic words, all formally and semantically similar (see 3 above). Although only one cognate might be the ultimate source in the end, no need is presently felt to specify which one it might be; the reader may judge. Likewise, semantic multiplicity (polysemy) was recurrent, where some English words had more than one meaning, which might just as well have more than one likely Arabic cognate; for example, *cane, cultivate, farm/firm, till, shell, stem* have different meanings, every one of which derives from formally and semantically similar Arabic words (see 3 above). As a matter of fact, almost all Arabic words are contextually polysemous in nature as can be immediately gleaned from any lexical entry (e.g., Ibn Manzour 2013). Lexical shift frequently occurred, e.g., *apple, banana, barley, basil, oregano, thyme, vegetable*. Lexical divergence was rare as in the first syllable of *walnut* (see 3. above). Lexical split affected several words such as *corn, acorn, grain,* all from Arabic *qarn/qarnia'* 'horn, grain, bunch'; *reap, ripe* and *rape* split from Arabic *'abara* 'to treat plants' or *raba/'irb* and related derivatives; *cumin* and *cinnamon* came from Arabic *kammoon*; *fruit* and *farm* split from Arabic *thamar(at)* 'fruit, farm' via reordering and turning /th/ into /f/. Lexical change was rare such as *vegetarian* and *vineyard*, which could be seen as an advanced stage of lexical shift as indicated above. Finally, lexical variability occurred often in the data, whether at the level of the different forms of the same words within the same language such as English *acorn; arboreal, tree; garden, yard* or across the languages like English *tree*, Latin *arboreus*, and Arabic *shajar(at)* 'tree' (see 3 above). Arabic, in particular, is replete with linguistic variability of all types such as *laimoon/limah* 'lemon', *bihar/buhar* 'pepper', *qam3/qima3* 'gummy, *quraa2, qiraa2, qiryaa2* 'agrarian; plantable land', *baqla(t), baql* 'vegetable' (see 3 above).

Finally, methodology and Indo-European etymological dictionaries merit some comment. Although tracing the Arabic origins of English, German, French, Latin, Greek, and Sanskrit words works well by, actually cannot be carried out without using the routes outlined in their etymologies such as Harper (2016) and his sources, yet there are countless cases whose etymologies are not only admittedly uncertain or unknown but also are factually implausible, erroneous, and complicated with unnecessarily lengthy derivations. Many such cognates, one can instantly observe, do not relate to each other in either form or meaning or both. Therefore, in many cases like *acorn, aubergine, bean, bloom, bud, cane, chick peas, crust, daffodil, egg, farm, fig, fir, forest, fruit, grape, harvest, husk, lettuce, log, mow, mushroom, onion, orchard, plant, pulp, rose, stalk, tulip, verdure, watercress, wither, zucchini*, a direct derivation from Arabic is not only shorter but also more logical, which, at the same time, preserves both the form and meaning of cognate words. Take *onion*, for instance, which is derived from *one* in Latin, which does not make sense at all, semantically-speaking. Instead, deriving it from Arabic *na3na3* 'mint' preserves both (a) its form via reordering and /3/-loss and (b) its meaning through lexical shift, both being vegetables. The same applies to the other instances as can be seen in the Results' Section 3 above.

5. CONCLUSION AND RECOMMENDATIONS

The main findings can be summed as follows:

- The 163 *floral terms* in Arabic, English, German, French, Latin, Greek, and Sanskrit are true cognates, whose differences are due to natural and plausible causes and different routes of linguistic change.

- The radical linguistic (or lexical root) theory has been adequate for genetically relating *floral terms* in the above languages to one another, according to which they are all dialects of the same language, comprising one larger language family grouping that may be called *Eurabian* or *Urban*, for short. In addition, these languages descended from a perfect Radical (Root) Language, or early prehistoric language, from which all human languages came and which, furthermore, has variably survived into today's languages. As Arabic is phonetically, morphologically, and lexically the most complex of all, it can be safely said that it has inherited almost all that Radical Language features, thus being the most conservative of all.

- On the analytical level, the main phonetic changes included substitution, reversal, reordering, deletion, split, and merger; morphologically, all affixes have true Arabic cognates; lexically, the recurrent patterns were stability, convergence, multiplicity, shift, split, and variability.

- Finally, further research is needed into all language levels, especially lexis (Jassem 2012a-f, 2013a-q, 2014a-k, 2015a-h); it also calls for similar research in other world languages or their families (Jassem 2014h-i, 2015h-i, 2016a); besides, the application of such findings to language teaching, lexicology and lexicography, translation (Jassem 2014d, 2015a), cultural (including anthropological, historical, social, religious) awareness, understanding, and heritage is badly needed to promote cross-cultural understanding and cooperation.

ACKNOWLEDGEMENT

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