

SYMMETRICAL LETTER PATTERNS

SUSAN THORPE

Great Missenden, Buckinghamshire, England

(thorped@hotmai.com)

We take for granted the symmetrical letter patterns in palindromes - such as LEVEL and KAYAK. These involve all the letters in the word. But what about symmetrical letter patterns which occur in **non-palindromic** words, such as that of the letter N in ENCHANTMENT? In *Making the Alphabet Dance*, Ross Eckler gave the name 'cadence' to a set of identical letters spaced at equal intervals in a word - as in SYNGENESIOTRANSPLANTATION. Here, I add two constraints:

the letters must be symmetrical within the word, as well as in relation to each other.

the letters must not occur elsewhere within the word. In ULULALU, for example, although two of the Us are symmetrical, the three Us taken together are not symmetrical.

I have divided the words with symmetrical letter patterns into two main groups:

- A. those in which a set of identical letters is symmetrically-arranged
- B. those in which sets of 2 or more different letters are symmetrically-arranged

The symbols used:

X represents identical letters

* represents any number of letters, the same number in a particular word. Ditto ? and -

In a particular word ? and - always represent different numbers of letters.

Either ? or - may, or may not, represent the same number of letters as *

In those words which include both the symbols ? and - there are different ways of making a specific length word, the number of ways increasing with the length of the word. Consider, for example, the pattern * X ? X - X ? X * = 14 letters - see A. Type 2 (c) below. Theoretically (and practically) it can be achieved in 5 different ways (numbers = the number of letters):

1 X 1 X 6 X 1 X 1, 1 X 2 X 4 X 2 X 1, 1 X 3 X 2 X 3 X 1, 2 X 1 X 4 X 1 X 2, 3 X 1 X 2 X 1 X 3

In words with an odd number of letters the central letter, if not repeated elsewhere, is symmetrical. However, GEOMORPHOLOGY would not conform to the pattern * X ? X - X ? X * if the letter P were treated as a second symmetrical letter. So here I only treat the central letter as symmetrical::

where it forms part of a set of symmetrical identical letters as, for example, in the patterns

(*) X ? X ? X (*) and (*) X X ? X ? X X (*)

where it forms the central letter of a central palindromic group of 5 or more letters, as do the letters F and L in KNIFING and CENTILITRES respectively.

Some patterns were found in only a few (or one) words. 'All' these words are listed. In the case of the more prolific patterns, I offer selections. All the examples are either solid or hyphenated. Phrases are excluded. Tautonyms are also excluded (such as ITAI-ITAI with its symmetrical I).

Unreferenced words can be found in the OED Second Edition as head words, variant forms and text words including citations. References for non-OED words are given at the end.

A. SET OF IDENTICAL LETTERS SYMMETRICALLY-ARRANGED

There are four basic types of symmetrical pattern which use only one letter of the alphabet:

- Type 1. single letters equally-spaced in the word
- Type 2. single letters not all equally-spaced
- Type 3. doubled letters only
- Type 4. single letters and doubled letters

In turn, each of these four types of pattern can be divided into two categories: those which start with one of the symmetrically-arranged letters (X.....X), and those which start with some other letter (*X.....X*).

TYPE 1 Single letters equally-spaced in the word

(a) Pattern X ? X ? X

No words of any length were found for the letters F, J, V and Z.

5 letters: ABACA, DADED, EGENE, GOGAG, HEHAH, IPITI, KEKUK (tig), NONAN, OROMO, POP-UP, RARER, SISTS, TETHT, URUBU, XIXAX (ww92216), YLYKY

7 letters: AQUARIA, BENBURB, COLCHIC, DAWDLED, EXPENSE, GOUGING, HASHISH, ILLINOI, KARKEEK (edfc), MNEMISM (sted), NAUNTON (tig), OBLONGO, PIT-PROP, RETRAIR, SEESAWS, TAUTEST, UNGUNDU (tig), WOUWOUW, XAAXKAX (a Mexican village), YAMYRLY

9 letters: ALEXANDRA, CHALCIDIC, DAUNDERED, ENUMERATE, GUANGDONG, HANCHURCH (Staffordshire), IMPLIEDLI, KNICKNACK, LADDLEFUL, MINIMARUM (sted), NEWINGTON (Kent), OAK-POTATO, PRIMPED-UP, QARA-QULAQ (cham), RESERVOIR, SATISFIES, TOASTIEST, WIFE-WIDOW, YESTYRDAY

11 letters: AUTOBASIDIA, COLPECTATIC (sted), DISORDAINED, EARTHENWARE, GEOLOGIZING, HERETHROUGH, KANICKANICK, LATEGLACIAL, MATRIMONIUM, NAGGING-PAIN, ORANGOTANGO, RAINPROOFER, SOPHISTRIES, TRICOTEMENT, WATERWILLOW

13 letters: AMPHIGASTRULA, CRYPTOCLASTIC, DISMURDERIZED, EMPHYSEMATOSE, GODFORGETTING, IMPROVISATORI, KILLICKINNICK, NIGHT-INVASION, PRINCIPALSHIP, REDISTRIBUTOR (web2), STEREOSTATICS, TRADUCTIONIST

15 letters: ANTONIO-AQUILINA, CARDIOSCLEROTIC (sted), DOWNWARD-FORWARD, ENTRANCE-PASSAGE, GRAMMAR-GRINDING, LITHOXYLOIDICAL, NITROGENISATION, PHILOSOPHERSHIP, SUBMINISTRATORS, THREMMATOLOGIST (bt)

17 letters: GUTTURAL-GRUMBLING, HANDKERCHIEF-CLOTH, NEUROTRANSMISSION, RHOMBIC-TRIANGULAR, SUTURE-INSTRUMENTS

(b) Pattern X ? X ? X ? X

No words found for B, D, F, G, H, I, J, L, M, N, O, P, Q, R, U, V, W, X, Y and Z.

10 letters: AMBARVALIA, EXPEDIENCE, SUN-SENSORS, TEST-RETEST

13 letters: KNICKETY-KNOCK, SINISTER-SIDES

16 letters: CHOLECYSTECTATIC (sted), SMICKSMICKSMACKS (csd)

(c) Pattern X ? X ? X ? X ? X

No words found for B, C, F through Z.

9 letters: ANAPANAPA (web2)

13 letters: DINDLE-DANDLED, EFFERVESCENCE

(d) Pattern * X 1 X 1 X * (1 indicates one letter)

No words found for D, F, J, K, V, W, X and Z.

7 letters: CARAVAN, JEZEBEL, NGOGOGO (tig), PHPHPHT, MILITIA, ULULALU, AMOMUMS, UNONING, SOLOMON, UQOQOQO (tig), PRURIRE, STATUTE, CUMULUS, CYTYZYN

9 letters: SEALAPACK, HO-BO-BO-BOO, CLEVEREST, LOGOGOGUE (web2), CRITICISE, MOLILALIC (sted), CONENINES (sted), PROTOZOAN, HYPOPEPSY, SARTRERIE, OUTSTATES, PHYSYCYON

11 letters: UNPALATABLE, PEACOCK-COAL, VICE-REGENTS, EIGHTH-WHEEL, DOMICILIARY, FAWNINGNESS, CHROMOSOMAL, LIBRARY-ROOM, TENSE-SYSTEM, DESTITUTION, BENYFYCYALL

13 letters: EXTRAVAGANCES, SPATCHCOCKING, UNPRECEDENTIAL, ACQUISITIVELY, REPUNGNANTLIE, METEOROLOGIST, CONSTITUTIONS

15 letters: HYPOCATALASEMIC (sted), NON-PRECEDENTIAL, PERMANENTNESSES (web2), ANTHROPOLOGICAL, ALTOCUMULUS-TYPE

17 letters: TRACT-DEGENERATION, SPECTROBOLOMETRIC (web2)

(e) Pattern * X 2 X 2 X *

No words found for F, J, M, Q, W, X and Z.

9 letters: TASMANIAN, ACESCENCE, SEPTEMBER, THIGHACHE, VITRIOLIC, SKUNK-LIKE, INVENTING, COMMOTION, PROCREARE, TSOTSIISM, VULTUROUS, TYSYLLYN

11 letters: GRAMMARIANS, RUBROBULBAR, ONCHOCERCAL, UNDERDEODES, FREQUENTEST, JEHOSHAPHAT, QUINTILLION, CONTINGENCY, BRONTOSCOPY (web2), PERCARBURET, POTENTIATES, AQUACULTURE, SWYNGYLLYNG

13 letters: DISADVANTAGES, TRICHOCERCOUS (dbs), UNPERFECTEDLY (web2), RINGING-ENGINE, ORTHORHAPHOUS, DEVIATIONISTS, QUINCENTENARY, GERONTOPHOBIA (cham), OVERFORWARDLY, PROTESTANTISH

15 letters: SUBLAPSARIANISM, MESOCONCHICALLY (sted), SHAKESPEAREANLY, DRUDGING-ENGINES, PSYCHORHYTHMIAS (sted), NONDISCIPLINARY (web2), SIMILARLY-PLACED, IMMUNOENHANCERS (sted), AMNIOCHORIONICS (sted), UNDERPERFORMING

17 letters: UNDISADVANTAGEOUS (web2), INTRAEXPERIENTIAL, MATERIALISTICALLY, PLASMODIOPHORALS (web2), UROCOPROPORPHYRIA (medical)

(f) Pattern * X 3 X 3 X *

No words found for D, F, G, J, K, Q, V, W, X and Z.

11 letters: CARRIAGEWAY, ECTOSCOPICS (sted), BEFORETIMES, BIOCLIMATIC, FLATULENTLY INCOGNISANT, POTAMOGETON, ARBITRAGERS, STRUCTURATE, CUNICULATUM (sted)

13 letters: BRADYCARDIACS (sted), CUBO-CUBO-CUBES, MICROSCOPICAL, TRIPOLITANIAN, POLYMOLECULAR, LYMPHOMYXOMAS (sted), CONFRONTMENTS, STOMAPODIFORM, PERIVERTEBRAL (web2), AUTHENTICATED, COUTEQUECOUTE, THYNSTYGACYON

15 letters: CUP-ACQUAINTANCE, HYPERPHENOMENAL, ARCHBISHOPSHIPS, ALTITUDINARIANS, MOUNTAINOUSNESS, HEMOCHROMATOTIC (sted), LOUP-LOUP-LOUPING, INTRAVERTEBRALS (sted), HOUSEMASTERSHIP, SYSTEMATISATION (cham)

17 letters: BUREAUCRATISATION, BRONCHOSCOPICALLY (cham), MONTICULIPORIDEAN (web2), SEVENTEEN-BRANCHED, LEPTOSTROMIFORMIS, PLEUROPERICARDIAL, ELECTROSTRICTIVES

19 letters: MORPHINOMIMETICALLY (sted), HYPOCRATERIMORPHOUS

(g) Pattern * X 4 X 4 X ***No words found for B, D, F, G, J, K, P, Q, W and X.**

13 letters: MATHEMATICIAN, DECONSECRATES, WHERE-THROUGHE, LIBRARIANSHIP,
PLASMOLYSABLE, OMENTUMECTOMY (sted), INSEMINATIONS,
COMMEMORATION, TRANSGRESSORS, PSEDO-SPANISH,
STEENSTRUPITE, QUASIHUMOROUS (web2), HYDROXYMETHYL

15 letters: QADRICAPSULATE, ARCHITECTONICAL, OVERASSERTIVELY (web2),
CHINKERINGCHING, CONTRAINDICANTS, PROTEMPORANEOUS (web2),
PERIPHERONEURAL (web2), DISILLUSIONISER, IATROMATHEMATIC,
CHURCH-FURNITURE

17 letters: CHOANOFLAGELLATES, STREPTOSEPTICEMIC (sted), MEDICO-CHIRURGICAL,
CONTRE-INFLUENCES, FUSOSPIROCHETOTIC (sted), HYDROSPIROMETRICS
(sted), PREVENTIVE-SERVICE, BENZENEAZOBENZENE (rh)

19 letters: ATOCHOLECYSTECTOMY (web2), CHORIONEPITHELIOMAS (sted),
NEUROFIBROSARCOMATA (sted)

(h) Pattern * X 5 X 5 X ***No words found for B, F, G, J, K, M, Q, V, W, X, Y and Z.**

15 letters: CAMPTODACTYLIAS (sted), ACANTHOCYTOTICS (sted), LEPIDODENDRALES (opc),
RHEOTACHYGRAPHY (sted), VICE-ADMIRALSHIP, ULTRAMELANCHOLY (web2),
UNCOMMUNICATING, NONEXPLOITATION (web2), ARCHSACRIFICERS,
PSEDOISOMERISM (web2), STRAIGHT-JACKETS, CUBITO-CUTANEOUS

17 letters: TRACHEOLARYNGEALS (sted), NEDERLANDSCH-INDIE, OVERMASTERFULNES,
MONOETHANOLAMINES, CHOLANGIOHEPATOMA (sted), NEPHROHYPERTROPHY
(web2), ATOKERATOPLASTIC (sted)

19 letters: HEPATOMELANOTICALLY, HEMISPHERICOCONICAL,
ZYGOMATICOSPHENOIDS (sted), DEATH-CONTERFEITING

21 letters: HYDROPNEMOPERITONEUM (sted), ELECTROCATERIZATIONS (sted)

23 letters: LIPOCALCIGRANULOMATOSES (sted), PHENYLPROPYLMETHYLAMINE (sted)

25 letters: PSYCHONEUROENDOCRINOLOGIC

(i) Pattern * X 6 X 6 X ***No words found for B, D, F, G, J, K, M, P, Q, R, S, T, V, W, X, Y and Z.**

17 letters: MARINE-DRAUGHTSMAN, ACTINOBACILLOTICS (sted), JEJUNOILEOSTOMIES,
PHYSICOPHILOSOPHY, MICROANGIOGRAPHIC (sted), GLYCOSIALORRHEALS (sted),
INFLATION-PROOFING, ROISTER-DOISTERDOM, QUASI-SIMULTANEOUS

(j) Pattern * X 7 X 7 X *

19 letters: HEPATOSPLENOGRAPHED (sted), RHEOENCEPHALOGRAPHS (sted)

(k) Pattern * X ? X ? X ? X *

9 letters: CATAMARAN, BEJEWELED (web2), VISIBILIA, LOCOMOTOR, SURUIUOUR

11 letters: SMARAGADANE, FLEMENEFERD, ELIGIBILITY, GNOMONOLOGY,

12 letters: BALSAMEACEAE (web2), DESCENDENCES (web2), KIDDIEWINKIE,
INCONVENIENT, BOREOTROPHON (tf), ASBESTOS-BASE (cham)

13 letters: MISERERE-SEATS, PEDONOSOLOGIC (sted)

14 letters: UNEXPECTEDNESS, LEIBNITZIANISM, CITRO-TARTRATES

15 letters: WEATHER-BLEACHED, NICOTINOMIMETIC (sted), ALVEOLOPALATALS (sted|)

16 letters: DISADVANTAGEABLY, ON-AENGENAEMHEYDT

17 letters: GRANULATOCAPITATE, DIOECIODIMORPHOUS

18 letters: IATROMATHEMATICIAN, AEROPIESOTHERAPIES (sted),
CYSTOPROCTOSTOMIES (sted)

19 letters: HYPERTHERMOESTHETIC (sted)

(l) Pattern * X ? X ? X ? X ? X *

11 letters: RASANAYAGAM, TELEMETERED, DIVISIBILIS

13 letters: ELIGIBILITIES

15 letters: PERVERTEDNESSES (web2), INCONVENIENCING, COLLODION-COTTON

17 letters: INEXPERIENCEDNESS, CONDENSING-ENGINES

(m) Pattern * X ? X ? X ? X ? X ? X *

13 letters: TARAMASALATAS

TYPE 2 Single letters not equally-spaced in the word**(a) Pattern X ? X - X ? X**

8 letters: ARAUCANA, EYEPIECE, SYSTASIS

9 letters: ATHABASKA, CONCYCLIC EBENACEAE, GONGAGENG, HACHSHISH,
OGBOMOSHO, SUSPENSES

10 letters: ANATHEMATA, EVERYWHERE, SYSTEMISES

11 letters: ANAMNIONATA, ELEAGNACEAE, HEATHTHRUSH, KNICKAKNOCK,
YMAGYNYNGLY

12 letters: ACCIACCATURA (cham), EVIDENCEABLE, LIGULIFLORAL (cham),
REVERBERATOR, SYSTEMATISES

13 letters: EXPERGISCENCE, PIMPERLIMPIMP, READER-PRINTER, WINDOWSWALLOW

14 letters: ACANTHOCEPHALA, ELECTROPHORESE, THROSTLE-THROAT

15 letters: SERORESISTANCES

16 letters: ABRACHIOCEPHALIA (sted), SINISTROTORSIONS (sted)

17 letters: TRANSIT-INSTRUMENT

18 letters: EMPLOYMENT-EXCHANGE

(b) Pattern X ? X - X - X ? X

11 letters: ABRACADABRA, ANAPLASMATA (sted)

15 letters: REFRIGERATOR-CAR

23 letters: TRANSUBSTANTIATIONALIST

(c) Pattern * X ? X - X ? X *

10 letters: PAPALOAPAN, REMEMBERED, DISINHIBIT, MONOTROPOS (cham),
ISOSTASIST (web2), TUMULTUOUS

11 letters: SANTALACEAE (dfpf), REPREHENDED, VIOLINISTIC, UNTENANTING,
NON-ORTHODOX

12 letters: RHABARBARATE, PRETENSELESS, BIPINNATIFID, TRIVIALITIES,
UNENLIVENING, PROTOBIOLOGY

13 letters: PAREIASAURIAN, PRINCIPIATION, GEOMORPHOLOGY

14 letters: HALICARNASSIAN (coll), SARRACENIACEAE (dfpf) PREVENTIVENESS,
SPIRITUALIZING, UNENTERTAINING, ENDODONTOLOGIC

15 letters: PHARMACOMANIACS, INTERDEPENDENCY, UNINQUISITORIAL,
UNCONDESCENDING, ISOCOTYLEDONOUS (dbs)

16 letters: TRANSCARBAMYLASE, SALICYLSALICYLIC, NEUROMUSCULATURE

18 letters: CHONDROSARCOMATOUS, HYPERLEPTOPROSOPIA

(d) Pattern * X ? X - X - X ? X *

13 letters: SARDANAPALIAN, PALAIYAKKARAN, LEVEL-TEMPERED, REPLETENESSES (web2)

(e) Pattern * X ? X - X - X ? X *

17 letters: PROCTOCOLONOSCOPE

TYPE 3 Doubled letters only - equally-spaced in the word**(a) Pattern XX?XX**6 letters: EE-BREE, OODLOO7 letters: DDOFYDD, LLOGELL (nwd), OOJIBOO8 letters: EERSANEE, LLAN-MILL (bar)9 letters: LLYFRGELL ((nwd))11 letters: LLANFECHELL (bar)12 letters: LLANSTADWELL (bar)17 letters: LLANFAIR-YN-NEUBWLL (tig)**(b) Pattern * XX1XX ***

See ... B. SETS OF 2 OR MORE DIFFERENT LETTERS SYMMETRICALLY-ARRANGED

Type 4 (b) Groups of 5 letters

(c) Pattern * XX2XX *8 letters: VAALHAAI, ODD-LADDY, PEETWEET, EGG-NOGGS, ILL-WILLY, BOOKHOOD10 letters: MACCIOCCHI, GREENWEEDS, FULLFILLED, WANNTONNES, BROOD-GOOSE,
SOPPCUPPAN, FORRWERRPE, DISSEISSEE (a triangle word: 4321), OUT-TROTTED12 letters: SHELL-FILLING, CROSS-KISSING20 letters: MESIOBUCCO-OCCLUSALLY (sted)**(d) Pattern * XX3XX ***9 letters: KAAPENAAR, FEED-WHEEL, ILLEGALLY, INNE-PINNE, GOODEROON, ITTY-BITTY11 letters: HUBBA-HUBBAS, GODDY-GODDEN, DULLSVILLES, KINNAKINNEC,
BLOOD-GROOVE, JIPPI-JAPPAS, CORROBORREE, CUTTHROTTIS13 letters: CHUFF-CHUFFING, SPILLSPILLING, EVER-RECURRING15 letters: ROSETTE-PATTERNS**(e) Pattern * XX4XX ***10 letters: NAACHT-MAAL, BEECH-GREEN, ALLICHOLLY, TOOTH-PROOF12 letters: JIBBER-JABBER, FEDDIRBEDDIS, HAFFLE-CAFFLE(EDD), HUGGERMUGGER,
HOLLOW-BILLED, HUMMEL-BUMMEL, JINNY-SPINNER, SHOOFLEBOARD,
COPPER-TOPPED, HIRRIE-HARRIE, TUSSIE-MUSSIE, PITTER-PATTER,
TUZZIEMUZZIE14 letters: CHIFFON-TAFFETA, SHILLY-SHALLYER, CHANNEL-TUNNELS,
PRETTY-PRETTIES (cham)**(f) Pattern * XX5XX ***11 letters: KEEPING-BEER, ILLOGICALLY, FOOTMANHOOD13 letters: HUBBLE-SHUBBLE, MODDLEY-CODDLE, SHEELING-SEEDS, RIFFLE-SHUFFLE,
WELL-TRAVELLED, BROODING-ROOMS, COPPICE-TOPPED, FERROSO-FERRIC,
PASSIONLESSLY, PATTERN-CUTTER15 letters: TWIDDLE-TWADDLES, WHIFFLE-WHAFFLES (edd), WHIPPER-SNAPPERS,
CHITTER-CHATTERS17 letters: FIFTEEN-SIXTEENTHS (maths books)**(g) Pattern * XX6XX ***12 letters: ZAAGMOLENAAR, ELLIPTICALLY14 letters: WELL-APPARELLED16 letters: FLIBBERTI-GIBBETS, SHIMMERY-WHIMMERY, STANNOSO-STANNICS,
DRIPPITY-DROPPITY, KNOTTING-SHUTTLES**(h) Pattern * XX7XX ***13 letters: ALLEGORICALLY, FOOLHARDIHOOD15 letters: FELLOW-TRAVELLER, PASSENGER-VESSEL

(i) Pattern * X X 8 X X *

14 letters: FEEDING-LINSEED, ALLOPATHICALLY, GOOSEBERRY-FOOL, APPRENTISHIPPE

16 letters: FIDDLE-COME-FADDLE, BLOOD-SISTERHOODS

(j) Pattern * X X 9 X X *

15 letters: ALLOPSYCHICALLY (sted), FOOT-AND-HALF-FOOT, ASSEHEADDINESSE

17 letters: BURROWING-SQUIRREL

(k) Pattern * X X 10 X X *

16 letters: ALLOISOMERICALLY (sted)

(l) Pattern * X X 11 X X *

17 letters: ALLOGOTROPHICALLY (sted)

(m) Pattern * X X 12 X X *

18 letters: ELLIPTOCYTOTICALLY (sted)

(n) Pattern * X X 13 X X *

19 letters: ALLOTRIOMORPHICALLY

(o) Pattern * X X ? X X ? X X *

These words are rare. Instead of looking for different lengths of word for the same doubled letter as previously, I concentrated on looking for words of any length representing as many different doubled letters as possible. In the event, I found words for the letters B, E, G, L O and T:

HUBBUBBUBBOO, BEEVEEDEES, WAGGERPAGGERBAGGER, PILL-WILL-WILLET,
ROOCOOROOS, RAT-TAT-TATTED

(p) Pattern * X X ? X X ? X X ? X X *

These words are even rarer!

PEEKEENEENEES

TYPE 4 Doubled letters and Single letters**(a) Pattern X * X X * X**

6 letters: ANAATA (cdz), COCCIC (ospd), DODDED, EMEERE, MIMMAM (daw),
NUNNAN, PIP-POP, SUSSES, TIT-TAT

8 letters: CRIC-CRAC, DRIDDLED, ENFEEBLE, GLUGGING, HOCHHUTH (bt), PLIP-PLOP,
SCISSORS, TRIT-TROT

10 letters: KNICK-KNACK, LOCAL-LEVEL, STRESSINGS, THYRTTYEST,

12 letters: DRUG-ADDICTED (web2), MONOAMMONIUM (web2), SUCCESSARIES,

14 letters: SOUL-MASSE-CAKES, SCHEPYSSKYNNES

16 letters: LINEAR-ELLIPTICAL, SULTANESS-MOTHERS

(b) Pattern * X ? X X ? X *

8 letters: KALA-AZAR (cham), VENEERED, DOG-OOT-OV, STATTUTE

10 letters: MASHA'ALLAH, KESKEEDIES, UNCONNYING, NEOZOOLOGY

12 letters: UNREDEEMEDLY, ANCIENNEMENT

14 letters: OVERGREEDINESS (web2), CHONDRO-OSSEOUS (Sted)

16 letters: YOUNG-MANNISHNESS, PALAEOZOOLOGISTS, EXTRATERRITORIAL

18 letters: COUNTER-ATTRACTIONS

(c) Pattern * X X ? X ? X X *

9 letters: ODDY-DODDY (daw), ULLALULLA (ww71170)

11 letters: NEEDLE-TREES

TYPE 5 A Central Symmetrical group of 3 or more identical letters

M-A-A-AH, CYDDDDYN (nwd -Y is also symmetrical), SEEER, PFFFFFFFT,
BOI-I-ING, FRILLLESS, COMMON (O is also symmetrical), SEFENNNAHHT,
LOOK, PERR'RIE, PRESS-STUD, PRATT-TYPE, AWWWWH

B. SETS OF 2 OR MORE DIFFERENT LETTERS SYMMETRICALLY-ARRANGED**TYPE 1 Single letters only** (words which start with a symmetrical letter are listed first)**(a) 2 different letters**

CHOLANGIOPANCREATOGRAPHIC (sted), DYSTRYBUTYD, EDELREDE,
EPIMERITE, NAHUATLAN, RETRORSER, RIVER-DRIVER, SCLERECTATICS (sted),
STEPSISTERS, SULPHUREOUS
CAESAREAN, HYSTEROTHERMOMETRIC (sted), MITHRIDATIC,
CHLAMYDOBACTERIALES (web2), PROLEGOMENOUS, HYPNOPOMPIC,
PREPARATORY, POST-DIPHtherITICS (sted), UNTRUSTWORTHY, MULTITUDINOUS

(b) 3 different letters

ACOUSMATAMNESIA, DEMICIVILIZED (web2), DETERIORATED,
ENDRALAZINE (sted), LEXICOLOGICAL, RED-LEADER, SUBSIDISERS
WELWITSCHIALES (opc), RESYNCHRONISED (cham), RETICULOCYTES,
PETROMYZONTES (web2)

(c) 4 different letters

DEANTHROPOMORPHIZED, SUPRASYPHYSARIES (sted)
ZEBRA-MARKED, CENTILITRES, PROBABILIFICATORY,
DEXTROSINISTRALLY (web2)

TYPE 2 Doubled letters and Single letters (in alphabetical order of the doubled letters)**(a) 2 different letters**

SLIBBER-SLABBERS, PEESE-WEEP, REDEEMER, GRIGGING,
ALLOCENTRICALLY (sted), CONTROLLERSHIP, SHOOTING-BOOTS,
SNIPPER-SNAPPERS, SELF-CORRECTING, GLASS-EMBOSSING, SUBOSSEOUS,
SPITTER-SPATTERS, STATTITS

(b) 3 different letters

SKIDDADDLES, SLEEVEENS, ALLODIPLOIDALLY (sted), COASSESSION

(c) 4 different letters

DISCOMMONSED

TYPE 3 Two Symmetrical letter groups (words with no doubled letters are listed first)**(a) The 2 letter groups are embedded in the word**

Groups of 3 letters:

TARANTARAS, HETEROGAMETES, UNINTERVENING,
WELL-SKILLED, CRISS-CROSSING, COOLING-FLOOR

Groups of 4 letters:

QUINOCARBONIUM (web2)

MOCCOMOCCOS, KINNIKINNIC, LETTER-BY-LETTER

Groups of 5 letters:

HEEBEE-JEEBES, COONOOMOONOOS

(b) The 2 letter groups form the beginning and end of the word

These are all examples of reverse *Heads 'n Tails*

Groups of 3 letters:

AISTHESIA (cham), DETONATED, ETAMSYLATE (sted), LACONICAL,
MARCONIGRAM, NITROGELATIN (web2), REVOLVER, SANTOLINAS,
TERSULPHURET (web2), VITUPERATIV (web2), XYLOCALYX (dfpf)
PEESWEEP, FOOLPROOF, SUUMPTUUS,

Groups of 4 letters:

CIBOPHOBIC (sted), DE-REGISTERED, DESINGULARISED (sg)
RE-ENGINEER

TYPE 4 A Central Symmetrical group of 5 or more letters (alphabetically by group)

(a) Single letters only

Groups of 5 letters:

BARTRAM, DEBATABLEY, ACIDICS (sted), INDEXEDLY (sg), VEINIER (ospd),
FUNGOLOGIST, CHALAHS (ospd), MITOTIC, OKAZAKI, PLUMULE,
ALBUMINIMETRY (web2), KNIFING, COPEPOD, BUMPOSOPHER, BREWERY,
DYSPEPSIA, UTILITY, MUTATUS, AUXOTOXES (sted), SYNONYM,
BENZALAZINE (web2)

Groups of 7 letters:

PACIFICAL, REDIVIDES, KIWI-KIWIS, XENOMOMONIA (nz), LOCO-FOCOS,
BROWNWORT, BITARTRATES, MURIVIRUS (medical)

Group of 9 letters:

BITARTRATIC, PREDIVIDERS (web2)

(b) Group incorporates 1, 2, 3 or 4 pairs of doubled letters

Groups of 5 letters:

BOCCACCIO, PEEWEEES, WELL-ALLIE, HOODOOS, DISSESSOR

Groups of 6 letters:

UNBARRABLE, HIVE-EVIL, BALILLILOW, SNIFFING, TREKKERS, STACCATO

Groups of 7 letters:

HULLABALLOO, FOOTSTOOL, POSSESSOR, MOTTETTOS,

Groups of 8 letters:

TEYELLEYER (daw), ROOCOOCOOS

Group of 9 letters:

BANNALANNAS (fw), WINNININNIE (tig), FEDDEBEDDES

Group of 11 letters:

BOONOONOONOOS (dje)

(c) Doubled letters only

COOKKOOS

The Symmetry Prize

To which word should the symmetry prize be awarded?

If quantity is the determining factor, then perhaps it should go to those words which boast 5 different symmetrical letters. If so, then SHERIFF-OFFICERS, and any other such words, must take the prize. If, on the other hand, we prefer quality, it must surely go to the 22-letter GASTROESOPHAGOSTOMISED whose two symmetrical letters, O and S, are each represented 4 times. SO, it has my vote!

References for non-OED words

- bar Bartholomew Gazetteer of Britain, 1977
- bt Bloomsbury Thesaurus, 1993
- cdz Collegiate Dictionary of Zoology by R.W. Pennak, The Ronald Press Co.
- cham Chambers English Dictionary
- coll Collins English Dictionary
- csd Chambers Scots Dictionary, 1975
- daw Dictionary of Archaic Words by J.O. Halliwell, Bracken Books 1989
- dbz The Dictionary of Biological Sciences by Peter Gray, Van Nostrand Reinhold 1967
- dfpf A Dictionary of the Flowering Plants and Ferns by J.C. Willis, 7th Edition CUP 1966
- dje Dictionary of Jamaican English, Cassidy & Le Page, 1985
- edd English Dialect Dictionary
- edfc Everyman's Dictionary of Fictional Characters by William Freeman, J.M. Dent 1973
- fw Funk & Wagnalls Unabridged Dictionary
- gdpn A Gardener's Dictionary of Plant Names by William T. Stearn, Cassell 1971
- nwd The New Welsh Dictionary by H. M. Evans & W.O. Thomas, Christopher Davies 1970
- nz Nomenclator Zoologicus
- opc Outline of Plant Classification by Sandra Holmes
- ospd Official Scrabble Players Dictionary
- rh The Random House Dictionary
- sg from word list with Supergram program for Acorn computers
- sted Stedman's Medical Dictionary
- tf Tertiary Faunas by A. Morley Davies, George Allen & Unwin 1971
- tig The Times Index Gazetteer of the World, 1965
- web2 Webster's Second Edition
- ww Word Ways

The Best of Verbatim

Verbatim, the language quarterly founded by lexicographer Laurence Urdang in 1974, has entertained its readers with articles about linguistics that are not written in the "impenetrable jargon" of that academic specialty; it has always championed the well-written article as an antidote to professional journals "stuffed with...turgid obscure, incomprehensibly boring articles". Everyone held their breath when Urdang resigned his editorship in 1997, but fortunately the journal survived the transition, thanks to financial angel Warren Gilson and editor Erin McKean. In a paperback having the same name as the journal, McKean has collected 58 essays, emphasizing such topics as "dictionaries, English usage, popular linguistics, and obscenity, with a large helping of humor."

This 353-page book (ISBN 0-15-60219-x), available from Harcourt (Harvest Books) for \$14, is highly recommended to readers of Word Ways. Better yet, consider subscribing for \$25 per year to Verbatim, 4907 N Washtenaw Ave, Chicago IL 60625-9933.