

GENERALIZED ALTERNADES: PART 2

REX GOOCH

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For a discussion of Generalized Alternades the reader is referred to the first part of this article in the August 2000 Word Ways. There examples of the simplest kind of alternade were given: single words with component parts read in the same direction, as TRIENNIALLY = TINILY + RENAL (stride length 2) or PACIFICATORY = PICO + AFAR + CITY (stride length 3). In this part, I consider variations on the basic theme: alternades with component parts read in reverse, and alternades with component parts that can be read in both directions, sometimes with the same stride length, other times with different stride lengths. One can even construct alternades which have two different forward stride lengths and one reverse stride length!

SINGLES REVERSE

8 letters to 4 + 4 Reverse (all in Pulliam)

APPROACH = HARP + COPA

BIOBLAST = TABI + SLOB

EARLIEST = TELA + SIRE

ESTRIATE PULL = EARS + TITE

GEARLESS = SERE + SLAG

GREATEST = TEAR + STEG

PEARLASH = HARE + SLAP

PEOPLISH = HIPE + SLOP

STEEPEST = TEET + SPES

THICKEST = TECH + SKIT

TRIALIST = TIAR + SLIT

BEAMLESS = SEME + SLAB

BLUENESS = SEEL + SNUB

ENTREATY = YARN + TETE

FREELOAD = DOER + ALEF

GIANTISM = MINI + STAG

OUTFLOAT = TOFU + ALTO

PEARLISH = HIRE + SLAP

PLAINEST = TEIL + SNAP

SURGIEST = TEGU + SIRS

TOLBOOTH = HOBO + TOLT

WEETLESS = SETE + SLEW

9 letters to 5 + 4 Reverse

AFRICAANS (vf) = SACRA + NAIF

ARTERIOLA (Sted) = AORTA + LIER

DYEADLICH (vf) = HIDED + CLAY

HYPEROOM (?) = MORPH + OBEY

REATTAINS (OSPD) = SITAR + NATE

RYE-FIELDS (Ch) = SLIER + DEFY

SEM PRIEST (OED) = TERMS + SIPE

SHOP LOOMS (OED) = SOLOS + MOPH

SMEARLESS = SERES + SLAM

STAINLESS = SENAS (obs senate) + SLIT

SWEETLEAF = FETES + ALEW

TORTILLAS = SLIRT + ALTO

AGIOGRAPH = HAGIA + PROG (= spike)

DEERWEEDS (OSPD) = SEWED + DERE

ENGINEERS = SENGE + REIN

INTOOTED = DHOTI + ETON

REEL-DANCE (OED) = ENDER + CALE

SEA-PRIEST (OED) = TERAS + SIPE

SENSORIAL = LIONS + ARSE

SKINNIEST = TENIS (OED) + SINK

SOPHOCLES = SLOPS + ECHO

STARRIEST = TERAS + SIRT

SWEETNESS = SETES (pl sete) + SNEW

TO SCAN OUT (OED) = TOAST + UNCO

10 letters to 5 + 5 Reverse

ALMAIN-LEAP (OED) = PENAL + ALIMA (Web2)

IMPORTANCE = ENTOM (Medical) + CARPI

PARDONLESS = SENDA (Pull) + SLORP

PHOTOFLASH = HAFTH (vf) + SLOOP

TANGENTIAL = LINGA + ATENT (vf)

AT THE GRIPE (OED) = EIGHT + PRETA (Pull)

NORNORWEST (Web2) = TERNO (Pull) + SWORN

PERSONLESS (OED) = SENSE + SLORP

PRAECUNEUS = SEUER (OED) + UNCAP

TREASONOUS = SOOAR (vf) + UNSET

10 letters to 4 + 4 + 3 Reverse

ABORIGINAL = *LIRA* + *AGO* + *NIB*
ANGIORRHEA (Web2) = *ARIA* + *ERG* + *HON*
DEPOPULATE = *ELOD* (Web2) + *TUP* + *APE*
ENSTATITIC = *CITE* + *ITS* + *TAN*
PEDICURIST = *TRIP* + *SUD* + *ICE* also *PEDICURING*
PROSODICAL = *LISP* + *ADO* + *COR*
SYNTONICAL = *LITS* + *ANN* (vf) + *COY*

AEROBATICS = *STOA* + *CAR* + *IBE* (Pull)
AROMATICAL = *LIMA* + *ATO* (Pull) + *CAR*
DETOXICATE = *ECOD* + *TIT* + *AXE*
EXTROPICAL = *LIRE* + *APT* + *COX*
PREMARITAL = *LIMP* + *ARE* + *TAR*
SEMINOMATA = *AMIS* (Pull) + *TOM* (whore) + *ANE*
WATERINESS = *SNEW* + *SIT* + *ERA*

11 letters to 6 + 5 Reverse

AT UTTERMOST (OED) = *TORTUA* (Sted) + *SMETT* (vf)
GENTIAN-ROOT (OED) = *TONING* + *ORATE*
ON NO ACCOUNT (OED) = *TUCANO* (Argentine plane?) + *NOCON* (Pcon)
OOLOOPOOLOO = *OLOOLO* + *OOPOO* (all Pcon)
STETHOSPASM = *MASHES* + *SPOTT* (vf, or place)

DENTULOUSLY (Sted) = *YSOUND* (vf) + *LULTE* (Mid Eng lilt)
NEGLIGENTIA (Ch, Latin root) = *ATEIGN* (vf) + *INGLE*
SLANTIN PASS (Bl) = *SANTAS* (pl) + *SPINL* (vf)
TEAM HONOURS (OED) = *SUN-HAT* (OED) + *ROOME* (vf)

11 letters to 4 + 4 + 3 Reverse

ABORIGINALS = *SNIB* + *LIRA* + *AGO*
ANTEMARITAL (Web2) = *LIMN* + *AREA* + *TAT*
DEMODULATES = *SADE* + *ELOD* + *TUM* also *DEMODULATED*
ESTROPIPATE (Sted) = *EPOS* (poetry) + *TIRE* + *APT*
REDECORATED = *DACE* + *ERER* (vf) + *TOD*
REGENERATES = *SANE* + *ERER* (vf) + *TEG*
SEXOLOGICAL = *LILE* + *AGOS* (Pull) + *COX*
SUPEROCULAR = *RURU* + *ACES* + *LOP*

ANOMALOUSLY = *YUAN* + *LOMA* + *SLO*
ASYNARTETES = *SEAS* + *ETNA* + *TRY*
DEMORALISES = *SIRE* + *ELOD* (Pull) + *SAM*
ORTHOSCOPE (Sted) = *DOOR* + *ECHO* + *PST*
REDELIVERED = *DELE* + *EVER* + *RID*
SELF-DELUDER = *RUDE* + *ELFS* + *DEL* also *SELF-DELUSED*
STEGANOPODS (OED) = *SPAT* + *DOGS* + *ONE*
WATER ANIMAL (OED) = *LIRA* + *ANEW* + *MAT*

12 letters to 6 + 6 reverse

ENDARTERIALS (Sted) = *SARTAN* (vf) + *LIERDE* (vf)

12 letters to 4 + 4 + 4 Reverse

ADENOLIPOMAS (Sted) = *SOLE* + *APOD* + *MINA*
ASTROLABICAL = *LILT* + *ABOS* (OSPD) + *CARA* (Pull)
EDEMATOGENIC (Sted) = *CETE* + *IGAD* + *NOME*
LAMINARANASE (OED) = *ENAM* + *SANA* (vf or mens sana) + *ARIL*
MARINE ANIMAL (Bl) = *LIER* + *ANNA* (Indian coin) + *MAIM*
MESENTERITIS = *SITS* + *IRNE* (Pull) + *TEEM*
METROLOGICAL = *LILT* + *AGOE* (vf) + *CORM*
NEGATIVENESS = *SNIG* + *SETE* (Pull) + *EVAN*
SEPARATENESS = *SNAP* + *SERE* + *ETAS*

ANEMOLOGICAL = *LILE* + *AGON* + *COMA*
ASTROLOGICAL = *LILT* + *AGOS* (Pull) + *CORA* (vf)
ETYMOLOGICAL = *LILY* + *AGOT* (vf) + *COME*
LENITIVENESS = *SNIN* (OSPD) + *SETE* (Pull) + *EVIL*
MATRIHERITAL = *LIHT* (vf) + *ARIA* + *TERM*
MESENTERONIC = *COTS* + *IRNE* (Pull) + *NEEM*
MONOBROMATED = *DARN* + *EMBO* (place) + *TOOM*
NORADRENALIN (AmHer) = *NARR* (Pull) + *INDO* (Sted) + *LEAN*
WOBEGONENESS (Pull) = *SNOB* + *SEGO* + *ENEW*

12 letters to 3 + 3 + 3 + 3 Reverse

ANTEROMEDIAL = *LEE* + *AMT* + *ION* + *DRA* (Pull)
CEPHALOCLAST (Pull) = *TCH* + *SOP* + *ALE* + *LAC*
ELYTROCLASIA = *ALT* + *ICY* + *SOL* + *ARE*
EPIDERMATOID = *DAD* + *IMI* (Ethiopia TAW or Pull) + *ORP* + *TEE*
GASTROLIENAL = *LIT* + *ALS* + *NOA* + *ERG*
MERCURIALISM = *MAC* + *SIR* + *IRE* + *LUM*
OSTEOSARCOMA = *ARE* + *MAT* + *OSS* + *COO*
PETTICOATISM = *MAT* + *SOT* + *ICE* + *TIP*
SECTARIANISM = *MAT* + *SIC* + *IRE* + *NAS*

BITRIPARTITE = *ERR* + *TAT* + *IPI* (Pull or in Pakistan) + *TIB*
DEPRECiating = *GAR* + *NIP* + *ICE* + *TED* (vf)
ENHYPOTASIS = *STY* + *ISH* + *SON* + *APE*
FALSEHEARTED (Web2) = *DAS* + *EEL* + *THA* + *REF*
LENTICELLATE = *ELT* + *TEN* + *ACE* + *LIL* (vf)
NITROMURIATE = *ERR* + *TUT* + *AMI* + *ION*
PETTICOATING = *GAT* + *NOT* + *ICE* + *TIP*
POSTAGE STAMP (Ch) = *PST* + *MES* + *AGO* + *TAP*
TERGIVERSATE = *ERG* + *TER* + *AVE* + *SIT*

13 letters to 5 + 4 + 4 Reverse

ADENOLIOMATA (Sted) = *AMINA* (Collins?) + *TOLE* + *APOD*
EXTRAPOLATORS = *STORE* + *RAPT* + *OLAX* (?)
INTRAOCULARIS (Sted) = *SACRI* + *ILOT* + *RUAN* (Bl)
MELANORRHEICS (Sted) = *SERAM* (Bl) + *CHOL* + *IRNE* (Pull)
PREHISTORICAL = *LITHP* (vf) + *ARSE* + *COIR*
TELETOPOMETER (Web2) = *REPET* (vf) + *EMOL* (Pull) + *TOTE*

EXTRASOMATICS (Sted) = *STORE* + *CAST* + *IMAX* (OED)
INTRAREGIONAL (OED) = *LOERI* (vf) + *AIRT* + *NGAN* (Pull)
NORADRENALINE = *ELEAN* (Pull) + *NARR* + *INDO* (W90-211)
REDELIVERANCE = *EAVER* + *CRID* (vf) + *NELE* (vf)

14 letters to 5 + 5 + 4 Reverse

DISARTICULATES = *SACRI* + *ELIAD* + *TUTS*
PARAGRANULOMAS (Sted) = *SONGA* (vf) + *ALAAP* (vf) + *MURR*

DISASSIMILATES (Sted) = *SAMSI* (vf) + *ELIAD* + *TISS* (vf)
REDELIVERANCES (derived) = *SNELE* (vf) + *EAVER* + *CRID* (vf)

15 letters to 3 + 3 + 3 + 3 + 3 Reverse (virtually all short words in Pulliam, even if marked otherwise)

ADULT LITERATURE (BI) = ERT + REL + UTU + TID + ALA ANOSODIAPHORIAS (Sted) = SHO' + APS (vf) + IAO + RIN + ODA
 CARDIOCIRRHOSES (Sted) = SRI + ERD + SIR + OCA + HOC CLANGOUROUSNESS (?) = SUG + SON + ERA + NUL + SOC (vf)
 DACRYOLITHIASIS (Web2) = SHY + ITR + SIC + ALA + IOD GENERAL AMERICAN (OED) = NER + AME + CAN + ILE + RAG
 MADREPORIC PLATE (OED) = ECE + TIR + ARD + LOA + PPM (pts per million)
MELANOKERATOSES (Sted) = SAN + ERA + SEL + OKE + TOM (= whore)
 MULTIPOLARITIES (Sted) = SRI + EAT + ILL + TOU + IPM (AmHer)
 PROPRIETARY NAME (BI) = ERR + MAP + ATO (vf) + NER + YIP
 REAPPORTIONMENT = TOP + NIP + ETA + MRE (Ch, Meals Ready to Eat) + NOR
 THE CRACKER STATE (OED) = ERR + TEC + AKE + TCH + SAT *TO WATER ONE'S CLAY (OED) = YET + ANA + LOW + CRO + SET*

15 letters to 5 + 5 + 5 Reverse

ZZZZZZZZZZZZZZZ = ZZZZZ + ZZZZZ + ZZZZZ (all Pcon)

16 letters to 4 + 4 + 4 + 4 Reverse

ANESTHESIOLOGIST = TOSS + SLEE + IOHN (vf) + GITA (Ch, Bhagavad Gita)
 DEFENSIVE WEAPONS (BI) = SAVE + NEIF + OWSE + PEND
 TEMPERAMENTALIST = TAMP + STAM + INRE (vf) + LEET
 TO SELL ONE A PACKET (OED) = TANE + EPOS (poems) + KALO + CELT

17 letters to 5 + 4 + 4 + 4 Reverse

ENDOTHELIOSARCOMA (Sted) = ARTE (Pull) + MALO (Pull) + OSSED (vf) + COHN (?), but anyway Continental terrorist family name

18 letters to 6@3 Reverse (most in Pulliam)

ANTI-CHOLINESTERASE (OED) = ESH (vf) + SEC + ANI + RIT + ELN (vf) + TOA
 DURANTE BENEPLACITO (OED) = OPT + TEN + INA (Pull) + CER (Sted) + ABU (Web2) + LED
 FEDERAL RESERVE BANK (OED) = KRA + NER (vf) + ASE + BED + ERE + VLF (AmHer)
NECRODIALOGICAL (OED) = LID + AGO + COR + ILC (vf) + TAE + SIN
 PHYSICOMATHEMATICS (Web2) = SEC + CHI + ITS + TAY + AMH (Cooper's Archaic Dict) + MOP
 SEROEPIDEMIOLOGIES (Sted) = SOP + EIE (vf) + IMO (Pull) + GER + ODE + LIS

21 letters to 7@3 Reverse

ADENOSARCORHABDOMYOMA (Sted) = ABA + MAS + OHO + YRN (vf) + MOE + OCD (TEA) + DRA (Pull)
 GYMNASTICS ASSOCIATION (BI) = NOT + OSS (to signify) + ISA (Ch, = Isaiah) + TAN + ASM (Ch) + ICY + CIG
 HAMARTOCHONDROMATOSES (Sted) = SOO (vf) + ERT (vf) + SDR (OED, Special Drawing Rights) + ONA (Pull) + TOM
 (prostitute) + AHA + MCH (Med)
HIGHER NATIONAL DIPLOMA (BI) = ALN + MAR + ONE + LOH (vf) + PIG + ITI (OED) + DAH
 PACHYDERMOPERIOSTOSES (Sted) = SIE + ERD + SEY + OPH (vf) + TOC (vf) + SMA (vf) + ORP (Pull)
 PRESENTATION ASSISTANT (OED) = TST (Book of Interesting Words) + NAN + ANE + TOS (vf) + SIE + ITR (Pull) + SAP

24 letters to 8@3 Reverse

CERVICOOCULOACOUSTICALLY (Sted) = YUO (OED) + LOO + LCC (Lo) + AAI (Cooper's Archaic Dict) + COV (Ch,
 covariance) + ILR (Instrument Landing R?) + TUE (vf) + SCC (TEA)
*GASTROENTEROCOLOSTOMIZES (Sted) = SON + ELE (obs oil) + ZOO + ICR (Ch, Intelligent Ch Recog) + MOT (witty saying) +
 ORS (vf) + TEA + STG (Ch, sterling) [also ...IZED giving DON]*
 NOT SEE THE WOOD FOR THE TREES (Ch) = SRH (Med) + EOT (Lo) + EFE (vf) + RDE (Med) + TOS (vf) + EOT (Lo) + HWO
 (vf) + TEN
 OFFER FINANCIAL ASSISTANCE (BI) = ESN (Ch, Educ Sub Normal) + CAI (Ch, Chinese root of sancai, or = Comp Asstd Instn) +
 NLF (Lo) + AAR (vf) + TIE + SCF (Ch, Save the Children Fund) + INF (ad inf) + SAO (Web2)
 PANCREATODUODENECTOMIZES (Sted) = SET + ENA (Tert Fauna or pname) + ZEE + IDR (?) + MOC (OSPD) + OUN (vf) +
 TDA (Med) + COP [plus 3 others, combining ...DENO/DENE... with ...IZED/IZES]

DOUBLES (FORWARD and REVERSE) — same word lengths

In this section, in order to extract words both forwards and backwards, every word extracted must be reversible. By "same word lengths", I mean for example that the same lengths of words, eg of lengths 5 and 4, are being extracted both backwards and forwards.

8 letters to 4 + 4 Forward and Reverse

ALLA-ALLA (Pcon) = ALAL (Hebrew basis of Elul, Jewish month) + LA-LA = ALAL (qv) + LA-LA
 BARMAIDS = BRAD + AMIS = SIMA + DARB (Pull) BLEARIER = BERE + LAIR = RIAL + EREB (Pull)
BLUENESS = BUNS + LEES = SEEL + SNUB GEARLESS = GALS + ERES (obs ears) = SERE + SLAG
 GLUINESS (?) = GUNS + LIES = SEIL + SNUG GREATEST = GETS + RAET (vf) = TEAR + STEG
 PERSANTE (OED) = PRAT + ESNE = ENSE (Web2) + TARP PLAINEST = PANS + LIET (vf) = TEIL + SNAP
 PLEONASM = PENS + LOAM = MAOL (Gaelic basis of mull) + SNEP (vf)
 SEEMLIER = SELE + EMIR = RIME + ELES (vf)
 SOURNESS = SUNS + ORES = SERO + SNUS (Swedish basis of snush)
 STEEPEST = SEPS + TEET = TEET + SPES

9 letters to 5 + 4 Forward and Reverse

ASSESSEES (W90-153) = ASSES + SESE (vf) = SESSA (Pull) + ESES (OSPD)
 ATTERNESS (OED) = ATRES (gen sing ATOR, JR Clark Hall, Concise Anglo-Saxon Dict) + TENS = SERTA (Web2) + SNET (OED)
 ATTORNEYS = ATRES (gen sing ATOR, JR Clark Hall, Concise Anglo-Saxon Dict) + TONY (vf) = SERTA (Web2) + YNOT (OED)
 GLOEBEARD (vf) = GO BAD (Ch) + LEER = DABOG (BI) + REEL
 RYE-FIELDS (Ch) = REILS (anatomy or obs rail) + YFED (OED) = SLIER + DEFY
 SEED-PEARL (OED) = SEPAL + EDER (OED) = LAPES (pl obs lap) + REDE
 SLEEKNESS = SEKES (obs seeks) + LENS = SEKES (qv) + SNEL
 SPAIRGEST (from obs sparge) = SARET (in Algeria, Times Atlas 1903) + PIGS = TERAS + SGIP (New Welsh Dict)
SPEAKLESS = SEKES (obs seeks) + PALS = SEKES (qv) + SLAP
 STAINLESS = SANES (OSPD) + TILS (OSPD) = SENAS (vf) + SLIT
 STARRIEST = SARET (qv) + TRIS = TERAS + SIRT (vf)
 STEEPNESS = SEPES (= soaps, Scot Nat Dict) + TENS = SEPES (qv) + SNET (OED)
 STERNOIDS (Sted) = SENIS (Latin root of senate) + TROD = SINES + DORT
 STIRROPPE (vf) = SIRPE (vf) + TROP = EPRIS + PORT
 SWEETLESS (Web2) = SETES (vf) + WELS = SETES (vf) + SLEW
 SWEETNESS = SETES (vf) + WENS = SETES (vf) + SNEW (Web2)

10 letters to 4 + 3 + 3 Forward and Reverse

ABOMINATED = AMAD (OED) + BIT + ONE = DAMA + ENO (OED, proprietary laxative) + TIB
DENATURANT = DART + ETA + NUN = TRAD + NUN + ATE
 DIARRHOEAL = DROL + IRE + AHA = LORD + AHA + ERI (vf)
 LATELINESS = LENS + ALE + TIS = SNEL (vf) + SIT + ELA (OED, musical note)
LEGITIMATE = LIME + ETA + GIT = EMIL (pname) + TIG + ATE
 LINOLENATE = LONE + ILA (OED, Bantu) + NET = ENOL + TEN + ALI (vf or pname)
 MANIPULATE = MILE + APA + NUT = ELIM (place) + TUN + APA
 MATURENESS = MUNS (OSPD) + ARE + TES (vf) = SNUM + SET + ERA
 PALATINESS = PANS + ATE + LIS = SNAP + SIL + ETA
 PEDOMETERS = POTS + EME + DER = STOP + RED + EME
STOWED AWAY (OED) = SWAY + TEW + ODA = YAWS + ADO + WET
 WATERINESS = WENS + ARE + TIS = SNEW + SIT + ERA

10 letters to 5 + 5 Forward and Reverse

ANIELLIDAE (Web2) = AILIA (Indian district, Pcon) + NELDE (vf) = EDLEN (OED) + AILIA (qv)
ASSOILLIED (? OED assoil) = ASILE (vf) + SOLID = DILOS (dilo tree) + ELISA (pname)
 PLAYERLESS (ch) = PAELS (EDD) + LYRES = SERYL (Sted) + SLEAP (vf)
 STEAM POINT (OED) = SEMON (OED) + TAPIT (Pull) = TIPAT (vf) + NOMES (OSPD)

11 letters to 6 + 5 Forward and Reverse

OOLOOPOOLOO = OLOOLO + OOPOO = OLOOLO + OOPOO (all Pcon)

11 letters to 4 + 4 + 3 Forward and Reverse

AMOBARBITAL = ABBA + MAIL + ORT = LIAM (vf or pname) + ABBA (OED garment or supertroupers) + TRO (vf)
 DEMODULATED = DOLE + EDAD (OED) + MUT = DADE + ELOD (Web2) + TUM
DENATURANTS = DART + ETAS + NUN = SATE + TRAD + NUN
 DERIVOMETER (OED) = DIME + EVER + ROT = REVE + EMID (OED) + TOR
 LEGITIMATES = LIME + ETAS + GIT = SATE + EMIL (pname) + TIG
 METAKINESSES (Sted) = MANE + EKES + TIS = SEKE (vf) + ENAM + SIT also METAKINESIS
 METAVANADIC (Web2) = MANI + EVAC (Sted) + TAD = CAVE + INAM (vf) + DAT
 REDECORATED = RERE + ECAD + DOT = DACE + ERER (vf) + TOD
 REMOTIVATES = ROVE + ETAS + MIT (vf) = SATE + EVOR (vf) + TIM
 SINOVAGINAL (Sted) = SOGA (Pull) + IVIL (vf) + NAN (= granny) = LIVI (vf) + AGOS (Pull) + NAN (qv)

12 letters to 3 + 3 + 3 + 3 Forward and Reverse

ANAEROBATION (Web2) = ART + NOI (Pull) + ABO (OSPD) + EAN = NAE (vf) + OBA + ION + TRA
 ECCLESIARCHY = EER (e'er or vf) + CSC (AmHer) + CIH (?) + LAY = YAL (vf) + HIC (vf or Latin) + CSC (AmHer) + REE
 EPIDERMATOID = EET (vf) + PRO + IMI (Web2) + DAD = DAD + IMI (Web2) + ORP (Pull) + TEE
 FALSEHEARTED (Web2) = FER + AHT (vf) + LEE + SAD = DAS + EEL + THA + REF
 GLADIATORIAL = GIR (Pull) + LAI + ATA (Pull) + DOL = LOD (Web2) + ATA (Pull) + IAL (computer language, Bl) + RIG
 LITHOPAEDION (Pull) = LOD (Web2) + IPI (Pull) + TAO + HEN = NEH (vf) + OAT + IPI (Pull) + DOL
 PANTALOONERY = PAN + ALE + NOR + TOY = YOT (Web2) + RON (OED, poem) + ELA (OED, Musical) + NAP
 PETTICOATERY = PIT + ECE (vf) + TOR + TAY = YAT + ROT + ECE (vf) + TIP
 PHALAENOPSID = PAP + HES (vf or he's) + ANI + LOD (Web2) = DOL + INA (Pull) + SEH (vf) + PAP

12 letters to 4 + 4 + 4 Forward and Reverse

DECISION TREE (OED) = DIOR (vf) + ESNE (OED, class of slaves) + CITE = ETIC (OED) + ENSE (Web2) + ROID (Web2)
 LAMINARINASE (OED) = LIRA + ANIS + MANE = ENAM + SINA (Web2) + ARIL [also ...ANASE, giving ANAS (OSPD), mens
 SANA]
 LITERARINESS = LERE + IRIS + TANS = SNAT (OED) + SIRI (Pull or vf) + EREL (vf)
 MARINE ANIMAL (Bl) = MIAM (vf) + ANNA (Indian coin) + REIL (vf) = LIER + ANNA (qv) + MAIM
 NEGATIVENESS = NAVF + ETES (vf) + GINS = SNIG + SETE (vf) + EVAN (vf)
 SAPONARINESS (OED) = SORE + ANIS + PANS = SNAP + SINA (Web2) + EROS
 SEPARATENESS = SATE + ERES (pl of ere = ear) + PANS = SNAP + SERE + ETAS
 SILICONONANE (Web2) = SINA (Web2) + ICON + LONE = ENOL + NOCI (Medical) + ANIS
 URETERITISES (Sted) = UTIS + RETE + ERIS (OED addenda) = SIRE + ETER (vf) + SITU
 UTEROVAGINAL = URAN (Web2) + TOGA + EVIL = LIVE + AGOT (vf) + NARU

13 letters to 5 + 4 + 4 Forward and Reverse

PALACE-COVERED = PACED + ACOR + LEVE = DECAP (Web2) + EVEL + ROCA (?)

15 letters to 3 + 3 + 3 + 3 + 3 forward and reverse (over 80% in Pulliam)

AREGENERATIVELY (Sted) = ANI + REV + ERE + GAL + ETY (Lo) = YTE (OED) + LAG + ERE + VER + INA (Pull)
 CHORIOADENOMATA (Sted) = COO + HAM + ODA + RET + INA (Pull) = ANI + TER + ADO + MAH (OED) + OOC (vf)
 IN A NATURAL STATE (Bl) = ITS + NUT + ARA + NAT + ALE = ELA (OED) + TAN + ARA + TUN + STI (obs sty)
 PALAEOMERYCIDA (Tertiary Faunas) = POC (vf) + AMI + LED + ARA + EYE = EYE + ARA + DEL + IMA (Sted) + COP
 PARAPERITONEALS (Sted) = PEN + ARE + RIA + ATL (vf) + POS (vf) = SOP + LTA (Lo) + AIR + ERA + NEP
 PARASITOLOGICAL = PIG + ATI (Pull) + ROC + ALA + SOL = LOS + ALA + COR + ITA (palm, OED) + GIP
 PSEUDOLAMINATED (Web2) = PON + SLA + EAT + UME (Pull) + DID = DID + EMU + TAE + ALS (Pull, vf) + NOP (OED)
 RADICATE VINEGAR (OED) = RAN + ATE + DEG + IVA (Pull) + CIR (AmHer) = RIC (vf) + AVI (video compression format)
 + GED + ETA + NAR
 REAPPORTIONMENT = RON (OED, obs) + ERM (vf) + ATE + PIN + POT = TOP + NIP + ETA + MRE (Ch, Meals Ready to Eat) + NOR
 WEATHERBOARDING (Web2) = WER + ERD + ABI (Ch, Assn Brit Insurers) + TON + HAG = GAH (OED) + NOT + IBA (Pull) +
 DRE (vf) + REW

15 letters to 5 + 5 + 5 Forward and Reverse

ZZZZZZZZZZZZZZZ = ZZZZZ + ZZZZZ + ZZZZZ as before

15 letters to 8 + 7 Forward and Reverse

ZZZZZZZZZZZZZZZ = ZZZZZZZZ + ZZZZZZZZ = ZZZZZZZZ + ZZZZZZZZ as before

16 letters to 4 + 4 + 4 + 4 Forward and Reverse

ANSTRUTHER EASTER (in Fife, Scotland) = ARES + NURT + STEE + THAR = RAHT (vf) + EETS (eet = vf of eat, or Early Engl Text Soc) + TRUN (Web2) + SERA

18 letters to 6@3 Forward and Reverse

DISINDIVIDUALISING (The Electronic Alveary) = DIL (vf) + IVI (vf) + SIS + IDI (TAW or Med) + NUN + DAG = GAD + NUN +
 IDI (qv) + SIS + IVI (vf) + LID
 MALEYLACETOACETATE (Med) = MAC + ACE + LET + ETA + YOT + LAE (vf) = EAL (vf) + TOY + ATE + TEL (vf) + ECA (Ch,
 Econ Commission Africa) + CAM
 PANCREATOPEPTIDASE (Sted) = PAT + ATI (Web3) + NOD + CPA (accountant) + RES + EPE (vf) = EPE (vf) + SER + APC (Ch,
 Armoured Personnel Carrier) + DON + ITA (OED, palm) + TAP
 PICK A PERSON'S POCKET (Ch) = PEP + IRO (Lo) + CSC (AmHer) + KOK (vf) + ANE + PST = TSP (teaspoon) + ENA (Tert.
 Faunas) + KOK (vf) + CSC (AmHer) + ORI (Ch, Jap root origami) + PEP
 RADIOCHROMATOGRAMS (Sted) = RHO + ARG (vf) + DOR + IMA (Sted) + OAM (Web2) + CTS (Clear to Send, telecomms) =
 STC (short title catlg) + MAO (vf) + AMI + ROD + GRA (Web2) + OHR (Ch, Ger ear)
 STAPEDIOTENOTOMIES (Sted) = SIT + TOO + ATM (AmHer) + PEI (Ch, Greek pi) + ENE (vf) + DOS = SOD + ENE (vf) + IEP
 (Med) + MTA (Telecomms Dict 1991, R Scott Perry) + OOT + TIS
 TO CAST A SIDE ONE'S EAR (OED) = TAN + QSE + CIS (Web2) + ADE (Web2) + SEA + TOP + BOT + AES (Web2) + EDA

21 letters to 7@3 Forward and Reverse

ESOPHAGOESOPHAGOSTOMY (Sted) = EOG (?) + SEO (vf) + OSS (Pull) + POT + HPO (Ch, phosphorus compound) + AHM (EDD) + GAY = YAG (vf) + MHA (Ch, Member House of Assembly) + OPH (vf) + TOP + SSO (vf) + OES + GOE (vf)
 HAMARTOCHONDROMATOSES (Sted) + HCM (His Catholic Majesty or Highest Common Multiple) + AHA + MOT + ANO (Web2) + RDS (Sted) + TRE (vf) + OOS (vf) = SOO (Pull) + ERT (Pull) + SDR (OED) + ONA (Web2) + TOM + AHA + MCH (Med)
INTERNATIONALISATIONS = IT'S + NIA (?) + TOT + ENI (vf) + RAO (OED) + NLN (family name, Pcon) + AIS (pl) = SIA (Sted) + NLN (qv) + OAR + INE (vf) + TOT + AIN + STI (vf)
 MICROMYELOBLASTICALLY (Sted) = MET + ILI (Pcon) + COC (vf) + RBA (Lo) + OLL (Ch, oll korrekt, possible source of OK) + MAL + YSY (obs Ysee) = YSY (qv) + LAM + LLO (New Welsh Dict) + ABR (TIG) + COC (vf) + ILI (Pcon) + TEM [also MACRO... with ALI (vf) and ILA (OED, Bantu)]
 PACHYDERMOPERIOSTOSES (Sted) = PRO + AMS (pl or Cooper's Archaic Dict) + COT + HPO (Ch, phosphorus compound) + YES + DRE (vf) + EIS (vf) = SIE + ERD + SEY + OPH (vf) + TOC (vf) + SMA + ORP
 SCINTICISTERNOGRAPHIC (Sted) = SIG + CSR (TEA) + ITA (OED, palm) + NEP + TRH (Ch, Their Royal Highnesses or hormone) + INI (king, Pcon) + COC (vf) = COC (vf) + INI (qv) + HRT (Ch, Hormone Replacement Therapy) + PEN + ATI (Web3) + RSC (Ch, Royal Shakespeare Coy) + GIS (vf) [also ...PHED with INE (vf), COD, DOC, ENI (vf)]
 STEREOENCEPHALOMETERS (Sted) = SNO (vf) + TCM (Telecomms Dict 1991, R Scott Perry) + EEE (EDD) + RPT (Ch, repeat) + EHE (vf) + OAR + ELS = SLE (vf) + RAO (OED, title) + EHE (vf) + TPR (Ch, teleprinter) + EEE (EDD) + MCT (Med) + ONS

24 letters to 8@3 Forward and Reverse

NOT SEE THE WOOD FOR THE TREES (Ch) = NET + OWH (vf) + TOE + SOT + EDR (?) + EFE (vf) + TOE + HRS (AmHer) = SRH (Med) + EOT (Lo) + EFE (vf) + RDE (Med) + TOS (vf) + EOT (Lo) + HWO (vf) + TEN

DOUBLES — mixed word lengths**12 letters to 6 + 6 Reverse and 3 + 3 + 3 + 3 Forward**

ENDARTERIALS = SARTAN (vf) + LIERDE (vf) = ERI (vf) + NTA (Ch, National Training Award) + DEL + ARS (OED pl or vf)

12 letters to 4 + 4 + 4 Forward and 3 + 3 + 3 + 3 Forward

BIFOLLICULAR = BOIL + ILCA (vf) + FLUR (vf) = BLU (vf) + ILL + FIA (vf) + OCR (Lo)
 DECEREBRATES (Sted) = DEBT + ERRE (vf) + CEAS (vf) = DRA (Pull) + EET (vf) + CBE (Ch) + ERS
 DECISION TREE = DIOR (vf) + ESNE + CITE = DST (Ch, = hadst) + EIR (vf) + COE + INE (vf)
 DYNAMOMETERS = DAME + YMER (Lo) + NOTS = DMT (Web3 addenda word, W72-027) + YOE (Web2) + NMR (scanner) + AES (pl &)
 MYSAUENTROUS (vf) = MANO + YUTU (Web2) + SERS (OSPD) = MUR + YEO + SNU (OED) + ATS (pl at)
 PITAHUIRATA (Web2) = PAUA + IHIT (vf) + TARA (fern) = PHR (= phrase) + IAA (vf) + TUT + AIA (Web2)
 SAMARITANESS (?) = SATE + ARAS + MINS (minutes) = SRN (State Regd Nurse) + AIE (vf) + MTS (abbr mountains) + AAS (vf)
 SEPARATENESS = SATE + ERES (pl of ere = ear) + PANS = SRN (State Regd Nurse) + EAE (vf) + PTS (pints) + AES (pl &)
 THREE ESTATES (OED) = TEST + HETE + REAS (pl OED) = TEA + HET + RSE (Lo) + ETS (OED pl)

12 letters to 4 + 4 + 4 Forward and 3 + 3 + 3 + 3 Reverse

BESO LAS MANOS (Ch) = BOSN + ELMO (St. Elmo's Fire) + SAAS (Ch, Old Fr basis for sift) = SMO (Snr ed Offr) + OSS (= presage) + NAE + ALB

GLORIOUSNESS = GRUE + LISS + OONS = SSR (radar or USSR) + SUO (vf) + EOL (vf) + NIG
 OSCULATORIES = OUTI (BI) + SLOE + CARS = SOU + ETC + IAS (vf) + RLO (Ch, Returned Letter Office)
 PITAHUIRATA (Web2) = PAUA + IHIT (vf) + TARA = AIA (= ayah, vf) + TUT + AAI (Cooper Archaic Dict) + RHP (AmHer)
 PROSIPHONATE = PSHA + RIOT + OPNE (vf) = EOS (Sted) + THO + APR (April or Annualised Percentage Rate) + NIP
 RESOLUTIONER = ROTN (Pull) + ELIE (place or E de Beaumont, Fr geologist) + SUOR (vf) = RIO (vf) + ETS (OED pl) + NUE + OLR (vf)
 SECOBARBITAL = SORT + EBBA (vf) + CAIL (vf) = LBO (Lo) + ARC + TAE + IBS (= ibidem or Irritable Bowel Syndrome)
 SEROPHTHISIS (Web2) = SOTS + EPHI (vf) + RHIS (Greek nose hence Rhinology) = SHO (OED, = sure) + ITR (Pull) + SHE + IPS (Web3 word)

UTEROGESTATE (Sted) = UREA + TOST + EGTE (obs eight) = ESR (?) + TEE + AGT (obs aught) + TOU

12 letters to 4 + 4 + 4 Reverse and 3 + 3 + 3 + 3 Forward

DETERIORATED = DAIT (vf) + ERRE (vf) + TOED = DRA (Pull) + EIT (vf) + TOE + ERD [also ...ATES with SAIT (vf) and ERS]
 DYSARTHROSES (Sted) = SOTS + ERRY (vf) + SHAD = DRO (vf) + YTS + SHE + ARS
 MESARTERITIC = CITS (pl, OED) + IRRE (vf) + TEAM = MRI (scanner) + ETT (vf) + SEI + ARC [also ...ITIS with SITS and ARS]
 NASOSPINALES (Sted) = SAPS + ENSA (vf) + LION = NSA (US Nat Security) + APL (Web2) + SIE + ONS
 PALAEOETHNIC = CHOL + ITEA (Web2) + NEAP = PEH (vf) + AON (Lamprière Classical Dict) + LEI + ATC (Lo)
 SEPARATENESS = SNAP + SERE + ETAS = SRN (State Regd Nurse) + EAE (vf) + PTS (pints, points) + AES (pl of &)
 SULPHOACETIC = CEOL (Old Eng keel) + ICHU + TAPS = SHE + UOT (OED) + LAI + PCC (Lo)

12 letters to 4 + 4 + 4 Reverse and 3 + 3 + 3 + 3 Reverse

DELIVERANCES = SNEL (vf) + EAVE + CRID (vf) = SAI + ERL (vf) + CEE + NVD (Ch, no value declared)

DETERIORATED = DAIT (vf) + ERRE (vf) + TOED = DRE (vf) + EOT (Lo) + TIE + ARD

DYSARTHROSES (Sted) = SOTS + ERRY (vf) + SHAD = SRA (Lo) + EHS (pl eh) + STY + ORD

EASY-BORROWED (OED) = DOOS (pl of doo, obs do) + ERBA (?) + WRYE (vf) = DRY + ERS + WOA (vf) + OBE (subdivision in ancient Laconia)

GANGLIONARIS (Sted) = SAIN + INLA (Lo) + ROGG (vf) = SNG (Synthetic Natural Gas) + ION + RIA + ALG (= alga)

INTERWREATHE = EAWT (vf) + HERN + TREI (vf) = EEE (EDD) + HRT (Lo) + TWN (vf) + ARI (see ariel 1 in OED, arabic root or name)

METASTASISES (pl METASTASIS) = SITT (vf) + ESSE + SAAM (vf) = SSA (Std Spend Assmt) + EAT + STE (abbr Sainte) + ISM

PETITENESSES = SSET (vf) + EETE (vf) + SNIP = SEI + ENT (vf) + SEE + STP (oil additive)

TIRE-MEASURER (OED) = RUER + ESMI (Ch) + RAET (vf) = RSE (Lo) + EAR + REI + UMT (?)

15 letters to 5 + 5 + 5 Forward and 3 + 3 + 3 + 3 + 3 Forward

PARASITOGENESES (Sted) = PATES + ASONE + RIGES (vf) = PIN + ATE + ROS + AGE + SES (vf)

ZZZZZZZZZZZZZZZ = ZZZZZ + ZZZZZ + ZZZZZ = ZZZ + ZZZ + ZZZ + ZZZ + ZZZ (all Pcon)

The Zs also qualify as the other 3 combinations of Forward and Reverse for 15 letters

TRIPLES

In cases where the same length of words is being extracted both forwards and backwards, those words must be reversible.

12 letters to 3 + 3 + 3 + 3 forwards and reverse, and 4 + 4 + 4 forwards

ADENOSARCOMA = AOC (= wine category or Air Offcr Commandg) + DSO (Ch) + EAM (Ch., Old Eng, also equipt I used) + NRA (Ch, R = rifle or rivers) = ARN + MAE + OSD (Lo) + COA (Sted) = ANAO (Ch, buffalo) + DORM + ESCA

BESO LAS MANOS (Ch, Span interj) = BLA (vf) + EAN + SSO (vf) + OMS (OSPD) = SMO (= Snr Med Off) + OSS + NAE + ALB = BOSN + ELMO (St. E's fire) + SAAS (Old Fr search)

CATARACTICAL = CRI (Ch, c. de coeur, c. du chat, dernier c.) + AAC + TCA + ATL (vf) = LTA (Lo) + ACT + CAA (= Civil Aviation Auth) + IRC (?) = CACC (?) + ARTA (OED text under boulder, castle, danger) + TAIL

DEGRADEDNESS = DAN + EDE + GES (Old Eng geese) + RDS (Sted) = SDR (OED) + SEG + EDE + NAD (vf) = DREE + EADS (Lo) + GDNS (= gardens)

PITAHUIRATA (Biol) = PHR (= phrase) + IAA (vf) + TUT + AIA (Web2) = AIA + TUT + AAI (CAD) + RHP (AmHer) = PAUA + IHIT (vf) + TARA

SPECULATISTS = SUI + PLS (= please) + EAT + CTS (= Clear to Send) = STC (= catalogue, or a coy) + TAE + SLP (= Scot Lab Party) + IUS = SCAS (vf) + PUTT + ELIS (pl. Eli or Anc. Greek district)

THREE ESTATES (OED) = TEA + HET + RSE (Lo) + ETS (OED pl) = STE (Fr abbr Sainte) + ESR (?) + TEH (vf) + AET (vf) = TEST + HETE + REAS (vf)

12 letters to 3 + 3 + 3 + 3 forwards and reverse, and 4 + 4 + 4 reverse

DETERIORATED = DRA (PULL) + EIT (vf) + TOE + ERD = DRE (vf) + EOT (Lo) + TIE + ARD = DAIT (vf) + ERRE (vf) + TOED

DYSARTHROSES (Sted) = DRO (vf) + YTS (Youth Tng Scheme) + SHE + ARS = SRA (Lo) + EHS (pl. eh) + STY + ORD = SOTS + ERRY (vf) + SHAD

METASTASISES (pl.) = MSI (Lo) + ETS (extra-terrestrials) + TAE + ASS = SSA (Std Spend Assesst) + EAT + STE (Fr = Sainte) + ISM = SITT (vf) + ESSE + SAAM (vf)

TENONOMETERS (Sted) = TNT + EOE (Pcon) + NMR (scanner etc) + OES = SEO (vf) + RMN (Regd Mental Nurse) + EOE (Pcon) + TNT = STON (vf) + RENE (vf) + EMOT (vf)

12 letters to 3 + 3 + 3 + 3 forwards, and 4 + 4 + 4 forwards and reverse

AYECEASELESS (?) = AEL (vf) + YAE + ESS + CES (Web3) = ACSE (obs. ask) + YEES + EALS (place or obs pl. awl) = SLAE + SEEY (vf) + ESCA

DECISION TREE (OED) = DST (Daylight Saving Time) + EIR (vf) + COE + INE (vf) = DIOR (vf or fashion hse) + ESNE + CITE = ETIC + ENSE + ROID

PARADUODENAL = AUN (vf) + ROA (vf) + ADL + PDE (?) = PAON + ADDA + RUEL = LEUR (vf) + ADDA + NOAP (vf)

SEPARATENESS = SRN (regd. nurse) + EAE (vf) + PTS (pints, points, PTs) + AES = SATE + ERES (pl of ere = ear) + PANS = SNAP + SERE + ETAS (pl. eta)

12 letters to 3 + 3 + 3 + 3 reverse, and 4 + 4 + 4 forwards and reverse

PARAMEDICALS = SIA (Sted) + LDR (eg Sqn Ldr) + AEA + CMP (?) = PADA + AMIL + RECS (OSPD) = SCER (vf) + LIMA + ADAP (vf)

SUPERARBITER = RBE (Relative Biol. Effect.) + ERP (EDD) + TAU + IRS (friend to US taxpayers) = SERT + URBE (eg ab urbe condita) + PAIR = RIAP (EDD) + EBRU (vf) + TRES

MULTILEVEL EXAMPLES

11 letters to 6 + 5, then to 3 + 3 + 3 + 2

BURRAMYIDAE (*Longmans Animal Encyclo*) = BRAYDE (vf) [= BAD + RYE] + URMIA (BI) [= UMA (vf) + RI]

CELLOBIOSES (?) = CLOISS (vf) [= COS + LIS] + ELBOE (vf) [= EBE (Times Atlas of the World) + LO]

CELLOBIOSUS (Sted) = CLOISS (vf) [= COS + LIS] + ELBOU (vf) [= EBU (Coptic root of ivory or Eur Broadcasting Union) + LO]

DEERBERRIES (?) = DEBRIS [= DBI (?) + ERS] + ERERE (Kurath, Middle English Dict) [= EEE (EDD) + RR (Rt Rev or Rolls Royce)]

OOLOOPOOLOO = OLOOLOO [= OOL (vf) + LOO] + OOPOO [= OPO (vf) + OO (vf)] For palindromes, see Pcon

PRE-ORDAINED = PERAND (OED) [= PRN (pro re nata) + EAD (Old Eng wealth)] + RODIE (OED) [= RDE (Med) + OI (OED)]

SPALLATIONS (Sted) = SALTOS (pl gymnastic leap) [= SLO (vf) + ATS (law: at the suit of OR Aux Territorial Service) + PLAIN [= PAN + LI]]

11 letters to 6 + 5, then to 3 + 3 + 3 + 2 reverse

DENTULOUSLY (Sted) = YSOUND (vf) [= DUS (vf) + NOY] + LULTE (vf) [= ELL + TU]

OOLOOPOOLOO as above, so the only reversible multilevel example found

SLANTIN PASS (BI) = SANTAS [= STA (vf) + ANS (vf)] + SPINL (vf) [= LIS + NP (nisi prius)]

TENDER YEARS (OED) = SAYENT (vf) [= TEA + NYS (vf)] + RERDE (vf) [= ERR + DE]

12 letters to 6 + 6, then to 3 + 3 + 3 + 3 reverse

ENDARTERIALS (Sted) = SARTAN (vf) [= NTA (Nat Tng Award) + ARS (OED pl or vf)] + LIERDE (vf) [= ERI (vf) + DEL]

MULTIPLE and MULTILEVEL

15 letters: //////////////: 8 + 7 forwards (then to 4 + 4 + 4 + 3), 8 + 7 reverse, 3 @ 5 forwards, etc

12 letters: ENDARTERIALS: 6 + 6 reverse, 3 + 3 + 3 + 3 forwards, and multilevel

11 letters: OOLOOPOOLOO: 6 + 5 forward, 6 + 5 reverse, and multilevel