ZIPWORDS – AKA ALTERNADES

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In *Language on Vacation*, Dmitri Borgmann introduced the subject of “alternades”. He gave four 9-letter examples: CALLIOPE, CHAINLETS, FLEETNESS and TRUANCIES. What makes these four words alternades is that their letters can be read in a zigzag fashion, with alternate letters spelling out genuine words or names. Thus:

```
CLIPS
ALOE

CANES
HILT

FETES
LENS

TUNIS
RACE
```

Borgmann also provided another name for alternades – “drop-letter charades”. He pointed out that there are very few first-rate 9-letter examples, and still fewer ones of greater length. He offered these 10- and 11-letter examples – SPEARHEADS, COURTLIEST and TRIENNIALLY:

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SERED
PAHAS

CUTIS
ORLET

TINILY
RENAI
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Borgmann went on to explain that instead of reading each second letter of a word, there is the option of reading each third one, to create what is called a “trinade”. Some of Borgmann’s 9-letter examples are: ABOMINATE (AMA, BIT, ONE), DECORATED (DOT, ERE, CAD), SEPARATED (SAT, ERE, PAD) and SIMILARLY (SIR, ILL, MAY). He said that 12-letter specimens are much harder to find, and offered MANIPULATORS (MILO, APAR, NUTS) and PUTATIVENESS (PAVE, UTES, TINS).

According to the National Puzzlers League, the alternade was introduced by L’Allegro just over 100 years ago in the June 1917 edition of *The Eastern Puzzler*. L’Allegro was the nom (puzzling name) used by Joseph McClintock Garrison, from Pittsburgh. His very first alternade was the relatively modest 8-letter SCHOOLED (SHOE, COLD).

Wikipedia has an entry for “alternade”, and offers some additional 11-letter examples: CARPETWEEDS (CREWES, APTED), CURTAINLESS (CRANES, UTILS) and SPALLATIONS (SALTOS, PLAIN) – as obscure as some of the words may be, they are all in *Webster’s Third*.

In this article, I am going to improve substantially on the alternades offered by Borgmann and Wikipedia. Recently, I have been investigating alternades further, with considerable input from my good Scrabble friends David Sutton (of Woodcote, Oxfordshire, England) and Chris Hawkins (of Eye, Cambridgeshire, England). Chris posted a query on Facebook asking for examples of words where alternate letters spelled out shorter words; Chris was unaware of the century-long history of alternades. As my other Scrabble friend David Sutton and I became involved, we started to use a different terminology with which to discuss alternades. We have replaced “alternades” with “zippable words” (shortened to “zipwords”) where a zipword is defined as a word from which one can take letters at prescribed intervals, for a given interval, and concatenate them to produce a set of valid component words. We have called the interval the
“ply”. Thus, referring back to the very first alternade, SCHOOLED is a 2-ply zippable word. This updated terminology will make it easier to refer to improved examples of alternades.

David Sutton’s role in our zipwords project was to carry out computerised searches of Collins Official Scrabble Words (2015 edition). As a result, he managed to find over 3500 2-ply zipwords having 4 to 11 letters. The majority of these 3500+ are of lengths 4 to 7 letters. But the longer ones, 8 and more letters, are those of most interest to the logologist. Here are 25 examples from his collection of 230 2-ply 8-letter zipwords:

<table>
<thead>
<tr>
<th>bluetits</th>
<th>butt</th>
<th>leis</th>
<th>pleonasm</th>
<th>pens</th>
<th>loam</th>
</tr>
</thead>
<tbody>
<tr>
<td>countess</td>
<td>cuts</td>
<td>ones</td>
<td>psalmist</td>
<td>pams</td>
<td>slit</td>
</tr>
<tr>
<td>encarpus</td>
<td>ecru</td>
<td>naps</td>
<td>rainouts</td>
<td>riot</td>
<td>anus</td>
</tr>
<tr>
<td>fiascoes</td>
<td>face</td>
<td>isos</td>
<td>shoalier</td>
<td>sole</td>
<td>hair</td>
</tr>
<tr>
<td>furrings</td>
<td>frig</td>
<td>urns</td>
<td>soybeans</td>
<td>syen</td>
<td>obas</td>
</tr>
<tr>
<td>grounded</td>
<td>gone</td>
<td>rudd</td>
<td>stewpots</td>
<td>sept</td>
<td>twos</td>
</tr>
<tr>
<td>guardees</td>
<td>gade</td>
<td>ures</td>
<td>teosinte</td>
<td>toit</td>
<td>esne</td>
</tr>
<tr>
<td>hairnets</td>
<td>hint</td>
<td>ares</td>
<td>theorems</td>
<td>term</td>
<td>hoes</td>
</tr>
<tr>
<td>isleless</td>
<td>ills</td>
<td>sees</td>
<td>triadist</td>
<td>tids</td>
<td>rait</td>
</tr>
<tr>
<td>mounseer</td>
<td>muse</td>
<td>oner</td>
<td>triolets</td>
<td>tilt</td>
<td>roes</td>
</tr>
<tr>
<td>obviable</td>
<td>oval</td>
<td>bibe</td>
<td>tweeness</td>
<td>tens</td>
<td>wees</td>
</tr>
<tr>
<td>oghamist</td>
<td>ohms</td>
<td>gait</td>
<td>weirdoes</td>
<td>wide</td>
<td>eros</td>
</tr>
<tr>
<td>personae</td>
<td>proa</td>
<td>esne</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As the length of zipwords increases, the number of 2-ply zipwords decreases substantially. David has unearthed 40 2-ply 9-letter zipwords. Here are all 40:

<table>
<thead>
<tr>
<th>agrarians</th>
<th>arras</th>
<th>gain</th>
<th>peartness</th>
<th>pates</th>
<th>erns</th>
</tr>
</thead>
<tbody>
<tr>
<td>ambiances</td>
<td>abacs</td>
<td>mine</td>
<td>plainness</td>
<td>panes</td>
<td>lins</td>
</tr>
<tr>
<td>ampassies</td>
<td>apsis</td>
<td>mase</td>
<td>priestess</td>
<td>pises</td>
<td>rets</td>
</tr>
<tr>
<td>arrestees</td>
<td>arses</td>
<td>rete</td>
<td>rheumiest</td>
<td>remet</td>
<td>huis</td>
</tr>
<tr>
<td>ballooned</td>
<td>blond</td>
<td>aloe</td>
<td>sapiences</td>
<td>specs</td>
<td>aine</td>
</tr>
<tr>
<td>bluebeats</td>
<td>bubas</td>
<td>leet</td>
<td>sapiobal</td>
<td>spoil</td>
<td>arba</td>
</tr>
<tr>
<td>calliopes</td>
<td>clips</td>
<td>aloe</td>
<td>seapieces</td>
<td>saics</td>
<td>epee</td>
</tr>
<tr>
<td>chainlets</td>
<td>canes</td>
<td>hilt</td>
<td>seigneurs</td>
<td>sinus</td>
<td>eger</td>
</tr>
<tr>
<td>choosiest</td>
<td>coset</td>
<td>hois</td>
<td>sheerness</td>
<td>seres</td>
<td>hens</td>
</tr>
<tr>
<td>collapses</td>
<td>class</td>
<td>olpe</td>
<td>smoother</td>
<td>soces</td>
<td>mohr</td>
</tr>
<tr>
<td>deergrass</td>
<td>degas</td>
<td>errs</td>
<td>speedless</td>
<td>sedes</td>
<td>pels</td>
</tr>
<tr>
<td>fleetness</td>
<td>fetes</td>
<td>lens</td>
<td>sphairees</td>
<td>shies</td>
<td>pare</td>
</tr>
<tr>
<td>forwastes</td>
<td>frats</td>
<td>owse</td>
<td>spurnings</td>
<td>sunns</td>
<td>prig</td>
</tr>
<tr>
<td>furriness</td>
<td>fries</td>
<td>urns</td>
<td>staidness</td>
<td>sades</td>
<td>tins</td>
</tr>
<tr>
<td>gainliest</td>
<td>gilet</td>
<td>anis</td>
<td>stainless</td>
<td>sanes</td>
<td>tils</td>
</tr>
<tr>
<td>greeniest</td>
<td>genet</td>
<td>reis</td>
<td>sternites</td>
<td>sents</td>
<td>trie</td>
</tr>
<tr>
<td>greenness</td>
<td>genes</td>
<td>rens</td>
<td>sweirness</td>
<td>seres</td>
<td>wins</td>
</tr>
</tbody>
</table>
David has unearthed 7 2-ply 10-letter zipwords; here are all of them:

barberries
barretries
carpetweed *
heartseeds
parrotries
peopleless
spallation *

brere
brere
crew
hated
prore
polls
salto
abris
artis
apted
erses
artis
epes
plain

Here are all 4 of the 2-ply 11-letter zipwords which David has found:

carpetweeds *
spallations *
stoicalness
triennially *

crews
saltos
socles
tinily
apted
plain
tians
renal

Asterisked ( *) items have been mentioned earlier in this article, and aren’t new to the world of logology. Even so, the unasterisked items are remarkable additions to the very limited collection of 10- and 11-letter examples. David has found no 2-ply zipwords longer than 11 letters.

As mentioned above, Borgmann provided some 9- and 12-letter examples of trinades. Using the new technology, trinades have become 3-ply zipwords. David Sutton has managed to find a total of 695 3-ply 9-letter zipwords. Here are 20 examples:

archaisms
baseliner
copulated
esuriency
facetimed
garageman
homelands
jugulates
kawakawas
lunitidal
majorette
nanoworld
offloaded
peasantry

ahs
ben
cut
ern
fem
gam
hen
jut
kaw
lid
mot
nor
old
pst
ram
ale
ole
ern
fem
gam
hen
jut
kaw
lid
mot
nor
old
pst
cis
sir
pad
uye
cid
ren
mas
gas
was
nil
jee
nod
fad
any
David has managed to unearth 171 3-ply 10-letter words. Each of these breaks down to one 4-letter word and two 3-letter words. Here are 20 examples:

arabicized  abid  riz  ace
benevolent  belt  eve  non
catamarans  cars  ama  tan
denaturant  dart  eta  nun
ejaculated  ecad  jut  ale
forebodies  feds  obi  roe
gelatinate  gane  eta  lit
halogenate  hone  aga  let
isomerized  imid  sez  ore
legitimate  lime  eta  git
memorisers  moss  ere  mir
notepapers  neps  ope  tar
overeaters  orts  vee  ear
philosophy  ploy  hop  ish
rereleased  read  els  ree
saccharify  scry  ahi  caf
temulently  tuny  elt  mel
titanesses  tass  ins  tee
uraninites  unis  rit  ane
wateriness  wens  are  tis

David has discovered 58 3-ply 11-letter words. Each breaks down to two 4-letter words and one 3-letter word. Here are 20 examples:

amobarbital  abba  mail  ort
baronetical  bota  anil  rec
cinematised  cete  imid  nas
deregulated  dele  egad  rut
fumatoriums  farm  utis  mou
gamogeneses  gone  ages  mes
hamamelises  hale  amis  mes
imprisoning  iron  ming  psi
laminarises  lire  anis  mas
meganewtons  mawn  ents  geo
mineralists  melt  iris  nas
paroxetines  pote  axis  ren
popularised  pure  olid  pas
radicalised  rile  acid  das
reticulated  rile  ecad  tut
revegetated  rete  egad  vet
seriousness  siss  eons  rue
telekineses  tene  ekes  lis
vitaminised  vane  imid  tis
vomeronasal  vena  oral  mos

David has identified 17 3-ply 12-letter words. Each breaks down to three 4-letter words. That all three constituent words are the same length is more aesthetically pleasing than the 3-ply 10- and 11-letter words. Here are all 17 examples:

agamogeneses  ames  gone  ages
amobarbitals  abba  mail  orts
curativelessness  cave  utes  rins
definiteness  dite  enes  fins
derisiveness  dive  eses  rins
disinberison  dies  intro  shin
facilenesses  fins  alee  cess
fugitiveness  five  utes  gins
literariness  lere  iris  tans
locomobility  lobi  omit  coly
malapertness  mare  apts  lens
manageresses  mars  agee  ness
metapolitics  mali  epic  tots
moderateness  mete  ores  dans
nugatoriness  nare  utis  gons
retiringness  rine  ergs  tins
separateness  sate  eres  pans

Onwards and upwards. David has found four 3-ply 13-letter words, each consisting of one 5-letter word and two 4-letter words. They are:

melanogeneses  mages  enes  lone
novocentenary  nonny  octa  veer
tumorigeneses  toges  ures  mine
tumorigenesis  toges  ures  mini
David has found a solitary 3-ply 14-letter word, consisting of two 5-letter words and one 4-letter word. It is:

\[\text{benevolence} \quad \text{belts} \quad \text{evens} \quad \text{none}\]

David was unable to find any 3-ply 15-letter words, which is a shame, as any such words would be composed of three 5-letter words, which has an appealing aesthetic to it.

How about 4-ply zipwords? *Language on Vacation* calls these “quadades” or “quaternades”, and offers just two of these: PANTALOONERY (PAN, ALE, NOR, TOY) and SUBTERRANEAN (SEN, URE, BRA, TAN). However, David Sutton has found 39 4-ply 12-letter words. The full set is:

| adulerating | att | dei | urn | lag | overdeviated | oda | vet | eve | rid |
| adulerising | ats | dei | urn | lig | pantalooney* | pan | ale | nor | toy |
| ameliorating | ait | moi | ern | lag | paraldehydes | ply | add | ree | ahs |
| ameliorators | ait | moo | err | las | passemeasure | pes | amu | ser | sae |
| amelioratory | ait | moo | err | lay | pathobiology | pol | abo | tig | hoy |
| carrageenans | can | aga | ren | res | reflationary | ran | eta | fir | loy |
| continuators | cit | ono | nur | tas | rootednesses | res | ods | one | tes |
| defecations | dei | eco | fan | ats | smithereneed | she | men | ire | ted |
| defualised | dui | eds | fae | eld | speleologist | seg | poi | els | lot |
| defualises | dui | eds | fae | els | spheroidises | sri | pos | hie | eds |
| deflationary | dan | eta | fir | loy | spheroidizes | sri | poz | hie | eds |
| etherealness | ern | tee | has | els | subauditions | sui | udo | bin | ats |
| gradualities | gut | rai | ale | dis | subterranean* | sen | ure | bra | tan |
| heatednesses | hes | eds | ane | tes | superfusions | sri | ufo | pun | ess |
| heavenliness | hen | ene | als | vis | superpraises | sri | ups | pre | eas |
| labouredness | lun | are | bes | ods | superrefines | sri | urn | pee | efs |
| leopardesses | las | ers | ode | pes | trophobiotic | tho | rot | obi | pic |
| longicaudate | lid | oca | nat | gue | unadmonished | ums | noh | ane | did |
| lophophorate | lor | opa | pht | hoe | uninterested | uts | net | ire | ned |
| motherhouses | meu | ors | the | hos |

Longer 4-ply examples exist. At the 13-letter level, the constituent words would be one 4-letter word and three 3-letter words. David managed to locate just eight of these:

| baccalaureate | bare | ale | caa | cut |
| bacteriolyzes | bels | ary | cis | toe |
| emotionalised | eild | moi | ons | tae |
| perditionable | pined | eta | rib | dol |
| savourinesses | sues | ars | vis | one |
| speleologists | segs | poi | els | lot |
| subterraneans | sens | ure | bra | tan |
| subterraneous | sens | ure | bro | tau |
And 4-ply 14-letter words can also be found. David found just 5 of these:

| baccalaureates | bare | ales | caa | cut |
| etherealnesses | erne | tees | has | els |
| labourednesses | lune | ares | bes | ods |
| pansexualities | pele | axis | nut | sai |
| pathobiologies | pole | abos | tig | hoi |

David didn’t manage to find any 4-ply zipwords longer than 14 letters.

Even 5-ply words are possible. David found 155 5-ply 10-letter zipwords, each composed of five 2-letter words. Here are some of them:

| aborigines | ag | bi | on | re | is |
| aluminised | an | li | us | me | id |
| apostrophe | ar | po | op | sh | te |
| balneation | ba | at | li | no | en |
| bituminate | bi | in | ta | ut | me |
| deliberate | de | er | la | it | be |
| elaborator | er | la | at | bo | or |
| expatriate | er | xi | pa | at | te |
| harpooneer | ho | an | re | pe | or |
| kinetosome | ko | is | no | em | te |
| lepidolite | lo | el | pi | it | de |
| mazarinade | mi | an | za | ad | re |
| metafemale | me | em | ta | al | fe |
| outpassion | os | us | ti | po | an |
| piperidine | pi | id | pi | en | re |
| remunerate | re | er | ma | ut | ne |
| seminomata | so | em | ma | it | na |
| taxability | ti | al | xi | at | by |
| telomerase | te | er | la | os | me |
| urinometer | um | re | it | ne | or |

5-ply words with 11 letters also exist in profusion. These are built up from one 3-letter word and four 2-letter words. David found 211 of these, including the following:

| aluminosity | any | lo | us | mi | it |
| apostleship | alp | pe | os | sh | ti |
| camerawomen | can | aw | mo | em | re |
| dehumanised | dad | en | hi | us | me |
| elaborating | erg | la | at | bi | on |
| featherhead | fed | er | ah | te | ha |
gelatinated gid en la at te
hematoxylin hon ex my al ti
imagination inn ma at gi io
jealoushood jud es ah lo oo
keratometer kor em re at te
leatherhead led er ah te ha
mountaineer mar oi un ne te
naturalises nas al ti us re
outmarriage ore ur ti ma ag
petalomania poa em ta an li
readmission rin es as di mo
subpoenaing seg un ba pi on
telomerases tes er la os me
zootrophies zos op oh ti re

And then there are 85 5-ply 12-letter zipwords which David found. Composed of two 3-letter words and three 2-letter words, here are some examples:

arpeggiation ago rin pa et gi
bituminating bin ing ta ut mi
canaliculate cit ace nu al la
deliberating den erg la it bi
evaporations ern vas at pi oo
foolhardiest fas ort od li he
gelatinating gin eng la at ti
hematologist hos elt mo ag ti
isoperimeter ire sir om pe et
jealoushoods jud ess ah lo oo
keratometers kor ems re at te
literateness las its te en re
metagalaxies mae els ta ax gi
nematologist nos elt mo ag ti
octaploidies ole cos ti ad pi
preachership phi rep er as ch
rehabilitant rin elt hi at ba
semiparasite sat ere ma is pi
solidarities sae ors li it di
weatherwomen wee ern aw to hm

And then there are 26 5-ply 13-letter zipwords which David found. Composed of three 3-letter words and two 2-letter words, here are some examples:

appetisements ain pst pes em te
leatherleaves lev ere als te ha
legitimatised lis eme gad it ti
metabolisable mob ell tie as ba
metasomatoses mos eme tas at so
parameterised pes ate red ar mi
spelaecologist sei pos elt lo ag
thermoelement toe hen elt re mm
unpasteurised uts nee pud ar si
volumenometer vet one lor um me

At the 14-letter level, it's still possible to find 5-ply zipwords, these having four 3-letter words and one 2-letter word. Here are the full 9 such words which David discovered:

cohesibilities cit obi hie els si
deliberateness den ere las its be
legitimatelyn lin eme gas its te
literatenesses las its tee ens re
percussionists psi ess rit cos un
spelaecologists sei pos elt los ag
thermoelements toe hen elt res mm
volumenometers vet one lor ums me
waterishnesses wis ass the ens re

We like the aesthetic appeal of 5-ply 15-letter zipwords as each will be composed solely of 3-letter words. The only two such words which David found are:

elaboratenesses ere las ats bee ons
undernourishing uns noh dui ern rig

And now finally at the 6-ply level .... Starting with 12-letter zipwords, these will comprise six 2-letter words. David discovered 40 of these, including:

adulteration ar da ut li to en
amalgamation am ma at li go an
antiheroines ar no ti in he es
demutualises da el mi us te us
deuteroestome do es ut to em re
diazomethane de it ah za on me
elementarity et la er mi el ny
equabilities el qi ut ai be is
exopeptidase et xi od pa es pe
hemodialysis ha el my os di is
italianating in ta at li in ag
materialised ma al ti es re id
motoneuronal mu or to on na el
opotherapies or pa op ti he es
salutational st ai lo un ta al
testamentary te en st ta ar my
unhabitatuated ut nu ha at be id
unionisation us na it oi no in
unsaturation ur na st ai to un
utopianising un ti os pi in ag

6-ply 13-letter zipwords are comprised of one 3-letter word and five 2-letter words. David discovered 34 of these, including:

damageability day ab mi al gi et
demutualising dag el mi us ti un
denationalise doe en na al ti is
desexualising dag el si es xi un
familiarising fag ar mi is li in
fetishisation fin es ta it si ho
haemodialysis his aa el my os di
immaterialise ire mi ma al ti es
labialisation lin as ba it ai lo
monoaminergic mic on ne or ag mi
monotherapies mes or na op ti he
multinational mal ut li to in na
peneplation pan en na et pi lo
podsolisation pin os da st oi lo
radialisation rin as da it ai lo
renationalise roe en na al ti is
ritualisation rin is ta ut ai lo
semasiologist sot el mo ag si is
solemnisation sin os la et mi no
subsaturation sun ur ba st ai to

6-ply 14-letter zipwords are comprised of two 3-letter words and four 2-letter words. David discovered 17 of these, including:

annexationists att nis no en xi as
cautiousnesses cue ass un te is os
fetishisations fin ess ta it si ho
immaterialised ire mid ma al ti es
labialisations lin ass ba it ai lo
multinationals mal uts li to in na
6-ply 15-letter zipwords are comprised of three 3-letter words and three 2-letter words. David discovered just 1 of these:

opinionatedness one pas its ne id on

And now finally, 7-ply zipwords. David found three 7-ply 14-letter zipwords, comprised simply of seven 2-letter words:

admeasurements ar de mm ee an st us
onomatopoieses op no oi me as te os
onomatopoiesis op no oi me as ti os

David found no 7-ply 15-letter words.

David’s searches ended at the 15-letter level, as Collins Official Scrabble Words (2015 edition) only contains words up to 15 letters. Of course, there may be many zipwords of lengths 16 or more letters among the words listed in mainstream dictionaries. Can readers offer any zipwords with more than 15 letters, and of any ply (although 2-ply words seem highly unlikely, given that the best so far discovered have only 11 letters).

Footnote 1: All of the words in this article, except one, both zipwords and the shorter words making up the zipwords, can be found in either Collins Official Scrabble Words (2015 edition) or Webster’s Third. Indeed, most of the words can be found in both these sources. The exception not listed by either of these sources is PUTATIVENESS, the 3-ply 12-letter zipword offered by Borgmann – nor is it listed in other major dictionaries. PUTATIVENESS will be the subject of a separate article.

Footnote 2: A full listing of David’s zipwords finds, from 2-ply to 7-ply for all word lengths from 4 to 15 letters can be requested from the author of this article.