

ISOPANGRAMS

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I'm sure that all Word Ways readers will know what a pangram is: a sentence containing all the letters of the alphabet. The most well-known one, once used for typewriter keyboard training, is this:

The quick brown dog jumps over the lazy fox (35 letters)

Shorter examples exist. For example, Wikipedia offers the following six examples:

Jived fox nymph grabs quick waltz (28 letters)

Glib jocks quiz nymph to vex dwarf (28 letters)

Sphinx of black quartz, judge my vow (29 letters)

How vexingly quick daft zebras jump (30 letters)

The five boxing wizards jump quickly (31 letters)

Pack my box with five dozen liquor jugs (32 letters)

A 'perfect pangram' is a set of words using all 26 letters of the alphabet, once and only once. The word **isopangram** is also used to describe a perfect pangram. Here is part of the OED entry for the word **pangrammatist**:

A writer who uses every letter of the alphabet in a single sentence, line of verse, etc; a composer of pangrams.

2002 *Spectator* (Nexis) 7 Sept. 32 The Holy Grail of the pangrammatists is the **isopangram**, which uses each letter once and once only.

In Dmitri Borgmann's *Language on Vacation*, he offers these 6-word and 7-word isopangrams:

cwm	fjord	bank	glyphs	vext	quiz	
fjord	buck	zags	whelm	qvint	pyx	
junky	qoph	flags	vext	crwd	zimb	
milk	vat	fez	bugs	qoph	crwd	jynx
zing	vext	cwm	fly	jabs	Kurd	qoph

Borgmann attempts to explain each of these as a meaningful sentence, albeit with a rather stretched, bizarre explanation. However, I think it's best to simply treat the solutions as collections of unrelated words.

Once the quest for meaningful sentences is discarded, it's not difficult to find other 6-word and 7-word solutions. Searching the internet throws up several additional examples. Here are just a few (reading left to right):

cwm	fjord	veg	balks	nth	pyx	quiz
jink	cwm	zag	veldt	fob	qursh	pyx
kat	veld	zubr	gif	cwm	jynx	qophs
cwm	fjord	bank	glyphs	vext	quiz	
jock	nymphs	waqf	drug	vex	blitz	
squdgy	fez	blank	jimp	crwth	vox	
veldt	jynx	grimps	waqf	zho	buck	
waqf	glyphs	vex	muck	djin	bortz	
zing	dwarf	jocks	vex	lymph	Qutb	

All of the words in the above solutions use words from mainstream dictionaries, even though several of the words are uncommon.

The challenge now is to find isopangrams using fewer than 6 words.

I am aware that the February 1977 edition of *Word Ways* contained a 4-word panisogram devised by Dmitri Borgmann: FJORDHUNGKVISL (a short river in Iceland, listed in *The Times World Index-Gazetteer*), PECQ (a town in western Belgium, also in *The Times World Index-Gazetteer*), WAMB (an obsolete spelling of **womb**, in *Webster's Second*) and ZYXT (an obsolete Kentish second person singular indicative present form of the verb **see**, from *The Oxford English Dictionary*). As impressive as this solution is, it depends on two obscure geographical names and two obsolete spellings.

Could I devise something better? Could I avoid placenames and other proper names? Could I get down to just one obsolete spelling, or even avoid them completely? I decided to try ...

But first, I wanted to lay down some ground rules – no initials, no abbreviations, no Roman numerals, no chemical symbols, no internet domains, no placenames or other proper names. I will allow obsolete, archaic, dialect

and variant spellings. And all solution words should be found in widely recognised reference sources, printed or online.

Delving back into the February 1977 Word Ways, there is this excellent 5-word solution, courtesy of Dmitri Borgmann:

jackbox	phlegms	qvint	fyrd	wuz
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All these words are in *Webster's Second Edition*, and none is marked obsolete.

Utilising the wealth of obsolete spellings from *The Oxford English Dictionary*, especially those beginning with QH-, QV- and QW-, I have managed to devise numerous 5-word solutions. Here are just 10 of them, most using only one obsolete spelling:

frogland	bumphs	qwyck	vext	jiz
muzjik	plongd	barfs	qwych	vext
advect	qhwyk	bumpf	grosz	jinx
blocked	qwyght	vamps	jinx	zurf
schmutzig	fjeld	prawn	qvyk	box
trebling	jumps	qwyck	vozhd	fax
muzjiks	plongd	byrch	vext	waqf
jagdwurst	flinch	bomp	qvyk	zex
jackbox	frump	glitz	wends	qvhy
jackbox	qwyght	fremd	vuln	zips

The final challenge is to find 4-word isopangrams, even just one! My good friend Allan Simmons helped out here. Between us, we found several solutions which came very close, usually with four words and a single unused letter. Eventually, Allan came up with this imperfect solution:

backjumping	scqwyr	vozhd	flex
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Allan commented that "*The Oxford English Dictionary* has **scqwyr** as an obsolete variant spelling of **squirt**, but the C is duplicated, also appearing in **backjumping**". However, with a bit of sleuthing, I managed to find a couple of online dictionaries which have the C-less spelling SQWYRT. Thus:

backjumping	sqwyr	vozhd	flex
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Let's take a look at each of these four words.

- **backjumping:**
 - en.wiktionary.org/wiki/backjumping and www.yourdictionary.com/backjumping both have exactly the same definition: “(Computing theory) A form of backtracking that may move more than one level at a time, used to improve the efficiency of certain algorithms.”
 - en.wikipedia.org/wiki/Backjumping (the word's Wikipedia article) has this more detailed statement: “In backtracking algorithms, **backjumping** is a technique that reduces search space, therefore increasing efficiency. While backtracking always goes up one level in the search tree when all values for a variable have been tested, **backjumping** may go up more levels. In this article, a fixed order of evaluation of variables is used, but the same considerations apply to a dynamic order of evaluation.”
- **sqwyr**
 - www.dictionary.com/browse/squirt and www.wordreference.com/definition/squirt both have this: “(noun) late Middle English **sqwyr** diarrhea, derivative of the verb.”
- **vozh**
 - According to the *OED*: “A leader, one who is in supreme authority: applied especially to the Russian statesman Joseph Stalin (1879–1953).”
 - *Collins English Dictionary, 2019 edition*, simply says: “a Russian leader.”
- **flex**
 - A common word, both verb and noun, findable in even modest dictionaries.

Dictionary sources for some obscure words

bumpf	variant of bumf , <i>OED</i>
bumphs	<i>Webster's Third</i>
byrch	obsolete form of birch , <i>OED</i>
fjeld	<i>Webster's Third</i>
frogland	land on which frogs live, <i>OED</i>
grosz	<i>Webster's Third</i>
muzjik(s)	<i>Webster's Third</i>
plongd	Spenserian spelling of plunged , <i>Chambers Dictionary, 12th edition</i>
qhwyk	variant form of quhilk , <i>A Dictionary of the Older Scottish Tongue</i> (at dsl.ac.uk)
qvyk	obsolete form of quick , <i>OED</i>
qwych	obsolete form of which , 28 quotes including qwych , <i>OED</i>

qwyck	obsolete form of quick , <i>OED</i>
qwyght	obsolete form of quit , <i>OED</i>
schmutzig	filthy/dirty, <i>OED</i>
waqf	<i>Webster's Third</i>
zurf	cup-shaped holder for a hot coffee-cup, used in the Levant, usually of metal and of ornamental design, <i>OED</i>