## PANGRAMMATIC CROSSWORDS

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The November 2002 Colloquy presented a $3 \times 14$ crossword grid devised by Chris McManus, which contains all 26 letters of the alphabet once each.

| J |  |  | H |  |  | W |  | F |  | Q |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | P |  |  |  |  |  |  |  |  |  |
| U | N | D | I | S | C | O | V | E | R | A | B |
| L L | Y |  |  |  |  |  |  |  |  |  |  |
| G |  |  | M |  |  | K |  | Z |  | T |  |
|  |  | X |  |  |  |  |  |  |  |  |  |

This was subsequently bettered by the $3 \times 13$ example below, which has just 39 total spaces and uses fairly common words, apart from QUM, a city in Iran given in the RHD. Note that the Q was out of place in the November Word Ways.

|  | $Q$ |  | W |  |  | J |  | V |  | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | P |  |  |  |  |  |  |  |  |
| S | U | B | O | R | D | I | N | A | T | E |
| L | Y |  |  |  |  |  |  |  |  |  |
| H | M |  | K |  |  | G |  | C |  | Z |
|  |  | X |  |  |  |  |  |  |  |  |

By using more obscure words, including a couple of initialized nouns, all 26 letters can be squeezed into a $3 \times 12$ grid ( 36 total spaces).

QUODLIBETARY, JUP, FIZ, KEX, GRW (grow), VG (ug) and CWM can be found in the OED. $\mathrm{NOH}, ~ V A C$ and PHS are in ChD, DS is in Web 3, YM is in Web 2, and JN (in) is in the MED. To compress all 26 letters into a $3 \times 11$ crossword requires a little ingenuity. Nevertheless it can be done with words listed in major dictionaries. There are only seven blank spaces in this grid.

| V | M | H |  | B |  | Q |  | J |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| E | S |  |  |  |  |  |  |  |
| E | L | U | C | I | D | A | T | O |
| R | Y |  |  |  |  |  |  |  |
| X |  | K |  | Z |  | F |  | P |
| W | N |  |  |  |  |  |  |  |

HUK (early form of 'huke', a hooded cape), JOP (dialectic for 'jaup', to splash), GRW (15th century form of 'grow'), SYN (early form of 'sin'), VMH (see 1614 quote under '†umh, um'h') and PWN (obsolete Scots for 'pun') are all in the OED. ELUCIDATORY, BIZ, VEX, JGS (junior grade lieutenants) and ML (master of laws) can be found in Web 3, and QAF (21st letter of the Hebrew alphabet) is in the RHD. A pangrammatic $3 \times 10$ crossword is not impossible, but one must use some logological license to concoct the following flawed specimen. Can anyone improve on this somewhat strained example?


PUC surname of about 70 people in US phonebooks [Google]
DRW 15th century form of 'drew' [OED]
QOM a city in Iran [RHD]
ZEV Hebrew male name [35000+ Baby Names, by Bruce Lansky, 1995]
XNF Xilinx Netlist Format, a hardware description language [Google]
JTH a mathematical term \{compare 'nth'), often 'in the jth degree' [Google]
YAK idle chatter [Web 3]
BLS bachelors of laws [Web 3]
PDQ immediately [Web 3]
CWM a rounded valley [Web 3]
ZX zeaxanthin, a yellow pigment found in Indian corn (zea mays\} [CD2]
VF early form of 'of' [MED]
JYB 18th century form of 'jib', a triangular stay-sail [OED]
HKS human keratinocytes, skin cells that produce keratin [CD2]
With the help of master wordsmith Dmitri Borgmann, here is a pangrammatic $2 \times 14$ crossword grid which has only two blank spaces.

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F JORD H U N GKV I S L
ZYXT WAMB P E C Q
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FJORDHUNGKVISL is a river in Iceland in the TIG, ZYXT is an old Kentish inflection of the verb 'see' in the OED, WAMB is an obsolete variant of 'womb' in Web 2, and PECQ is a town in Belgium in the TIG. These words appear on page 43 of the February 1977 Word Ways. The twoletter words can all be found in The Concise Dictionary of 2 Letter Words, a booklet privately published in 1996.

FZ furazolidone, a drug used to treat diarrhoea and bacterial enteritis
JY Middle English form of 'Jew'
OX a dull, placid or clumsy person
RT an ancient Syrian personal name
HW 14th century spelling of 'yew'
UA 15th century Scots or northern English spelling of 'woe'
NM a nurse-midwife, one who cares for children before, in, and after childbirth
GB a goofball, American slang for a portion or dose of any narcotic
VP 14th-17th century variant of 'up', to drive up and catch swans
IE a Pacific islands screw-pine tree
SC American Navy slang for a 'scouting craft'
LQ laterality quotient, used in studying patterns of right and left handedness

## References

CD2 Concise Dictionary of 2 Letter Words, Jeff Grant, 1996
ChD Chambers Dictionary, 1998
Google Internet search program
MED Middle English Dictionary, 1959-2001
OED Oxford English Dictionary, 2nd edition, 1989
RHD Random House Dictionary, 2nd edition, 1987
TIG Times Index Gazetteer, 1965
Web 2 Webster's New International Dictionary, 2nd edition, 1934
Web 3 Webster's 3rd New International Dictionary, 1976

