

# LADDER WORDS

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PERVERSER, HASHISHES and INSINKING are examples of what I call Ladder Words. Each word is a self-contained ladder (PER-VER-SER, HAS-HIS-HES, INS-INK-ING) in which each trigram (3-letter group) differs from its trigram neighbour(s) by a single letter, just as do the words in a word ladder. All the examples of ladder words below are either solid words or hyphenated words. Hyphens are not shown. All 3 trigrams must be different, so that GONGOLGON (in New South Wales) is not acceptable. A few words of this genre appeared in Colloquy 98116 and these are identified in the lists below by an asterisk\*. Unreferenced words can be found in the Oxford English Dictionary, Second Edition or can be inferred from words therein. Sources of non-OED words are given at the end.

For convenience, we can identify 2 basic types of ladder word:

- \* those like the three listed above in which the two changes occupy the same positions (first, second or third letters, respectively) in the three trigrams. PERVERTER, and other words in which the changes involve the first letter of the trigrams, are especially easy to identify visually as ladder words.
- \* those like ASSESSEES, UNKINKING and REPRESSES in which the two changes involve letters in two different positions in the first/second and second/third trigrams.

## 9-LETTER LADDER WORDS

By numbering the letters 1 to 9, the 2-change permutations between the first/second, and second/third, trigrams can be shown numerically - there are 9 of them:

1 2 3 4 5 6 7 8 9	<u>CHANGES</u>	1 2 3 4 5 6 7 8 9	<u>CHANGES</u>
P E R V E R T E R	1 - 4 4 - 7	A S S E S S E E S	1 - 4 5 - 8
M E A T E A T E R	1 - 4 6 - 9	B A R B E R I E R	2 - 5 4 - 7
H A S H I S H E S	2 - 5 5 - 8	S E I S M I S M S	2 - 5 6 - 9
M A M M A L I A L	3 - 6 4 - 7	E N C E N S E R S	3 - 6 5 - 8
I N W I N D I N G	3 - 6 6 - 9		

I found a total of 415 9-letter ladder words not having repeated trigrams. 66% of these have the change pattern 1-4 4-7, and 13.7% the pattern 1 - 4 6 - 9. None of the other patterns account for more than 4% of the 415 words. The actual number of words found for each pattern is shown in brackets. The words offered in the list below are a selection. Unless specified otherwise, a location identified by a country is a populated place in that country.

It is interesting to note that all 9-letter ladder words contain at least one Miami (12?12) sequence of letters (see *Miami Words* WW2000014). 3 of the 9 patterns also contain at least one tautonymic sequence.

**1-4 4-7 (275) 2 overlapping Miami sequences**

ACESCENCE, BEEVEEDEE\*, BERSERKER\*, CANUANGAN (Philippines), DESGESTES, FERWERDER en Blijaer Kleilandspolder is a polder in the Netherlands, GYUSYULYU (Azerbaijan), HERBERGER\*, JOUCOULOU (ravine in Haiti), KUKLUKTUK (Hodge), LESNESSES (WW85204 w3), MANGANJAN, MANGANOAN, NANPANTAN (in Leicestershire), PERVERSER\*, PERVERTER\*, RIAKIANIA (Kenya), SIEMIENIE (Poland), TANZANIAN, TENDENZEN (w2), VOUTOUFOU (Greece), WARPAREAR (an island in Indonesia), Morne XANGANZAN (a mountain in Haiti), YOULOUGOU (China), ZOUGOUNOU (Ivory Coast). More ladder words with this particular pattern of change can be found in 'Out of Africa' later in the article.

**1 - 4 5 - 8 (11) 2 overlapping Miami sequences / single tautonymic sequence**

ASSESEES, CHARHARDA (Morocco), GBONBONDO (Sierra Leone), INTENTEST (?), LANGANGEN (Finland), MANTANTON (Hodge), OBERBERGE (a farm in Germany), RINGINGEN (Germany), SCHECHETH, THAM'HAMMA Bergen (a hill in S. Africa), UNTENTEST, WORDORDER

**1 - 4 6 - 9 (57) 2 overlapping Miami sequence / 2 overlapping tautonymic sequences**

ASSESEST, BAGIAGIAR (a well in Ethiopia), CAGUAGUAS (Cuba), DIGAIGAIA (Papua NG), FAJIAJIAO (China), HANSANSAR (Pakistan), INKONKONI (a stream in Zimbabwe), KHUCHUCHO (a stream in Bolivia), Cerro LOCCOCCOY (a spur in Peru), MEATEATER, NHACHACHE (a lake in Mozambique), OESZESZEK (a lake in Hungary), PERHERHEL (France), RAWUAWUAT (a bay in Papua NG), SENOENOEI (a stream in Indonesia), TAMEAMEAS (ebw), UNKINKING (w2), WASHASHAT (a wadi in Israel), WESKESKEK (Hodge), XIAJIAJIE (China).. This 1 - 4 6 - 9 pattern offers the opportunity for palindromic sequences. 7-letter internal palindromes can be found in BILLILLIE (a well in Australia), LOCCOCCOY (see above) and LUSSUSSUA (a stream in Angola). TASSASSAT (a hill in Mali) is a 9-letter palindrome.

**2 - 5 4 - 7 (7) single Miami sequence**

BARBERIER (France), CUSCOSOOS, DUNDANGAN (Philippines), KEOKHOPHO (a mountain in Laos), MILMOLGOL (N. Korea), NONNENVEN (a locality in the Netherlands), TULTOLGOL (N. Korea).

**2 - 5 5 - 8 (16) single Miami sequence**

CHOCLOCAO (Bolivia), HASHISHES (ospd), NYINPINTI (a point in Australia)

**2 - 5 6 - 9 (13) 2 overlapping Miami sequences / single tautonymic sequence**

AYVARVARA (Cyprus), Udeiate ERBEIBEIN (a wadi in Morocco), El HACHICHIA (Algeria), ISTINTINO (Italy), NHANGANGO (an island in Mozambique), OKAORAORE (Namibia), SEISMISMS (ospd)

**3 - 6 4 - 7 (16) 2 overlapping Miami sequences**

ACHACARCA (Peru), BAMBANGAN (Malaysia), CALCANEAN, DARDANIAN, GANGAWDAW (Burma), HORHOYTOY (China), KOKKONION (Greece), LIULISKIS (Lithuania), MAMMALIAL, NEWNESSES, PAMPANGAN, PEPPERIER, REDRESSES, REDRESSES, REFRESHES, REGRESSES, REPRESSES, SASSANIAN, UNBUNGING.

**3 - 6 5 - 8 (6) single Miami sequence**

ANCANEALE (Angola), CHICHACUA (a hill in Mozambique), ENCENSERS, NHANHONZO (a lake in Mozambique)

**3 - 6 6 - 9 (14) 2 overlapping Miami sequences**

ANDANKANI (Sri Lanka), CARCANCA (Honduras), DEADENDED, ERLERBERG (Austria), INWINDING, JINJIAJIE (China), LALLAILAT (Morocco), OENOEROEM (Indonesia), SHESHASHI (a river in Zimbabwe).

Ladder Words make word ladders. 'Ladder Travel', the logological tourist company, have exploited this phenomenon. In Australia, they offer a choice of two schedules. The first starts at BOOTOOLoo and proceeds, via BOOGOOLOO and MOOGOOLOO, to MOOROOLOO where it ends. The second starts at BOOLOOROO and takes in BOONOOROO\*, COONOOROO and COONOOGOO. These locations share the letter pattern ?OO?OO?OO. In both tours, each location visited differs from the previous location by a single letter.

### 12-LETTER LADDER WORDS

HEMIDEMISEMI\* is 12-letter ladder word.

'Ladder Travel' offer a North Korean tour of 12-letter locations, all having the letter pattern ?ONG?ONG?ONG. The tour begins at PONGYONGDONG and thereafter takes in TONGYONGDONG, TONGJONGDONG, TONGSONGDONG, NONGSONGDONG, YONGSONGDONG, YONGBONGDONG, YONGJONGDONG, SONGJONGDONG, ending at SONGBONGDONG.

All these 12-letter ladder words consist of 3 different tetragrams. But 12-letter ladder words can also be constructed from 4 different trigrams, as demonstrated by these African locations:

Burkino Faso: KOUSOULOUGOU, POUNOUROUKOU, SOUROUGOUDOU

Central African Republic: BOUTOUMOULOU, KOUMOUDOUROU, KOUZOOMOUTOU\*

Chad: BOUTOUNOUKOU, TOUKOULOUMOU

Congo: BOUGOULOUKOU, GOUMOUKOUTOU, MOUNOUFOUKOU

Guinea: FOUROUDOUGOU, KOULOUDOUGOU, KOUROUDOUGOU, NOUMOUSOULOU,  
SOUPOUKOUDOU, SOUROUKOUDOU, SOUTOUMOUROU

Ivory Coast: SOUPOUGOUTOU

Mali: BOUGOUTOUROU, DOUGOUNOUKOU, KOULOUBOUGOU, NOUMOUBOUGOU,  
SOUNOUGOUBOU, SOUROUKOUTOU

Niger: BOULOUKOUTOU

Senegal: KOUMOUTOUROU

To these 12-letter African ladder words we can add MOODOOGOOROO in Australia and TYARYAKYAMYA in Azerbaijan. I also found four words with the pattern ?OE?OE?OE?OE: POELOEGOEDOE and WOEDOEBOEKOE are in Suriname; BOELOEDOEKOE and DOEJOENOEMOE are in Indonesia.

### 15-LETTER LADDER WORDS

15-letter ladder words can be constructed from 5 trigrams or from 3 pentagrams. In either case, they are rare. SOULOUKOU DOUGOU is in Guinea, TOUDOUGOUKOUROU in the Ivory Coast and LOEKOEJOEBOETOE in Suriname. TAUNGAUNGAUNG (1 - 6 6 - 11) is in Burma and YUANCHUANHUANG (1 - 6 10 - 15) in China.

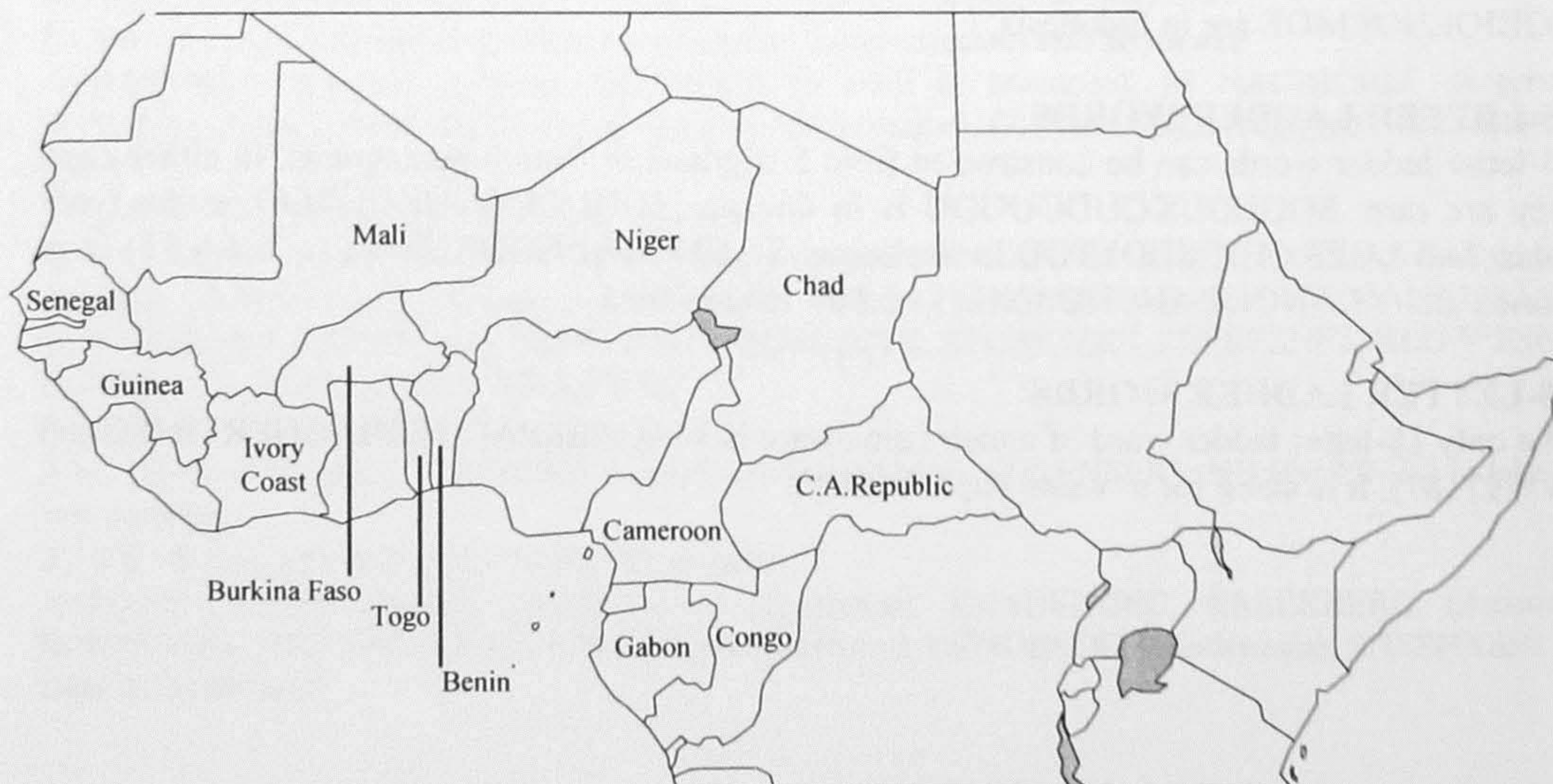
### 18-LETTER LADDER WORDS

The only 18-letter ladder word of which I am aware is WAGGERPAGGERBAGGER (Jeff Grant WW97187). It is slang for a 'waste paper basket'.

In this list of ?OU?OU?OU locations, the OUs have been omitted in order to save space.

BCT = BOUCOUTOU.

C.A R.		Chad		Burkino Faso		Congo		Mali	Ivory C.	Guinea	Niger
BCT	GKZ	BGN	KLF	BGN	KYG	BDH	MBY	AZR	BDG	BGR	BDK
BDL	GMR	BGR	KLG	BLG	MLR	BKL	MFB	BDG	BDK	BND	BKL
BDP	GYV	BKY	KMR	BTG	PGD	BYG	MFG	BGR	GRK	BTD	BKR
BKL	KMR	BRD	KRM	BYN	RNG	BYK	MGF	BLG	KDG	DKL	BRG
BKR	KNM	BRK	KTB	BZR	SDG	KDF	MKL	BRK	KDY	DNK	BTD
BLG	KNP	DMG	MCL	DLG	SGD	KDL	MPT	DFR	KLG	DPR	DLG
BLK	KRP	GDK	MGR	DRK	SKT	LBK	MSB	DKL	KNM	FDG	GRM
BLN	KTF	GDM	SLD	FBR	SLG	LBM	MTB	DKT	KRB	FKR	GTL
BLV	PKB	GLM	TKL	KBL	TLG	LFY	MYG	FGR	KTG	FRD	KDR
BTN	PKL	GRD	TKM	KDG	TNG	LHM	PKL	FTG	NDG	FRG	KRG
BTR	PLB	GRT	TKR	KRG	TSK	LKM	PNG	GDR	SGN	KHD	KTG
DKL	SML	HLG	YRS	KTG	ZLG	LNY	TLB	KLB	SGR	KLD	LFD
GDM	SRG	KBR	ZML			MBD		KMD	TKZ	KML	LGD
GFL	TCL	KDG				<b>Gabon</b>		LPR	TMN	KNL	RKZ
GHT	TZL					BGL		NBG	TRD	PDK	SLG
GKR						BHL		SBG	TRK	SKT	SRG
						BKL		SRF	ZGN	SLK	SRT
<b>Benin</b>	<b>Togo</b>	<b>Senegal</b>				DBH		TBG		SRK	TDN
DBT	BGL	BRH				DFC		TDG	<b>Cameroon</b>		TKL
GMR	KLH	BTG				DKM		TNF	BKL		YGL
GNR	NSR	DBR				DVL		TRL	BLR		ZRD
KGR	PLG	DFR				MBK			BTR		
MSL	SDG	GLF				MFB			DMR		
SRK	SRK	SKD				MGB			GLM		
						MLB			GZD		



**SYNONYMIC LADDER WORDS**

Hodge's *Handbook of American Indians* contains the ladder word TULSULSUN (1 - 4 6 - 9) with its synonym DALSAALSAN (also 1 - 4 6 - 9). The TULSULSUN entry reads: *Tulsulsun, given by Dorsey ... as a Takelma band or village in Oregon, but identified by Sapir ... as merely the Takelma name (Dalsalsan) of Illinois r.*

**OUT OF AFRICA** (see opposite page)

Finally, it's back to 9-letter ladder words for the journey of a lifetime. Apparently, 'Ladder Travel' also promote a gruelling, African, tour based on locations with the letter pattern ?OU?OU?OU. The particulars laid down by 'Ladder Travel' for this tour make absorbing reading. We are told that:

- \* each location visited in a particular African country must only differ by a single letter from the previous location visited
- \* the tourist can visit as many of the 13 countries on offer as they wish, but can only visit any particular country once.
- \* the tourist is not allowed to enter a country unless it is one of the 13 on offer
- \* a particular location in a country can only be visited once
- \* where there are locations with the same name in more than one country, only one of these locations can be visited
- \* the above rules also apply when crossing country borders

So far so good. Or is it? In the small print it says '*tourists should work out their own schedule such that as many locations as possible are visited, regardless of the number of countries involved*'. In other words, the poor old tourists have to do an enormous amount of homework before they are ready to embark on their journey. At least 'Ladder Travel' provide the bare essentials, a map showing the 13 African countries it is permitted to visit, and access to the appropriate gazetteers. After many arguments the tourists set off, having finally agreed on their route. Not surprisingly, none of them was ever heard of again...

...I don't know what happened to 'Ladder Travel', but I am curious to know what route the tourists intended to follow, how many locations it encompassed and, incidentally, how many different countries would have been visited. Can you help? I have gone a stage further than 'Ladder Travel' by extracting the ?OU?OU?OU locations for you. All you have to do is discover which of them to visit. You should aim at visiting at least 40 locations. I know this because the tourists' intended route was found, quite by chance, years later on a piece of paper in the middle of the desert - it now resides in Answers and Solutions at the end of this issue.

Perhaps you can improve on the tourists' intended route?

**SOURCES OF NON-OED WORDS**

**ebw** The Illustrated Encyclopedia of the Butterfly World by Paul Smart, Salamander Books 1975

**Hodge** Handbook of American Indians, edited by F.W. Hodge 1907

**ospd** Official Scrabble Players Dictionary

**w2/w3** Webster's Second and Third Editions

**WW** Word Ways

The names of locations are taken from The United States Board on Geographic Names (BGN), Foreign Names Committee.