

## FIVE-LETTER CONNOISSEUR'S LADDERS

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For five-letter words, over 60 per cent of words are heterograms, fewer than 2 per cent are isolanos, over a quarter onalosis, and each word has almost 13 neighbours on average—over two per letter. On the other hand, there are not many more than half the number of words to choose from compared to six-letter words. Also it is not possible to have sequential replacement between reversals: from ABCDE to EDCBA would proceed via EBCDE, EDCDE, then EDCDE again, and an implicit condition of all our ladders is that no word should be repeated, so we will not find reversals between words with an odd number of letters. We therefore find about 200 ladders that are technical Connoisseur's Ladders, compared with just one for words of length six. In these ladders, the terminal words are heterograms, the word at one end being a permutation of the other with corresponding letters different, all words in the ladder are different, and letters are replaced in order. Given that there was a plentiful supply of semantic Connoisseur's ladders for six-letter words, we can guarantee that there are very many of length five, but there are too many to fit into a short article, so, apart from a few examples at the very end, we will be content to see if there is a technical ladder which also qualifies as a semantic one. Such judgment is subjective, and it is a lot to expect a good semantic ladder from a mere selection of 200, but if you were a witch in the time of the Inquisition you might think that SPAIN and PAINS were synonymous, or at least apt. SERIC RICES actually means silk riches, from a period when silk was a major item in diplomacy and Byzantine Imperial grandeur. Other apposite pairs need similar thought or research, which I have attempted to report in the lists: how else would one find a connection between monkeys and salmon? And do some people think sealyhams are fabulous? What about the Persian superbeing superdrinker? Furthermore, the outlook is brilliant when desire rides! We can also reveal that GIs in Vietnam were not the first to use narcotics. As the old saw goes, many a true word is spoken in ladders!

In "Snakes and Ladders" in the May 1998 Word Ways, there was one example of an ideal ladder between heterograms with the terminal ladders mutual permutations, but the terminal words were not semantically related, and letter replacement was not sequential.

Given the restricted choice of ladders, it is difficult enough to find a common word at each end, let alone those in between.

Words in the following lists are OED headwords or obvious derivations thereof unless marked otherwise. The first word in the ladder is earlier in the alphabet than the last. Ch = Chambers, OSPD = Official Scrabble Players Dictionary, Pcon = Palindromicon, Tert F = Tertiary Faunas, and vf = variant form. The same place names may occur in different counties.

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## Connoisseur's Ladders with terminal words which are permutations of one another (about a quarter of those found)

### forward replacement

AREST (vf, = arrest)—TREST—TEEST—TEAST (vf)—TEART—TEARS  
 CURES—SURES—SERES—SECES (OED under cease)—SECUS CHf PULL—SECUR (OED = sicker)  
 CUTER—RUTER (vf)—RETER (Pcon)—RECER (Pcon)—RECUR—RECUT  
 DOSER—ROSER—RESER (Pcon, surname)—REDER (vf)—REDOR (OED)—REDOS (OED = reredos)  
 HATES—SATES—SETES (vf)—SEAES (vf)—SEATS—SEATH (=seathe, a fish)  
 HEIST—SEIST (vf)—SIIST (vf)—SITST (vf)—SITHT (vf)—SITHE (OED sithe 2b = mishap)  
 KEATS (poet)—SEATS—STATS (OED)—STETS—STEAS (vf)—STEAK  
 LAMES (vf = lamb... of God?)—SAMES (vf)—SEMES (vf)—SEAES (vf)—SEALS—SEALM (vf = psalm)  
 LEATS (OED = open watercourse)—SEATS—SLATS—SLETS (vf = sleets)—SLEAS (vf)—SLEAT (OED bait, hunt, incite)  
 LEATS (OED = open watercourse)—SEATS—STATS (OED)—STETS—STEAS (vf)—STEAL  
 MALES—SALES—SELES (OED)—SEAES (vf)—SEALS—SEALM (vf = psalm) Singing the praises of men!  
 MANES—SANES—SENEs (vf)—SEMES—SEMAS (vf)—SEMAN (vf = weigh heavily)  
 MASON—NASON (OED)—NOSON (Pcon)—NOMON (vf)—NO MAN—NOMAS (ulceration of throat)  
 MATES—SATES—SETES (vf)—SEMES—SEMAS (vf)—SEMAT (vf = undershirt)  
 MAYES (vf = Mayas or Mays)—SAYES (vf)—SEYES (vf)—SEAES (vf)—SEAMS—SEAMY  
 MEATS—SEATS—STATS (OED)—STETS—STEAS (vf)—STEAM  
 MEATS—SEATS—STATS (OED)—STETS—STEMS—STEMA (Grk whence gynostemium)  
 MONAS (OED = monkeys)—SO-NAS (OED)—SANAS (vf)—SAMAS (Web3)—SAMOS—SAMON (vf = salmon)  
 PAINS—SAINS—SPINS—SPANS—SPAIS (vf)—SPAIN  
 PATER—RATER—RETER (Pcon)—REPER (vf)—REPAR (vf)—REPAT (OED = repatriate)  
 RAISE—SAISE (vf)—SEISE—SERSE (vf)—SERIE—SERIA (opera seria)  
 REATS (OED = wrongdoings)—SEATS—STATS (OED)—STETS—STEAS (vf)—STEAR (vf = stir)  
 RICES (vf = riches)—SICES—SECES (vf = ceases)—SERES—SERIS (OED)—SERIC (OED = silk)  
 ROIST (vf = rice)—TOIST—TRIST—TROST (vf)—TROIT (vf)—TROIS (OED, Troy weight or truss)

### reverse replacement

ADRET (OED = slope facing sun)—ADRED (vf)—ADRAD—ADEAD—AREAD—TREAD  
 DELIA (pers name)—DELIE—DELDE (vf)—DEIDE (vf)—DAIDE (vf)—LAIDE (Fr ugly!, or, worse, OED under lay)  
 DESIR (vf = desire)—DESI (vf)—DESES (vf)—DEDES (OED)—DIDES (vf)—RIDES  
 ERAND (vf = errand)—ERANE (OED)—ERADE—ERNDE (vf)—EANDE (vf)—RANDE (vf = high ground or SA currency)  
 FERIT (vf = feared)—FERIE—FERTE (vf)—FEFTE (vf)—FIFTE (vf)—RIFTE (vf = rift)  
 HEALT (vf = lame, crippled)—HEALE (vf)—HEATE (vf)—HEHTE (vf)—HAHTE (vf)—LAHTE (vf leap 1225)  
 HEART—HEARE (vf)—HEATE (vf)—HEHTE (vf)—HAHTE (vf)—RAHTE (vf = reach)  
 KEARN (vf = Irish foot-soldier)—KEARE (vf)—KEAKE (vf)—KERKE (vf)—KARKE (vf)—NARKE (Grk, whence narcosis etc)  
 MEROS (OED sea-perches)—MEROR (vf)—MERER (OSPD)—MEMER (OED)—MOMER (Old Fr whence mum, v)—SOMER  
 (OED pack-horse)  
 NOWIT (vf = nowt, nothing)—NOWIN—NOWON (Pcon)—NOT ON (Ch)—NITON—WITON (vf = wit)  
 PERIS (OED Persian superbeing)—PERIR (Ch, Old Fr whence perish)—PERER (OED)—PEPER (vf)—PIPER—SIPER (immoderate drinker)  
 REVIN (vf = raven)—REVIR (OED)—REVER—RENER OEvf—RINER (OED)—VINER  
 REVIS (vf = ravish)—REVIR (OED)—REVER—RESER (Pcon)—RISER—VISER (vf = vizier)  
 SEALT (vf = salt)—SEALS—SEAES (vf)—SELES (OED)—SALES—TALES. Old sea tales?  
 SEALY (Sealy Ham terrier, OED sealyham)—SEALS—SEAES (vf)—SELES—SALES—YALES (OED = fabulous beast)  
 SETIL (vf = settle)—SETIS (vf)—SETES (vf)—SELES—SILES (OED)—TILES  
 SITEN (vf = sit)—SITES—SITIS (vf)—SINIS (Pcon)—SENIS (Ch, Latin whence senate)—TENIS (OED = tennis). Table tennis?  
 STIRE (vf = stir)—STIRS—STIES—STRES (vf)—SIRES—TIRES. So does whisk!  
 TOWER—TOWEE (vf)—TOWTE (vf)—TOOTE (vf)—TROTE (vf)—WROTE  
 TWAIN—TWAIT (vf)—TWANT (Web2)—TWINT (Pull)—TAINT—WAIN (OED obs vaunt). A good writer?

### Ideal Ladders, between heterograms, with forward replacement (a few samples only, A-F)

The following may need to be reversed to reveal the apposite nature of the pairing: sometimes both directions work. A given word may carry more than one meaning. Intermediate words are forced by the end words, and are to be found in the usual major dictionaries I use, including OED variant forms, except where noted at the end.



AEROS (choc bars)—MANKY	AFIRE—SCAMP/SWAMP	AIDES—HARPY
AIRE—TEARS	ALECK—BONKS	ALIKE—CARDS
ALIKE—CREDO	AMIRS—SEAMY	ANODE—SHINY
ARIES—BALMY/BARMY/FLAKY	AROSE—PEAKS/PEALS/PEARS/WORDS/WORKS/WORMS	
ASIDE—BALMY/BRASH	AUDEN (famous poet)—HEBIG (Old High Ger heavy, but HE BIG)	
AUNTS—BALMY/BARED/BARMY/DALEK (Dr Who enemy)/DAUNT/HARDY/HARPY/LATEX/MATED/MATEY/MOLDY/ PITHY/PORNY	AUNTY—BEAMS	BACKS—PORED/RINDY (bacon)/SOAPY
BACON—TOXIC	BADGE—PUNKS	BAGEL—GONAD
BAKES—MINTY/MOLDY/SIROP	BALES—DEMON/HEMPY	BALMS—HERBY
BANES—DEMON/LUCKY	BANKS—FISHY	BARDS—FOLKY/LOIRE (river)/LOUSY
BARED—SHINY	BARES—CUTIE/FELIX/PUBIC	BARKS—DINGO
BATER—DEMON	BATES—FELIX	BATIK—KINGS
BAWDY—CONGA	BEAMS—SHINY	BEANS—DUREX/SPICY/STEWY
BEARS—HORNY/TIRED	BECKS (footballer)—DIRTY	BELCH—PANTO
BELTS—COILY/CUTIE/MANIC/MANKY	BENCH (of magistrates)—LOUTS	BENDY—HARPS
BENTS—PORNY	BHANG—SLURP	BIERS—LEAFY
BIKER—DEMON/MANIC	BIKES—PERVY/PORNY/PUBIC/TACKY/TONKA (big toy)/TON-UP	
BILGE—MONKS (OED MONG)	BINGO—PORNY (every number is 69)	
BINTS—DALEK/DORKY/DUSKY/HARPY/LATEX/MATEDMOLDY/MUSKY/MUTED/PACEY/PERKY/PERVY/PORKY	BITES—MACHO/PERVY	
BITER—DEMON	BLEND—SCARY	BLAME—GRUBS
BLARE—SONIC	BOAST—LEITZ (make Leica cameras)	BLOCK—PRISM
BLUES—SEAMY/SEARY (jazz)/SHINY (dress uniform)	BOGIE—VENUS	BLURS—SOAPY
BLUSH—FROGS	BOLTS—DENIM (bolts of cloth)/HARDY	BOATS—CHINA (song : on a slow boat to China)
BODGE—RAIDS/RANDY/WANKS	BORED—SHARK	BOILS—FARTY/SEAMY
BOING—CHART (for bungy, qv)		BONKS—HAIRY/MARIO (computer game)
BONUS—SALIC (Salic Law... it's a boy)		
BORES—CAMPY/DANTE (Ital poet)/FINKY/LUCID/LUCKY/LUNAR/PANTY/PATHO/PUBIC/SEAMY/SICKO/TAPIR		
BOTEL—PARIS	BOUTS—PHONY/TACKY	BOXED—LAWNS
BOYER—FLIRT (Charles Boyer, Fr actor)	BOYLE—GRAPH (Boyle's Law)	BRATS—PERKY
BRING—FLAGS	BRITS—CLASH (football louts)	BROKE—PLANK
BUCKS—DISCO/HAIRY/NERDY/PORNY/RANDY/SOAPY		BUMPY—ROADS
BUNCH—LOUTS	BUNDS—FOREX (German Bonds — Foreign Exchange)	
BUNGY—CORDS	BUNKS—DIRTY	BURLY—MAIDS
BURPS—TAMED	BUSTY—LINDA (Lusardi)	BUTCH—CANER
BYRES—TACKY	BYTES—LOGIN	CABIN—HOLED
CADGE—MINTS	CAFES—SEAMY/SURFY (Internet cafes)/LUCKY	
CAKES—MINTY (Kendal mint cake)/MOLDY/SIROP	CANES—LEGIT	CAMPS—TURDY/TURFY
CANER—DEMON	CARED—TEARS	CANTO—PORNY
CAPES—PONGY	CAVER—DEMON	CARES—HELPY
CAULS—MOLDY		CAVES—RISKY
CELTS—DORKY/GIRLY/MANIC/MANKY/MATEY/PUNKY/WISER		CESAR—LAZES
CHILD—TEARS	CHILE—PARIS (the new geography)/PESKY/PORTS	
CHOKE—PLATO/PLEBS/PLUMS/PORTS/TOWNS		
CHOSE—GEARS/GLAXO (pharm share)/GRADS/GRAPH/GRUBS/PERKS/PINKS (flowers)/PINTS/PORTS/PRAMS/PRANK/PRATS		
CLAMS—SHINY	CLANS—PERVY	CLAPS—PROSE
CLARE—SPICY	CLEFT—SCARY	CLITS—GROWL/SPANK
CLODS—PONGY	CLOTS—SCARY	CLUES—SEAMY
CODES—LEGIT	COLAS—MINTY	COLDS—GIRLY
COLTS—HARDY/MANED/MATED	COMAS—NARCO	
COMES—DANTE/DELIA/DICKY/DINAH/FELIX/MILKY/MILTY/MINGY/RAPID/TACKY		
CONES—PILOT/TEXAN	CONKS—HAIRY	COPES—TACKY
CORED—SHARK	CORES—LUCKY/PATIO/PUBIC	CORKS—DICEY
CORNS—HAIRY	CORPS—TAMED	COSTA—PALMS/PALMY
COUTH—FROGS	COVES—RISKY	COWES (Regatta)—LARKY
COXES—PERKY/PERVY/PILOT	CRATE—PLONK/PLUMS	CRIES—FANGY
CRITS—FACED	CRONY—GONER	
CRUDE—FEATS/FLIPS/FONTS/FORKS/FORMS		CULTS—PERVY/PORNY
CUNTS—DALEK/DARKY/DEBUG/DORKY/HARPY/LATEX/MATED/MATEY/MILKY/MISER/MOLDY/MOTEL/PERKY/ PERVY/PORNY/RAPED		



CURED—DEBUG/SPANK/TEALS	CURLS—HAIRY/PALER/MAIDS	CURLY—WANDS
CURSE—MAIDS/MATES/MATHS/MEATS/MONKS		CUSHY—HACKS
CYRUS—PINED/SAGER/SULKY	CZARS—TIRED	DALES—HEMPY/HERBY/WISPY
DAMES—FUSTY/HONKY/SEAMY/SERIC/TEXAN/TON-UP		DANCE—NOISY
DANES—LUCKY/VEGAN	DARES—PUBIC	DARKY—LEARS
DATES—FELIX/PERVY/PONGY/PORNY/RISKY/SEAMY/TON-UP		DAUNT—FRATS
DAWNS—LOIRE/LOUSY	DAZES—FELIX	DEALS—PILOT/VILER
DEALT—TWINS	DEARS—HORNY	DEBAR—RADIO/RAVES
DECKS—HOLED	DEGAS—MAISY	DEMON—SATED/SIRED
DENTS—PITON	DHOTY—PONGS	DIANE—LAIRD/LAIRS/LOUTY
DICES—FELIX	DICEY—PALMS	
DICKS—HAIRY/HONED/LURED/MANIC/MUSED/PAINY/PAWED/RANDY/SOAPY/TURDY		
DIETS—PARED/PORKY/POSER	DIMES—MOLDY/TO PAY	DINER—FORUM/REPAS/VEDIC
DINES—LAIRD/SERUM(vampire)/VEGAN	DINKY—WORMS	DIPSY—TOWNS
DIVES—JONAH/RAPID	DOCKS—LINER/LUNAR/MINED/SILTY	DOLTS—HINDU/PUNIC
DOMES—TACKY (eg Millennium Dome?)	DON'TS—MISER/PITHY/PITON	DOPES—NARCO
DORES (in Highland)—LUCKY	DORKS—FINED	DOTER—RADIO/SAVOY
DOTES—PANTO/PANTY/PAWKY	DOVES—MACHO/MANKY/RAPID/WARTY/WINGY	
DOZES—MARIO	DRATS—FELIX	DRINK—FLUSH/PLOYS
DRIVE—WARNS/WARPS (Star Trek)/WEARS		DRUSE—GORED
DUCKS—HAIRY/HARDY/MIRED/SOAPY (in bath)		DUELS—FELIX
DUETS—SEAMY/SHOWY	DUKES—LOFTY/MACHO/MINGY/PERVY/PINKO	
DUMAS—PITHY	DUMPS—RAPID/SALTY	DUMPY—HEADS(lavatories)
DUNCE—NOISY	DUNES—NOMAD	DUNKS—FISHY
DUPES—NOMAD	DURAL—TONED	
DURAN (Duran Duran pop group)—FAMED/GAMES/TOURS		DUSKY—LAIRD/LAIRS
DUSTY—LAIRS	DYING—FLAGS	
DYKES—FINKY/FUSTY/HARDY/HONKY/MACHO/MANKY/MINGY/MURKY/SEAMY/SICKO/TACKY/TON-UP		
DYNES—HERTZ	EARLS—HULKY/MEATY	EMIRS—SEAMY/SHOWY
EMITS—SLURP	EUROS—MAKER (has billions to do in 2000)	FACES—LUNAR
FACTS—PIANO/PITHY	FAILS—ROLEX (watch)	FAIRS—LOUSY
FAKES—LIMBO/LOGIN/LUCKY/MINOX (camera)/MINTO/MOLAR/SERIC		FALSE—PUNCH/PUNKS
FARTS—POSER	FATES—NOMAD	
FAURE (v for Fr Composer)—LEADS/LEAPS/LOANS/LOINS/SCAMP/SCIVY/SPICY/SWAMI/SWIFT/TOWED/TOWNY		
FAVES—SEAMY/WILMA (Flintstones)	FAXED—TEARS	FAXES—PERVY/PORNY/SEAMY/SICKO
FEARD—GOWNS	FEARS—HORNY	FEATS—SLURP/SPICY
FELIS (genus, cat)—MANKY	FELON—SATED	FERAL—GONER/POKED/POKES
FERDY (Duchess of York)—GAWPS	FETAS (hard cheese)—LIMED/PALER/PARED	
FETCH—RUNTS	FEUDS—LAIRD	FIBER—RECUT
FIBRE—LAUDS/LOUSY	FILED—WORKS	FILER—PETAL
FILES—TACKY	FINAL—MARLS/MODES	FINDS—LEAFY/MEATY
FINES—LUCKY/NARCO/TO PAY/VALID	FINKS—LURED/RACED	FINKY—LACES/WORDS
FIRED—TAMIL/TEARS	FIRES—LOFTY/LUCKY/MELTY	FIRST—WANTS/WEALS
FIXES—PANTY	FLAGS—SHOWY	FLAME—GRECO (Olympics)
FLARE—SHINY/SMOKY	FLATS—SPIVY	FLIER—SHOWY
FLIPS—SHOWY/STAGY	FLIRT—SHOWY/STENO	FLOES—SHINY
FLOGS—SCAMP	FLUES—SHINY	FLUME—GRAPH
FLUNG—PRIGS	FLUTE—PRANK	FLYER—SHIRK/SHOWY
FOIST—TWEAK	FOLDS—GIRLY	FORDS—SANER
FORES (golf)—MACHO	FORTE (hotel chain)—VENDS	FORTY—PEAKS/PEARS/PUNKS
FOULS—PAWKY	FOXED—LAIRS	FOXES—PATIO
FOYER—SAVOY/SHOWY	FRANK—PLOYS	FRATS—PERKY/PERVY/PINKO/TEXAN
FROCK—PLANS	FRUIT—TIRED	
FUCKS—HAIRY/HANDY/HARPO/HARPY/MANIC/PAWER/PERVY/RANDY/SOAPY/TON-UP		
FUDGE—MILKY/MINTY	FUNKY—GAUDI (architect, see Barcelona)/PIKES	
FUSTY—LAIRS	PENIS—SALTY/SATED	
PORNY—GENTS/HACKS/HANTS/HATES/HICKS/HINTS/HUNTS/JAPES/KELTS/KYLIE (Minogue)/LAGOS/LICKS/LIKES/LINGO/MATES/MICKS/MULES/NITES		
PUBIS—RAPED/RANDY	PUBES—RISKY/TACKY/HARES/HOLES/JOKES/LIKES/LORES/LYRES/MOLES/MORES	
RANDY—HICKS/JOCKS/LICKS/MICKS (the Celts again)		



Intermediate words that are more difficult to find:

BOECK: OED sarcoid 1941 quote	CANEH: Ch KANEH	DEBED: inferred.
DEBUD: Bloomsbury Thesaurus	DORES: in Highland	FRANT: is in East Sussex
FRING: is in Norfolk	FRINK: Electronic Alveary, name in OED	GAMAN: Ch Norse whence game
GARAN: Ch crane, Welsh	GHOSE: (Longmans)	HABIN: is in West Sussex
KINK: Northern dialect chink Ch	LEGIS: abbr legislate, or Latin whence legal	LOUTH: is in Lincolnshire
MATSE: Ch matzo, Yiddish	MEGAS: Ch Grk whence acromegaly	MILAS: OED above 896 quote
NAMAS: Sanskrit whence namaste	PAETS: EDD	PALSE: OED palse
PALTA: OED sarcocol 1712 quote	PIRUS: Ch true spelling of Pyrus pear tree	POKEL: Ch Ger whence pickle
POSTA: OED scud 1845 quote	RABAR: Pcon	RAPIS: OED rape 1502 quote
RAPIS: OED rope 1400 quote	RAPPS: is in Somerset	RIBER: is in Derbyshire
SAGUS: Ch Latin whence presage	SCIVY: Ch under skive	SELON: Roget, OED intensation 1826 quote
SMIRS: OED SMUR	SURUS: OED ennoble 1565 quote	TURAN: Ch Persian, whence Turanian
VENER: Ch whence venery	WROSE: is in Bradford	