

THE STATE CAPITALS REVISITED

DARRYL FRANCIS

Sutton, Surrey, England

darrylfrancis@tahoo.co.uk

In my November 2001 Word Ways article, “Transposing the State Capitals”, I explored the transposability of the names of the 50 state capitals. In that article, I offered transposals for 20 of the names of the state capitals, leaving readers to explore the remaining 30.

In this article, I look at both transdeletions and transadditions of the names of the state capitals. A transdeletion of a given word or name is where one or more letters are deleted, and the remaining letters transposed to generate another word or name—for example, ASSENTOR is a one-letter transdeletion of TRANSPOSE, and SENATOR is a two-letter transdeletion. A transaddition of a given word or name is where one or more letters are added, and the letters transposed to generate another word or name—for example, PATRONISES is a one-letter transaddition of transpose, and SENATORSHIP is a two-letter transaddition.

This article addresses two sets of questions:

1. What are the longest transdeletions of the 50 names of the state capitals? Is it possible to find one-letter transdeletions for all 50 of the state capital names? How close could I get to finding 50 one-letter transdeletions? Where one-letter transdeletions cannot be located, what are the fewest numbers of letters that need to be deleted to effect a transdeletion?
2. What are the shortest transadditions of the 50 names? Is it possible to find one-letter transadditions for all the 50 state capital names? How close could I get to finding 50 one-letter transadditions? Where one-letter transadditions cannot be located, what are the fewest numbers of letters that need to be added to effect a transaddition?

The table below shows my best efforts to date in locating transdeletions and shortest transadditions. In a few cases, where I feel the technically best transdeletions or transadditions offered are trivial (e.g., a one-letter transaddition of CONCORD is CONCORDS), I have offered less-trivial but technically inferior alternatives. All words are courtesy of Webster’s Third New International, except where noted. All improvements from readers are welcome.

| State Capital | State | Longest transdeletion | Number of letters deleted | Shortest transaddition | Number of letters added |
|---------------|----------|-----------------------|---------------------------|------------------------|-------------------------|
| ALBANY | New York | BANAL | 1 | BANALLY | 1 |
| ANNAPOLIS | Maryland | SALOPIAN | 1 | NONSPATIAL, | 1 |

| | | | | PLANATIONS | |
|----------------|----------------|-------------------------|---|------------------------------------------------------------|----|
| ATLANTA | Georgia | ANATTA | 1 | TARLATAN | 1 |
| AUGUSTA | Maine | AUGUST (note 1) | 1 | TAUTAUGS (W2) | 1 |
| AUSTIN | Texas | SAINT | 1 | TSUNAMI | 1 |
| BATON ROUGE | Louisiana | OUTRANGE | 2 | ANTIBOURGEOIS (W2) | 3 |
| BISMARCK | North Dakota | IMBARKS | 1 | BRICKMASON | 2 |
| BOISE | Idaho | BIOS | 1 | BODIES | 1 |
| BOSTON | Massachusetts | BOOST | 1 | BONITOS | 1 |
| CARSON CITY | Nevada | NARCOTICS | 1 | PANTISOCRACY | 2 |
| CHARLESTON | West Virginia | CHLORATES | 1 | CHLORINATES | 1 |
| CHEYENNE | Wyoming | HENCE | 3 | MYELENCEPHALON | 6 |
| COLUMBIA | South Carolina | ABOULIC (W2) | 1 | COLUMBARIA | 2 |
| COLUMBUS | Ohio | OSCULUM | 1 | SUBMUCOSAL | 2 |
| CONCORD | New Hampshire | CONDOR | 1 | CONCORDS (note 2) | 1 |
| DENVER | Colorado | NEVER | 1 | RAVENED | 1 |
| DES MOINES | Iowa | DEMONESS (TCD) | 1 | DEMERSIONS (TCD), MODERNISES (TCD), SERMONISED (TCD) | 1 |
| DOVER | Delaware | RODE | 1 | OVERDO | 1 |
| FRANKFORT | Kentucky | AFFRONT | 2 | ? | |
| HARRISBURG | Pennsylvania | AIRBRUSH | 2 | ? | |
| HARTFORD | Connecticut | FORRAD | 2 | FORTHWARD | 1 |
| HELENA | Montana | ANELE | 1 | LETHEAN | 1 |
| HONOLULU | Hawaii | HULLOO | 2 | ? | |
| INDIANAPOLIS | Indiana | DIAPASON (note 3) | 4 | ? | |
| JACKSON | Mississippi | JACKOS | 1 | JANNOCKS | 1 |
| JEFFERSON CITY | Missouri | REJECTIONS | 3 | ? | |
| JUNEAU | Alaska | JAUNE (W2) | 1 | UNJEALOUS (TCD) | 3 |
| LANSING | Michigan | SIGNAL | 1 | SLANTING | 1 |
| LINCOLN | Nebraska | COLLIN (W2) | 1 | NONLEXICAL | 3 |
| LITTLE ROCK | Arkansas | TRICKLET | 2 | ROCKET- INSTALLATIONS (OED - note 4) | 9 |
| MADISON | Wisconsin | DAMSON | 1 | DIAMONDS | 1 |
| MONTGOMERY | Alabama | MOTORMEN | 2 | HEMOGLOBINOMETRY | 6 |
| MONTPELIER | Vermont | INTERLOPE | 1 | IMPLEMENTOR | 1 |
| NASHVILLE | Tennessee | INHALES | 2 | SLAVEHOLDING | 3 |
| OKLAHOMA CITY | Oklahoma | HOMOLYTIC | 3 | ? | |
| OLYMPIA | Washington | MYOPIA | 1 | PALIMONY (W10NCD) | 1 |
| PHOENIX | Arizona | PHENIX (W2) (note 5) | 1 | XENOPHIL (W2) | 1 |
| PIERRE | South Dakota | RIPER | 1 | PREMIER | 1 |
| PROVIDENCE | Rhode Island | DIVORCEE | 2 | PINE-COVERED (OED - note 6) | 1 |
| RALEIGH | North Carolina | HAILER | 1 | LITHARGE | 1 |
| RICHMOND | Virginia | CHONDRI | 1 | MONORCHID | 1 |
| SACRAMENTO | California | STRAMACON (TCD) | 1 | MACERATIONS | 1 |
| SALEM | Oregon | SEAL | 1 | SAMPLE | 1 |
| SALT LAKE CITY | Utah | STATICALLY | 2 | ? | |
| SANTA FE | New Mexico | FASTEN | 1 | FANTASIE | 1 |
| SPRINGFIELD | Illinois | PILFERINGS (W2) | 1 | FIELDSTRIPPING (W10NCD) | 3 |
| ST PAUL | Minnesota | SPLAT | 1 | SPATULA | 1 |
| TALLAHASSEE | Florida | SEASHELL | 3 | THALASSOCHELYS | 10 |

| | | | | | |
|---------|------------|--------|----|------------------------|----|
| | | | | CARETTA (OED - note 7) | |
| TOPEKA | Kansas | ATOKE | 1 | OUTSPEAK | 2 |
| TRENTON | New Jersey | ROTTEN | 1 | UNROTTEN | 1 |
| | | | | | |
| | | | 71 | | 85 |

Note 1: AUGUST as a one-letter transdeletion is trivial; a better-mixed two-letter transdeletion is AGAST (TCD).

Note 2 CONCORDS as a one-letter transaddition is trivial; a better-mixed two-letter transaddition is ACCORDION.

Note 3: DIAPASON is a four-letter transdeletion; there is a technically better three-letter transdeletion, ANNAPOLIS, but this could be considered partially trivial because of the commonality of the -POLIS element.

Note 4: ROCKET-INSTALLATIONS appears in a quote under ROCKET in the OED.

Note 5: PHENIX as a one-letter transdeletion is trivial; a better-mixed two-letter transdeletion is PHONE.

Note 6: PINE-COVERED is listed under PINE in the OED.

Note 7: THALASSOCHELYS CARETTA is a scientific name for the loggerhead turtle, shown at LOGGERHEAD in the OED.

The two numbers at the foot of the table, 71 and 85, show the numbers of letters that have been deleted and added. The first figure, 71, is a measure of how closely I have approached a full set of 50 one-letter transdeletions. Note that there are no state capital names that cannot be transdeleted—there are examples for all 50 state capital names. Further effort needs to be expended to get the figure of 71 down to the ideal target of 50. The second figure, 85, is not so straightforward. As there are several state capital names for which I was unable to find any transadditions, it is not a question of simply reducing the 85 to 50. The gaps need to be filled in, which will increase the figure upwards!

Sources used and abbreviated in this table are OED (The Oxford English Dictionary, 2nd edition), TCD (The Chambers Dictionary, 1998 edition), W2 (Webster's New International Dictionary, 2nd edition), and W10NCD (Webster's 10th New Collegiate Dictionary).