*Epidemiology and Infection*

Geography but not alternative host species explain the spread of raccoon rabies virus in Vermont

Authors: S.A. NADIN-DAVIS, Q. FU, H. TREWBY, R. BIEK,R.H. JOHNSONand L. REAL

**Supplementary Material**

Supplementary Table S1. Summary of raccoon rabies cases reported by county in Vermont, 1994 - 2012

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |  |
| County |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | **Total** |
| Addison |  | 14 | 41 | 7 | 5 | 11 | 5 | 8 | 8 | 6 | 4 | 8 | 12 | 7 | 2 | 9 | 7 | 4 | 4 | **162** |
| Bennington | 15 | 23 | 5 | 2 | 15 | 2 | 2 | 18 | 13 |  | 2 | 1 | 4 | 2 | 2 | 5 | 2 |  | 2 | **115** |
| Caledonia |  |  |  |  | 10 | 5 | 2 |  |  |  |  | 15 | 12 | 11 |  | 1 | 1 | 3 | 10 | **70** |
| Chittenden |  |  | 12 | 85 | 14 | 6 | 6 | 3 | 6 | 11 | 4 | 1 | 4 | 27 | 9 | 10 | 15 | 6 | 13 | **232** |
| Essex |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 1 | **2** |
| Franklin |  |  |  | 1 | 6 | 2 | 4 |  |  |  |  |  | 7 | 85 | 10 | 3 |  |  | 2 | **120** |
| Grand Isle |  |  |  | 1 |  |  |  |  |  |  |  |  |  | 7 | 9 | 3 | 1 |  |   | **21** |
| Lamoille |  |  |  |  |  | 5 | 7 | 2 | 2 | 1 |  |  | 9 | 6 | 5 | 3 | 1 | 1 | 11 | **53** |
| Orange |  |  | 3 | 2 | 2 | 5 | 4 | 1 | 2 | 4 | 5 | 5 | 7 | 9 | 2 |  | 1 |  | 4 | **56** |
| Orleans |  |  |  |  |  | 2 | 2 | 1 |  |  |  |  |  |  | 8 | 9 | 6 | 1 | 5 | **34** |
| Rutland | 6 | 24 | 7 | 4 | 4 | 11 | 7 | 5 | 17 | 2 | 3 | 1 | 11 | 2 |  | 1 | 8 | 2 | 2 | **117** |
| Washington |  |  |  |  | 16 | 40 | 6 | 3 | 2 |  | 13 | 17 | 4 | 2 | 1 | 2 | 6 | 8 | 4 | **124** |
| Windham | 5 | 63 | 6 |  |  |  | 2 | 13 | 30 | 9 | 4 |  |  | 3 | 21 | 10 |  | 1 | 2 | **169** |
| Windsor |  | 10 | 31 | 10 |  |  | 6 | 5 | 9 | 1 | 6 |  | 2 | 1 | 3 | 8 | 6 |  | 1 | **99** |
| Unknown |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | **1** |
| **Total** | **26** | **134** | **105** | **113** | **72** | **90** | **53** | **59** | **89** | **34** | **41** | **48** | **72** | **162** | **72** | **64** | **54** | **26** | **61** | **1375** |

Supplementary Table S2. RRV samples employed in this study.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Designation** | **Species** | **State** | **County** | **Town** | **Year recovered** | **Sequence type** | **Viral variant group\*** | **GenBank Accession** |
| MA.2003.5142 | Raccoon | MA | unknown | unknown | 2003 | Illumina | VI | MG562518 |
| NH.2003.5152 | Raccoon | NH | unknown | unknown | 2003 | Illumina | NY HIST (outlier) | MG562519 |
| NH.2003.5154 | Raccoon | NH | unknown | unknown | 2003 | Illumina | VI | MG562520 |
| NJ.2004.1927 | Equine | NJ | unknown | unknown | 2004 | Illumina | VI (outlier) | MG562521 |
| NY.1990.2072 | Raccoon | NY | Sullivan | Tusten | 1990 | Sanger | NY HIST (VI outlier) | MG562523 |
| NY.1990.5015 | Raccoon | NY | Orange | Deer Park | 1990 | Illumina | NY HIST | MG562524 |
| NY.1992.0394 | Raccoon | NY | Westchester | Bedford | 1992 | Illumina | NY HIST | MG562525 |
| NY.1995.0364 | Raccoon | NY | Saratoga | Malta | 1995 | Illumina | NY HIST | MG562526 |
| NY.1995.3745 | Raccoon | NY | Clinton | Black Brook | 1995 | Sanger | NY HIST | MF143291 |
| NY.2003.1734 | Raccoon | NY | Rensselaer | Nassau | 2003 | Illumina | VII | MG562527 |
| NY.2003.2059 | Raccoon | NY | Saratoga | Saratoga | 2003 | Illumina | IIIa | MG562528 |
| NY.2003.3040 | Raccoon | NY | Saratoga | Wilton | 2003 | Illumina | VII | MG562529 |
| NY.2003.7854 | Raccoon | NY | Rensselaer | Schaghticoke | 2003 | Illumina | V | MG562530 |
| NY.2003.7914 | Raccoon | NY | Albany | Albany C. | 2003 | Illumina | VII | MG562531 |
| NY.2003.7917 | Skunk | NY | Saratoga | Moreau | 2003 | Illumina | VII | MG562532 |
| NY.2003.7990 | Raccoon | NY | Columbia | Austerlitz | 2003 | Illumina | VII | MG562533 |
| NY.2004.1046 | Raccoon | NY | Washington | Kingsbury | 2004 | Illumina | IIIa | MG562534 |
| NY.2004.1247 | Raccoon | NY | Rensselaer | Pittstown | 2004 | Illumina | V | MG562535 |
| NY.2004.1705 | Raccoon | NY | Albany | Bethlehem | 2004 | Sanger | VII | MG562536 |
| NY.2004.2620 | Raccoon | NY | Rensselaer | Nassau | 2004 | Illumina | VII | MG562537 |
| NY.2004.4138 | Raccoon | NY | Albany | Westerlo | 2004 | Sanger | VII | MG562538 |
| NY.2004.5339 | Raccoon | NY | Albany | Coeymans | 2004 | Illumina | VII | MG562539 |
| NY.2004.6383 | Skunk | NY | Washington | Greenwich | 2004 | Illumina | V | MG562540 |
| NY.2004.6937 | Skunk | NY | Washington | White Creek | 2004 | Illumina | V | MG562541 |
| NY.2004.8403 | Raccoon | NY | Washington | Cambridge | 2004 | Illumina | V | MG562542 |
| NY.2010.0729 | Raccoon | NY | Washington | Jackson | 2010 | Illumina | IV | MG562543 |
| NY.2010.0775 | Raccoon | NY | Rensselaer | Berlin | 2010 | Illumina | VII | MG562544 |
| NY.2010.1098 | Skunk | NY | Rensselaer | Troy City | 2010 | Illumina | VII | MG562545 |
| NY.2010.5433 | Raccoon | NY | Saratoga | Ballston | 2010 | Illumina | VII | MG562546 |
| NY.2011.0005 | Skunk | NY | Albany | Albany City | 2011 | Illumina | VII | MG562547 |
| NY.2011.0007 | Raccoon  | NY | Rensselaer | North Greenbush | 2011 | Illumina | VII | MG562548 |
| NY.2011.0042 | Raccoon  | NY | Albany | Bethlehem | 2011 | Illumina | VII | MG562549 |
| NY.2011.0560 | Raccoon  | NY | Washington | Cambridge | 2011 | Illumina | IIIa | MG562550 |
| NY.2011.0714 | Gray Fox | NY | Saratoga | Moreau | 2011 | Illumina | IIIa | MG562551 |
| NY.2011.1343 | Gray Fox | NY | Essex | Westport | 2011 | Illumina | Ib | MG562552 |
| NY.2011.2001 | Raccoon | NY | Essex | Crown Point | 2011 | Illumina | Ib | MG562553 |
| NY.2011.4095 | Skunk | NY | Essex | Crown Point | 2011 | Illumina | IIIa | MG562554 |
| NY.2011.5590 | Skunk | NY | Clinton | Champlain | 2011 | Illumina | IIIa | MF143334 |
| VA.2003.5213 | Raccoon | VA | unknown | unknown | 2003 | Illumina | outgroup | MG562522 |
| VT.2005.0142 | Raccoon | VT | Caledonia | Peacham | 2005 | Sanger | IIb | MG562555 |
| VT.2005.0167 | Raccoon | VT | Caledonia | Peacham | 2005 | Illumina | IIb | MG562556 |
| VT.2005.0212 | Raccoon | VT | Caledonia | Barnet | 2005 | Illumina | IIb | MG562557 |
| VT.2005.0214 | Skunk | VT | Orange | Bradford | 2005 | Illumina | IIb | MG562558 |
| VT.2005.0215 | Raccoon | VT | Washington | Cabot | 2005 | Sanger | IIa | MF143373 |
| VT.2005.0270 | Raccoon | VT | Washington | Barre Town | 2005 | Illumina | IIa | MG562559 |
| VT.2005.0274 | Raccoon | VT | Orange | Orange | 2005 | Illumina | IIa | MG562560 |
| VT.2005.0275 | Raccoon | VT | Orange | Newbury | 2005 | Sanger | IIb | MG562561 |
| VT.2005.0277 | Raccoon | VT | Rutland | Rutland City | 2005 | Illumina | IIIa | MG562562 |
| VT.2005.0296 | Raccoon | VT | Washington | Northfield | 2005 | Illumina | IIIb | MG562563 |
| VT.2006.0104 | Raccoon | VT | Caledonia | St. Johnsbury | 2006 | Illumina | IIb | MF143374 |
| VT.2006.0108 | Raccoon | VT | Lamoille | Stowe | 2006 | Sanger | IIIb | MF143375 |
| VT.2006.0116 | Bovine | VT | Caledonia | Danville | 2006 | Illumina | IIb | MF143278 |
| VT.2006.0117 | Skunk | VT | Chittenden | South Burlington | 2006 | Illumina | Ia | MF143376 |
| VT.2006.0147 | Raccoon | VT | Addison | Leicester | 2006 | Sanger | Ib | MG562564 |
| VT.2006.0153 | Skunk | VT | Lamoille | Stowe | 2006 | Sanger | IIIb | MF143377 |
| VT.2006.0161 | Raccoon | VT | Addison | New Haven | 2006 | Sanger | Ib | MG562565 |
| VT.2006.0166 | Raccoon | VT | Rutland | Clarendon | 2006 | Illumina | IV | MF143279 |
| VT.2006.0173 | Raccoon | VT | Rutland | Hubbardton | 2006 | Sanger | Ib | MG562566 |
| VT.2006.0178 | Skunk | VT | Addison | Panton | 2006 | Illumina | IIIc | MF143280 |
| VT.2006.0218 | Skunk | VT | Orange | Chelsea | 2006 | Sanger | IIIb | MG562567 |
| VT.2006.0225 | Raccoon | VT | Lamoille | Stowe | 2006 | Both | IIIb | KY026478 |
| VT.2006.0245 | Raccoon | VT | Caledonia | Peacham | 2006 | Illumina | IIb | MG562568 |
| VT.2006.0259 | Skunk | VT | Windsor | Bethel | 2006 | Sanger | IIb | KY026479 |
| VT.2006.0263 | Raccoon | VT | Bennington | Dorset | 2006 | Sanger | IV | MG562569 |
| VT.2006.0287 | Raccoon | VT | Orange | Corinth | 2006 | Illumina | IIIb | MG562570 |
| VT.2006.0288 | Bovine | VT | Addison | Shoreham | 2006 | Sanger | IIIc | MG562571 |
| VT.2006.0289 | Raccoon | VT | Rutland | Mount Holly | 2006 | Sanger | IIIa | MG562572 |
| VT.2006.0325 | Raccoon | VT | Bennington | Dorset | 2006 | Illumina | IV | MG562573 |
| VT.2006.0332 | Skunk | VT | Addison | Middlebury | 2006 | Illumina | Ib | MF143281 |
| VT.2006.0366 | Woodchuck | VT | Orange | Bradford | 2006 | Illumina | IIb | MG562574 |
| VT.2007.0084 | Skunk | VT | Chittenden | Burlington | 2007 | Sanger | Ia | MF143378 |
| VT.2007.0092 | Raccoon | VT | Caledonia | Lyndon | 2007 | Illumina | IIb | MF143282 |
| VT.2007.0294 | Horse | VT | Rutland | Benson | 2007 | Illumina | Ib | MG562575 |
| VT.2007.0297 | Raccoon | VT | Lamoille | Stowe | 2007 | Illumina | IIIb | MF143283 |
| VT.2007.0308 | Raccoon | VT | Bennington | Pownal | 2007 | Illumina | V | MF143284 |
| VT.2007.0320 | Skunk | VT | Chittenden | Williston | 2007 | Illumina | Ia | MF143285 |
| VT.2007.0342 | Raccoon | VT | Franklin | St. Albans City | 2007 | Sanger | Ia | MF143379 |
| VT.2007.0357 | Skunk | VT | Washington | Barre Town | 2007 | Illumina | IIIb | MG562576 |
| VT.2007.0380 | Raccoon | VT | Franklin | Fairfield | 2007 | Sanger | Ia | MF143380 |
| VT.2007.0392 | Raccoon | VT | Chittenden | Burlington | 2007 | Sanger | Ia | MF143381 |
| VT.2007.0398 | Skunk | VT | Franklin | Georgia | 2007 | Sanger | Ia | MF143382 |
| VT.2007.0412 | Raccoon | VT | Chittenden | Essex | 2007 | Illumina | Ia | MF143286 |
| VT.2007.0417 | Skunk | VT | Orange | Bradford | 2007 | Illumina | IIb | MG562577 |
| VT.2007.0465 | Skunk | VT | Franklin | Sheldon | 2007 | Sanger | Ia | MF143383 |
| VT.2007.0473 | Raccoon | VT | Windham | Rockingham | 2007 | Sanger | VIa | MG562578 |
| VT.2007.0479 | Skunk | VT | Franklin | Swanton | 2007 | Sanger | Ia | MF143384 |
| VT.2007.0489 | Raccoon | VT | Grand isle | North Hero | 2007 | Sanger | Ia | MF143385 |
| VT.2007.0491 | Skunk | VT | Franklin | Franklin | 2007 | Sanger | Ia | MF143337 |
| VT.2007.0492 | Raccoon | VT | Caledonia | Danville | 2007 | Illumina | IIb | MF143287 |
| VT.2007.0496 | Raccoon | VT | Caledonia | Danville | 2007 | Sanger | IIb | MF143386 |
| VT.2007.0505 | Skunk | VT | Caledonia | Danville | 2007 | Sanger | IIb | MF143387 |
| VT.2007.0506 | Skunk | VT | Franklin | Georgia | 2007 | Sanger | Ia | MF143388 |
| VT.2007.0512 | Skunk | VT | Franklin | Sheldon | 2007 | Sanger | Ia | MF143389 |
| VT.2007.0520 | Skunk | VT | Addison | Bridport | 2007 | Illumina | VIII | MG562579 |
| VT.2007.0522 | Raccoon | VT | Orange | Braintree | 2007 | Illumina | IIb | KY026480 |
| VT.2007.0523 | Skunk | VT | Franklin | Franklin | 2007 | Sanger | Ia | MF143390 |
| VT.2008.0041 | Raccoon | VT | Windsor | Windsor | 2008 | Sanger | VIc | MG562580 |
| VT.2008.0111 | Raccoon | VT | Windham | Townshend | 2008 | Sanger | VIa | MG562581 |
| VT.2008.0170 | Skunk | VT | Bennington | Bennington | 2008 | Sanger | V | MG562582 |
| VT.2008.0180 | Raccoon | VT | Windham | Wardsboro | 2008 | Illumina | VIa | MG562583 |
| VT.2008.0205 | Skunk | VT | Windsor | Chester | 2008 | Sanger | IIIa | MG562584 |
| VT.2008.0209 | Raccoon | VT | Chittenden | Charlotte | 2008 | Sanger | VIII | KY026481 |
| VT.2008.0233 | Skunk | VT | Washington | Moretown | 2008 | Sanger | IIa | MG562585 |
| VT.2008.0237 | Raccoon | VT | Lamoille | Stowe | 2008 | Sanger | Ia | KY026482 |
| VT.2008.0270 | Skunk | VT | Lamoille | Elmore | 2008 | Illumina | IIIb | MF143288 |
| VT.2008.0275 | Skunk | VT | Addison | Bristol | 2008 | Illumina | Ib | MG562586 |
| VT.2008.0277 | Skunk | VT | Orange | Randolph | 2008 | Illumina | IIIb | MG562587 |
| VT.2008.0283 | Skunk | VT | Orange | Newbury | 2008 | Sanger | IIb | MG562588 |
| VT.2008.0296 | Raccoon | VT | Windham | Dover | 2008 | Sanger | VIa | MG562589 |
| VT.2008.0310 | Bovine | VT | Franklin | Bakersfield | 2008 | Sanger | Ia | MF143391 |
| VT.2008.0536 | Raccoon | VT | Bennington | Bennington | 2008 | Sanger | V | MG562590 |
| VT.2008.0704 | Raccoon | VT | Windham | Westminster | 2008 | Sanger | VIa | MG562591 |
| VT.2008.0764 | Raccoon | VT | Windham | Rockingham | 2008 | Illumina | VIa | MG562592 |
| VT.2009.0023 | Skunk | VT | Windsor | Royalton | 2009 | Sanger | IIIb | MG562593 |
| VT.2009.0036 | Skunk | VT | Franklin | Fairfax | 2009 | Sanger | Ia | MF143392 |
| VT.2009.0092 | Raccoon | VT | Grand Isle | South Hero | 2009 | Illumina | Ia | MF143393 |
| VT.2009.0093 | Skunk | VT | Orleans | Craftsbury | 2009 | Illumina | IIb | MF143394 |
| VT.2009.0124 | Skunk | VT | Chittenden | Williston | 2009 | Illumina | Ib | MF143395 |
| VT.2009.0134 | Skunk | VT | Caledonia | Sheffield | 2009 | Illumina | IIb | MF143396 |
| VT.2009.0136 | Raccoon | VT | Chittenden | Essex | 2009 | Illumina | Ia | MF143397 |
| VT.2009.0137 | Horse | VT | Windsor | Hartford | 2009 | Sanger | VIc | MG562594 |
| VT.2009.0146 | Raccoon | VT | Orleans | Craftsbury | 2009 | Illumina | IIb | MF143398 |
| VT.2009.0164 | Raccoon | VT | Franklin | Franklin | 2009 | Illumina | Ia | MF143399 |
| VT.2009.0169 | Skunk | VT | Chittenden | Shelburne | 2009 | Illumina | Ib | MF143400 |
| VT.2009.0191 | Raccoon | VT | Chittenden | Charlotte | 2009 | Illumina | Ia | MG562595 |
| VT.2009.0194 | Raccoon | VT | Chittenden | Williston | 2009 | Illumina | Ia | MF143401 |
| VT.2009.0322 | Gray Fox | VT | Windham | Putney | 2009 | Sanger | VIb | MG562596 |
| VT.2009.0335 | Raccoon | VT | WIndham | Townshend | 2009 | Sanger | VIb | MG562597 |
| VT.2009.0346 | Raccoon | VT | Addison | Vergennes | 2009 | Sanger | Ia | MG562598 |
| VT.2009.0352 | Raccoon | VT | Grand Isle  | Grand Isle  | 2009 | Sanger | Ia | MF143402 |
| VT.2009.0353 | Raccoon | VT | Bennington | Bennington | 2009 | Illumina | VII | MG562599 |
| VT.2009.0361 | Raccoon | VT | Windsor | Hartford | 2009 | Sanger | VIc | MG562600 |
| VT.2009.0370 | Raccoon | VT | Lamoille | Stowe | 2009 | Illumina | Ia | MF143289 |
| VT.2009.0371 | Cow | VT | Orleans | Barton | 2009 | Sanger | IIb | MF143403 |
| VT.2009.0377 | Raccoon | VT | Windham | Dover | 2009 | Illumina | VIa | MG562601 |
| VT.2009.0384 | Raccoon | VT | Windsor | Baltimore | 2009 | Sanger | IIIa | MG562602 |
| VT.2009.0393 | Cow | VT | Addison | Addison | 2009 | Sanger | Ib | MG562603 |
| VT.2009.0397 | Cow | VT | Orleans | Greensboro | 2009 | Sanger | IIb | MF143338 |
| VT.2009.0406 | Raccoon | VT | Bennington | Dorset | 2009 | Illumina | IV | MG562604 |
| VT.2009.0423 | Raccoon | VT | Orleans | Greensboro | 2009 | Sanger | IIb | MF143404 |
| VT.2009.0428 | Raccoon | VT | Franklin | Franklin | 2009 | Sanger | Ia | MF143405 |
| VT.2009.0443 | Cow | VT | Lamoille | Hyde Park | 2009 | Sanger | IIIb | MF143406 |
| VT.2009.0475 | Skunk | VT | Chittenden | Charlotte | 2009 | Sanger | Ib | MG562605 |
| VT.2009.0500 | Raccoon | VT | Bennington | Manchester | 2009 | Sanger | IV | MG562606 |
| VT.2010.0003 | Gray Fox | VT | Bennington | Bennington | 2010 | Illumina | VII | MG562607 |
| VT.2010.0044 | Skunk | VT | Chittenden | Burlington | 2010 | Illumina | Ia | MF143407 |
| VT.2010.0054 | Raccoon | VT | Chittenden | South Burlington | 2010 | Illumina | Ia | MF143408 |
| VT.2010.0070 | Skunk | VT | Chittenden | Hinesburg | 2010 | Illumina | Ib | MG562608 |
| VT.2010.0089 | Raccoon | VT | Chittenden | Burlington | 2010 | Illumina | Ia | MF143409 |
| VT.2010.0090 | Skunk | VT | Chittenden | Winooski | 2010 | Illumina | Ia | MF143410 |
| VT.2010.0093 | Skunk | VT | Chittenden | Winooski | 2010 | Illumina | Ia | MF143411 |
| VT.2010.0145 | Skunk | VT | Orleans | Craftsbury | 2010 | Illumina | IIb | MF143412 |
| VT.2010.0172 | Skunk | VT | Chittenden | South Burlington | 2010 | Illumina | Ia | MF143339 |
| VT.2010.0246 | Gray Fox | VT | Addison | Middlebury | 2010 | Illumina | Ib | MG562609 |
| VT.2010.0370 | Skunk | VT | Chittenden | Burlington | 2010 | Illumina | Ia | MF143413 |
| VT.2011.0079 | Skunk | VT | Chittenden | Burlington | 2011 | Illumina | Ia | MF143414 |
| VT.2011.0122 | Skunk | VT | Caledonia | Walden | 2011 | Both | Ia | KY026483 |
| VT.2011.0138 | Skunk | VT | Orleans | Derby | 2011 | Illumina | IIb | MF143340 |
| VT.2011.0145 | Skunk | VT | Caledonia | Ryegate | 2011 | Illumina | VIc | MG562610 |
| VT.2011.0198 | Raccoon | VT | Chittenden | Burlington | 2011 | Illumina | Ib | MF143415 |

\*as described in the main text, NY HIST refers to New York historical isolates from the 1990s.

Supplementary Table S3. Additional sequences used for the phylogenetic analysis illustrated in Supplementary Figure 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sample designation | State origin | County | Year of collection | Accession number: N gene  | Accession number: G gene  |
| RRV\_MA.1992.SM1630 | MA | Worchester | 1992 | DQ886050 | DQ888343 |
| RRV\_NH.1992.SM1547 | NH | Grafton | 1992 | DQ886055 | DQ888348 |
| RRV\_NH.1992.SM1642 | NH | Hillsboro | 1992 | DQ886054 | DQ888347 |
| RRV\_NH.1992.SM1676 | NH | Rockingham | 1992 | DQ886056 | DQ888349 |
| RRV\_NJ.2003.SM6407 | NJ | Sussex | 2003 | DQ886058 | DQ888351 |
| RRV\_NY.2003.1584 | NY | Westchester | 2003 | DQ886041 | DQ888334 |
| RRV\_NY.2003.1642 | NY | Otsego | 2003 | DQ886043 | DQ888336 |
| RRV\_NY.2003.1847 | NY | Genesee | 2003 | DQ886044 | DQ888337 |
| RRV\_VA.1984.SM1748 | VA | Spotsylvania | 1984 | DQ886062 | DQ888355 |
| RRV\_VT.1994.SM2692 | VT | Bennington | 1994 | DQ886069 | DQ888362 |

I

II

IV

VIII

V

III

VII

VI

SE

NE1

E

NW1

NE2

Supplementary Figure S1. Concatenated N and G gene sequences were used for

a ML analysis employing 1000 bootstrap replicates. Viral groupings as described in this report are shown in blue to the right of the tree while clades previously identified by Biek et al. [8] are identified in red along the main branches. Bootstrap values are indicated at several nodes.