

Table S1. Results (mean, 95% HPDs, and root mean squared error (rMSE)) of leave-one-out analyses in which leaf ages were estimated for 85 Dengue sequences of known sample isolation time.

Sequence ID	<u>Years prior to most recent sample (2002)</u>		<u>Year</u>		rMSE
	True Age	Mean (95% HPD)	True Age	Mean (95% HPD)	
D2MEXChochola02	0	1.36 (0.00-3.49)	2002	2001 (2002-1999)	1.75
D2MEXOpichen02	0	2.00 (0.01-3.91)	2002	2000 (2002-1998)	2.27
D2MEXTizimin02	0	0.66 (0.00-1.82)	2002	2001 (2002-2000)	0.89
D2MEXOxkutzcab01	1	0.85 (0.00-2.08)	2001	2001 (2002-2000)	0.67
D2MEXStElena01	1	1.22 (0.00-2.65)	2001	2001 (2002-1999)	0.80
D2MEXTekax01	1	1.22 (0.00-2.69)	2001	2001 (2002-1999)	0.83
D2Peru6658yr01	1	0.68 (0.00-1.86)	2001	2001 (2002-2000)	0.68
D2Peru6663yr01	1	1.74 (0.00-3.72)	2001	2000 (2002-1998)	1.33
D2ECa2000	2	1.75 (0.00-3.62)	2000	2000 (2002-1998)	1.06
D2ECb2000	2	3.01 (0.72-5.58)	2000	1999 (2001-1996)	1.59
D2GUY2000	2	1.14 (0.00-2.87)	2000	2001 (2002-1999)	1.23
D2TRla2000	2	2.67 (0.03-4.70)	2000	1999 (2002-1997)	1.46
D2TRlb2000	2	2.17 (0.00-4.82)	2000	2000 (2002-1997)	1.48
D2Ven5942yr00	2	2.62 (0.79-4.46)	2000	1999 (2001-1998)	1.09
D2Ven5952yr00	2	1.74 (0.01-3.32)	2000	2000 (2002-1999)	0.95
D2Ven6045yr00	2	1.70 (0.00-3.14)	2000	2000 (2002-1999)	0.94
Ven2000	2	1.27 (0.00-2.77)	2000	2001 (2002-1999)	1.10
D2STLa1999	3	3.48 (1.54-4.91)	1999	1999 (2000-1997)	0.97
D2STLb1999	3	4.04 (2.00-5.64)	1999	1998 (2000-1996)	1.38
D2STLc1999	3	2.04 (0.00-4.13)	1999	2000 (2002-1998)	1.55
D2STLd1999	3	0.94 (0.00-2.17)	1999	2001 (2002-2000)	2.16
D2SURb1999	3	3.05 (0.00-6.71)	1999	1999 (2002-1995)	2.07
D2SURc1999	3	3.45 (1.26-5.70)	1999	1999 (2001-1996)	1.13
D2SURd1999	3	2.34 (0.05-3.95)	1999	2000 (2002-1998)	1.19
D2Ven4256yr99	3	2.87 (1.01-4.40)	1999	1999 (2001-1998)	0.84
D2Ven4924yr99	3	2.06 (0.07-3.49)	1999	2000 (2002-1999)	1.31
Ven1999	3	4.12 (1.36-6.51)	1999	1998 (2001-1995)	1.70
D2BAR1998	4	3.07 (0.27-5.11)	1998	1999 (2002-1997)	1.57
D2PRa1998	4	6.16 (1.90-10.59)	1998	1996 (2000-1991)	3.08
D2PRb1998	4	6.05 (2.14-10.77)	1998	1996 (2000-1991)	3.01
D2STVa1998	4	8.28 (5.34-11.20)	1998	1994 (1997-1991)	4.53
D2STVb1998	4	4.45 (2.00-6.34)	1998	1998 (2000-1996)	1.16
D2STVc1998	4	5.46 (2.40-8.08)	1998	1997 (2000-1994)	2.04
D2Ven2213yr98	4	6.19 (3.61-8.55)	1998	1996 (1998-1993)	2.54
D2Ven2303yr98	4	3.38 (0.86-5.28)	1998	1999 (2001-1997)	1.32

D2Ven2893yr98	4	4.44 (0.78-7.48)	1998	1998 (2001-1995)	1.79
D2Ven2995yr98	4	3.49 (0.59-5.79)	1998	1999 (2001-1996)	1.44
D2Ven3146yr98	4	7.41 (1.74-12.12)	1998	1995 (2000-1990)	4.27
D2Mar1998	4	4.48 (0.02-7.85)	1998	1998 (2002-1994)	2.24
D2BOL1997	5	9.11 (5.99-11.94)	1997	1993 (1996-1990)	4.39
D2TRI1997	5	4.37 (2.44-6.30)	1997	1998 (2000-1996)	1.15
D2TRla1997	5	4.95 (3.08-6.73)	1997	1997 (1999-1995)	0.92
D2TRib1997	5	4.09 (1.63-6.19)	1997	1998 (2000-1996)	1.44
D2Ven1432yr97	5	4.92 (1.84-7.60)	1997	1997 (2000-1994)	1.43
D2Ven1557yr97	5	3.91 (1.23-6.21)	1997	1998 (2001-1996)	1.66
D2Ven1688yr97	5	4.54 (2.89-6.04)	1997	1997 (1999-1996)	0.93
D2Ven1811yr97	5	3.95 (1.24-6.15)	1997	1998 (2001-1996)	1.64
D2ARU1996	6	6.73 (1.13-11.58)	1997	1995 (2001-1990)	1.77
D2CUR1996	6	7.01 (4.11-9.81)	1996	1995 (1998-1992)	2.43
D2TRla1996	6	4.42 (0.52-7.53)	1996	1998 (2001-1994)	3.66
D2TRib1996	6	8.92 (4.63-13.19)	1996	1993 (1997-1989)	1.65
D2Ven1996yr97	6	6.19 (2.88-9.24)	1996	1996 (1999-1993)	2.75
D2DOMa1995	7	7.50 (3.65-11.01)	1995	1995 (1998-1991)	1.96
D2DOMb1995	7	7.43 (5.46-9.37)	1995	1995 (1997-1993)	1.04
D2DOMc1995	7	6.37 (4.03-8.28)	1995	1996 (1998-1994)	1.23
D2PRa1994	8	10.02 (5.61-14.09)	1994	1992 (1996-1988)	2.95
D2PRb1994	8	7.07 (3.67-10.43)	1994	1995 (1998-1992)	1.90
D2COL1993	9	11.06 (8.19-13.78)	1993	1991 (1994-1988)	2.51
D2JCUR1993	9	8.79 (6.64-10.83)	1993	1993 (1995-1991)	1.08
D2SURa1993	9	7.84 (5.46-10.15)	1993	1994 (1997-1992)	1.67
D2SURb1993	9	8.76 (6.53-10.69)	1993	1993 (1995-1991)	1.08
D2SURc1993	9	8.78 (6.62-10.71)	1993	1993 (1995-1991)	1.08
D2SURd1993	9	7.41 (4.71-9.80)	1993	1995 (1997-1992)	2.07
D2PRa1991	11	12.49 (8.32-16.03)	1991	1990 (1994-1986)	2.47
D2PRb1991	11	12.48 (8.37-16.20)	1991	1990 (1994-1986)	2.48
Bra1990	12	10.20 (6.95-13.67)	1990	1992 (1995-1988)	2.49
D2JDR1990	12	17.33 (13.33-20.79)	1990	1985 (1989-1981)	5.66
D2VEN1990	12	13.45 (9.53-17.27)	1990	1989 (1992-1985)	2.46
D2BAH1989	13	15.69 (12.62-18.75)	1989	1986 (1989-1983)	3.11
D2TRI1989	13	11.19 (7.12-14.67)	1989	1991 (1995-1987)	2.66
D2PRa1988	14	12.74 (9.15-16.80)	1988	1989 (1993-1985)	2.32
D2PRb1988	14	11.33 (7.40-15.10)	1988	1991 (1995-1987)	3.31
D2TRI1988	14	14.91 (12.27-18.02)	1988	1987 (1990-1984)	1.68
D2BAR1987	15	14.10 (10.99-16.91)	1987	1988 (1991-1985)	1.77
D2TRI1987	15	14.30 (12.12-16.38)	1987	1988 (1990-1986)	1.26
D2JSUR1986	16	16.75 (14.80-19.03)	1986	1985 (1987-1983)	1.29
D2JTRI1986	16	15.97 (12.35-19.03)	1986	1986 (1990-1983)	1.71
D2PRa1986	16	22.13 (13.41-33.01)	1986	1980 (1989-1969)	8.62
D2PRb1986	16	14.29 (10.13-18.30)	1986	1988 (1992-1984)	2.71
D2SURa1986	16	15.45 (12.78-17.45)	1986	1987 (1989-1985)	1.28

D2SURb1986	16	17.03 (14.73-19.47)	1986	1985 (1987-1983)	1.58
D2SURc1986	16	17.84 (13.11-25.09)	1986	1984 (1989-1977)	3.29
D2TRla1986	16	16.16 (12.36-19.53)	1986	1986 (1990-1982)	2.13
D2TRlb1986	16	16.01 (12.49-19.45)	1986	1986 (1990-1983)	1.75
D2TRlc1986	16	16.74 (13.57-19.72)	1986	1985 (1988-1982)	1.72
D2DR1984	18	9.48 (5.96-12.74)	1984	1993 (1996-1989)	8.70
D2JAM1983	19	25.02 (19.16-31.58)	1983	1977 (1983-1970)	6.68
Jam1981	21	23.45 (18.82-28.54)	1981	1979 (1983-1973)	3.49