The R1b-L555 "BORDER IRWIN" HAPLOTREE, as on 1 November 2020

adapted from the FTDNA haplotree and Alex Williamson's Big Tree format,
showing results of 55 L555 BigY tests and 72 L555 SNP Pack tests, with additions from other SNP tests, STR-based predictions, Family Finder tests and known genealogical relationships.
NB The haplotree shows the bifurcation/hierarchy of relvant SNPs, e.g. FGC19539 may be more recent than FT11934,
but neither horizontal nor vertical placings indicate relative ages (e.g. Bonshaw may be older than Dumfries, and BY3890 may be older.

Key to haplotree data

BigY500 top38 "High confidence" SNPs
BigY700 SNPs
unidentified SNPs

Dumfries surname branch with good pedigree
38 > 4 STR data

dates
non-DNA-data
haplotree confirmed by triangulation with pedigree

Pedigree of the *Irvings of Bonshaw*

Examples of contemporary records of Dumfriesshire Irvins

(for details see *The Irwin Surname* by James M Irvine)

Glichrist Herwyd fl.1376
Morton
David Erwyn fl.1402
Pennersaxe
Mathew Irwyn fl.1493
Pennersaxe

(Pennersaxe is 3 miles from Bonshaw)

William c1440-1509
Edward c1470-c1515
Christopher c1501-1556 sons
Edward c1518-1605 sons
Black Christie c1525-
Christopher c1542-p1583
John -c1555-
William c1588-1646
Christopher c1585-1666
William 1608-1635
William c1620-1691
John c1635-1669
Christopher c1660-1723
John c1670-1732
William 1665-1742
Christopher 1697-1755
Christopher c1700-1760

Bonshaw *Castle Irvine* *Killaloes*

L555 was formerly suspected of being specific to the Border Irwins, but it is now apparent this is not so.

L555 L557 FGC19531 FGC19536 FGC34514.4 FGC34548.52 FGC34555 FGC34563 FGC34575 FGC35190 FT8600 S20749 Y5806 Z16929.31 Z16933.40 Z18842 Z18845 Z18946 Z17660 S303.5334 Indels L561 FGC16164 Z18947

FGC34556 FT31901 PH3960 Z16932 BY63882 FGC19539

? SNP of earliest Border Irwin ?

FGC13746 FGC34547

? SNP of earliest Border Irwin ?

born c.1350 (from contemporary records) c.1390 (interpolated)

c.1410 (interpolated) c.1440 (interpolated)

(The "Terminal SNP" is the SNP immediately upstream of the relevant Private SNPs)

"Private SNPs"

IDENTITIES OF BigY TESTEES POSTIONED ON THE ABOVE L555 HAPLOTREE

BigY500 testees (28)

BigY700 testees (44)

IDENTITIES OF OTHER TESTEES WHOSE POSITION ON L555 HAPLOTREE CAN BE ASSUMED

Known genealogical relationships (26)

Single SNP testees (10) (p. L555)

L555 SNP Pack (75)

Family Finder tests (10) (4th cousin or less)

STR predictions (29)

(DYS617 and DYS505 apart; my criterion for inclusion is generally patterns of 3 markers or more, with exact matches (or a more distant mutation) in 2 of these 3.

Frequency distribution of number of SNP mutations

Number of BigY700 SNP mutations since FGC13746

Frequency

NB: The average of 9.1 SNPs assumes #592951 is FGC34547+. If last shows #592951 to be FGC34547+, then the average no. of SNPs since FGC13746 would fall to 8.1.

Comments

1 Haplotree now has over 60 branches below L555, with up to 7 bifurcations between L555 and private SNPs.
2 If kits #861771, 343473 and 19899 (columns "1", "2" and "3") are not Irwin NPEs, as seems quite plausible, then FGC13746 was the earliest Border Irwin, not L555 or Z16932.
3 Local history records suggest the earliest Border Irwin was probably born in the early/mid 14th century - say AD1350.
4 Reliable genealogy shows #54774 (column "59") and #174091 (column "66") to be 12th cousins, both descended from a Christopher Irvine of Bonshaw born c.1590, but not his son born c.1620.
Similarly reliable genealogy shows #174091 and #919885 (column "66") to be 9th cousins, both descended from a William Irvine born c.1620.
This ability to place a conventional family tree within a haplotree is perhaps the "holy grail" of genetic genealogy, and still extremely rare.
5 It also follows that the bifurcations in the ancestries of #594774 and #286909 must be c.1550 or later.
6 On average BigY700 is giving 53% more SNPs than BigY500, but there is much variation;
7 There has been an average of 9.1 Y700 SNP mutations since FGC13746, but there is a big variation: three testees have only 5 SNPs since Z16932, one has 16 SNPs (see table on right - a typical Poisson distribution).
8 Assuming FGC13746 dates from c.1350, then 9.1 SNPs means an average of (1950-1350)/9.2 or 66 years per SNP (the predicted rate is 83 years), or about 2 generations per SNP.
But#358192 has 16 SNPs since AD1350, i.e. 37 years, or 1 generation, per SNP, while #596263 hase 5 SNPs between 1350 and 1580, i.e. 1 generation per SNP, and no SNPs since 1500 (i.e. c.7 generations per SNP)!
9 Conversely, assuming 83 years per SNP, then most probable age of FGC13746 would be (83 x 9.1) = 756 years, i.e. AD1200 - incompatible with contemporary evidence.
10 FTDNA may revise some SNPs: the haplotree is dynamic.