

Larkin DNA Project 2016 Y-DNA Update

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Updated: April 10, 2016

Topics

- News for 2016
- Introduction to Genetic Genealogy
- Origin & Distribution of Larkin Surname
- Larkin DNA Project
 - Ancestral Parish Sampling
- Larkin Y-DNA Findings
 - Geographic Analysis
- Ancient European DNA
- Modern DNA Connections

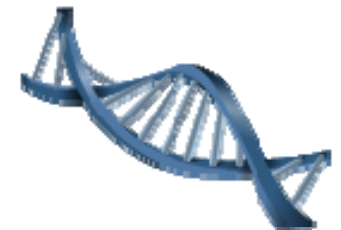


News for 2016

- [FTDNA Big-Y](#) results on eleven (11) samples have raised the number of SNPs below M343 identified in participants rising from 11 in 2014 to 26 in 2016.
- Kilkenny City Larkin hurling family likely came from Muintir Lorcán in Ui Maine in the Shannon River Valley
 - Larkin Type 01
- Rural County Kilkenny group related to South Tipperary group.
 - Larkin Type 14
- Southwestern Irish group shows relation between Counties Limerick and Kerry
 - Larkin Type 09
- Advances in SNP marker testing starting to distinguish each groups with unique SNP markers
- First Ancient DNA on Irish samples support hypothesis of Bronze Age invasion of Ireland by L-21 males
 - Same marker carried by 83% of Larkin DNA Project Participants

Introduction to Genetic Genealogy

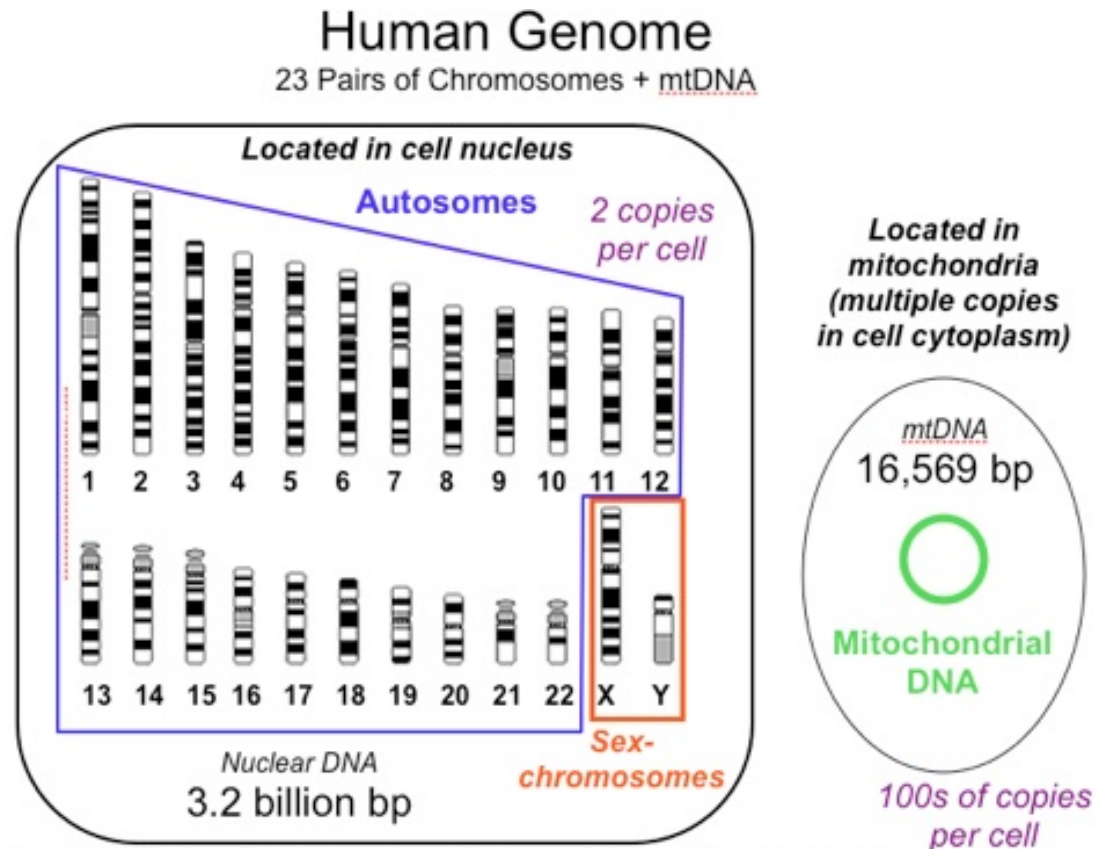
- Genealogy
 - First genealogy society (NEHGS) 1845
 - *Who* were our ancestors?
 - *Where* Do We Come From?
- Genetic Genealogy
 - Family Tree DNA founded in 2000
 - Use of genealogical DNA testing to determine the level and type of relationship between individuals.



Types of DNA

Three main types of DNA testing from a genealogy perspective

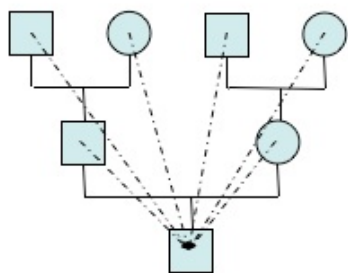
1. Y-Chromosome
2. Mitochondrial (MtDNA, from the mother's egg cell)
3. Autosomal (chromosomes 1-22)



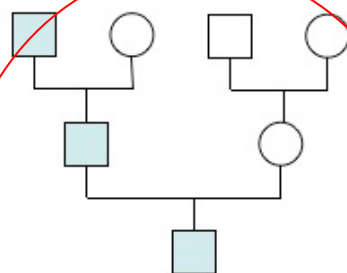
Chromosome Fit for Genealogy

	Autosomal	Y-Chromosome	Mitochondrial
Recombination - Mixing	Yes	No	No
# Coding Genes	~ 30,000	86	37
# Markers Initial Test	708,093	37	1,120
Mutation Rate	0.5 bp/gen = 354,047 per generation	$\mu = 0.0041\text{bp/gen}$ 1 change per 165 years	0.48 bp/MY = 1 change per 1,860 years

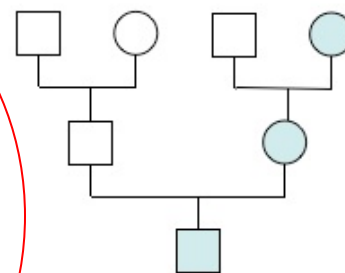
Y-Chromosome
DNA characteristics
are the bet fit for
surname genetic
genealogy



Autosomal
(passed on in part,
from all ancestors)



Y-Chromosome
(passed on complete,
but only by sons)



Mitochondrial
(passed on complete,
but only by daughters)

SNP vs. STR Measurement

- SNP = Single Nucleotide Polymorphism
- Mutation in a single base pair at a specific position
- Expressed a 'positive' when different from all other human beings.

– e.g. position *rs1019875*

– Person1 T A T C C T = -

– Person2 T A C C C T = +

- Analogous to '*Trunk and Branches of the Tree*'



- STR = Single Tandem Repeat
- Repeating patterns of multiple base pairs
- Allele Count = number of repetitions of particular pattern

– e.g. *DYS389*

Person1 T AACC T = 1

Person2 T AACC AACC T = 2

- Analogous to '*Leaves on the Tree*'



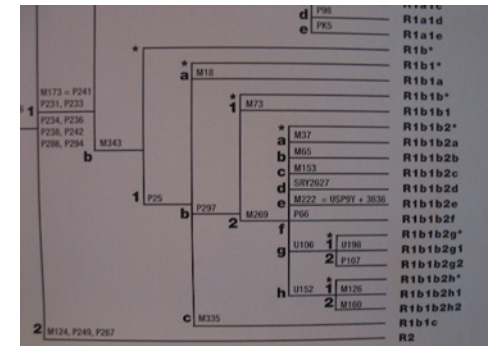
Evolution of DNA Test Equipment

- Automated, PCR Sequencers
 - *Applied Biosystems AB370* (1987)
 - Sanger Sequencing (chain termination)
 - Takes a lot of amplification and chemistry work for each marker
 - This is how initial STR, SNP, & MtDNA tests from [FTDNA](#) were done
- DNA Microarrays (aka SNP Chips)
 - Affymetrix *GeneChip* system (1994)
 - Quartz chip with collection of individual, pre-defined SNP marker probes across all 23 chromosomes.
 - Meaningful autosomal testing products for genetic genealogy
 - e.g. Family Finder, 23andMe, Ancestry DNA
 - SNPs have to be identified and prepared at manufacture. Not flexible, cannot find new markers.
- Next Generation Sequencing
 - Illumina *HiSeq* system (2010)
 - Technique: Synthesis Method with short read segments assembled by computer models
 - Can find new markers but often 'skips' reading at a given location. Makes it unsatisfying when trying to compare and match individual participants as they will often not have same markers tested.
- Single Molecule Real-Time Sequencing (SMRT)
 - Pacific Biosciences *Sequel System* instrument (2015)
 - Long strand runs, best for finding new variants. Should provide better comparisons of individuals with fewer 'skips'.
 - Still too expensive for hobbyists but costs are projected to drop.

DNA Relationship Grouping

- **Haplogroup**

- Major branches of human tree
 - (e.g. 40 branches for all humanity)
- Always defined with SNP mutations
 - As the number of SNPs identified grows, subordinate Haplogroups are identified.
 - e.g. M222 with haplogroup R1b = R-M222



- **Haplotype**

- Sub branches of a haplogroup with similar pattern
 - e.g. 40 branches from each haplogroup R1b
- Traditionally identified with STR patterns
 - May later be confirmed to share an SNP
 - e.g. Larkin Type 01 within R-M222
- *Next-Generation DNA* testing finding more markers, SNPs for most STR haplotypes

How DNA Tell Us Where We Come From

Identification of geographic origin depends on two factors:

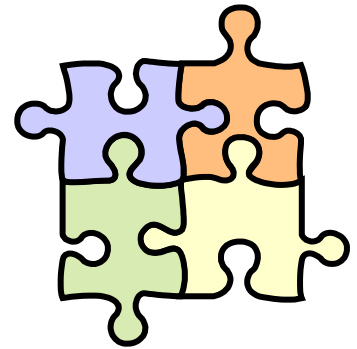
1. MATCHES with GEOGRAPHY

Having genetic matches whose geographic origin is known with precision.

2. RESOLUTION

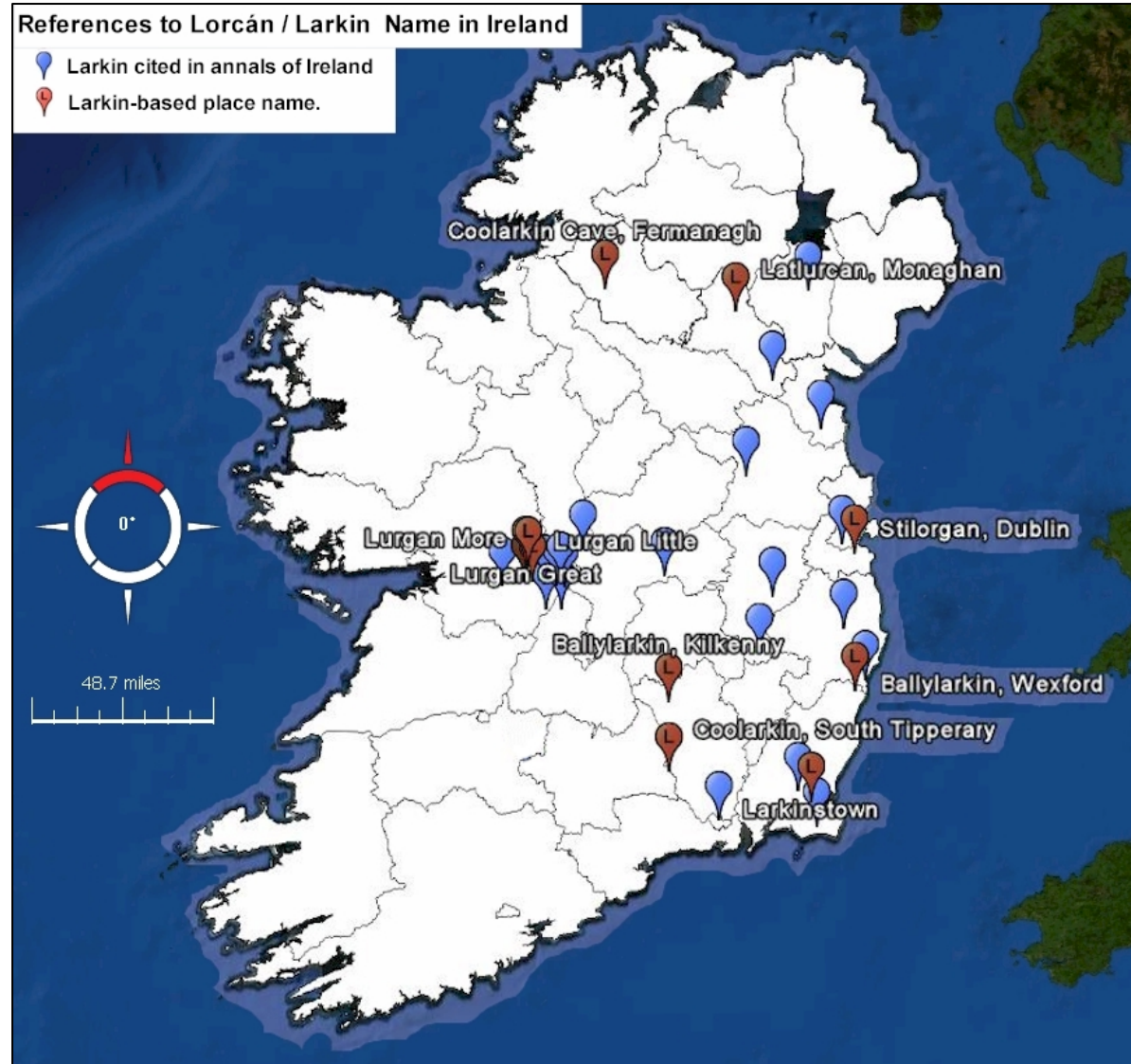
Sufficient resolution in the DNA tests to indicate that the time-to-most-recent-common-ancestor (TMRCA) is correlated to historical geographic movements.

- A match of 33 on a 37-marker STR test ~ 400 years.
- In some cases a 67-marker upgrade as well as SNP testing may be recommended.

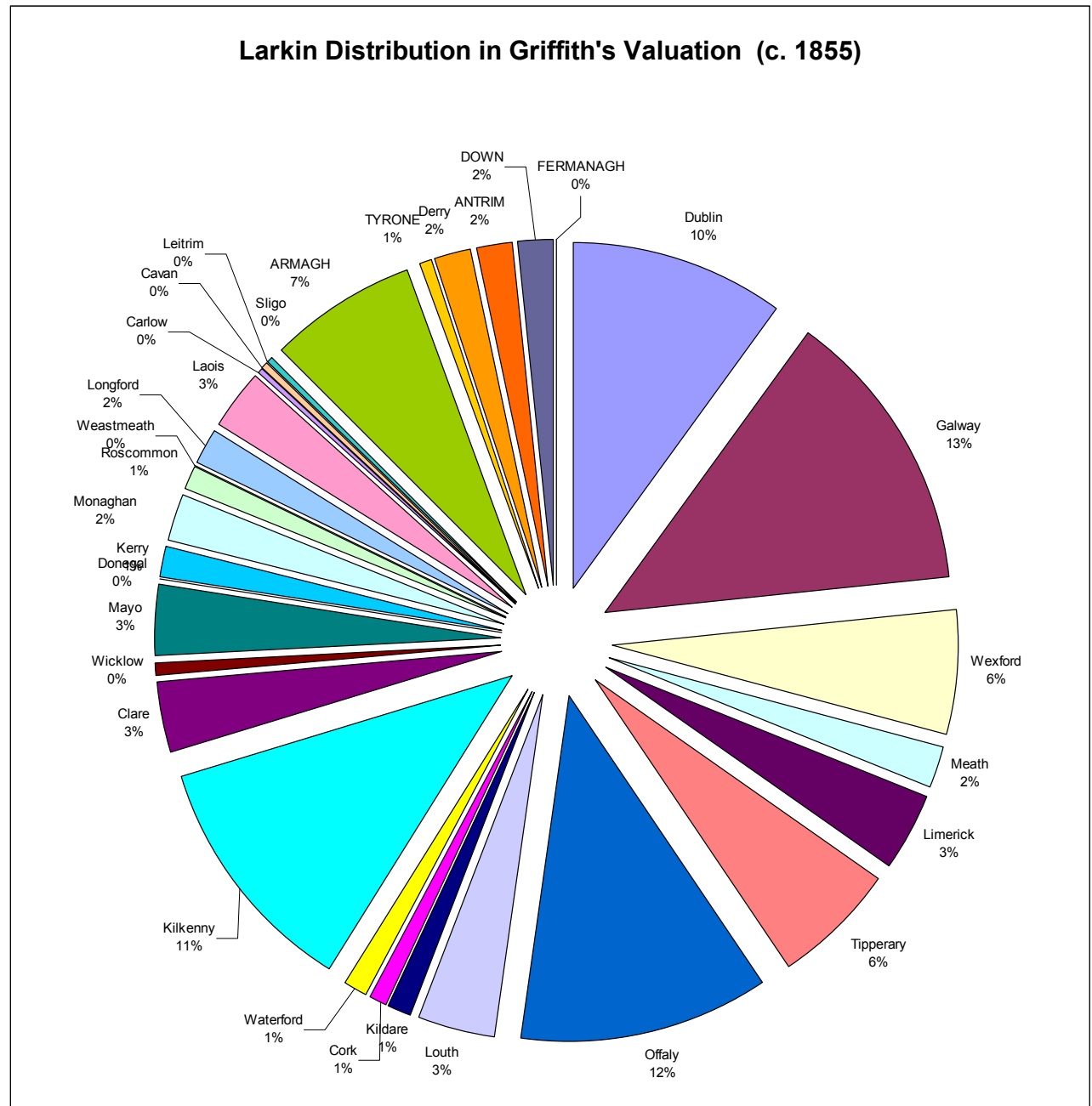


Origin of Larkin Surname

- References in Irish Annals before 1,000 AD.
- Larkin-based place names.
- In England, recorded since 1,200s.



Distribution of Larkin Surname in 19th Century Ireland

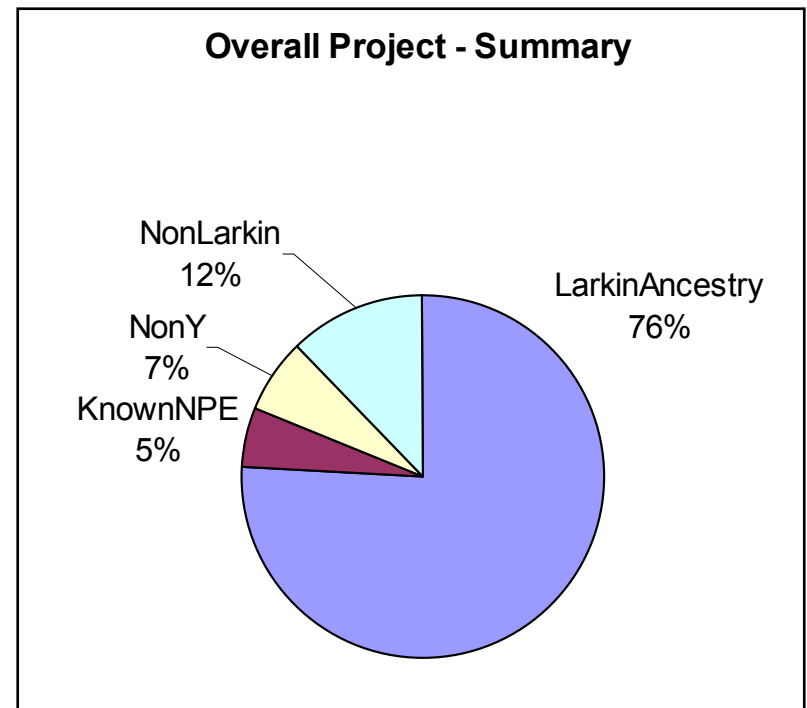


Global Larkin Surname Estimate

Area	Total Population	Est. Larkin Population	Pct
United States	311,591,917	29,021	0.009%
United Kingdom (excl NI)	55,768,712	16,533	0.030%
Australia	23,367,525	5,841	0.025%
Ireland (Republic + NI)	6,159,105	4,991	0.081%
Canada	33,476,688	2,845	0.008%
New Zealand	4,400,000	828	0.019%
South Africa	52,981,991	248	0.000%
<hr/>		<hr/>	
Total		60,307	
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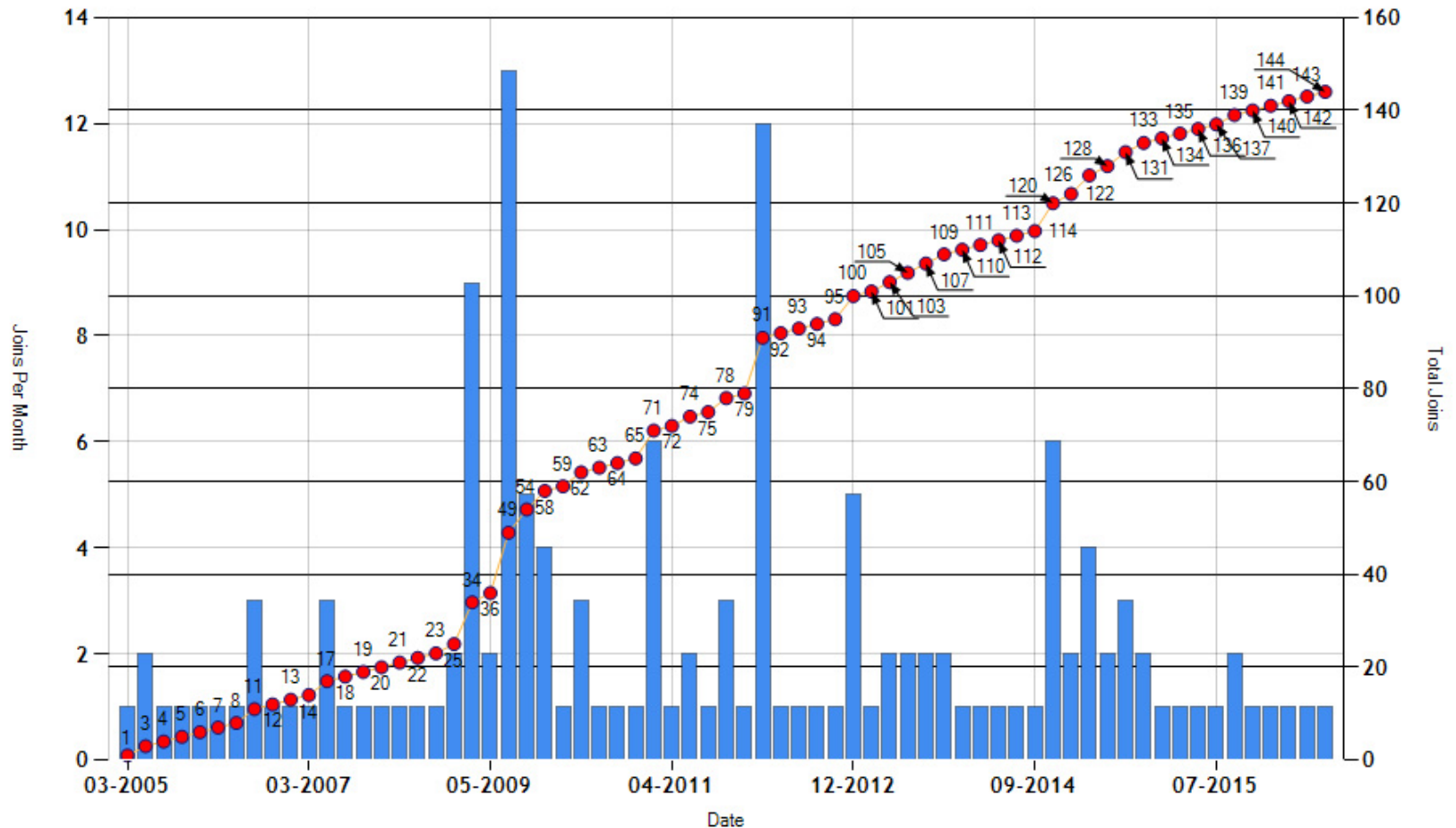
Larkin DNA Project

1. Provide a focus for persons with the Larkin surname and its variants from around the world to use DNA testing to identify their origins and migratory patterns.
2. Provide assistance to Larkin members with understanding and interpreting their DNA test results.
3. Help members get a discount on DNA testing.

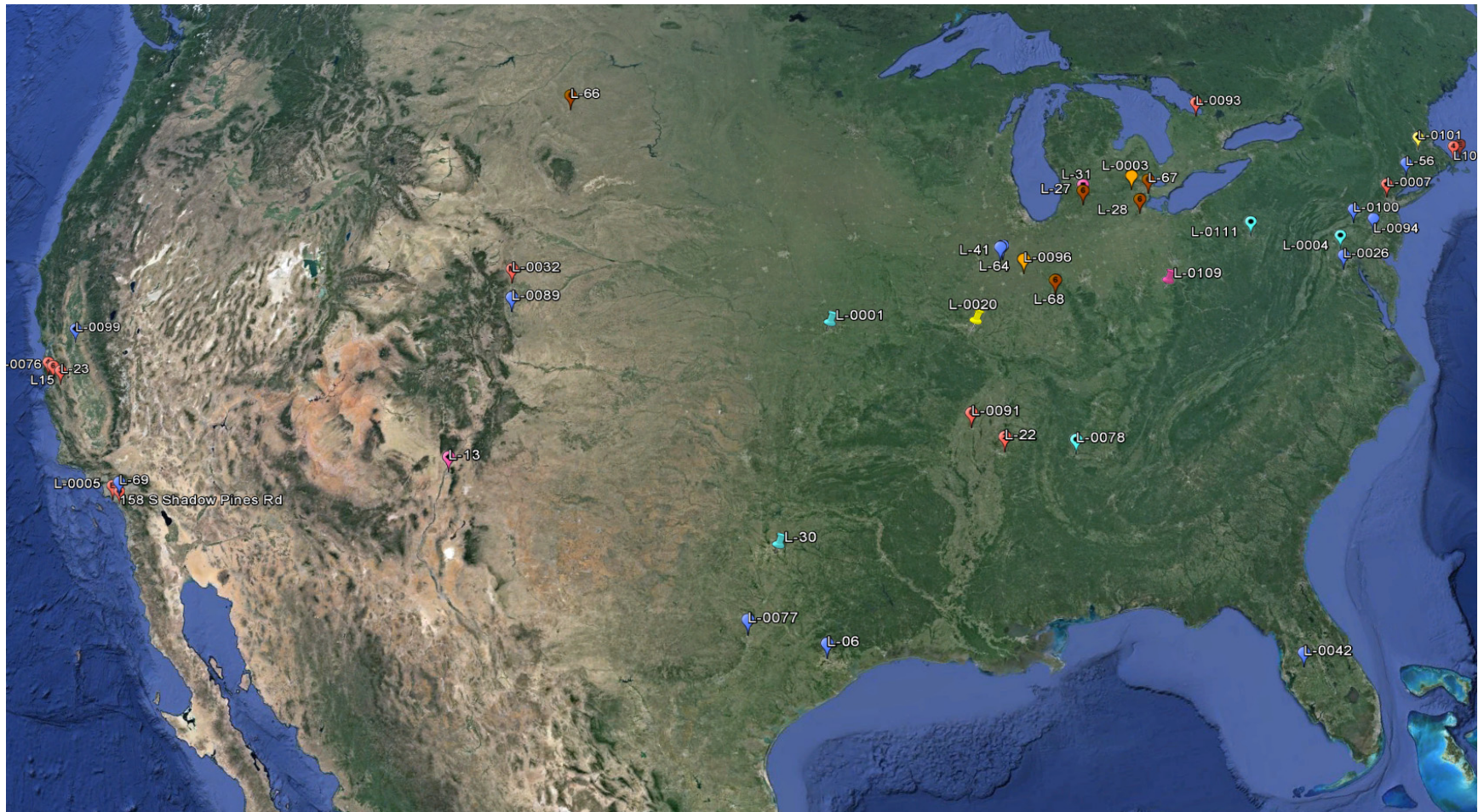


Larkin DNA Project Growth

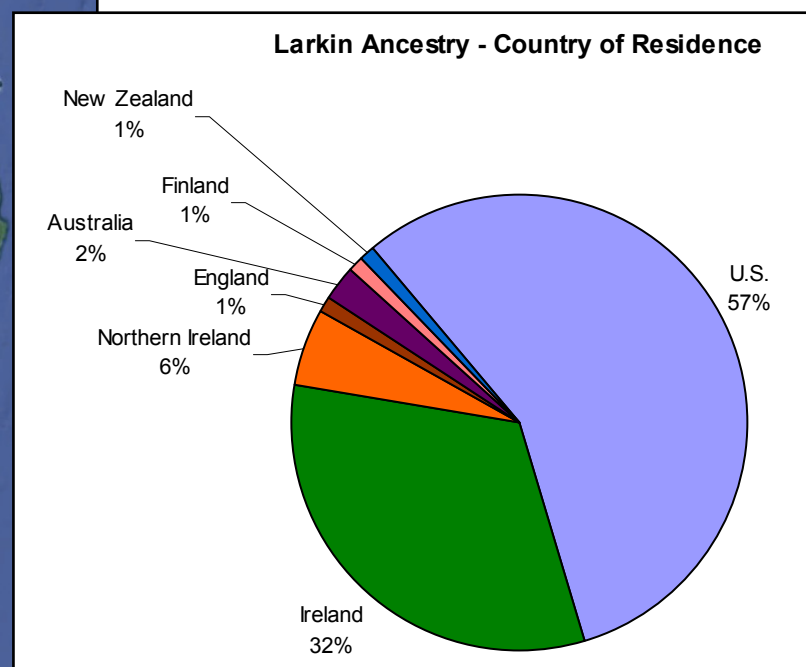
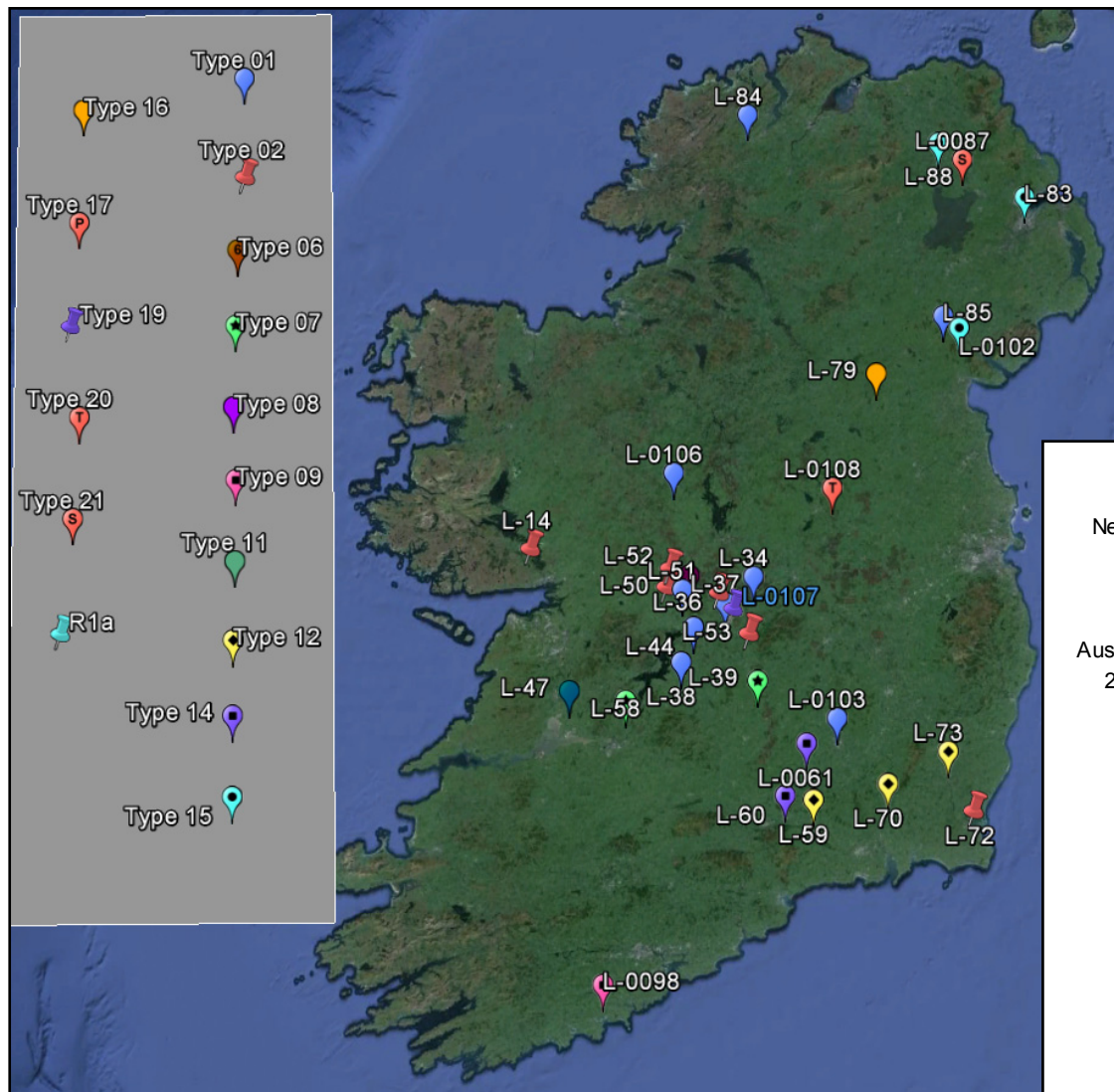
Project Joins



North American Participants



Ireland Participants



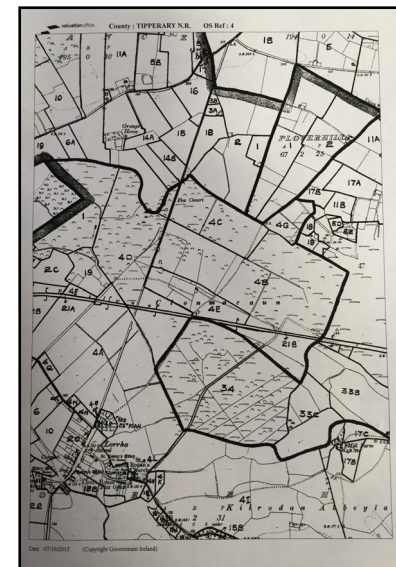
Ancestral Parish Sampling

- Goal: Link Y-DNA Pattern to Ancestral Geography
 - Search for parishes with a continuity of the Larkin surname in historical records.
 - Identify and Recruit individuals from those parishes for DNA sample
 - If emigrants closely match those from ancestral parish, very likely their ancestors came from that parish.

[illegible]

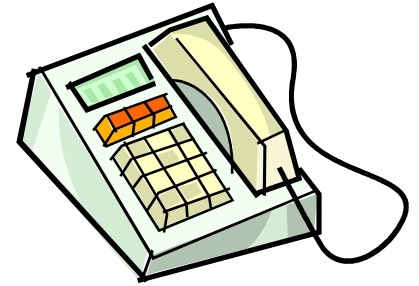
Target Parish Identification

- Record sets across history
 - Tithe Applotment books of the 1820s
 - before the famine
 - Griffith's Valuation of the 1850s
 - immediately after the famine
 - Modern Telephone Directory
- Supplemental Records
 - Annals of the Four Masters
 - Hearth Money Rolls of 1660s
 - Place names & castles



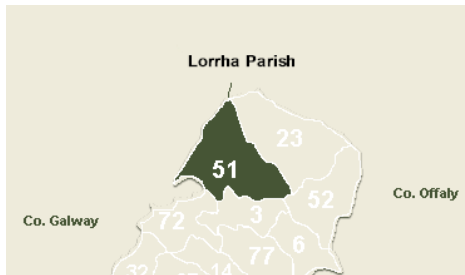
	County	Map Key ¹	Parish	Number In Tithes	Number In Griffiths	Number In 2009	Rating
1	Galway	39	Fahy	5	6	4	135
2	Galway	29	Clontuskert	2	7	5	84
3	Offaly	9	Birr	1	9	5	60
4	Galway	76	Killmorobogue	1	12	4	65
5	Limerick	109	Monagay	1	11	4	60
6	Offaly	44	Reynagh	2	10	2	54
7	Offaly	40	Lusmagh	1	25	1	52
8	Kilkenny	20	Callan	1	24	1	50
9	Galway	52	Kilcloony	1	6	6	49
10	Limerick	83	Killeedy	1	7	5	48
11	Tipperary	51	Lorrha	2	12	1	39
12	Offaly	43	Rahan	1	11	2	36
13	Galway	88	Kilmalinoge	3	2	4	33
14	Offaly	41	Lynally	1	8	2	27
15	Tipperary South	65	Kilsheelan	2	2	4	24
16	Laois	10	Borris	1	3	5	24
17	Tipperary	78	Youghalarra	2	6	1	21
18	Longford	15	Killoe	1	6	2	21
19	Galway	33	Donanaghta	1	4	3	20
20	Galway	26	Clonfert	-	13	3	16

Recruitment



- Presentation made at the Larkin Clan Gathering at Portumna, County Galway, Ireland in 2009
 - Shannon River Valley (Galway, Tipperary, Offaly)
 - Home Visits & Interviews
- Telephone & field recruitment from Irish parishes with continuity in historical records
 - Instructional video on [YouTube.com](https://www.youtube.com)
 - 2010 Recruitment in Wexford & Ulster
 - 2014 Recruitment in Armagh, Kilkenny, Roscommon





Example: Lorrha, Tipperary

- Annals of the Four Masters (1014)

MURCERTAIGH Ua LORCAIN
 aRCHIMEACH OF LORRA, MORTIS

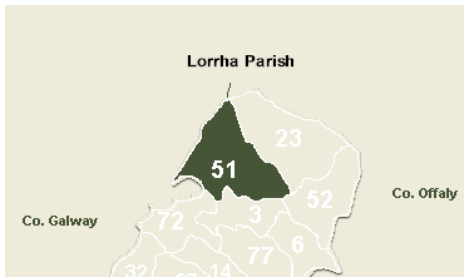
- Hearth Money Rolls (1667)



PARISH OF LURHA—Continued.

Bally mEgan

Era Salter	"	...	2	4
Thomas Wedneshey	"	...	2	4
John Nowlane	"	...	1	2
John McTelge	"	...	1	2
Teige Lahy	"	...	1	2
Rory Harane	"	...	1	2
Michael Shully	"	...	1	2
Hugh Murry	"	...	1	2
Edmond McMorogh	"	...	1	2
Loghlin Lorkane	"	...	1	2



Lorrha – Data Examples

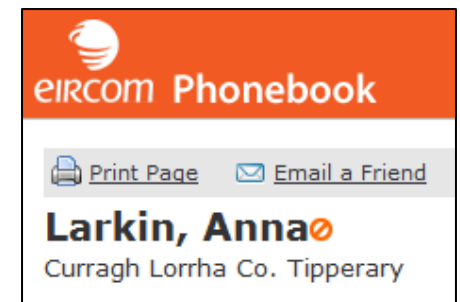
- Tithe Applotment Book (1824)



- Griffith's Valuation (1852)

VILLAGE OF LORRHA.				
19	1	(Ruins)	Same,	Ruins,
-	2	(Ruins)	Same,	Ruins,
-	3	John Coughlin,	Same,	Garden,
-	4	Michael Reynolds,	Same,	House and small garden,
-	5	Luke Hughes,	Peter Murphy,	House and small garden,
-	6	(Ruins)	Francis H. Toon,	Ruins,
-	7	Peter Murphy,	Same,	House, office, & garden,
-	8	Mary Murphy,	Same,	House and small garden,
-	9	Daniel Hogan,	Same,	House, office, & garden,
-	10	Mary Larkin,	Same,	House, office, & garden,
-	11	John Larkin,	Same,	Office and garden,
-	12	John Larkin,	Same,	House and yard,

- Eircom Telephone Directory (2009)



Lorrha DNA Pattern

- Identified man whose father came from Lorrha through Ancestral Parish Sampling
 - 37 Marker STR results, M222 SNP

393	390	19	391	385a	385b	426	388	439	389-I	392	389-II
13	25	14	11	11	14	12	12	12	13	14	29

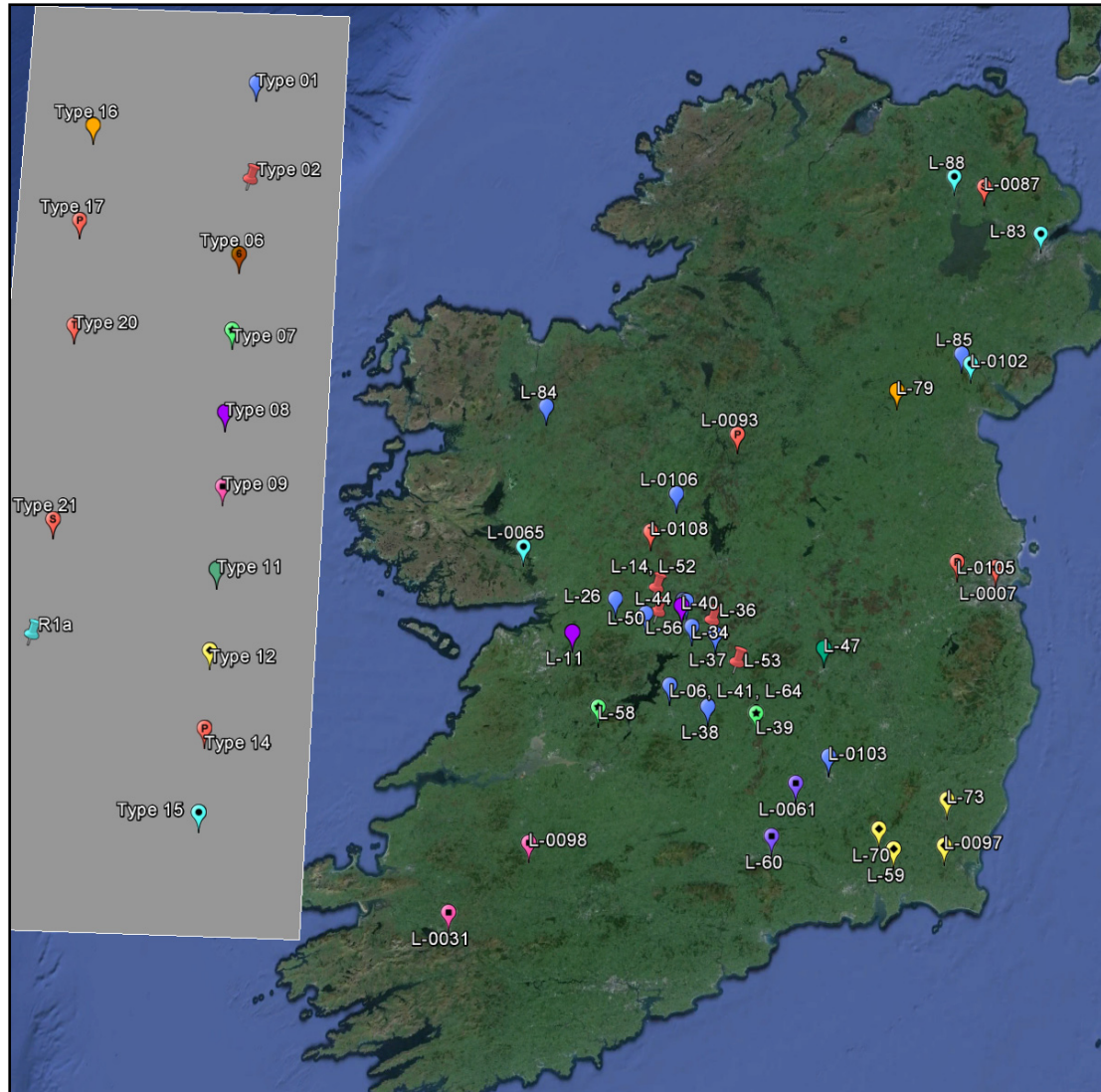
458	459 a	459b	455	454	447	437	448	449	464 a	464 b	464 c
17	9	10	11	11	25	15	18	27	15	15	16

464d	460	GataH4	YCA2a	YCA2b	456	607	576	570	CDYa	CDYb	442	438
17	10	11	19	23	17	16	17	17	36	39	13	12

- So any Larkin in the world who matches this DNA pattern is highly likely to have ancestors that came from Lorrha, County Tipperary, Ireland.



Ancestral Parish Samples



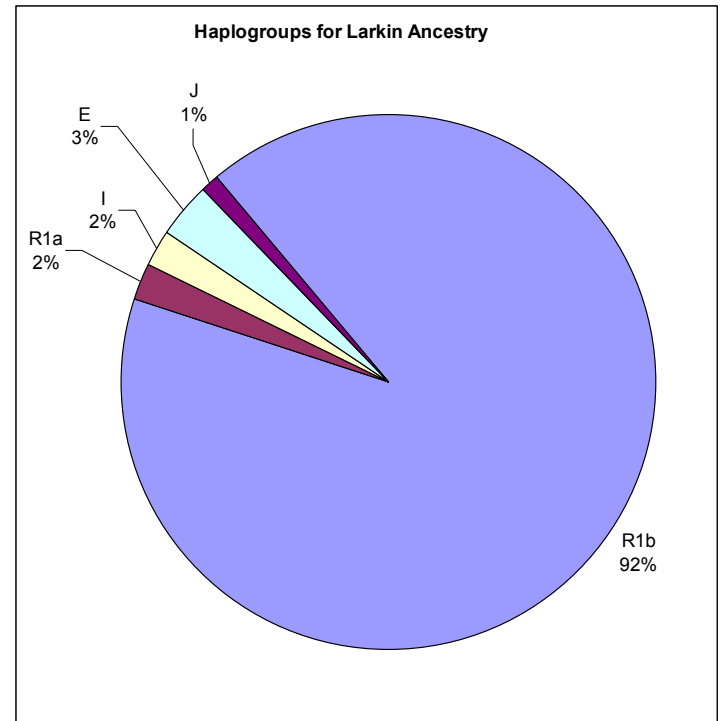
Ancestral geographic locations for which at least one Larkin DNA Project sample has been collected:

- Ireland: 38
- England: 3
- US: 5

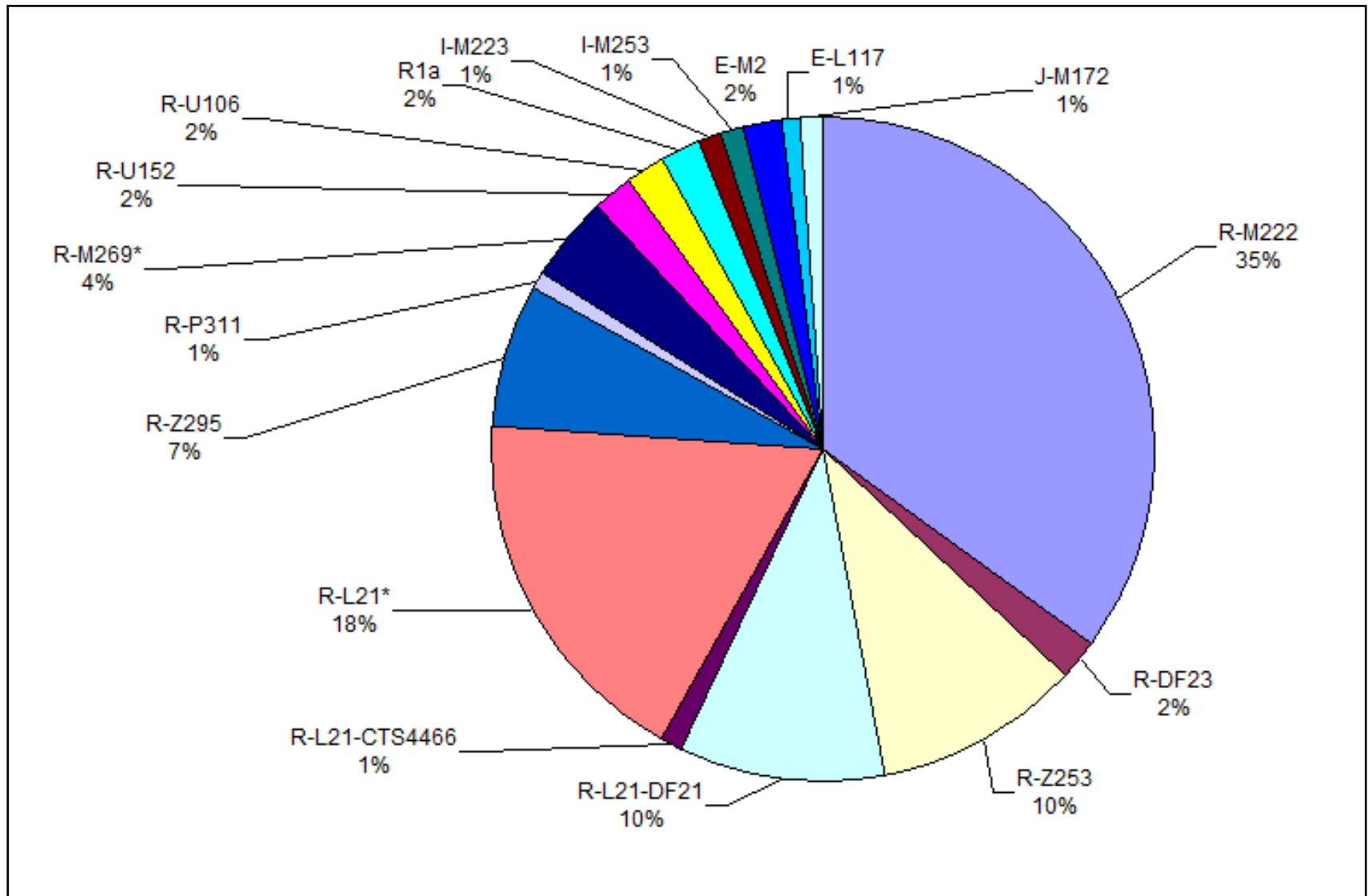
These samples with attribution to specific geographic locations help future participant matches understand WHERE their Y-DNA and ancestors may have originated prior to 1900.

Larkin Y-DNA Findings

- DNA Classifications for 37 Marker STR Results
 - R1b Haplogroup: 21 Types covering 92% of results
 - Other Haplogroups: R1a, I, E & J
- Published in [Journal of Genetic Genealogy](#) (December 2010).
- Published in [Surname DNA Journal](#) (Jan 2013)

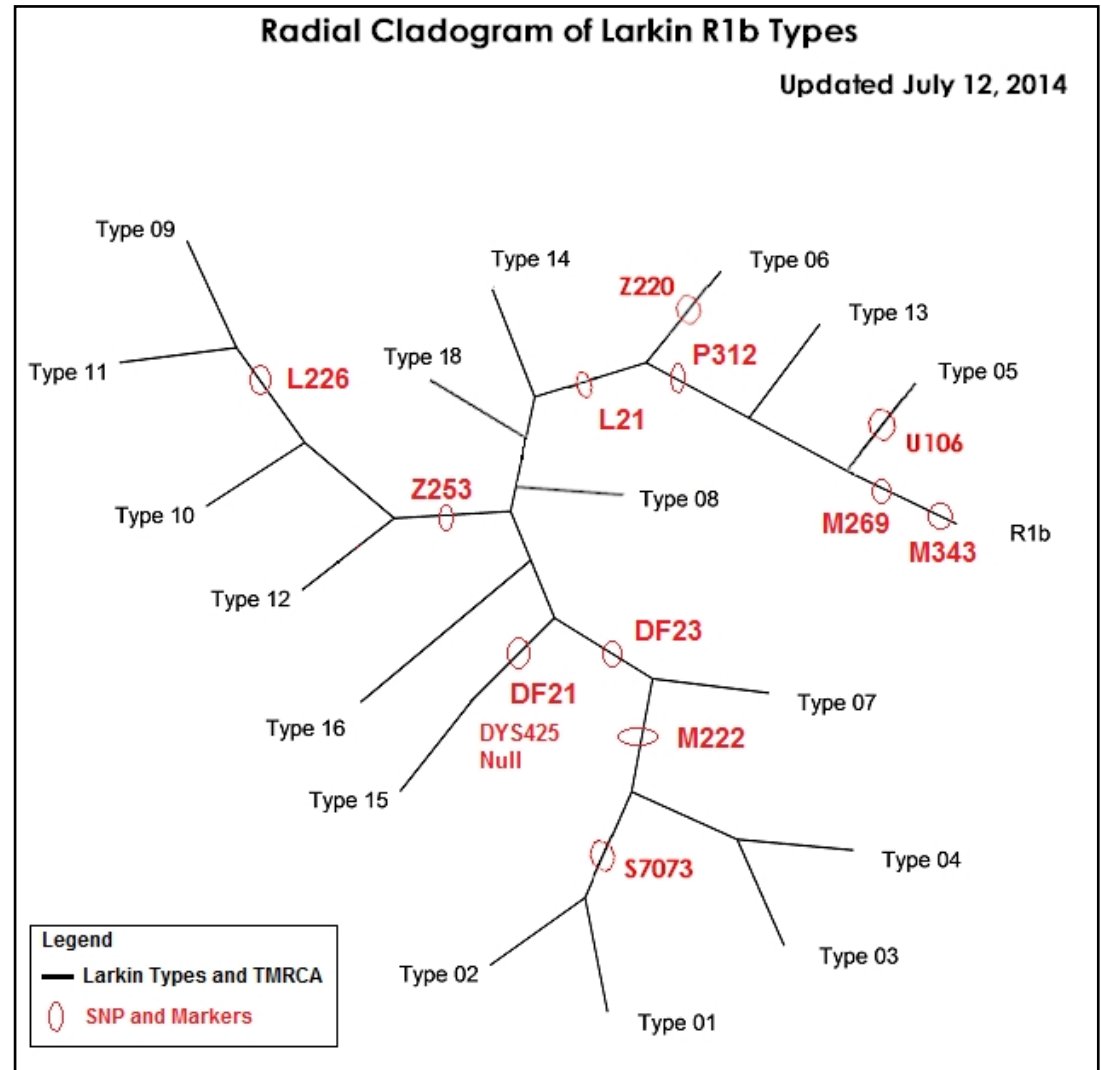


Larkin Ancestry by Major SNP



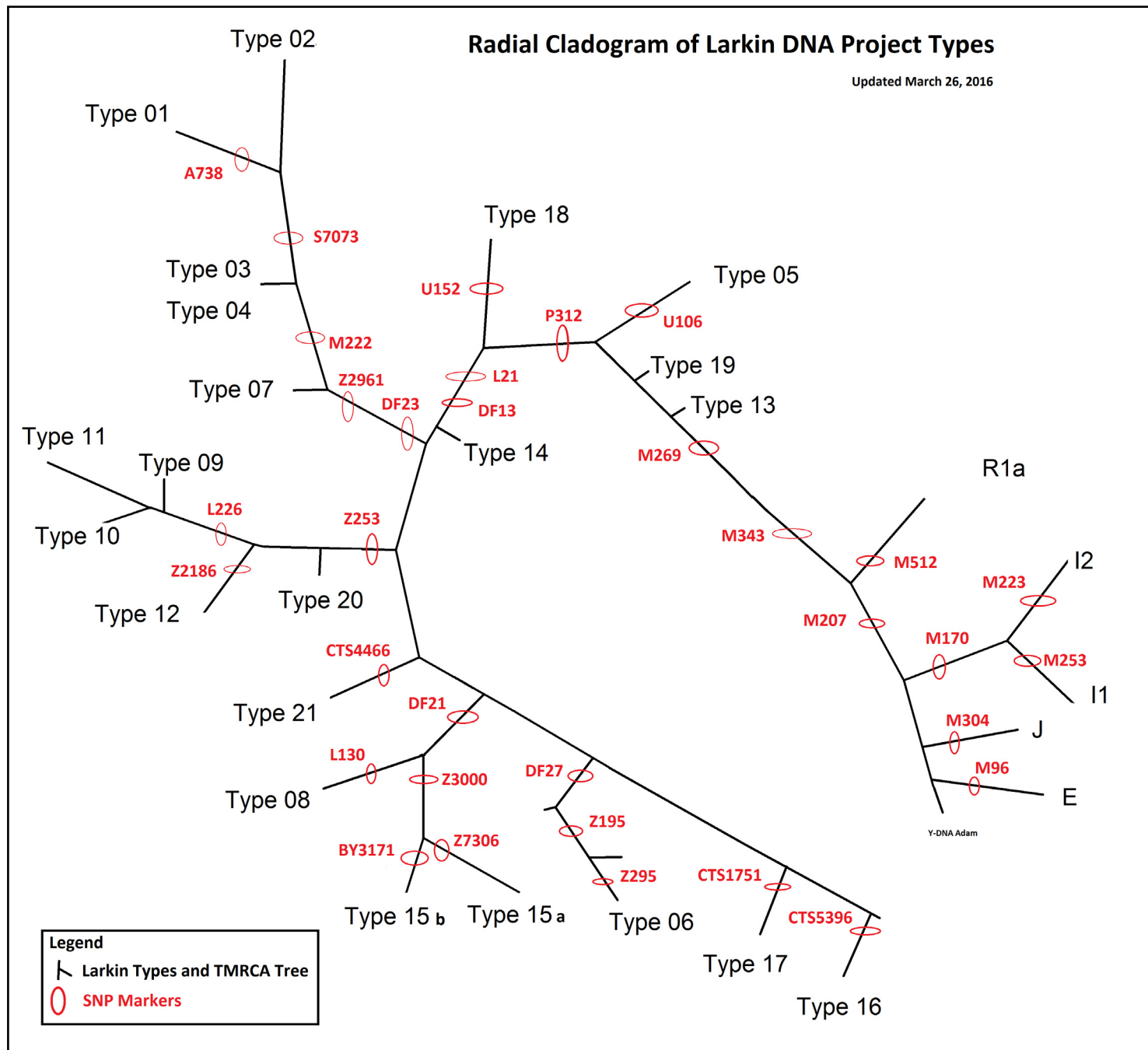
Larkin R1b SNP Branches

- Old version from 2014
 - Total of 11 distinguishing SNPs below M343 for Larkin DNA project members



•For 2016, we have eleven (11) [FTDNA](#) Big-Y results for men with Larkin Ancestry.

•There are at least 26 distinguishing SNPs below M343 for Larkin DNA project members.



R1b Types 1-4 Summary

R-M222+ Larkin Types		SNPs: L21+; DF23+; M222+ STRs: DYS 390 = 25, 26; DYS 19 = 14
Designation	# Identified	Comments & Distinguishing Markers
Type 01	23	<p>Most common haplotype in North Tipperary and East Galway area around the Shannon River. Ancestral parishes include: Lorrha, Dorrha, Knigh, & Aghnameadle in Co Tipperary; Clonfert, Tynagh, & Loughrea in County Galway.</p> <p>Recent finds in: Ballygalda, County Roscommon, Kilkenny City, and Forkhill, County Armagh</p> <p>SNPs: L21+; DF23+; M222+; S7073+; DF109+; PF682+; A738+</p> <p>STRs: DYS 390 = 25, 26; DYS 19 = 14; DYS 385b = 14; DYS 464b = 15; DYS 449 = 27; DYS 576 = 17</p>
Type 02	7	<p>Includes Kiltormer Larkins from around Aughrim and Meelick area of Galway as well as the Lusmagh and Coolderry Larkins of County Offaly. Famous members include hurly maker T.J. Larkin.</p> <p>SNPs: L21+; DF23+; M222 +; S7073+; PF682-</p> <p>STRs: DYS 390 = 25, 26; DYS 19 = 14; DYS 460 = 12; DYS 458 = 18; DYS 449 = 29</p>
Type 03	2	<p>Haplotype is very close to R1b-M222 modal. Family origin is American immigrant from County Galway but no ancestral parish identified.</p> <p>SNPs estimated: L21+; DF23+; M222+</p> <p>STRs: DYS 390 = 25, 26; DYS 19 = 14; DYS 458 = 18; DYS 449 = 30; DYS 576 = 17</p>
Type 04	3	<p>County Galway origins but no ancestral parish identified.</p> <p>SNPs: P25+ (estimated: L21+; DF23+; M222+)</p> <p>STRs: DYS 390 = 25, 26; DYS 19 = 14 DYS 459b = 11; DYS 391 = 10; DYS 389-1 = 14</p>

R1b Types 5-9 Summary

Designation	# Identified	Comments & Distinguishing Markers
Type 05	2	Members with known ancestry trace to England & Ireland. Includes Larkin Soap founder John Durant Larkin of Buffalo, NY from Beckley, Sussex County, England. SNPs: P312+; L23+; U106+; L21- STRs: DYS 447 = 24; DYS 442 = 13
Type 06	7	American colonial ancestry from 1655 in Newport, Rhode Island. No samples from British Isles matched yet. SNPs: P312+; Z220+; Z295+; L21- STRs: DYS 437 = 14; DYS 460 = 10
Type 07	2	Ancestral parishes are Kilseily in County Clare and Templetohy in County Tipperary. Also matches a number of men with the Kelly surname, including lineage of the last O'Kelley Lord of Ui Maine. SNPs: L21+; DF23+; Z2961+; M222- STRs: DYS 391=10; DYS 458 = 18, 19
Type 08	3	Ancestral parishes of Fahy and Kilmacduagh in County Galway with emigration to Lancashire England and Australia SNPs: L21+; DF21+; L130+; STRs: DYS 19 = 15; DYS 389-1 = 12
Type 09	2	Ancestral parish is Killarney in County Kerry and Broadford, County Limerick. DNA matches Irish Type III cluster, consistent with King Lorcain of the ancient Dal Cais tribes. SNPs: L21+; Z253+; L226+, FGC5660+ STRs: DYS 447 = 25; DYS 464b = 15; DYS CDY a-b = 37-39

R1b Types 10-15 Summary

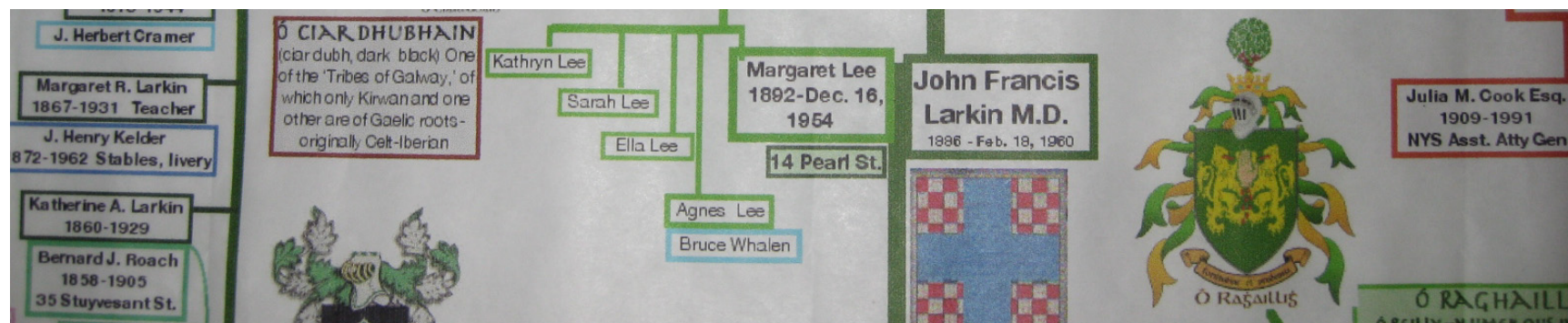
Designation	# Identified	Comments & Distinguishing Markers
Type 10	1	American immigrant from Dublin. No ancestral parishes identified. No SNP tested but suspected to be R-L226+. STRs: DYS 392 = 13; DYS 459a = 9; DYS 439 = 13
Type 11	1	Ancestral parish is Borris (Portlaoise) in County Laois. DNA matches Irish Type III cluster, consistent with King Lorcaín of the ancient Dal Cais tribes. SNPs: L21+; Z253+; L226+ STRs: DYS 447 = 23; DYS 464c = 13
Type 12	5	Wexford cluster descended from Kings of Leinster. Ancestral parishes throughout south Wexford. SNPs: L21+; Z253+; Z2185+; Z2186+; CTS4314-; L226- STRs: DYS 390 = 25; DYS 392 = 30, DYS 458 = 16
Type 13	1	American from Rochester, New York. No ancestral parish identified. No SNP tested but suspected to be R-P311+. STRs: DYS 390 = 23; YCA IIb = 22; DYS 607 = 14
Type 14	2	Ancestral parishes in Kilsheelan in County Tipperary (South) and Ballylarkin, Killaloe (Callan), County Kilkenny. SNPs: L21+, DF13+ STRs: DYS 390 = 21; YCA IIa = 22; DYS 437 = 16
Type 15	7	Part of Clan Colla of Ulster. Ancestral parish of Ballyscullion, County Derry and Jonesborough, County Armagh with representation in urban Belfast. Also includes early American lineage from New Hanover County, North Carolina. SNPs: L21+; DF21+; DF25-; DF5- STRs: DYS 425 = NULL, DYS 439=14, CDYb = 38

R1b Types 16-21 Summary

Designation	# Identified	Comments & Distinguishing Markers
Type 16	3	Suspected Ulaid Clans of ancient Ulster. Ancestral parish of Magheross, County Monaghan. Group was split in 2015 based on new SNP results. SNPs: L21+; CTS5693+, DF21-; DF23- STRs: DYS385 = 12-14; DYS 456 = 15, DYS 460 = 10
Type 17	2	Ancestry from County Longford and Leixlip, County Kildare SNPs: L21+; CTS1751+ STRs: DYS 391=13; DYS 459 = 7-10; DYS449 = 25; YCA-IIb = 19
Type 18	2	Early American lineage from Frederick, Maryland. Formerly classified as Type 05 but now distinguished by SNPs. SNPs: P312+; U152+; L21- STRs: DYS394 = 13; DYS 456 = 17
Type 19	1	Ancestry from Wouldham, Chatham, Kent, England. SNPs: M269+ STRs: DYS390 = 26; DYS570 = 20
Type 20	1	Ancestry from Castlefrench, County Galway SNPs: Z253+; CTS4314-; L226-; Z2185-; Z2201-; STRs: DYS439 =13; GATA H4 = 9
Type 21	1	Ancestry from County Antrim but has Irish Type II marker. SNPs: L21+; CTS4466+ STRs:DYS449 = 29;

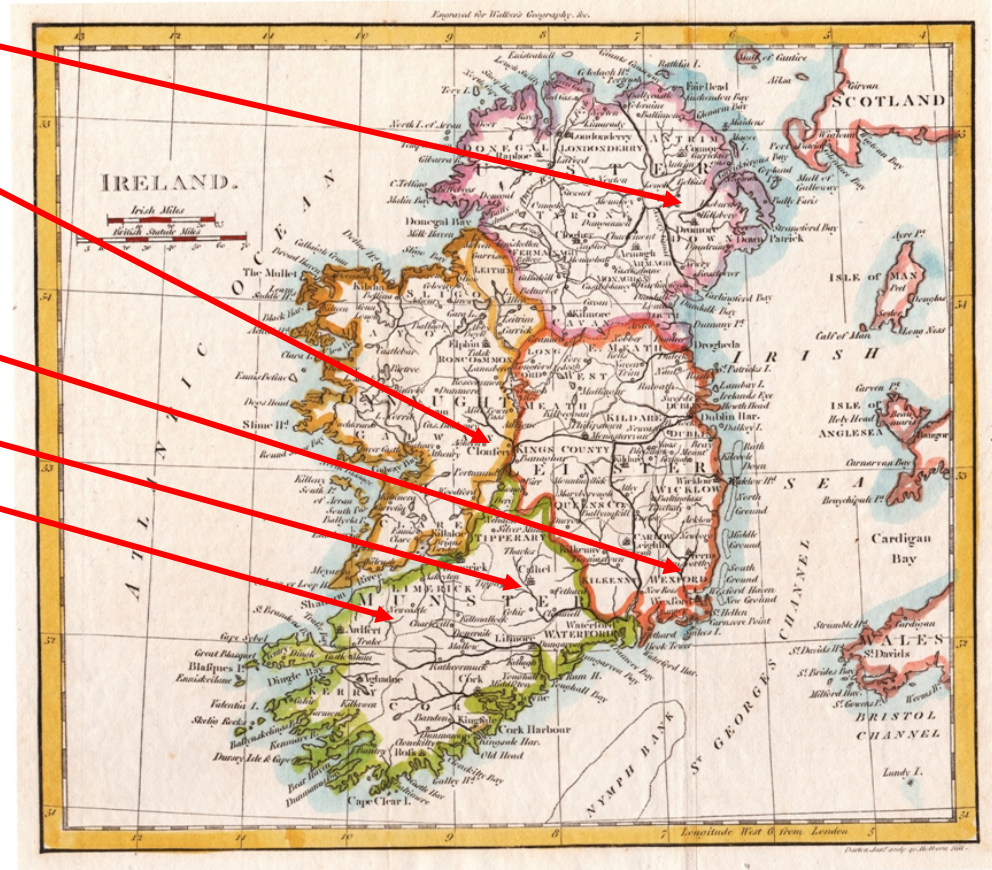
Larkin – Non R1b Haplogroups

Haplogroup	# Identified	Comments & Distinguishing Markers
R1a	2	Ancestral parishes in Cambridgeshire, England. SNP: M512+
E	3	African-American from Sumter County, Alabama back to North Carolina. One lineage includes baseball player Barry Larkin. SNP: M2+
I1	1	Origin in County Limerick, Ireland. Likely Viking origin. SNP: M253+
I2	1	American origin in Washington County, Maryland SNP: M223+
J	1	No ancestral information SNP: M172+



Geographic Analysis

- Ulster
- Muintir Lorcán
of Ui Maine
- Wexford
- Kilkenny
- Southwest Ireland
- England
- Colonial America



Ui Maine Larkins

- Numerous Annals cite a Larkin clan along the Shannon River in an area called Ui Maine (aka Hy Many).
- Some think descended from King Máine Mór
 - Perhaps last son of Niall of the Nine Hostages
- Shannon River Valley Sampling 2009
 - East Galway
 - North Tipperary
 - West Offaly
- Sampling 2014
 - Roscommon



Surname Map from Annals of the Four Masters, 1846 translation by Owen Connellan

Muintir Lorcán of Ui Maine

- Irish Gaelic for '*Community of Larkin Families*'
- Several *townland* names carry variants of the Larkin name.
 - e.g. *Lurganshanny, Lurgan More*
- Vicinity of Kiltormer & Killimor in County Galway

18-JUN-1585

MONTER LORKAN – all lands and hereditaments in Shillanghye as part of the nation of Donall O Madden of Longford [Barony, County Galway]. Granted to be held forever by the service of one knights fee for a rental of £80.00; and to provide 6 horsemen and 24 footmen to the service of the President of Connacht or the Lord Deputy.*

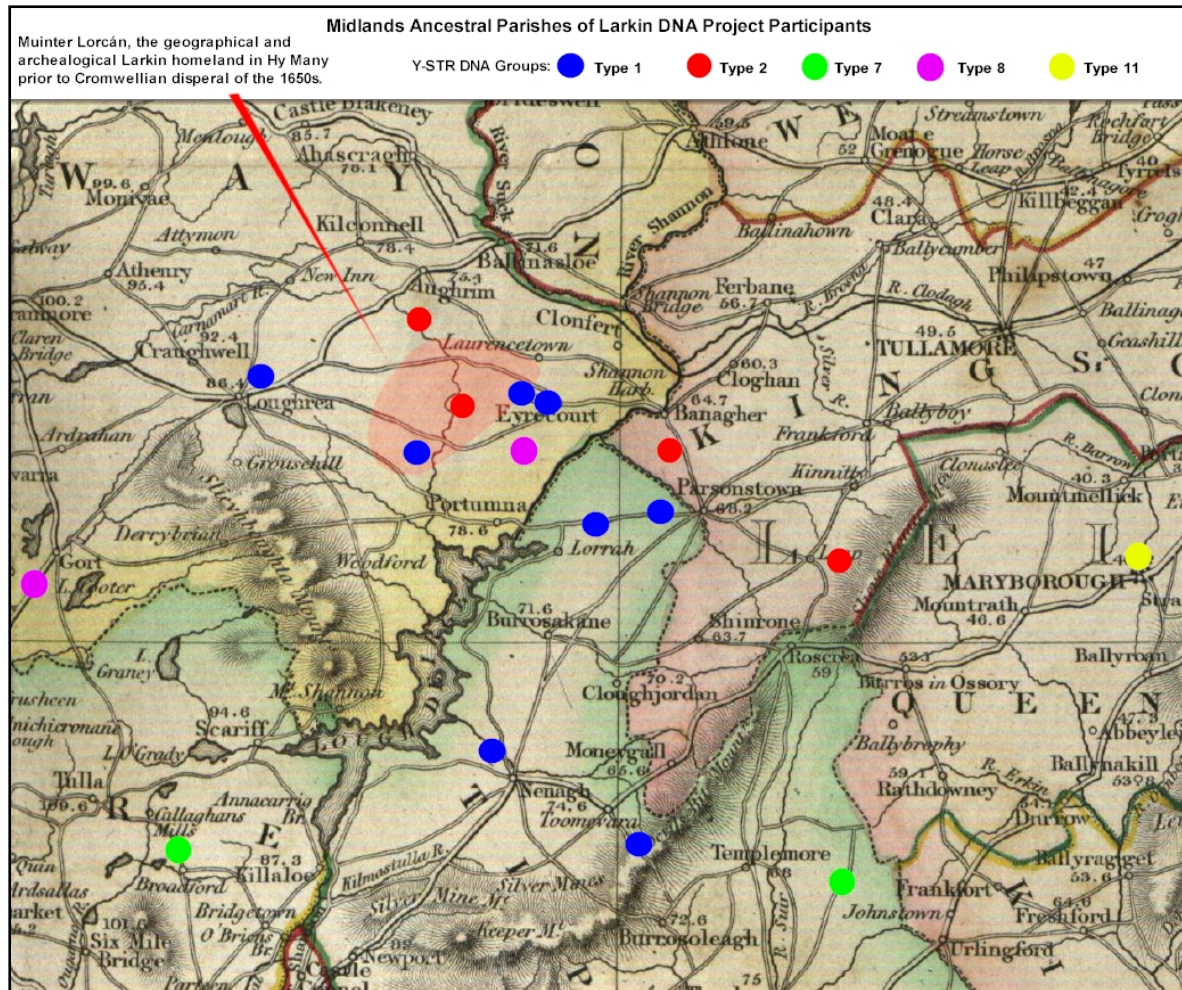
Ancient Ring Fort in Muintir Lorcán



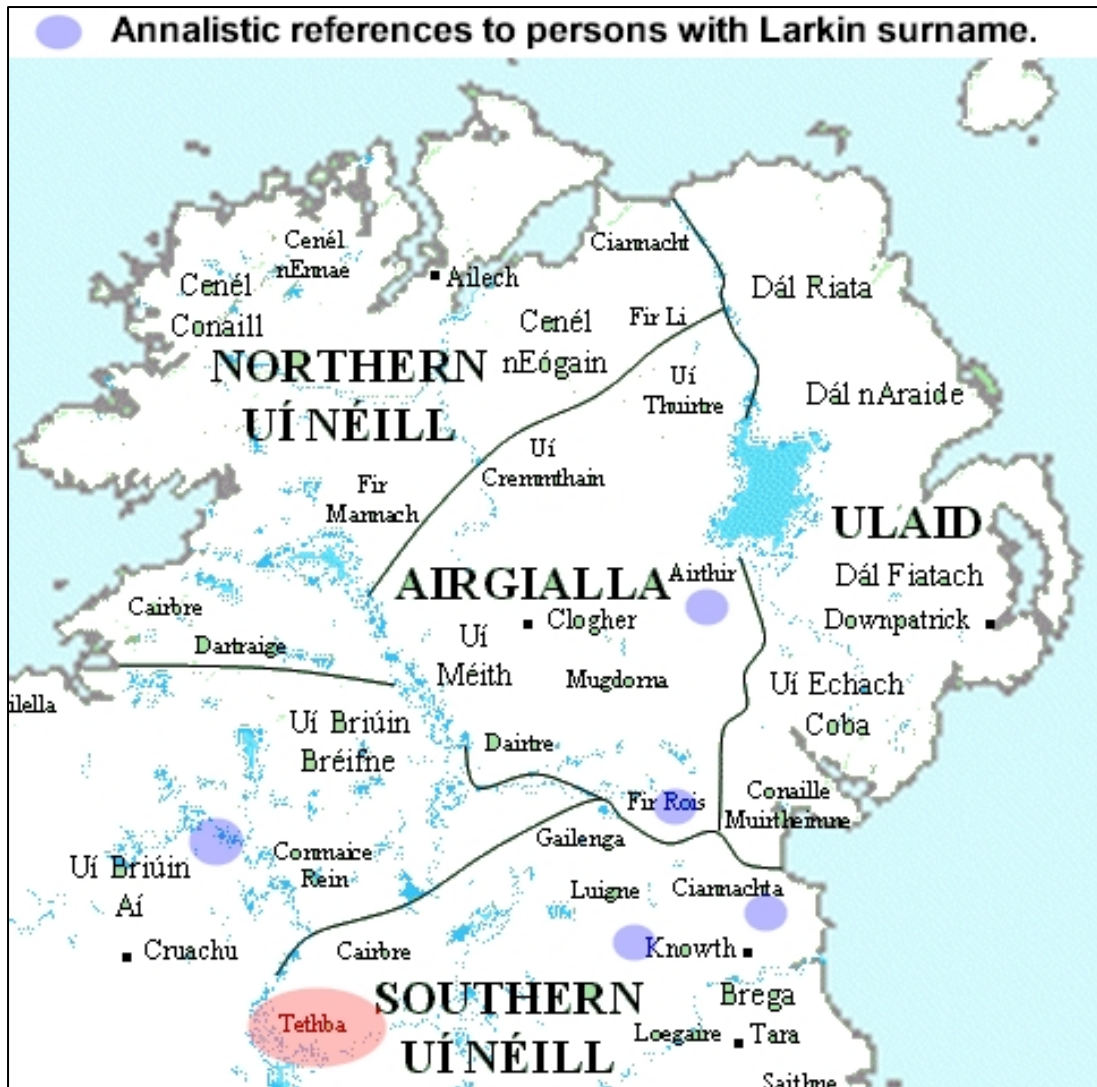
* Larkin Patrick B *Muintir Lorcán* presentation at Larkin Clan Gathering, Portumna, County Galway, 2009. Cites Larkin pardons and real estate in *Fiant Litterae Patentes*, Reference # 4718.

DNA Findings in Ui Maine

- Mostly R-M222 in Types 01 & 02.
 - Numerically constitute about 20% of the Larkin surname worldwide.
 - Type 01 is the single biggest group. 11/38 ancestral parishes
 - Part of Niall-of-the-Nine-Hostages cluster
 - 2014 sample from further north on the Shannon (County Roscommon) was Type 01 as well.
- Also Types 07 & 08
 - Type 07 matches last O'Kelley Lord of Ui Maine



Larkin Name in Ulster



- Ulaid Clans
- Clan Colla (Airgialla)
- R-M222

Ulaid Clans

- Irish annals mention the name *Lorcán* in the year 879 AD in the same areas where the surname is found in Ulster today.

*“These families are all noted in the Annals and are from two races - the Clan Colla of Oriel and the Ui Eathach Cobha (Iveagh, Co. Down) an ancient Clanna Rory tribe of Ulidia (ancient Ulster).” **



*David Austin Larkin, *The Ancient Septs of ÓLorcain* (2000), Queensland, Australia.

Clan Colla of Ulster

- Distinctive DYS425 DNA (null) STR marker deletion.
 - Equivalent to SNP Z3000
 - Larger group is well-studied as descendants of one of the *Three Collas of Airghiallagh*.*
 - Designated as Type 15 in the Larkin DNA Project.
 - Three American lineages
 - Two SNP-based subgroups now identified
 - Type 15a: Z3000-RS953
 - Type 15b: Z3000-BY3171

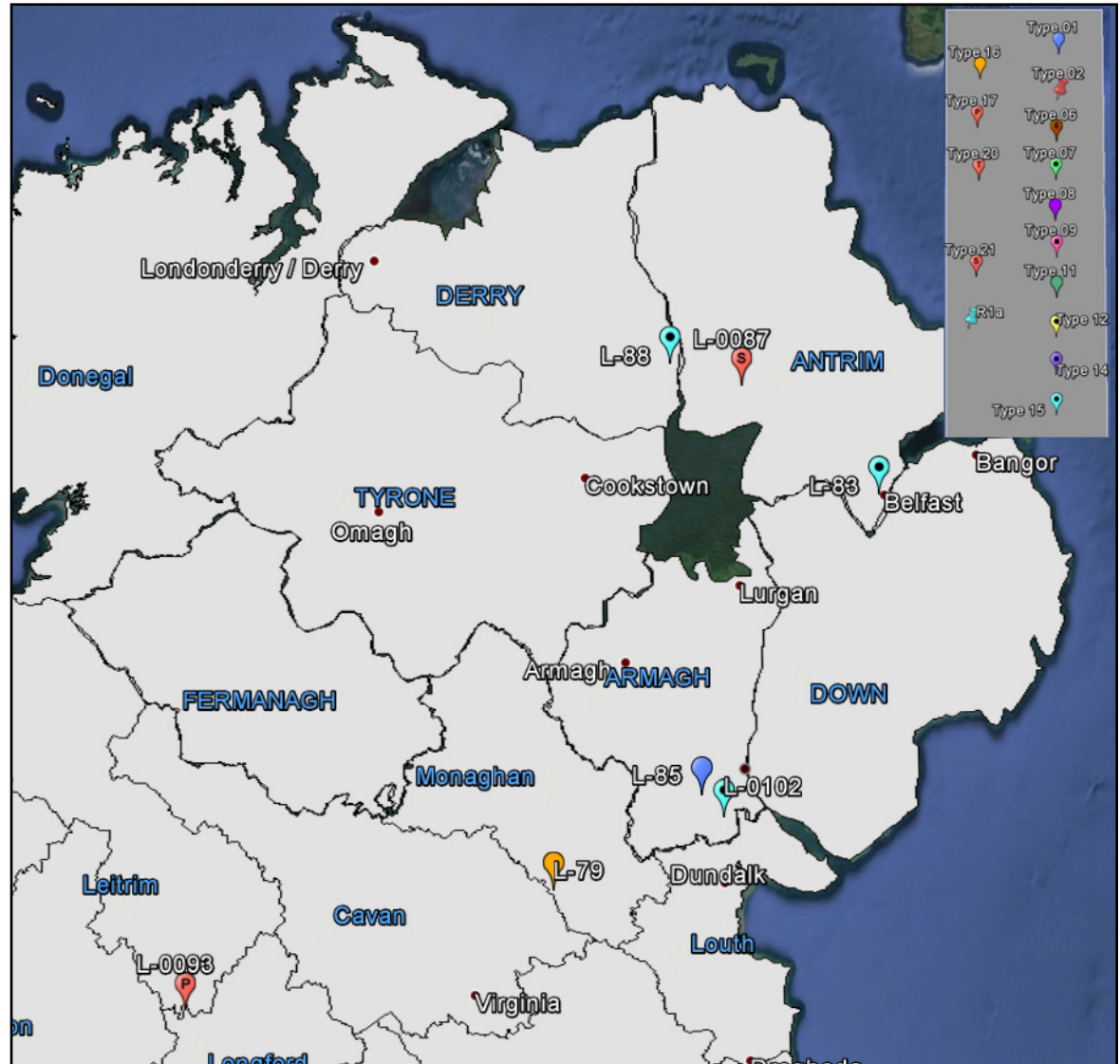
*Biggins P, McGuire J, McMahon P, Roderick T, *DNA of the Three Collas*,
<http://www.peterspioneers.com/colla.htm>

County Armagh Samples

- Forkhill, Armagh group sampled in 2012
 - Type 01, SNP: M222
- Jonesborough group sampled in 2014
 - DNA part of Larkin Type 15 from Clan Colla
 - But have BY3171 SNP different from Larkin's previously found in Derry.
 - Have oral tradition of coming from Wexford
 - Not supported by DNA. Seem very rooted in Ulster. Found there in paper records of Griffith's Valuation as well.
 - One American Larkin lineage has been able to connect its ancestry to Ulster because of this finding.

Ulster Sample Ancestral Locations

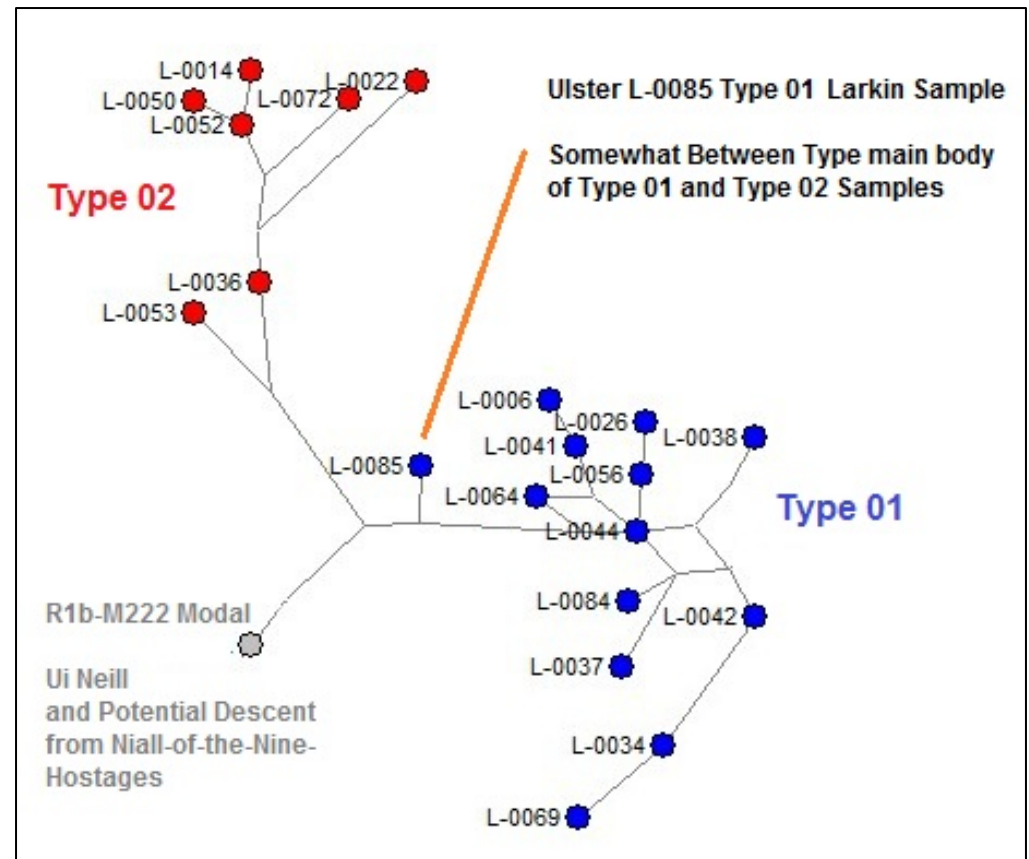
- Type 15
 - Derry & Armagh
- Type 21
 - Antrim
- Type 16
 - Monaghan
- Type 01
 - Armagh



Comparison of R-M222 Larkin Haplotypes

Y-STR DNA Similarities of Larkin Types 01 and Type 02

- Type 01 and Type 02 share a common ancestor around the year 540 AD.
- Tests on Larkins from Ulster with M222 marker support long history of Larkin surname with many small variations.
- Share SNP marker S7073 below M222.



Wexford - Larkin Kings of Leinster

*“Lorcán, son of Felim, king of Leinster from 923 until his death in Dublin 941.” **

- Kings of Leinster and descended from a High King of Ireland.
- Modern Larkin's sampled from County Wexford show consistency and distinctness we expect from a royal lineage.
 - Type 12 - Like most Irish males, positive for SNP L21 but are also positive for SNP Z253 but negative for SNP L226.
 - New SNP for Type 12 discovered in 2015: Z2186
 - Not similar to Kilkenny samples so hypothesis that some of this group might have been displaced there by Strongbow & Normans is not supported by modern DNA.

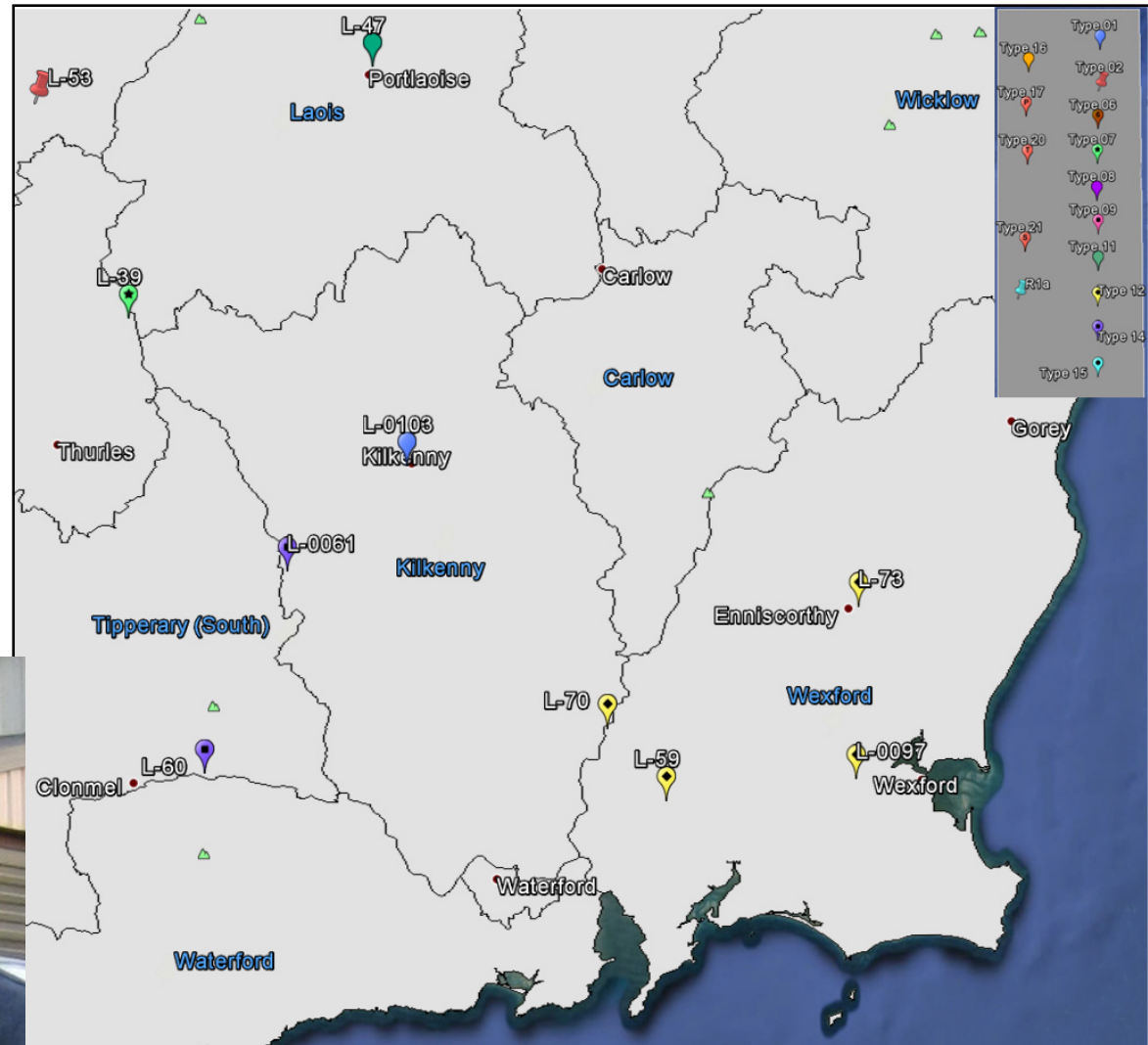
*David Austin Larkin, *The Ancient Septs of ÓLorcain* (2000), Queensland, Australia.

Larkins of Wexford

- Ancestral Parishes in the area of County Wexford are consistently Type 12
 - SNPs Z253 and Z2186

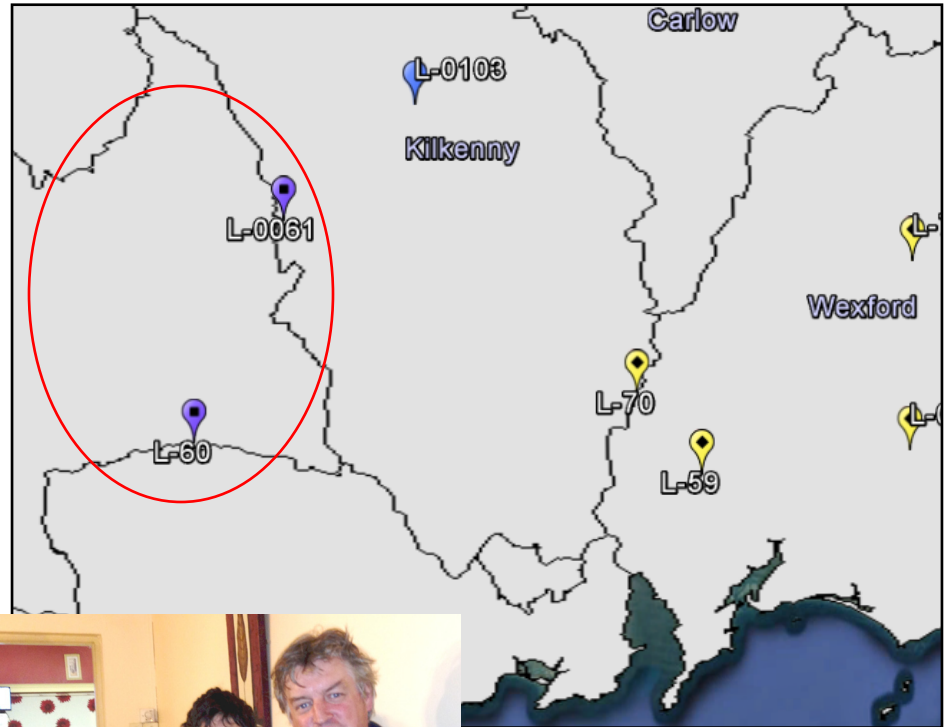


Image of Larkin Project participant with Wexford roots



Rural Kilkenny Larkins

- Y-DNA distinct from urban Kilkenny City Larkin family.
 - Type 14 (SNP L-21*)
 - Related to the Larkin family already identified in South Tipperary.
 - Rural Occupations, long tenure with place names such as Ballylarkin townland
 - Suspected (but not proved yet by DNA) to also be related to Larkin cluster around Templeglenta, County Limerick



Kilkenny City Larkins

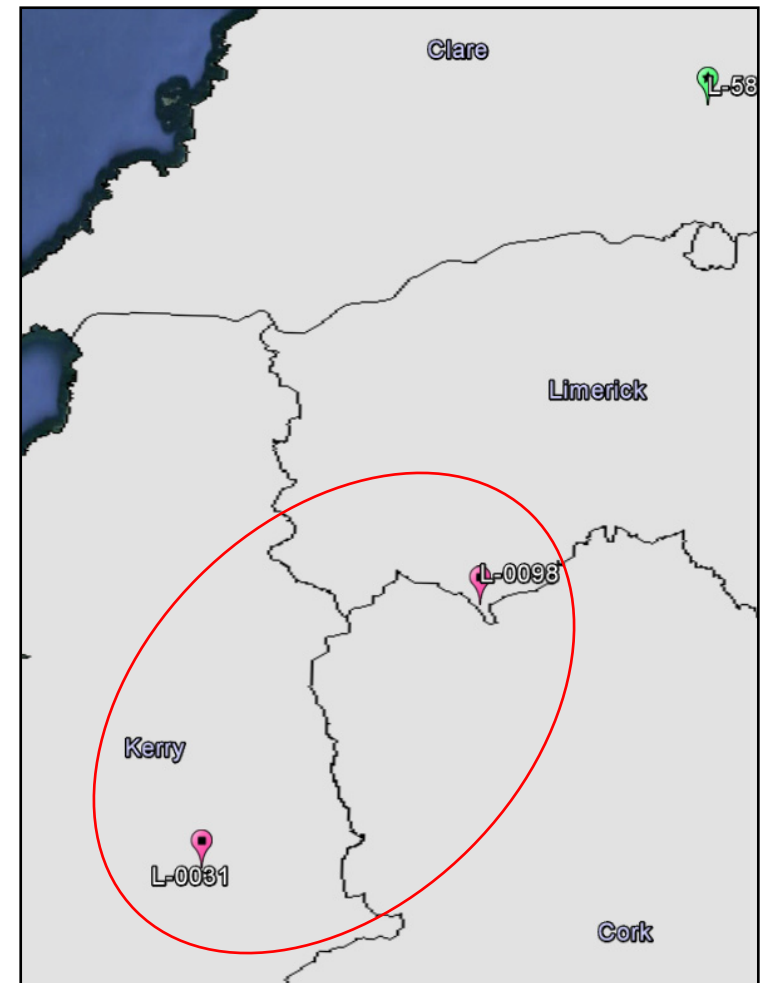
- Sample obtained from member of the renowned hurling family of Kilkenny City
 - Tradition of laborers and hurling sportsmen at least back to 1870s
 - DNA matches Type 01 from Shannon River Valley
 - Carry the M222 SNP
 - DNA disproves other hypotheses:
 - Not related to the Wexford group (Type 12) or rural Kilkenny group



Picture of Phil 'Fan' Larkin and son Philip, from joe.ie
(sample is from one of their cousins)

Southwest Ireland

- New sample from southwest County Limerick matches earlier sample from County Kerry
 - Type 09, SNP L226 South Irish Haplogroup



Brian Boru Connection

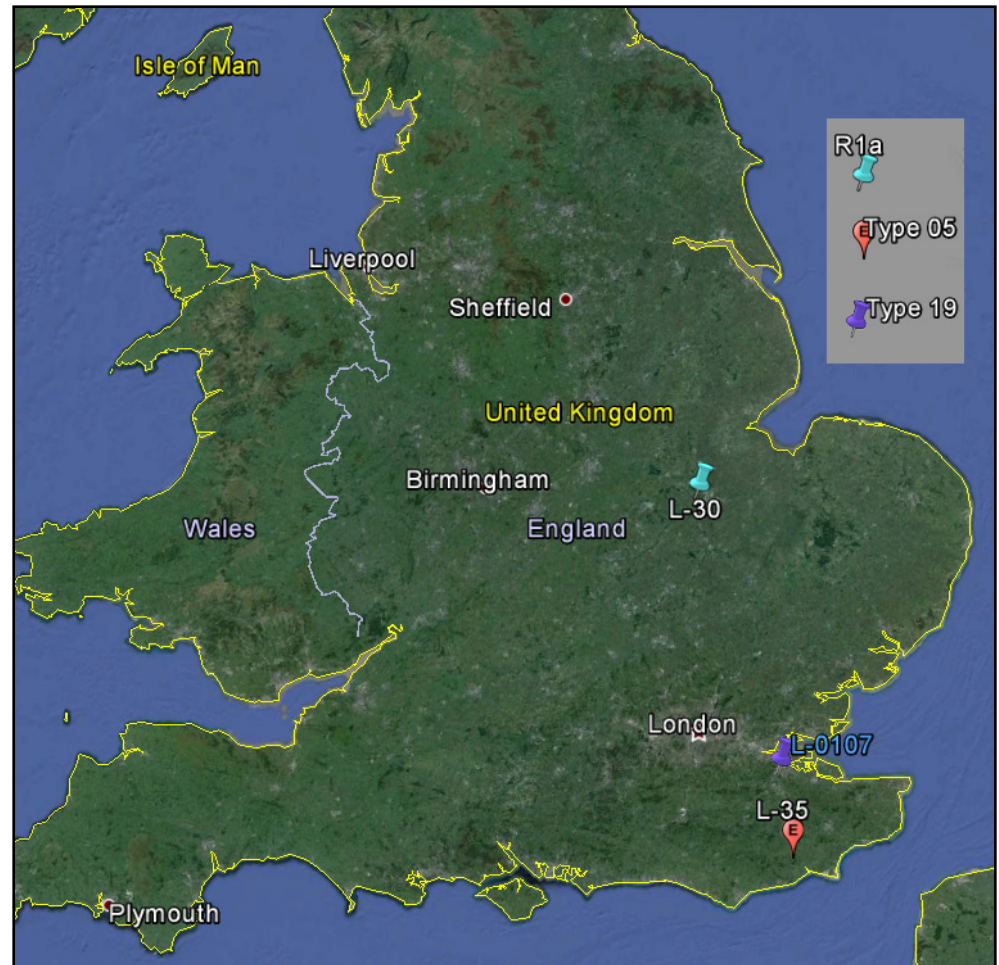


- Brian Boru was High King of Ireland
 - Defeated Vikings at Battle of Clontarf, 1014 AD
 - His grandfather was Lorcain, King of the Dal Cais ~ 900 AD
 - Descendants took O'Brien surname and became *Earls of Thomond*
 - Comparison of O'Brien sample with pedigree to Earls of Thomond*
 - L-0047 TMRCA: 630-1080 ybp
 - L-0031 TMRCA: 720-1230 ybp
 - Descent from King Lorcain implies a TMRCA of ~ 1090 years
- => The Larkin surname of Types 09 and 11 could very well could derive from *Lorcain, King of the Dal Cais*
- SNP L226 = part of Irish Type III cluster

* O'Brien sample part of *Irish Type III Project* by Dennis Wright, <http://www.irishtype3dna.org>.

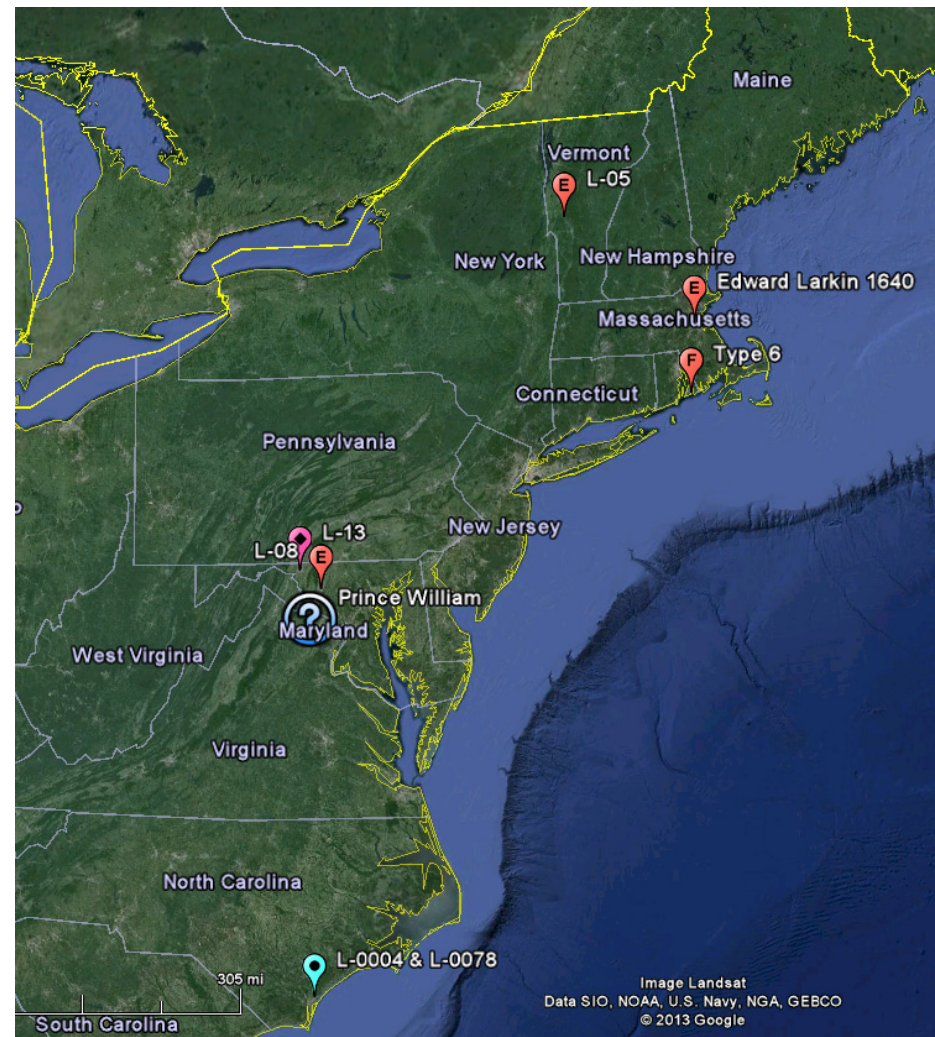
English Larkins

- Larkin as a surname comes from Sussex and Kent counties in the late 1200s.
 - Sussex Subsidy Rolls: 1296 Adam Lartkyn and Thomas Lorekyn
 - Industrial revolution caused migration of Irish Larkins to England & Scotland.
- Ancestral Geographies Sampled:
 - Type 05 - Beckley, Sussex
 - R1a - Chesteron, Cambridgeshire
 - Type 19 – Chatham, Kent



Colonial America

- No European matches:
 - Type 06 – Edward Larkin 1655 Newport, Rhode Island
 - Unidentified DNA – Prince William County, Virginia
- Matches to Ireland
 - Type 15 – Roger Larkins 1760 New Hanover County, North Carolina
- Matches to England & Germany
 - Type 05
 - Edward Larkin 1638 Charlestown, Massachusetts
 - Type 18
 - Thomas Larkin 1731 Frederick, Maryland

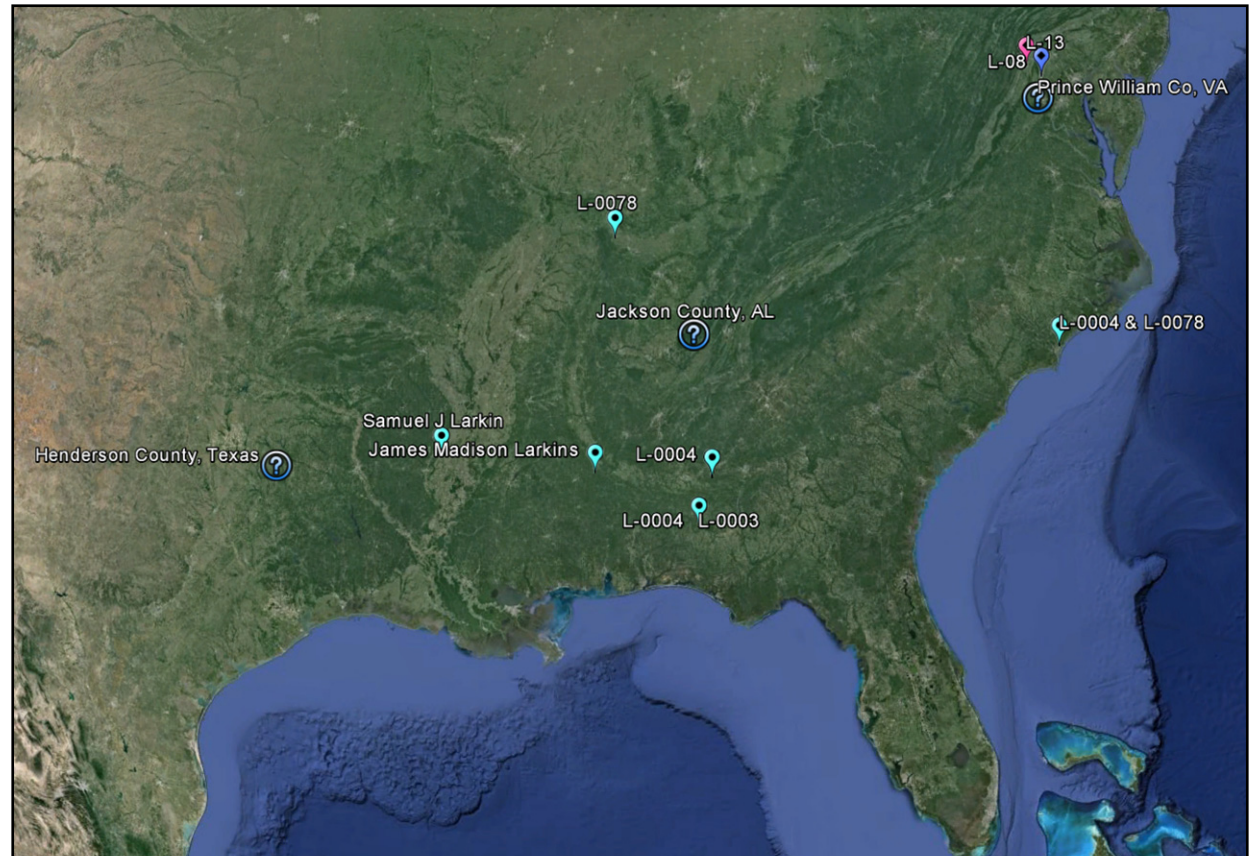


Southern Antebellum Larkins

- Only two slave-holding family groups of Larkins
 - Prince William County, Virginia
 - Larkin families spread to Franklin & Hawkins Counties, Tennessee, Jackson County, AL, and Henderson County, TX
 - » No confirmed DNA sample yet
 - New Hanover County, North Carolina
 - Larkin families spread to Kentucky, Alabama and Louisiana in the 19th century.
 - Progenitor: Roger Larkins, 1760, New Hanover, North Carolina
 - » Y-DNA: Type 15

African American Locus Map

- Illustration of geographic locations of slave-holding Larkin family migrations
- For African Americans with the Larkin surname, it is likely that ancestor traces to one of these geographies.



European Ancient DNA

- Y-DNA samples from ancient graves in western Europe have big differences from modern era:
 - Haplogroups I and G predominant in stone age graves
 - Haplogroup R was not found in Central Europe before 3000 bc

Example	Approx Date	Y-DNA Haplogroup
Cheddar Man - England	8000 bc	"Not properly published"
Sweden	6000 bc	I & I-M223
Germany	5600 bc	G2a & F
Spain	5000 bc	G2a & E
Otzi – Italian Alps	3200 bc	G2a
France	3000 bc	G2a & I-M223

Irish Ancient DNA Results

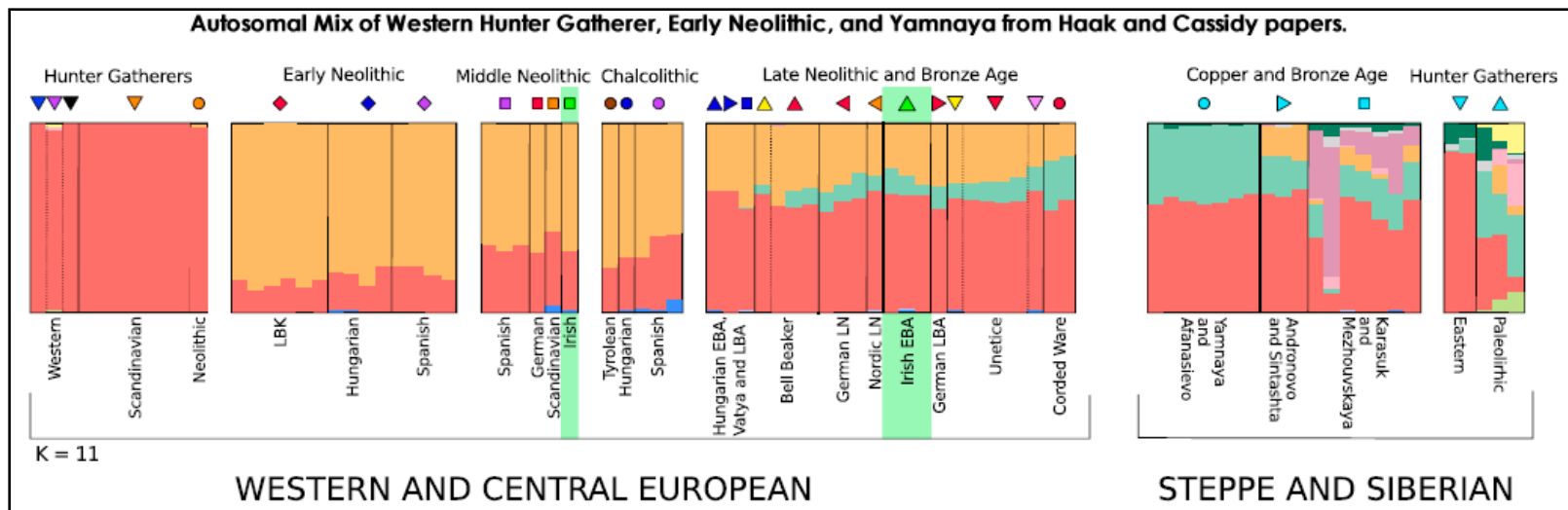
- New approaches to targeting ancient DNA (ADNA) from grave sites.
 - Use of temporal bones producing dramatically higher result yields.
 - First Irish ADNA paper published in 2015^{*}
 - Supports Bronze-age Celtic invasion hypothesis (Demic Diffusion)
 - Series of invasions, lastly by Milesian warrior culture
 - Three ancient Y-DNA individuals from Rathlin Island, County Antrim
 - Date from ~ 1700 to 2000 bc
 - SNP **R-L21** (Table S8.1 rs11799926 = L21)
 - » Just like 83% of modern Larkin DNA Project Participants



^{*} Cassidy et al (2015), Neolithic and Bronze Age migration to Ireland and establishment of the insular Atlantic genome, [PNAS](#)

Autosomal Mix of Ancient DNA

- Autosomally, the ancient Irish samples were consistent with emerging ADNA studies from Europe showing a mix of three ancient populations over time^{*}
 - Western Hunter Gatherers
 - Early Neolithic (LBK culture, middle eastern agriculture)
 - Yamnaya from Siberia (corded ware, steppe warrior culture, metal working => CELTS; Y-DNA SNP = L21)



^{*} Haak et al (2015), Massive migration from the steppe is a source for Indo-European languages in Europe, [Nature](#)

Modern DNA Connections

- Ancestral Parish Sampling has led to some success stories where participants learned their ancestral origin with 1 DNA test:
 - Tennessean from Galway
 - North Carolina from Clan Colla, Ulster
 - Californian from Lorrha, Tipperary
- In some cases, we're still looking for the ancestral sample that will connect with Larkins worldwide
 - =>Recruit participants with Larkin Ancestry



Can a DNA Test Tell Where You Came From?

- Yes – if persons who you match known their origin and have already been tested
 - Larkin DNA Project is now more than 10 years old.
 - Lots of progress since 2005
 - Initially no one had a match.
 - Now about 49% of participants with Larkin Ancestry can connect to a researchable geography.
 - By 2024, probably 90% of Larkins will be able to confidently connect to an ancestral geography
 - Modern genealogy is about 171 years old, so we're still catching up.



Famous Larkin Lineages Not Yet Identified

- Labor Leader 'Big Jim' Larkin –
– Father from Lower Killeavy,
County Armagh
- Manchester Martyr – Michael Larkin,
Lusmagh, County Offaly
- Poet Phillip Larkin – western England
- GAA Pioneer 'Paddy' Larkin – Killimor,
Galway & Chicago



How You Can Participate

- Join the Larkin DNA Project with a Y-37 STR test from your family.
- Recruit participants with known ancestral origins.
- Sponsor Ancestral Parish Sample Testing



The Larkin DNA

Open to all families, any spelling

[Patriarchs](#) [y-Results](#) [Join Project](#) [Discussion](#) [Help](#) [Order Test](#) [Pedigrees](#)

Project Home Page

The Mission of the Larkin DNA Project is to:

1. Provide a focus for persons with the Larkin surname and its variants from around the world to use DNA testing to identify their origins and migratory patterns.
2. Provide assistance to Larkin members with understanding and interpreting their DNA test results.
3. Help Larkin Clan members get a discount on DNA testing.

Click [here](#) to order a DNA test now

Links to Larkin Research

- Larkin DNA Project Site
 - <http://www.worldfamilies.net/surnames/larkin/>
- *Searchable list of castles, surnames, & place names plotted on maps*
 - www.genetichomeland.com
- *Larkin DNA Project – Ancestral Parish Sampling in Ulster and Wexford*
 - <http://www.surnamedna.com/?articles=larkin-dna-project-ancestral-parish-sampling-in-ulster-and-wexford>
- *Larkin DNA Project - Ancestral Parish Sampling on the Shannon River*
 - <http://www.jogg.info/62/files/Larkin.pdf>
- *Larkin Clan Site*
 - <http://www.larkinclan.eu>

