# DNA and Digitization in Irish Genealogy

Using new resources to make breakthroughs in your Irish family tree.



#### **Brad Larkin**

Prepared for the Southern California Genealogical Society Jamboree 2019



#### Overview

- Online tools for making new genealogy discoveries about your ancestors from Ireland have increased radically in the past six years.
  - Digitization and indexing of surviving paper records
  - DNA sampling of modern Irish descendants and residents

# **Topics**

- Most Important, Digitized Irish Records
  - Tithe Applotment Books
  - Griffith's Valuation
  - Maps
  - Parish Registers
- Other Digitized Records
- Genetic Genealogy DNA

### Tithe Applotment Books

- Earliest surviving recordset of rural households from all 32 counties.
  - Typically recorded in 1820s and 1830s BEFORE THE FAMINE
  - Handwritten list of heads of household, acres of land, and tithe amount assessed per year.

Valu	ation and Applotm	ent of the paris	of Knigh under the Tithe Composition Acts.
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Ball.	Muly Donovan Edmond Hogan	3 3 32 43	8 17 8% 15 11 2
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the state of	Michew Hayes	3 3 /5 /13/	8 13 12 4 6
	Not	224230	471 16 3 ". " 34 " 5

#### Then and Now: Tithe Applotment

#### Old Way – Back Then

- Go to a Genealogy Library
- Pull Paper Index of Tithe & Applotment by Surname by Barony & Parish
- Order Microfilm or go to Dublin
- Troll microfilm of handwritten pages

#### Now with Digitization

- http://titheapplotmentbook s.nationalarchives.ie
  - or Signup for Ancestry.com
- Search by first, last, or just browse

#### Griffith's Valuation

- Recorded for taxation in 1850s and 1860s
  - Typeset in 19<sup>th</sup> century
  - Most complete coverage of the entire island
- Now searchable online by name or place
  - AskAboutIreland.ie
  - Ancestry.com
- Indexed to detailed maps

No. and Letters of Reference to Map.	Names.			Day Andrew Processing		Area		Net Aunual Value,			
	Townsands and Occupiers. Immediate Lessors.			Description of Tevement.		Ara.		Land.	Buildings.	Total.	
	LORRHA—continued. VILLAGE OF LOREKA, continued.				А,	R,	r.	£ s. d.	£ s. d.	£ s. d	
- 42	Thomas Kennedy, .	Patrick Heaguey,		House and yard,		_		- 1	0 5 0	0 5	
- 43	Thomas Kennedy,	Francis II. Toon,	- 40	Garden,	0	U	17	0 2 0	<u>~</u>	0 2	
- 44	Patrick Kennedy, .	Patrick Cleary, .	- 33	House and garden, .	0	0	25	0 5 0	1 15 0	2 0	
- 45	Denis Lynch (post-office)	Same,	3.	House and garden,	0	0	17	0 3 0	1 7 0	1 10	
- 46	Thomas Needham,	William Coonan,		House & small garden,		_			1 10 0	1 10	
- 47	James Loughnane, .	Francis H. Toon,		House, office, & sm. gar.,			- 4		1 10 0	1 10	
- 48	Patrick Flamgan.	John Larkin, sen.		House.		_	- 1	_	0 10 0	0 10	
- 49	John Larkin, sen.	Francis H. Toon.		House and earden.	O	9	0	A 10 A	0.10 0	7 7/4	

#### **Historical Parishes**

- Civil Parish
  - Basis for Tithe & Griffith enumerations
  - With some changes, correspond to modern Electoral Divisions in the Republic of Ireland.
- Church of Ireland Parishes
- Roman Catholic Parishes
  - Basis for Catholic Parish Records
  - Were reorganized and consolidated following Penal Laws and shortage of priests
  - Continue to be 'Unioned' and reorganized today

# Other Map Divisions

#### Barony

- Feudal political structure from Norman to famine times
- Original basis for land ownership

#### Poor Law Union

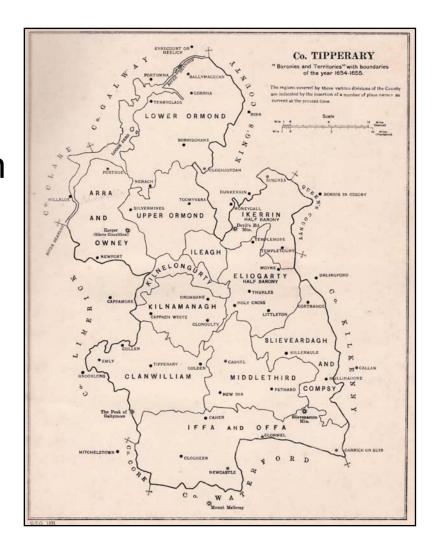
- Attempt to reorganize taxes and local governance around population centers in 19<sup>th</sup> century
- Electoral Divisions (ED)
  - Lowest level of modern government geography in Republic of Ireland
  - Often correspond with historical civil parishes
  - Historical Counties are preserved

#### Administrative Divisions

- Lowest level of government geography in modern Northern Ireland
- Historical county structure disbanded

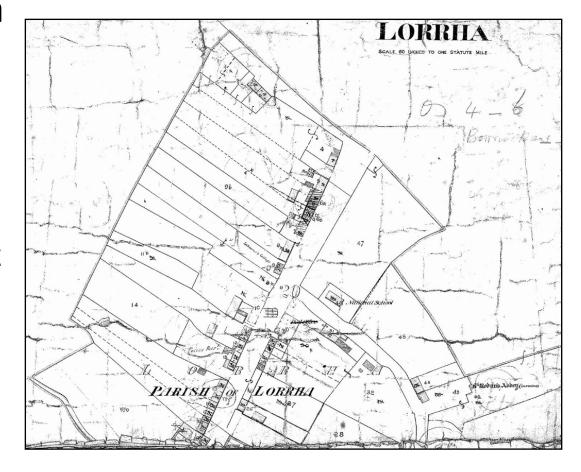
### **Historical Map Divisions**

- Knigh Civil Parish
- Monsea Catholic Parish
- Nenagh Poor Law Union
- Barony of Lower Ormond
- County Tipperary, North Riding
- Province of Munster



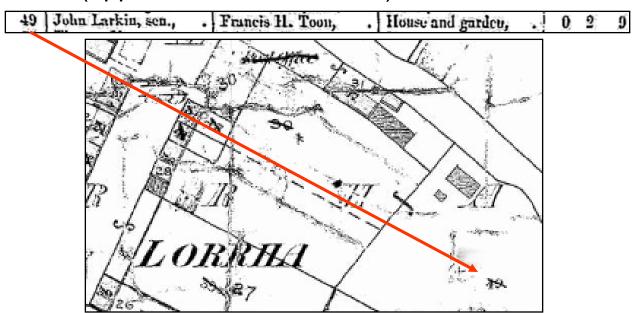
# Online Maps

- Griffith Valuation keyed to Ordinance & Survey (OS) maps
  - Combine
     historical and
     modern maps at
     GeoHive.ie
    - Adjustable Transparency
  - 19<sup>th</sup> century city street plans are hand-drawn inserts



# Matching Reference to OS Map

- Typed original numbers match map
  - e.g. Lorrha, County Tipperary
    - # 49 John Larkin senior, tenant of Francis Toon
      - with house and garden on 2 roods, 9 perches of land (approx 0.6 modern acres)



# Adjustable Transparency

 Example GeoHive map images showing Lorrha village with 1837 OS map overlaid on modern map with adjustable transparency.



# Parish and Civil Registers

- Problems Solved with Digitization
  - Records consolidated online at RootsIreland.ie for most counties
    - Roman Catholic Church
    - Church of Ireland
    - · Civil Registration of Births, Marriages, and Deaths
  - Searchable index with linkage to images of originals at National Library of Ireland
  - Subscription Based

#### Irish Civil Records

- RootsIreland.ie has assembled good collection of civil and church records.
  - Combining information from 34 county historical centers.
- 9.8 million births
- 4.8 million marriages
- 1.8 million burial & death
- 427 thousand cemetery markers



# Civil Birth Record Example

- Irish Civil Birth records in Ireland improve in latter part of the 19<sup>th</sup> century.
  - Shows mother's maiden name, address, and other useful information.

			Civil Birth Record
Name:	John Larkin	Date of Birth:	11-Mar-1890
		Registration Date:	19-Mar-1890
Address:	Clare St Nenagh	Parish/District:	NENAGH
Gender:	Male	County	Co. Tipperary
		Denomination:	Civil Record
Father:	Joseph Larkin	Mother:	Mary Carey
Occupation:	Labourer		
Sponsor 1 / Informant 1:	Mary Larkin	Sponsor 2 / Informant 2:	Not Recorded
	Notes:		
	X **** **** MOTHER		
© 2018 Copyright No	orth Tipperary Genealogy Centre		www.rootsireland.ie

#### Civil Record Certificates

- Searchable index coming online in 2018-2019 on <u>irishgenealogy.ie</u> run by the General Register Office (GRO) of the Republic of Ireland
  - Have records for all 32 counties in the 19<sup>th</sup> century.
  - Copies of original certificates can be ordered via mail or fax for a fee of €4.00 from the GRO
    - Or purchase in-person:
      - Werburgh Street, Dublin
      - Convent Road, Roscommon, Co. Roscommon
  - Purchase online for €20.00 from 3<sup>rd</sup> party HSE Civil Registration Service site <a href="https://www2.hse.ie">https://www2.hse.ie</a>



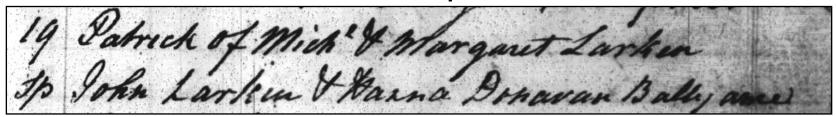
# Parish Church Registers

- Can be very helpful in locating a particular family when multiple children baptized in same parish over the years.
- Suffer from inconsistent start dates & execution

   especially in the 1820s and 1830s when
   Famine emigrants were generally born.
- Widespread use of the same forenames makes it difficult to distinguish between families within the same surname.
  - e.g. 18 Patrick Larkin's baptized in County Tipperary registers 1830-1840.
- Original books & scans often hard to read.

# Finding Gold in the Register

- Available at Ancestry.com and RootsIreland.ie, with raw images at <u>National</u> <u>Library of Ireland</u>.
- If you are able to make a firm connection, can be very informative.
  - Often includes marriage, maiden name, and address as well as baptism date.



### Parish and Civil Registers

- Old Problems Still Around
  - No 'New' parish church books found in a long time
  - Adoption and retention of birth, marriage, and death registers very inconsistent across parishes
  - Civil registrations not started early enough in most localities to help descendants of famine emigrants.

# **Topics**

- Most Important, Digitized Irish Records
- Other Digitized Records
  - 1901 & 1911 Census
  - Ships Passenger Lists
  - Military Records
  - Cemetery Markers
  - Newspapers
  - Wills & Estate Papers
  - Deeper Historical Records
- Genetic Genealogy DNA

#### Census of 1901 and 1911

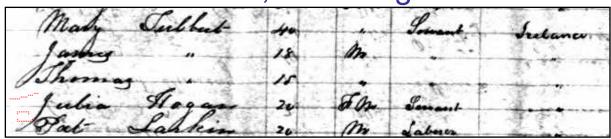
- Searchable
- Free online
  - National Archives of Ireland
  - Ancestry.com
- While not usually helpful for famineera ancestors, can be very helpful in finding and identifying cousin families that stayed in Ireland.



		CE	NSUS (Two Exa				ELAND e are given on the other side.)
RI	ETURN of the MEMBERS of th	is FAMILY	and their VISITORS		ORI		
	NAME and SURNAME.	RELATION to Head of Family	RELIGIOUS PROFESSION.	EDUCATION.	AGE.	SEX.	RANK, PROFESSION, OR OCCUPATION.
Number.	No Persons arrangement of Sunday, Marchalles, be entered here: EXCEPT these incide ensured here: EXCEPT the since the summer delication of the Part (1997). A PARILLES of the AMERICA, and APARILLES of the Sunday of the Head	State whether "Head of Family," or "Wife," "Son," "Daughter," or	State here the pericular Religion, or Religious Denomination, to which each person belongs. [Members of Protestant Denominations are requested not describe allows are requested not to describe a continuous control of the second of the control of the second of the pericular church, Denomination, or Jody, to which they belong:	can "Read and Write," can "Read "only, or "Cannot Read."	Years on isst Birth- day, Yea	"M" for Males er and "F" for	State the Particular Rank, Profession, Trade, or other Employment of each person. Children or young persons attending a School, or receiving regular instruction at home, should be returned as School are to the person of the pe
1	Margaret Stermedy	headoffons	Roman Catalich	Read and write	60	7	Farmers wife
2	Daniel Remedy	Son	Roman Catalich	Readandwet	30	M	Farmer Son
3	Sizzie Kennedy	Doughto	Roman Caterle	Bead and with	20	7	Farmer Daughter
4	James Tarkin	Dervan	Roman Cateslie	Cannotreadyura	60	M	Dervant

# Passenger Ship Lists

- Like Parish registers, some ship lists seem to be lost
- Common first and last name combinations can make it hard to identify your ancestor.
  - Context & Oral History clues can help.
    - e.g. Patrick Larkin traveled on same ship with his future sister-in-law, Julia Hogan



# Military Records

- British Military
  - Surviving service records of the First World War (1914) are transcribed at <a href="https://www.ancestry.com">www.ancestry.com</a>
  - Pre-1914 service and pension records at <u>FindMyPast.co.uk</u>

of	Chels	ea Hos	pital	in the 22 Plymouth May. 1848, inclusive.	District, from	g the Out-Pe
	the_	VI Z		. Pensioners transferred from	the District.	
Regt.	Rate of Pension	Date of Admission to Out- Pension	Rank	Name of Pensioner	District to which transferred	Date to which Pensioner was paid previous to transference
5 Foot	8	1848 25 Jany	P	George Mills -	Volunteer for Mudsons Bay	
34	1		1000	John Might	Hermay	30 April
68	1/1	1825 24 Augte	P	Charles Miller	2 W.D. London	31 May

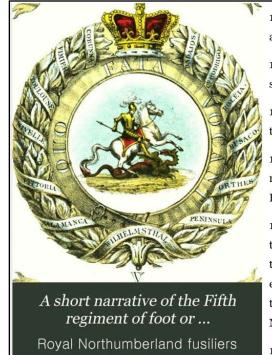
#### **British Unit Histories**

 Most 19<sup>th</sup> century British military units did service in Ireland at one time or another.

Unit histories can provide geographic details, even if

ancestors were not named officers.

- Many available instantly on Kindle from Amazon.com
- Military Barracks are also shown prominently on Valuation Maps



1837. Embarked from Malta on the 28th March, and arrived at Corfu on the 4th April.

1838. The reserve battalion was ordered to Ireland and stationed at Birr,

1839. 10th April, the reserve battalion moved from **Birr**, to Galway.

1842. 15th February, the left wing of the service companies embarked at Corfu for Gibraltar; 15th March, the Head Quarters and right wing embarked.

1843. Eight wing and Head Quarters embarked on the 22nd April, disembarked at the Cove of Cork on the 12th May, and marched to Fermi; the left wing embarked on the 20th May. On the 7th July, both battalions were incorporated at **Birr**, 4th April, Sir Jasper Nichols, K.C.B., appointed Colonel.

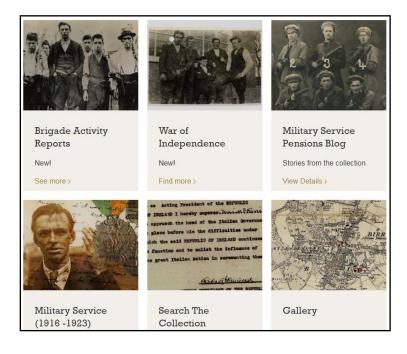
1844. Quartered at Belfast.

# Irish Military Records

- Ancestry.com
  - 1922 Army Census
  - Kilmainham Pensions

- http://www.militaryarchives.ie
  - Easter Rising of 1916
  - War of Independence 1919-1921
  - Brigade Activity Reports
  - Pension Records





#### Other Records Online

#### Background

- These records are not going to be complete for entire island of Ireland.
- But can be very informative for specific geographies.
- Tend to record property-holding families.

#### Cemetery & Grave Memorials

- RootsIreland.ie
- Findagrave.com
- RIP.ie



#### U.S. Gravestones with Clues

 Around 1900, it became fashionable to record a little bit of geographic information on Irish-American tombstones.

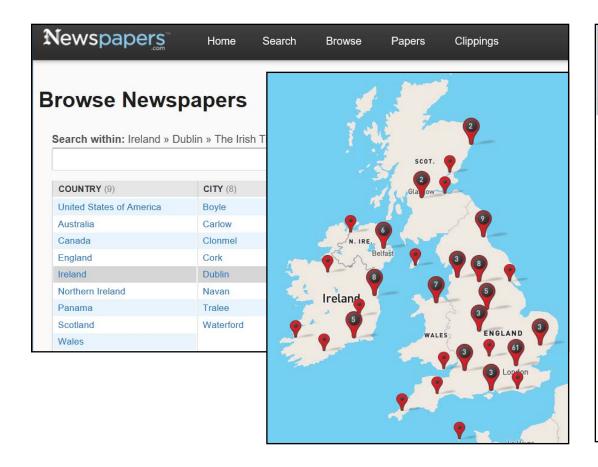
 e.g. Our Patrick Larkin baptized in 1835 was memorialized with a large tombstone in 1895

that states "County Tipperary" but implies birth in 1836/1837.

 Famine Irish Immigrants were often 'creative' or not fully informed of their true date of birth.

### Newspapers

- Newspapers.com
  - About 24 Irish Newspapers online



- Unfortunately, the contents of the large newspaper collection at the *National Library of Ireland* is not online.
  - But a catalog index of those holdings <u>now</u> online.



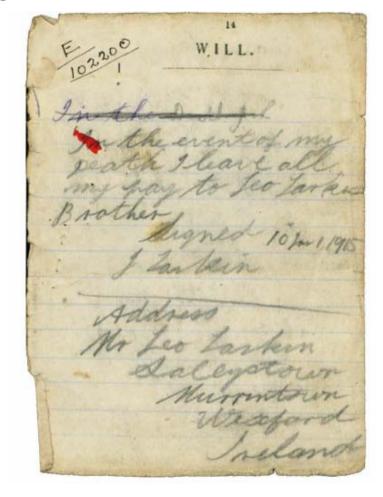
#### Calendar of Wills and Administrations

- Searchable index now online
  - -1858-1920
  - **1923-1982**
- Entries include brief sketch
  - Heir or Executor
  - Relationship to deceased

394 WILLS AND	ADMINISTRATIONS. 1876.
LARKIN Hugh.  [131] Effects under £200.	2 May.  Letters of Administration of the personal estate of Hugh Larkin late of Esker County Galway Farmer a Bachelor de- ceased who died 6 March 1876 at same place were granted at the Principal Registry to Eleanor Larkin of Esker aforesaid Widow the Mother of said deceased.
LARKIN Hugh.  [348] Effects under £100.	of Hugh Larkin formerly of 8 Stephen's-green and 8 Holles-street both in Dublin and late of the Hospital for Incurables Donnybrook County <b>Dublin</b> Billiard Marker deceased who died 5 August 1876 at the Hospital for Incurables was proved at the <b>Principal Registry</b> by the oath of Peter Ward of 20 Christchurch-place Dublin Printer and Publisher the sole Executor.
LAUGHLIN Eliza.  [28] Effects under £100.	3 February. Letters of Administration of the personal estate of Eliza Loughlin late of 65 Townsend-street Bublin Widow deceased who died 12 December 1875 at same place were granted at the Principal Registry to Charity Powell of 46 Church-street Widow and Ellen Lilly of 65 Townsend-street (Wife of John Lilly of 12 Leawood-terrace Onslow Gardens London Commercial Clerk) the Sisters of said deceased.

#### Some Recent Collections

- Chief Secretary's Office Registered Papers
  - Online Catalog for years 1818-1830
    - Must visit Dublin to see documents
- Soldiers Wills
  - Available and searchable online
  - Often includes geographical address of heir



# Older Record Examples

- Civil Survey of 1654
- 16<sup>th</sup> & 17<sup>th</sup> Century Census Substitutes
- Annals of Ireland
  - Genealogical Books Derived from Annals
- Royal Fiants Letters Patent
- Papal Registries

# Civil Survey of 1654

- Commissioned by Cromwellian Government
  - inventory the lands in Ireland in preparation to transfer land to Cromwellian soldiers in lieu of pay in the English Civil War.
  - Set in a before & after list of owners of land in each County, Barony, Parish, and Townland
    - e.g. Before: the Gaelic chieftains who had established English property titles
    - After: which Cromwellian soldiers / investors obtained land title
  - Lists only the Owner typically the prominent families, not the laborers or subtenants.
  - Published as books by County in 20<sup>th</sup> century.
    - Some in public domain, some only recently digitized

# Civil Survey of 1654 Example

 Title page and example of Donogh Kenedy (sic) of Lackeene Castle, Lorrha, Tipperary

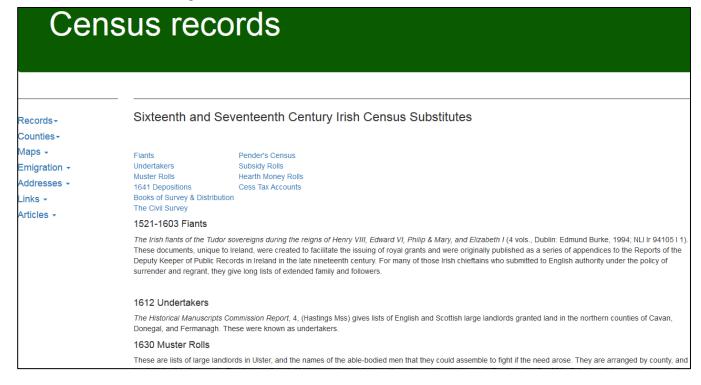
COIMISIÚN LAIMHSCRIBHINNI NA hÉIREANN IRISH MANUSCRIPTS COMMISSION THE CIVIL SURVEY A.D. 1654-1656 COUNTY OF TIPPERARY VOL I. EASTERN AND SOUTHERN BARONIES Prepared for Publication with Introductory Note ROBERT C. SIMINGTON Of the Quit Rent Office, Dublin PUBLISHED BY THE STATIONERY OFFICE, GOVERNMENT PUBLICATIONS SALE OFFICE, 5 NASSAU STREET, DUBLIN, C.2, Price Ten Skillings.

» Digitized as PDFs on AskAboutIreland.ie

Proprietors names in 1640	Denominacon of lands	Number of plant acres by estimat	Lands pfitable and the quantity	Lands unpfitable and the quantity	Value of the whole & each of ye sd lands		
Donogh Kenedy of Lackeene Irish Papist	Lackeene, Coro- hagh, Bally- bryen Liscur- rine and Lurhoe. Nyne plds	A R P 1769:00:00	Arable 1140:00:00 meddow 0070:00:00 pasture 0160:00:00 shrubby 0049:00:00	Redd 350:00:00 Bogg 3	li s. d. 080:00:00		
	The sd Nyne plds being in one continent are bounded on the east with the pld of Rathmckeina in the Parish of Durra and a pld of Lishernane in this parish of Lurhoe, on the west with the pld of Annagh and the pld of Bredagh in this Parish on the North with the two plds of Carrigeene and the two plds of Grainge both in this parish of Lorhoe, and on the south with the pld of Kilcregane and the pld of Ballyquirke both in this parish of Lorhoe  The sd Nyne plds of Lackeene, Corohagh, Babryen, Liscurrine and Lurhoe afforesaid descent from his Ancestors.  Of the sa nyne plds of Lackeene, Corohagh, Babryen, Liscurrine and Lurhoe afforesaid descent from his Ancestors.  Of the sa nyne plds there was mortgate to Kein Callanane two plds called Corohagh before the yeare 1640 as were are informed. Uppon the above continent of lands stated of ruined castle & bawne of Leackeene walls onely standing an orchard and garde mill standing on a little brooke running through the pld of Rathmckeina in the parish of Lurhoe, on the west with the pld of Grainge both in this parish of Lorhoe, and on the south with the pld of Kilcregane and the pld of Ballyquirke both in this parish of Lorhoe.						

# 16<sup>th</sup> & 17<sup>th</sup> Century Records

- JohnGenham.com web site has excellent lists and descriptions.
  - e.g. Hearth Money Rolls



#### **Monastic Annals**

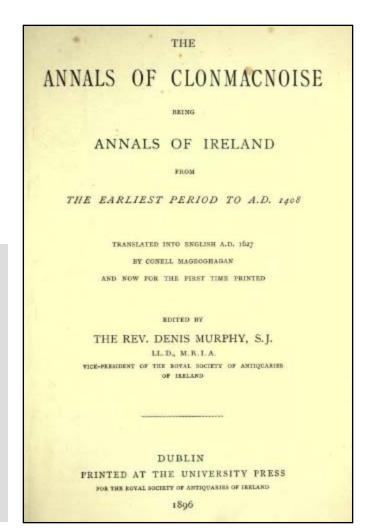
- Titles
  - 28 titles listed on Wikipedia
    - e.g. Annals of Clonmacnoise
  - Annals of the Four Masters
    - 17<sup>th</sup> century compendium of earlier annals
    - Translated to English and published in 19<sup>th</sup> century
- Recorded feast days, obituaries, genealogies, and notable events of the year



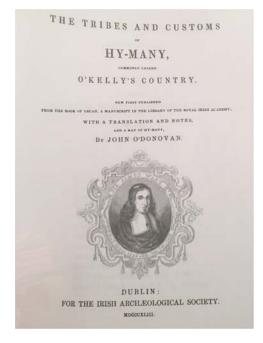
#### Annals of Clonmacnoise

- Written by Irish monks up to the year 1408
- Translated to English in 1627
- Published in English in 1896

[Year 994] King Moyleseachlin and Cahall O'Connor of Connaught made a bridge at Athlone over the [Shannon]. Dermott o'Laghtna prince of the land of Teaffa was killed by some of his [own] men

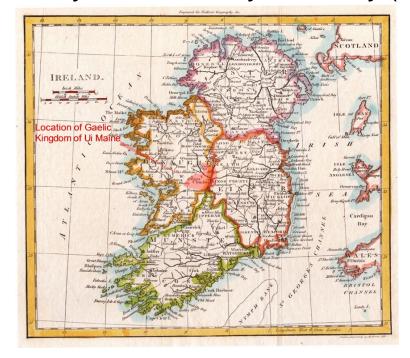


#### Genealogical Books Derived from Annals



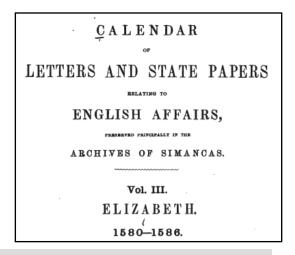
John O'Donovan wrote several in the 19<sup>th</sup> century.

e.g. The <u>Tribes and Customs of Hy-many</u>,
 Commonly Called O'Kelly's Country (1843)



### Royal Fiants

- Most important genealogically are records of the Surrender and Regrant real estate records.
  - Published in 19<sup>th</sup> century as part of the series, "<u>Deputy Keeper of Public</u>
    <u>Records in Ireland</u>"



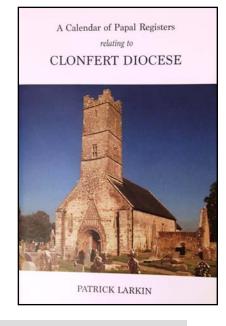
18-JUN-1585

MONTER LORKAN - all lands and heriditaments 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.1

<sup>&</sup>lt;sup>1</sup> Fiant Litterae Patentes, Reference # 4718 in Calendar of Letters and State Papers Vol II Elizabeth 1580-1586 in the Twenty-Sixth Report of the Deputy Keeper of the Public Records (1895)

## Papal Registers

- Vatican Archives preserve documents and correspondence now lost within Ireland.
  - Many dispensations for illegitimate sons of priests
  - Rulings on assignment of benefices



[4 June 1427] To the abbots ·· Donald [O'Shaughnessy], cannon of Clonfert· Mandate to collate and assign to John [O'Madden], clerk, who lately received papal dispensation as the son of a priest and an unmarried woman, to be promoted ... the perpetual benefice without cure called the rectory [of Kilfarboy parish, County Clare]<sup>1</sup>

## **Topics**

- Most Important, Digitized Irish Records
- Other Digitized Records
- Genetic Genealogy DNA

## Genetic Genealogy - DNA

#### Current research efforts relating to Irish Genealogy:

- 1. Better autosomal matches by inclusion of pedigree information
- 2. Enhanced Y-DNA Family Tree from expansion of markers tested
- 3. Geographical mapping projects of earliest known ancestors with both Y and Autosomal chromosomes
- 4. Combination of old pedigrees with modern descendants who have Y-DNA tests.

#### Y-DNA vs Autosomal DNA

#### Y-DNA

- Male only
- Using portion which does not recombine or mix => strong ancestral signal across time
- Y-DNA test make matching possible over 100s to 1000s of years
- SNP and STR marker mutations in parallel

#### Autosomal DNA

- Male and Female
- Recombines or mixes in random ways
- Autosomal DNA tests are best used below five (5) generations of kinship
  - Some faint signals can come through from more distant cousins
- Helpful for population studies and aggregate ancestral composition

# Autosomal Matching Incorporating Pedigree Information

- Available at Ancestry.com or Family Tree DNA or MyHeritage.com or 3<sup>rd</sup> parties.
  - Upload a genealogical family tree GEDCOM file
  - Link one or more autosomal DNA testers to their profile in the family tree.
  - Automated inference of matches in common and not in common helps clarify which of your ancestral lines a given match comes from.

#### Mother vs Father Line Matches

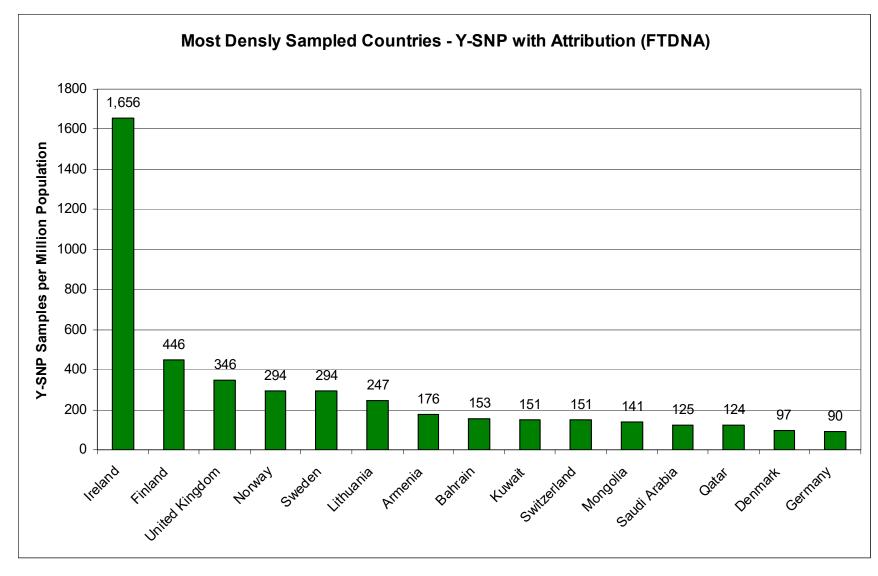
- Note that of (3,655) Family Finder autosomal DNA matches in this example:
  - Breakout between Maternal (1,579), Paternal (726), and Both parents (19).



# Example of Genealogical Success Autosomal DNA & Digitized Records

- My Patrick Kinsella ancestor came from <anywhere> in Kings County (Offaly) in famine.
  - Could not localize name is too common, parish records too hard to read and search
- Distant DNA Cousin match on FTDNA Family Finder with Irish man and his sister.
  - Initially not sure which of my branches it could be
  - By discussion and his Irish genealogical research, he figured it was likely from Offaly
- With Geographical Focus
  - He searched digitized parish records to find baptismal records matching names and years of many siblings in Offaly
  - => My Patrick Kinsella was baptized in Daingean parish, Offaly in October 1829 to parents who lived in the townland of Killeshin<sup>1</sup>
    - Townland localizes WHERE they lived to within a few hundred meters

#### Ireland – Most Densly Sampled Y-DNA



# Example of Genealogical Success Y-DNA & Digitized Records

- Telephone Directory & Calls
  - Irish Sample Recruitment by Surname and Geography
  - Ancestral Parish Sampling
- Digitized Genealogy Records
  - Continuity Linking Modern Family to Ancestors in Historical Records
- Y-DNA Testing
  - Getting strong signature for that surname / locality
  - But may be no matches for some time
- Someone from California with same surname but no pedigree tests
  - matches Y-DNA => His ancestors likely came from that geography
  - Focuses next steps in paper / digital genealogy

## Genetic Genealogy - DNA

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- 2. Enhanced Y-DNA Family Tree from expansion of markers tested
- 3. Geographical mapping projects of earliest known ancestors with both Y and Autosomal chromosomes
- 4. Combination of old pedigrees with modern descendants who have Y-DNA tests.

## Enhanced Y-DNA Family Tree from expansion of markers tested

Phylogenetic Tree for branch of SNP

BY21676

•50 branches from Y-Adam

•27 branches below M269

•11 branches below *M222* 

33	Z39589	Z39589_2	Found in haplogroup R1b under L21 and DF13. 18 bp deletion. Note that hg38 position description not linear translation from hg19. aka hg19:4439911-TGCAGCTTCACTCCTGAGG-T.
34	DF49	S474 AM01922 rs769171919	Large branch under L21 Z39589
35	Z2980	S6154 rs1006335787	Under L21 DF49
36	Z2976	S476 S644 S6147 AM01919 rs770179167	Under L21 DF49
37	DF23	S193 rs773517566	
38	Z2961	rs771631896	Found in haplogroup R1b under DF23. Most concentrated in Ireland.
39	Z2956	AM01923 rs1006912931	
40	M222	Page84 PAGES00084 rs20321 USP9Y+3636	Discovered in 2006 in conjunction with McEwan's STR clusters. Often called Northwest Irish, concentrated in Ireland and western Scotland. Associated with Niall of the Nine Hostages and Ui Neill clans.
41	S658	DF106 FGC4100 Y2841 rs747839864	Under R1b L21 > M222
42	DF104	S661 Y2842 FGC4099 rs752415261	
43	DF105	\$659 Y2843 FGC7927 rs755714899	
44	BY198	A738	Under M222. Discovered by Thomas Krahn & Iain Kennedy. Includes Larkin Type 01 and others.
45	BY20834	S27575 rs3097069	Found in R1b M222 individuals.
46	BY21680		Found in Larkin Type 01 of Ireland.
47	BY21673	A15862	Found in Larkin Type 01, M222 individuals.
48	BY21672		Found in Larkin Type 01, M222 individuals. Now found child of BY21673 (rather than coincident).
49	BY21674		Found in Larkin Type 01, M222 individuals. FTDNA now consider it parent of BY21671 rather than coincident.
50	BY21671		Under M222. Found in Larkin Type 01 of Ireland. FTDNA Tree once had incorrect parent of BY21680.
51	BY21676	R-BY21676 A15868	Found in Larkin Type 01 of Ireland. Coincident with A15871.

## View your own DNA Pedigree

- Enter your terminal SNP for Y-DNA
  - or Haplogroup for MtDNA
  - https://www.genetichomeland.c om/welcome/dnapedigree.asp
  - Printable
  - Free tool, does not require registration
- Currently 25,728 Y tree branches as of 30 May 2019

JNA	NA Pedigree				
Ģe	eneci	chomelai	nd.com Mapping Technology for DNA, Surname & Genealogy Researc		
cestra	al DNA Marke	r Pedigree Display			
			he phylogenetic order of markers based on a variety of sources. It is by no means final or authoritative but offere		
			unction with our DNA Marker Index which shows additional information for incluidual markers. The longest pedig is recorded in our dislabisse as of \$15(2019 5:13:40 PM.		
hylogenetic Ancestral Tree for marker (BY118188) on Chromosome Y (Tree 1379351)					
11/12/12	Marker	The far manual (art fro loo) on on	The state of the s		
rese sevel	) Branch Name	Alternative Names	Notine		
	HomoErectus	hg38:21292569-T-G	Human and Denisovan diverge from ancestral affeit T found in chimpanzees at this position, hg35 R is G.		
	YAdam	hg35:2544421-A-G	Ancestral silele in chimpenzee is A implying this is probably a human-defining SNP for home sagism hg25 Ref is G.		
	L1085	2922885-T-C	Defining mutation for near-root haplogroup A0-T (ska A01234). That is to say father of ALL modern Y-DNA lineages except A00, hg35 Ref does not match ancestral affeit value.		
	P305	ra72625365 2542113-A-G	Defining mutation for hagingroup ISOGG branch A1, hg28 Ref does not match encestral silele value		
	P105	rs761539052	Defining mutation for haplogroup branch A1b at ISOGG, hg38 Ref does not match ancestral. Also enumerated as hg36:12314265-C-T.		
	L413	PF1409 V31 rs192939307	Defining mutation for haplogroup branch ST at ISOGG, hg38 Ref does not match ancestral allele va		
	M165	PF1416 rs2032595	Defining mutation for haplogroup branch CT, hg35 Ref does not match ancestral silele value.		
	P143	PF2557 rs4141555	Defining mutation for haplogroup branch CF, hg28 Ref does not match ancestral silele value.		
	MS9	PF2746 rs2032652	Defining mutation for haplogroup F. hg35 Ref does not match encestral silele value.		
	F1329	M3656 PF2622 Y5C0001299	Defining mutation for haplogroup branch above GHUK (sic), hg35 Ref does not match encestral allevature.		
	M578	F929 58397 PF3494 58378 rs73814810	Mutation at hagingroup branch HUK, hg25 Ref does not match ancestral affeite value.		
2	M522	L15 PF3492 S137 Z4413 rx9788139	Defining mutation for haplogroup branch IJK, hg28 Ref does not match ancestral silele value.		
	мэ	PF5506 rs2000	Defining mutation for haplogroup K. Predecessor of haplogroups T, P, and NO. Arose about 43,000 bcs. hg35 has incorrect Ref versus ancestral silete.		
	M526	PF5979 rs2033003	hg28 Ref does not match ancestral allele value.		
,	M1221	PF5911 YSC0188 P331 YSC0000188 rs9785994	FTDNA shows this as encester to haplogroups N.P., and S. hg35 Ref silele does not match encestre		
	P295	PF5888 58 ra595530	Defining mutation for haplogroup P (K2b2), Predecessor of haplogroups R and C. Arose about 43,0 bcs. hg35 has incorrect Ref.		
,	M45	PF5962 rs2032631	Defining mutation for haplogroup branch P1 / QR (K2b2a), hg26 Ref does not match encestral silely value.		
8	M207	Page37 PAGE500037 PF6038 UTY2 rs2032658	Designates major haplogroup R, ancestor to R1b, R1a, and R2 (sks K2b2a2). Arcse about 30,000 b hg25 Ref does not match ancestral sliefs value.		
	M172	P241 Page29 PAGE500029 PP6126 rs2032624	Designates major haplogroup branch R1". Arose about 26,000 bos. hg35 Ref does not maich ances allele value.		
0	M343	PF6242 rs9756154	Designates major haplogroup R1b. Arose about 22,000 bcs. hg35 Ref does not match encestral alle value.		

#### Y-37 Test of STR Markers

- STR-only testing is not very meaningful for geographical matching in Ireland.
- Typically only gets us to about Tree Level 24 (versus level 52 in our previous example)

## Big Y-700

- New test package from FTDNA that incorporates both SNP and STRs.
  - FTDNA Big Y-700 SNP matches offer much higher resolution that Y-37:
    - TMRCA to 40 year increments
    - Big Y-700 match with ancestral geography in Ireland is a very powerful genealogy clue!

## Y-DNA Kinship Measurement

- Actual Phylogenetic Tree for branch of SNP BY21676
- 44 branchesfrom Y-Adam
- •22 branches below M269
- •8 branches below *M222*

```
BY21878 Tree
                                                                                                                                                                                                               5/15/2018
Level SNP Names
     HomoE rectus
             L1085
                 P305 rs72625368
                     P108
                         L413 PF1409 V31
                             M188 PF1416 rs2032595
                                 P143 PF2587 rs4141886
                                      M89 PF2746 rs2032652
                                         F1329 M3658 PF2622 YSC0001299 rs9786482
                                              F929 S6397 M578 PF3494 rs73614810 S6378
 11
12
13
14
15
16
17
                                                  L15 M523 PF3492 S137 Z4413 rs9786139
                                                          E549 M 2335 S22380 rs72811890 V4208
                                                              M214 Page39 PAGES00039 rs2032674
                                                                  P295 PF5866 S8 rs895530
                                                                      B253 rs1003790053
                                                                          M207 Page37 PAGES00037 PF6038 UTY2 rs2032658
                                                                              M173 P241 Page29 PAGES 00029 PF8128 rs2032824
 18
 19
                                                                                  M343 PF6242 rs9786184
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
                                                                                      L754 PF6269 YSC0000022 rs7893073
                                                                                          L389 PF8531 rs1358368
                                                                                              P297 PR8398 rs9785702
                                                                                                  M269 P F6517 rs9786153
                                                                                                      L23 PF6534 S141 rs9785971
                                                                                                          L51 M412 PF6536 S167 rs9786140
                                                                                                              L151 PF6542 rs2082033
                                                                                                                  P312 PF8547 S116 rs34276300
                                                                                                                      Z290 S461 rs146019383
                                                                                                                          L21 M529 S145 rs11799228
                                                                                                                              DF13 CTS241 S521 rs373989227
                                                                                                                                   739589
                                                                                                                                      DF49 S474 AM01922
                                                                                                                                           Z2980 S8154
                                                                                                                                               Z2976 S476 S644 S6147 AM01919
 35
36
37
38
                                                                                                                                                  DF23 S193 rs773517566
                                                                                                                                                       Z2961 rs771631896
                                                                                                                                                           M222 Page84 PAGES00084 rs20321 USP9Y+3636
                                                                                                                                                               S858 DF108 FG C4100 Y2841 rs747839864
 39
40
                                                                                                                                                                   DF104 S661 Y2842 FGC4099
                                                                                                                                                                       DF105 S659 Y2843 FG C7927
 41
42
                                                                                                                                                                           BY198 A738
                                                                                                                                                                               BY20834 S27575 rs3097069
 43
                                                                                                                                                                                  BY21680
                                                                                                                                                                                      BY21671
 45
                                                                                                                                                                                           A15868 BY21676
 46
                                                                                                                                                                                               Novel Variants TBD
                                                                                                                                                                                                   Newest STR mutations
```

## Genetic Genealogy - DNA

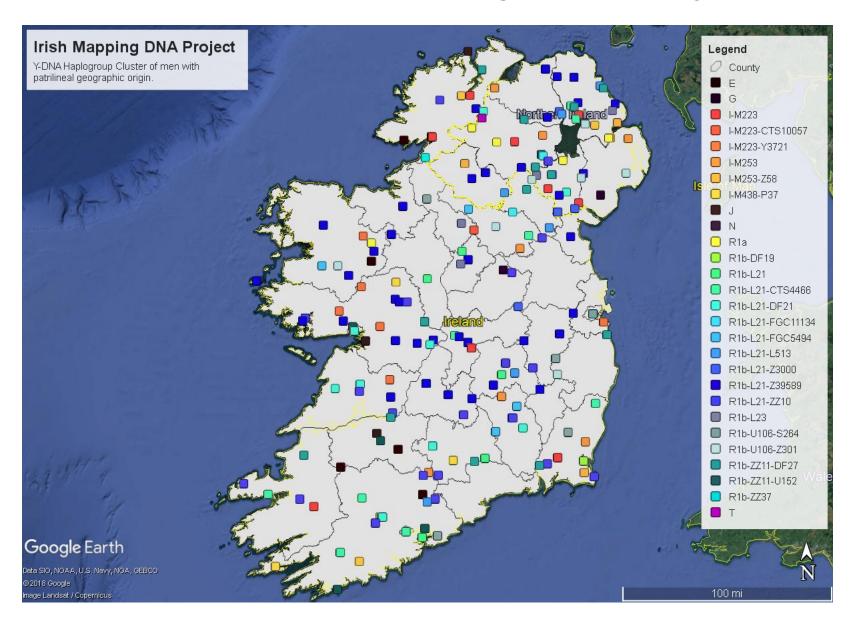
Current research efforts relating to Irish Genealogy:

- 1. Better autosomal matches by inclusion of pedigree information
- 2. Enhanced Y-DNA Family Tree from expansion of markers tested
- 3. Geographical mapping projects of earliest known ancestors with both Y and Autosomal chromosomes
- 4. Combination of old pedigrees with modern descendants who have Y-DNA tests.

## Irish Mapping DNA Project

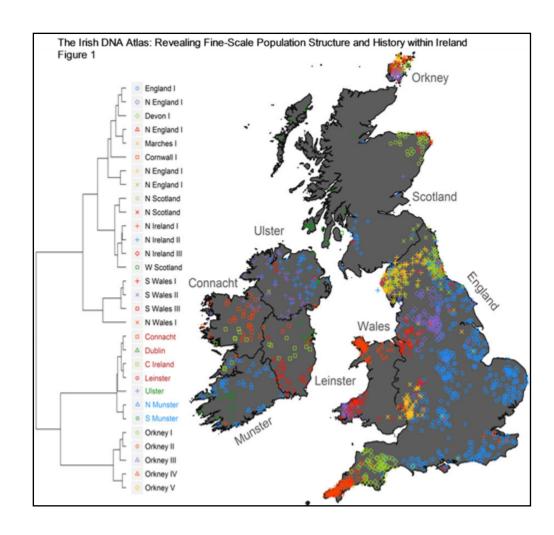
- Geographic origins of Y-DNA originating in Ireland.
  - Precise latitude and longitude origins of persons on related Y-DNA SNP branches
- Project Statistics as of 08 May 2019<sup>1</sup>
  - 1,226 Total members
  - 944 Y-37 Tests
  - 446 Big Y Tests
    - 144 Big Y with Latitude & Longitude in Ireland

#### Y-DNA: Irish Mapping DNA Project



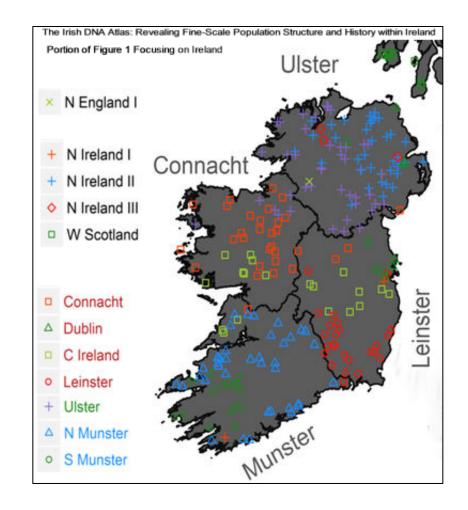
#### Autosomal Projects: IDA & POBI

- British Isles Geographic Projects
  - Irish DNA Atlas (IDA)
  - Peoples of the British Isles (POBI)
- Avg Lat/Long plot segregated into 30 autosomal clusters among 2,103 individuals



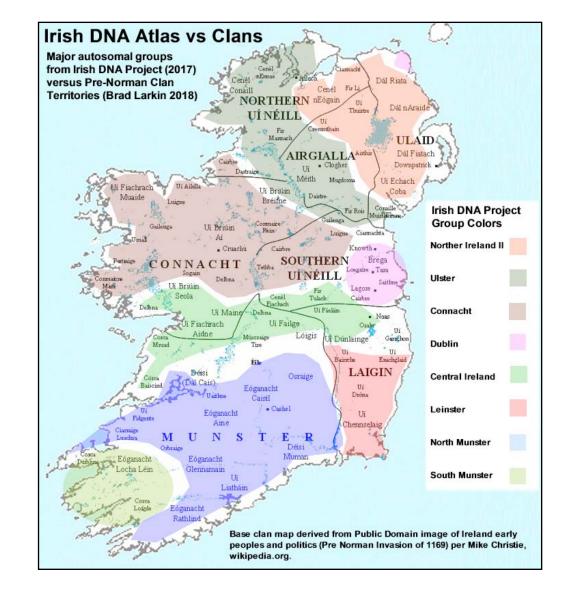
## Irish DNA Atlas Project

- Focusing on the autosomal results within Ireland.
- IDA project found:
  - Some conformance to historical provinces
  - Some East-West bands not part of provincial structure

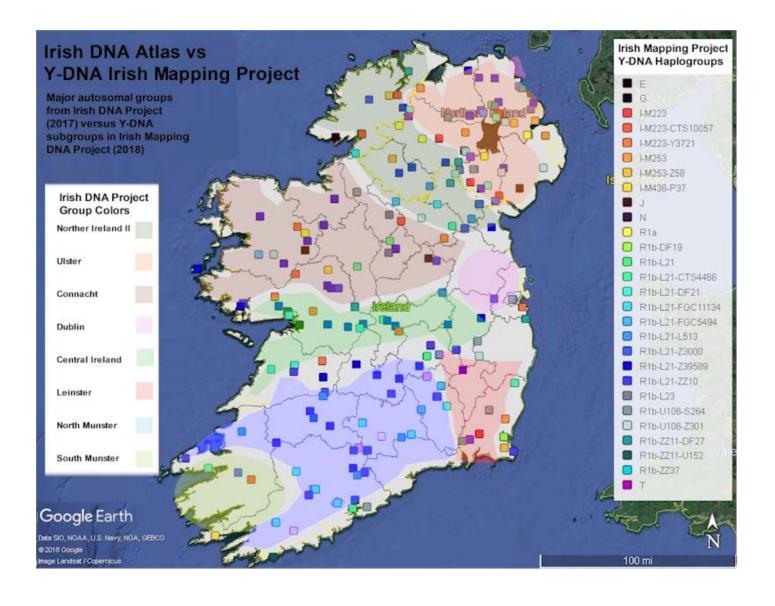


#### IDA vs Clan Territories

 Approximate IDA autosomal groups overlaid on pre-Norman clan territories map of Ireland.



#### IDA Autosomal vs Y-DNA



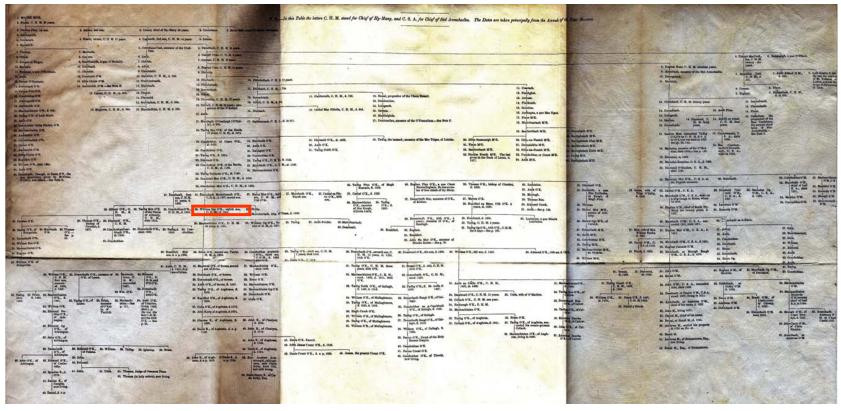
## Genetic Genealogy - DNA

Current research efforts relating to Irish Genealogy:

- 1. Better autosomal matches by inclusion of pedigree information
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- 3. Geographical mapping projects of earliest known ancestors with both Y and Autosomal chromosomes
- 4. Combination of old pedigrees with modern descendants who have Y-DNA tests.

#### Uí Maine Pedigree by O'Donovan

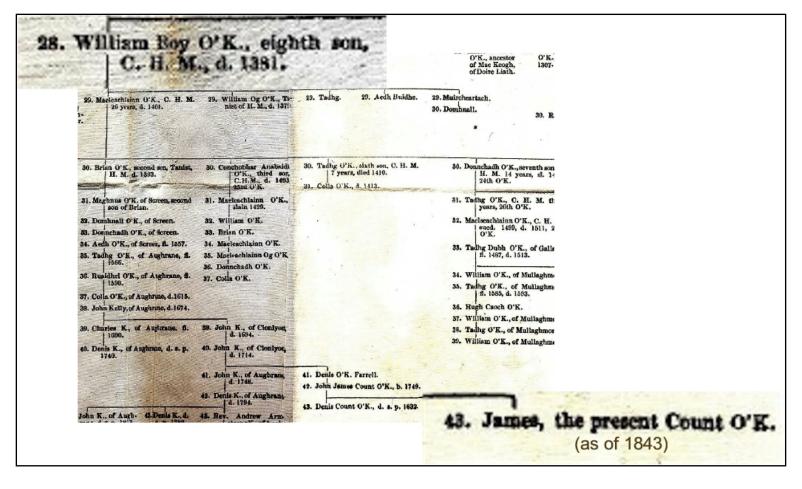
- King Máine Mór led his people to re-conquer and occupy western Ireland in the 4<sup>th</sup> century.
- Highlighted in red in the middle is William 'Boy' O'Kelley
  - Died in 1381, one of last Gaelic Chieftans of Hy Many.
  - 28<sup>th</sup> generation from King Maine Mor.



Pedigree Image from provided by Aidan Kelly of the Kelley/Kelly Y-Chromosome DNA Surname Project (2016)

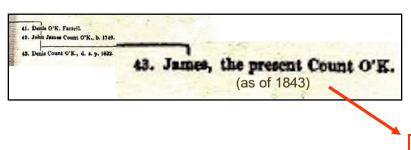
## Pedigree of Count O'Kelly

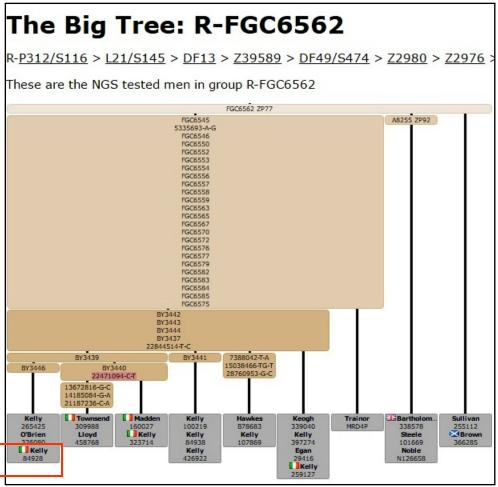
 O'Donovan's pedigree includes a line of descent to Count James O'Kelly who was known to O'Donovan in the 19<sup>th</sup> century



## O'Kelley Pedigree and DNA

- Kelly DNA Project shows multiple Y-DNA lineages from Galway.
- Including descendant of Count James O'Kelly in the O'Donovan Pedigree





<sup>1</sup>YTree.Net Big Tree display of R-FGC6562 node with correspondence by Aidan Kelly of the Kelley/Kelly Y-Chromosome DNA Surname Project (2016)

## Genetic Genealogy - DNA

#### Current research efforts relating to Irish Genealogy:

- 1. Better autosomal matches by inclusion of pedigree information
- 2. Enhanced Y-DNA Family Tree from expansion of markers tested
- Geographical mapping projects of earliest known ancestors with both Y and Autosomal chromosomes
- Combination of old pedigrees with modern descendants who have Y-DNA tests.
- There's a lot going on with Irish genetic genealogy!
  - Genetic Genealogy is likely to help you localize your Irish genealogy research in the future
    - Even if it has not done so thus far.

### Unlock Your Lineage

- Making DNA Work for you in searching for Irish Ancestral Geography
- If you do not know where in Ireland your ancestor came from:
  - Identify kinsman with patrilineal descent from your Irish ancestor
  - 2. Obtain Y-DNA test with Informed Consent
    - Big Y-700
  - 3. See if any of the high-resolution Y-DNA matches know their ancestral geography

#### What if no Close Y-DNA Matches?

- Study geographical clusters and patterns of the Surname in 19<sup>th</sup> century Ireland.
- 5. Develop hypothesis for most likely geographical area(s) for your ancestor.
  - Monitor DNA projects with Irish ancestry
  - Use digitized records to trace descendants from that area that could provide Y-DNA sample.
- 6. Heritage Travel & Recruitment
  - Visit that area of Ireland and recruit new Y-DNA participants from that geography / surname.
  - If they match, you've found a good lead for further parish research.

#### Digital Communications & Social Media

- Searchable Telephone Directories
  - Republic of Ireland
  - Northern Ireland
- Low Cost International Dialing
- Email Widely Adopted
- World Wide Web sites
- Facebook
  - Popular in Ireland
  - Surname History / Genealogy Groups

#### Questions

- Digital Irish Records Research
- Irish Genetic Genealogy
- No Questions on 3<sup>rd</sup> Party Sites not mentioned in presentation



**Brad Larkin** 

Southern California Genealogical Society
Jamboree 2019

