



The unique nature of Dál Cais DNA



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Iomarbhagh na bFileadh: the contention of the bards

- Early 17th C poem *Éisd a Lughaidh rem labhra* by Tadhg mac Daire MacBruaideadha - ollam Uí Bhriain
first attested in RIA 471. R.I.A. no 740 (C/vi/3) **1633**

*Tug sloinnte sochar oile – nach tugsad ríoghradh roimhe
Le dtuigtear i ngairm gach fhir – cia a threabh do
macaibh Mílidh*

**[Brian] introduced surnames – another benefit – which
no king did before him**

**So that in the name of each man one sees to which tribe
[recte «household»] of Míl's sons he belongs.**

Bardic poetry data-base; ITS ed. L. McKenna (1918), I 38-9 V:79

See also G. Petrie, *The Ecclesiastical architecture of Ireland; an essay on the origin and uses of Round Towers of Ireland* (1845, repr. Shannon 1970), 390 quoting 'Mac Liaig'

Response by northern poet

- Early 17th C poem *Ro chuala ar tagrais a Thaidg* by Lughaidh Ó Cleirigh

first attested in 471. R.I.A. no 740 (C/vi /3) **1633**

*Thoir ar tus tigh gach eolas – tar mhuir go hÉirinn sheolas
Tángadar sloinnte mar sin – re linn Briain más fáth maoidimh*

**In the East at first comes forth all knowledge which comes
over sea to Eire. Family names thus came in Brian's day – if
that be a matter for boasting.**

John O'Donovan's list of "progenitors of various important native families" in *The topographical poems of John O'Dubhagain and Giolla na naomh O'Huidhrin* (1862): Munster and south Connacht examples

- O'Brien of Thomond, died 1014.
- O'Callaghan of Desmond, flourished 1092.
- O'Conor of Corcomruadh, died 1002.
- O'Dea of Thomond, flourished 1014.
- O'Donnell of Corco-Bhaiscin, slain 1014.
- O'Donoghue of Desmond, flourished 1030.
- O'Donovan, slain 976.
- O'Dugan of Fermoy, flourished 1050.
- O'Faelain of Decies, flourished 970.
- O'Flaherty of Iar Connaught, flourished 970.
- O'Heyne of Ui-Fiachrach, flourished 950.
- O'Keeffe of Desmond, flourished 950.
- O'Loughlin of Burren, died 983.
- O'Mahony of Desmond, slain 1014.
- O'Quin of Thomond, flourished 970.
- O'Scanlan of Ui-Fiachrach, flourished 946.
- O'Sullivan of Desmond, flourished 950.

Pádraig de Bhulbh, *Sloinnte Gaedhael is Gall: Irish names and surnames* (Dublin 1922)

- “Irish surnames came into use gradually from about the middle of the tenth to the end of the thirteenth century and were formed from the genitive case of the names of ancestors who flourished within that period by prefixing *Ó* (also written *Úa*) or *Mac* (sometimes written *Mag*) as

Ó Briain

Mac Aodhagáin

Ó hAodha

Mac Cárthaigh

Ó Néill

Mag Uidhir



Postcard on sale in Nassau Street

Ireland was the first country in Europe to adopt hereditary surnames. The earliest recorded elsewhere in Europe are assigned to the eleventh century.

History of English surnames

- Before Norman conquest in 1066 nobody possessed a surname and people were called by first name in Old English or Norse with occasional nicknames.e.g. Eirik Bloodaxe, Ethelred the Unready
- Spur to surnames in England seems to be desire of leading barons to identify their families with estates back in Normandy .e.g point of origin.
- Most knights in south of England possessed surnames by about 1200 but still not all knights in north by 1300.
- Ordinary people are rather slower but, starting with richer merchants, fashion starts to spread from c.1250 and becomes especially productive c. 1350. Majority of population seems to have acquired surname by c. 1400

Dublin Citizen Roll of c.AD 1200: approximately 1600 names – almost no trace of use of Irish *sloinnte* in *Ó* though possibly in *Mac*

9 names with no other element

746 names with origins marked: *X de* (French)
+ 19 names with origins marked: *X of* (English)
+ 50 names with origins marked by adjective: *X ..us*

267 names with profession

210 names with 2nd noun: *X Y*

95 names with adjective specific to individual

296 names with patronymic marked: *X filius Y*

30 names with brother marked: *X frater Y*

15 names with descent marked: *X nepos Y*

7 names with relative marked: *X cognatus Y*

5 names with relative marked: *X gener Y*

3 names with patronymic and grandfather: *X filius Y filius Z*

1 name with Irish patronymic marked: *X mac Y*

1 name with Welsh patronymic marked: *X ap Y*

1 name with English/Norse patronymic marked : *Xson*



Irish origins of late 12th

C Dublin citizens:

- 11 from Cork
- 4 from Castledermot
- 3 from Kildare, Dublin, Duleek, Trim, Killaloe
- 2 from Ulster, Munster, Naas, Clonard, Castleknock, Lismore, Leighlin
- 1 from Wicklow, Athy, Bray, Fore, Limerick, Derry, Drogheda, Carlingford, Galtrim, Donore, Fore, Lough Sewdy, Granard, Kilkenny and Wexford



The development of Irish *sloinnte*: **How widespread was Irish habit of marking dynastic progenitors through reference to ancestors?**

- **13th C *Acallamh na Senórach: Tales of the Elders of Ireland*:**

“Canas táncabair” ar in tóclách. Innisit do a nainm agus a slonnad agus a tuirthechta. “Cuich thusa” ar iat. “Blathmac Bóaire mise” ar sé.

“Where do you come from?” asked the warrior, They told him their names, their *sloinnte* [lineages] and their adventures. Who are you, dear man?” they asked. “I am Blathmac Bóaire [of the rank of commoners]

G.B. Adams, “Prolegama to a study of surnames in Ireland” *Nomina* 3 (1979), 81-94

- “The earliest surname of the Ó type or *Úa* as it was sometimes written seems to be *Ua Cléirigh* recorded as a surname in 916 and they went on being formed till about the middle of the twelfth century, to be followed by a new type beginning with the prefix *Mac* ‘son’. These arose in part from the break-up of many of the older families following the Anglo-Norman invasion in the second half of the 12th century and at this stage the system spread to Scotland where there are extremely few Ó surnames, and to the Isle of Man.”

Ó Cuiv 1986, 33/4: AFM 916 reference to *Úa Clerig* may be simply a reference to a real grandfather/grandson relationship. AU 980, however, is clearly the use of *Úa Cleirig* as a surname

Brian Ó Cuiv, “Aspects of Irish personal names” (DIAS lecture 1986)

- In O’Brian’s 1962 *Corpus Genealogiarum Hiberniae* – there are c. 12,000 individuals sharing something over 3,500 names between them. (Many occur only once).

Frequency lists include

Áed (c. 250 examples)

Cormac (c. 100 examples)

Conall (c. 50 examples)

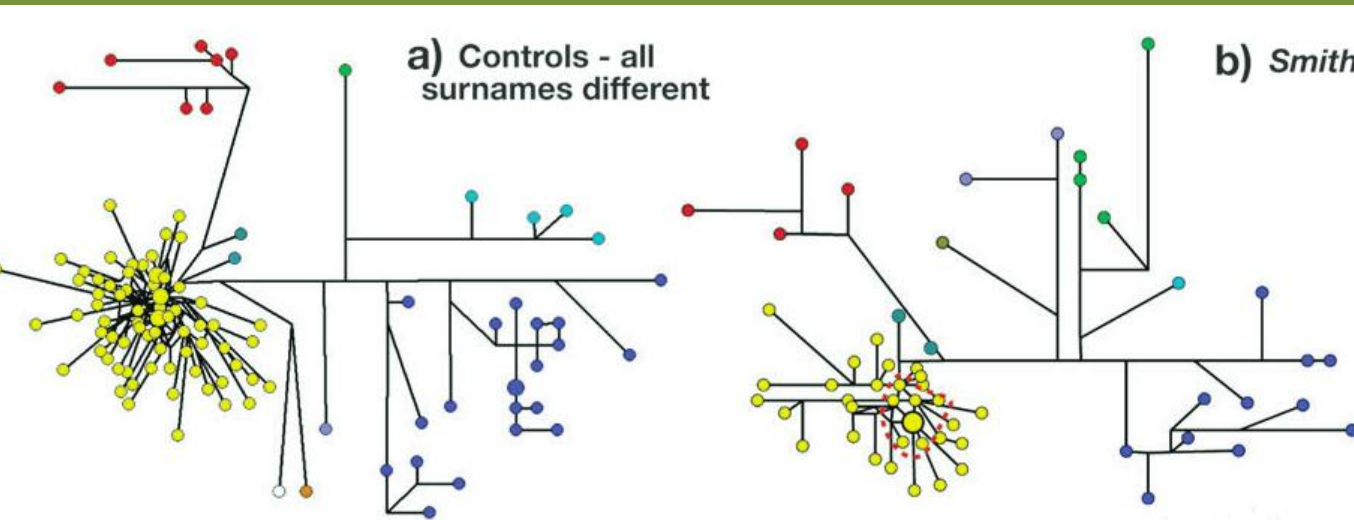
Echthigern (c. 14 examples)

Mathgamain (c. 12 examples)

The frequency in the genealogies is not necessarily reflected in the frequency of names in other texts such as *Cóir Anmann* where only ten examples of Áed are given.

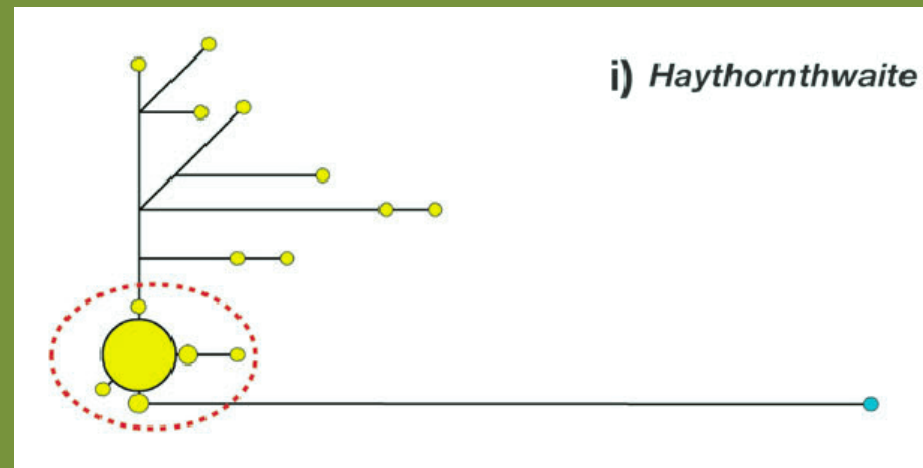
Ó Cuiv 1988 , 1988, 79: **“number of [male] names in common use was between one hundred and two hundred”**

Frequency of personal names has impact on the probability of a single originating progenitor.



Pattern showing haplogroup and Y-STR haplotype diversity where there are multiple progenitors

Pattern showing haplogroup and Y-STR haplotype diversity which seems to indicate a single founder



Surnames, DNA & Family History by George Redmonds, Turi King and David Hey (Oxford 2011), 190

“Irish Y chromosomes, in general, show much lower diversity in terms of haplogroup; 90% fall in haplogroup R1b1 and therefore it is predominantly the Y-STRs which act to differentiate Y chromosome types. As with the British, the Irish controls showed few shared haplotypes. The average proportion of haplotypes that fell into a descent cluster within surnames (61%) is almost identical to the British study (62%) but is different in that the proportion does not correlate with surname frequency. Even very common Irish surnames, such as Ryan and O’Sullivan, which are found at frequencies of 1 per cent of the Irish population can be dominated by a single descent cluster: a phenomenon which was not seen among common surnames in Britain.

B. McEvoy & D. Bradley, “Y-chromosomes and the extent of patrilineal ancestry in Irish surnames”
Human Genetics 119 (2006), 212–19.

BUT..this is NOT NECESSARILY an endorsement of 19th C ideas about founders of Irish families living a millennium ago – *Ibid.*, 190-1

“The chance of a surname founder some twenty generations ago having offspring surviving today was only about 10 per cent. ..What the simulations show is that it is likely that not all the founders of a surname will have surviving offspring and that the number of descent clusters that we see today is probably a very poor reflection of the true number of founders. Drift is acting to blur, or possibly even overwrite, the original genetic picture of a surname’s origins and, with it, a true indication of the number of founders that a surname had. Genetics can act only as a guide in this matter and DNA analysis alone cannot determine the number of founders.

A study of Brian Boru's genetic ancestry is published in "Genetic Investigation of the Patrilineal Kinship Structure of Early Medieval Ireland" published in *American Journal of Physical Anthropology* 2008 by Brian McEvoy, K. Simms & D.G. Bradley

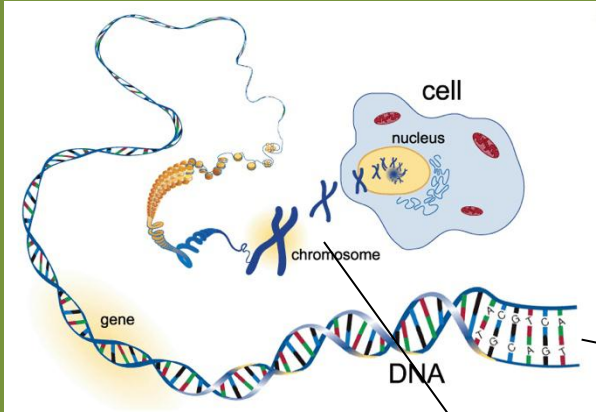
Questions posed in this article include:

- Do kingdom names such as Uí Néill or Connachta reflect the ancestor of an élite dynasty or of the population of the primeval "tribal" group as a whole?
- 2006 paper argues that strong IMH haplotype (section of DNA) within surnames identified as Uí Néill argues that there is strong evidence that that "tribal group" was marked by strong DNA links between descendants.

[NB! This conclusion was subsequently questioned on historical and genealogical grounds – Swift 2013]

- Intention to test this conclusion by looking at other "tribal" groups, Eóganacht and Brian's dynasty, the Dál Cais.

How does the nucleus of a cell store its information?

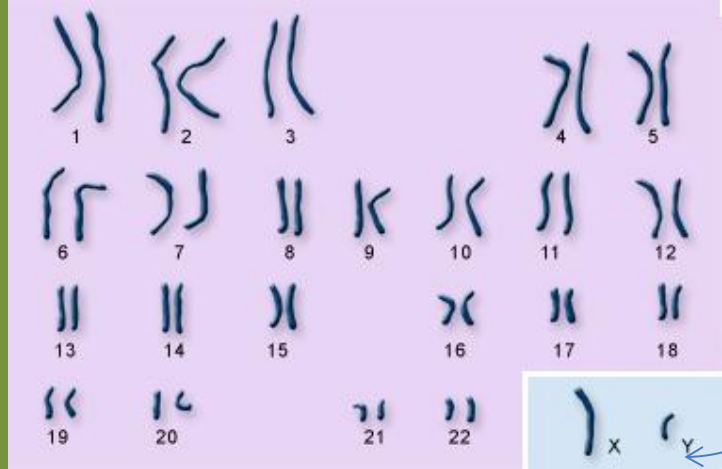


Inside the nucleus are structures called chromosomes.



Each chromosome consists of two strands of DNA wound around each other

22 pairs of chromosomes mutate randomly in the shared offspring when two people mate. The only chromosome which does not is the **Y chromosome** which is handed down from father to son and mutates very slowly over long periods of time.



Chromosomes come in pairs

Argument of McEvoy *et al* 2008.

- Although their name derives from a pre-historic and **quasi-mythological** founder Eógan Mór, the group called Eóganacht claimed descent from his **apparently** 5th century AD descendant “Corc” (see Fig.2). The Eóganacht had several geographically distinct branches **reputedly** descended from Corc’s sons.
- The Dál Cais grouping, which came to dominate Munster from the Eóganacht in the 10th century AD, is widely believed to have **forged** a genealogical connection between its eponymous founder (Cas) and Eóghan Mór to legitimize the change in power.
- NB! this remote ancestry fits well with the mid 2000 theories re rate of mutation of Y Chromosome and time back to TMRCA(time to most remote common ancestor.)

McEvoy *et al.* 2008: Investigation of 247 individuals with Munster surnames

- Stage I: group of 247 individuals was divided into 3
 - Eóganacht,
 - Dál Cais
 - random Munster surnames
- Stage II: Results were tested against 184 samples taken without incorporating surname data. This is called the Munster geographic group.

Dál Cais surnames tested in Stage I: total of 80 examples

Cahill – 10 examples

Clancy – 8

Heffernan – 7

Hickey – 6

Kennedy – 7

McGrath – 6

McMahon – 5

McNamara – 4

O'Brien - 14 examples

O'Dea - 6

O'Grady – 7

Names in bold are descendants not of Brian but of group descended from an alternative son of ultimate ancestor Casséne son of Cas.



Eóganacht surnames tested in Stage I:

total = 95

Cronin – 8 examples

Doran – 6

Kirby – 8

McCarthy – 7

McGillicuddy – 7

Moriarty – 8

O'Callaghan - 10

O'Donoghue – 8

O'Donovan – 2

O'Flynn – 6

O'Keefe – 6

O'Mahony – 3

O'Sullivan – 7

Quill - 8

Random Munster surnames tested in Stage

I:

total = 72 names

- Carroll – 5 samples
- Coffey – 9
- Healy - 6
- Maher – 12
- O'Connor – 11
- O'Driscoll – 8
- O'Leary – 6
- O'Loughlin – 5
- O'Shea - 6
- Whelan - 4

How specific are the surnames studied to the Dál Cais?

- Cahill < Úa Cathail
50 examples of Cathal in CGH;
4 groups of O Cathail; 3 groups of Meic Cathail, 8 Clann Cathail, 1 Muintir Cathail, 1 Síol Cathail in 17th C LMG
- Clancy < Mac Flannchadha
10 examples of Flannchad in CGH
2 groups of Mag Fhlannchadha, 1 Méig Fhlannchadha, 1 Uí Fhlannchadha. 1 Síol Flannchadha 1 Muintir Fhlannchadha in 17th C LMG
- Heffernan < Uí hIffernáin
2 examples of Iffernán in CGH;
- Hickey < Uí hÍcide
No example in CGH
ONLY ONE FAMILY in 17th C LMG
- Kennedy < Uí Cheinnedigh
11 examples in CGH
4 Uí Cheinnéidigh, 4 Ó Cennéidigh, 2 Muintir Cennéidigh, 2 Tellach Cennéidigh, 1 Síol Cinnéidigh, 1 Mac Cinnéidigh in 17th C LMG

Surnames used in Dál Cais study include those derived from personal names not attested in 12th C genealogies and/or which are commonly found in 17th C genealogies

McGrath < Mac Raith

No example of Craith or Raith as names in CGH

1 Mag Craith, 1 Clann Mheic Raith, 1 Clann Chraith, 1 Uí Chraich in LMG,

McMahon < Mac Mathgamain

12 examples in CGH

7/8 Ó Mathgamhna, 7 Clann Mhathgamhna; 3 Uí Mhathgamhna, 2 Mac Mathgamhna, 1 Mág/Méig Mathgamhna, in LMG

McNamara < Meic Con Mara

4 examples in CGH

1 Mac Con Mara, 1 Meic Con Mara in LMG

O'Brien < Uí Briain

15 examples in CGH (due partly to spread of fame of Brian Boru and impact on older names like Brion and Bran)

3 Mac Briain, 1 Mac Uí Bhriain, 5 Clann Bhriain, 1 Ó Briain, 1 Uí Bhriain, 1 Síol Briain in LMG

O'Dea < Uí Deaghaidh

No examples in CGH

11 Uí Dheaghaidh, 4 Ó Deaghaidh, 2 Clann Deaghaidh in LMG

O'Grady < Ui Gradaigh)

No example in CGH

1 Ó Gráda, 1 Uí Ghrada in LMG

An Leabhar Muimhneach – The Book of Munster: 18th C manuscripts in Royal Irish Academy

- The seed of Flannchad (Síol bhFlannchadha) were judges of the Ó Briain (O'Briens) and their lands were the Grianán of the Judges in the Dál Cais and in the lands of the foreigners. There was a crowd (*drong*) of the Síol bhFlannchadha in the barony of Fear Muighe (Fermoy) in County Cork from the time that a woman of the Uí Bhriain married one of the Roches
- Woulfe 1923: *O'Flannchadha* = *Flanahee*, Flanahy; 'descendant of Flannchad (red-warrior); a rare Thomond surname. Separate group from Clanchys?

Results of McEvoy *et al.* 2008 study

“Amongst the Eóganacht nor the Dál Cais surname groupings (nor both together) **none showed significant differences at the tribal level when compared with the Munster surname control sample** (P 5 0.769, 0.952 and 0.808, respectively), indicating that neither designation is under-laid by extensive shared ancestry as a whole.”

This means there is nothing much unifying the various surnames which are thought to descend from Eóganacht ancestry AND nothing unifying Dál Cais surnames either

Stage 3: Munster geographic sample examined to see if one could find a dominant Y-chromosome signature like IMH in North-West

- The Munster central/ancestral Y-chromosome (marked C in Fig. 4) is considerably less frequent than the IMH in the Northwest (3.8% vs. 12.5%) but is surrounded by more extensive and frequent diversity.
- Conclusion is that there is a less homogeneous population in Munster than in NW Ireland
- “it is possible that greater migration to Munster relative to the Northwest over the past 1,000 years (associated with Norman and English conquest) may dilute such a signature in the Munster geographic sample.”

Geographic Munster data

“We next investigated the Munster surname data for evidence of important additional founding lineages (see Fig. 5). **Two potential founding male signatures** (frequent Y-chromosomes surrounded by subsidiary diversity) are apparent, centered or ancestral on haplotypes A and B.

These two clusters of leading Y chromosomes **are scattered between individuals of the three groups used e.g. Eóganacht, Dál Cais & random Munster surnames”**

BUT...

“It is none-the-less curious that haplotypes A and B, the joint second and third most common Y-chromosomes in the geographic Munster sample (at 2.2% and 1.6%, respectively), are enriched in the surname sample (Dal Cais, Eoganacht and Munster surnames) at 12.9% and 6.5%, respectively”

- i.e. Haplotype A was found in generic Munster surnames at 2.2 but in our two sets of Eóganacht and Dál Cais surnames much higher reading of 12.9 and 6.5% of Haplotype A was found.
- **It appears that the chosen Munster surnames (which have some degree of longevity in Irish genealogy) show some degree of common ancestry even though there is little evidence that the Dál Cais and Eóganacht groups share strong common characteristics.**

11thC division between Thomond and Desmond seen as relevant to “tribal” origins of Eóganacht and Dál Cais

“These findings may reflect the presence of geographic sub-structure in Munster. In this regard, it is interesting to note that clusters A and B are significantly different in terms of the geographic origin of individuals when divided into Northern and Southern Munster geographic cohorts”

While there are subdivisions of Munster from the late tenth century corresponding to Thomond (meaning “north Munster” and “Desmond” (meaning “south Munster”). However these geographically defined kingdoms do not correspond to the earliest distribution of Eóganacht kingdoms which were concentrated in Tipperary, east Limerick and Kerry.

The Dál Cais dynasties, in contrast, are largely limited to Clare, West Tipperary and East Limerick from the time in which they are first recorded in any detail in the tenth century (and so do appear to be based largely in North Munster or Thomond).

Conclusions of McEvoy *et al.*, 2008

[While] “our analysis cannot exclude the possibility that some level of patrilineal kinship underlaid the Munster Eóganacht and Dál Cais entities, it does seem that if any existed it was not comparable in extent to the widespread kinship in the contemporaneous Uí Néill grouping from the North of the Island, presumably the descendants of the ancestral eponym “Niall of the Nine Hostages” and his clan.

“Although the Uí Néill and Eóganacht are often thought of as major contemporary rivals from the North and South of the island respectively, genetic evidence combined with surname information suggest they were founded, established and perhaps led by different means and this may reflect wider differences in organization of Irish tribal societies.”

Few historians would see the common ancestry of the Eóganacht and Dál Cais which is proposed in twelfth-century genealogical texts as being anything other than the propaganda of the “new kids on the block” claiming remote and ancestral connections with the traditional kingship of Munster. This paper was framed by geneticists to answer genetic questions (such as theories about TMRCA) ; it WAS NOT designed to answer questions of evolution of Irish surnames and cannot be used in such an attempt.

From a surname historian's standpoint...

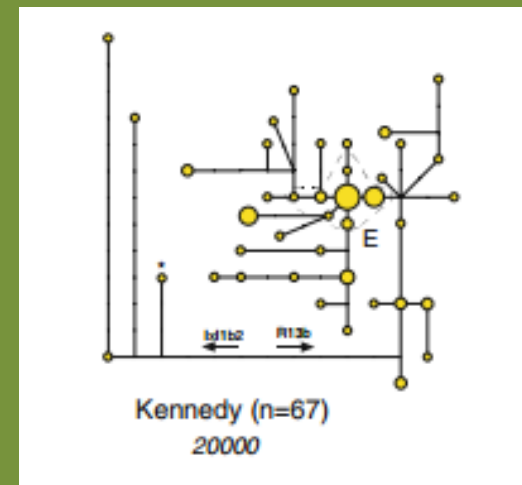
- Far more interesting are the results from 2006 study by same group which states that “the average probability of a man sharing an identical 17 STR Y-chromosome haplotype with another man of the same surname is 8.15%. This value is over 30 times greater than the background Irish population Y-chromosome match possibility of 0.2%. However, the extent of sharing differs widely between surnames. Amongst the most extensively sampled names (with a sample size of >50) it ranged from a 47-fold higher probability over background levels in Ryan to a more modest 4.5 fold increase in Kelly.”

B. McEvoy & D. Bradley, “Y-chromosomes and the extent of patrilineal ancestry in Irish surnames”
Human Genetics 119 (2006), 212–19.

And for students of Brian Boru's impact on Ireland...

“As expected from match probability statistics, most surname groups are clearly distinct from the background Irish phylogenetic structure. Many, specifically, Ryan, O’Sullivan, O’Neill, Byrne and Kennedy show one predominant Y-chromosome, which forms the ancestral haplotype of a broader diversified lineage. Such phylogenies are consistent with one major eponymous ancestor to these surnames.”

But note that while this pattern suggests a single highly successful male progenitor, the jury is still out whether that progenitor belongs to Brian Boru’s era or is a far more obscure Cinnétig of much more recent date



And one way to possibly solve this problem

- A king from Ireland called Sigtryggr was also there. He was the son of Ólafr Kváran [Amlaíb Cuarán]. His mother was called Kormlǫd (Gormlaith); she was endowed with great beauty and all those attributes which were outside her own control but it is said that in all the characteristics for which she herself was responsible, she was utterly wicked. She had been married to a king called Brian but now they were divorced. He was the noblest of all kings and lived in Kincora in Ireland. His brother was **Úlfr Hræða**, a great champion and warrior.
- King Brian did not wish to wield weapons on Good Friday; so a wall of shields was formed round him and his army was drawn up in front of it. **Úlfr Hræða** was on the flank facing Brodar and on the other flank facing King Sitryggr were Óspakr and King Brian's sons.

Brennu-Njals saga

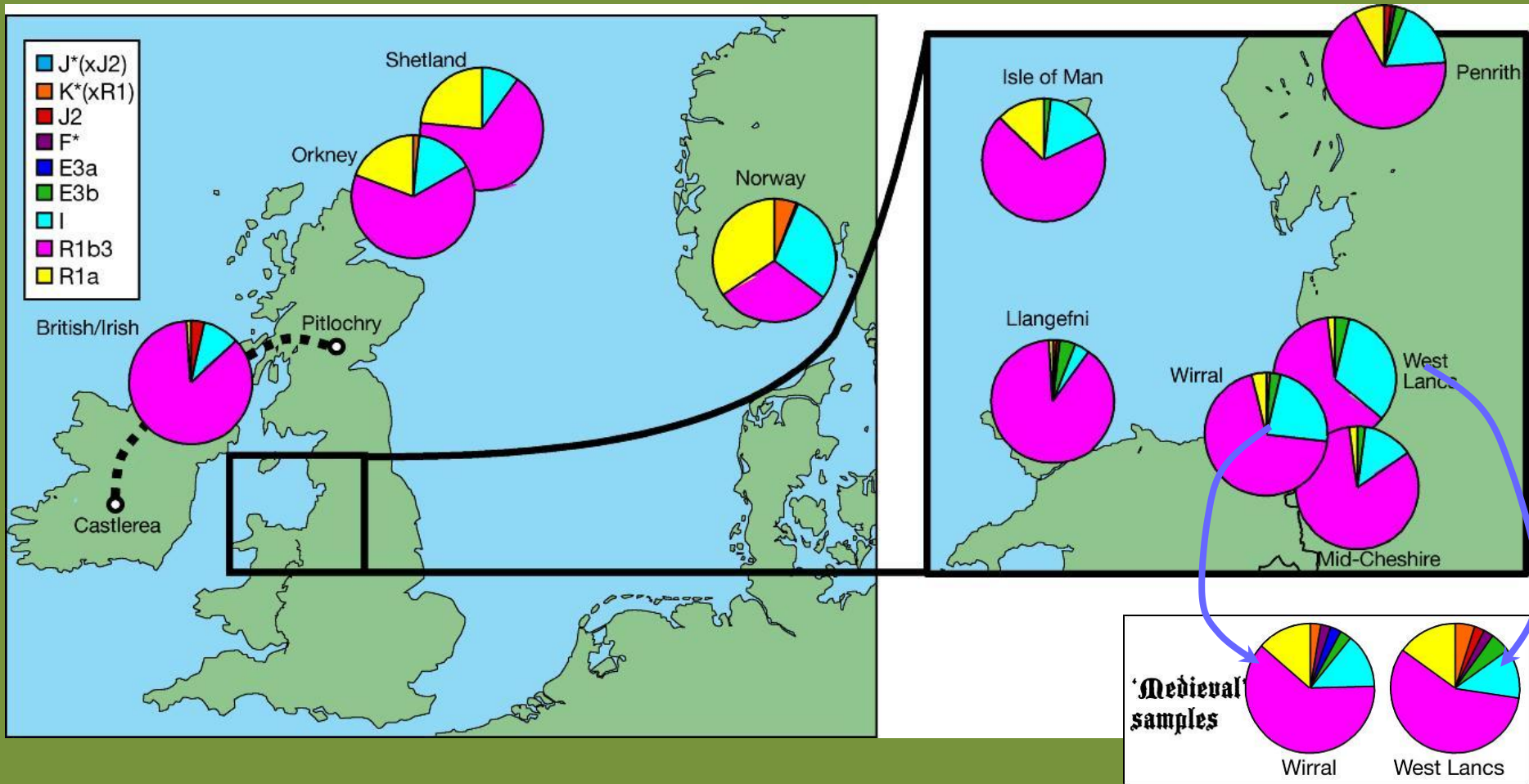
W. Sayers in *Scandinavian Studies* 63.2 (1991), 173-4: Is Úlfr the same man as Cú Duilig in the *Cogadh*?

Brian Hodgkinson's "Who Was Who in Medieval Limerick";
from Manuscript Sources.

(updated 22/01/2012)

- Wolf, Patrick (Wolff). 1421, juror for inquisition at death of E of Desmond (COD 3,45).
- Wolf, Thomas. 1307, dispute over mercy (CJR2, p. 452). 1311, victim of robbery
- (CJR3, p. 206). Wolf, William of Or, 1308 accused by Gerald of Or of extortion from Killeedy (CJR3, p. 1-2).
- Wolfag, William. 1341, free tenant on manor of Ath

Modern surnames produce one set of haplotypes showing relatively little of R1a (marked in yellow)



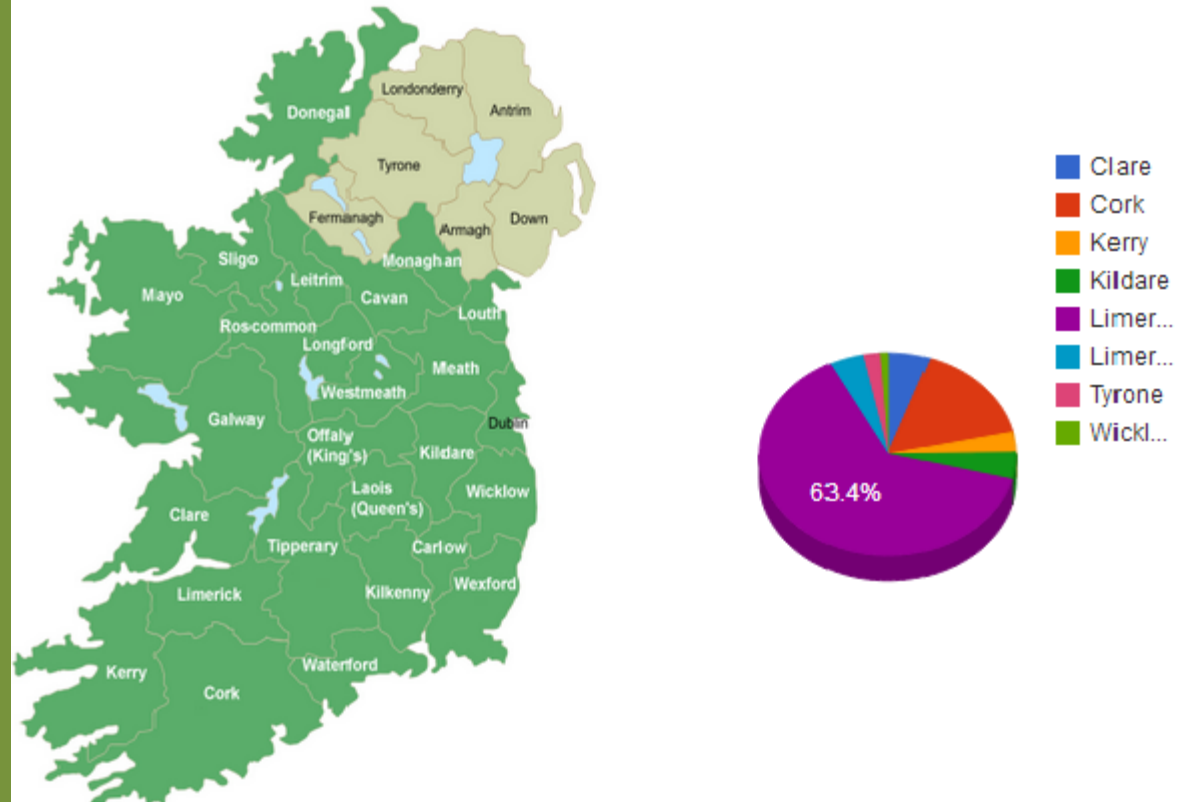
But samples taken from medieval surnames show considerably more R1a (yellow) haplotype

Interesting possibilities....

- Fourteenth and Fifteenth century Wolfs in Limerick area > Woulfe, de Bhulbh
- If we test DNA of modern Woulfes – would we get shared Y chromosome and Y-STR pattern with Kennedys?
- If we did, that might go a long way to support the nineteenth-century suggestion that the founder of the modern surname Kennedy belongs to Brian Boru's immediate family.

Woulfe households in mid-19th century Ireland

Hold the cursor over the county on the map to see the number of households and the year.
Click on the county for a list of the parishes and a map showing all-Ireland parish numbers (paying).



Conclusions

- History of evolution of Irish surnames is still very much driven by 19th C research and attitudes.
- The relationship between the development of dynastic *sloinnte* names based on *Úa* in the era of Brian Boru to modern Irish surnames has yet to be investigated in detail.
- This lack of modern research on surname origin somewhat undermines the validity of modern surnames chosen to investigate the DNA of the Dál Cais in 2008.
- For the historian of surname evolution in Ireland, a paper on the descendants of Brian and the extent to which those descendants share a common DNA signature is of far more interest than the investigation of putative “tribal” identities (as in 2008 study), which are based on family origin legends believed to represent a prehistoric era hundreds of years before the records in which these legends survive.
- The fall in the cost of DNA sampling should allow historians to play part in designing investigations of the DNA patterns in modern surnames aimed at answering the questions of historians rather than those of geneticists.
- In particular, a DNA examination of the characteristic haplotypes linked to Kennedys and Woulfes from the Mid-West region should throw interesting light on the validity of the 19th C theories of surname evolution in Ireland