

A PARTIAL READING OF THE STONES: A COMPARATIVE ANALYSIS OF IRISH
AND SCOTTISH OGHAM PILLAR STONES

by

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ABSTRACT
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Ogham is a script that originated in Ireland and later spread to other areas of the British Isles. This script has preserved best on large pillar stones. Other artefacts with ogham inscriptions, such as bone-handled knives and chalk spindle-whorls, are also known. While ogham has fascinated scholars for centuries, especially the antiquarians of the 18th and 19th centuries, it has mostly been studied as a script and a language and the nature of its association with particular artefact types has been largely overlooked. This thesis will examine ogham as a cultural artefact and the role of stone as a medium in the transfer of the concept of ogham stones from Ireland to Scotland. The ways in which the stones were adapted from their Irish forms to fit the needs of the peoples of Scotland in the Late Iron Age and early medieval period will be examined from the perspective of both the material and the context of the finds. Selected pillar stones and other objects in the collections of the National Museum Scotland (NMS) and University College Cork (UCC) were examined for evidence of variations and similarities between these monument assemblages in both areas. Reflectance Transformation Imaging (RTI), a free-ware program provided by Cultural Heritage Imaging was used on selected stones bearing ogham inscriptions in the National Museum Scotland in an attempt to shed new

light on this enigmatic class of artefacts. Indirect evidence in the form of ogham inscriptions on selected non-lithic objects, evidence from site records, and historical references to ogham and other scripts found in the British Isles during the Iron Age and the early medieval period were also consulted to put the pillar stones in context. This thesis represents a pilot study of the functional and material differences in the ogham stones in the Irish/Scottish interface. The project demonstrates how ogham can be analyzed as an archaeological artefact category by utilizing spatial and new imaging analysis in addition to existing studies of the inscriptions themselves.

TABLE OF CONTENTS

Chapter 1: Introduction	1
1.1 Ogham Stones	2
1.1.1 Origins	5
1.1.2 Reuse	10
1.1.3 Dating	10
1.1.4 Geographic and Temporal Distribution	12
1.1.5 The Written Language in Antiquity	15
1.2 Research Questions	15
1.3 Theoretical Approach	20
Chapter 2: Literature Review of Research Problem	22
2.1 The Language and Script	22
2.2 The Ogham Stones	25
2.3 The Iconography of the Ogham Stones	27
2.3.1 Christian Iconography	28
2.3.2 Pictish Iconography	28
2.4 The Cultural Context of Ogham Inscriptions	30
2.4.1 Material Culture Movement	30
2.4.2 The Dál Riata	34
2.5 Summary	37
Chapter 3: Methodological and Theoretical Framework	38
3.1 Types of Evidence	39
3.1.1 Ogham Stones	39
3.1.2 Indirect Evidence	42
3.2 Theoretical Framework	46
3.2.1 Materiality	46

3.2.2	Material Culture Theory	47
3.3	Scope of Study	49
3.3.1	Variables	49
3.3.2	Sample Parameters	52
3.3.3	Data Collection	55
3.4	Approach to Research Questions	56
3.4.1	Three Dimensional Imagery	57
3.4.2	Reflectance Transformation Imaging	58
3.4.3	Data Collected	60
	Chapter 4: Analysis, Discussion, and Conclusion	64
4.1	Evidence for Technological and Conceptual Transfer	64
4.1.1	Trade	65
4.1.2	Migration and Colonization	67
4.1.3	Christian Missionaries	68
4.1.4	Conclusions	69
4.2	Media Used for Monumental Ogham Inscriptions	71
4.3	Communication	76
4.3.1	Socio-Political Significance	78
4.3.2	Intended Audience	80
4.4	The Biography of an Ogham Stone	87
4.4.1	Conception of an Ogham Stone	88
4.4.2	Early Life of an Ogham Stone	93
4.4.3	Later Life of an Ogham Stone	94
4.4.4	Conclusions	98
4.5	Future Research	98
4.6	Conclusion	102

References Cited	107
Appendix: Data Collected on Scottish Ogham Inscriptions	114

LIST OF FIGURES

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Chapter 1:

1.1	The ogham alphabet	2
1.2	Ogham inscribed cross slab with incised arris	3
1.3	Ogham stone with natural arris	4
1.4	Distribution of ogham inscriptions	6
1.5	Ogham stone from Abernethy, Scotland	12
1.6	Ogham stone from Breastagh, Ireland	13
1.7	Map showing regions discussed in thesis	14
1.8	Ogham stone from Ackergill, Scotland	19

Chapter 2:

2.1	The Latheron stone	31
2.2	Map showing Dunadd and nearby significant sites	36

Chapter 3:

3.1	Distribution of ogham inscriptions	40
3.2	The Ballywiheen Stone from County Kerry, Ireland	41
3.3	The Brandsbutt Stone from Scotland	41
3.4	The Brodie Stone from Scotland	41
3.5	Metal Horns found in Torrs, Scotland	44
3.6	Map showing the ogham inscriptions of the kingdom of the Dál Riata	45
3.7	RTI example using an 8 ball	59
3.8	RTI example using a marble	60
3.9	An example of Reflectance Transformation Imaging	61

Chapter 4:

4.1 The Bac Mhic Connain Knife	65
4.2 The Gurness Knife	65
4.3 Map of portable ogham inscriptions in Scotland	66
4.4 The Eglwys Cymmin stone	68
4.5 Map showing Iona and nearby ogham inscriptions	70
4.6 Distribution of ogham inscriptions in Scotland	72
4.7 Geological Formations of Ireland	74
4.8 Geological Formations of Scotland	75
4.9 Abernethy stone	84
4.10 Ackergill stone	85
4.11 Burrian stone	86
4.12 Ogham stone from Faunkill and the Woods, County Cork, Ireland	90
4.13 Abernethy stone from Scotland	92
4.14 Breastagh stone from County Mayo, Ireland	96
4.15 Drumlohan Souterrain in County Waterford, Ireland	97
4.16 Church in Ardfert, County Kerry, Ireland	98
4.17 Distribution map of ogham inscriptions	101

LIST OF TABLES

Chapter 1:

1.1 Hypothesized dates for ogham script and stones	4
1.2 Distribution of ogham inscriptions by region	7
1.3 Names and translations of ogham letters	17

Chapter 2:

2.1 Counts of ogham inscriptions and ogham inscribed stones	24
2.2 Arguments for and against ogham as a Christian script	29

Chapter 3:

3.1 Ogham inscriptions in the National Museum Scotland collection	50
3.2 Ogham inscriptions in the University College Cork collection	51
3.3 Variables included in analysis	52
3.4 Iconographic variables included in analysis	53
3.5 Ogham inscriptions of the National Museum Scotland	54

Chapter 4:

4.1 Pictish symbols found on ogham stones in the National Museum Scotland	87
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Chapter 1: Introduction

The appearance of ogham marked the introduction of a form of writing to Ireland, where there had previously been no use of a written script. These inscriptions on stone have some linguistic similarities with Latin, but at the same time the script is completely indigenous. It consists of a series of tick marks set against a central line, visually similar to Roman numerals, but completely unlike the Latin alphabet (McManus 1991: 1). Ogham is one of the most recent alphabets recorded in any global context, having been developed in the 4th or 5th centuries. A question that remains to be answered is why did a need for a form of writing develop in that particular time period and that particular place? By the 5th century AD, the Roman Empire was being broken up by Germanic tribes and the legions had left Britain (Cunliffe 2008: 408-409). Ogham script clearly reflects some influence from Latin writing, but it is interesting that this influence came so late after the introduction of Latin into Britain and Ireland.

Regardless of why the script was developed, it was clearly used for multiple purposes. Today, ogham inscriptions are most commonly found on stone monuments (Macalister 1945: 10). Possible functions of the standing stones inscribed with ogham have been debated by many scholars for decades, though definitive conclusions remain elusive. Irish mythology describes ogham as being used by the druids whose inscriptions were said to have magical properties (McManus 1991: 156-157). The stones with inscriptions include individual names and lineages, leading many early scholars to believe that they were mainly used as burial markers (McManus 1991: 44). The dominant theory today, however, is that these stones served as some sort of memorial

to a common ancestor, one that could also be used as an indicator of ancestral ownership or connection to the land on which the stone originally stood (McManus 1991: 165). In this thesis, I hope to contribute to what is known about this script and these monuments by examining the less well documented Scottish stones from a 21st century perspective, in which digital imaging can provide new visual data that may help in their interpretation.

1.1 Ogham Stones

Ogham is a script believed to have originated in southern Ireland in the 3rd or 4th centuries AD (James 1993:162; McManus 1991:1; Thomas 1973:6) and is most commonly found today inscribed on large standing stones in the British Isles and Ireland. The script consists of a series of tick marks that are set against a central line known as an arris (Figure 1.1). Sometimes the arris is drawn in (Figure 1.2), in other cases the oghamist used the natural edge of the object he or she was inscribing (Figure 1.3). Originally, the script consisted of 20 letters, set in four groups, or *aicme*, of five letters. Later, five additional letters, known as *forfeda*, were added in order to accommodate

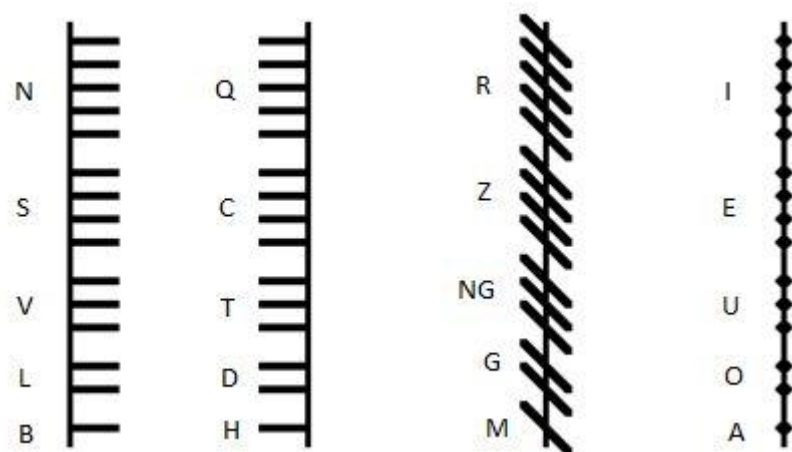


Figure 1.1 The ogham alphabet, arranged in aicmes.

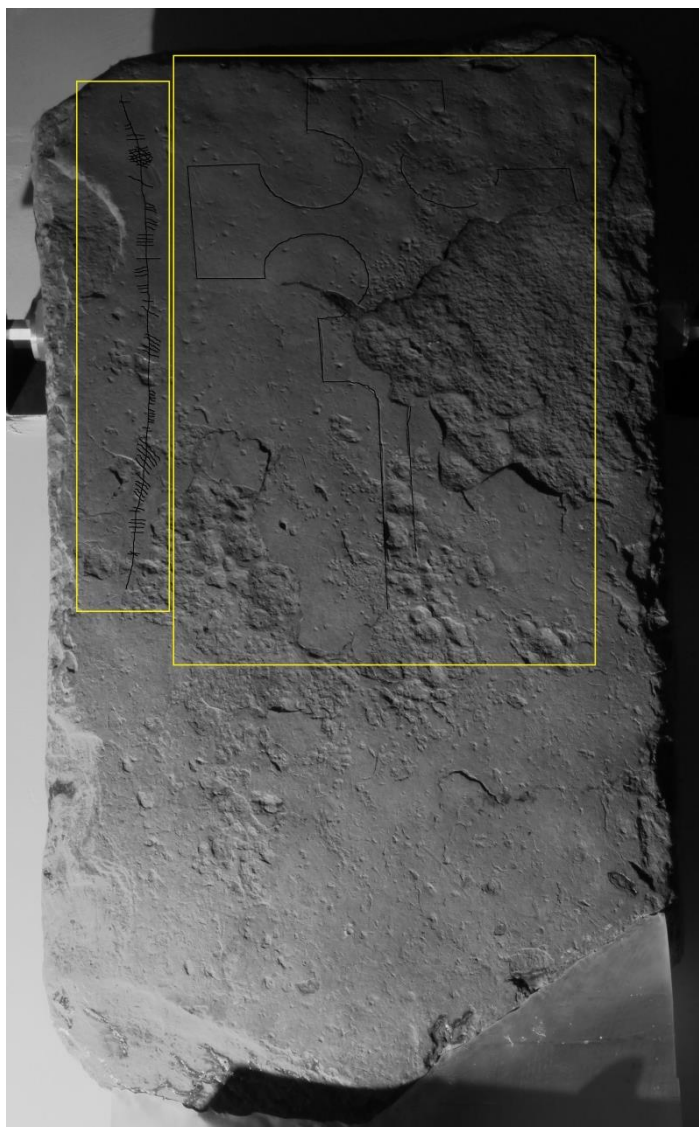


Figure 1.2 Ogham incised cross slab with an incised arris. Ogham is boxed (left) and cross (right). From Burrian, Scotland, National Museum Scotland Cat. N. X.IB.1.

changes in the Irish language (McManus 1991:1-3).

Ogham as a form of written language has been studied in great detail since the 19th century (Windle 1850). These enigmatic inscriptions on large stones were a curiosity recorded by various observers throughout the landscape of Ireland and the British Isles. Many of the stones were found in fields or pastures, along roads, or built



Figure 1.3 Ogham stone fragment from Poltalloch, Scotland, National Museum Scotland Cat. No. HPO470.

Table 1.1 Hypothesized dates for the ogham script and ogham stones (by year of publication).

Author	Date proposed for development of ogham script	Date proposed for ogham stones
Thomas 1973	Late 4 th century AD	
Lehmann 1989		Ireland – 4 th -6 th centuries AD Wales – 6 th -8 th centuries AD Scotland – 7 th -9 th centuries AD
Senner 1989	200 AD	
McManus 1991	4th century AD	"Pictish" stones – 7 th -9 th centuries AD
Warner 1991	3 rd century AD Primitive Irish – 3 rd -8 th centuries AD Old Irish – 7 th -10 th centuries AD	3 rd -8 th centuries AD
James 1993	4 th -7 th centuries AD	5 th -7 th centuries AD
Forsyth 1996		Scotland – 6 th -10 th centuries AD
Swift 1997	Pre-5 th century AD	Ireland– Late 4 th -7 th centuries AD
Birkhan 1999	4 th -5 th centuries AD	

into walls; few systemic excavations involving in situ ogham stones have been conducted (Harvey 2001:37).

1.1.1 Origins

Precisely when and how this script was developed remains unclear, though it is theorized that it emerged sometime in the 4th century, most likely in southeastern Ireland, where the largest cluster of ogham stones is found today (McManus 1991:1). From there, it spread to other regions in the British Isles, most notably areas with Celtic or Gaelic language connections (Scotland, the Isle of Man, Devon, Cornwall, and Wales) (Figure 1.4) (McManus 1991:47). Ogham is most commonly found inscribed on stone, though there are also several examples inscribed on bone and metal (Table 1.2) (McManus 1991: 93, 132).

According to Caesar, the druids in Ireland were prohibited by their religion from writing down any of their teachings, which is how he explained the lack of a formal writing system when he arrived in the British Isles in the 1st century BC (Lehmann 1989: 159). There are several theories regarding the possible parent alphabet of ogham. Because of the simplified nature of the inscriptions and the resemblance of the characters to Roman numerals, many have suggested a Roman influence (Forsyth 1996: xxxiii; McManus 1991: 1). Others have suggested that ogham was derived from a more functional indigenous counting system. Lehmann has proposed the possibility that ogham originated as wooden tally sticks used for counting, due to the fact that the characters resemble tally marks (Lehmann 1989: 160). Another alternative is that

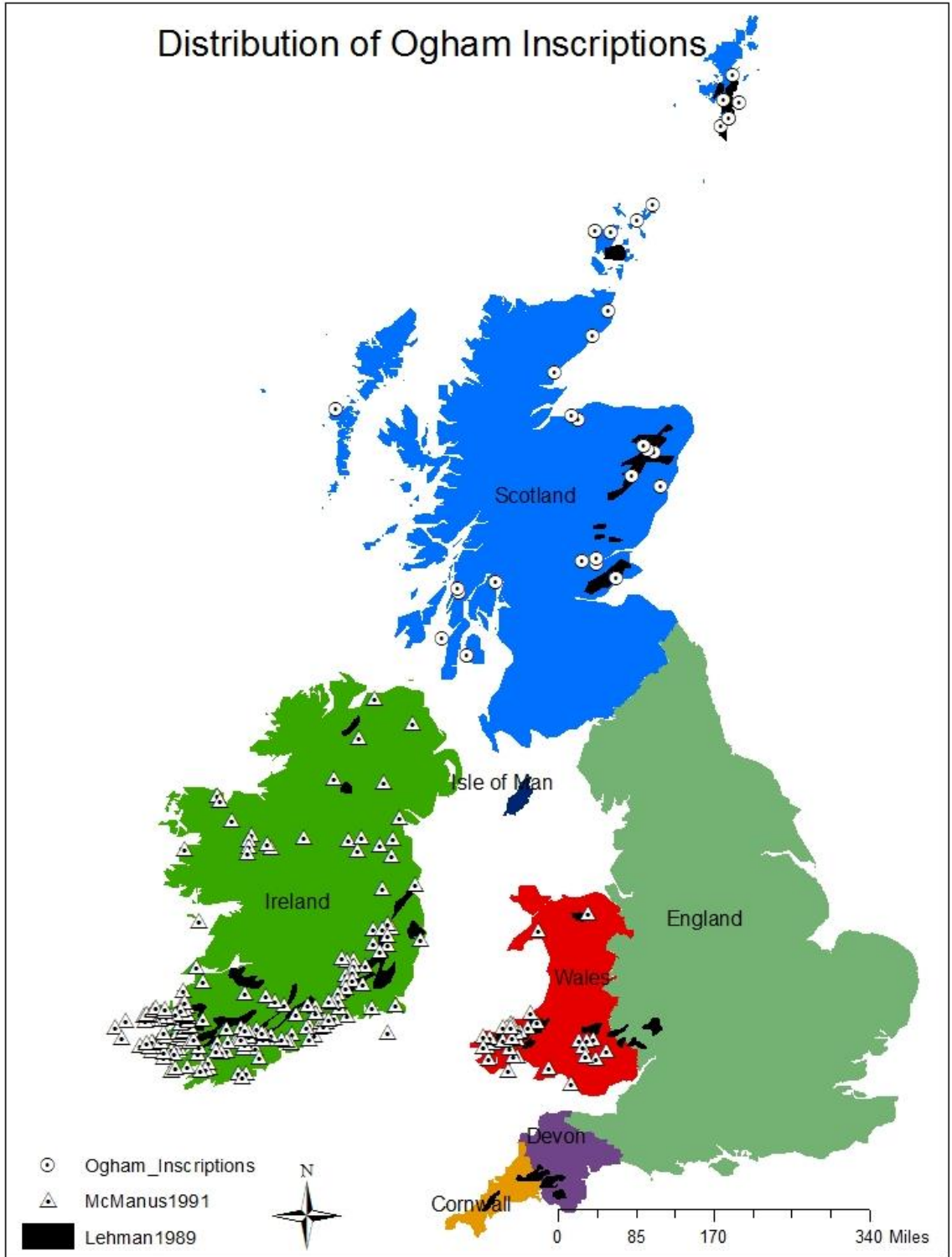


Figure 1.4 Distribution of ogham inscriptions based on Forsyth (1996) (Scotland), as well as Lehmann (1989) and McManus (1991) (all inscriptions).

Table 1.2 Distribution of ogham inscriptions by region (Forsyth 1996; McManus 1991; Ogham in 3D 2015).

Ogham by Region		
Region	# of Ogham Stones	# of Inscriptions
Ireland	360 (81.8%)	367 (80.8%)
Wales	35 (8.0%)	35 (7.7%)
Scotland	32 (7.3%)	39 (8.6%)
Cornwall	5 (1.1%)	5 (1.1%)
Isle of Man	5 (1.1%)	5 (1.1%)
Devon	2 (0.5%)	2 (0.4%)
England	1 (0.2%)	1 (0.2%)
Total	440	454

ogham originated as a “finger language”, an idea for which some textual evidence can be found. These sources describe people placing their fingers against their leg or nose in a manner that is supposedly similar to the way ogham marks are placed against the stem line (Lehmann 1989: 164).

Macalister believed that there must have been an alternate alphabet for everyday use, and that the ogham found on stones was used for monumental inscriptions while the other form (which would be lost at this point according to his theory) was used in day-to-day writing. His theory is that this “gesture-alphabet” was derived from a similar one used by the Chalcidic Greeks. His main evidence is that the nature of the inscriptions makes them difficult to read at a glance (Macalister 1945: v-vi). Others have proposed that ogham was derived from the runic alphabet of northern Europe, known as the *futhark*, which displays similarities in the grouping of the letters and in the order of the letters differently from most other alphabets (Lehmann 1989: 167). The opposite idea, that the runes were derived from ogham, has also been proposed, however (Lehmann 1989: 168). The main linguistic evidence that ogham was

not developed on its own is the existence of 'H' and 'Z' letters in the ogham alphabet. Manuscripts with the ogham alphabet and its cipher show clearly that the 'H' and 'Z' letters existed; however, these two letters never appear in any of the inscriptions on stone, indicating that were not used in the spelling of Primitive Irish (Macalister 1945: v).

Some manuscripts also contain ogham writing and it is through these that the ogham alphabet was deciphered. The *Codex Bernesis*, which has been dated to the 14th century, provides a list of the ogham letters and their Latin correlates, including the letters 'H' and 'Z' (McManus 1991: 134-135). Other ogham writings in manuscripts often follow the lines of notes written in the margins by monks transcribing religious texts. Such notes include complaints, prayers, dates, poems, and one example that is an apology for being hung-over: LATHEIRT (McManus 1991: 132-133).

A frequent feature of ogham stone inscriptions is the addition of incised images, the most common of which is a cross. Many of these are believed to have been carved in later times by Christians in an attempt to "de-paganize" the stones (McManus 1991: 54). The Drumconwell stone of Northern Ireland, however, is believed by Warner to have a contemporary cross and ogham inscription: "except for the depth the grooves [the cross and the ogham] are identically formed" (Warner 1991: 43). There is no way of dating either of the incisions, so it is impossible to confirm their contemporaneity. Other stones include different images, from "incised lines" (Jones 2006: 107), to more intricate decorations, such as a braided design (Southesk 1893: 207).

In a very small number of examples, the incised names seem to have historical or mythical connections. A stone inscription at Rathcroghan in County Roscommon, Ireland, for instance, contains a possible mythical name, while another stone at Cloghanacarhane in County Kerry, Ireland, has an inscription with a name that can be linguistically linked to the place name (Warner 1991: 47). Again, these are very rare occurrences, and it would be dangerous for archaeologists to force ogham inscriptions to fit Irish mythology or history. An example is a 1787 attempt by O'Flanagan to translate a stone to read "Beneath this stone is laid Conan the Fierce, the Nimble-Footed". O'Flanagan came by this translation by reading the inscription from different directions and piecing the different translations together (O'Flanagan and Hamilton 1787: 6). The commonalities found in these sorts of inscriptions must therefore be taken with a grain of salt.

Several carving techniques were used on ogham stones, including chiseling, incising, pocking, pocking and rubbing, and scratching. The method used can be determined by tool marks, though the nature of these tools is still unknown (Ogham in 3D 2015). Due to the height of many stones that were inscribed along an arris, it is likely that those stones were carved while on their sides, and were then erected after production. Most stones are read from the bottom to the top, but later inscriptions are often horizontal and read left to right (such as the Abernethy stone in Scotland). There are some cases where neither is true, for example the Cunningsburgh 3 stone from Scotland, which is believed to have been inscribed in a boustrophedon or spiral manner (Forsyth 1996:224). It is possible that further research with the use of RTI or other three

dimensional imaging software will provide details about the instruments used and the manner in which the inscriptions were produced.

1.1.2 Reuse

There have also been a few cases in which an inscription has been found in Ireland that is unintelligible when translated. These are theorized as having been purposefully written in a “secret” language known as “cryptic ogham”, possibly to be used in a magical form, which will be discussed in more detail below. An example of this can be found at Cahercommaun, a ringfort in County Clare, Ireland, where inscriptions were found on two sheep bones (Jones 2006: 107).

The most commonly found ogham inscriptions are in the medium of stone. These can range greatly in size from over nine feet tall to less than a foot. The size of the stone may indicate what it was used for, either before or after the ogham passage was inscribed. For example, Macalister describes an inscribed stone nine feet three inches tall that he postulates was used as a Bronze Age megalith before being used as an inscribed monument (Macalister 1945: 10). Alternatively, small fragments are sometimes found that are entirely illegible because they were broken either by plowing or to be used as building material. Large stone segments lend themselves best to the script since the angle of the slab is usually used as a stem line.

1.1.3 Dating

Ogham stones have been dated mainly using the morphology of the languages found in the inscriptions. It has been suggested that the ogham stones and ogham inscriptions of Ireland are earlier than those in Scotland based on linguistic dating

(McManus 1991:47). Because these inscriptions are the only remaining literary evidence of the Primitive Irish language, however, this dating system is problematic. Where archaeological dates are available, in the rare instance of an ogham stone being found in situ, the dates do seem to corroborate the linguistic data (for an example, see Forsyth 1996:69-92).

In addition, there is some paleographic sequencing data that can be used. While these data cannot provide dates per se, they can determine whether a stone is later or earlier in the ogham stone timeline. For example, later inscriptions are more likely to contain word division and 'bound letters', which are ogham letters that are framed by an outline, making it easier to see where one letter ends and another begins (Forsyth 1996: xxxiv-xliv) (Figure 1.5). None of these are hard and fast rules, however; they are simply tendencies that provide a general timeline of ogham stone production. The majority of the known surviving ogham stone inscriptions are found in southwestern Ireland; these do not, however, necessarily accurately represent the distribution of ogham stones during the late Iron Age and early medieval period.

The known ogham stones of Ireland and Britain are usually large pillar stones, though many have been fragmented by plowing or were reused as building material. The majority of inscriptions are eroded or so fragmentary that they are illegible, though many scholars have attempted to transcribe what remains. While multiple stones within a single site are rarely found, they do occur in regional concentrations (Forsyth 1996; McManus 1991). Unfortunately, the original locations of stones are rarely known with any certainty because most have been moved at some point. For example, several

stones with ogham inscriptions have been identified as being used as construction material or as cattle rubbing stones (Figure 1.6) (Forsyth 1996; McManus 1991). While this makes it difficult or impossible to determine the original location of monumental stones with inscriptions, because of their size and weight it is unlikely that most of them were moved very far. This has however required scholars to look at the distribution of stones on a regional basis, as opposed to site-by-site.



Figure 1.5 Abernethy stone from Scotland. Stone includes two bound letters inscribed on a carved band (National Museum Scotland Cat. No. X.IB. 98).

1.1.4 Geographic and Temporal Distribution

Ogham was likely developed sometime in the 4th century AD, but by the 5th century it was definitely in use as a form of monumental inscription in Ireland (McManus 1991: 1). The ogham script was in practical use from the 4th to the 11th centuries AD. After this, there were texts written *about* ogham, but not *in* ogham (Forsyth 1996: lii). Sometime around the 6th century AD, this material culture category appears to have begun to move into southern Britain, as demonstrated by concentrations of ogham stones in Wales, Cornwall, Devon, and one dubious example in the eastern-most area of England (Fulford 2000:357; Lehmann 1989:165) (Figure 1.7).



Figure 1.6 Breastagh stone from County Mayo, Ireland. Inscription is worn from use as a cattle rubbing stone (photo by Bettina Arnold, 2004).

A short time later, the stones also began to appear in Scotland and it was there that the greatest variety was introduced into the form (Forsyth 1996). The stones in Scotland range in date from the 6th century to the 12th century AD. On average, the ogham stones of Scotland are later than the stones of Ireland (Forsyth 1996: xliii). It appears that in Ireland the use of ogham to inscribe stones began to fall out of popularity around the 7th century (Forsyth 1996: lxxvii), while the practice gained popularity in Scotland during that time. Forsyth hypothesized that “post-classical

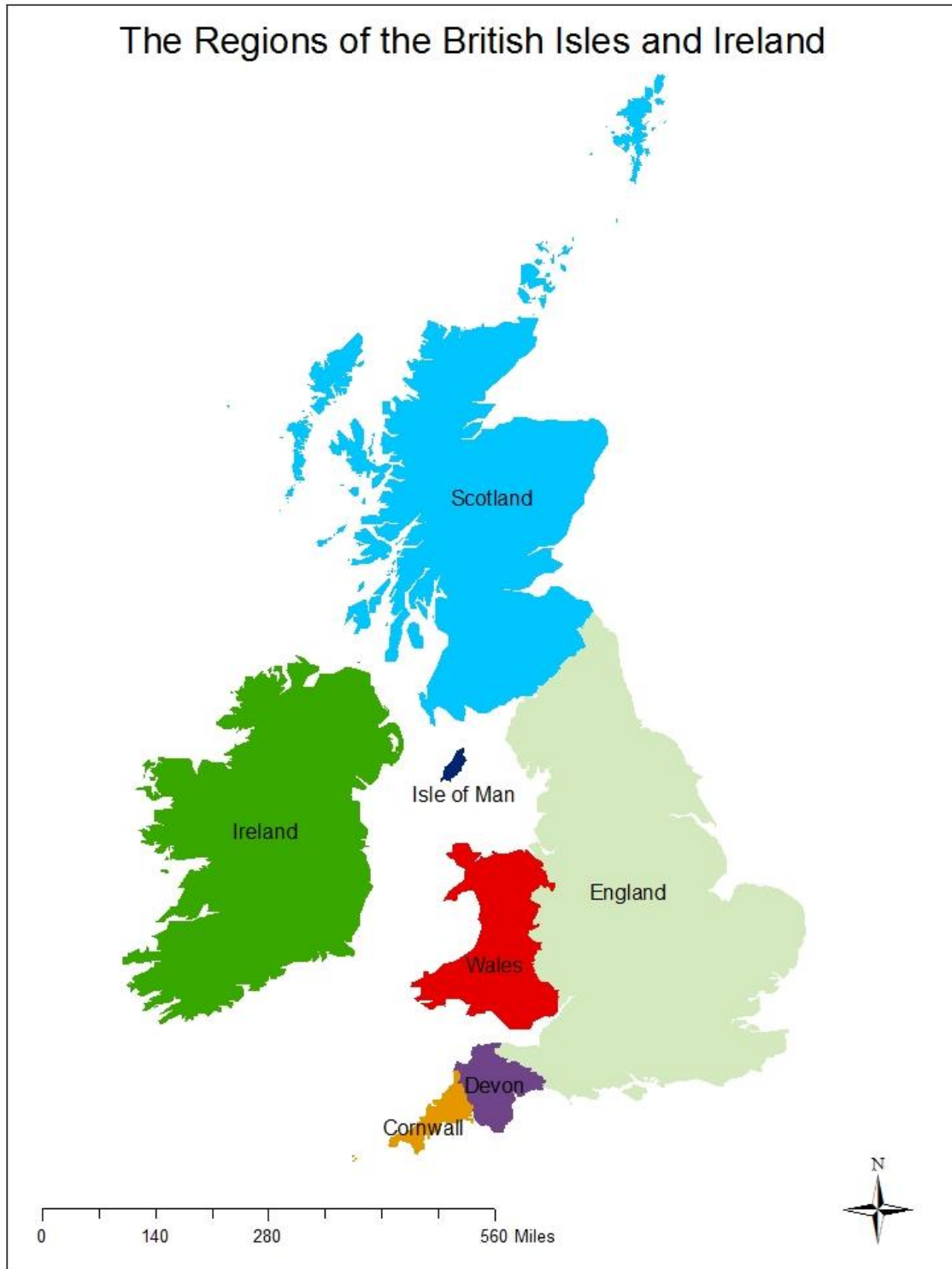


Figure 1.7 Map showing the regions of Ireland and the British Isles discussed in this thesis.

ogham [ogham inscriptions that post-date the 7th century] in Ireland had only marginal status, whereas in post-7th century Scotland, ogham was a prestige script used on grand public monuments” (Forsyth 1996: Abstract).

1.1.5 The Written Language in Antiquity

It has been suggested that someone in Ireland with knowledge of Roman Britain decided that having a means of recording ritual or genealogical passages would give them greater social standing in the eyes of the Romans or in their own societies. The ogham (sometimes also called ogam) script was designed to transcribe names and short messages; in its original state, it was probably not intended for anything more (McManus 1991:7). This has been cited as further evidence of ogham’s link to Latin, since most Latin inscriptions on ogham stones in Britain and Ireland are short and mainly used to commemorate dates or people, providing a functional analog for the ogham inscriptions. Most of the Latin inscriptions are found in Wales (26); only 3 have been found in Ireland.

The script closely resembles Roman numerals, which is cited in support of the theory that it developed out of contact between Roman Britain and Ireland. The fact that the inscriptions are short, similar to many Latin inscriptions in Britain, also supports this idea (James 1993:163; Jones 2006:107; Warner 1991:43), which has not, however, been critically examined.

1.2 Research Questions

Previous research on the subject of ogham stones has focused on a particular geographical or temporal region, making it difficult to identify inter-cultural connections

and patterns. It is these connections and their association with the variety of inscription types and stone monuments found in Scotland that will be the focus of this thesis.

While existing published records of ogham stones and ogham inscriptions will be considered, this thesis will concentrate on the stones bearing inscriptions in Scotland and links with the Irish ogham stone tradition suggested by this less well-studied set of monuments.

There is still a great deal to be discovered about ogham stones because they are not often found in their original locations and the majority of the stones are damaged to the point of being difficult or impossible to read (Warner 1991:43). The majority of legible inscriptions have been interpreted as written in Primitive Irish (McManus 1991:1). There are, however, a number of stones in Scotland that differ from all others. These stones were inscribed using a language that has yet to be positively identified or translated. It is likely that this language is either Pictish or some early form of Norse, with the latter being the predominant current theory (Cox 1999: 5; McManus 1991: 47).

The known stone inscriptions probably represent only a fraction of those that once existed. The fact that there are a small number of inscriptions on bone and ceramic objects suggests that several other, probably organic, media were also used. The script was most likely used early on a softer surface, possibly wood. Many of the letters are named after different types of trees or shrubs (Table 1.3). Trees are significant in early Irish culture and religion and it is likely that if the letters were named after types of wood, they were also initially carved on wood (McManus 1991: 34-36). If it was, as Macalister called it, a “gesture” alphabet, then it would have been modified to

Table 1.3 Names and translations of ogham letters. Tree and shrub names are starred (McManus 1991: 36-39).

Letter	Name	Translation
B	Beithe	Birch Tree*
L	Luis	Flame or Herb*
V/F	Fern	Alder Tree*
S	Sail	Willow Tree*
N	Nin	Fork or loft
H	Úath	Lord or Fear
D	Dair	Oak Tree*
T	Tinne	Metal Bar
C	Coll	Hazel Tree*
Q	Cert	Bush*
M	Muin	Neck, Ruse, or Love
G	Gort	Field or Enclosure
GG	Géal	Killing
Z	Straif	Sulfur
R	Ruis	Red
A	Ailm	Pine Tree*
O	Onn	Ash Tree*
U	Úr	Earth or Soil
E	Edad	Unknown
I	Idad	Unknown

be inscribed onto a more permanent material like stone (Harvey 2001:42). In any case, it is important to remember that the distribution of ogham inscriptions known today will always be incomplete due to the removal and dislocation of monuments, as well as preservation bias (McManus 1991:47).

The dating of ogham inscribed stones is also problematic. The stone material itself cannot provide any specific date for the inscriptions, and the context of the stones is rarely known, leaving the non-script carvings on the stones as the main means of establishing the significance of these monuments. Because these are the oldest known forms of writing in Ireland or Scotland, there is nothing to compare them to, and

scholars have had difficulty finding more accurate methods of dating them (O'Sullivan and Downey 2014:26). Most previous work on the dating of ogham inscriptions focused on the language used, basing the date on the apocope¹ and syncope² (Swift 1997:70), but the ogham inscriptions of Scotland pose a different problem in that scholars have not yet been able to identify the language used in many cases (McManus 1991:47). Forsyth, in particular, has discussed the linguistic elements of these inscriptions. She theorized that one of the Goidelic languages of Britain (including Scottish, Welsh, and Brittonic), a Pictish language, or an early Norse language may have been used in these inscriptions (see Forsyth 1996 for further details and examples). In addition to ogham inscriptions in this unknown language, various Pictish symbols are also often found inscribed on the stones found in Scotland (Figure 1.8).

This thesis poses the following research questions:

1. How and why did the practice of ogham stone production move from Ireland to Scotland? While the evidence of material culture movement in the British Isles during the Late Iron Age and early medieval period is implied by similarities in various media, including ogham inscriptions (Cunliffe 1997; Thomas 1973; Wells 1996), this phenomenon is still poorly understood.
2. Can the material itself provide a clue to the mechanisms by which the pillar stone phenomenon may have moved from Ireland to Scotland?

¹ Apocope refers to the process in which the final syllables of words within a language are lost (Swift 1997:70)

² Syncope refers to the process in which the second syllable is lost from words with three or more syllables (Swift 1997:70).



Figure 1.8 Ogham stone from Ackergill, Scotland. Inscribed with ogham and two Pictish symbols: a partial fish on top of a rectangle, highlighted in yellow. National Museum Scotland Cat. No. X.IB.168.

3. What might explain why ogham was used instead of an alternative script or communication system, such as Latin, Pictish symbols, or a new script that the Scottish peoples could have created? What was the possible socio-political significance of ogham in Scotland? What was the intended audience?
4. How can the ways in which the Scottish peoples between the 6th and 10th centuries AD (Forsyth 1996: xliii) adapted ogham to suit their needs shed light on the cultures and societal structures of the times in Scotland? What can the evidence for contact represented by the ogham stones tell us about contact between Scotland and Ireland at this time?

1.3 Theoretical Approaches

Two major theoretical approaches will be used in this thesis: materiality and material culture theory. From the standpoint of materiality theory as applied to archaeological evidence, this thesis will be utilizing the works of Williams (2003) and Tilley (2004). The materials used for ogham inscriptions were chosen for a reason that may have been related to the different types of inscriptions used. Establishing monumental ogham stones was a way of remembering the past and the stones themselves as well as the way in which they were erected can provide a window on the culture who erected them and their views on the past. The second theoretical approach, material culture theory, is used to explore the social and cultural importance of the ogham inscribed stones themselves. Woodward's (2007) work on material culture will be the basis of this theoretical approach. The ogham stones clearly had symbolic meaning, some of which was linked to the material of which they were made.

Like other material culture categories, the stones were likely produced for some utilitarian purpose, but retained a meaning beyond this purpose. These symbolic meanings allowed the people who used these objects to shape their world. By applying an object biography approach (Joy 2009; Kopytoff 1986) to material culture studies, we can explore the relationships between people and the objects on which ogham was inscribed. Kopytoff in particular discusses the importance of the interactions between objects and people throughout the lifespan of the object (Kopytoff 1986: 68).

This dual approach to the ogham stones of Ireland and especially Scotland should allow for a more holistic, anthropological interpretation of how these stones were viewed and used by the peoples of the Late Iron Age and early medieval period. It may also illuminate the differences between the stones of Ireland and Scotland and how the peoples of Scotland may have adapted the technology of ogham inscriptions to suit their own needs. Both approaches will be discussed in further detail in Chapter 3. A more detailed discussion of the previous work conducted on ogham stones and the people who erected them can be found in Chapter 2.

Chapter 2: Literature Review of Research Problem

Ogham and ogham stones have been a subject of interest for scholars since at least the 18th century (McManus 1991: xi). This enigmatic script and the objects it adorns have been the focus of research in several disciplines. Linguists, archaeologists, historians, mythologists, and others have all been intrigued by these little-understood inscriptions. While the data collected on ogham and ogham stones are limited, there is a significant amount of literature on the subject. Ogham stones were discovered mainly by individuals who happened to notice the odd markings on stones found in their farm fields or built into church walls. It is rare for a stone to be found in an archaeological context (Forsyth 1996; McManus 1991), and even then, there is often little evidence to prove whether the stone was in situ or found in a secondary context (Forsyth 1996). The difficulties inherent in dating the stones and their inscriptions have led many to attempt to develop new means of analyzing their component features, such as dating them on the basis of the form of the carvings (Forsyth 1996), linguistic changes and other diachronic evidence (McManus 1991), the names being used (McManus 1991; Swift 1997), other inscriptions on the objects (Forsyth 1996; McManus 1991; Swift 1997), and even measuring the buildup of lichen on the stones (Harvey 2001).

2.1. The Language and Script

The primary focus of ogham studies has, in the past, been the script and the languages in which it was written. The origins of the script remain a mystery and the function of the script itself is largely unknown, though there are several theories as to the function of the script on stone monuments. The languages themselves have posed a

challenge. It is known that the majority of ogham inscriptions are written in a form of Primitive Irish, but the inscriptions are often incomplete. Those that are complete have very little to say, usually just a name and a lineage (McManus 1991: 44).

The main focus historically has been on the language and cataloging of the ogham inscriptions (Brash 1879; Forsyth 1996; Jackson 1984; Padel 1972). One of the main mysteries associated with the inscriptions in Scotland involves the languages in which the script was written (Brash 1879; Forsyth 1996; Jackson 1984; Macalister 1945; McManus 1991; Padel 1972). Primitive Irish is certainly present, but the unique aspect of the Scottish ogham stone inscriptions is that Irish is not the only language represented in ogham. However, this other language written in ogham remains unknown. Brittonic, Goidelic, Norwegian, and Pictish languages have all been suggested, but currently, their presence cannot be confirmed in the Scottish ogham inscriptions (Forsyth 1996; McManus 1991:47).

One of the largest early studies conducted on the ogham stones was produced by Richard Bolt Brash, entitled *The Ogam Inscribed Monuments of the Gaedhil in the British Islands* (1879). In this tome, Brash collected all the information available on ogham and inscribed stones known at the time (Table 2.1). This included references to ogham inscriptions in the mythological record, comments by early antiquarians, examples of the script in use in manuscripts, and an inventory of every inscription known at the time and its transliteration. Brash set a precedent for works on ogham inscriptions and many of the subsequent larger projects were conducted in the same style. Macalister's 1945 tome, entitled *Corpus Inscription Insularum Celticarum*, eclipsed

Table 2.1 Counts of ogham inscriptions and ogham inscribed stones by year of publication.

Publication	Overall		Scotland Only	
	# of Inscriptions	# of Stones	# of Inscriptions	# of Stones
Brash 1879	214	201	11	11
Macalister 1945	377	377	11	11
McManus 1991	397	N/A	29	N/A
Forsyth 1996	N/A	N/A	37	31
Ogham in 3D 2015	Over 400	N/A	N/A	N/A

Brash as the definitive reference work and is still widely cited. Since 1945, other authors have continued to update this inventory to produce more complete renderings of the inscriptions using newly acquired knowledge of the script and languages (Forsyth 1996; McManus 1991). The number of stones within the inventory has increased over time (Table 2.1). This is because stones and inscriptions are still being found, though the pace of discovery has slowed in recent years. For the most part, stones and inscriptions are now more likely to be discovered archaeologically, such as the Bornais plaque that was uncovered in 1996 in South Uist during the excavation of a settlement site (Forsyth 2007: 493).

Damian McManus produced a synthesis of Irish ogham in 1991 focusing on the script, language, inscriptions, and transliterations of the inscriptions known in Ireland at the time. Like many other scholars of ogham, he came to the subject from the perspective of a linguist with expertise in Early Irish. The ogham inscriptions are the main remnants available to scholars of this early language. In Wales, the primary focus of research has also been the language (Macalister 1945, for example). There are several examples of bilingual stones with inscriptions in both Latin script and ogham

script. Some of these involve transliterations of the message in both ogham (the language used being Primitive Irish) and Latin, while others have separate Latin and ogham inscriptions, though all of the ogham inscriptions are written in Primitive Irish (McManus 1991:96). The importance of this is that the languages on the stones reflect (to a certain extent) the languages being used in society at the time, indicating that the Irish language was at least somewhat important in Welsh society in the 5th and 6th centuries AD and that at least one intended audience was presumably only literate in Latin (Foster 1965:218). This has implications for the mechanism involved in the transfer of the script as a concept and a technological adaptation.

2.2 The Ogham Stones

As stated earlier, the first compilation of data on the known ogham stones was conducted by Richard Bolt Brash (1879). Brash reviewed the history of the study of ogham and the ogham inscribed stones, suggesting that, because of the widespread views of Ireland and the cultures of the island, the study of ogham and the stones on which it is found was not as in-depth as it would be if ogham had originated in a different part of Europe (Brash 1879: 1). His descriptions of individual stones mainly involved recording the inscriptions on the stones and the method used to inscribe them. He divided the stones by nation (Ireland, Scotland, Wales) and then by county.

Brash's compilation of who found the stones, when they were found, what was inscribed on them, and how they were inscribed became the foundation of all later compilations (Macalister 1945; Ogham in 3D 2015). R.A.S. Macalister updated Brash's inventory in 1945. The major difference between Macalister's two volume publication

and Brash's tome is that Macalister was interested in all types of inscribed stones in the British Isles whereas Brash focused solely on ogham inscribed stones. Macalister added new data such as updated translations, stones that had not been found in Brash's time, and further details about the inscriptions.

Damian McManus (1991) is one of the foremost living experts on the ogham script. While his concerns trend more towards the script and the language than the stones themselves, (see above), he has written the most recent definitive reference work on ogham and is cited by most who have followed him. In 1997, Catherine Swift took McManus's guide to the language and the linguistic dating system he had devised and brought to them the perspective of an archaeologist for the first time. Swift used archaeological evidence to argue for connections between Ireland and Roman Britain by synthesizing the linguistic evidence outlined by McManus with the material record in other media. She suggested that the connection to the Romans had an effect on the Irish culture that can at least be linked in some way to ogham's existence and development (1997).

The most recent compilation of Scottish ogham inscriptions was produced by Kathrine Forsyth in her 1996 doctoral dissertation. Forsyth recorded all the known examples of Scottish inscriptions, including data on the discovery of each stone or object, its provenance and current location, a description of the object and any inscriptions, including those not in ogham, transliterations of the inscriptions, previous readings of the ogham inscriptions, and her own interpretation of the inscriptions.

In more recent years, the study of ogham stones has taken a new turn with advances in imaging technology. The past decade has seen the increased use of three-dimensional imaging tools in studying the inscriptions. The Discovery Programme in Ireland has recently compiled the known ogham inscribed stones found in Ireland in their “Ogham in 3D Project” (ogham.celt.dias.ie) (O’Sullivan and Downey 2014:26), for example. This project is developing three-dimensional images to be paired with the records of known data for each individual stone. The images are used to identify previously unrecognized details of ogham inscriptions and to preserve the images of the stones for future research. However, this project only covers the stones found in Ireland and non-lithic artifacts with ogham inscriptions and inscriptions found outside the country are not included at this time. This is an ongoing project that is part of the Dublin Institute’s multidisciplinary study of ogham (Ogham in 3D 2015).

2.3 The Iconography of the Ogham Stones

There is a connection between the imagery found on some of the stones and their location in the landscape, possibly based on their “communicative potential” (Hartley and Wolley Vawser 1998: 185). These images were chosen for a reason, and the fact they were combined with ogham inscriptions in some cases is significant. A study of rock art from the Northern Colorado Plateau in the United States provides data suggesting monumental art can be placed in the landscape not only for communication, but also to manipulate behavior (Hartley and Wolley Vawser 1998: 189). This is an area of analysis that has not yet been extensively applied to ogham stones.

2.3.1 *Christian Iconography*

McManus (1991) focused on the language inscribed on the stones, though he did describe some of the imagery that accompanied the inscriptions as well, specifically the Christian cross symbol. He suggests that some of the crosses found on ogham stones may have been used to “Christianize” the pagan monuments, implying that the ogham script was, in essence, pagan. Some of these crosses are contemporary with the inscriptions and some came later (McManus 1991: 54). McManus nevertheless argues that the script was more likely used in a Christian context, though it was probably produced by both Christians and Pagans (McManus 1991: 59). The fact that this one page is the only mention in McManus’s *Guide to Ogham* of the images that accompany these inscriptions is an indication of how little attention is paid in general to the stones as material culture, while emphasis is mainly placed on studying the text represented by the inscriptions. McManus’s assessment of the Christian connections with ogham has been largely accepted by other authors (Table 2.2).

2.3.2 *Pictish Iconography*

Forsyth (1996) provides a detailed account of all the known ogham inscriptions in Scotland, including associated imagery, such as Pictish symbols. Throughout her dissertation, Forsyth provides a detailed description of these symbols as well as their possible implications. Cummins (1999) conducted a study of Pictish symbols which includes a chapter devoted to the symbols that appear on ogham stones. Cummins’ theory is that the Pictish symbols also represent names. He presents little evidence for this other than his belief that symbol stones were designed almost exclusively for the

Table 2.2 Arguments for and against ogham as a Christian script, by year and author.

Evidence for or Against Ogham as a Christian Script			
Author and Date	Evidence for Christian	Evidence for Pagan	Author's Conclusion
Lehmann 1989		Mythological references to ogham being used as a secret script by druids.	Ogham is a pagan script.
McManus 1991	Same format as Christian monuments (name and familial affinity). Some crosses are contemporary.	Crosses could have been used to "Christianize" the stones. Some later stones use the formula "a prayer for X".	Ogham may have Christian origins, but was likely used by both Christians and Pagans.
Forsyth 1996	Ogham stones largely found in ecclesiastical contexts. Irish missionaries were likely one of the mechanisms for transferrance of ogham from Ireland to Scotland.	Ogham inscriptions also found in settlement contexts.	Ogham probably has a Christian connection, but was not restricted to ecclesiastic functions.
Swift 1997	Ogham stones are evidence for the movement of Christianity.		Ogham stones were often used for Christian purposes.
Cummins 1999		Ogham inscriptions were defaced by Christians.	Ogham is a pagan script. It is difficult to read because it was meant to be a secret code which the pagans could use to prevent Christians from knowing they were still practicing.

purpose of memorializing individuals. Using the *Pictish Chronicle* (14th century or earlier) and the *Irish Annals* (17th century), he determined that the most common format for Pictish names was in two parts: a personal name and a secondary name, usually a patronymic. Pictish symbols are also most commonly inscribed in pairs (Cummins 1999: 48-49). Cummins concluded that each symbol must represent a Pictish name and that the ogham stones with symbols must be bilingual stones that can be used as a sort of Rosetta Stone to decode the Pictish symbols. As an example, Cummins highlights the fish symbol, which is found in four ogham stones in Scotland (Figure 2.1). Three of these have a similar stem word: NEHT, NAHHT, and INEHHET. One of the most common names on the lists of names in the two textual sources is Nechtan. Cummins believes these three ogham inscriptions might be a form of Nechtan and concludes that the fish symbol must represent this name (Cummins 1999: 62). Cummins' work, which includes a few other conclusions on names, is problematic. He appears to make several untested assumptions regarding the meaning of the Pictish symbols. In addition, his data on the translation of the symbols is extremely limited. There are only eight bilingual ogham/Pictish stones containing a total of ten texts. Of these, the fish symbol was the most common (Cummins 1999: 60). A sample of N = 4 is not sufficient to draw definitive conclusions.

2.4 The Cultural Context of Ogham Inscriptions

2.4.1 Material Culture Movement

Material culture movement between Britain, Ireland, and the continent began long before the Iron Age. There is evidence of movement as early as the Neolithic



Figure 2.2 The Latheron Stone, Caithness, Scotland. Stone has an ogham inscription running up the right side of the face of the stone, a cross made of interlaced knots, and two Pictish symbols: a bird and a fish (National Museum Scotland Cat No. X.IB. 183).

(Cunliffe 2007: 103), continuing steadily into the Bronze Age. While the majority of Bronze Age metal artifacts found in Britain are of local manufacture (Raftery 1997: 551), several votive deposits of continental metalwork have been found in eastern Britain. These were most commonly deposited in rivers between the 10th and 4th centuries BC (Cunliffe 1997:584). Prior to the introduction of iron production in the 8th century BC, Atlantic trade route connections were strong and trade was common between Ireland, Britain, and the Atlantic coast of continental Europe. When iron production was introduced, however,

the centers of wealth changed. Iron was much more widely accessible than bronze, and this change also altered the major trade routes. While on the continent iron technology advanced, the Insular Celts did not see quite as much trade and material culture movement. For Britain, trade via the North Sea strengthened, and a connection to northern continental Europe developed, eventually leaving Ireland relatively isolated (Cunliffe 2007:108-9).

Although the altered trade routes left Ireland with fewer connections, there was still contact between the island and the continent. A handful of scattered artefacts from continental Hallstatt cultures have been found (Raftery 1996:637). In southeast Britain, bronze scabbard chapes and various other Hallstatt C objects, while most likely produced in Britain, show close affinities to continental counterparts (Raftery 1997:558). In the Late Bronze Age, Scotland had its own connections to continental Europe. Evidence of metalwork and pottery in Aberdeenshire in eastern Scotland connects the northern part of the island to Germany through the North Sea in the 7th century BC, for example (MacKie 1996:661).

The Roman occupation of Britain had a major effect on cultural diffusion. Large scale trade between Romans and the Insular Celts began with the Common Era (Wells 1996:231). Once the Roman legions began moving into Britain, however, the mechanism of movement shifted from trade and exchange to conquest and colonization. Romans brought their own culture in addition to those of the areas previously conquered by them. They also adopted aspects of the cultures they conquered, which can be seen in the associated material culture. Classical documents tell us that in Wales, Rome fought with three major tribes: the Decangi, Silures, and Ordovices (Davies 1996: 671), while the Roman general, Agricola, first marched into Scotland in AD 82 (Raftery 1996: 636). The movement of the Romans also affected the movement of other peoples. MacKie indicates that the battle at Mons Graupius between the Romans and the Celtic tribes forced many of the tribes to flee north into Scotland, bringing their La Tène material culture with them (MacKie 1996: 659).

Once the Romans moved into an area, they firmly integrated their own culture with that of the native cultures. In Britain, the Romans would appropriate Celtic ritual spaces, placing votive deposits in the same areas as the tribes who had used them beforehand (Davies 1996: 693). Native Groups in Britain also took on some aspects of Roman culture. It is possible that prestige and a higher social status were associated with Roman culture based on evidence from Romanized forms of names (*tria nomina*) inscribed in Roman-style tombstones, dedications, and personal ornaments. It also appears that the Latinized names carried greater weight when one considers that in the *tria nomina*, the Celtic name is always positioned last (Mullen 2007: 40, 402).

The Roman rule of Britain ended at the beginning of the 5th century, when the legions left the island. It was around this time also that the Irish began to colonize Britain (Swift 1997: 2). This is significant as it is the same time that ogham stones began to be erected (McManus 1991: 1). Roman artifacts have been found in Ireland dating to the 4th and 5th centuries, including coins, ingots, jewelry, “toilet implements”, and pottery. However, Ireland is the only area of the islands not occupied by the Roman military; no forts or other evidence of a permanent military presence have yet been found there. Many of these Roman imports were found in caches in rivers, harbors, near hill forts, and in connection with earlier prehistoric monuments (Swift 1997: 3). There was clearly movement between the two islands during the period of development of the ogham script, but the timing of its development and its distribution seems to undermine the idea that Roman influence was the primary motivation or impetus behind the emergence of this indigenous recording system.

Religious movements also bring with them new ideas and associated technology.

One reason why Christianity was able to spread so widely was its ability to integrate with previous cultures and traditions, especially in terms of cult relics (Waddell 2011: 210). After the Romans left Britain, the Irish monks took it upon themselves to spread Christianity there. Probably the first to do so was St. Columba, who established his monastery on the Scottish island of Iona in AD 563. This led to other Irish monks leading missions to Continental Europe, bringing with them the uniquely insular material culture found in Ireland (Ó Cróinín 1997: 687).

In addition to the archaeological record, there are other sources for the movement of peoples and the reasons for this mobility. The main source available, though it can be problematic, is the existing texts, the majority of which come from the Roman and Greek worlds since there was no native form of writing in either Ireland or Britain until the 5th century AD. These sources were obviously not produced by the Celtic cultures themselves. The classical references provide evidence of extensive trade between Ireland and the Roman world (Raftery 1996: 636), and it is mainly through the *Annals* of Tacitus (c. 56-117 AD) that we know about the movement of the Romans into Britain (Davies 1996: 671).

2.4.2 *The Dál Riata*

Movement between Ireland and Scotland is a key element in understanding the ogham stones and the technological and conceptual transfer between these areas. Bannerman (1974) discusses the connections between the Irish Dál Riata and the Scottish Dál Riata. The Dál Riata was an Irish kingdom that became subdivided and

reestablished in Scotland as a satellite polity of the same name. The kingdom was established in northeastern Ireland around 500 AD, or possibly earlier. The date of the kingdom's migration to Scotland is uncertain, but the two polities were likely separated around 700 AD. There were violent rivalries both within the kingdom and between the Dál Riata and neighboring kingdoms for power (Lane and Campbell 2000: 31, 34).

Fergus Mór was the king of the Irish Dál Riata when he made the move to Scotland, but he was not replaced by another Irish king there, indicating that the Scottish Dál Riata had at least some level of control over the Irish portion of the kingdom (Bannerman 1974: 1). The 8th and 9th centuries saw raids on Dál Riata by Vikings (Lane and Campbell 2000: 31), another possible motivation for the increase in permanent stone monuments used to mark territory.

Dunadd (Figure 2.2) is considered the capitol of the Scottish Dál Riata kingdom (Lane and Campbell 2000: xiii). Dunadd has been excavated, but in spite of this, there is still much that can be learned about the site. This site has produced one of the largest collections of early medieval artifacts known from Scotland. The occupation of Dunadd dates mainly from the 5th to the 9th centuries AD (Forsyth 1996: 227-228). One of the more interesting aspects of the site is the evidence for metalworking. It is clear from the artifacts found in this part of the site that the Dunadd metalworkers had a sophisticated knowledge of a variety of alloys and pure metals as well as Celtic metal artistry (Lane and Campbell 2000: 210-11).

Several examples of rock carvings have been found at the site. One is an ogham inscription which, instead of being carved on a standing stone, was instead carved on a

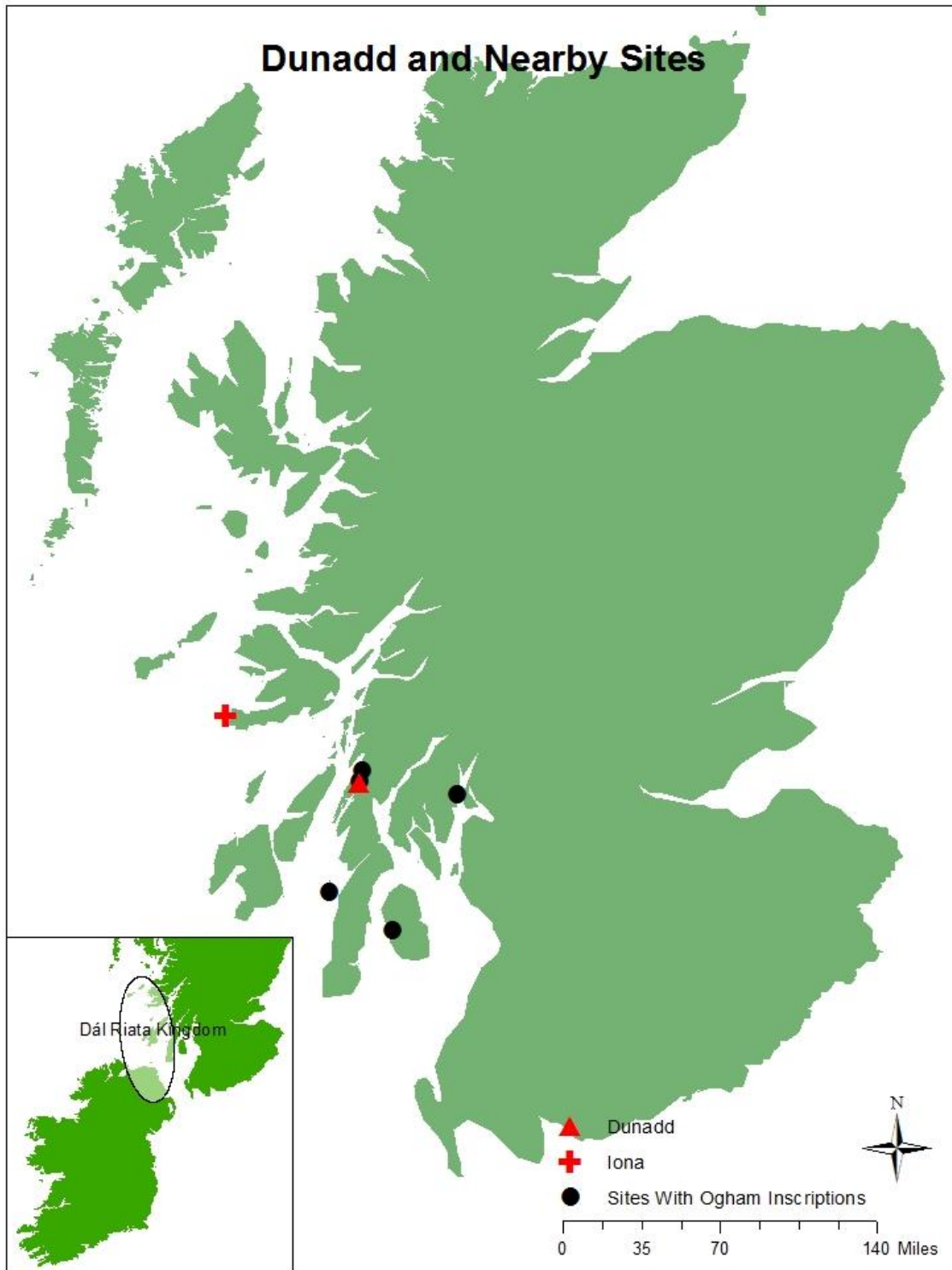


Figure 3.2 Map showing Dunadd and nearby significant sites.

rock outcrop. This is located just below the summit around which the site was built, near one of the forts. In addition to the ogham inscription, a basin, two foot prints, and a boar were carved into the rock (Lane and Campbell 2000: 19). Archeological and linguistic evidence dates this inscription to the 9th or 10th centuries AD (Lane and Campbell 2000: 22-23). Footprints carved in stone and linked to inauguration ceremonies have been attested to at royal sites. Forsyth interpreted the inscription at Dunadd, with the foot prints, as connected to an inauguration ceremony, though the inscription is illegible (Forsyth 2000: 272).

2.5 Summary

Beyond the inscriptions and images carved into these stones, this project also examines the possible cultural meanings embedded in the material of the stones themselves, their locations in the landscape, and the methods of carving used. Evidence from previous research projects will be combined to provide a new perspective on of the ogham stones from both Ireland and Scotland. These data, combined with the use of three-dimensional imaging of a subset of Scottish stones, are used to develop a narrative of the biography of a typical ogham stone in order to demonstrate the complexity of their role and interpretation in early Christian Britain and Ireland.

Chapter 3: Methodological and Theoretical Framework

Previous research conducted on ogham stones and ogham inscriptions has tended to focus either on all known stones or inscriptions (see Brash 1879) or those stones belonging to a specific region (see Forsyth 1996). The problem with these comprehensive surveys is that very little attention has been paid to the connections between regions and cultures evidenced by the ogham inscriptions or the materiality of the stones themselves.

In the past, ogham stones have been studied mainly based on their inscriptions, although some attention has been paid to the physical state of the stones, whether they were shaped prior to being inscribed, where they may have originally been erected, and what other imagery or inscriptions may have been carved on them (see Brash 1879; Forsyth 1996; Macalister 1945; Padel 1972). Due to this restricted focus, research on the ogham stones had all but come to a halt until three-dimensional technology was recently introduced as a new analytical approach (The Discovery Program 2007).

The Scottish ogham stones are the only known inscriptions in an indigenous language other than Primitive Irish apart from the bilingual Latin inscriptions, which are mainly found in Wales. While these inscriptions have been previously studied, the language(s) has not yet been identified or translated, and the stones as stones have not been subjected to the more detailed study carried out on the Irish material. My interest, therefore, lies mainly in the material itself as well as what it may reveal about the transfer of the technology of inscribing stones with the ogham script from Ireland to Scotland, which has been assumed to have been the result of either Irish colonization in

Scotland or diffusion of Christianity through missions such as Iona (Forsyth 1996: xv; McManus 1991: 47; Swift 1997: 128).

3.1 Types of Evidence

3.1.1 The Ogham Stones

There are over 400 known ogham inscriptions in the British Isles (Figure 3.1), although the precise number has not been determined and new inscriptions are still being found (Ogham in 3D 2015). Ogham inscriptions have been discovered in Ireland, Scotland, Wales, Cornwall, the Isle of Man, and England (McManus 1991: 44-47). These inscriptions are most commonly found on stone (Macalister 1945: i), though ogham has also been documented on other material, including bone (Forsyth 2007:471). While many of the artefacts with ogham inscriptions are now in museum collections, several remain in the landscape either in their original contexts (or near them) (Figure 3.2), in new contexts (field stone walls or cattle rubbing stones) (Figure 3.3), or used as modern monuments (Figure 3.4) (McManus 2004: 5).

For the majority of ogham inscriptions in any region, the location of the original site is often uncertain. It is unknown how many of the known stones were found in situ and how many were found in secondary contexts. Over 40% of ogham inscribed stones from Ireland, for example, were reused in souterrains and over 40% were found in or near ecclesiastical sites, though these may not always have been their original contexts (Ogham in 3D 2015). The earliest known location usually provides the best information available as to context. This limits the kind of geographic analysis that might otherwise provide useful insight into location, position and distribution in the landscape.

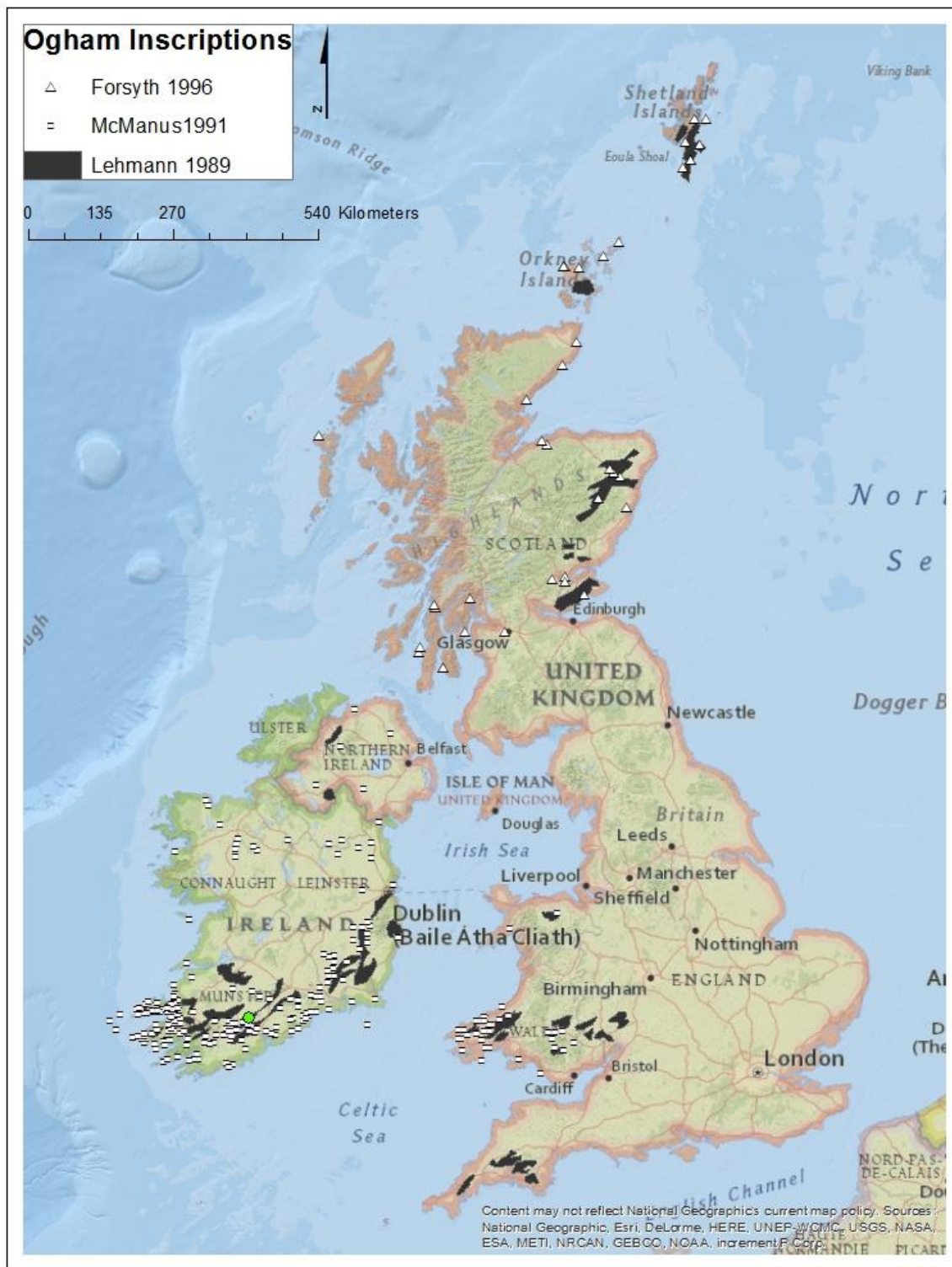


Figure 3.4 Distribution of ogham inscriptions based on Forsyth (1996) (Scotland), as well as Lehmann (1989) and McManus (1991) (all inscriptions). Lehmann and McManus distribution studies of ogham inscriptions compared to each other and Forsyth's 1996 dissertation show significant differences.



Figure 3.2 Ballywiheen stone in County Kerry, Ireland shown in situ. (Image from ogham in 3D project.)



Figure 3.3 Brandsbutt stone from Scotland, built into stone dyke. (Image from Royal Commission on the Ancient and Historical Monuments of Scotland website.)



Figure 3.4 Brodie stone from Scotland, re-erected as a monument for tourism. (Image from Royal Commission on the Ancient and Historic Monuments of Scotland website.)

As can be seen in Figure 3.1, our knowledge of the distribution of ogham inscribed stones has changed dramatically over time. The data distribution, as has been stated, is not reliable as we know little about the original locations of these inscriptions. The authors whose data were used to produce Figure 3.1 include Ruth Lehmann (1989), Damian McManus (1991) and Katherine Forsyth (1996). McManus only documented

distribution data from Ireland and Wales, while Forsyth was only concerned with Scotland. Stones and inscriptions are still being found in both areas. This is one possible explanation for the differences in the distributions seen in Figure 3.1. An inscription was discovered in South Uist, Scotland in 1996 during excavations, for example (Forsyth 2007: 493). Forsyth's data set is the most recent and the largest. In addition, Forsyth had the benefit of global positioning systems data and was able to provide precise coordinates for her analysis, allowing her to produce a more accurate distribution map (Forsyth 1996: lxxx).

Ogham stones are difficult to date due to the nature of the material of which they are made. The options available include archaeological stratification, which, as has been stated above, is not a commonly available data source for ogham stones; linguistic data, also problematic as the main source of linguistic data is the ogham inscriptions themselves; and epigraphic analysis, which is a very indefinite field of study (McManus 1991: 83).

3.1.2 Indirect Evidence

In addition to data on the individual stones, information available for these regions during this time period and the cultures that inhabited them is also incorporated. The relationship between material culture in both Britain and Ireland demonstrates the transfer of technology and information between the two regions in the early medieval period. While the material culture, especially imagery, of Iron Age Britain and Ireland shows evidence of connections with the material culture of the continental Celts, a distinctive insular style of decoration sets this region apart.

However, there are relatively few imports in the archaeological record for the period (Raftery 1997: 557).

Interaction between the two islands was more frequent than with the continent, and evidence for a close relationship between Ireland and Scotland would be expected in the archaeological record. Examples include bun-shaped querns dating to the Iron Age that have been found in both Ireland and southern Scotland. In both areas, these querns are found in association with La Tène (late Iron Age) style metalwork (MacKie 1996: 659-660). Another example, Souterrain Ware, is a type of pottery known to have been produced in Ireland, and can also be found in western Scotland where Irish colonies are documented (Thomas 1973: 7-8).

There is a great deal of evidence supporting trade and exchange between Ireland and Scotland, but collaboration is also attested; the metalwork that came out of both Irish and Scottish workshops in the first few centuries AD points very clearly towards this reciprocal influence (Raftery 1997: 575). The Irish scabbard style has parallels in a pony head piece and two horns found at Torrs in southwest Scotland. The carvings on the head piece and horns (Figure 3.5), though the piece was made in Scotland, consist of imagery more commonly found in Ireland combined with imagery from the continent (Raftery 1997: 561).

Much of the archaeological evidence for connections between Ireland and Scotland comes from southwest Scotland. In particular, the kingdom of the Dál Riata most likely played an important role in the distribution of ogham in Scotland (Figure 3.6). One of the major theories of how technological and cultural concepts were

transferred from Ireland to Scotland is that the alphabet and the inscription of ogham on stones may have been introduced via the kingdom of Dál Riata (Forsyth 1996: xv).



Figure 3.5 Horns found in Torrs, Scotland with both Irish and Continental imagery (Raftery 1997:569).

Dál Riata was a kingdom in Ireland established by the first group of Gaels to settle in Scotland, specifically in the areas of Lochgoilhead, Poltalloch, Dunadd, the Island of Arran, and Gigha Island, which also contain a cluster of ogham stones (Figure 3.6) (Cox 1999: 1). The site of Dunadd in particular was an important Dál Riadic center, possibly the capitol of the Scottish Dál Riata kingdom. Based on archaeological data, Dunadd was occupied mainly between the 6th and 9th centuries AD (Lane and Campbell 2000: xiii). The Dál Riata kept strong ties with their sister kingdom in Ireland, according to the genealogy and military survey *Senchus Fer nAlban* (c. 10th century) (Macquarrie 2004: 10). Historic texts such as *Senchus Fer nAlban* indicate a correspondent relationship between Ireland and Britain as well. These sources include the *Irish Annals* (c. 17th century), *Easter Tables* (c. 9th to 12th centuries), *Iona Chronicle* (7th century or earlier) and *Senchus Fer nAlban*. Each of these sources contains indirect evidence of the relationships between the two islands, including tribal names, genealogies, and military surveys for the Dál Riata (Macquarrie 2004: 10). Medieval Irish texts suggest three possible

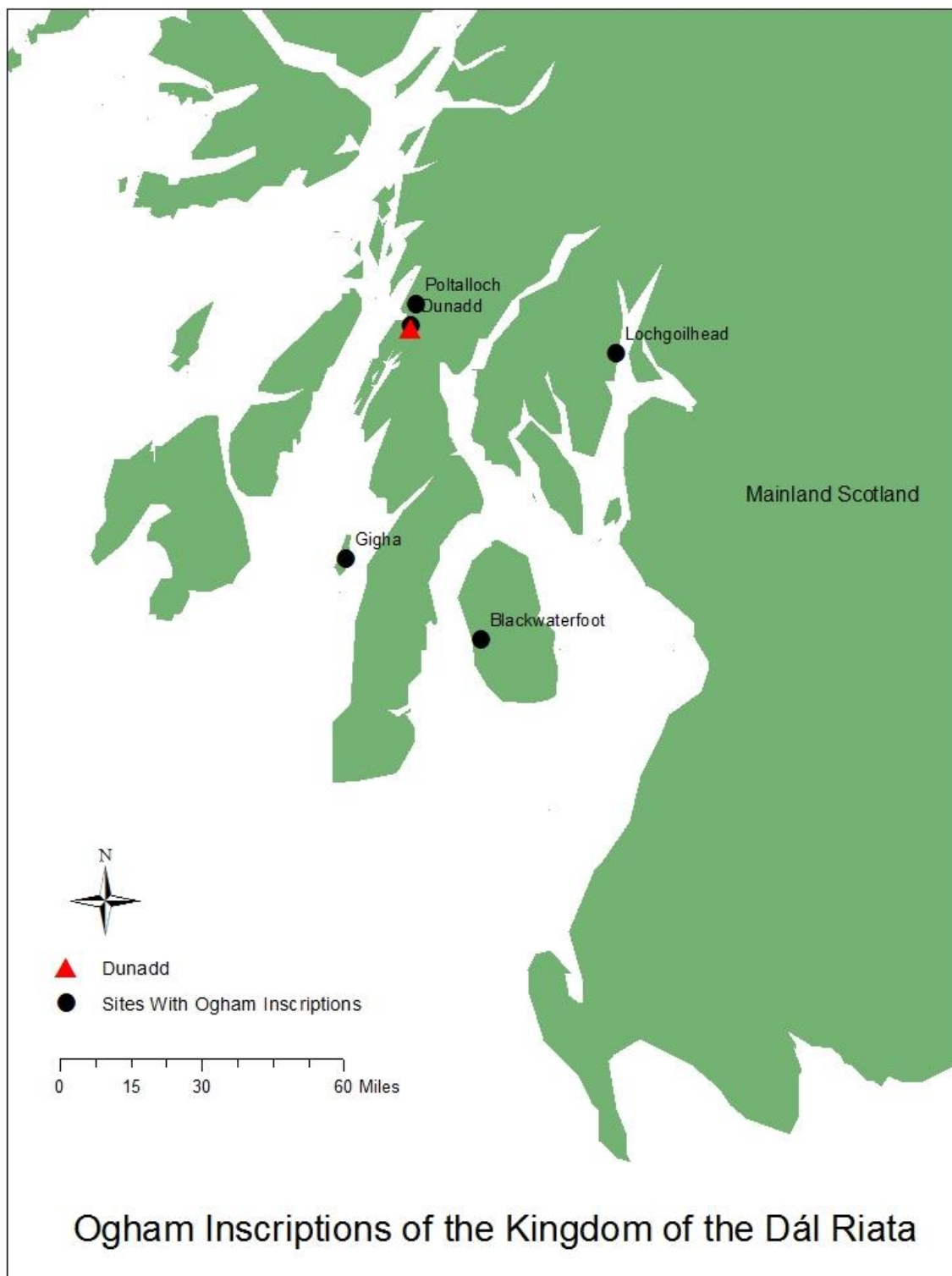


Figure 3.6 Map of ogham inscriptions in the territory of the Dál Riata (based on Forsyth 1996).

functions for ogham stones: as memorials for the dead, as boundary markers, and as notations of land ownership (Swift 1997: 42).

3.2 Theoretical Framework

Two separate, though closely related theoretical frameworks are applied in this project. The first relates to the cultural connections between the different regions containing ogham inscriptions, Ireland and Scotland in particular. In order to investigate these connections, I will be using the theoretical framework of materiality, specifically its association with monumentality and territoriality (Tilley 2004; Williams 2003). The second framework directly examines the stones themselves using material culture theory to explore the significance of the ogham inscribed stones of these regions (Joy 2009; Woodward 2007). Using this dyadic approach may allow me to interpret differences in the Scottish and Irish stone assemblages, viewing the transfer and transformation of ogham stones from the perspective of other inter-cultural relationships in the Iron Age and early medieval period.

3.2.1 Materiality

Ogham stones are a very specific category of artefact that are far more than just their inscriptions. Their importance lies not simply in the words or language inscribed, but also in the type of stone chosen and the ways in which they were displayed. The theory of materiality suggests that an object's meaning is based on the perception through which it is viewed (Tilley 2004:2). This means that an artefact such as an ogham stone would have had different meanings for the creator(s) and the viewers throughout the stone's use life, including contemporary responses to these objects. The oghamists

of Scotland, especially those who chose to use a language other than Irish, must have had a reason for moving away from the classic ogham formulas of Ireland in significant ways. The meanings of these stones must have differed from those found in Ireland. In addition to the placement of the object itself, the location of the source of the stone may hold some significance as well (Conneller 2011: 78), as would other images carved on the stones in addition to the inscription.

Memories have both socio-political and sacred aspects (Williams 2003: 230). The act of producing such monumental artefacts is a way of creating and maintaining memory. Often artefacts such as stone monuments have multiple lives and therefore multiple meanings. If a stone was used in a cultural context prior to inscription, then the material would have already carried meaning and significance, for example (Williams 2011:13-15). Erecting monumental stones formed a connection between people and the landscape (Longden 2003: 178). Materiality and monumentality, especially as these relate to landscape and memory studies, will therefore be applied in combination in this thesis.

3.2.2 Material Culture Theory

Material culture theory is based on the idea that no object can be reduced solely to its utilitarian function. Objects have symbolic meaning(s) attached to them that allow people to shape their world (Woodward 2007: 67). A subset of material culture is object biography. Each artefact has a life course that can potentially be reconstructed. From the collection of the raw material, to the creation of the object, through its use, reuse, and destruction or curation in a museum, the life of an artefact can tell a story about the

culture that produced and used it. The functions of ogham inscriptions and ogham stones have been theorized and the locations of these stones have been investigated for meaning in the past. However, to my knowledge, only one individual has applied the object biography method to ogham stones to date. A student at University College Cork examined the life history of the Irish ogham stones for her undergraduate course paper (Barry 2009). No one has, to my knowledge, however, produced an object biography of an ogham stone or explored the insights into the culture and people that produced ogham stones that such an object biography can provide. The life history of an object is more concerned with the object itself, whereas the biographical approach examines the relationships an object can have with people (Joy 2009: 542). Barry's paper title may contain the word "biography", but it speaks little of the relationships between ogham stones and the people who made, viewed or used them, or the effect such objects can have on the people who observe and interact with them. In this thesis, the method of object biography is applied to a subset of stones from Scotland, through a comparative analysis of the two data sets.

The details of the inscription, the images cut into the stone, the shape and dimensions of the stone, damage caused to it, and its various sites of erection, can all tell a story. Object biographies are difficult to establish, and this approach is therefore not often used. Many museum pieces, however, have been researched sufficiently that a biography, even if only a partial one, can be pieced together (Joy 2009: 543).

3.3 Scope of Study

For this project, I chose to compare two major museum collections of ogham stones and ogham inscriptions. The largest collection in Ireland is housed at University College Cork (UCC) (McManus 2004) and consists of 27 stones found almost exclusively in County Cork. In Scotland, the largest collection is housed at the National Museum Scotland (NMS) in Edinburgh, with 17 ogham related objects (including ogham stones, ogham inscribed bone objects, and a pillar stone associated with ogham stones) collected from throughout Scotland (Forsyth 1996) (Tables 3.1 and 3.2). Because these two collections contain the most researched and best published stones, they are the main focus of this thesis. This sample also represents the range of temporal (and regional in the case of the NMS collection) variations present in the total assemblage. One caveat of using these collections is that isolated stones not included in these collections, and therefore not part of this project, might be important exceptions. In addition, because I was only able to personally view inscriptions and stones from Scotland, the data on Irish inscriptions and stones utilized in the comparison presented here may not be as accurate or extensive as the information available on the Scottish stones. This is also why I have chosen a qualitative rather than quantitative comparison of these data sets.

3.3.1 Variables

Although these two collections represent a relatively small sample (only about 11% of the total number of known inscriptions), it is a sufficient sample size to test the research questions posed by this project. Possible correlates between size of stone,

Table 3.1 Objects in the NMS collections documented for this project. This is a list of all objects in the NMS collection that either include an ogham inscription or are associated with ogham inscriptions.

Ogham Related Objects in the National Museum Scotland	
Name (Denoted by Forsyth)	Object Type
Abernethy	Standing Stone
Ackergill	Standing Stone
Bac Mhic Connain	Bone and Iron Knife
Birsay 1	Standing Stone
Birsay 4	Standing Stone
Bressay	Standing Stone
Burrian	Standing Stone
Cunningsburgh 1	Standing Stone
Cunningsburgh 3	Standing Stone
Foshigarry	Bone Spindle Whorl
Gurness	Bone and Iron Knife
Latheron	Standing Stone
Lunnasting	Standing Stone
Poltalloch	Standing Stone
Saint Ninian's Isle	Standing Stone
Scoonie	Standing Stone
Whiteness	Standing Stone
Total:	17

material, and presence of particular image categories will be compared both within and between the two regional data sets (NMS and UCC).

Twelve variables were defined for the analysis, but not all of them were available for each ogham inscribed stone included in this study. The variables utilized include the dimensions of the object, the material of which the object was made, a transcription of the inscription(s), the length of the inscriptions and individual strokes used, the location and find context of the stone, the location on the stone of the inscription, and details of any additional inscriptions or imagery on the stone (Table 3.3). These variables include data that can be found in the literature for the majority of ogham stones and ogham

Table 3.2 Ogham stones from the UCC collection documented for this project. All of these objects are standing stones. One object is not included as it was not a part of McManus's catalogue (2004).

Ogham Stones in University College Cork Collection	
Stone Number (Denoted by McManus)	Site Name
1	Barrachaurin
2	Knockshanawee
3	Knockshanawee
4	Garranes
5	Knockshanawee
6	Knockshanawee
7	Ballyknock
8	Ballyknock
9	Ballyknock
10	Ballyknock
11	Ballyknock
12	Seemochuda
13	Ballyknock
14	Ballyknock
15	Ballyknock
16	Ballyknock
17	Ballyknock
18	Ballyknock
19	Ballyknock
20	Tuligmor
21	Glenwillin
22	Glounagloch
23	Aghabullogue
24	Bishop's Island
25	Carrigagulla
26	Knockshanawee
27	Knockshanawee
Total:	27

inscriptions in Ireland and Scotland. The material of the object in particular is of interest. The method of choosing the material to create a monument such as an ogham stone can indicate either functionality and expedience (by selecting material close at hand or that is easy to carve), or may reflect a deeper meaning and connection to a

Table 3.3 Description of variables used in this study.

Variables Included in Analysis:	
Dimensions	HxLxW cm
Language of ogham inscription	Irish, Other
Length of ogham inscription	cm
Length of ogham strokes	cm
Number of inscriptions	Ogham and other
Location of Inscription on stone	Number of sides/edges inscribed
Imagery	*See Table 3.4
Number of images combined with Inscriptions	
Material used	Sandstone, schist, flagstone, slate, etc.
Find location	Region, site type
Condition of stone	Whole, fragmentary, worn, etc.
Component of stone	Based on archaeological, linguistic, and typological evidence

specific location (by selecting a material based on its origin or particular visual qualities) (Conneller 2011: 27).

These variables will be used to perform a qualitative comparative analysis of this selected group of stones and other ogham inscribed objects from Ireland and Scotland. The ogham stones of Scotland are a fascinating subject because they differ from those of the Irish ogham stones more than examples from any other region and raise many questions about how the script and the concept of inscribed stone monuments may have crossed the Irish Sea.

3.3.2 *Sample Parameters*

The two collections represent a variety of imagery, sizes, and dates, which illustrate both the differences and the similarities between the Irish and the Scottish inscriptions that impact the available sample. Both museums have clearly defined collecting policies. The University College Cork only collected ogham stones within

Table 3.4 Iconographic variables included in comparative analysis.

Imagery:		
Christian Imagery	Cross	Simple Cross
		Celtic Knot Cross
		Cross With Circle
		Multiple Crosses
	Biblical Imagery	Fish Symbol
Biblical Figures		
Pictish Imagery	Crescent and V Rod	
	Double Disc and Z Rod	
	Snake and V Rod	
	Double Disc	
	Rectangle	
	Mirror	
	Tuning Fork	
	Flower	
	Pictish Beast	
	Fish	
	Intertwined Snakes	
Serpent		
Other Imagery	Interlace Knots	
	Interlace Animals	
	Other Human Figures	
	Hunt Scene	

County Cork (aside from one stone that was discovered in County Waterford) in Ireland (McManus 1994: 10). The NMS similarly only collects items discovered in Scotland (www.nms.ac.uk). My interest in the Scottish stones arose from the lack of previous comparisons of the two regions in which these stones are found.

Only four of the stones in the NMS collection were intact, and seven included images in addition to the inscriptions. Each object in the NMS collection was recorded, sketched, and photographed (Table 3.5). The size of ogham stones within the NMS

collection ranges from Whiteness (22 cm tall, 18.4 cm wide, and 7.5 cm thick) to Scoonie (106 cm tall, 72 cm wide, and 11 cm thick). The Whiteness stone, however, is only a fragment of a larger ogham stone, a good example of why data collected on dimensions of ogham stones is not particularly useful. The smallest complete stone in the collection is the Burrian stone (60 cm tall, 37 cm wide, and 4 cm thick). Ten of the 14 ogham stones at the NMS are made of sedimentary rock while three are metamorphic. The dating of these stones is based on archaeological context, the linguistic evidence of the inscription, and the epigraphy of the ogham inscriptions. Both the earliest possible date and the latest possible date for the stones in this collection belong to the Birsay 1 stone, which could date between the 6th and the 12th centuries AD (Forsyth 1996: 80). Seven of these stones were found in ecclesiastical contexts, two were discovered in

Table 3.5 included in analysis. Data based on personal observation, supplemented with Forsyth 1996.

Ogham Inscriptions of the National Museum Scotland				
Name (As denoted by Forsyth 1996; 2007)	HxLxW(cm)	Additional Images?		Proposed Component
		Christian	Pictish	
Abernethy	37.3x23.6x7.3	Possible	Possible	Unknown
Ackergill	112x65.5x9.8	No	No	Unknown
Bac Mhic Connain Knife	11.5x1.6x2	No	No	6th-8th cent. AD
Birsay 1	63x31x12	No	No	6th-12th cent. AD
Bressay	125.5x40x4.5	Possible	Possible	9th-10thcent. AD
Burrian	60x37x4	Yes	Possible	7th-8th cent. AD
Cunningsburgh 1	23.6x20.4x4.5	Possible	Possible	Unknown
Cunningsburgh 3	225.3x52.8x6.4	No	No	Unknown
Gurness Knife	15x1.8x1.5	No	No	Unknown
Latheron	87x47x15	Yes	Yes	Unknown
Lunnasting	111.5x32x4	No	No	8th-9th cent. AD
Poltalloch	25.5x8.4x5.6	No	No	8th-10th cent. AD
Saint Ninian's Isle	79x26.5x5.3	No	No	Pre-12th cent. AD
Scoonie	106x72x11	Yes	Yes	Post-8th cent. AD
Whiteness	22x18.4x7.5	Possible	Possible	Unknown

non-Christian mortuary contexts, one was uncovered in an Iron Age Broch, one found washed up on a beach and in a peat bog, respectively, with the possible original contexts unknown.

3.3.3 Data Collection

In March of 2014, I traveled to Edinburgh, Scotland to view the ogham inscriptions in the collections of the National Museum Scotland (NMS). My initial intention was also to document an ogham stone in situ, several of which (nine as of 1996) can still be found in the Scottish landscape (Forsyth 1996). Due to budget constraints and inclement weather, however, it was only possible to include the collection at the NMS in the analysis presented here. I spent two days at the NMS studying all of the 17 objects in the NMS collection related to ogham inscriptions; most are stones, though some are not (see Table 3.1).

One of these objects was a large stone with no ogham inscriptions that had been discovered adjacent to three inscribed stones (Birsay 2, 3, and 4). This stone (Birsay 1) does, however, contain Pictish imagery similar to that found on other ogham inscribed stones, so it was included in the analysis. There was also a perforated bone disc with tick marks similar to ogham and a center line drawn in a circle around the perforation. The label for the exhibit containing this item described the markings as ogham, but Forsyth believes that these are decorative markings, not writing (Forsyth 1996: 512). In addition to these two non-ogham inscribed items, there were also two non-stone items: Bac Mhic Connain (NMS Cat. No. GNB 134) and Gurness (NMS Cat. No. GAA). Both of these items were bone handled knives with short ogham inscriptions on the handles.

The Bac Mhic Connain knife was found in an archaeological context dating between the 6th and 8th centuries, falling within the early period of the use of ogham in Scotland (Forsyth 1996: 56). While there is no known date for the Gurness knife, the form of the inscription is similar to that of the Bac Mhic Connain knife, indicating that portable ogham-inscribed objects may have been earlier in Scotland than monumental ogham-inscribed objects (Forsyth 1996: 322, 331). This is significant because it suggests one possible way in which the concept itself may have been introduced from Ireland. Both knives have complete inscriptions, with no indication that any letters or scores are missing or broken off. This is something that cannot be said of most of the ogham stones. The inscriptions on the knife handles are much shorter than those on stone; they contain fewer letters on average and appear to contain fewer words as well. Neither of the inscriptions on the knives includes the standard formula of “X son of Y”. Previous scholars have also not yet been able to translate satisfactorily the inscriptions on either knife, but given the propensity of these inscriptions to involve names, they may be owner’s marks of some kind (Forsyth 1996: 331).

3.4 Approach to Research Questions

This project investigates what information can be acquired from analyzing these stones as an artefact category as opposed to mainly as literary documents that happen to be made of stone. I predict that these stones will illuminate differences and similarities in the Irish and Scottish cultures while at the same time demonstrating how the Irish may have been accepted into Scottish culture when they migrated to Scotland and brought the script with them.

The data derived from previous sources combined with my own observations of the collections at the National Museum Scotland can be used to compare the stones inscribed in Scotland to those in Ireland. Because so many stones were not discovered in situ or have been damaged, a quantitative analysis is not appropriate. A qualitative comparative approach, has been adopted instead, as previously noted.

3.4.1 Three-Dimensional Imagery

Linea Sundstrom (independent rock art scholar) and Glen Fredlund (University of Wisconsin-Milwaukee Geosciences Department) recommended two methods of three-dimensional imaging that are appropriate for studying rock carvings. One in particular, Reflectance Transformation Imaging (RTI) requires only a minimal budget as the program utilizes freeware provided by Cultural Heritage Imaging (culturalheritageimaging.org). I chose this program in part for this reason, but also because the use of light reflections allows the image produced to show details that may not be visible to the naked eye, details that can only be seen using various angles of light (Cultural Heritage Imaging 2002-2014). Another important aspect of RTI is that instead of producing an image of an entire object, it is used to produce an image of one face of an object, which was especially useful in analyzing the inscriptions of the ogham stones in the NMS.

Reflectance Transformation Imaging uses light reflections to produce detailed images similar to 3D. RTI was “originally developed to create realistic CGI effects on complicated illumination geometries on textured surfaces such as skin and textiles”

(Manfredi et al. 2013: 189). In the last few years, the technology has advanced from using lasers to a more simplified method using a camera flash (Happa et al. 2010: 162). This program uses various lighting angles to render a three dimensional image that allows the viewer to manipulate the lighting to enhance detail. It is one of several digital technologies currently being used in several contexts. Recently, the British Museum has used RTI technologies to advance the study of the Easter Island statues in their collections (Pitts et al. 2014), for example. This technology has allowed scholars to identify greater details on the stones to determine the methods used in carving them as well as the chronology of the sculptures and later inscriptions (Pitts et al. 2014: 291). RTI was chosen because it is capable of creating a three dimensional rendering of the face of an object using basic photographic equipment in the field, showing minute changes in the surface of an object and allowing different perspectives that neither the human eye nor scanning technologies can capture. RTI is also ideal for a project with a limited budget and timeline since the images can be rendered in a short period of time (Happa et al. 2010:161). With this program it was possible to produce clearer images of the inscriptions and decorations on the NMS stones. Any questionable or previously unrecognized strokes in the stone are also highlighted. The rendering process was completed in the summer and fall of 2014.

3.4.2 Reflectance Transformation Imaging

When I worked with the objects in the NMS collection, my intention was to take photographic images that could later be inserted into the RTI program. My hope was that the images produced by RTI would provide details that cannot be seen by the

naked eye, whether that be strokes as of yet undiscovered ogham lettering, or breaks and weathering that could indicate what the life of an ogham stone had entailed after its erection. RTI makes use of numerous photographs taken of the same object with different angles of light. In order to measure the light angles, a reflective sphere must be positioned near the object. For larger objects, such as the ogham stones, I used an 8 ball (Figure 3.7); for smaller objects like the two bone handled knives, I used a silver marble (Figure 3.8). This was one of the limitations of acquiring the necessary photographs for RTI. Many of the stones at the NM S were on display and the mounts used on these stones made it impossible for the sphere to be included in the photographs.

This left the objects held in storage. The RTI program makes use of multiple photographs, each taken from a different light angle, ideally at least 60 images per object. Due to time constraints, it was not possible to take that many photographs of each item.

When I returned from Scotland, I attempted to insert the images into the RTI program, but found that many of them were unsuitable. In order for the program to work, all



Figure 3.7 The Whiteness stone from Scotland with an 8 ball used for Reflectance Transformation Imaging (National Museum Scotland Cat. No. X.IB.256).



Figure 3.8 The Gurness knife from Scotland with an marble used for Reflectance Transformation Imaging (National Museum Scotland Cat. No. GAA).

images need to be taken from the exact same distance and angle; however, the camera shifted several times, making some of the photographs unusable. In the end, there were only four objects with enough photographs to be used in the RTI program: the Gurness and Bac Mhic Connain knives, and the Abernethy and the Whiteness stones. The results were sufficient to demonstrate the utility of this approach in the analysis of ogham stones, however.

RTI combines the various light angles to produce new images. In the RTI viewer, it is possible to adjust the angle of light as needed. There are three different types of views that can be used to produce new images. These are the default view, specular enhancement, and normal visualization. Each view allows one to see different details depending on the material and the object being recorded (Figure 3.9).

3.4.3 Data Collected

All 17 of the NMS objects were included in Katherine Forsyth's *The Ogham Inscriptions of Scotland* (1996), but had not yet been subjected to 3D imaging, which can reveal details not otherwise visible to the naked eye. In addition, three-dimensional imaging was used on all the NMS stones in order to compare them with the most recent



Figure 3.9 Different views of the Abernethy stone using RTI: An undoctored photograph (top left), default view (top right), specular enhancement (bottom left), and normal visualization (bottom right). The various details of this object can be seen, including the three letters, the leg and possible hoof above the letters, the partial circle on the bottom left corner, cuts below the letters, breaks, and general weathering. National Museum Scotland Cat. No. X.IB.98.

Irish 3D imaging analysis results of ogham objects (Ogham in 3D 2015).

I recorded and photographed all 17 of the objects, including those made of bone. It is important not to ignore ogham inscribed objects in other media because, although inscriptions on portable objects are much shorter than those on monumental objects and do not conform to the standard formula found on the Irish ogham stones, these objects might have implications for interpretations of the latter. If these objects contain different inscriptions and inscription methods, then they could indicate that ogham itself had a wider variety of functions than is represented by the ogham stones. Also, the material on which ogham was inscribed could indicate the function of the individual inscriptions. In particular, technology transfer and the transmission of the ogham script are likely to have occurred via portable objects initially before being translated into the monumental stone medium. The RTI approach was especially effective in highlighting details on smaller objects with finely incised lines. Using a qualitative comparative analysis of images, script and other variables, the data and images from the NMS phase of the project will be compared to previous research, especially that of Katherine Forsyth's 1996 dissertation on Scottish ogham inscriptions, as well as McManus's (2004) inventory of inscriptions at Cork.

Recent work in three-dimensional imaging (O'Sullivan and Downey 2014) has been undertaken to preserve some ogham inscriptions in Ireland and to provide a better view of details that may have previously gone unnoticed. This can be helpful in producing an artefact biography approach because the images produced might reveal details that could not be seen previously. The use of these imaging technologies has

ushered in a new era of analysis of ogham and ogham stones. The creative use of this technology could bring new answers to centuries-old questions.

Chapter 4: Analysis, Discussion, and Conclusions

There is a wide array of evidence available for discussion of the ogham inscriptions of Ireland and Scotland. But as I hope to show, some of that evidence is more useful than the previous primarily linguistic and art historical focus on the inscriptions and imagery may have indicated up to now. The stones themselves, their distribution, the few contemporary or near-contemporary textual sources, when combined with archaeological evidence, can provide us with a new picture of the spread and use of ogham in the British Isles and into Scotland, in particular. The ogham inscriptions may have had different functions depending on the material of which they were made and the contexts in which they were produced. Synthesizing the direct and indirect evidence and viewing it from an anthropological perspective produces a clearer picture of the ogham stones, their inscriptions, and their functional and symbolic significance within the cultural framework in which they were made and used.

4.1 Evidence for Technological and Conceptual Transfer

The first questions addressed by this thesis were how and why the practice of ogham stone production moved from Ireland to Scotland? There is some limited evidence of the movement of material culture in the British Isles and Ireland at this time, as discussed in Chapter 2, but the mechanisms of exchange are still poorly understood. There are several ways in which the concept and technology of inscribing ogham stones may have been transferred from Ireland to Scotland and the rest of the British Isles, assuming that Ireland is really the place where the script originated. The transfer of technology over such distances is unlikely to have occurred as the result of a

single event, or even due to a single mechanism. Below, I explore three possible transfer mechanisms, all of which are likely to have occurred in stages over a long period of time.

4.1.1 Trade

Trade is one of the most likely mechanisms for transferring the knowledge of ogham as a concept, but not necessarily the technological knowledge required to produce it. Small, portable inscribed objects are the earliest examples of ogham in Scotland and probably served as the initial conduit. There are four known portable ogham inscriptions from Scotland: the Bac Mhic Connain (Figure 4.1) and Gurness bone knife handles (Figure 4.2), the Buckquoy spindle whorl, and the Bornais plaque (Figure 4.3). The Bac Mhic Connain knife and the Bornais plaque were discovered in North Uist and South Uist, respectively, the two western most islands in Scotland, north of Ireland.

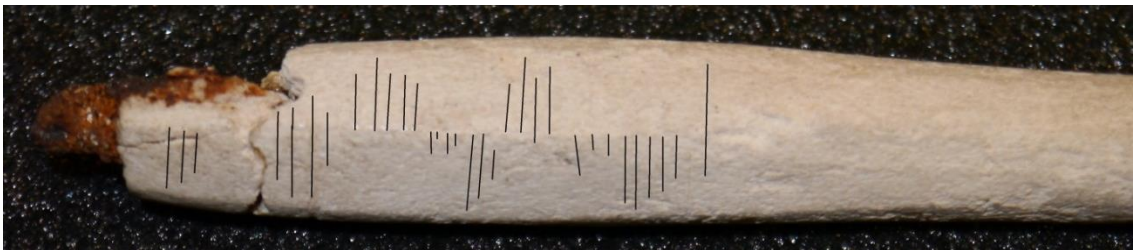


Figure 4.1 Bone knife handle from Bac Mhic Connain, North Uist, Scotland. Ogham is highlighted in black. (National Museum Scotland Cat. No. GNB. 134).



Figure 4.2 Bone and iron knife from Gurness, Scotland. (National Museum Scotland Cat. No. GAA).



Figure 4.3 Distribution of portable ogham inscriptions in Scotland.

wheelhouse (Forsyth 1996: 56). The plaque was also discovered during excavations, in a Middle to Late Iron Age wheelhouse (Forsyth 2007: 493). The Gurness knife and the Buckquoy spindle whorl were both discovered in the Orkney Islands, north of mainland Scotland. The Gurness knife was found in the post-broch occupation layers of the Broch of Gurness (Forsyth 1996: 321) while the Buckquoy spindle whorl was discovered during the excavation of a Pictish structure in a prehistoric settlement site (Forsyth 1996: 161). All four of these items, which likely represent only a fraction of the total number of portable ogham inscriptions once in circulation, were found in the northwestern peripheries of Scotland (Forsyth 1996: 55, 160, and 321; 2007: 93). The date of the Gurness knife is unknown, but the other three items range in date from the 6th to the 11th century (Forsyth 1996: 56, 163, and 331; 2007: 474). This is a large range, and while the 6th-7th centuries is early for ogham in Scotland, the 11th century is quite late (Forsyth 1996: Abstract). The distribution map (Figure 4.3) suggests trade by sea.

4.1.2 Migration and Colonization

The dominant theory for the spread of ogham to Wales, Cornwall, and Devon invokes migration and colonization by Irish peoples at the end of the Roman occupation of Britain and later (McManus 1991: 62), which provided an opportunity for access to previously occupied land and the transfer of cultural concepts. This suggests the intended audience included people who could read Latin and implies an ecclesiastical context for at least some of the stones. In Wales, a large number (26 of the 40 total) of ogham stones are bilingual, with both ogham and Latin inscriptions (McManus 1991: 48). For example, the Eglwys Cymmin stone has an ogham inscription which can be

transcribed as AVITTORIGES INIGENA CUIGNI and a Latin inscription of AVITORIA FILIA CVNIGNI, both of which can be translated as “Avitoriges daughter of Cunigni” (McManus 1991: 50) (Figure 4.4). Cummins (1999) has argued that the stones in Scotland that contain both ogham and Pictish symbols are also bilingual stones and that the ogham can be used to decipher the Pictish symbols (Cummins 1999: 61). The main problem with this theory is that only eight such stones are known (ibid: 60) and the number of Pictish symbols is also limited to about 30 (ibid: 10). It is, however, likely that as the Romans adopted and adapted technologies and concepts from the peoples they encountered, so too did the cultures of Scotland. Symbol inscribed stones already existed in Scotland, as did Roman and runic inscriptions. Ogham was probably just another addition to the corpus of available media and forms of transmission.

4.1.3 *Christian Missionaries*

Another common theory is that if it was a Christian script, ogham would have



Figure 4.4. The Eglwys Cymmin stone with both ogham and Latin inscriptions from Wales (McManus 1991: 50).

travelled with missionaries. Columba's settlement of Iona (founded 563 AD) and other Christian foundations are cited as the main mechanism for technology transfer between Ireland and Scotland (Forsyth 1996: lxxiv; Swift 1997: 128). However, if this was the case, one would expect to find most examples of early ogham inscriptions within the vicinity of Iona. The nearest known ogham inscription to Iona is in fact the inscription on a rock outcrop at Dunadd, the Scottish Dálriadic royal center, which is roughly 70 miles away (Figure 4.5). The dominant theory for the spread of ogham to Wales, Cornwall, and Devon is migration and colonization of Irish peoples after the end of the Roman occupation of Britain (McManus 1991: 62).

Another possible explanation for the introduction of ogham stones to both Scotland and Wales from Ireland is that it accompanied a more economically motivated migration. What David Anthony has described as "push/pull factors", in this case an increase in the Irish population coupled with limited arable and grazing land in Ireland, could have motivated some of this movement. If the ogham stones were mainly used to claim territory for particular lineages, their appearance in these colonized areas could be partly explained by invoking this aspect of migration theory (Anthony 1990).

4.1.4 Conclusions

Unfortunately, ogham existed in a liminal time zone, between history and prehistory. This means that data on the stones and the technological transfer of this medium of communication are difficult to come by. There is little direct evidence, so indirect evidence becomes correspondingly important. The distribution of known ogham inscriptions in Scotland indicates that the communities that used ogham were

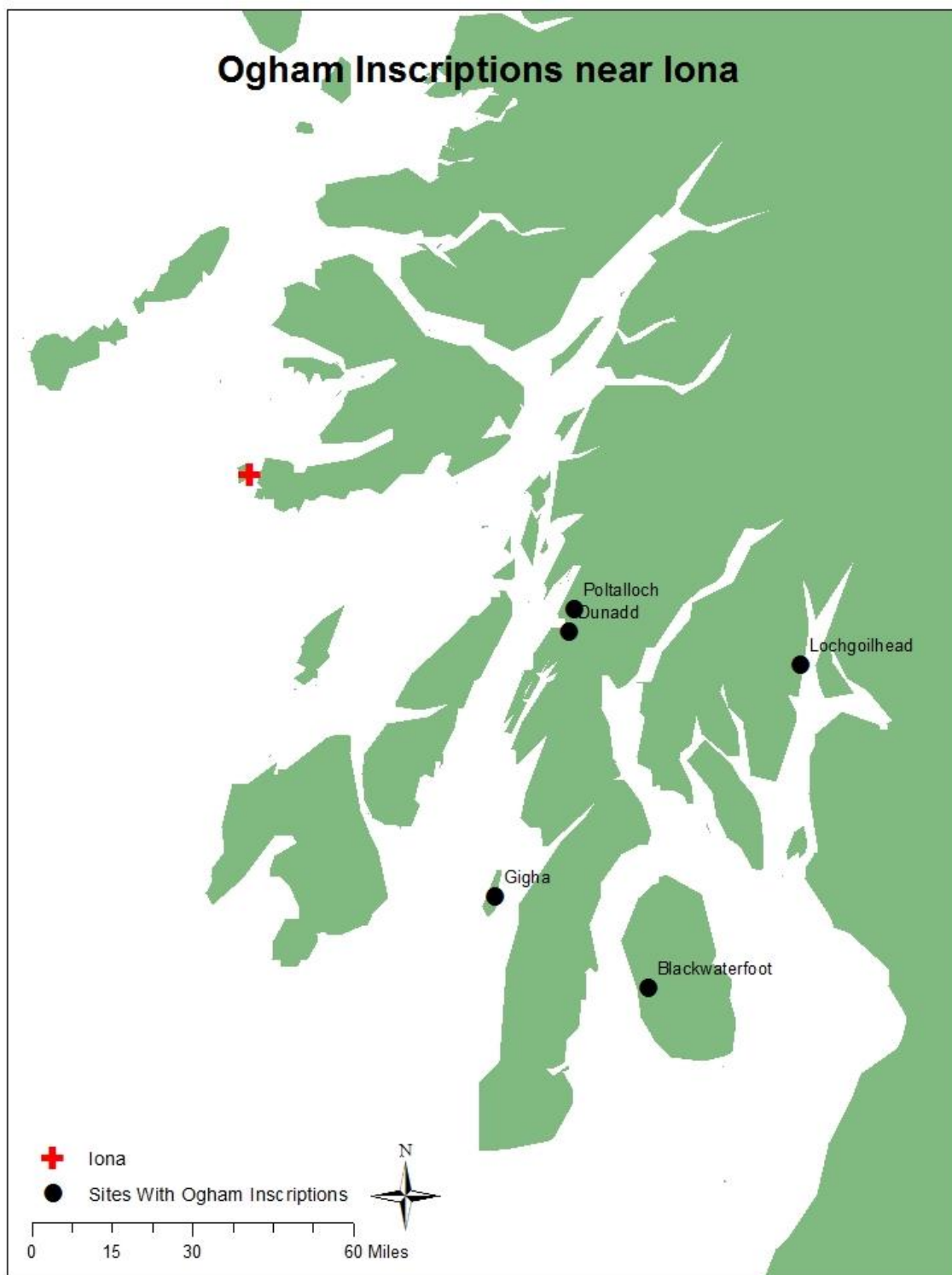


Figure 4.5 Ogham inscriptions near the ecclesiastic site of Iona.

mainly in coastal territories or near coastal territories (Figure 4.6). The locations and contexts of these territories suggest that they were the regions of Scotland most likely to have interacted with other groups, particularly sea-faring groups. Ogham and ogham inscribed stones were likely introduced to Scottish peoples via the coastal regions in some way. The fact that the currently known number of ogham inscriptions is only a fraction of what may have once existed must be remembered, however. Because of this, no final conclusions on distribution and movement can be reached. The distribution of stones in Wales also suggests movement inland from the west, a fact to which I will return later.

4.2 Media Used for Monumental Ogham Inscriptions

The second question discussed in this thesis is whether the material itself can provide a clue as to the mechanisms by which the inscribed pillar stone phenomenon may have moved from Ireland to Scotland. The material used for ogham inscriptions was chosen for a specific reason and could provide additional insight into the use and significance of these stones. A survey of the 90 Irish stones that are currently a part of the “Ogham in 3D” project (<http://ogham.celt.dias.ie/>) shows that while 34 stones (38%) are made of an unidentified material, 38 (42%) were made of sedimentary rock, with sandstone being the most common. 13 stones (14%) were made of metamorphic rock, with the most common being slate, and only 5 (6%) were made of granite, an igneous rock. The material of the 32 ogham stones in Scotland differs, however. Only four of these stones (13%) are currently

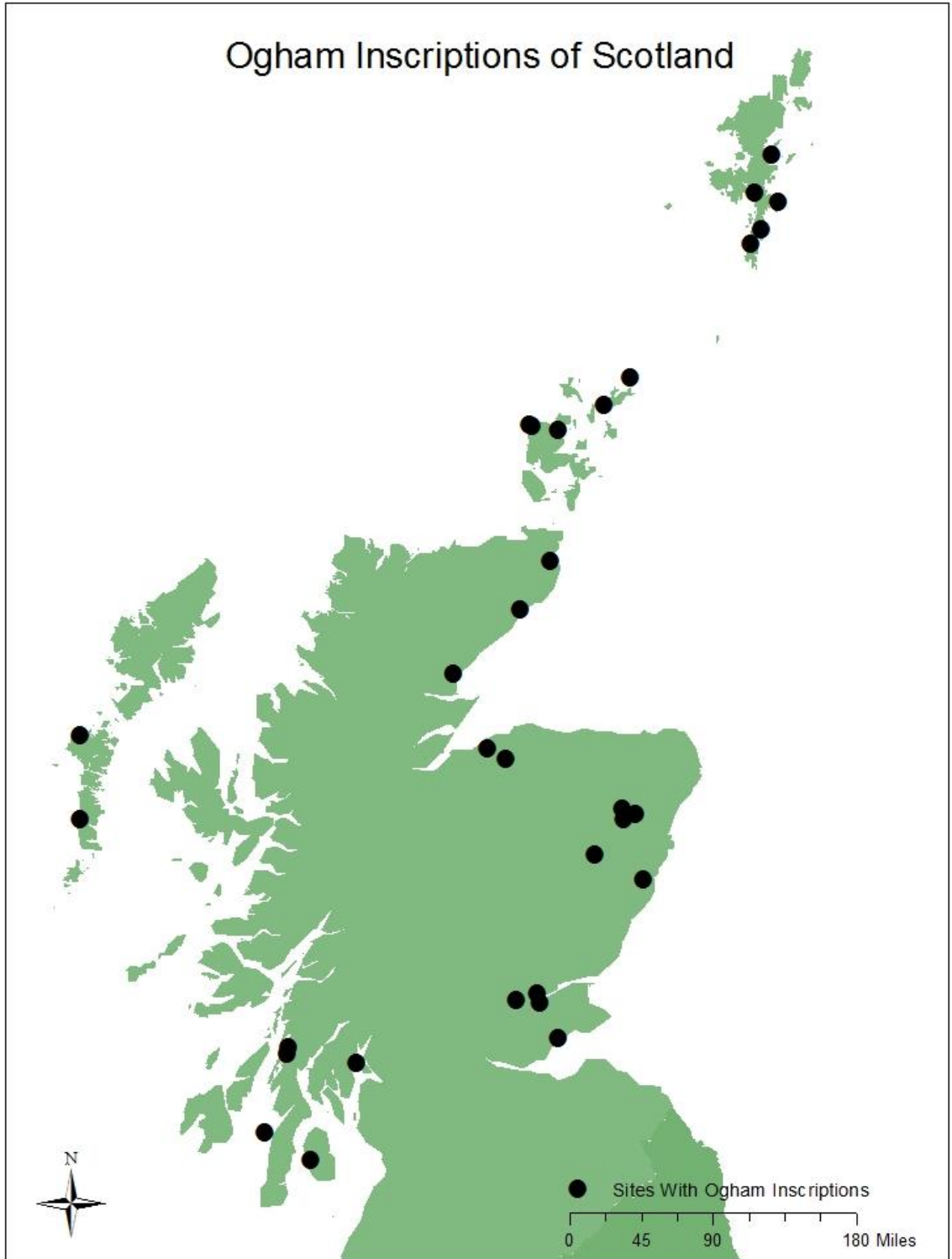


Figure 4.6 Distribution of ogham inscriptions in Scotland showing coastal distribution.

unidentified, but 21 (66%) are of sedimentary rock (mainly sandstone), 4 (13%) are of granite (igneous rock), and 3 (9%) are of slate (metamorphic rock) (Forsyth 1996). The most common type of material used for both the Irish and the Scottish stones appears to have been sandstone, in various colors. This could be indicative of some property of sandstone, such as it being an easy material to carve and inscribe, or it could simply be that sandstone was the most readily available material. It is interesting that there is almost the same number of granite ogham stones in Scotland as in the Irish dataset, which is three times larger. But again, this could have more to do with the relative availability of this material in the two regions rather than with the importance of the material itself. To test this idea, the distribution of ogham stones was compared to the geological survey map of Ireland, indicating that the majority of stones are found on or near sedimentary deposits (Figure 4.7). The geological information on Scotland is much more complex, though sedimentary deposits are still more common than other rock deposits (Figure 4.8) (NERC 2015).

The fact that all available lithic materials were used, even if not evenly distributed, indicates that it may not have been the type of stone that had significance. If material had been brought in from a distance, then the material could have been hypothesized to have had some special meaning, but it is more likely that because so many types and colors of stone were used, the ogham monuments were made from local material due to ease of access. This suggests that the location of the erection of the stone may have been what was most important. In order to test this idea, however, more research would need to be conducted on the materials used, both in Scotland and

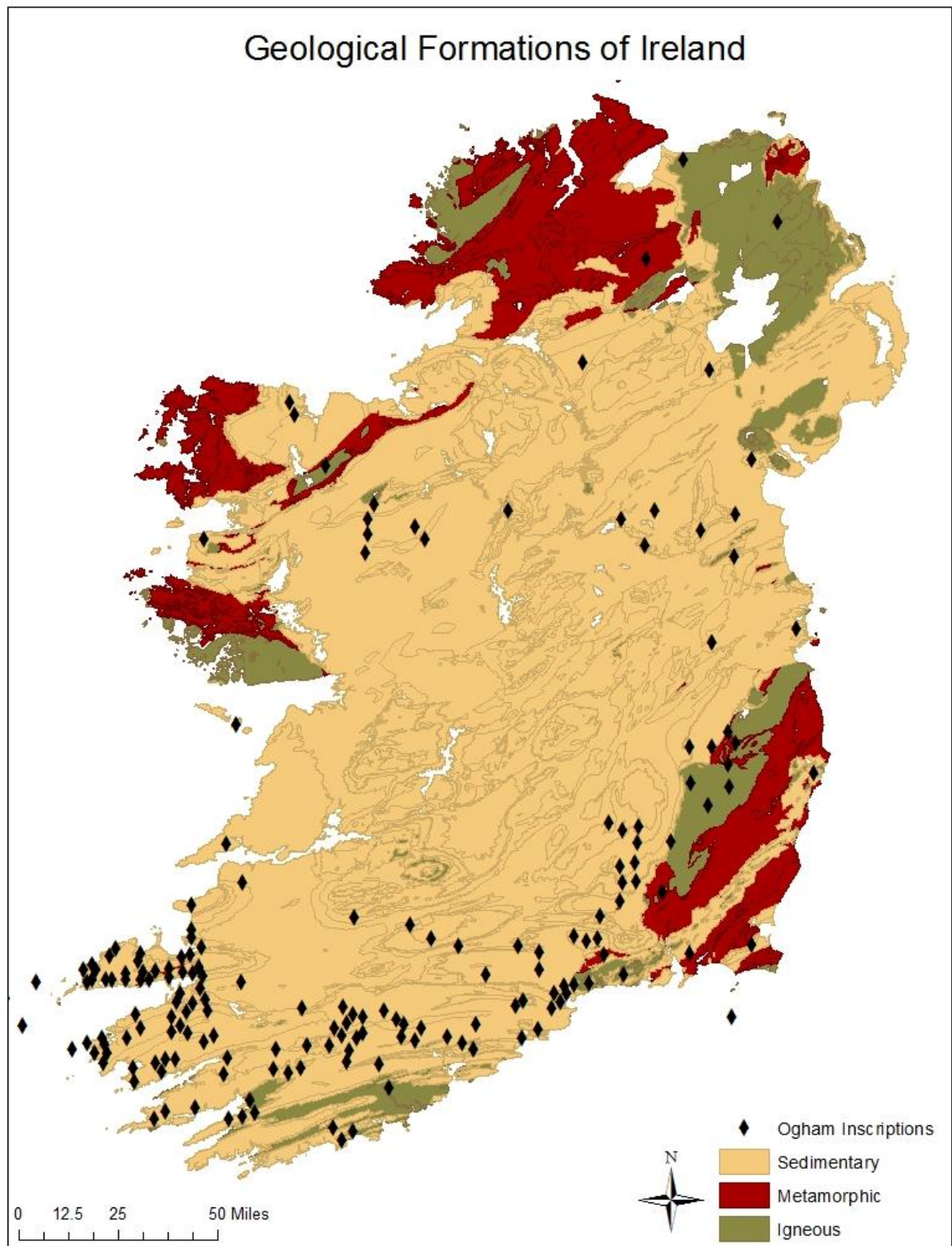


Figure 4.7 Distribution of rock types in Ireland in comparison to ogham inscription distribution. Notice that Sedimentary rock is the most common rock formations found and that the majority of ogham inscriptions are located within these formations. Data based on the Geological Survey of Ireland.

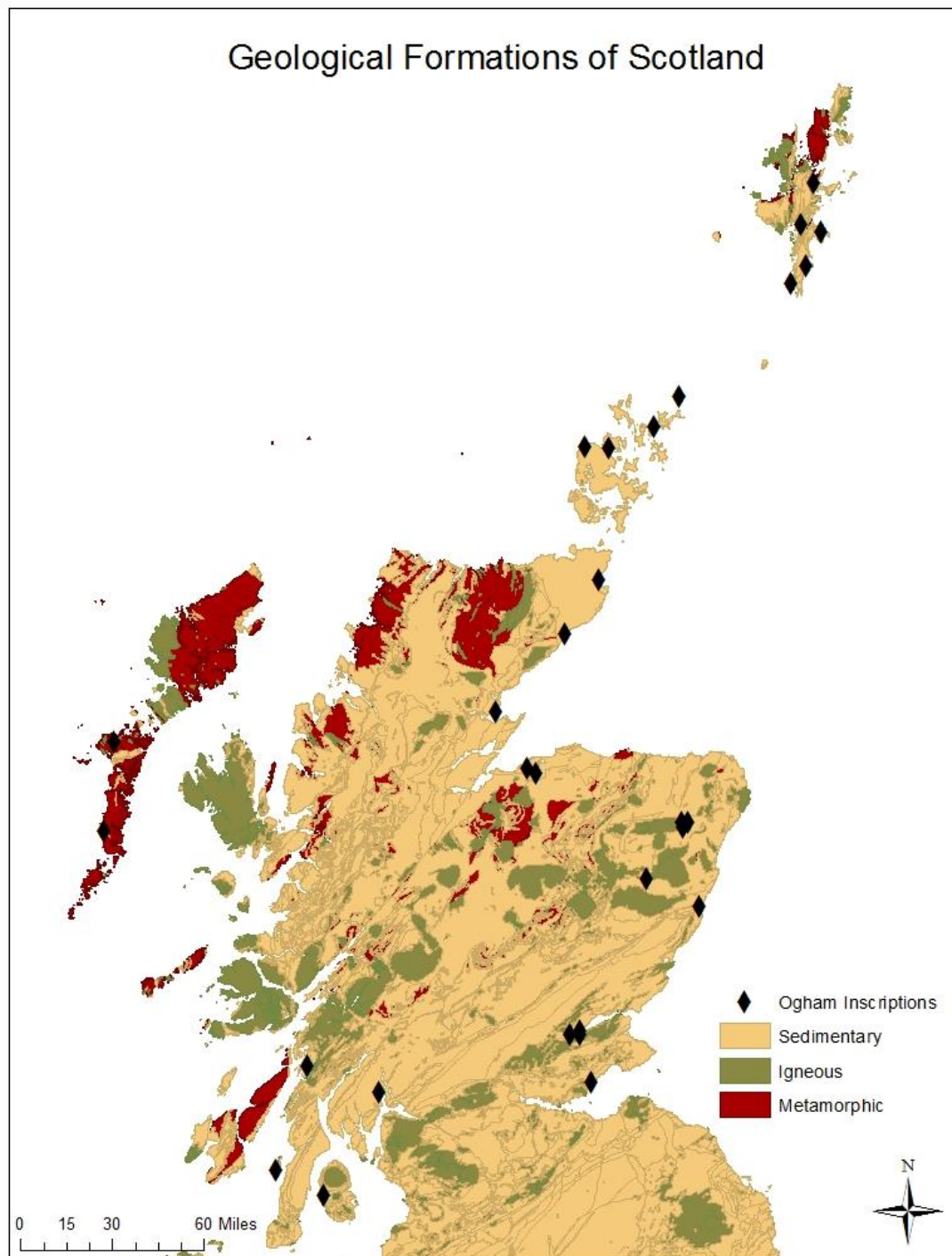


Figure 4.8 Distribution of rock types in Scotland in comparison to ogham inscription distribution. Notice that Sedimentary rock is the most common rock formations found and that the majority of ogham inscriptions are located near or within these formations. Data based on the British Geological Survey.

in other areas with ogham stones, including the variability and the distance from which the material was being sourced. GIS analyses of the proximity of stones to various landforms and view sheds could provide additional insights.

4.3 Communication

What might explain why ogham was used instead of an alternative script or communication system, such as Latin, Pictish symbols, or a new script that the Scottish peoples could have created? What was the possible socio-political significance of ogham in Scotland and who was the intended audience of these inscriptions? These questions can be addressed by comparing the ogham stones with other inscriptions both within and outside Scotland. The identity of these cultures, and the meaning behind that identity, played a role in every piece of material culture produced. In addition to material culture, language is a major factor in cultural identity and this idea can be applied to the ogham stones as well.

When Rome invaded Britain, Ireland and Scotland were in a good position to receive the benefits of trading with the neighboring Roman Empire without being controlled by it. They were able to maintain their own cultures while adopting Roman technologies and customs as they saw fit. In particular, Rome brought with it literacy. It has been theorized that ogham originated in Ireland as a response to literacy in other regions, especially in the form of monumental inscriptions produced by the Roman colonists (Forsyth 1996: xxxiii; McManus 1991: 1).

Another script that was developed in North America over a millennium later can be used here as a comparison. When Europeans landed in North America and began to

interact with the native North Americans, the use of a written language was one of the major differences between the two cultural systems. The Cherokee tribe (Tennessee) was subjected to assimilation pressures, but made an effort to retain a separate cultural identity (Summitt 2012: 8). In the 19th century, missionaries moved into the area to Christianize the Native Americans, teaching the children English so they could read the Bible. One Cherokee man, Sequoyah, saw the power inherent in language. He believed that the Cherokee language was the only repository for the stories, history, and cultural identity of the culture and took it upon himself to develop a system for writing the Cherokee language so that its culture and traditions could be preserved (Ibid: 10-11). The written words of Europeans were seen to have power and with this new alphabet, Sequoyah could utilize that power and teach his people in the early 19th century (Ibid: 28).

It is possible that a similar situation surrounded the origin of the ogham script. It is known from Irish mythology and later writings that language was thought to have had powerful magical properties in prehistoric Irish culture. There is a story in the myth *The Second Battle of Moytura* about the famed poet of the Tuatha Dé Danann, the mythical early inhabitants of Ireland, named O Cairpré, son of Etan. In this story, O Cairpré, as a bard, expected to be treated well by King Bress, which included eating at the king's table. When the king did not treat him with the respect he felt he deserved, the bard spoke the first ever satire:

*No meat on the plates,
No milk of the cows;
No shelter for the belated;
No money for the minstrels:*

May Bress's cheer be what he gives to others!

Large red blotches formed on Bress's face as a result of this satire, and in the custom of the Tuatha Dé Danann, a king could not have blemishes. Therefore, because of this poem, the king was dethroned (Squire 2003: 82-83). Memorizing poetry and stories was clearly of a great importance to early Irish culture, so what might they have thought of written words? Were inscriptions thought to hold more, or a different kind of, power than spoken words? Was this the spark that ignited the development of ogham? There are, however, several key differences between ogham and the Cherokee alphabet. Sequoyah was faced with cultural erasure and developed his script as a way to preserve his culture, while it has been suggested that the creator of ogham was likely absorbing an aspect of Roman culture. The question is why an indigenous script created in Ireland was adopted in other areas of Britain *in addition to* Latin (especially in Wales). Communicating a continued link to pre-Roman cultural origins must have played a role in the display of the ogham script. Perhaps the use of ogham in Ireland and Britain was not as different from the Cherokee context as might at first appear.

4.3.1 Socio-Political Significance

The origins of ogham may hold the key for understanding the adoption of ogham by the peoples of Scotland. Perhaps they also wished to have the ability to write their language, but were either unwilling or unable to create their own writing system. If they associated themselves with the Irish and their language more than with the other options available (Latin, Pictish symbols, or Scandinavian runes), then they may have simply chosen to adopt the Irish form of writing. The two subfamilies of what have

become modern Scots Gaelic and Irish are very similar and because of this the two groups of cultures could be seen as being similarly related. Specific attitudes, beliefs, and even opinions are adopted through language, especially native language (Ahearn 2012: 21). Much the same thing may have happened in Wales, even though the actual spoken language belongs to a different branch of the Gaelic linguistic family.

The ogham script and the Irish language for which it was designed must have had some significance to the people who adopted them. The ideologies and identity inherent in the languages were likely similar enough to warrant the merging of the colonizing groups with the local cultures. Identity in linguistic anthropology often involves power and subjectivity. Linguistic Identity depends almost entirely on the speaker's (or in the case of ogham, writer's) ideas of identity, but also on situations and contexts of speech events (Bucholtz and Hall 2006: 370-376). The Irish culture, and in particular the language, may have held some elite status. This elite language could have been used as a way to claim ownership by the new colonists. A speech event does not only have to be when people speak out loud. If a stone is placed in the landscape to send a message, chances are that message was meant to be 'heard' loud and clear. Ogham stones were a means of communication and therefore, each time someone "reads" them, this can be seen as a speech event. A speech event also involves agency. There is a speaker (the person or people who erected the ogham stone) and a receiver (whoever sees or reads the stone). The speaker tries to convey a message or meaning, and the receiver receives said message. In order for this message to be conveyed, the proper language must be chosen, not only the specific words, but also the tone and

visual stimulation. The speaker may also intend to convey multiple messages, depending on who the audience is. For example, a sign on someone's lawn which conveys the owner's support of a particular political candidate can contain two messages. One message says "I approve of this candidate and his or her policies", the other says "I disapprove of the other candidates and their policies". An ogham stone may also say simply "Mine!", or invoke protection for a particular territory.

4.3.2 *Intended Audience*

What was the intended audience of the ogham stones? If we continue with the analogy of a political lawn sign, it is possible to think of ogham stones as having multiple meanings as well as multiple audiences. Stones with individuals' names on them may have indeed acted as memorials of sorts to those individuals. The ogham stones were likely multi-vocal objects with dual (or multiple) purposes. The importance of the material used to create these stones has already been discussed and shown to contain less importance, apart from permanence than their locations. Today, when a memorial is created in someone's honor, great care is taken in choosing the material and the execution of the carving or inscription. There seems to have been little thought, apart from expedience, given to the material used for ogham inscriptions, by comparison. This may not be a perfect analogy, as modern cultures are very different from Iron Age and medieval cultures, but it indicates that the stones had more than one message to convey to more than one audience, both literate and those unable to read (including modern people).

Another function of ogham stones was as territorial markers. There is not much literature on the environment of Scotland in the Late Iron Age and early medieval era. This is in part due to the acidic soils of Scotland that allow few organic materials to preserve. In the area near Dunadd in western Scotland, many early Christian sites, including crosses and cross slabs, were located near or on arable land (Lane and Campbell 2000: 24). The excavations at Dunadd, however, were able to uncover enough data to provide a picture of the domestic landscape in that area. The most common plants found in the organic remains were barley and oats. The barley was charred enough that little information could be gleaned from their remnants but the oats were clearly domesticated. There was enough grain found to indicate that Dunadd grew and processed its own grains. In addition to growing their own grains, there is also evidence for domestic animal rearing, in particular cattle, and gathering of food from the sea (charred seaweed was found) (Ibid: 221-223). As was discussed earlier, Dunadd was probably a royal center. That the royal center grew its own grain likely indicated that much of the area was used for farming and food production. The stones may have been used to lay claim to arable land, which the people needed to survive. It may also have been a way to notify kin and allies that the land upon which the stone stood was safe for them, similar to the modern lawn sign.

There is little evidence of social structure or land tenure in Scotland during the Iron Age and medieval periods. However, a comparison can be made based on what is known about Irish social structure at this time, thanks to later Irish manuscripts. Medieval Ireland was a society of clans. There was an emphasis on genealogy for the

higher classes, while those in the lower classes were less likely to be concerned with clan connections, having nothing to pass on or inherit (Nicholls 1972: 8-9). The Irish landscape was a patchwork of woods, bogs, and lakes (Ibid: 5) inhabited by an agro-pastoral society, and the division of land was largely dictated by herding practices. Territorial units were organized around upland areas used for grazing. Cattle were a major part of the economy, so control of grazing land was a major political focus (Patterson 1991: 88-89). There is also evidence that early Christian churches in Ireland were built on boundaries and that these churches were the locations of large gatherings (Gleeson 2015: 43). It is interesting in this connection that ogham stones are often found in or near early ecclesiastical sites. In Wales, a slightly different picture emerges, as Latin and/or ogham inscribed stones are often located along roadways, where they were more likely to be seen by travelers (Longden 2003: 176).

Ogham inscriptions on media other than stone use a different wording format than those inscribed in stone (Forsyth 1996: lxxv; McManus 1991: 93). The Gurness knife (Figure 4.2), for example, contains just a single male name, which might indicate the owner of the knife (Forsyth 1996: 66). This suggests that different messages, and perhaps even different registers of language, were used depending on the medium. Registers allow for speakers to indicate or respond to different meanings and contexts. Different registers are associated with different discourse types and cultural groups, and whether or not a register is known or understood could indicate if someone is outside the cultural group of the speaker (Agha 2006: 23-24). In this way, the register, or formula, of an inscription could hold a much deeper meaning in which the identity of

the intended audience could be imbedded. Ogham inscriptions on portable objects should be studied more in-depth as a category than they have been, since they probably reflect a different set of meanings than the standing stones.

The Scottish ogham stones also included forms of visual communication, as did some found in Ireland and Wales. Iconography is an essential aspect of visual communication. Not only do people communicate with body language and words but with through the language of iconographic object signifiers. When someone is wearing a necklace that has a cross on it they may be demonstrating to those who can see them that they are Christian. However, symbols can also be open ended. The cross may have nothing to do with Christianity; it could instead have any number of other meanings. A cross inside a circle, for example, is a common pre-Christian motif in prehistoric Europe.

It is probably safe to assume that the crosses inscribed on ogham stones did reference Christianity in some way, because the ogham stones correspond temporally with the spread of Christianity in Europe. As with the duality of meaning found in textual communication, the crosses, as well as other iconography found on ogham stones, could have conveyed multiple messages. Religion often has political associations, and these symbols could have been used to send messages of socio-political connections within and between groups. A variety of imagery inscribed on stones in the NMS collection can be seen in the selected stones below:

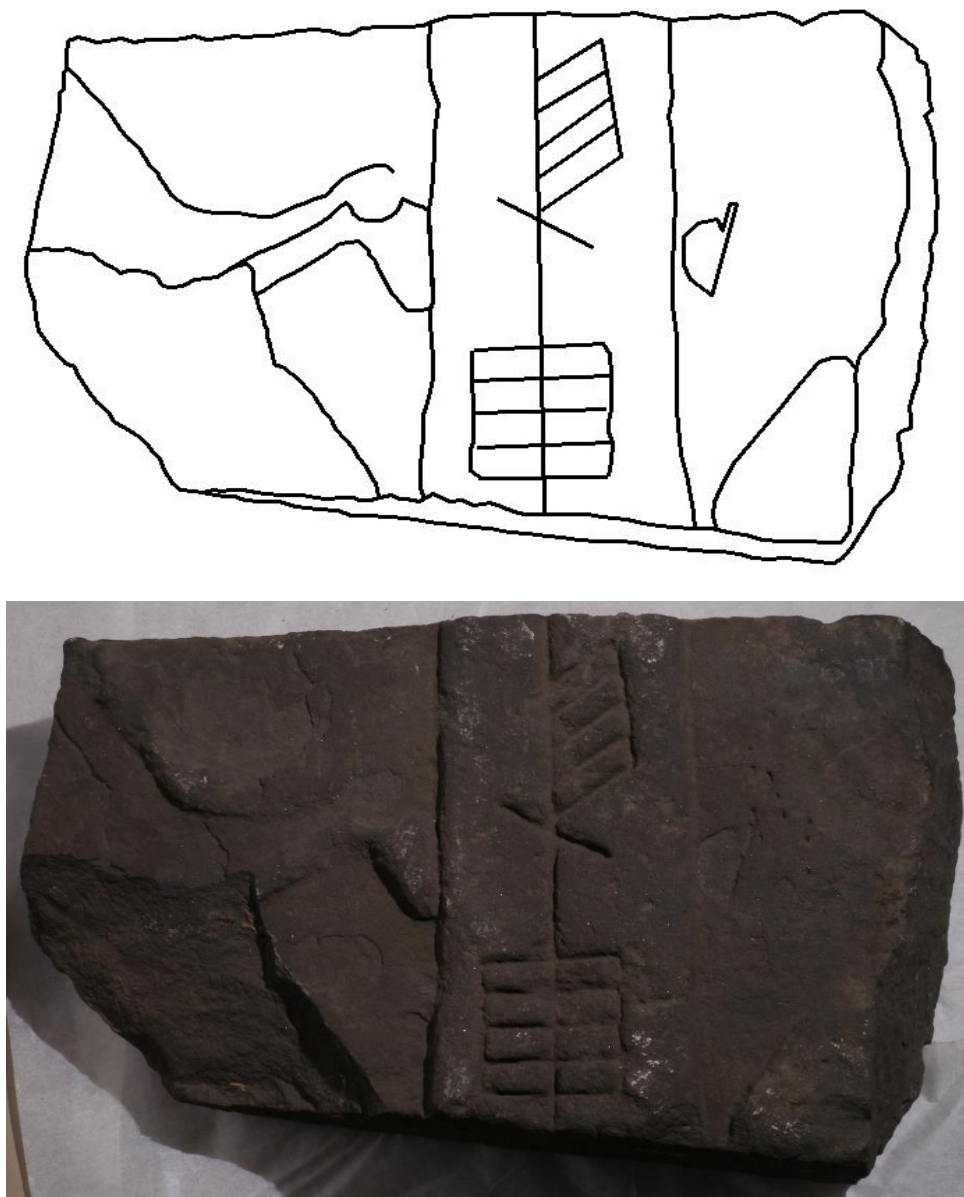


Figure 4.9 Abernethy Stone. This stone contains three bound letters and a possible horse's hoof (National Museum Scotland Cat. No. X.IB.98).

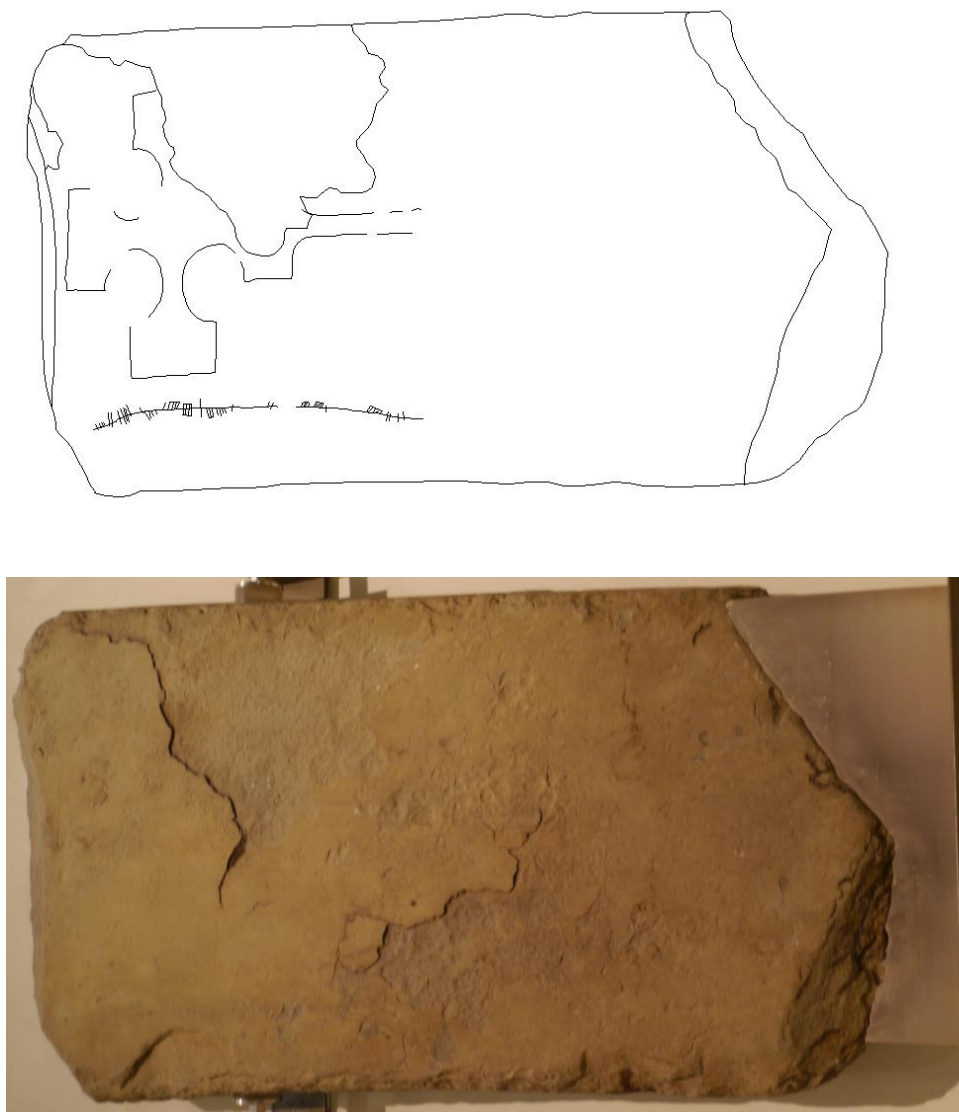


Figure 4.10 Burrrian Stone. This stone contains a very faint ogham inscription and cross (National Museum Scotland Cat. No. X.GB. 1).

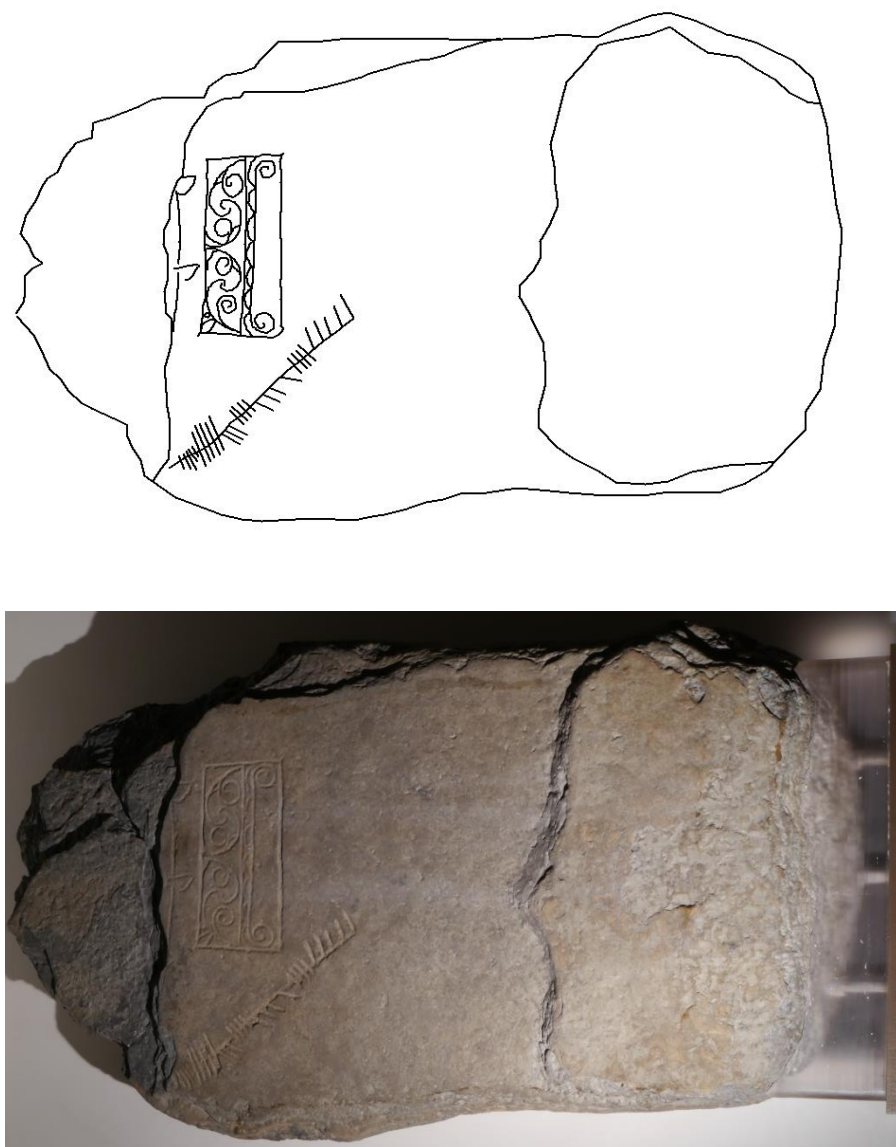


Figure 4.11 Ackergill Stone. This stone contains an ogham inscription and two Pictish symbols: a rectangle and part of a fish (National Museum Scotland Cat. No. X.IB.168).

These three stones represent the most common forms of iconography associated with ogham inscriptions: scenes of people or animals, Pictish symbols, and crosses. Three ogham stones in the NMS collection contain Pictish symbols (Table 4.1). There is a fourth stone in the NMS collection that contains only Pictish symbols, but no ogham (Birsay 4, NMS Cat. No. X.IB.243). Each of these images was chosen to accompany the ogham inscriptions. Even though we cannot discern the message or messages that were being produced with the combination of ogham and imagery, we can assume that the intended audience would have understood the message.

Table 4.1 Pictish symbols that accompany ogham inscriptions on the stones in the National Museum Scotland collection.

Pictish Symbols on the NMS Ogham Inscribed Stones			
Stone Name	Pictish Symbols		Other Symbol
Ackergill	Fish	Rectangle	
Latheron	Fish	Bird	2 Horsemen
Scoonie	Beast		Hunt Scene

4.4 The Biography of an Ogham Stone

Combining the data presented above with material culture and object biography approaches, a biography of an ogham stone can be produced. The biographical approach allows for the creation of a different view of cultural connections, especially where an object type is adopted by a different culture than the one that originally developed it. For this particular biography, I will be looking at the Abernethy stone from Scotland. It is important to emphasize two points here. First, the full biography of an object, especially one as ancient and damaged as this, can never be completely understood by a 21st century scholar. Second is that this is a biography for one

particular stone. Each ogham stone has its own unique biography and not all the “life phases” experienced by one stone may have been experienced by others.

4.4.1 Conception of an Ogham Stone

An ogham stone, like any other artefact, begins with a concept. It is unknown what class of people would have had their names inscribed on stone, or who exactly the intended audience may have been. Based on what we know about the socio-political structure of Iron Age Scotland and Ireland, however, we can guess the production of these stones was proscribed in some way, possibly to elites. However, the actual audience could have been much larger than the intended audience. The process began with a decision to erect a stone for a person. This decision would have been made either by the person himself or for him (or her – only one female name is known however) by a family member or someone within his circle of society. We know that it was more likely to have been a male, because there is only one known ogham inscription with a female’s name, the Eglwys Cymmin stone in Wales (McManus 1991: 49). If these names indicate some form of ownership or elite status, the small number of female names suggests that women were not able to own property on the same level as males. These stones may have been used to mark territory. If the society was an agropastoral one, which the limited data available from the excavations at Dunadd indicate, ogham stones may have been a way to lay claim to arable or grazing land. This theory could be tested by comparing the distribution of known ogham stone locations to arable, pasture land and tribal boundaries.

Tradition has it that Abernethy was founded by a Pictish king (Forsyth 1996: 2). It is certain, at least, that it was “one of the principal ecclesiastical sites of early medieval Scotland” (Ibid: 1). The date of the Abernethy stone is unknown; however, it is possible that the stone was contemporary with Christian activity. It is also possible that this stone was commissioned either by or for someone connected to the ecclesiastical community.

Possibly the person who was commissioned to carve the stone was a scribe of sorts, a member of an educated class. It is possible that, as with other writing systems, only a select class of individuals had this knowledge, and the ecclesiastical class is known to have included scribes. If this was the case, whoever commissioned the stone would have had to hire both a scribe and a stone carver.

The next step would have been the choosing of the material. The stone material chosen for the monument could have been meaningful, though it appears likely that the people who erected these stones cared more about ease of access than about some quality of the material itself. The size of the stone and possibly its color could have been important in choosing the material, however. The Abernethy stone is made of sandstone, a common material in Ireland and Britain. In particular, the Abernethy stone is made of red sandstone. It is possible that this was a conscious choice. There are some stones that appear to have been used prior to the inscribing of ogham. Several of these were likely erected in prehistoric periods without writing, especially the Bronze Age, such as the Faunkill and the Woods stone in County Cork, Ireland (Figure 4.12) (Ogham in 3D 2015). By choosing such stones, those who commissioned the inscriptions



Figure 4.12 Ogham stone from Faunkill and the Woods, County Cork, Ireland. This stone was likely originally a Bronze Age standing stone later inscribed with ogham (Ogham in 3D 2015).

would have been invoking or appropriating whatever power was thought to be held by the earlier stone monument and possibly its context or location.

In Ireland, in the earlier days of monumental ogham, the words would not have to have been chosen carefully, because a specific formula was in place: “of X son of Y”. The names on “classic” ogham stones, those found in Ireland pre-7th century, were written in the genitive form, indicating possession, possibly meaning the stone or the

area and land surrounding the stone was owned by whoever was named on the stone (McManus 1991: 101). Later, more formulas came into play with options such as:

“of X son of/grandson of Y”
 “of X here son of/grandson of Y”
 “of X grandson of Y”
 “of X son of Y son of/grandson of Z”
 “of X”
 “in the name of X son of Y”
 “in the name of X”
 “of X client of Y” (McManus 1991: 52).

These formulas suggest that the stones were used to indicate genealogy or as lineage markers. In Scotland, the stones were later in date, and there is more variation in the inscriptions (Forsyth 1996: xliii). The inscriptions in Primitive Irish and likely those undeciphered in another language may have been chosen with more care. Once the inscription was decided upon, it would have been carved into the stone. In addition, some were decorated with imagery. Some of these images were likely done by the same hand as the ogham, as in the case of the Abernethy stone, which includes a possible equine leg contemporary with the ogham inscription (Figure 4.13) (Forsyth 1996: 4-5). Because of the arrangement of the ogham relative to the legs, it is clear that the design on the stone always included both elements. The three letters that remain likely spell –QMI—. With only three extant letters, it is not possible to interpret the intended ogham message.

In Ireland, most stones have no iconographic images. The iconography that did make it onto Irish stones was usually Christian, in particular crosses (McManus 1991: 54). If the crosses were added at the same time as the inscriptions, they may have been chosen carefully by whoever commissioned the stone.

Outside Ireland, additional inscriptions and images were more common. In Wales, an inscription in Latin was likely to be added, often repeating the message in the ogham inscription (Figure 4.4) (McManus 1991: 48). In Scotland, Pictish symbols adorned 28% of the ogham stones (Cummins 1999: 60). The stones in the NMS collections include four (27%) with Pictish symbols, a comparable ratio. All of these additions would have been planned in association with the ogham inscription itself.

The stones, being so large and cumbersome, were likely in place before the inscribing took place though perhaps horizontally positioned if they were intended to be used as standing stones, which many appear to have been. The Abernethy stone is now so broken that it is impossible to know how large it originally was. With so few stones having been discovered *in situ*, it is difficult to hypothesize regarding the erection ceremonies that may have accompanied these stones. However, the erection was likely an important event and may have included a ritual or ceremony of some sort. This event would have included several people, maybe even from multiple classes of society. There was likely a religious aspect,



Figure 5.13 Abernethy stone from Scotland. Stone includes an ogham inscription and an image, possibly of a horse that were clearly inscribed by the same person (National Museum Scotland Cat. No. X.IB.98).

whether Christian or pagan, to most if not all, of these stones, given the iconography associated with them. Because of its connections to an ecclesiastical site, the erection of the Abernethy stone likely included a Christian aspect. Therefore, there was likely also a religious aspect to the event that resulted in the dedication of the stone and its placement in the landscape.

4.4.2 Early Life of an Ogham Stone

If used as a standing stone, the stone may have been visible on the landscape, depending on its size. The inscription may even have been visible from a short distance. The stone could have been a sign to others, either used to invoke the memory of a significant individual, to display power, to mark the boundary of the family or tribe of the individual for whom the stone was created, or some combination of the three. The ogham inscription would have existed to send a message to all who saw it, regardless of whether they could read it or not. They would have understood the message of the stone's existence. This message could go beyond the need to remember an individual, it could also reference the 'founding fathers' of a kin group while at the same time promoting the area marked by the stone for its connection to a particular and outstanding historic individual (Williams 2003). Later in the medieval period, some of the manuscripts associated with the laws of Ireland indicate that ogham stones were used as a means of legitimizing land ownership (McManus 1991: 163-165). In other words, they were used as records as well as markers. In Scotland, however, the stones tended to be smaller. The largest extant stone in the Ogham in 3D database is 4.7 meters tall (Faunkill and the Woods, Co. Cork), while the largest extant stone in Scotland

is 3.3 meters tall (Altyre). The Abernethy stone may not have been tall enough to send a message to a wide audience; it may have been intended to be seen only by those within the community. The memorial function may have been more important in Scotland than the political or economic associations of the stones erected in Ireland – again, the multivocality of this medium must be taken into account in any comparative analysis.

Several ogham stones have been discovered with inscriptions or iconography that were clearly added at a later date. The Inchyra stone in Scotland contains three phases of ogham and Pictish symbols (Forsyth 1996: 341). The dating of this stone is unknown. These were added likely during the lifetime of the ogham stone, before it was lost to the collective memory of the culture which constructed it. These additional carvings could have been intended to add to the stone's meaning or to change it. This could have indicated a change in ownership and the desire to provide legitimacy of said ownership.

4.4.3 Later Life of an Ogham Stone

Eventually, ogham would have been forgotten by all but the literate members of society, and only remembered thanks to those scribes who wrote ogham in their manuscripts, as discussed in Chapter 1. The individuals whose names adorn the stones may also have been forgotten or turned into legends or mythological characters repeated in local tradition. With the specific meaning of the individual stone lost, it may have been forgotten or ignored. The weather over decades and centuries would have worn the stone and its inscriptions down, making it less auspicious. Looking at the images of the Abernethy stone produced by RTI, intense weathering can be seen on the

inscribed face. This weathering marred the details of the letters and associated imagery. Some of the stones would have fallen over and been covered up by soil as time passed. In a way, one could say that the stones “died” until they were “resurrected” by antiquarians or archaeologists for an afterlife in museum exhibits or storage.

Few ogham stones have been found *in situ*. This indicates that most were moved by people. Some were left in the landscape untouched. Others were moved, but left upright, such as those used as cattle rubbing stones, like the Breastagh stone in County Mayo, Ireland (Figure 4.14) (Ogham in 3D 2015). Still other stones were broken up and used as construction materials, like the Abernethy stone. The stone is cut on all four sides and it appears that the back was carved off (Forsyth 1996: 4). These were often found as lintel stones in souterrains (the Drumlohan stone in County Waterford, Ireland (Figure 4.15) (Ogham in 3D 2015)) or built into walls (Ardfert I in County Kerry, Ireland (Figure 4.16) (Ogham in 3D 2015)). It may be significant that the two most likely structures to include ogham stones in their walls are churches and souterrains, though this could also simply be a result of which structures are still standing from the late Iron Age and early medieval periods. There were three other post-Pictish decorated (non-ogham) stones found at Abernethy. All three were used to construct an 11th century round tower (Forsyth 1996: 4). The ogham stone was not found in a structure, so it is unclear who broke the stone or why. Because it was cut with fairly straight lines, however, it is possible that it was used as a building stone.



Figure 4.14 Breastagh stone from County Mayo, Ireland. Stone is currently being used as an cattle rubbing stone (Ogham in 3D 2015).

More likely, ogham was completely forgotten at this time and the scratches on the stones were not seen as having any special meaning. At this point, the collective memory of the importance of ogham and the individual stone has been lost. The stones being used in these new capacities now had new lives with new functions. Those used as building material had new lives as a component of a larger object: the structure

they were used to build.

Starting with the 18th century antiquarians (O'Flanagan 1787), ogham began to be rediscovered. The scratches found on large stones were once again recognized and acknowledged as a written language. The Abernathy stone was discovered lying in a churchyard by a Mr. Marr in 1890, though no details of its discovery remain (Forsyth 1996: 2). People began to see the stones as important again. In this secondary or even tertiary life, the importance of the ogham stones lies in their ability to tell a story about



Figure 4.15 Drumlohan Souterrain in County Waterford, Ireland, including an ogham stone as one of the lintels (Ogham in 3D 2015).

the past. The entirety of the story has long been forgotten, but fragments still remain. The stones were at this point being studied by various groups of people.

Several of the stones

were collected and placed in

museums. Mr. Marr, for example, donated the Abernethy stone to the National Antiquities Museum in 1892 (Forsyth 1996: 2). Others were re-erected as monuments so they could be viewed by locals and tourists. A new collective memory of the stones has developed. They no longer hold the same meaning, but they have acquired a new life and a new relationship with the people who see and interact with them. A virtual afterlife in 3-D databases is the latest stage in this transmutation. Now the ogham stones are reaching a much larger audience than at any time in the past. In 1985, the national Antiquities Museum was amalgamated with the Royal Scottish Museum to become the National Museums of Scotland (www.nms.ac.uk)



Figure 4.16 Church in Ardfert, County Kerry, Ireland. An ogham stone was used to build one of the walls (Ogham in 3D 2015).

and the Abernethy stone was transported to the museum collections in Leith. In 2014, the museum moved their collections once again, this time to West Granton. In the time since its donation in 1892, the stone has passed through several hands, including museum visitors, curators, and researchers such as myself.

4.4.4 Conclusions

When compiling an object biography, the objects observed usually have a birth, life, and death. Often they will have a second life or multiple lives at once (Kopytoff 1986: 67). Monuments usually have more lives than portable objects. They are a part of the landscape and viewed by several generations within a culture, and can often last long enough to be a part of a succession of cultures, such as the ogham stones (Joy 2009: 541). The life of a typical ogham stone involved many people and several cultures. An ogham stone has the power to affect many people on multiple levels, amplified by new media today.

The biography of an object as ancient as an ogham stone is problematic in that it must be written from the biased perspective of a modern individual living in a modern culture and society. We can never truly understand the people of the Late Iron Age and early medieval period because we have not lived their lives, meaning that any object biography must remain incomplete.

4.5 Future Research

Several areas where future research is necessary have been identified in the course of this project. In particular, the material used for ogham inscriptions has been largely overlooked in previous research. The type of stone used for many, but not all,

ogham stones has been identified in the past, though not in any systematic way. My attempts to discover the types of stones most commonly used revealed that the classificatory terms and reliability of classification varied greatly by author. The existing stones should be analyzed by a geological specialist and classified systematically in order for any effective materials analysis to be conducted.

A systematic survey of the types of stone used for monumental inscriptions, and the sourcing of this material, could aid in producing a better sense of the thought process and choices that went into the production of ogham stones. In addition, if this survey were to be conducted for all known ogham stones, inter- and intra-regional comparisons could be generated. This type of inter-regional comparison could allow additional research into how the technology of ogham stone production was transferred to the different regions. If the process (i.e. the method of material sourcing) differed by region, this could indicate that there was some change in the cultural meaning of the stones as a category of material culture.

There has also, to my knowledge, been no research into the possibility of the use of pigmentation on ogham stones. The ability to send a message using the stones may have depended on its visibility. Many of the stones are large, but have relatively small inscriptions. The use of pigments would allow for a greater range of visibility. Research into this possibility could shed further light on the intended audience and function of the ogham stones, as well as knowledge of other media besides stone as conveyors of ogham inscriptions. In addition, further research into the relationship between ogham stones and Scandinavian rune stones, which did have painted inscriptions and served as

territorial and political markers, could provide additional insights into cultural technology transfer during this time period.

An updated comprehensive survey of the known ogham stones is also an area of future research. Such a survey has not been completed since Macalister's 1945 tome. Since then, there have been some regional surveys, such as Forsyth's 1996 dissertation and the ongoing "Ogham in 3D" project (<http://ogham.celt.dias.ie/>). However, a survey of all known ogham inscriptions should be completed. The coastal distribution is interesting, especially southwest Ireland, and should be further investigated. As the distribution map produced for this thesis indicates (Fig. 4.17), there are some patterns that could be explored further. Little work has been done on the distribution, other than the idea that the cluster of ogham inscriptions in southwest Ireland suggests that this area was where the script originated (McManus 1991: 1). Why are there no inscriptions found in central Ireland? Why are the largest concentrations of inscriptions outside of Ireland found in southwest and northeast Britain? There are very few ogham inscriptions in northern Ireland, or western and central Scotland and yet there is a relatively large concentration in eastern Scotland. Further research on the distribution of ogham stones and the relationships between the cultures in this region can address and possibly even answer these questions.

The "Ogham in 3D" project is currently working on stones found in Ireland and will eventually expand into other regions. The important aspect of this survey is the fact that they are bringing ogham studies into the 21st century by using three-dimensional imaging. They do not appear to be performing any analysis with these renderings,

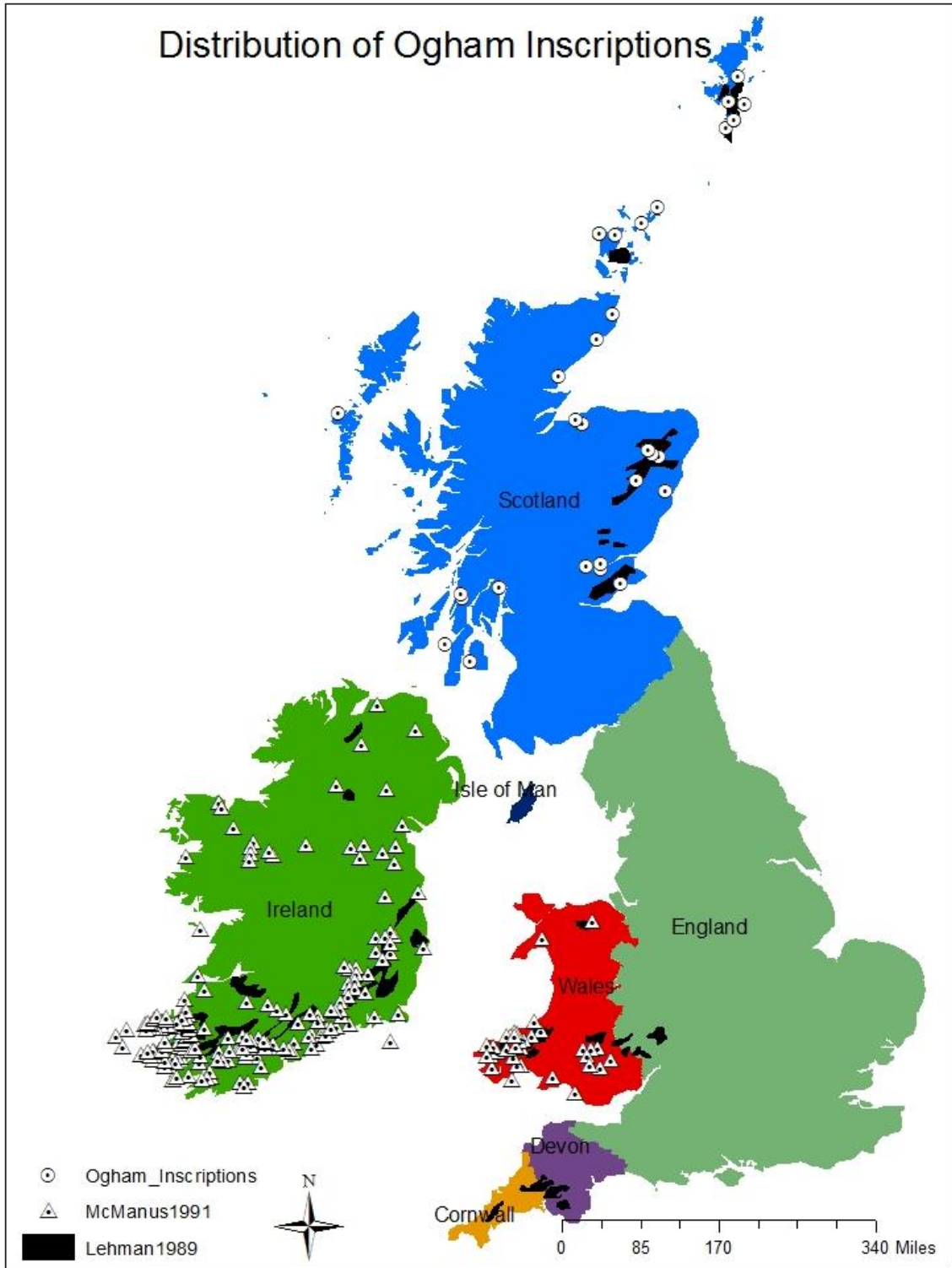


Figure 4.17 Distribution of ogham inscriptions based on Forsyth (1996) (Scotland), as well as Lehmann (1989) and McManus (1991) (all inscriptions).

however. Creating three-dimensional images of stones can be immensely helpful in preserving inscriptions, as many of these stones are still in the landscape and at the mercy of nature. There is much more that can be done in terms of interpretation. My own small survey involving digital imaging showed that different forms of digital imaging can be used to provide different levels of detail. While the RTI images generated for this thesis can only show one face of a stone, they can provide greater detail thanks to light reflection than the scanned full body three-dimensional images produced by the Ogham in 3D project. Producing a comprehensive survey of all extant stones using RTI could facilitate an inter-cultural analysis which, in combination with digital imaging, is the next logical step in ogham studies.

4.6 Conclusion

The ogham stones of Ireland and Scotland can provide more information on the relationship between the two nations in pre- and early history than has hitherto been recognized. In particular, they can shed light on an area where archaeological evidence is scarce. The data that can be collected from an ogham stone, especially that which can be discovered using modern imaging technologies, can be used to deepen our knowledge of these objects and of the Late Iron Age and early medieval periods in Ireland and Scotland while bringing archaeology into the digital era. Various forms of three-dimensional imaging methods can produce greater insight into these objects and their production, life and death. The relationship between Ireland and western Scotland and the likelihood of elite technology transfer implied by the monumental stone

inscriptions could be used as a starting point for an exploration of how these areas interacted through time.

Ogham is one of many material culture categories that reflect contact between Ireland and Scotland. These categories of material culture created and strengthened the links between the two regions. The collections of stones at the National Museum Scotland and University College Cork represent both typical and atypical stones as well as many of the variations of ogham inscriptions and should be analyzed as parts of a whole to be properly understood.

The technology of inscribing stones in ogham was likely transferred to Scotland via multiple mechanisms. Because of this, knowledge of the ogham script was probably not restricted to only one class within society. Most likely, ogham was transferred by some combination of trade, Irish colonization, and Christian missionary movement. While the ogham script appears to have originated in Ireland, based on distribution data, the question of its inspiration is less certain. Previous authors have held to the idea that ogham was inspired by Roman numerals (Forsyth 1996; Lehmann 1989; McManus 1991). In that case, the timing and geographic context are problematic. Why would a script originating in an area with little to no Roman contact be influenced by Latin writing and why would that writing only begin to be used only after the Roman military retreat from the British Isles? The orthography of the script may be superficially similar to Roman Numerals, but once the distribution and movement of the script has been studied, it seems much less likely that this was the inspiration. In view of this, the

idea of a tally or counting system being the origin of the ogham alphabet seems more plausible (Lehmann 1989).

Another question regarding movement is *why* were people moving from Ireland to Britain? The push/pull concepts of migration theory may be applied usefully here (Anthony 1990). Factors that push people out of some areas are usually accompanied by those that pull them into others. Anthony states that the reasons behind migration across cultural boundaries are often motivated by economic situations, such as population growth, and involve the use of long-distance communication and small groups of people migrating ahead of the larger population (Ibid: 900-901). The push for people to leave Ireland may have been population increase. As has been discussed previously, Iron Age Irish society was organized into a system of patrilineal clans. If territory and property were inherited from parent to child, the population would have eventually outgrown the amount of land available. The pull factor may have been land that was available after the Romans left Britain. However, why Cornwall, Wales, and eastern Scotland? A more in depth analysis of the relationships between Ireland and these areas could provide new insights to this question. One possible answer is that there were previously established connections in these areas that did not exist in others. Another, as proposed by Longden, is that the ogham stones were used to claim legitimacy of power by association with past Roman territories and the Roman custom of inscribing on stone (2003: 179). While this might be valid when only looking at the ogham stones of Wales, it does not explain the presence of ogham stones in either Ireland or Scotland. In particular the movement of ogham stone production to eastern

Scotland is puzzling. Anthony might have an answer to this: "Interregional migration is likely to resemble the children's game of leap-frog more than it does a wave. Great distances may be jumped and large areas bypassed the agency of advance 'scouts' who collect information on social conditions and resource potentials and relay it back to the potential migrants" (Ibid: 902). Most likely, ogham stone production moved to different regions of Britain via different groups or clans whose previous connections with certain areas may have been the result of various mechanisms including but not limited to trade or missionary activity.

Once ogham did become known to the peoples of Scotland, it was culturally and linguistically adapted to their needs, in much the same way that the Romans adapted other cultures' practices and material culture to their needs. The use of ogham sent a specific set of messages to those who came in contact with it as to the identity and role of the individual or group that produced the inscription.

The act of erecting a monument is one of remembrance. In order to study this form of remembrance, we have to realize that our perspective is different from those who committed the original act of commemoration. We experience the world through our perceptions, and while one can't see everything at once, one can see parts of the whole (Tilley 2004: 10). When we study archaeological material in particular, we can only see a part of the story, that which is left behind. Perceptions change with time, and with this change comes a different understanding of the past: "the past influences the present and the present rearticulates the past" (Tilley 2004:11). Even the permanence of the stone material used in the production of the ogham monuments of Ireland,

Scotland and Wales could not ensure the permanence of the message they were intended to convey.

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