

Crannogs, castles and lordly residences: new research and dating of crannogs in north-east Scotland

Michael J Stratigos* and Gordon Noble*

ABSTRACT

This article outlines new research into the crannogs of north-east Scotland and dating of two crannogs in Loch Kinord, Upper Deeside, Aberdeenshire. The dating of the crannogs in Loch Kinord represents the first direct dating evidence for crannogs in the north-east of Scotland and indicates construction episodes at these crannogs in the last centuries of the first millennium AD. The radiocarbon dates, alongside various historic records, suggest that crannogs, including Castle Island in Loch Kinord, may have been significant nodes within early medieval landscapes of power in eastern Scotland.

INTRODUCTION

Crannog research in Scotland has traditionally focused on the south-west and central highlands (see Munro 1882; Piggot 1953; Barber & Crone 1993; Henderson 1998a, 2009; Dixon 2004; Cavers & Henderson 2005; Cavers et al 2011; Cavers & Crone 2013). Consequently, our understanding of the basic characteristics of crannogs outside of these specific regions remains poor. The lack of information is particularly lacking in eastern regions of Scotland. Until now, the north-east of Scotland (considered here as Moray, Aberdeenshire, Aberdeen City and Angus) as well as Dundee City, Fife, Clackmannanshire, Falkirk, West Lothian, Edinburgh City, Midlothian, East Lothian and the Scottish Borders have seen no modern investigation of a crannog site. Encompassing the entire eastern half of Scotland, this represents a notable gap in our understanding of crannogs as a site-type. This paper represents an attempt to redress the geographical focus of crannog studies through the presentation of the results of a programme of dating of two crannogs in Loch Kinord, Aberdeenshire, a region that has seen no modern work and only limited recognition of its crannog resource in the past. The dates

from the crannogs on Loch Kinord represent the first radiocarbon dates from crannogs in north-east Scotland and are the beginning of a new regional dataset that can address new aspects of crannogs studies in Scotland. In particular, the research provides important evidence for late first millennium AD construction of crannogs in eastern Scotland.

THE HISTORY OF CRANNOG RESEARCH

Crannogs in Scotland date to as early as 800 BC and in some cases were inhabited as late as the 17th and 18th centuries (Crone 2012: 141–6). Owing to the difficulty of defining the term crannog as an archaeological site-type, there are wide estimates of the number of surviving examples – the National Monuments Record has around 400, while a recent compilation of sites lists 571 (Lenfert 2012: 356–75). Crannogs have repeatedly been argued to be a western or Atlantic phenomenon (Henderson 2009: 39; Cavers 2010: 26–8), however, there are many recorded crannogs in other, less well-studied, regions, and there has been very limited research on these sites outside of the specific regions

* Archaeology, Geosciences, St Mary's Elphinstone Road, Aberdeen, AB24 3UF

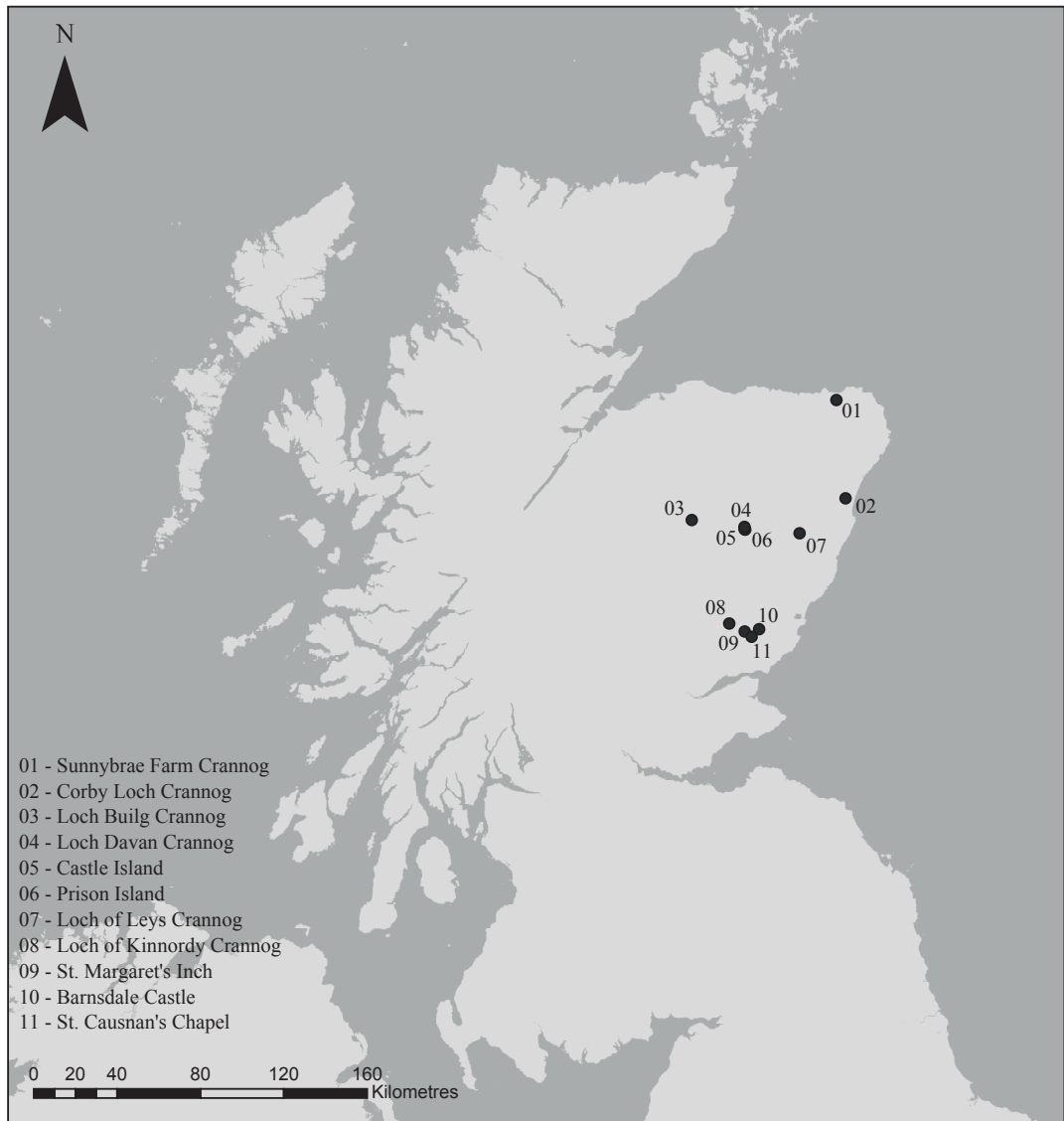
mentioned below. Research on Scottish crannogs began in the 19th century with early antiquarian interest and greatly benefited from the seminal work conducted by Robert Munro (1882). Munro excavated a number of crannogs in the south-west of Scotland, most notably at Buiston and Lochlee (Munro 1882: 68–151). Munro made a major contribution to crannog studies and some of his interpretations and findings on crannogs still influence a significant proportion of contemporary crannog research (Dixon 2004: 60). Despite Munro's early foundational work, crannog studies subsequently faltered, with few investigations of crannogs in the following decades (for exceptions see Monteith & Robb 1937; Ritchie 1942; Piggot 1953).

A resurgence of interest in crannogs began to gather pace from the 1970s onwards, with two survey programmes being instigated in this decade (eg McArdle et al 1973; Dixon 1982). The most intensive programme of research on a crannog in Scotland has been the excavations at Oakbank crannog, Loch Tay, begun by Dixon in the 1980s and continuing intermittently over the past 30 years (Dixon 2004). Also part of the resurgence in crannog archaeology was the re-excavation of Buiston crannog by Anne Crone in 1989–90 (Crone 2000). Since these significant excavations, a number of other research projects have also advanced our knowledge of crannogs, particularly in the south-west (eg Cavers & Henderson 2005; Crone & Campbell 2005; Cavers 2010; Cavers et al 2011). Recent research has also included important regional surveys of crannogs, including the Perthshire Crannog Survey (Dixon & Shelly 2006; Dixon 2007), the South-West Crannog Survey (Henderson et al 2003; Henderson et al 2006) and the ongoing Scottish Wetland Archaeology Programme (SWAP), which also focused on crannogs in south-west Scotland (Crone & Clarke 2005; Cavers & Crone 2010; Cavers et al 2011). In each case, as a result of these surveys, the number of crannogs known has been increased in the respective study area (eg McArdle et al 1973; Dixon 1982; Henderson 1998a; Lenfert 2012). Vital dating projects and analysis have also been undertaken, including radiocarbon

dating and dendrochronological studies. Consequently, there is now a body of over 150 radiocarbon dates from 52 crannogs in Scotland (Crone 2012).

Interpretations of crannogs have also advanced in recent years. Traditional interpretations tended to focus upon functional concerns – their use as defensive or strategic dwellings – or simply on developing structural typologies and chronologies based on geographical distribution and radiocarbon dates (see Henderson 1998b). However, other perspectives have emerged in recent years and have begun to provide a broader understanding of crannogs with the discussion of the social and symbolic dimensions of crannogs (eg Fredengren 2002), the contemporary landscape contexts of crannogs (eg Cavers 2010) and the place of crannogs in the wider settlement patterns of Iron Age Scotland (eg Henderson 2009).

Crannog research in Scotland has repeatedly focused most intensely in the south-west of the country and the modern administrative area of Perthshire. This geographical focus of crannog studies partly dates back to Robert Munro, who claimed that the south-west of Scotland was the only place that crannogs were to be found in any great number (Munro 1882: 287). Indeed, the south-west region of Scotland does have considerable numbers of crannogs, and along with Perthshire, these regions now have a good range of dated sites. In contrast, other regions with significant numbers of sites, such as Argyll and much of the rest of northern and western Scotland, remain little more than entries in the National Monuments Record of Scotland or regional council Sites and Monuments Records. However, it has become apparent that whenever suitable loch conditions exist, crannog sites are found across Scotland (see Hale 2007; Stratigos forthcoming a). This is the case even without conceding that many crannogs are likely to have been completely lost from the archaeological record in the more intensively farmed and improved lowlands due to loch drainage that began in the post-medieval period and continued through the 19th and 20th centuries (Stratigos forthcoming b).



ILLUS 1 Crannogs in north-east Scotland

TABLE 1
List of crannog sites in the north-east of Scotland

<i>Crannog name</i>	<i>Council</i>	<i>NMRS No</i>	<i>Details</i>	<i>References/dating</i>
Castle Island, Loch Kinord	Aberdeenshire	NO49NW 16	Large crannog around 3m high. Linked to shore by timber causeway still partly in place in 18th century. Large numbers of oak timbers removed in 19th century. Recorded as castle in 14th century. Castle slighted in 17th century. Bronze jug and cup, iron axe and spearheads recovered from site. At least four logboats from loch	10th century AD radiocarbon date; later medieval references to castle
Prison Island, Loch Kinord	Aberdeenshire	NO49NW 17	Crannog 20 × 14m × 1.2m height. Formed by oak piles, horizontal beams and stone infilling	9th century AD radiocarbon date
Loch Davan	Aberdeenshire	NJ40SW 26	Possible submerged crannog	none
Corby Loch	Aberdeenshire	NJ91SW 15	Group of oak piles of about 0.3m in diameter in an area approximately 7m in diameter, some 30m from the N shore of Corby Loch	none
Bishop's Palace (NJ91SW 2) (not listed as crannog in NMR)	Aberdeenshire	NJ91SW 2	Remains of a manor complex of later medieval date	Reputed to be 13th-century residence of Bishop of Old Aberdeen
Sunnybrae Farm	Aberdeenshire	NJ86SE 21	Raised, level, sub-circular platform on edge of very wet bog. Some stone content evident near edge, and possible causeway extending to NE	Burnett residence before shift to Crathes in 16th century
Loch of Leys	Aberdeenshire	NO79NW 3	Ruins of structures, and of an 'oven' recorded at end of 18th century and again in 1850 on crannog made of layers of clay, brushwood and stone. A 'millstone', bronze vessels of medieval date, two dugout canoes (one 100m NNE of the crannog), coins, and part of a red deer skeleton were also recovered from the bed of the loch during draining. Residence of the Wauchope and Burnetts till 16th century	none

<i>Crannog name</i>	<i>Council</i>	<i>NMRS No</i>	<i>Details</i>	<i>References/dating</i>
Loch of Kinnordy	Angus	NO35SE 7	A probable crannog discovered c 90m from the shore of the Loch of Kinnordy when part of loch drained in the 18th century. Based on a stone foundation and secured by oak piles. Up to 80m in diameter and 2.5m in height. A finely carved logboat with a possible 'animal-head' prow was also recovered from the loch in 1820. It has been dated to the early medieval period, probably 8th or 9th century. Now in Dundee Museum	none
St Margaret's Inch, Loch Forfar	Angus	NO45SW 12	Excavated in 1868. Composed of oak piles, logs and large stones overlaid by midden and soil. On promontory projecting into Loch of Forfar. Defined by large ditch. Medieval finds including bronze vessels and playing-pieces	First millennium AD origins? Medieval finds
Barnsdale/Rescobie Castle, Rescobie Loch	Angus	NO55SW 10	Possible castle site in Rescobie loch	King Donald III imprisoned here in 11th century?
St Causnan's Chapel, Dunnichen	Angus	NO54NW 4	Site of St Causnan's Chapel, possibly on an artificial islet set on edge of now drained Mire of Dunnichen. Separated by ditch and said to have been approached by a bridge.	First millennium AD origins? 12th century church
Loch Builg	Moray	NI10SE 1	Possible crannog lying 12m from NE shore approached by ruinous causeway	none

CRANNOGS IN THE NORTH-EAST OF SCOTLAND

The new research outlined here focuses on an area that has seen little modern research on crannogs – north-east Scotland, considered here as the area made up of the modern administrative councils of Aberdeenshire, Aberdeen City, Angus and Moray (Table 1) (illus 1). The crannogs of this region have been treated as anomalies (Cavers 2010: 26–7) or considered to represent a later adoption of the building tradition (Lenfert 2013: 133). The density of crannogs in the north-east appears to be less than other areas of Scotland, with the basic geography of the north-east likely to be one limiting factor in crannog occurrence – wide, fertile river valleys are common in this region with fewer areas of open water compared to more central or western parts of Scotland. As Hale (2007: 278) notes, there is a general, ‘thinning’ of crannogs as one proceeds eastwards in Scotland. However, Hale (2007: 275) and Morrison (1985: 2) have noted the role drainage may have played in crannog survival, and this impact has recently been quantified (Stratigos forthcoming a). An analysis of the Roy Military Survey of Scotland (1747–55) has shown that areas of eastern Scotland have witnessed considerably more loch drainage than other regions of Scotland. Furthermore, there are recorded archaeological features located within former lochs depicted on the Roy Military Survey of Scotland that in their description and appearance bear striking resemblances to positively identified crannogs (Stratigos forthcoming b). Whether crannogs in north-east Scotland are anomalies or are the few surviving examples of more widely observed building tradition is yet to be resolved, but regardless, and as this paper hopes to demonstrate, the sites that do survive are significant and deserve further attention.

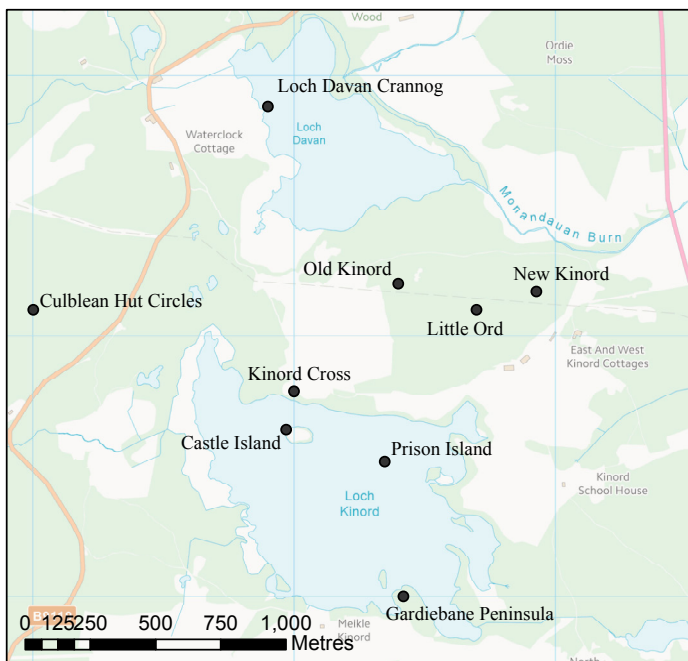
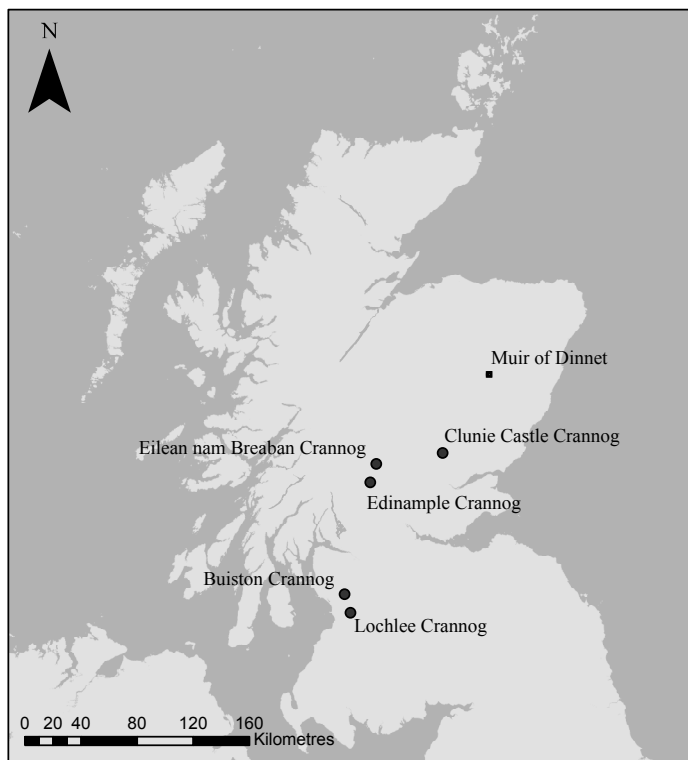
RESEARCH IN THE MUIR OF DINNET

Rich in treasures of science and relics of long forgotten ages

(Michie 1910: 2)

The Muir of Dinnet is a National Nature Reserve in upper Deeside (illus 2), which includes two lochs – Loch Kinord and Loch Davan. Three crannogs have been identified, two in Loch Kinord with a third possible site in Loch Davan. The two crannogs in Loch Kinord are Prison Island (NO49NW 17) and Castle Island (NO49NW 16) (illus 2). Prison Island (illus 3) is located approximately 170m from the north shore of the loch and its area above the water is approximately 20m × 14m. The islet stands about 1m proud of the waterline. Castle Island (illus 4) is located farther to the west and is approximately 80m from the north shore. It is much larger, measuring approximately 100m × 60m (the areas of both sites above the waterline are exaggerated by 19th century lowering of the level of the loch). The islands are ringed with trees at the waterline with grass in the centre of each. The possible crannog in Loch Davan (NJ40SW 26) was identified by aerial photography in 1996, and lies submerged near the western shore of the loch. Prior to the current work, none of these crannogs had been directly dated and only antiquarian observations and Ordnance Survey measurements existed.

The archaeological landscape of Loch Kinord saw antiquarian interest through the 19th and early 20th centuries. The most detailed descriptions of Prison Island and Castle Island were compiled by Rev J G Michie, who drew upon his own observations and previous antiquarian and local knowledge of the crannogs and surrounding archaeology (Michie 1910: 83–96, 171–88). A notable commonality between all the antiquarian records of the islands in Loch Kinord is the great quantity of archaeological material, particularly in the form of substantial structural timbers, which were found submerged around Castle Island and from other areas of the loch (*Old Statistical Account of Scotland*, 12: 225–6; Stuart 1866: 167–72; Michie 1910: 83–96, 171–88). Regarding the timbers, Michie records that some were over 7m long, squared and notched, being obviously worked by iron tools, and all had been split, but some were more roughly shaped. Michie states that Castle Island in particular was a locally famous site, due to the number and quality of timbers discovered and was visited as both a



ILLUS 2 Location of Muir of Dinnet and main sites mentioned in text (above) and Loch Kinord (below)



ILLUS 3 Prison Island © Aberdeenshire Council Archaeology Service

curiosity and as a supply of timber for building and craftwork (Michie 1910: 82). While Michie considered Castle Island as possibly artificial in nature, he found unambiguous proof for the artificial nature of the nearby Prison Island crannog. In 1859, Michie records oak piling, arranged in three concentric rows with roughly hewn interlacing horizontal beams between. The timbers, Michie suggests, were supported by a substantial platform and mound of stones. Many of these timbers, even in Michie's time, had already been washed away and few remained in situ (1910: 93–4, Fig 7).

Michie and others recorded the many artefacts that have been found in the waters of Loch Kinord over the course of the past two centuries. These include at least five watercraft, four of which were logboats or 'canoes' (NO49NW 30, NO49NW 31, NO49NW 32, NO49NW 33; Michie 1910: 83–9). The boats were all originally found in the 19th century, but none survive intact today. The first boat, discovered during a drought in 1826, was described as having a clinker construction, with

overlapping oak planks secured by iron rivets. A logboat recovered from the loch in 1859 was taken to Aboyne Castle and was known locally as the 'royal yacht' (ibid 87). Only a small fragment of this boat now survives (held at Marischal Museum, Aberdeen). Two other logboats, both around 9m in length, were found c 180m to the west of Castle Island in 1875, and in the same year, a final logboat filled with stones was found near Prison Island. This latter logboat was rediscovered in 1962 by recreational divers in 6m of water, 20m to the south-east of Prison Island. It was brought to shore and measured and then put back in its original location. A subsequent survey in 1992 was unable to locate the boat. In the University Museums' collections at the University of Aberdeen, there is also a paddle said to be from one of the crannogs on the loch (ABDUA 16817). The paddle is finely carved and survives to 0.52m in length, but is clearly missing its shaft. The paddle was analysed and dated as part of this work (see below). Additionally, found from within the waters of Loch Kinord a finely

made Roman blue-green glass perfume bottle has been recovered (Curtis & Hunter 2006: 211), along with a medieval carpenter's axe (Beaton 1950) and two bronze vessels (PSAS 1901: 280; PSAS 1912: 10).

In the landscape around the loch there is a rich archaeological record. A remarkable cross-slab is located on the north shore of Loch Kinord, directly opposite Castle Island. It is an intricately carved Christian interlaced cross-slab and most likely dates to the last centuries of the first millennium AD (Allen & Anderson 1903: 3–4; illus 2). On the other shore of Loch Kinord, opposite the crannogs, is located the Gardiebane peninsula (NO49NW 11) (illus 2). A substantial earthen rampart and ditch has been recorded across the neck of the promontory (Michie 1910: 28–9) and is still clearly visible. There is also the suggestion that there are the remains of a drawbridge extending across the ditch, and it is possible that the site may be related to the later castle on Castle Island (Stuart 1866: 169–70). In the wider environs there are well-preserved hut circles and field systems at Old Kinord (NJ20SW

3), New Kinord (NJ40SW 13) and Little Ord (NJ40SW 16); and farther to the west there is a group of hut circles on Culblean Hill (NJ40SW 8) – all of which are undated. Two Hiberno-Norse bronze pins of 9th to 10th century AD date, from the hut circles at Culblean, are also in the University Museums' collections (NJ40SW 8; ABDUA: 15549 and ABDUA: 15550).

There are further historical references and local information regarding Castle Island and Loch Kinord that suggest the area held importance throughout the medieval period. It is recorded that the castle was used as a refuge for the earl of Atholl after the battle of Culblean Hill in 1335, during the Second War of Scottish Independence. The island habitation is also said to have been visited by King James IV on his way to a holy shrine in Tain, in 1505, and in 1511, the castle is referred to in a charter of Alexander, the earl of Huntly, as a 'mansion'. Following a re-garrisoning of Castle Island in 1646 by the Marquis of Huntly, the castle and its defences were razed on the order of an act of Parliament in 1648 (Simpson 1929: 130–1 and



ILLUS 4 Castle Island © Aberdeenshire Council Archaeology Service

references therein). It is clear from these historical references that Castle Island was an important lordly residence. However, a possible earlier and grander phase of occupation is suggested by the *Old Statistical Account of Scotland* which records that Castle Island was ‘built, and occasionally occupied as a hunting seat by Malcolm Canmore’ (*Old Statistical Account of Scotland*, 12: 225; Michie 1910: 38–9). There are no contemporary historical references to support what is likely to be a local legendary association with Malcolm Canmore, but it is important to note that no historical references refer to the initial construction of Castle Island giving a *terminus ante quem* for its construction at the first historical reference – 1335. There are no historical references to Prison Island prior to its mention in the *Old Statistical Account* which refers to it as the ‘Tolbooth’ for Castle Island (*Old Statistical Account of Scotland*, 12: 225).

FIELDWORK IN THE MUIR OF DINNET

A series of brief diving surveys in Loch Kinord were conducted by one of the authors (MJS) in August of 2011, to investigate the two crannogs in the loch (illus 5). These surveys were followed up by a dive in October of the same year, to obtain samples for radiocarbon dating. Initial observations indicated that a detailed survey of the two crannogs would not be possible given the visibility conditions (<1m) experienced in the loch at that time. In addition to the poor visibility, thick vegetation covered the majority of the loch bottom. The initial survey was conducted over three days, with approximately 10 hours of dive time logged. The aims of the survey were to determine the preservation conditions of Loch Kinord and to identify potential *in situ* timbers for radiocarbon dating. Dive time was split between the two crannogs,

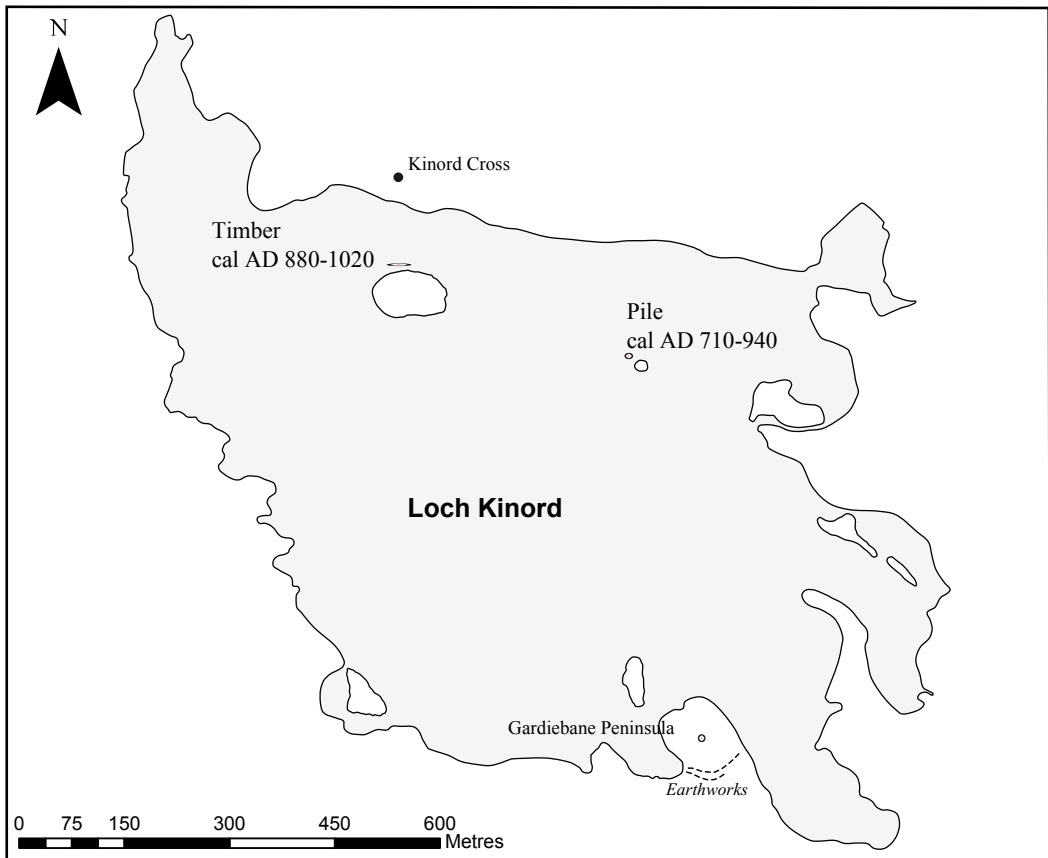


ILLUS 5 The survey of Prison Island in progress (Sally Foster)

Prison Island and Castle Island. A lead weight attached to a buoy was used to take positions of features on the crannogs, which were recorded by hand-held GPS.

During the survey work, a number of structural timbers and the structural rubble matrix of the crannogs themselves were identified (illus 6). Initial observation confirmed the status of Castle Island as a crannog, with the submerged mound being at least partly artificial. At Prison Island, a number of potential structural timbers were identified and one vertical roundwood pile, which was firmly driven into the loch bed, was chosen for sampling. The pile was located 3m from where the submerged mound of the crannog meets the natural loch bed. Its location

suggests that it may relate to an outer walkway around the crannog or part of a jetty extending from the crannog. At Castle Island, a number of large timbers, some of them clearly worked and shaped, were identified. One of the largest timbers was embedded into the loch bed, just off the submerged mound on the crannog's northern side. The timber had a clear woodworking notch in manner similar to those recorded by Michie (1910: 86–7). This timber measured at least 1.8m long and was squared, measuring $0.3 \times 0.37\text{m}$ – a small section of the outer part of this timber was sampled and subsequently dated. The position of the timber suggests that it may have once been part of a causeway leading to the crannog. Due to the visibility conditions, not much further



ILLUS 6 Location of sampled and dated timbers from Loch Kinord crannogs



ILLUS 7 The Loch Kinord paddle © University Museums Service, University of Aberdeen

detail on the nature of the timbers or their exact context was retrievable, other than that they were elements of the surviving structural elements of the crannogs. In addition to the features sampled as a result of the survey, the paddle (illus 7) from Loch Kinord, held in the Marischal Museum, was

sampled for radiocarbon dating. The paddle, at the request of one of the authors (GN), was analysed by the museum curator Nicole Stahl. No evidence of preservative treatments were encountered and the sample taken was viable for AMS radiocarbon dating.

RADIOCARBON DATING RESULTS

The results of the radiocarbon dating are presented in Table 2. The pile at Prison Island dates to cal AD 710–940 (SUERC-29184; 95% probability), a date most likely to fall in the 9th century AD (cal AD 780–880; 68.2% probability). The roundwood pile extended 35cm from the loch bed and was 6cm in diameter, with no bark present. Whether this particular pile dates from the initial construction of the crannog or from a period of refurbishment is unclear. The worked timber from Castle Island dates to cal AD 880–1020 (SUERC-29185), a date that likely falls in the 10th century (cal AD 895–980; 68.2% probability). Given the size of the timber, an ‘old wood’ effect cannot be ruled out here, although the sample was taken from the outermost edge of the surviving material. The chronological context of the timber from Castle Island is also somewhat uncertain, but assuming an old wood effect of no more than approximately 400 years, the timber dates from before the first historical reference to Castle Island. The radiocarbon date from the paddle from Loch Kinord falls later than either of the two crannogs and was made sometime in the 11th or 12th centuries (cal AD 1020–1190; 95% probability).

DISCUSSION

Crone (2012) has recently brought together all of the dating evidence for crannogs in Scotland. The dataset in 2012 comprised 159 radiocarbon dates, dendrochronology from three sites and a wiggle-matched radiocarbon date from another. This dataset has seen more than a six-fold increase over the past two decades (Crone 1993: 2012). The majority of crannog radiocarbon dates in Scotland fall in a period from the Late Bronze

TABLE 2
Radiocarbon dates for Loch Kinord

<i>Lab No</i>	<i>Material</i>	<i>Context/sample</i>	<i>Radiocarbon on age (BP)</i>	<i>Calibrated date range (95% confidence)</i>
SUERC-29184	Quercus species	Prison Island pile	1195 ± 30	AD cal 710–940
SUERC-29185	Quercus species	Castle Island worked timber	1110 ± 30	AD cal 880–1020
SUERC-29186	Wood unknown	Loch Kinord paddle	925 ± 37	AD cal 1020–1190

Age to early Roman Iron Age (*c* 850 BC–AD 200), and consequently crannogs have been considered a predominantly Iron Age phenomenon in Scotland (Henderson 2009: 39–40; Cavers 2010: 26–36). Although Crone has identified other phases of crannog building in Scotland, primarily in the 5th to 8th centuries AD and from the 11th to 13th centuries, crannogs dating to the later medieval and modern periods, though attested in documentary sources, are not well dated through radiocarbon or other dating methods (Crone 2012: 147–9). In her study, Crone (*ibid*) highlights the period from the 9th to the 11th centuries AD as a lacuna in crannog construction – the exact period in which the radiocarbon dates from Prison Island and Castle Island fall. It is striking that in Crone’s list there is not a single radiocarbon date from a site in eastern Scotland, an area encompassing the entirety of the modern councils of Aberdeenshire, Aberdeen City, Angus, Dundee City, Moray, Fife, Clackmannanshire, Falkirk, West Lothian, Edinburgh City, Midlothian, East Lothian and the Scottish Borders. As such, the Loch Kinord dates make a significant contribution to the dating of crannogs in Scotland.

The new radiocarbon dating from Loch Kinord remains provisional, and further direct dating of the Kinord crannogs and other crannogs in eastern Scotland needs to form a priority for crannog research. Based on the radiocarbon dating, building activity on Loch Kinord of some kind appears to have taken place in the late first millennium AD. The historic records suggest activity from at least the 14th century onwards, but whether occupation was continuous from the late first millennium or not remains unclear. The evidence for late first millennium AD activity at Loch Kinord is, however, reinforced by the presence of the Kinord Cross, which also likely dates to the later first millennium AD. The precise location of the cross-slab in the late first millennium AD is uncertain, as it was moved to Aboyne Castle in the 19th century, but in 1959 it was moved back to its approximate original position, close to the ruins of a supposed chapel. Its current position and the position of the supposed chapel are directly across from Castle Island, where the causeway recorded by Michie would have met land.

THE WIDER CONTEXT

All of the other crannogs in the north-east (Table 1) have yet to be studied or radiocarbon dated. However, there are historical references or traditions that suggest many, like Castle Island, may have been important nodes in the early and later medieval landscape. For example, the crannog in the Loch of Leys in Aberdeenshire is known to have been the residence of the Burnett family, prior to their move to Crathes Castle in the 16th century (Bailey 2000). The site, partially excavated by James H Burnett Esq in 1850, revealed a range of artefacts from the crannog, including bronze cooking vessels that are likely to date to the period from the 12th to 13th century (Burnett 1851). St Margaret's Inch in Forfar Loch, Angus, was excavated by Stuart in 1868, who uncovered oak piles, logs and large stones overlying possible floor levels, a midden and a causeway. This site also produced probable medieval objects including silver ornaments, gaming pieces and bronze vessels (Stuart 1872). A small cross-incised stone, probably of first millennium AD date, was also recovered from the loch and is now held in the Meffan Institute, Forfar. These finds suggest the crannog at St Margaret's Inch may have even earlier origins. The Forfar Loch crannog also has a royal association – its name, St Margaret's Inch, reflects local tradition that Queen Margaret had a residence on the island (Jamieson 1822: 18–21). Barnsdale Castle, a castle site on an artificial island in Loch Rescobie, in Angus, also has a loose royal connection, said to have been the site where King Donald VII, Malcolm Canmore's brother, was imprisoned in the 11th century, by his nephew King Edgar. Snorkelling survey of Barnsdale Castle in the late 1990s revealed possible dressed stonework, but due to vegetation cover, the survey was not comprehensive enough to identify or rule out a possible crannog (Dixon 1999). Finally, in Dunnichen Moss, a 12th-century church dedicated to St Causan is located on what has been interpreted as an artificial island. Clearly, these examples show that a number of other north-east crannogs were also important high status secular and ecclesiastical sites in the medieval landscape.

In Scotland more generally, both early medieval and later medieval occupation of crannogs is not unknown. Shelley (2009) has recently brought together the evidence for late medieval and early modern use of crannogs in central Scotland. Shelly has shown how later medieval period crannogs were predominantly high status sites of both a secular and religious nature (Shelley 2009: 8). Whether many of these later medieval sites had earlier origins is uncertain. As noted above, construction dating to the period from the 9th to 11th centuries is a major lacuna in radiocarbon dates from crannogs in Scotland, hence there is little evidence, so far, in Scotland for continuity between early medieval and later medieval construction and occupation of artificial island settlements. One further site in eastern Scotland, however, has recently been shown to have both important medieval remains and structural phases dated to the late first millennium AD. This is Edinample in Perthshire, which lies near the southern shore of Loch Earn, and was examined as part of the Perthshire Crannog Survey (Dixon & Shelly 2006: 74–5). Shelly suggests Edinample was the commital residence of mormaership of Strathearn (Shelley 2009: 43) (Eilean nam Breaban, a crannog in Loch Tay, is also said to have been a residence of the earl of Strathearn), and now radiocarbon dating has shown a constructional phase dating to the 9th century AD at Edinample (Dixon & Shelly 2006: 74; Shelley 2009: 39–42).

While there are no other radiocarbon-dated crannogs in this late first millennium/early second millennium AD context known in Scotland, one further parallel may be relevant. Loch Clunie Island bears many similarities to Castle Island in Loch Kinord (including the other name of Loch Clunie Island being Castle Island). Loch Clunie Island is a large, mostly or wholly, artificial island on which still stands a 16th-century tower house. Within Loch Clunie there is another smaller crannog with no obvious medieval occupation (Dixon 1991), similar in morphology (a rocky mound) to Prison Island. Directly opposite Loch Clunie Island there is a significant royal castle, Castle Hill (MacGibbon & Ross 1889: 589–90; Woolf 2007: 94). Leslie Alcock (1981: 161) suggests that Castle Hill may have been a 9th

to 12th-century royal centre. This is based on the appearance of Clunie in *The Chronicle of the Kings of Alba* which states that Clunie was ‘wasted’ by the *Danari* in AD 849 (Anderson 1973: 250). There are further historical references including the island’s depiction on the Pont Maps, a 15th-century dispute over ownership of the loch and surrounding lands and a record of the erection of a tower house by Bishop George Brown of Dunkeld, to be his residence in the 16th century (Dixon & Shelly 2006: 71–2; Woolf 2007: 94; Shelly 2011: 110). The historic references for the character and timing of occupation at Loch Clunie Island, Edinample and Castle Island are supported by the limited archaeological evidence which has been uncovered at these three sites, however, the process of transition from crannog to early medieval and later high-status settlement requires more targeted programmes of fieldwork.

The status of the crannogs in Loch Kinord in the 9th to 11th century, and crannogs more generally in Scotland in this period, remains to be more firmly established. Certainly, in other regions there is clear evidence that crannogs were high status residences in an early to later medieval context. The best excavated examples of high status crannogs with documented royal associations are those from Ireland (see Hencken 1950; Bradley 1991; Warner 1994; O’Sullivan & Sands 2007) and the lone example of a crannog from Wales (see Redknap & Lane 1994). Although not all early medieval crannogs in Ireland display characteristics of high-status occupation or royal association (see Fredengren et al 2004: 176–7), there is clear evidence for the importance of crannog occupation in the 9th–10th centuries AD. In Scotland, this period is a crucial area for further study. For example, the nature of high status settlement in this period is uncertain, yet this was the period that the nation-state of Scotland began to form, with the amalgamation of the Pictish and Scottish kingdoms into the Kingdom of Alba (Woolf 2007: 312–50). It seems that crannogs, as a very visible display and command of resources and social separation, may have been an ideal means of communicating and maintaining social status at this time. Indeed, the commissioning of the cross-slab at Loch Kinord is only likely to have been done by someone of high

social rank (see Gondek 2006). In a later medieval context, the use of a wide range of residences was part of the peripatetic lifestyle of medieval kings and lords (Shelly 2009: 45), and crannogs may have been one node where the authority of these figures was materialised in the landscape. The late first millennium AD was also a time when another type of settlement, the hillfort, began to fall out of use in north-east Scotland, with the latest dates from these sites extending only to the 9th century AD (Noble et al 2013). Crannogs may well be one avenue for assessing the ways in which early medieval high status architecture and power structures were transformed in the second millennium AD into the lordly residences and estates that underpinned the transformation of Scotland into a medieval kingdom.

CONCLUSIONS

The radiocarbon evidence from Loch Kinord represents the first scientific dates for crannogs in the north-east of Scotland, and begins to address a gap in the coverage of radiocarbon dating for crannogs in Scotland. Castle Island and Prison Island were clearly very elaborate structures made of complex worked oak beams, piling and stone revetments. The historical records for Castle Island extend from the 14th to 17th centuries, but the new fieldwork indicates that construction and use of the crannogs on Loch Kinord extend back into the first millennium AD, and begins to fill a lacuna in dated crannog sites in Scotland in the 9th to 11th centuries (Crone 2012: 149). The Castle and Prison Island radiocarbon dates brings the total number of late first millennium dates to three. Future crannog excavations should target sites with significant medieval occupation in order to begin to chart the possible transition(s) from Iron Age crannog to medieval lordly residence. Loch Kinord represents an excellent chance to do just that, with well-preserved archaeological material evident on two crannogs, in addition to a rich archaeological landscape surrounding. More radiocarbon dates from Loch Kinord and the crannogs of eastern Scotland more generally will establish a chronology for this important,

but under-researched, area and allow for a better assessment of the alignments of secular and religious power that are suggested at a number of crannog sites in eastern Scotland. In particular, we may begin to be able to explore in more detail the ways in which early medieval nodes of power were transformed into the castles and lordly residences that underpinned the expansion and consolidation of the medieval kingdom of Scotland.

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