

# Moray's lithics – impressions from local museums and excavations

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## INTRODUCTION

In February 2014, I examined the lithic assemblages from Dr Fraser Hunter's (National Museums Scotland) excavations at Clarkly Hill and Birnie, Moray (see the excavation website at <https://feastbowl.wordpress.com/category/projects/clarkly-hill-dig>), as well as the entire lithics collections of Elgin Museum and the Falconer Museum, Forres. As a point of departure, one would expect the lithics collections of any local museum to cover the entire prehistoric period roughly equally, but this is rarely the case. The local geology and topography play important parts in determining which finds are made and which periods are represented, as does the local development of towns, infra-structure and business life.

*Table 1. Lithic artefacts from Clarkly Hill and Birnie.*

	<i>Clarkly Hill</i>	<i>Birnie</i>	<i>Total</i>
<i>Debitage</i>			
Chips and flakes	220	491	711
Blades	25	17	42
Micro-/narrow blades (W>10mm)	20	14	34
Indeterminate pieces	12	52	64
Core preparation flakes	4	3	7
<i>Total debitage</i>	<i>281</i>	<i>577</i>	<i>858</i>
<i>Cores</i>			
Split pebbles and core rough-outs	1	1	2
Single-platf cores	17	4	21
Opposed-platf cores	1		1
Irregular cores	2	1	3
Bipolar cores	11	16	27
<i>Total cores</i>	<i>32</i>	<i>22</i>	<i>54</i>
<i>Tools</i>			
Microliths	1	1	2
Backed bladelets		1	1
Leaf-shaped arrowheads		8	8
Barbed-and-tanged arrowheads	1	2	3
Bifacial arrowheads, rough-outs		1	1
Discoidal and short end-scrapers (2/3 are thumbnail size)	19	15	34
Blade-scrapers	1		1
Double-scrapers	2	2	4
Side-scrapers and end-/side-scrapers	8	5	13
Atypical scrapers and scraper-edge frags	2	11	13
Plano-convex and scale-flaked knives	3	8	11
Truncations and piercers	2	3	5
Notches and denticulates	1	1	2
Pieces w edge-retouch	25	16	41
<i>Total tools</i>	<i>66</i>	<i>74</i>	<i>140</i>
<b>TOTAL lithic artefacts</b>	<b>379</b>	<b>673</b>	<b>1052</b>

The four collections – Dr Hunter’s excavated assemblages from Clarkly Hill and Birnie (which are mainly chronologically mixed ‘background noise’ on later prehistoric settlement sites), as well as those from the two local museums – are composed in similar ways, dominated by Neolithic and Early Bronze Age finds, and with Mesolithic finds being present, but rare. As it has not been possible to precisely quantify the finds from the Elgin and Falconer Museums, the finds from Clarkly Hill and Birnie are used here to give an impression of the relative presence in Moray of finds from the various prehistoric periods (Table 1).

The most diagnostic elements from these two excavated assemblages are summarized in Table 2.

*Table 2. Diagnostic lithic elements from Clarkly Hill and Birnie.*

	<i>Clarkly Hill</i>	<i>Birnie</i>	<i>Total</i>
Blades	25	17	42
Micro-/narrow blades (W>10mm)	20	14	34
Microliths	1	1	2
Leaf-shaped arrowheads		8	8
Barbed-and-tanged arrowheads	1	2	3
Thumbnail scrapers (<25mm)	10	11	21
Plano-convex and scale-flaked knives	3	8	11

If we compare Table 2 with the overview in Table 3 of the lithic techno-complexes of East of Scotland and their diagnostic lithic elements (the table was developed for two workshops at the museums in Elgin and Forres), we see that typical Mesolithic forms (microliths and narrow blades) are rare in the Clarkly Hill and Birnie assemblages, and that Early Neolithic finds (leaf-shaped points [Fig. 1], as well as narrow and broad blades) and Early Bronze Age finds (barbed-and-tanged points [Fig. 2] and thumbnail-scrapers [Fig. 3]) dominate notably (cf. Butler 2005). The well-executed plano-convex and scale-flaked knives (Fig. 4) are of either Neolithic or Early Bronze Age date (Ballin 2006a). Although no obvious Middle and Late Neolithic implements were recovered at Clarkly Hill and Birnie (such as chisel-shaped and oblique arrowheads; Fig. 5), the recovery of Yorkshire flint at these sites indicates a later Neolithic presence, as this raw material was mainly imported into Scotland during these two periods (Ballin 2011).

*Table 3. The techno-complexes of East of Scotland and their diagnostic lithic elements (Ballin 2005; 2008a; 2008b; 2013; Suddaby & Ballin 2011).*

<i>Techno-complex</i>	<i>Period</i>	<i>Raw material</i>	<i>Target blanks</i>	<i>Percussion technique</i>	<i>Diagnostic microliths/ arrowheads</i>	<i>Sites</i>
1	Early Mesolithic	Local red/brown flint	Broad blades	Soft	Broad microliths	Nethermills, Banchory
2	Late Mesolithic	Local red/brown flint	Microblades	Soft	Narrow microliths	Nethermills, Banchory
	Early Neolithic	Local red/brown flint	Microblades/ broad blades	Soft	Leaf-shaped points	Garthdee Road, Aberdeen
3	Middle Neolithic	Exotic light-grey and local red/brown flint – frequently half-and-half	Broad blades	Hard (Levallois-like)	Chisel-shaped points	Stoneyhill, Peterhead
	Late Neolithic	Exotic dark-grey and local red/brown flint – frequently half-and-half	Broad blades	Hard (Levallois-like)	Oblique points	Midmill, Kintore
4	Early Bronze Age	Local red/brown flint	Flakes	Bipolar	Barbed-and-tanged points	Kingfisher Est., Aberdeen

In terms of general composition, the collections from Elgin Museum and the Falconer Museum correspond quite precisely to those from Clarkly Hill and Birnie, with few Mesolithic pieces (such as microliths), but many leaf-shaped arrowheads, barbed-and-tanged points, thumbnail-scrapers and well-executed plano-convex and scale-flaked knives (Figs 1-4). The low number of Mesolithic artefacts may be due to the fact that the Mesolithic settlements may mainly have been located along the coast and the region's water-courses, and the extensive dune systems of Moray now cover many of these sites (Peacock *et al.* 1968; Stephenson & Gould 1995). As shown at Sands of Forvie near Aberdeen, Mesolithic sites are occasionally revealed when the dunes move, and the original prehistoric surface cleared of sand (so-called 'deflation zones') (Warren 1999).

*Fig. 1. Leaf-shaped arrowheads from the collections of Elgin Museum (Photo: Leanne Demay).*



*Fig. 2. Barbed-and-tanged arrowheads from the collections of Elgin Museum (Photo: Leanne Demay).*



*Fig. 3. Early Bronze Age thumbnail-scrapers from the collections of Elgin Museum (Photo: Leanne Demay).*

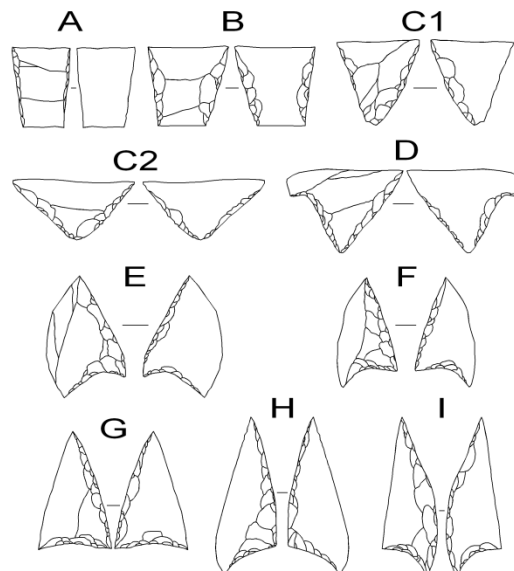


Fig. 4. Plano-convex and scale-flaked knives from the collections of Elgin Museum (Photo: Leanne Demay).



Although later Neolithic arrowheads were not recovered at Clarkly Hill or Birnie, chisel-shaped (Middle Neolithic) and oblique arrowheads (Late Neolithic) are included in the two museum collections (Fig. 5). Compared to the coastal and riverine Mesolithic sites, the post Mesolithic farming communities settled further inland, on well-drained ridges and slopes, and we now find their sites when we build our towns, roads and factories.

Fig. 5. Clark's 10 main chisel-shaped (A-D) and oblique (E-I) arrowhead forms. Re-drawn from Clark (1934, Figs 1-2).



However, Stone and Bronze Age Moray formed part of a greater procurement and exchange network, as shown by the different lithic raw materials found on prehistoric sites in the region. The lithic assemblages from Clarkly Hill and Birnie, as well as the collections from Elgin Museum and from the Falconer Museum, all include a wide variety of different lithic raw materials. The finds are generally dominated by the local honey-brown or orange flint, which

would usually have been procured from the local shores, having washed in from deposits in the North Sea (eg, Suddaby & Ballin 2011). The further inland sites are (that is, the further away from the coastal sources of flint), the more local quartz and quartzite are included in the assemblages (eg, Ballin 2012). However, a fourth local raw material is also present in the prehistoric lithic assemblages, namely Stotfield silcrete (Fig. 6), formerly known as Stotfield chert. This material was probably procured from the area around Lossiemouth, where it is available from geological layers associated with the region's abundant sandstone formations, and pebbles in this raw material erode out of the coastal cliffs (Ballin 2014; Glennie 2002; Naylor *et al.* 1989; Peacock *et al.* 1968).

*Fig. 6. Microblade core in Stotfield silcrete.*



*Figs 7-8. 7) Pitchstone from Auchategan in Argyll (Ballin 2006b); 8) Levallois-like core in Yorkshire flint from near the Overhowden Henge, Scottish Borders (Ballin 2009).*



In addition to these local raw materials, Moray's lithic assemblages also occasionally include Arran pitchstone (Fig. 7), a form of obsidian, as well as Yorkshire flint (Fig. 8) (Ballin 2009; 2011). The Arran pitchstone exchange network is largely an Early Neolithic phenomenon, whereas the Yorkshire flint exchange network is mainly a Middle/Late Neolithic phenomenon. In East of Scotland, Arran pitchstone is rare, and it usually occurs as solitary pieces on the region's sites. This indicates that it may have had symbolic rather than functional use. In eastern Scotland, Yorkshire flint may have been considered a precious and exotic resource, but the fact that approximately one-third to half of some assemblages are in this material (eg, Midmill Area 1;

Ballin 2008b) suggests that it was also very much a functional resource, used in everyday life on the settlements.

In terms of future lithic research in Moray, it is important to learn more about the local Stotfield silcrete, define exactly what it is, where it is found, and what it was used for. We know quite a bit about the lithic industries of the region's Early Neolithic and Early Bronze Age settlers, but less about the region's Mesolithic and to some degree Middle and Late Neolithic settlers, and these periods should be given some attention.

If any readers wish to learn more about Scottish lithic industries, or about lithics in general, a number of my papers can be accessed freely on my Academia page: <https://independent.academia.edu/TorbenBjarkeBallin>.

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