

THE PREHISTORIC PETROGLYPHS OF SCOTLAND

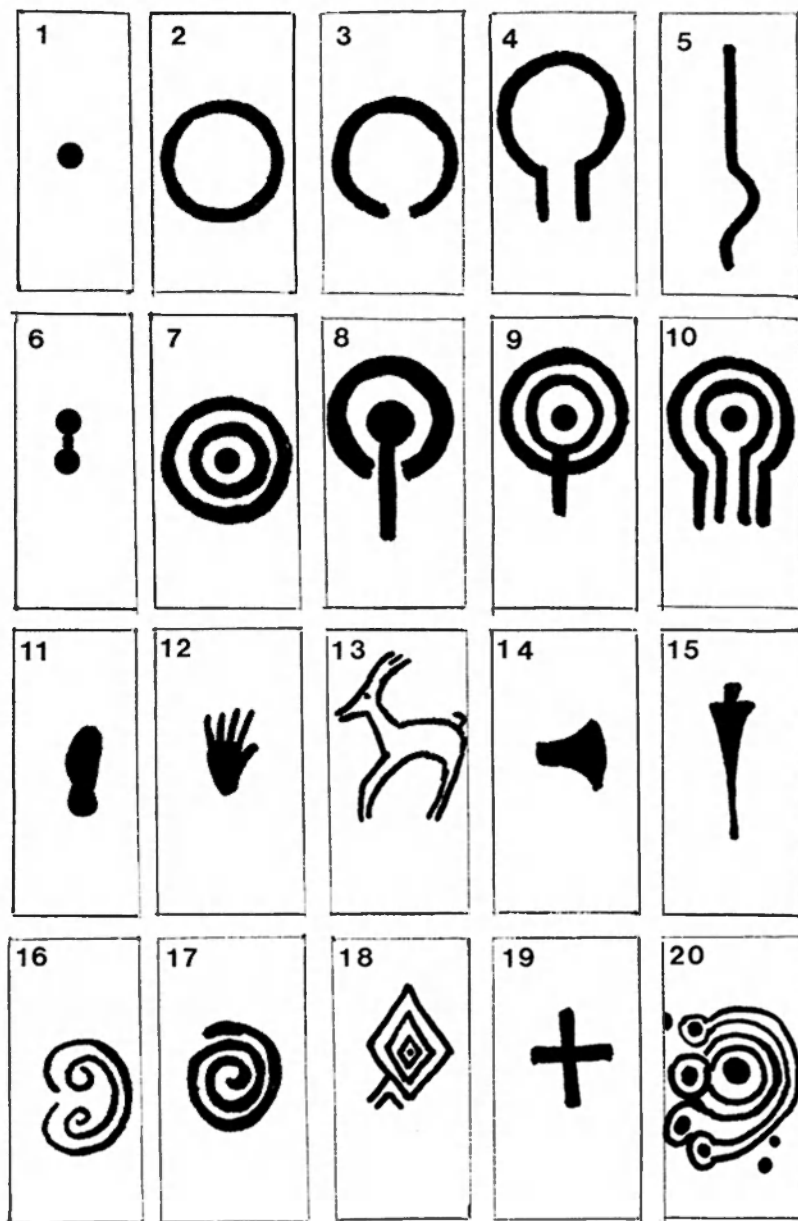
Ronald W. B. Morris, Kilmacolm, Scotland

Petroglyphs, including cup-marks, are found in quite large numbers in Scotland, Northern England, and Ireland. The present paper will be concerned with petroglyphs from Scotland. These petroglyphs occur in concentrations in sporadic sites, but in nearly every part of the country there are some engraved rocks. Nearly all Scottish petroglyphs of the prehistoric period are geometric designs composed of some or all of the following: cupmarks, rings and grooves, cups and rings and concentric rings. The cup-mark is commonly about 5 cm. in diameter, but it may range in size from 2 cm. to 40 cm. Some of the very small or very large cup-marks may not be prehistoric in age. The ring is commonly about 20 cm. in diameter, but it varies in size from about 7 cm. to 3 metres. Usually, it has a cup-mark in its centre and there may be from 1 to 9 concentric rings. The ring may be complete or gapped. Generally, it is circular, but it may be elliptical, oval, or irregular in shape. Less frequently than in other forms, it occurs in a «key-hole» form. The groove may be straight, curved, or irregular.

These basic components are commonly combined to make various designs, including those shown in nos. 6 to 10 of the typological chart. Also, the cup-mark may be used to form patterns such as rosettes or straight lines, made up of cup-marks. The radial groove shown in nos. 8 and 9 of the typological chart usually begins either at the central cup-mark or at the innermost ring. It often reaches only the outermost ring, but sometimes it goes beyond this. In most cases it runs downhill if the rock surface is not horizontal.

There are a few other motifs, each found in a small

Fig. 43
 Scottish petroglyph motifs: 1-5: Common basic components of the designs found; 6-10: some of the commonest designs made from these basic components; 11-19: motifs rarely found; Crosses and animals are common only on petrogliff recent carvings but rare in the prehistoric series; 20: Example of a complex design made from the common basic components, on Tormain Hill, near Edinburgh (Nt 129698).



number of petroglyphs. Some of these are shown in the typological chart (nos. 11 to 19). The spiral may be single or double or double-ended («S»-shaped). The remaining motifs are all very scarce and, in many cases, of doubtful date. Among these are the pre-Christian cross, footprints, handprints, deer, and other figurative motifs such as axes (wide-ended, un-hafted), dagger (doubtful),

lozenges, « wheels », « trees », and « boats », The last three mentioned are difficult to identify. (For example, some people identify the « boat » as a « comb »).

In many cases, cup-marks are found with most of the other motifs. In the table such cup-marks are not shown. The map does not show the sites bearing *only* cup-marks. In the table a site with several different motifs has been included when counting each motif.

Site bearing:	Approximate number of such sites
Cup-marks only	535
Cups-and-rings	295
Rings, no central cup-mark	29
Spirals	15
Footprints	8
Axes ¹	4
Lozenges ²	3
Deer ³	2
Handprints ⁴	2
« Eyes » ⁵	2
Other geometric motifs (« trees », « boats », « wheels », etc.)	6
Anthropomorphic figures ⁶	1

1. In Midlothian (doubtful) at NT 281633. See Proceedings of the Society of Antiquaries of Scotland (P.S.A.S.) LXXIII (1938 - 1939) p. 316. And in Argyll at NF 830938, 831984 and 826971. See P.S.A.S. XCV (1961 - 1962) p. 34 and 38.

2. In Argyll only - at NR 858890, 838910 and 370952. See P.S.A.S. XCIV (1960 - 1961) p. 49 and 51.

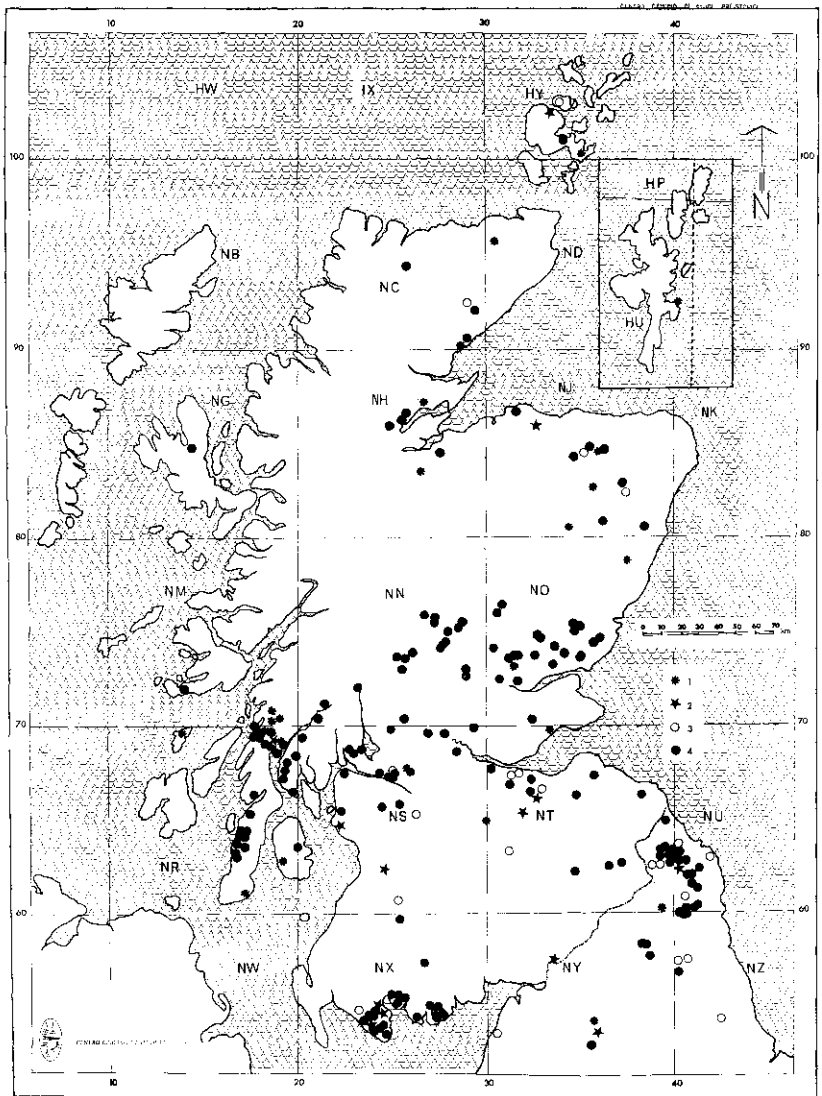
3. In Fife at NT 334958. See P.S.A.S. LXVII (1932 - 1933) p. 171. And in Argyll at NM 864099 (date controversial). See P.S.A.S. XCVIII (1964 - 1965) ps. 215 and 316.

4. In Argyll only - at NR 822915 and NM 889036. See P.S.A.S. XCV (1961 - 1962) p. 36.

5. In Kirkcudbright at NX 686447 and 687472. See P.S.A.S. XCVIII (1964 - 1966) ps. 165 and 166.

6. In Fife at NT 334958. See P.S.A.S. LXVII (1932 - 1933) p. 171. Casts of the Fife carvings are held by the National Museum of Antiquities in Edinburgh, where also can be seen casts of the « axe » and « boat » petroglyphs, and many cups-and-rings, spirals, rings, and cup-marks.

Fig. 44
 Scottish Petro-
 glyph Sites. 1 =
 rare motifs. 2 =
 spirals. 3 = rings
 with no central
 cup. 4 = cups-and-
 rings. A magni-
 fying glass will
 help distinguish 1
 and 4. The letter-
 ing shows the
 National Grid.



The map shows most of the sites at present known to the author, who has a first-hand knowledge of most of the sites in Southern Scotland, but has seen only a small number of the northern sites.

Proximity to
 the sea

Rock engravings occur most often near the sea. In Southern Scotland, 7 out of 8 sites are less than 5 km. from the sea or a tidal estuary.

Proximity to
 horizontal

Petroglyphs on outcrop rock are nearly always carved on surfaces which are nearly horizontal. Thus in Southern

Fig. 45
Achnabreck A unique type of spiral,
near the rock's
summit.



Fig. 46
Achnabreck. Typical carvings. The
scale in all pictures has 5 cm. di-
visions.



Scotland, 7 out of 8 sites are within 20° of the horizontal, 3 out of 4 are within 10° of it, and nearly half are absolutely horizontal.

Altitude

Although there are mountains in Southern Scotland over 1000 m. high, no petroglyphs have so far been found at heights above 350 m. and, in Southern Scotland at least, 7 out of 8 sites are at heights of less than 200 m. No cup-ring or other design, except a cup-mark, has been found at altitudes lower than 7 m. This last fact may be important, as the sea in Scotland was 7 or 8 m. higher in 1.800 B. C. and earlier than it is now. The position appears similar in Northern Scotland.

Outlook

Nearly every site visited by the author has a fine, open view, in many cases including the sea or an estuary; nearly every site is in a position hit by the sun nearly all day. Very few sites are on hill-tops.

Metal working

In Southern Scotland, which is the only part of Scotland so far analysed by the author in this respect, more than 7 out of 8 cup-and-ring petroglyphs on outcrop rock lie within 10 km. of a place where it is known that ores of copper or gold have been worked. This does not occur in every part of the British Isles, however. For example, there are many cup-and-ring carvings on outcrop rock in Ilkley, Yorkshire, England, yet no copper or gold ores are known within many miles of Ilkley.

*Fig. 47
Torradh Na Feinn.
(Nr 854875). A typically-carved stone, found recently about 2 miles South of Achnabreck.*

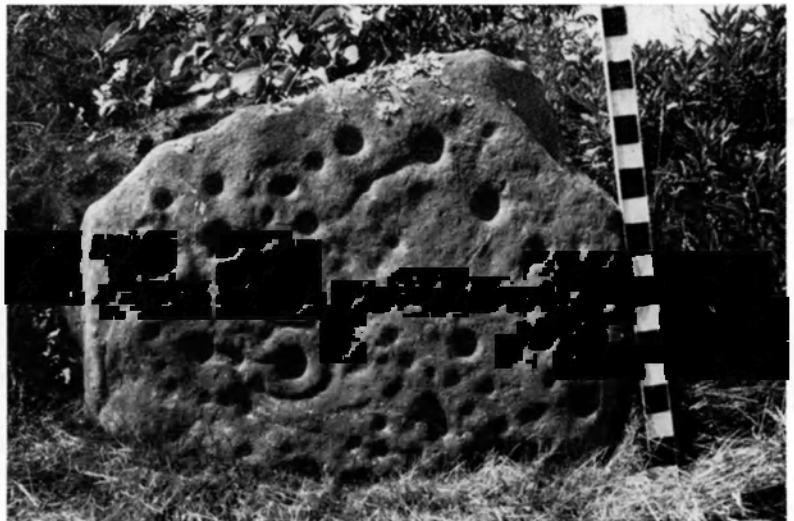


Fig. 48
Greenland I. (Nr
435746). Cup-marks
in a «rosette» pat-
tern.



Fig. 49
Gallows Outon.
(Nx 449422). «S»-
shaped spiral, on
outcrop.



Fig. 50
Ri Cruin. (Nr
826971). An exam-
ple of the rare
« axe-head » motif.



Dating

In Ireland, radio-carbon dating, corrected by dendrochronology, shows that the main passage into the tomb of New Grange, Boyne Valley, was built about 3200 B. C. On one of many petroglyphs forming the roof of this passage, a cup-ring design was carved on the upper, hidden face of a corbel where it could not possibly have been seen or carved after the passage was built. There are other similar examples in Ireland, indicating that the cup-and-ring, cup-mark, rings, and spiral were all being carved by around 3.200 B. C. In 1971 a cup-marked stone was found at Dalladies in a position where radiocarbon evidence (not calibrated) suggests it must have existed about RC 3240 BC (personal information from prof. S. Piggott, the excavator of this site). Petroglyphs are found on standing stones and as parts of stone « cists », all of which can be dated by their grave goods to around 2.000-1.600 B.C. Other Scottish examples can be dated to show their use at more recent dates until at least 100 A. D. For example, a few are built into brochs (stone forts), dating from about 500 B. C., and into *souterrains* (underground chambers), dating from around 100 A. D. Spirals or rings (with or without cups) are occasionally included in the designs.

Method of carving

Nearly all Scottish prehistoric petroglyphs have been carved either by pecking or abrading, or both. Very few have been incised using tools with sharp edges. Flint is

*Fig. 51
Barrnakill. (Nr
822915). An exam-
ple of the rare
«hand-print» mo-
tif.*



scarce in many parts of Scotland and it seems probable that, in most cases, the carvings were made using a sharp piece of quartzite, possibly hammered by another stone. Spirals appear to have been carved, commonly, as a series of half-circles, each with a larger diameter than the last, using alternate centres.

Purpose

Very few petroglyphs found in Scotland have been associated with chambered tombs. But many petroglyphs are found as parts of stone « cists », most but not all of which are found carved on the cover-stone, facing inward. There are at least 35 examples of petroglyphs carved on standing or « recumbent » stones associated with stone circles. Commonly, they are in one of three positions and nearly

*Fig. 52
Achnabreck (Nr
855906). - lowest
rock area. The
author's party sur-
veying this, Bri-
tain's largest, pe-
troglyph - carved
rock sheet.*



always on the southeast or the east of the circle. Some authors consider them to have an astronomical significance in this position, a subject of much controversy.

Seven out of 8 cup-and-ring carvings on outcrop rock in Southern Scotland are, as already said, within 10 km. of copper or gold ore workings. Some authors consider that the purpose (indeed some say the sole purpose) of these petroglyphs was to help find or prepare, perhaps in some magical way, these ores. But there is no real evidence in Scotland to prove or disprove this theory. Neither has any direct evidence been found thus far in Scotland to prove or disprove any association between these petroglyphs and the sun; however, just as the « cross » symbol today covers a number of quite unrelated uses (medical aid - Red Cross; land area - Swiss Cross; brave man - Victoria Cross; dead man - cemetery cross), so the « circle » symbol, perhaps the sun, may well have covered several unrelated meanings such as « dead man », Sun-alignment marker, and metal-ore finder.

RIASSUNTO

La Scozia si rivela una regione ricca di petroglifi, dei quali l'autore ha iniziato lo studio, specialmente nella parte meridionale del paese. La maggior parte dei soggetti rappresentati sono geometrici: coppelle, cerchi concentrici, scanalature, spirali e croci, mentre le figure di armi, animali o parti del corpo umano (piedi, mani, occhi) sono molto più rare. Le rocce incise sono in genere orizzontali e ben esposte; si trovano presso il mare e a bassa altitudine e a volte in luoghi nelle cui vicinanze sono state trovate tracce di lavorazione dei metalli. Le incisioni appartengono a un periodo cronologico assai lungo, che va dall'inizio del terzo millennio a. C. fino all'epoca cristiana. Il problema dello scopo e del significato di queste incisioni è ancora irrisolto.

RESUME

L'Ecosse s'avère à son tour une région riche en pétroglyphes dont l'auteur a commencé l'étude, principalement dans le Sud du pays. La plupart des sujets représentés sont géométriques: cupules, cercles concentriques, rainures, spirales et croix. Les figures telles que les armes, les animaux, les parties du corps humain (pieds, mains, yeux) sont beaucoup plus rares. Les roches gravées sont généralement horizontales, bien exposées, situées près de la mer et à basse altitude, dans le voisinage de lieux où l'on a trouvé des traces de travail du métal. Les gravures appartiennent à une très longue période chronologique, allant du début du IIIe millénaire à l'époque chrétienne. La question de leur signification est encore ouverte.