RIVERS, LOCHS AND BOGS

HISTORIC SCOTLAND ALBA AOSMHOR

The rivers, lochs and bogs that are such a vital element of the Scottish landscape have an important archaeological component. Before the development of a road system from the 18th century onwards, rivers and lochs often provided an easier means of transport than overland, and the pattern of prehistoric settlement was closely related to river valleys and coastal areas.

The remains of timber ponds can be seen on the foreshore of the Clyde estuary at Port Glasgow. They date to the 18th and 19th centuries, and stand as a reminder of the area's important maritime and industrial heritage. Timber imported from North America was stored here before its sale to local shipyards. © Crown Copyright: Historic Scotland

Many upland bogs, and some lowland bogs, began to develop by about 1500 BC, and their wildlife and peat made them important sources of food and fuel. Domestic peat-cutting has led to many exciting archaeological discoveries, but modern commercial extraction of peat on a large scale has spelled archaeological destruction as well as the loss of the natural heritage of plants and wildlife.

The presence of water on an archaeological site can make an enormous difference to what survives in the way of physical evidence about past societies. Organic materials such as wood and textiles normally rot away on dryland sites, whereas waterlogged and therefore airless conditions can help to preserve them. For example, all that remains of a hafted axe on a dry land site is the stone or metal axehead, whereas on a wetland site the axehead may still be attached to its wooden haft with bindings in place. On a wetland site, houses may still have the remains of wooden posts and wattle walls, rather than be evident as just the holes in the ground in which the posts once stood. There is also likely to be much fuller evidence of economy and environment because plant remains such as leaves, roots, seeds and fruits will survive, together with beetles and insect remains that can illustrate living conditions.

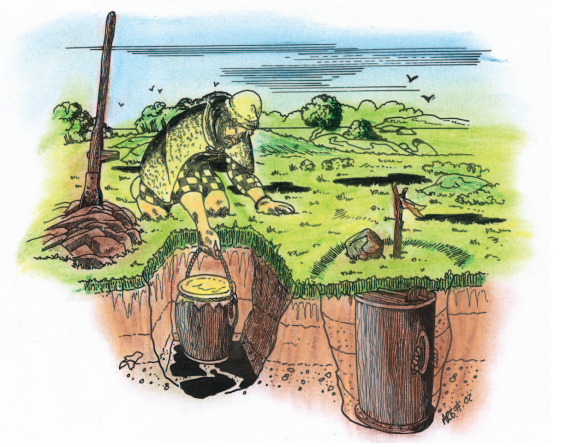
Here the artist has shown a wooden walkway across boggy ground to a river, where a logboat is moored and a fisherman has just landed with his skin-covered coracle.

Organic remains can also provide essential dating evidence, as the growth-rings in wood can be analysed (dendrochronology), and many organic materials can be radiocarbon dated.

Centuries of peat growth can mask archaeological remains. Here, at Kebister, Shetland, excavation has uncovered a field-wall beneath the peat.
© Olwyn Owen

Many wetland sites were originally built on dry land but have since been inundated by rising sea levels. The sediments carried down stream can overlie traces of ancient settlement flanking river estuaries, and these alluvial deposits can also contain artefacts. At low tide, sea marshes and mudflats may reveal the timber remains of houses built on piles (crannogs), fish-traps and boats, from the logboats (hollowed tree-trunks) of early times to more recent barges and other vessels.

Drainage can dry out sites that were originally built in wet conditions. Small lochs and marshes containing crannogs have sometimes been drained in recent centuries to create more farmland (see the leaflet on Prehistoric Defences for a description of crannogs). The crannog will survive as a low mound in a field, but in time the change from wet to dry conditions will cause the organic materials to perish. This has happened to many crannogs known to have existed in south-west Scotland. Pumping water from a borehole can have the same effect upon nearby wetlands. The problems of crossing bogs on foot led to the creation of timber walkways, which may be found in the course of peat-digging, and they are also at threat from processes of drying out wetlands.



How to use the natural preservative qualities of a bog to store bog butter! The container would be buried in a hole in the wet peat, covered over and, if the intention were to retrieve it later, the spot would be marked in some way.

Many everyday objects made of wood, such as bowls and platters, or of leather, such as shoes, can only survive in wet conditions, and they help to add to our understanding of daily life. Wet and acidic conditions in peat bogs can even preserve the skin and organs of human bodies. Bones do not normally survive, but intact bodies have occasionally been discovered. None of the Scottish bog bodies found to date is earlier than the 17th century, but prehistoric examples have been discovered elsewhere in Britain, victims of sacrifice or murder. Surprisingly common finds made during peat digging in the Highlands and Islands are wooden containers of bog butter, which is a hard yellow substance that seems to be some form of animal fat. It may have been used in cooking, or perhaps to smear on the skin, and it appears to have been buried deliberately, either to preserve it or as an offering to the gods.

Such offerings, or votive deposits, can take many forms, for what we know of prehistoric religion places special importance upon 'wet' places. Valuable and prestigious items such as jewellery, weapons and tools made of bronze (copper alloy) were deliberately thrown into rivers, lochs and marshes.

There is also a range of archaeological structures that reflect the harnessing of water power, such as mills, mill-ponds, lades and weirs, or solutions to crossing rivers, such as bridges of timber, stone, iron and steel. The importance of fish as food through the ages has resulted in the creation of artificial fish-ponds and fish-traps across rivers and estuaries, as well as portable equipment for fishing by line, and for spearing and netting fish and eels.

Centuries of immersion in water have preserved the footings of a timber bridge.

TIME-LINE

End of the last Ice Age — 12,500
Wildlife colonises land
Mesolithic hunting settlers — 8500 — Flint scatters
Shell mounds, rock shelters

Neolithic farming settlers — 4000 — Chambered tombs and houses
Cupmarked rocks
3000 — Stone circles, henges, and standing stones

Metal technology (gold, copper) — 2000 — Burial mounds and short cists
Hut-circles

Climate deteriorating — 1000 — Burnt mounds
Fortifications begin — Hillforts

Iron-working technology — 500 — Crannogs
200 — Duns, brochs, wheelhouses, and earth-houses
BC ▲

▼ AD

Roman army in Scotland — 79

Waning of Roman influence — 200 — Roman camps, forts and roads, Antonine Wall
400

Introduction of Christianity — Long cist graves
Picts, Gaels, Britons and Anglians — 600
Start of the Viking Age

800 — Early Christian and Pictish carved stones, chapels
Emergence of Scottish nation — Pagan Viking graves and settlements
1000
1100

First burghs — Stone-built churches
1200
1500 — Mottes, abbeys, stone-built castles
Reformation of the Church

1600 — Tower-houses
Agricultural improvements & Industrial Revolution — 1800 — Deserted villages and farms
1900 — Coal mines and heavy industries

Two World Wars — 2000 — Gun batteries and airfields

FRONT COVER PHOTOGRAPH:
Water is a natural form of defence, and many small islands in lochs were adapted for timber dwellings (crannogs).

For advice and further information, please contact
Historic Scotland
Longmore House, Salisbury Place
Edinburgh EH9 1SH
Tel: 0131 668 8766
Email: hs.schedulingteam@scotland.gsi.gov.uk
www.historic-scotland.gov.uk

Historic Scotland is an agency within the Scottish Government and is responsible for administering the legislation that protects ancient monuments (buildings, ruins, archaeological sites and landscapes). It provides general advice on the conservation and protection of Scotland's heritage.

Historic Scotland's Education Service encourages the use of the built heritage as a learning and teaching resource.

Over 300 historic properties are looked after by Historic Scotland are open to the public for enjoyment and education. For information, including free leaflets telephone 0131 668 8600.

Our data service website contains details of scheduled monuments and has GIS datasets available to download:
http://data.historic-scotland.gov.uk

The following leaflets are available from Historic Scotland:

Scheduled ancient monuments: a guide for owners, occupiers and land managers

Managing Scotland's archaeological heritage

Grants for Ancient Monuments: a guide to grants available for the preservation, maintenance and management of ancient monuments

Archaeology on farm and croft (produced jointly with Archaeology Scotland)

Scotland's listed buildings: a guide for owners and occupiers

The carved stones of Scotland: a guide to helping in their protection

Metal detecting - yes or no? Metal detecting, scheduled ancient monuments and the law

A leaflet on *Treasure Trove in Scotland* is available from the National Museums of Scotland, Edinburgh

A number of *Historic Scotland Technical Advice Notes,* on topics such as the use of lime mortars, the conservation of thatching and stonecleaning, are available. Catalogue from and orders to:

Historic Scotland Conservation Group
Tel: 0131 668 8638
e-mail:
hs.cgpublications@scotland.gsi.gov.uk

This information leaflet is one of a series produced by Historic Scotland.

Text written by Anna Ritchie
Illustrations drawn by Alan Braby