



# The Carved Stone Balls of Scotland

## *Who made them, and why?*

BY JEFF NISBET

*This article is dedicated to my father, for reasons that will become obvious, and to Robert Brydon, FSA Scot, who passed along his own torch of inquiry on May 21, 2014.*

Only about 400 of Scotland's 4,000-year-old carved stone balls have been found. They are of fairly uniform size, with the diameters of most measuring around 2.75 inches. Fitting nicely within the cupped hand, they are made from a variety of stone -- from soft sandstones to hard granitics. The numbers of projections or knobs range from between three and 160, with six knobs being by far the most common. They display varying degrees of workmanship. A few, like the remarkable Towie Stone, display beautifully intricate carvings, while others are unadorned. All but five of the stones have been found in Scotland, with the majority discovered in the Aberdeenshire area.

Along with its vitrified forts and Loch Ness Monster, these carved stone balls take their place as one of Scotland's most enduring mysteries, and never fail to excite the inquisitive mind. Although many theories have been presented, no one is sure who made them or why.

In her exhaustive study of the balls, published in the 1976-77 *Proceedings of the Society of Antiquaries in Scotland*, Dorothy N. Marshall reports their distribution "is much the same as that of the Pictish symbol stones which led to the original idea that the balls were of Pictish origin," but goes on to say that the small collection found while excavating Skara Brae, a stone-built settlement in the Orkney Islands, place them firmly in the later Neolithic or New Stone Age period, which is too early for the Iron-Age Picts. Marshall also says, however, that the area where the majority of the balls were found "is also the area of good land which today, as well as in antiquity, can support the largest population," an observation we'll get back to later.

First, as listed in Marshall's paper, let's look at the various theories about how the balls were used.

- J. Alexander Smith, in an 1876 paper, believed the balls had been attached to sticks and used as weapons. But Marshall counters, "when one appreciates the skill and time which has been used in the fashioning of these balls, it does not seem possible that the owner would have risked their loss or damage in war or chase."

- Ludovic Mann also refuted Smith's belief in 1914, theorizing the balls were instead used as weights in primitive scales. While Marshall agrees that the balls' general uniformity of size and weight lends some credence to the theory, she cites the opinion of Major Colville, a farmer in Kenya, who said his farm workers "were suspicious of weighing, preferring to have their meal issued to them by measure," and felt that Neolithic people might feel the same.

- Marshall also relates the theory that the balls may have been used in competitive throwing games, but argues "if this had been the case surely more balls would have been chipped."

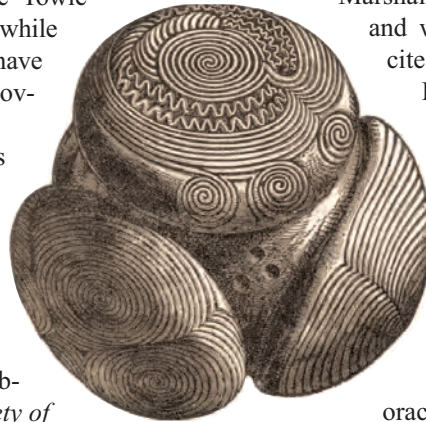
- A fourth theory is that the balls were used as oracles by rolling them on the ground and interpreting the future from both the way they rolled and their positions at rest. Marshall admits that this theory is a possibility, "although the diversity of shape in the balls would make interpretation of the signs different too."

- The last theory Marshall lists is that the balls may have been used as ceremonial speaking stones at important gatherings, with the right to speak given to the holder of the stone.

Unsatisfied with any of the theories made before the publication of her paper, Marshall concludes her presentation by quoting the opinion of archaeologists Stuart Piggott and Glyn Daniel that the usage of the balls is still "wholly unknown."

Left at such an unresolved juncture, it is not surprising that the

*Continued on page 2*



The Towie Stone

*Continued from page 1*

mystery of the carved balls of Scotland continues to generate ever more theories.

One theory is that they were used as weights for fishing nets, which fails to mention why such time and care would be spent fashioning ornate objects for such a mundane task, and why not one of the balls, even if used to magically invoke a good catch, would have been discovered with the totem image of a fish carved on it. And why, too, have most of the balls been found inland?

Another theory, posted on the abovetopsecret.com forum by member MysterX, speculates that the carved balls were made to represent pollen, and posts microscopic images of pollen alongside photographs of the balls to make his case. While the comparison of the two is certainly visually intriguing, and might convince many less-than-scrupulous readers of his theory, MysterX wisely concludes his post with the following caveat: "The obvious question arises, if the stones are indeed representations of pollen, how could Neolithic people see microscopic pollen grains in order to carve them on the macro scale." The same argument could be leveled at the idea the balls are meant to represent the nuclei of atoms.

Yet another theory speculates that the Neolithic carvers were experimenting with solid geometry, and had knowingly or unknowingly discovered, and shown in the three-dimensional qualities of the balls, the five Greek Platonic Solids over one thousand years before Plato described them in his *Timeaus*, his dialogue on the nature of the physical world and its human inhabitants. Archaeologists and mathematicians have criticized this theory because not all of the Platonic Solids can be definitively found in the balls that have so far been discovered -- some having far too many knobs to even remotely qualify, and some having no knobs at all. Dr. Alison Sheridan of the National Museums of Scotland is more than a little circumspect about the mathematical interpretation of the carved balls when she says that the interpretation "fails to take into account their archaeological background, and fails to explain why so many do not have the requisite number of knobs! It's a classic case of people sticking on an interpretation in a state of ignorance. A great shame when so much is known about Late Neolithic archaeology."

Finally, it has been speculated by Andrew Young, while an archaeology student at the University of Exeter, that the balls may have been used to move the huge stones found in Aberdeenshire's standing stone circles. While there is merit to the theory, it still does not explain why the balls were so elaborately carved, since smooth balls would have been more appropriate. The very act of carving the balls, in fact, would weaken their structural integrity, making them less fit for the task. And more damaged balls should certainly have been discovered.

As we can see, while there have been many theories put forth about Scotland's carved stone balls, the mystery still remains -- who made them, and why?

I have a new theory.

Hanging on the wall of my home office is the brass and iron fire poker my father gave me before he died.

Regardless of its weight, it had been packed along with a



very few other family keepsakes when we emigrated from Scotland to the USA in 1960, in spite of the fact that we would never again have to "poke up the fire" in a cold-water flat. It had clearly meant a lot to him, and it got me thinking ...

He had made the poker, he said, as an "apprentice piece" -- a requirement of his training as a British Railway "fitter." Railway fitters, especially during the Age of Steam, were often called upon to fashion parts for the huge locomotives out of raw metals, and his poker was a measure of his skill level at that time. The brass handle was made in the "thistle style," he added, and he had put a twist in the iron shaft for added strength.

I believe that as my father's poker verified, at its most basic level, my father's ability to work metals, so the carved stone balls of Scotland verified a mason's ability to work stone.

As a 20th-century railway fitter, of course, my father didn't need his poker to find employment. He had a union card in his wallet that certified his proficiency in the trade, no matter where he looked for work. A Neolithic stonemason, on the other hand, would have needed some other type of certification, and an easily portable carved stone ball could have eminently suited that purpose.

*Hanging on the wall  
of my home office is  
the brass and iron fire  
poker my father gave  
me before he died.*

Let's now return to Dorothy Marshall's conclusion that the small collection of balls found at Orkney's Skara Brae settlement place them firmly in the Neolithic Age (4000-2000 BC), which is too early for the Picts of the Iron Age (750 BC - 43 AD). While this rather mitigates the long-held theory that the balls are of Pictish origin, it does not necessarily preclude the possibility that the creation and usage of the balls could have spanned a much longer period of time -- from the Neolithic or New Stone Age, through the Bronze Age, to the Iron Age and beyond. No matter what natural resources archaeologists have used to define these measures of historical time, stone has been worked in all of them, and still is.

While Marshall admits the distribution of the balls does seem to follow the distribution of the Iron Age Pictish symbol stones that dotted the landscape in Aberdeenshire, it is also true that more than 100 stone circle sites, dating as far back as 3000 BC, have been identified in the same area. This area where the majority of the balls were found, she says, "is also the area of good land which today, as well as in antiquity, can support the largest population."

It is as true today as it was then, I would add, that the larger the population of a region the more available work there is. Besides the symbol stones and stone circles, there would have been houses and walls to build, cist burial slabs to cut, and tools and weapons to make -- all practical and marketable uses for the skilled stonemason's craft. Unlike the

*Continued on page 3*



*Continued from page 2*

fishermen who sold their catch at the harbor, or the farmers who brought their livestock to the local market, stonemasons would have often been required to travel from job site to job site, and would have to prove they had the skills to handle the tasks at hand. Like the résumés and portfolios of today's workforce, the carved stone balls of the ancient stonemasons would be visible and tangible testimony of the work they were qualified to do.

In their 1992 book, *Scotland, Archaeology and Early History*, Graham and Anna Ritchie report that "very few balls have been found on archaeological sites, but those from Skara Brae clearly demonstrate their use in Neolithic times." Coincidentally, however, an undecorated six-knobbed ball was recently discovered within the Ness of Brodgar, an important Neolithic complex just 6 miles to the southeast of Skara Brae, causing a bit of excitement within the archaeological community.

The Ritchies also report "old records of balls having been found in burial cists suggest that their reverence if not their manufacture continued into Bronze Age times." While it is no doubt too late for these "old" discoveries, modern forensic study of the hand and forearm bones of those buried with the balls may, if future discoveries of that kind are made, be able to establish the professions of their owners.

As my father's metal poker led me to the development of this theory, so the stonemason's carved balls serendipitously led me back to metalwork -- specifically the cast-bronze objects known as Roman dodecahedrons.

Though younger in origin than Scotland's carved stone balls, but just as mysterious, the Roman dodecahedrons are so named because of their twelve pentagonal faces and because they have generally been found within the ancient boundaries of the Roman Empire. Dated from the 2nd or 3rd centuries AD, they are almost 3000 years younger in origin than the Skara Brae balls, are made of metal, not stone, and are hollow, not solid. Of the 100 or so that have been found, most have been found in France and Germany, and not one has been discovered in Scotland.

Like the stone balls, there are many theories about their usage, though none has been considered conclusive.

Among the speculations are that they were made as candle

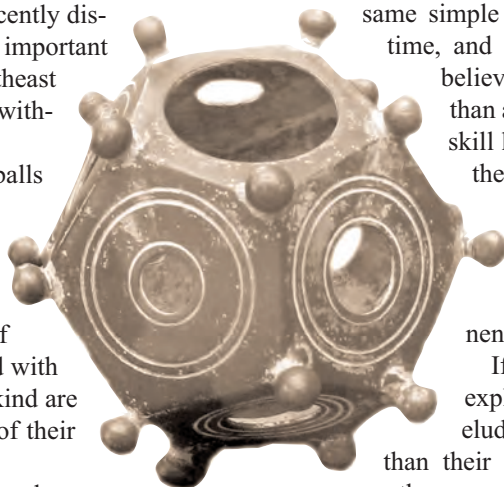
holders, scepter decorations, dice, throwing toys, surveying instruments, flower holders, ring-size finger gauges, water pipe calibrators, rangefinders for siege machines, religious artifacts, bed warmers, and astronomical devices for determining optimal dates for planting and harvesting. Using a 3-D printed replica, one man even used it as a form on which to crochet a rather goofy looking pair of gloves. But because there is no mention of them in any known account of the day, their purpose is as big a mystery, now, as when the first one was discovered in 1793.

The dodecahedrons do, however, fit nicely in the cupped hand, just like Scotland's carved stone balls, and it is difficult for me to look at the two without feeling they were meant to perform the same simple function. Though separated by geography, time, and the materials of which they were made, I believe that each was meant to be nothing more than a portable example of an individual worker's skill level - the carved balls for stonemasons, and the dodecahedrons for metalsmiths -- as well as a symbol of membership in the brotherhoods of their respective crafts. They functioned as résumés, portfolios, and union cards, all combined in small, eminently portable and entirely mundane objects.

If this is true, it would go a long way to explain why a practical use for these objects has eluded discovery for so long -- because other than their skill-assessment and trade-recognition use, there was none. They would be valuable and necessary objects to the individual craftsmen, to be sure, but would be entirely useless to anyone else. Moreover, their intrinsic uselessness would have made them virtually theft-proof -- no small consideration in those presumably wilder and woollier times.

But in these mundane objects we might still recognize, though separated by many centuries, the early roots of the medieval trade guilds, the arcane symbolism traditionally attached to those brotherhoods, and an ancient window through which to view our own work-a-day world.

Once cupped in ancient hands, these humble yet very personal objects can still give us a glimpse of who their makers were, bring us the curiously comforting knowledge that these craftsmen were not so very different from ourselves, and show us that even in our widely separated worlds our lives, indeed, may continue to play out on common ground. **END**



A Roman Dodecahedron

*Jeff Nisbet was born in Edinburgh, Scotland, and is a graphic designer living in the USA.  
His Email address is [jeff@jnisbet.com](mailto:jeff@jnisbet.com).*

## ACKNOWLEDGEMENTS

I am grateful to the Society of Antiquaries of Scotland for permission to reproduce images of the four stone balls shown on the first page of this paper. They originally appeared in J. Alexander Smith's "Notes on small ornamented stone balls found in different parts of Scotland, &c., with remarks on their supposed age and use." -- *Proceedings of Antiquaries of Scotland Vol. XI (1874-76) pp. 29-62.*

The Roman Dodecahedron shown on page 3 is a *Wikimedia Commons* image, uploaded by user LoKiLeCh.