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FRONT COVER: Porch of the Panagia Ekatontapliani church on the Island of Paros, Greece photo: TL

BACK COVER: Balanced stones, California stones/photo: Jonas Jongblut

INSIDE FRONT COVER: Stacked coral fragments, Kohala Beach, Hawaii stones/photo: Zach Pine

contents

departments

 EDITORIAL
 2

 PHOTOS to the EDITOR
 3

 Sean Adcock, Cindy Chabot, DJ Garrity,
 3

 John Barlow Hudson, Paul Lindhard,
 3

 Dan Lupino, Deva Manfredo
 3

ANNOUNCEMENT Inside Back Cover Stonework Symposium 2007

reprints

A Graphic Portrayal David Gentleman

TOWERING MYSTERIES24 Richard Stone



与这些令人震撼的、坚固的、伟大而 独特的古代摩天大楼神秘的起源相 比,我认为目前对它们的保护和推广 还远远不够。

features

DELOS and PAROS10 the Editor
SNECKED MASONRY
ST. KILDA



Kent Avery and progeny, Vancouver, B.C.

stone (ston) n.

- a. Concreted earthy or mineral matter; rock.
 b. Such concreted matter of a particular type. Often used in combination.
- 2. A small piece of rock.
- 3. Rock or piece of rock shaped or finished for a particular purpose, especially a piece of rock that is used in construction.

nex-us (nek' sas) n., pl. nexi or nex-us-es.

- A means of connection; a link or tie.
 A connected series or group.
- 3. The core or center.

mag-a-zine (mag-úh-zeen), n.

1. A periodical containing a collection of articles, stories, pictures, or other features



THE SECRET TOWERS OF THE HIMALAYAS

by Frederique Darragon

Review by Pierre de Montaulieu



THE RUGGED **HINTERLANDS**

of Western Sichuan province, between central China and the Tibetan Autonomous Region, an area known as the Tribal Corridor, were at one time dotted with thousands of lofty stone towers cunningly designed, skillfully constructed, remarkable in form and scale, and mysterious in origin.

A few hundred of them still stand scattered amongst an indigenous populace largely ignorant of their history, indifferent to their presence and often detrimental to their well-being. Until recently that is.

The towers have acquired a champion in the adventurous person of Frederique Darragon, who became a dedicated amateur archaeologist as she delved into the mystery surrounding the origins of these remarkable structures. Who had built them, and why, and when, were the questions she set out to answer. In the process, she uncovered answers to another guestion, how were they built? These answers are to be found in her book, The Secret Towers of the Himalayas.

From her home bases in Sichuan (an apartment in Chengdu, the capital, and a house adjoining a tower in one of the many valleys), she has conducted what amounts to the first census-taking of the towers, counting them, mapping them, measuring them, drawing them, photographing them, categorizing them, collecting samples of wooden elements for carbon-dating, questioning the people living in proximity to the towers and researching the history of the regions in which they are to be found.

WHO

As Darragon recounts, the towers are found in what is known as the "Tribal Corridor" between Central Tibet and China. This area has been inhabited time out of mind by a distinctly varied assortment of tribes, often categorized in Chinese ancient texts as the Quiang Ren (ren meaning people). In the recorded history of

opposite: Twin epitomes of the star tower concept, the Remede towers, built around 1200 AD. Eleven meters (36 feet) wide at base, thirty meters (almost 100 feet) tall. Eight outward and eight inward pointing corners, all sixteen corners of both towers battered back at precisely the same angle. Well-fitted stonemasonry. Marvelous.



China, there are few clues about these regions before the 4th century AD.

Dynasty [1644-1912] and since.)

written history.

Nyang-Po.

Ready to go. Near Long Ping village, in the Min Mountains of the Maoxian region, the HeiHu tribal area with one of the round towers reinforced with vertical ridges characteristic of this area.

During China's Sui Dynasty (581-618) and Tang Dynasty (618-907), a time when Tibet had become a military power, many independent-minded barbarian tribes created regional kingdoms in the rugged hinterlands between the two realms. The Tribal Corridor today is comprised of twenty or so regions that are home to more than a dozen minorities (as well as a number of Han Chinese that entered during the Qing

Due to the diverse nature of their origins and the fragmented terrain in which they live, the languages spoken by the contemporary rural peoples are dissimilar, varying greatly from valley to valley. One thing these mutually unintelligible languages and/or dialects do have in common is the lack of a written form, therefore, there is no

There are towers of various kinds and qualities throughout the Tribal Corridor, but only four regions where the star towers are to be found. The current inhabitants of these regions are considered to belong mainly to the Tibetan or Qiang Minorities, but Darragon is convinced that their ancestors, who built the towers, were, in fact, subjects of fairly independent kingdoms, the Qiang of the Min Mountains, the Jiarong, the Minyang and the people of

WHEN

Conscientiously, Darragon collected samples from structural wooden elements for laboratory carbon-dating. The oldest towers are those found at the highest altitude, in Kongpo in the southeast of the Tibetan Autonomous Region. One wood sample from that region was dated from between 780 to 1040 AD; another from 900 to 1140 (of course, the wood samples might be older than the tower itself, so, bearing this in mind, she was careful to sample smaller pieces of wood which was less likely to have been reused.)

Of 58 towers dated, the youngest were found to be around 500 years old: the oldest could have been built as long as 1200 years ago. It is an interesting coincidence that the era of tower building here, 900-1400, corresponded roughly to the great era of cathedral (and tower) building in Europe.

WHY

As the Smithsonian article relates, many theories have been put forward. Some say the towers were defensive in nature, that this was a lawless land subject to internecine raiding and invasion from outside. Indeed, many of them seem to have been designed for that purpose, as integral features of fortified hamlets. The entryways of some towers were several meters above ground level (like the towers built by the Irish monks to safeguard themselves against Viking raiders.) Sometimes the

PHOTOGALLERY

EKTONIKA



by Tomas Lipps

ROCK IS

an enduring material. We stonemasons assemble pieces of this obdurate stuff—STONES—with the intention that they stay assembled for as long as possible. Stability is the goal, to produce an enduring structure.

A BALANCE OF MATTER. A MATTER OF BALANCE

To spend time and effort in the act of putting stone upon stone in ephemeral configurations so delicately balanced that a breeze or the alighting of a bird is enough to bring them down them is an activity that is marvelously absurd-and totally engaging. Balancing stones requires sensitivity, poise, physical coordination and a concentration of attention that results in what might be termed an existential state of being. It is, or can be, meditation, a physical feat, a creative challenge, an art.

The impulse to put stones upon other stones is instinctive. Killing, cutting, cooking, and building were not the only uses early man found for stone. It was also a means of expression. Marking terrain and trails, making significant configurations, were other purposes for which stone was "handy."

A cairn, whether a built pillar or two or three stacked stones, is a purposive statement. Upright stones, whether erected, built, stacked or balanced evince a presence quite distinct from the unarticulated prima materia. In Asia-in Tibet, Japan and South Korea, for instance-stones are stacked as the embodiment of a prayer. In Canada and Alaska, stones were, and are still, used to build free-standing dry stone totemic figures, called inukshuk. These serve as surrogate human presences that help to herd reindeer, and as friendly landmarks in a vast, lonely and nearly featureless landscape.

There is no physical evidence that the activity at issue here, defying gravity with delicately balanced assemblages, has a long history, but inherent human creativity and playfulness, and the fascination with which naturally occurring balanced rocks and stones are regarded, argues that it must be so.



Lake Mansarovar, Western Tibet. photo: Julie Kandyba

above right: At the Tapsa Temple on Korea's Mt. Maisan, there are some 80 stone towers or pagodas that were erected in the early 1900's by a hermit/monk named Yi Kap-ryong. He carefully piled hundreds of rocks atop one another as a personal prayer for peace; no mortar was used. Stone by stone, working only at night and without any mechanical help, he spent more than ten years creating these pagoda shaped piles-some as much as 10 meters high!

The stone towers have stood for over 100 years, withstanding the forces of strong wind, rain and typhoons that have uprooted trees in the area.





Yi's daughter-in-law maintained that he could never have completed such a feat without the help of a heavenly spirit who descended to Earth each night to help him build the towers. The pagodas are said to be an extension of salvation for mankind to strengthen the spirit. Each tower was built of stones selected and carried from one of several mountains and rivers through-out Korea.

Yi died at the age of 98; the stone towers endure as a mountainside testament of manifest spiritual devotion.



Jeju Island Temple, South Korea photo: Elliott Henry

Also at Tapsa Temple: pagoda style prayer stone stacks photos: Patrick King

stonexus VII 39

DANCES WITH STONES

A small but spirited and wide-ranging societal subset with a shared interest in this activity has come into existence. Stone balancing is becoming established as a category of creative activity, like music, painting or sculpture. There is, as with those activities, a wide range of involvement, from mere dabbling—stacks of stone in the front yard—to "High Art"—art gallery and museum exhibits and coffee-table books.

The transition from archetypal activity to a contemporaneous popular art form has resulted in what might be called the 'Modern Era' of stone balancing, a phenomenon that can be said to have begun late in the last century. It was, evidently, a popular pastime at Rainbow Gatherings in the 70's. A photograph in an article in a 1984 issue of the National Geographic magazine showed a gentleman quietly stacking black stone 'Buddha spires" in a creek somewhere in Big Sur, California.

Yes, in a creek. Water is the great quarrier and the banks and beds of creeks and rivers, lake shores and rocky sea coasts with the abundance of stone exposed were, and are, potential theatres of operation for a growing number of stone balancers.

Stone balancing is done for various motives, as a meditation, as art, as recreation, as an occupation or an avocation, as creative play or exhibitionism. It is performed in public by some and done privately by others. The former often accept, and sometimes solicit, money in appreciation for their feats of balance. The latter often do theirs in unpeopled places and then photograph them *a la Goldsworthy* before leaving them to their inevitable collapse. (Though some, acting on personal principle, return each stone to its original resting place.)





above: Deva Manfredo balancing, Mt. Labbro, Tuscany, Italy

left: Elizabeth Foley balancing, Seattle, Washington. photo: Jeff Leck



Bill Dan balancing, San Francisco, California photo: Frederic Neema

Darryl Maddeaux balancing, Toronto, Canada photo: Elson T. Elizaga



THE HUNDREDTH MONKEY THEORY

The Japanese monkey, Macaca fuscata, had been observed in the wild for a period of over 30 years. In 1952, on the Island of Koshima, scientists were providing monkeys with sweet potatoes dropped in the sand. The monkeys liked the taste of the raw sweet potatoes, but found the dirt unpleasant. An 18 month old female named Imo found she could solve the problem by washing the potatoes in the salty ocean water, improving the taste of the potato. She taught this trick to her mother. Her playmates learned this trick and taught their mothers too. This cultural innovation was gradually picked up by numerous monkeys in the troop and observed by the scientists.

Between 1952 and 1958, all the young monkeys learned to wash the sandy sweet potatoes and make them more palatable. Only the adults who imitated their children learned this cultural improvement. Other adult monkeys kept eating the dirty sweet potatoes. In autumn of 1958, something startling took place. A certain number of Koshima monkeys were already washing their sweet potatoes, the exact number is not known. The hypothetical number given was 99. Then it happened. The hundredth monkey learned to wash the sweet potatoes. The added energy of that hundredth monkey somehow created an ideological breakthrough. Almost everyone in the tribe was washing their potatoes before eating them, but a surprising occurrence was observed by these scientists. The habit of washing the sweet potato had jumped overseas. Colonies of monkeys on other islands and the mainland troop at Takaskiyama began washing their sweet potatoes.

Although the exact number may vary, this Hundredth Monkey Phenomenon means that when only a limited number of individuals knows a 'new way', it remains the conscious property of those individuals. However, when one more individual manifests this new awareness, the field is strengthened, a critical mass is reached, and the awareness becomes the conscious property of all. This new awareness is communicated mind to mind.

by Ken Keyes Jr.

Something similar seems to have happened world-wide with with stone balancing.







"Everything, rocks and other solid objects or anything else, have their inua (inner person). Anything that is made or created has an inua." Hubert Amarualik, Inuit elder





stones/photos, top left and above: Peter Riedel

George Quasha, from his book, Axial Stones, an art of precarious balance, published by North Atlantic. photos: Sherry Williams





above: Island of Hydra, Greece

stones/photos: Tom S. Thomas

Capilano River, British Columbia, Canada







stones/photos: Zach Pine, Muir Beach, California







above: stones/photos: Stephen Goulet left: Stephen Goulet and Glen McConnell, Highway 17, Vancouver, British Columbia

below right: stones/photo, John Felice Ceprano, Ontario River, Canada

below left: stones/photos, Elizabeth Foley and Len Othick







The 'Western North Carolina Rockstackers,' a group of friends and neighbors have embraced the activity of stone balancing in a way unique to them.

Individually, they enhance their properties with 'yard art,' stacks of stones that, in a few cases, number between fifty and a hundred.

Collectively, they occasionally gather for con-vivial group 'stackathons,' friendly creek-side affairs with food and drink that result in the creation of a menagerie of stone 'critters.'







stones/photo: Daliel Leite, Hawaii



stones/photo: Daliel Leite, Portugal

THE STORY OF HOW I GOT STARTED

in this rock thing goes like this: in the process of collecting stones for a flower bed in our front yard, I noticed that the stones were killing patches of grass. It occurred to me one day that if I stacked them on top of one another, I would make fewer brown spots on the yard. So I did.

Soon I began making all kinds of stacks. I began to thrive on that moment when nothing else in the whole world mattered except for making Stone C stand on Stone B, which in turn, stood on Stone A.

A year earlier I had quit drinking and found that I had restless hands and a desire to create things. The flowerbed became a terraced rock-n-sedum affair with tons of collected rocks — arches. stacks. walls and some collectibles and sentimental favorites. Stacking became my passion.

I like to stack things in somewhat busy places and listen to the comments of passersby, or visit places I have stacked to find that visitors have left contributions. Doing something I enjoy that brightens others' day makes for a good past-time, I think.

I progressed from Stone C on B on A to what I call "dependent balances," in which Stone B would not stand on Stone A without the weight of Stone C on it. Arches came next and remain a favorite construction.

More and more I see myself chasing those intense magic moments of precarious balance at some risk to my personal safety (two trips to ER so far, but I like to think I am getting wiser as I get older.)

I consider the Arch-on-Pedestal, shown here, to be my signature stack. It combines the three disciplines I employ in my work — stacking, balancing and building.

STACKING because the pedestal is stacked and the most important part of the stack.

BALANCING because you have to put equal amounts of weight on each side of the shelf, the horizontal piece that supports the arch, at all times.

BUILDING because that is what I consider making arches. Arching is not exactly stacking or balancing.

Dave Russell



THE STANDING STONES OF BARGA

A mysterious phenomenon has come this summer to one small stream It appears it was started some weeks ago by someone who lives nearin the Garfagnana, Italy - stone balancing. by, but then others who have happened upon this somewhat remote spot have continued the installation, and now dozens of these statue-Strange figure-like constructions stand guard, immobile, along a rushlike constructions stand along a hundred-metre stretch of the stream. ing stream near the Tuscan hill-top town of Barga. Some appear to be in an almost human form, others are like birds. What makes them with however small a contribution.

Almost everyone who comes seems to want to add to this exhibition, unusual is that nothing holds these towers of stones together except gravity. No cement. No glue. Not even a small pile of sand comes One of those who has added to the creation of this free art gallery between the naked stones, one piled upon another. Improbable feats talked about the experience. of balance, one long pearl-shaped stone stands - upside down as it "It is almost mystical," he said, "to feel a sudden realisation of an were - on another. Three on top of each other here. Four there. Five. All suspended, as if for eternity. But the reality is much more fragile: improbable equilirium. The most unexpected alliances can be achieved, and as you gently move the stone on top you can somehow the most miniscule change can send them all toppling back into the stream. A strong breeze, the merest touch, a failed attempt to add sense whether the two can make a happy alliance. You try one way, another to the already unlikely constuction and the work is destroyed. then another, you feel it might just be possible, then the most tiny of adjustments and it suddenly locks into place. You begin to set fresh One large slab of rock has several egg-shaped stones of various sizes challenges for yourself, and look for bigger and more improbable all precariously perched along its ridge - and some others cling to one stones to try and balance on top of others.

of its sides, which looks easier to achieve - until you try to add to it yourself. Long lozenges of rock balanced on a tip have had smaller "The whole thing is so ephemeral, and yet is has an appearance of permanence. Sometimes the equilbrium is so fine that if it has been rounder stones balanced on their tops, giving them almost the appearachieved when one of the stones has still been wet from the stream, it ance of human figures. In places three or four are clustered together in small family groups. You are irresistibly reminded of the stone can be lost as the sun dries out the stone, and you hear one that ten minheads of Easter Island, or the creations of Brancusi, or Epstein or utes ago was standing quite firm suddenly tumble into the water again." Barbara Hepworth or Henry Moore - isolated, impenetrable, silent.

Even the inevitable attempts at representations of those parts of the human anatomy generally kept decently covered have a kind of primitive charm, and no little skill in the realisation.

And who is doing all this work? No one knows.



by a barganews.com reporter, 27th August 2001

The only thing for certain is that this unique display is transitory. The wind and the water will soon take away all this work. A salute, therefore, to all those who unselfishly and anonymously have given their time and the creative effort into creating a park of spontaneous freestanding sculpture in this secret place that will pass, with summer, into only a fond memory.

> stones: Kent Avery, Vancouver, B.C. photo: Craig Campbell



Built, then balanced. The drystone plinth on which the balanced stones stand identify this as the work of a stonemason. Stonemasons are particularly vulnerable to the attraction of stone balancing. To use stone in this sensitive, playful, creative and impractical way is recreational. Building with stone or rock does not become as automatic as building with block or brick can be, but it can be done with less than complete attention. In balancing stones, however, total concentration on the task at hand is required.

As you might assume from the foregoing, I have succumbed to the allure of stone balancing. As a stonemason, though, I am tempted to circumvent the taboos which I suppose to exist against 1) shimming, and 2) altering the form of a stone, both of which are skills basic to our craft. To shim or not to shim IS the question. A tiny shim, a stone flake the size of a fingernail, placed just so could make the impossible possible. Bruising one stone with another to remove an impediment to equilibrium serves too.

George Quasha, author of Axial Stones, for instance, follows strict rules: "one stone must be balanced on another, at a narrow point of contact, and no adhesive is permissible nor may either stone be modified in any way." John Felice Ceprano shims without shame; his monumental tableaus must stay in place throughout the summer. Dave Russell (see p 48) differentiates between balancing, stacking and building, sometimes employing all three activities in a single piece. For whatever ostensible reason people balance stones, there are three essential aspects that draw them to it: (1) the collaboration with nature, the intersection of the life of stone and the life of man; (2) the creative challenge and the satisfaction of meeting it; and (3) what might be called The Moment, the aforementioned 'existential' state of being, the concentrated attention required to achieve balance. (You must be present to win.)

The people who do this, the lithic equilibrists, let's call them, are as interesting as what they do. A sampling would include artists who have found another medium in which to work, poets, several photographers, software designers, doctors, a nurse, a newspaper editor, a private detective, construction workers and, of course, stonemasons. Profiles, even simple character sketches of the individuals responsible for the examples shown on these pages, would make for interesting reading, but, unfortunately, would require more space than is available here; a book could be written about them—and IT.

Public awareness of stone balancing has been broadened by the Internet. Many practitioners have web sites where they can be visited—by each other as well as a curious public. And, there is www.rock-onrock-on.com. Daliel Leite, a San Francisco Bay Arean, was so impressed by watching Bill Dan, a virtuoso balancer whose base of operations is near the Golden Gate Bridge, that he was inspired to begin balancing himself. His enthusiasm for the activity later led him to set up the website. Initially it show-cased Bill's work, but gradually evolved into a celebration of the activity of stone or rock balancing and a nexus for a growing community of stone balancers. It is a survey of contemporary stone balancing and a repository of images and personal reflections on the nature of the act by individual stone balancers. Most of the balancers represented in this article are members of the rock-on-rock-on.com community and more images and information about them, and others, can be seen there.

Part of the appeal of stone balancing is that no training or tools are required and the material is abundant and free. If you feel compelled to practice this 'art.' remember, stones can bite! Be careful.

Some discretion is advised as to where and how one might choose to balance stones. In parks and wilderness areas where folks go to appreciate nature, balanced stones might seem out-of-place and cause offense. Arcadia National Park in Maine, for instance, implores hikers to please NOT build cairns. "LEAVE THE MOUNTAIN AND ROCKS AS YOU FIND THEM" says the signage. Be sensitive.

The more precarious the balance, the more remarkable—and satisfying—the result. To achieve balance in this way, if only briefly, is to feel balanced in one's self, if only briefly.

As Bill Dan says, "Be Balance."







THE ART OF Stone Balancing:

BALANCERS:

Jean Felice Ceprano www.jfceprano.com Bill Dan, www.rock-on-rock-on.com Stephen Goulet, www.klatu.com/lix/rockatier Elizabeth Foley/Len Othick, www.artoflivingrocks.com Jonas Jongblut, www.rockbalance.blogspot.com Daliel Leite, www.rock-on-rock-on.com Deva Manfredo, www.devamanfredo-stoneart.com Jim Needham, www.rockstacker.com Zach Pine, www.naturesculpture.com Peter Riedel, www.peterriedelphotography.com Dave Russell, www.myavantgarden.squarespace.com

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David Gentleman

A Cross for Queen Eleanor

The story of the building of the mediaeval Charing Cross, the subject of the decorations on the Northern Line platforms of the new Charing Cross Underground Station

Printed to mark the occasion of the opening of the Jubilee Line on 30 April 1979 by HIS ROYAL HIGHNESS THE PRINCE OF WALES.

Reprinted here by permission of the author



Author's note

When London Transport commissioned me to design the mural decorations for the Northern Line platforms at Charing Cross station, I chose as the subject the building almost seven hundred years ago of the original Charing Cross in what was then the village of Charing. In the course of the task I had to find out about the methods and organization of the craftsmen who built the Eleanor Crosses, and also discovered their significance in the architecture of their time. This book is the fruit of that research.

It is not a scholarly treatise. It attempts, like the decorations, to give the interested Londoner (and visitor) some idea of the working lives and the skills of the craftsmen of an earlier time and, in a way, to acknowledge our debt to them.

The illustrations are enlarged from prints from wood engravings which were made on boxwood blocks. For the station decorations, similar prints were further enlarged and screenprinted with great skill and care by Perstorp Warerite Limited on to the wall panels which run from end to end of the platforms.

I would also like to record my debt to the many medieval illustrators and to the historians and scholars whose works made my task possible, some of whom are mentioned in the bibliography; and to thank Herbert Spencer for his invaluable help in designing this book.





Charing Cross to most Londoners means only a hazily-defined area somewhere between Trafalgar Square and the Thames, with a hotel, a hospital (now moved to Hammersmith) and a number of stations with, until recently, a confusing variety of names. But long ago it meant something much more tangible and precise. For three and a half centuries, a real solid Charing Cross stood where the statue of Charles I stands now, one of the great sights of London, as familiar in its time as the nearby Nelson's Column is in ours: the tall and splendid monument which had been built in Charing village to remind Londoners of their resourceful and faithful Queen, Eleanor of Castile.

Eleanor was the beloved wife of King Edward I. She married him at Burgos in Spain in 1254 when both of them were very young; she accompanied and sustained him on his Crusade; it was said that when he was wounded by an assassin, she saved his life by sucking the poison from the wound; she traveled with him on his perilous expeditions to Wales; and during their thirty-six years of marriage she bore him fifteen children. It was written of her that 'to our nation she was a loving mother and the column and pillar as it were of the whole realm.' During these years her husband became not only an energetic and powerful warrior king but also a remarkable builder; the Tower of London and eight great castles in North Wales stand as his own most solid and striking memorial. Eleanor the Faithful died at Harby in Nottinghamshire in 1290. Her body was taken to nearby Lincoln where her heart and entrails are buried; then the body was embalmed and, accompanied by the King and his court, was taken in a great funeral cortege to Westminster. At each of the twelve stopping-places on the road the King selected a place to build a monumental cross to her memory; they came to be called the Eleanor Crosses. Three of them still survive, at Geddington in Northamptonshire, at Northampton and at Waltham Cross in Hertfordshire. Her body lay at last in Westminster Abbey, under the bronze effigy which suggests to us, as vividly now as it did almost seven hundred years ago, a graceful and serene woman. The stone tomb encasing it was made by the King's mason, Richard of Crundale, and he it was who, at the King's mews in the nearby village of Charing, built the last and most splendid Eleanor Cross of all: Charing Cross.

No one knows exactly what it looked like. The Puritans pulled it down in 1647 and used the stones to pave the ground outside White Hall, and the few surviving drawings of it tell us very little. It seems probable that, like the eight-sided Northampton cross, it was a tall polygonal structure carrying six or eight statues of the Queen, that it stood on a stepped plinth, and that a large cross stood on top of its spire. The Victorian 'Charing Cross' in the Strand outside the Southern Region Station is not a restoration or even an accurate reconstruction but a Gothic Revival work of the imagination, built in 1865 by the railway company; of the genuine crosses, Waltham Cross has been much too thoroughly, even disastrously, restored to retain any feel of the original. But by looking at the beautiful crosses at Northampton and Geddington we can guess at the elegance of Charing Cross itself. The time was ripe for building it; indeed, at about this time, 1290-94, the most active developments in Gothic architecture were no longer taking place in France (its original source) but had shifted to England; building here over the following twenty or thirty years reached a peak of invention and achievement whose influence was to spread through Europe.

Self-confidence and stability under King Edward played a part in this architectural upsurge, but the underlying reasons for it stretch back to the Normans, whose determination and efficient organisation had transformed English building. Norman vigour and enterprise had flourished in an increasingly, if only relatively, stable and prosperous country. To establish their supremacy and prestige here, the newcomers had had to build castles, monasteries, and great churches; they had organised adequate and reliable supplies of stone, first from Normandy and then from newly-developed English quarries; and having at first brought over their own Norman masons, they had then set in train enough work to call forth great numbers of skilled English carpenters and masons. As these skills developed, there grew an astonishing mastery of construction, in which clever and complex ideas were closely matched by skilled and developing craftsmanship, for in Gothic architecture idea and execution were inseparable. Buildings were designed not by architects who had been sheltered by education and upbringing from practical building work, but by highly skilled masons, with great breadth of experience; the same men knew how to design and erect castles, houses, churches, to build, in short, for kings and cut-throats. There was no practical reason for them to specialize, and masons' guilds had not yet invented one by dividing the craft into strictly demarcated functions. Master masons were concerned not with any aesthetic style as such, nor with following any classical model, but only with building as practically and efficiently as they knew how. And since the skills of artist, craftsman and technologist, which we now generally assume to be separate and distinct, were only just beginning to be differentiated at all, a mason was, as has been well said, at the same time composer, conductor and member of the orchestra.





DELOS

The Grotto of Herakles, perhaps one of the oldest of the temples on the island. The buff fellow in the shadows gives an idea of the scale. There must be a name for this sort of arch?

The Cyclades are a cluster of more than 200 islands in the Aegean Sea to the southeast of the Greek mainland. Cyclades (circling) refers to way the islands are disposed around Delos, at one time the spiritual as well as commercial and cultural center of the archipelago.

Diminutive Delos, only a kilometer and half wide and six kilometers long, exerted power and radiated influence throughout the Aegean. It was the birthplace, not only of the Greek gods Apollo and his sister, Artemis (Diana), but of the Delian League, the political alliance that ruled the Aegean from Athens. It was the League's home port and the site of its treasury. Its harbour, though, does not give the impression that a great sea power operated from here. Neither does the island seem able to accommodate a population of 25,000 persons (not counting slaves) as it is said to have done.

Temples were built not only to Apollo and Artemis, but to many other deities, major and minor, Greek, Roman and Egyptian. There was a major synagogue there. Under Roman rule Delos was made a freeport and became a favoured destination for Rome's affluent class, much as neighboring Mikonos is for Europe's jet set today.

Circa 426 BC the bones of all who were buried on Delos were disinterred and removed to Rhenia, a nearby island, and it was decreed that those about to die and women who were about to give birth were to be taken off the island. In effect, no one was allowed to be born or die there.

But die there they did, and in great numbers when, early in the 1st Century BC, the Mithridatic War made a sudden and brutal visit to Delos. Mithridates, the emperor of the kingdom of the Black Sea was at war with Rome, and Delos was very important to Rome. In 88 B.C the island was sacked and its inhabitants, thousands of them, were were slaughtered, the mansions and temples desecrated and demolished. Twenty years later it was raided again and ransacked by pirates who took into slavery all those they did not kill. ports in the Mediterranean, the second assault caused the island to recede into obscurity. The Greek emperor even put the place up for sale in the 1st century AD. Nobody would buy it. At times it was a base for pirates. The Turks owned it for a while. For centuries Delos has been used as a marble quarry; the temples, monuments and mansions were stripped by generations of scavengers. The vestiges of its glory that remain, however, and the absent world they intimate, still evoke a sense of wonder.

The French School of Archaeology began excavations in 1872, resumed them between 1904 and 1914, then again between 1958 and 1975. Many public buildings and private houses were uncovered and some were partly reconstructed. Work is still in progress.

I regret that my photographs of the famous lions of Delos and the cisterns—beneath the floor of a theatre supported by a series of arches —have dematerialized. A return there may be in order.

Given the emergence of other important



SNECKED STONEMASONRY

by Bobby Watt

This method of bonding stonework is so prevalent in Scotland and Ireland it has been referred to in some journals as 'Celtic Bond'. Amongst the French speakers in Canada it is known as 'travail ecossais'.

Whatever it's called, this is a method of building an incredibly strong masonry wall with differently sized, (and even very loosely squared), stones, in either ashlar or rubble work, with a pattern that is both handsome and, at the higher levels of workmanship, artistic.

The principal characteristic of snecked work is the keying together of parallel courses of stone. This is achieved by interrupting the level height of a horizontal course by placing a taller stone that reaches up into the next course. This vertical interlacing gives a wall a tensile strength that enhances its compressive strength.

When I served my apprenticeship we were never provided with a set of instructions to build snecked work; it was picked up directly on the job. When I started teaching stonemasonry to brick and blocklayers at Durham College in Ontario, I learned the value of putting the basic tenets on paper for the students to take with them.



SNECKED MASONRY involves three kinds of stones:

RISERS—Or JUMPERS, these are the stones extend up through the horizontal beds. They can be square, or almost square, or up to three times as long as they are high.

LEVELLERS—These form the bulk of the wall. They are usually at least twice as long and up to five times as long as they are high.

SNECKS—These are the smaller pieces that enable the mason to make up the differential in height between the top surfaces of the levelers and the risers.

The easiest way to build snecked masonry is to work with uniform material such as that provided by free-stone suppliers, like Indiana Limestone, who saw the stone into standard bed heights that enable us to conveniently build snecked work with a minimum of bother. The visible faces of such stones are usually pitched. But beware; some suppliers, either ignorant or unprincipled, provide stone in this category that is face-bedded, that is to say with the bedding plane of the stone running vertical, parallel to the surface plane of the wall. For shame! This stone will, in time, defoliate.

10 pages of 10



ISLANDS ARE FASCINATING.

Often remote from the mainland, they foster unique lifestyles which stimulate the outsider's imagination to picture an alluring utopia of harmony and cooperation. The hard, cold facts of island life, however, seldom live up to such idealistic yearnings. The story of life on the islands of St. Kilda is a case in point.

St. Kilda is a small archipelago 40 miles west of the Hebridean island of North Uist. It is one of Scotland's most remote island groups and, except for the remote uninhabited crag called Rockall, the furthest west. The archipelago consists of the main island of Hirta, the smaller islands of Soay, Dun and Boreray, the magnificent sea stacs of Stac an Armin (644 feet high) and Stac Lee (564 feet) and the smaller rock called Levenish (203 feet). There are other smaller rocks and stacs, each magnificent in their own right.

Hirta is approximately two and a half miles long and two miles wide with spectacular cliffs around most of the periphery. The island is part of the remains of an extinct volcano system and is roughly 'H' shaped with Glen Bay to the north and Village Bay to the south. Conachair is the highest point on Hirta, towering 1407 feet above the highest sea cliff in Britain. The hills combine to produce a rolling landscape with many sheltered corners and exposed slopes.

Recent archaeological research, including the discovery of a stone tool 'factory,' indicates that Hirta may have been occupied as early as 5,000 years ago.





above: Looking down from Conachair, beyond the scree to the crescent of the Village Street. Army buildings lie nearest the sea. Note the profusion of enclosures and drystone cleits.

left: The "consumption" wall, or dyke, leads through the meadow in front of the houses down to the sea. The island of Dun in the background is separated from Hirta by a narrow passage and is inhabited only by seabirds.

The native population was evacuated in August, 1930. Today, most of the people on Hirta are seasonal conservation workers and scientists, apart from a skeleton staff who look after the radar station, more of which later. There is no record of a permanent settlement ever having been on any of the other islands in the group.

Evidentially there never was a saint named Kilda; the word is said to derive from a Gaelic or Old Norse word for a well. Such a watering place would be important to the sea-going Norsemen.

The earliest written reference to Hirta is in a charter dated 1346 granting ownership to Clan Ranald. Since then written works about St Kilda have increased exponentially. New books are still being published and archeologists are uncovering more evidence of past ages and adding to the knowledge gleaned from 400 years' worth of contemporary writings. This reflects how this remote place continues to attract the interest of mainland folk. The Victorians were especially enthralled with the idea that Gaelic-speaking British citizens lived on a distant speck of land in stone beehive structures, eating puffins boiled in their porridge and holding a 'parliament' every morning to allocate their work. These islanders' lives were as exotic to these mainlanders as any to be found in the far-off mystic Orient. The St Kildans led a simple lifestyle based

on subsistence agriculture supplemented with seabirds and eggs. At the appropriate season, the islanders would go down the cliffs on the end of long ropes made from horsehair, sheep hide or manila fiber and collect eggs or harvest the young gannets, fulmar chicks and puffins. Feathers were exported for use in mattresses. Oil from the fulmar's stomach was collected and exported to the mainland where it was prized for medicinal purposes.

St. Kildans sitting on the village street, 1886. photo: the National Trust for Scotland



Huge numbers of birds were killed. Reasonable figures around the 1830s record that 4,000 gannets and 12,000 fulmars were killed in one season. One writer reports 89.600 puffins killed in 1876 but this is likely to be an exaggeration because slaughter on that scale would have decimated the bird population, something that seems not to have happened. Indeed, the St Kildans would have been careful to avoid over-exploitation of this important source of food. Thousands of eggs were also collected, some of them preserved in peat ash.

In their pursuit of the birds and their eggs, St Kildans demonstrated remarkable agility on the cliffs and sea stacs: there were deaths, certainly, but bearing in mind the risks taken, comparatively few. At a rocky promontory called "The Lovers' Stone," young men could prove their skill and impress the girls by balancing on one foot at the end of a rock hundreds of feet above the sea. Custom demanded placing one foot in front of the other, then bending over and holding both clenched fists in front of the forward foot.

The islanders also ate mutton, beef, grain and dairy products, all local. Sheep milk was used to make cheese. They attempted, with varying success over the years, to grow potatoes, cabbages and turnips to supplement their diet. The islanders did fish but there was little enthusiasm to develop a fishing industry, partly because the island did not have a proper pier until 1901.

St. Kildan lifestyle was little different from any other island in the North Atlantic; they were simply making the most of what nature provided. To this day, in fact, the peoples of the Faeroe Islands to the north-





This souterraine may be up to 2000 years old and at one time part of a larger complex of buildings. Its original function is lost in time, reputedly a place where fairies dwelt.

west of St Kilda catch seabirds to supplement their diet and men from the Isle of Lewis in the Scottish Outer Hebrides sail some 40 miles to Sula Sgeir in the open Atlantic to harvest young gannets.

In 1877, the Victorians began to operate steamer cruises to St Kilda from Glasgow. Naturalists and tourists were keen to see this unique island and its people. The islanders now had the opportunity to increase their income by selling knitting, tweed and souvenirs and demonstrating their prowess on the cliffs. One islander set up a mail order service for egg collectors. Every tourist was anxious to visit the St Kilda Post Office to buy and send postcards with the local postmark on the postage stamps.

The flood of visitors in the summer months must have reduced the independence of the islanders, disrupted their work and emphasised their remoteness during the long stormy winters.

Many island communities develop stonework unique to their locality. The 'beehive' structures, for example, on Inishmurray and Skellig Michael off the Irish coast confirm man's stubborn persistence to create habitations in an inhospitable environment.

For the visitor, the most striking feature when approaching Village Bay, apart from the relatively modern army buildings, is the row of sixteen cottages, the long drystone walls and the large number of stone 'beehive' shapes. These are over 1,200 *cleits*, or drystone storage units, on Hirta. There are possibly 200 more on the remotest cor-





Soay sheep. top: ewe and lamb, bottom: ram. Originally confined to the neighboring island of Soay, brought to St Kilda after the evacuation of 1930.

ners of the other islands and sea stacs. A cleit, in its simplest form, is two parallel drystone walls with one end open to form a doorway and the other end curved and buttressed against the weather. The roof, whether corbelled or spanned with large stone lintels, is covered with turf. The drystone construction keeps the wet out but allows air to travel freely through the walls and keep the interior dry. This is most important in a maritime climate like St Kilda

where winds of 198 mph have been recorded and the air is full of salt spray and rain. The microclimate inside a cleit is ideal for preserving produce or seabirds, or keeping equipment or turf drv.

The best maintained cleits are around the Village Bay area. These are the larger of the type, up to 20 feet long, 4 feet wide and 6 feet high. Some have doors on the side, but most have doors on the uphill end away from the prevailing winds. Cleits beyond the village area are usually smaller, two or three feet wide, the same height and 10 feet long, probably used only for storage of turf for the fire and seabirds or eggs. Door openings invariably point uphill. There is evidence of attachments for wooden doors or slabs of rock nearby which could be used to block the entrance. Many cleits in the outer corners of Hirta are ruinous-almost bevond repair.

One large cleit is known as 'Lady Grange's cleit.' The husband of the lady in question, a Scottish politician, organized her imprisonment on Hirta from 1734 to 1742. She had threatened to reveal his anti-government activities during the 1715 Jacobite uprising and he could no longer put up with her violent tempers. Her presence on Hirta is established fact, but it is unlikely she inhabited this cleit.

In 1697. Martin Martin, an educated man with first hand knowledge of the Scottish Hebridean Islands, said of Hirta, "The whole island is one hard rock." In actuality. the Village Bay area consists of two rock types, dolerite to the west and granite to the east. When the village is viewed from a distance, the variation in rock type is evidenced by the lighter shade of the structures on the east side of the village area. There is an interesting mottled effect in the middle where the structures consist of both types of rock.

This fulmar chick looks cute but he will protect himself by spitting strong smelling oil from his stomach





This drystone wall 'consumed' much of the stone from the land in the foreground, making it viable for agriculture. The backgound is full of stone structures from different eras.

ROCK.

along with turf and driftwood, was the most important building material. No trees grow on Hirta. There is a tiny creeping willow but it is only of botanical interest. Driftwood or wood transported to the island was the only source of timber. As in many Scottish island communities, the roof timbers were the most valuable part of the house: stone could easily be found for the walls. In such a situation, corbelling would be a natural development, careful stonework replacing timber as a way of bridging the gap between stone walls

Three "consumption walls," so called because they "consumed" the stone as it was cleared from the arable land or removed from demolished structures. run from the village street down toward the sea. These walls are much wider than a standard stone wall. They also provide valuable shelter for crops and livestock.

The graveyard wall is quite remarkable; about 220 feet in circumference, it is one of the best built walls on the island. The simple gravestones stand crookedly among tall grass and wild yellow iris.

Outside the head wall separating the lower lying arable ground from the rough grazing on the surrounding hills, there is a network of smaller enclosures. These were used to raise vegetable crops, safe from the strong winds and marauding animals or to manage the sheep. There was also an enclosure and a house for the island's bull. Within this

area, there are larger cleit-like structures, which may have been the original dwellings for ancient St Kildans.

In the bowl-shaped areas between the hills of Conachair and Oiseval, behind the Village area, there are a group of very fine stone enclosures. Some of the walls are built with small rocks carefully fitted together. Other sections have large slabs laid on edge, incorporated within a wall of



smaller rocks. This is not the strongest way to use large slabs but it is the quickest way to fabricate a length of wall. If the wall fulfilled its function, that was all that was required, it was not important how it looked and it would be no great trouble to repair a section if it failed.

The sequential history of St. Kildan structures is often difficult to interpret because stone was commonly recycled. One old map of Hirta shows three churches in the Village Bay area. These churches are now gone and their stone dispersed. One of these might have been the original home of an incised cross found on one cleit roof lintel and another on a quoin stone on the frontage of one of the cottages. Lintels and flat slabs were valuable and would not go to waste.

The highest recorded population on Hirta was 180 in 1697, this figure represented 27 families. From then on, the population



One of two incised stones probably recycled from church buildings

This is an example of "the local style." possibly rebuilt many times after stormy winters. The chunky granite lends itself to a rougher, efficient, style of walling. Many of these stones would be cleared from the land for cultivation and to improve the grazing.



An opening in a wall blocked up with stonework: a common practice in the Hebrides. The entrance may no longer be required or the stonework is in lieu of a gate, wood being scarce.



The corbelled interior of a cleit showing roof construction with rocks used to their full advantage. The corbelling allows smaller rock to be used in the closing off of the roof.



The interior of a cleit, looking towards the entrance: the roof shows the large stone lintels, a building style developed to take full advantage of available materials.

This cleit is unique; the smaller structure to the left is accessed through a passage at the back of the larger one.







The construction may look less than stable but this building has stood the test of time and survived many storms. The thatched roof is no longer but the stone walls remain.

One of the larger cleits, typical in its wet environment and wild iris. The turf roof has luxurious growth which is often grazed by the Soay sheep.





above: Using basic drystone techniques the stone from the land was used to raise these sturdy structures. In the background are the gables of houses built in the 1860's. They may have had more light and space than the Blackhouses but were far more difficult to heat.

below: The interior of a blackhouse built in the 1830's. With thick stone walls and thatched roofs these provided a snug shelter from Atlantic gales.



fluctuated with disease, immigration and emigration but seldom exceeded 100 persons. When the inhabitants were evacuated in 1930, there were only 36 inhabitants remaining.

Small remote island populations are vulnerable to infection from outside. Whenever visitors came ashore, there was every chance that they would bring the common cold, which could easily infect a population with reduced immunity. Throughout the world, this has various names but is often called 'the boat cold' for obvious reasons. Over the years, whooping cough, measles and typhus had a greater effect on the islanders than the mainlanders because of their isolation. In 1727, St. Kilda's population was reduced to 30 by a smallpox epidemic when the clothes of a native, who had died of that disease on the mainland, were returned home. The owners of the island guickly boosted the population by encouraging immigration from other islands, perhaps with the offer of reasonable rents and, by the standards of the day, a decent living.

Over the years, many infants died of tetanus when only a few days old. The cause was eventually traced to poor postnatal hygiene and the use of fulmar oil to daub the umbilical cord. By 1891, the resident nurse and the minister managed to improve postnatal care and there were no more deaths but, until then, this one disease had a crippling effect on population growth.

Religion and church officials played a crucial part in St Kildan lives, sometimes for the good, sometimes as a barrier to their improvement. The Rev. MacKay (minister from 1865-1889) had three services every Sunday and other religious meetings throughout the week. The Sunday services would proceed even if an urgent cargo required unloading. On the other hand, a prior minister, the Rev. Neil MacKenzie (minister from 1830-1843) worked hard to improve the lot of his parishioners, urging them to reorganise their agricultural system and improve their housing. He helped build the head wall, which separated the arable ground from the rough hill ground and, most importantly, during the 1830s, he encouraged the islanders to build better houses along the line of the current village 'street'. These 'black houses' as they were known considerably improved living conditions. The older houses were basically a larger version of the cleits but the new type had double stone walls with an earthen core, windows and thatched roofs. An open fire in the middle of the floor provided cooking, heat and some light. Smoke

escaped through a hole in the thatch.

As was common at the time, the cows were overwintered at one end of the black house. It is thought that the cow's urine gave a high ammonia content to the air, which has antiseptic qualities and may have helped sterilize the atmosphere and lower the incidence of tuberculosis in this type of house.

In recorded history, only the Village Bay area of Hirta has been occupied. There are, however, ruined structures near Glen Bay, which suggest there may have been a permanent population there also. One of these is known as the 'Amazon's House' because of the legend of a female warrior (although it is more reasonable to assume they served an agricultural purpose). These drystone corbelled structures and semicircular enclosures were once used as summer shielings, places where the sheep would be separated





Large stones have been used on the corner of this drystone enclosure; despite the size of these granite blocks a smooth finish has been achieved.

left: Abhainn Ilishgil or 'the Dry Burn', as it passes through the Head Dyke. This stream may be dry for weeks then fill up spectacularly when it rains and water pours down the hillsides. 'Burn' is a Scottish word for a small stream.

from their lambs for the night but could be kept close to them. This ensured a good milking in the morning and a minimum of distress for the lambs. These sheep were a type of the Scottish Blackface, completely different from the primitive Soay sheep, which were restricted to the island of Soay until 1932. The shieling system is common in various forms throughout the world; it takes advantage of summer pastures and turns milk into storable foodstuffs, especially cheese, for the winter months.

In the village Bay area, there is a *souterrain*, a subterranean structure, stone-lined with a stone lintel roof, about 25 feet long, 4 feet wide and 4 feet high. It is thought to be at least 1,000 years old, making it one of the oldest structures on Hirta.

Calum Mor's house is another notable structure. Calum was a local strongman who reputedly built it in one day. It is roughly circular, sunk into the ground and built out of large stones, well corbelled. Internally it measures approximately 15 feet x 9 feet. It is probably one of the original house types.

In 1860, a storm blew the roofs off many of the black houses and the opportunity was

taken to build 16 new houses of stone and lime mortar. These make up the 'street' we see today. Originally they were roofed with zinc but this was replaced with tarred felt. The cows were then relegated to the structures built in the 1830s. The 1860s houses may have been more hygienic and brighter with the advantage of two rooms and fireplaces built onto the gables but the walls and roof were thinner than the drystone black houses, which made them draughty and more difficult to heat.

Until the 1860s, the islanders had lived in thatched drystone houses but several other buildings were an important part of the community. In the early 1800s, a two-story store was built for storage of the wool, tweed, feathers and other exports. It must have been a fascinating sight for villagers living as they did in old rough hovels. A new church was built in 1830 and later, a schoolroom was added to it. In the late 1860s, the Factor's house was built. This was where the Factor, the owner's agent, would live during his annual visit to check on the island, collect the rent and take away produce.

These buildings were constructed of stone and lime mortar with slate roofs, a vast improvement on the islanders' houses. We must note that these buildings were for trade and religious purposes, built by those who wished to influence the islanders in one way or another.

Communication between the island and the mainland was always difficult. Frequent attempts were made to organise a regular postal service but this came to naught. The St Kildans had their own boats but they were not always well maintained, and a trip of 65 miles of open sea to the nearest port, Lochmaddy on North Uist, was a hazardous undertaking.

In the event of emergencies, communica-

tion was attempted by means of the St Kilda 'mailboat.' A message was put into a sealed box, attached to an inflated bladder, then thrown into the sea, hopefully to drift toward the mainland and be picked up. This precarious and haphazard method was used in 1877 to summon help when sailors were shipwrecked on Hirta and straining the food resources. Help arrived within a month! This has now become a visitors' tradition. Messages are place in replicas of the original 'mailboat' and cast into the sea. Some have been picked up within days on the Scottish islands but others drift for months before landing in the north of Scotland or even Norway.

During the First World War, the Royal Navy established an observation post on Hirta. A period of relative prosperity followed with employment and a reliable link to the outside world. In May 1918, a German submarine shelled the island, damaging the Naval radio mast, the church, the manse,

IN VICTORIAN ENGLAND

there was a keen desire to learn more about every corner of the Empire; this was abetted by professional men and women with the wealth and spare time to pursue their various and wide ranging interests. Improvements in printing and photography allowed the public to experience any part of the world within months of it being visited by the authors, thus replacing oft-repeated myths and legends with science and fact.

Naturalist Richard Kearton and his photographer brother, Cherry visited St Kilda in June 1896 and took many photographs of the scenery, birds and the inhabitants. Their book, "With Nature and a Camera" (1897), included chapters on St Kilda as well as others on poaching, duck decoying and photographic methods of the day. During World War One and on to the evacuation in 1930, St. Kilda was visited by many more photographers, even cinematographers, but the Keartons were the first to provide an accurate pictorial account of what life on St. Kilda was like. Their achievement is all the more remarkable because their cameras were fickle and bulky compared to equipment of our own era.

This excerpt is from "A Camera on St Kilda," a 1978 reprint of "With Nature and a Camera"(1897) by Richard Kearton, illustrated with pictures from photographs by Cherry Kearton. The reprint was published by Melvin Press, Inverness.

"For nine months in the year the inhabitants of St Kilda are doomed to an utter ignorance of the doings of the outer world unless some stray fishing smack should, under favourable conditions of wind and tide, venture to drop in and see them

When the natives now desire to send news of any happenings on the island to their friends, they cut a cavity in a solid piece of wood roughly hewn like a boat, and, putting a small canister or bottle containing a letter and request that whosoever pick it up will post it to its destination (a penny being enclosed in the boat for that purpose), they nail a lid or hatch over the cavity, with the letters of the words 'Please open' crudely cut on the top of it. To the boat is attached a bladder made from a sheep's skin, and the whole is cast into the sea during the prevalence of a westerly wind. I was assured that an average of four out of six of these interesting little mailboats are picked up either on the shores of Norway, or Long Island, in the Outer Hebrides, and their contents forwarded to the people whose hands they are intended to reach.

As I had expressed a desire to hear from the St Kildans during the winter by means of one of their miniature mailboats, they dispatched one containing three letters for me at eleven o' clock on the morning of March 24th, during the prevalence of a north-westerly wind. On the 31st of the same month it was picked up by a shepherd in a little bay at Vallay, North

The St Kilda Mailboat



Uist, and its contents forwarded to me by post. The letters had been placed in a small tin canister, and despite the fact that they had become soaked with sea water, they still retained a delightful aroma of peat smoke when they reached my hands, reminding me forcibly of my stay on the island."

the storehouse and two houses. One lamb was killed. In response, the Navy installed a 4-inch gun, which has never been fired. Its rusting barrel and the ammunition store are all that remains in the village to commemorate the best years the islanders ever had.

The Navy left in 1919 and the population drifted downhill until 1929-30 when it fell to below 40 persons. Clearly, the St Kildan way of life was not sustainable. Thirty-six people were evacuated to the mainland on 29th August 1930; they left behind most of their furniture, their dogs were destroyed by drowning and their cats abandoned. The livestock had already been shipped to the mainland where they were sold for a pittance. In a final irony, some of the islanders were given jobs with the Forestry Commission, working with trees, something they never saw on their native isle.

For the first time in centuries, there were no sheep or cattle on Hirta. The only livestock left on the archipelago were a few wild Blackface sheep on Boreray and the primitive sheep on Soay. The Soay are an ancient breed, possibly extant in Britain 5,000 years ago but gradually replaced by larger breeds that provided more wool and better meat. While the Soay sheep were restricted to the island of Soay, they were safe from crossbreeding. Occasionally a few would be taken for their meat but the St Kildans mostly left them to their own devices. In 1932, the Marguis of Bute, St Kilda's owner at that time, brought 107 sheep over from Soay and released them on to the slopes of Hirta. They quickly established themselves and can still be seen wandering through the buildings, grazing the roofs of cleits and presenting a head-on hazard if you try to enter a cleit as they try to leave. Their numbers fluctuate dramatically over a three or four year cycle, from well over a thousand to a few hundred. A year with a high population is followed by a large number of deaths over the winter, followed by a three or four year recovery.

Some St Kildans continued to revisit their homes until the start of the Second World War in 1939. Soon thereafter, the roofs of the houses collapsed, the island became a refuge for fishing boats and whatever could be taken away, was.

During the Second World War, Hirta was unoccupied and, with the notable exception of three aeroplane crashes, largely unvisited. This section of the north Atlantic was used for navigation training by aircraft based on the west of Scotland.

Ownership of St Kilda passed to the

National Trust for Scotland in 1956; a year later it was declared a National Nature Reserve. In 1986, it was declared a World Heritage Site. This designation was extended in 2004 to protect the marine environment around the archipelago. St Kilda, with its colourful history, its scenic grandeur and the abundance of seabirds, is well deserving of this distinction.

In 1957, the Cold War came to St Kilda: Hirta was judged to be an ideal site for a radar station to track missiles test-fired from the island of Benbecula, to the east. The village street was to be demolished as part of the military development but fortunately it was decided instead to open a quarry to get the vast amount of rock needed to make concrete for the roads, radar installations and other structures associated with a military base. Some ancient cleits found themselves standing in ironic contrast next to modern radar installations or being used to store military equipment.

up call.

In 1958, work parties from the National Trust for Scotland began clearing up the houses and consolidating all the structures to stop further deterioration. During this period the church, factor's house and schoolhouse were restored. Over the years six of the 1860s houses were re-roofed for use as dormitories, a museum, a store and a communal kitchen and dining area. Work parties still do maintenance work but more and more of their time is spent assisting with archaeological research.

Drystone walls and cleits require a lot of maintenance; they suffer damage in winter storms and through simple old age. The St Kildan style of drystone walling had been basic and efficient but visiting wallers tended to rebuild the walls in their local styles. Building patterns normally associated with the English Lake District or Yorkshire can now be seen around Village Bay. A drystone waller working on historic sites should match the repair with the local style; otherwise the importance and impact of these structures will be diluted.

Since 1997, the army has turned work over to civilian contractors. They make sure the radar; the generators and the buildings are kept in good order. St Kilda is now part of

The soldiers learned to live with the local wildlife, accepting the St Kilda field mice nibbling their chocolate and the fact that the Soay sheep had the right of way on the island roads. The song of the unique St Kilda wren was the soldiers' morning wakeone of the few live-firing missile ranges in Europe but these tests are fairly rare nowadays. Only a couple of dozen contractors now occupy Hirta with visits from seasonal researchers and conservation workers during the summer. There is also a steady stream of visitors on cruise boats and yachts, if the weather is good. Some of the contractors are native Scottish Gaelic speakers from the Outer Hebrides. That language can once more be heard on St Kilda.

Life was certainly not easy for the islanders who struggled to make St Kilda their home, but they appreciated its isolation, rugged beauty and the wildlife it attracts. These gualities, along with its history and unique stonework, make it a simply magnificent place to visit. Getting there today requires more than a little time and money, but those who do so feel it is definitely worth the effort and expense.

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The Edge of the World (1936).

Directed by Michael Powell, produced by Joe Rock and based on the St Kilda evacuation. He went on to direct many fine films including 49th Parallel, The Black Narcissus and The Red Shoes.

Nick Aitken is a drystone dyker working in the Highlands of Scotland. He first visited St Kilda in 1975. followed by many visits through the 1980s and more recently in 2004. All photos except for the one of the villagers on the street are his. Nick is currently working on a Dictionary of Stone and Stone Related Terms, all contributions gratefully received at stonedyker@talk21.com.