



ESTHER CHILTON
WRITES IN PRAISE OF
BATS



BILL STREEVER
SEARCHES FOR
VAQUITAS



STEVE SHELLEY
LISTENS TO 'THE
STONES SPEAK'



ROBBIE CHEADLE
SINGS ABOUT
ELEPHANTS



BEAR ENVIRONMENT

THE MAGAZINE OF THE SOCIETY OF ENVIRONMENTAL AUTHORS & JOURNALISTS

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Dr Robert Tansey has donned his archaeologist's hat to lead a dig at Littleborough in the English county of Nottinghamshire. It's the site of an ancient crossing of the River Trent on the old Roman road that ran between Lincoln and Doncaster. See p17.

Editor's Introduction

Welcome to our latest magazine, as we feel winter moving in again in the UK, we are donning our hats and coats once again. Our summers been generally very poor, a few days sunny but mostly wet. A very bad year for our insects particularly the butterflies, numbers are well down on last year.

Steve and I went to the Global Bird Fair back in July, where Steve filmed several events for Tim and Penny, the event organisers. We met a number of interesting people, many from all over the world. Steve has more recently been on a mission to research the stone circles of England and has just completed a book on the subject, which you can read about below. He's also been trying out some newly affordable hard back print-on-demand options. It's not bad when you can get a full colour hardback printed one off for around £5.

We have also decided to use the Society as a publishing imprint. If anyone wants to self-publish but with a credible 'Published by' on your cover, do get in touch and we can discuss how this works.

Look for our regular contributors who have kindly answered our call for contributions. We really would like all our members to send in contributions and share your experiences. It's a great way to extend the reach of your writing and showcase your latest passion.

NEW ASSOCIATE MEMBER: Jackson Ribler of Miami, Fl., runs a small printing press and is currently taking submissions for their quarterly magazine under the theme of 'Haunting.' Max word count 5,000, deadline December 15th. See <https://everythingmatters.press>.

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The Crucial Role of Bats

by Esther Chilton

Bats are often portrayed as vicious and nasty – especially when it comes to movies. I personally think they're beautiful creatures and admire what they do for the environment. Here are some reasons why bats matter.

Pollination

Over 500 species of plant rely on bats to pollinate their flowers. This includes banana, mango, balsa and agave. The name given to the pollination of plants by bats is chiropterophily.

Because the flowers pollinated by bats are often bell-shaped, there are bats which have evolved specifically to reach the nectar right at the bottom. An example of this is the tube-lipped nectar bat of Ecuador. This type of bat has an exceptionally long tongue so it can get to the nectar.



Seed dispersing

Birds, of course, spread the seeds of trees and plants. But so, too, do bats. As well as plants relying on bats, bats rely on the flowers and fruit of plants for survival. So some bats, such as the tropical fruit bat, carry seeds inside them during the digestion process. These seeds are then excreted often a substantial distance from the original plant. As they're excreted, they fall to the ground already fertilised, which in turn aids their development.

Deforestation and habitat loss is a big problem, so bats' role in assisting regrowth is an essential part of our survival.

State of the environment indicators

Here, in the UK, bats make up nearly a third of all mammal species. They can be found in many different places. We often see them in urban areas, but their habitats include woodlands, wetlands and farmland. Because their habitat is so widely spread, it can be useful to study them as they can inform us about the state of the environment. Bats eat common nocturnal insects and we have seen that bats are sensitive to changes in the way land is used. In recent times there have been a lot of changes in land use practices, including vast alterations in landscape and intensive farming. These changes also create issues for lots of other wildlife species, thus bats are great indicators of biodiversity.

Insect control

Insects are fed on by over 70% of all species of bat (in the UK, all of our bat species only eat insects). So it's clear that they're vital in controlling the numbers of insects. This means they help to keep insects away from gardens and very importantly, crops. In some places, they are so good at controlling the insect population, that there isn't a need for pesticides.

Sadly, it isn't all good news for bats with pesticides still being widely used in other areas, meaning there is a lack of insects for them to eat. The increase in destroying wildlife habits for houses and farmland also causes them a major problem.

Climate Change and a Positive Outlook

by **Bill Streever**

Google “Environment importance to US voters,” and what will you see? Entries titled “Understanding pro-climate voters,” “U.S. voters’ climate change opinions swing elections,” and “Climate voter power.” In my own search, I had to scroll ten entries down to see even a mention of other environmental concerns.

Conclusion: Somewhere along the line climate change stole the environmental show.

And yet in my work as a biologist and a writer, I have encountered and continue to encounter oceanic dead zones, massive amounts of plastic waste, toxins known and unknown, underwater noise, loss of habitat, overfishing, huge declines in amphibians, birds, and insects, and a host of other insults that trouble our planet.

Why then are we so singlemindedly fixated on climate change? Possibly because it seems, at least superficially, to be an overwhelming problem, a perception fueled by unrelenting media attention. But also at least in part because we have become, arguably with good reason, confident in and even optimistic about our ability to address other environmental challenges.

Some will see this last statement as heresy. An optimistic environmentalist, I have been told more than once, is not so much an oxymoron as just a plain moron. But I disagree. The environmental movement blossomed in the 1970s, reacting to what seemed intractable problems. Headlines publicized unsafe drinking water, unswimmable streams and lakes, species disappearances, DDT, rivers catching fire, acid rain, ozone destroying CFCs, and other horrors. But one headline after another fell into disuse as the root causes underlying dire warnings were sufficiently addressed to comfort a worried public.

Wallowing in apparent success stories might seem naïve. After all, few of these problems have truly been solved. But they have been managed to one degree or another, even in the face of dramatic population growth accompanied by insatiably growing consumerism, both of which render their management increasingly difficult. So while few of our successes are complete, and while arguably the entire environmental movement could be described as a holding action, collectively the undeniable progress demonstrates a single reality: We humans are remarkably clever beasts. When we find problems, we address them.

With regard to climate change, we need more of what has served us so well elsewhere. We need self-confidence, optimism, and cooperation. Without it, we are grumblers, blamers, obstructionists, doom mongers, and naysayers, refusing to accept the situation at hand not because we cannot follow the science behind climate projections but because we are quite simply afraid.

Long before the word “environment” entered the daily lexicon, the *Bounty* mutineers set William Bligh and 18 loyal men adrift in a 23-foot-long open boat. The castaways, working together, sailed thousands of miles through poorly charted waters before reaching New Holland—today’s Australia—where they could take on water and food. In his 1790 narrative, Bligh described the men who accompanied him, writing, “For if any of them had despaired, he would most probably have died before we reached New Holland.”

In addressing climate change, what if we embrace the same confidence, optimism, and cooperative spirit that saved Bligh and his men? Most Americans now believe that climate change is a real problem. Seventy-seven percent of elected officials making up today’s U.S. Congress accept the reality of the problem. The U.S. Department of Defense, for almost ten years, has considered climate change to be “an urgent and growing threat.”

While some continue to cower under the shadow of pessimism, many embrace optimism. Many believe that we as a society, working together, can meet this challenge, just as we have met challenges that have come before and just as we will meet challenges as yet unknown. The path forward remains unpredictable, but it will certainly consist of reducing carbon emissions and adapting to changes that are at this point inevitable, and both are hindered by those who say, “it can’t be done.”

Despite the uncertainties, in this lifeboat called Earth success will come not from the pessimists, but from those of us who follow in the wake of Bligh and his sailors, embracing optimism and cooperation while we build the best possible future.



Captain Bligh and his crew

Author Bio: Bill Streever, a biologist, is the award winning and bestselling nature writer behind *In Oceans Deep*, *Cold*, and *A Sea Full of Turtles*. He began his working life as a commercial diver. Later, as a scientist, he worked on issues ranging from the environmental effects of underwater sound to the evolution of cave crayfish to the restoration of tundra wetlands. With his wife, marine biologist and photographer Lisanne Aerts, he lives aboard the cruising sailboat *Rocinante*. When Bill is not busy fixing the boat, he spends his time sailing, diving, hiking, rowing a dinghy, paddling a kayak, seeing the world through the twin lenses of science and history, and, of course, writing. When in range of the internet, he can be reached at Bill@billstreever.com.

Vaquitas Not Seen

by Bill Streever

We are realistic. The odds of seeing a vaquita during our coming thirty-hour passage hover at the level of less than remarkably slim. Even swerving well west of a direct route, we will barely touch the easternmost edge of what is believed to be the remaining range of these porpoises, and by all accounts they are furtive creatures. Plus they are tiny by cetacean standards, coming in at no more than five or so feet long. But the numbers are what really hurt our odds. In this entire world, there are perhaps twenty or thirty vaquitas left alive. Or maybe infinitely fewer, as in zero. The last credible sighting of a vaquita is now a year old.

Yet we sail with hopeful minds. Because on the water one never knows what one might find. And because realism and optimism do not have to be mutually exclusive.

Waves slap the hull from two directions, coming from a cross sea that refuses to strike with anything resembling a discernible rhythm. We hear, too, the wind, fifteen knots from the port quarter, perfect for our old boat, a goldilocks wind that propels us forward at five and six knots while it kicks up the beginnings of white caps. And mixed with the sounds of air and sea we catch the puffing exhalations of a dozen bottlenose dolphins playing on our bow wave. For twenty minutes they leap and splash, they jet forward and shoot down into the depths, they circle us. Perhaps they laugh at our slow speed.



Full grown bottlenose dolphins are almost three times the size of typical adult vaquitas.

(Photograph by Lisanne Aerts.)

Isla Ángel de la Guarda sinks into our wake, falling below the horizon. We have been with the island for weeks now, at different anchorages, sometimes alone and sometimes in the company of fishermen working from small skiffs, from pangas. The island is often described as barren. No humans call it home and it supports no reliable freshwater. But innumerable snakes, lizards, and birds reside on its steep rocky hillsides, sea lions patrol its coast, and the sandy bottoms of its bays are alive with guitar fish and electric rays, more than we have seen anywhere else in the Gulf of California.

Seen in the right light, the island is not so much barren as fecund.

The sun sets. A full moon rises. We flip on navigation lights. We eat pasta. The wind dies to five knots and then builds again, gusting to twenty. We reef, meaning that we reduce the size of our sails. The wind softens and we shake out the reefs.

Our radio issues not even a squawk. We are, in terms of human company, alone. We are equally alone in terms of vaquitas. That is, none yet.

But not seeing is no excuse for not watching. Vaquitas, if any are here and if luck allows, could be visible on such a moonlit night as this.

For context, the “we” to which I refer includes only my wife and I, two biologists who, ten years ago, exchanged anything resembling mainstream for a life afloat. We said to ourselves and others that we wanted to fill our weeks and years with something more than the solemn study of plants and animals. We hoped to live closer to nature.

On balance, we have traded up. We have compensated for lost conveniences and financial wellbeing with experiences that would be accessible in no other way. Passing days are marked by the movements of sun and stars rather than by morning and evening traffic. Weather exists as something far more than a topic of conversation. Consumption that was once driven largely by advertising is now driven mostly by necessity. Land forms take on meaning as clues to what lies beneath the waves, such as shallow unmarked rocks capable of sinking our boat or heavy sand of the sort perfect for anchoring. And we consort constantly with other species, with their habitats and communities, with changing ecosystems and biomes. We do not do so in an effort to collect data, but casually, respectfully. Whale sharks swim nearby, and we slip into the water with them. Likewise, but far more often, sea turtles. Eared grebes, brown pelicans, loons, frigate birds, and a hundred others visit frequently. In Guatemala, howler monkeys announced dawn. In Panama, sloths and arboreal ant eaters hung from branches. On the Pacific coast of Costa Rica and Mexico, for months on end, we mingled with American crocodiles. And for some time now here in the Gulf of California we have sailed with humpback whales as well as blues, orcas, and fins.

Despite what it might sound like, we are not inventory keepers. We are merely interested. Strike that. We are merely hyper interested.

Last year, a few days before my birthday, the United States Fish and Wildlife Service published the names of twenty-two animals and one plant that would, henceforth, no longer be included on its list of endangered species. The agency did this not because the species had been saved from extinction, but because they had in fact gone extinct. Eight species of mussels would no longer filter water, eleven species of birds and one species of bat would forever give up flight, two species of fish would never swim again, and an endemic Hawaiian mint would cease to send up shoots.

The vaquita, for now, has not made the ranks of the tragically delisted. And yet here we are, seeing as few as we hear, which is to say exactly none.

The trouble with vaquitas is that they have not learned to thrive when confronted by a thousand cuts. But wait, some might say. It is gillnets that kill vaquitas, nothing to do with cuts. They drown in gillnets.

To envision a gillnet, think of a volleyball net made of fine monofilament plastic line. Now lengthen that net until it is three or four or six hundred feet long. Attach floats to the top and weights to the bottom. Dump it over the side. Wait. Below, passing fish will not be encircled by the net. No, they will try to swim through it and become stuck, fouled. In the language of the trade, they might be gilled, wedged, snagged, or entangled, and while the differences between each form of capture are real, they are all nothing more than ways of becoming hopelessly trapped in a mesh made from line so fine that it is all but invisible. Gillnets efficiently catch fish, both those desired by fishers and those that will be thrown back, alive or dead. They also catch sea turtles, diving birds, and vaquitas.

The Gulf of California is a good place to see gillnets. In every coastal village, they can be found in stacks along the beach. They can be seen in the ubiquitous pangas used by fishermen. Out on the water the nets are everywhere, both attended and unattended, night and day. I can say from experience that it is not possible to sail in a straight line up the Gulf of California without either passing over and possibly becoming entangled in a net or changing course to avoid the potential inconvenience. I can say, too, that the more I know about gillnets the less tasty fish tacos become.

Gillnets are, in places, illegal. Among these places is the upper Gulf of California, vaquita habitat. But by definition laws do not stop poachers. The poachers here pursue the totoaba, a fish that outsizes the vaquita and that is valued not for its flesh but because its swim bladder can be dried and sold for thousands of dollars.

And laws do not stop lost nets from drifting around, ghost fishing for months or years on end before permanently washing up on some beach or rocky shore.



The bottom trawls used by shrimpers bulldoze every inch of seabed they can reach.

(Photograph by Lisanne Aerts.)

An international conservation organization works with the Mexican government in vaquita habitat to stop poaching and to recover abandoned gillnets in what is called Operation Milagro. Milagro is of course Spanish for “miracle,” perhaps implying that nothing short of a miracle is needed to save the vaquita.

In 2019, this organization found what they believe was a decomposed vaquita in a gillnet. In 2020, a video of what appeared to be a dead vaquita in a gillnet made the rounds.

I know of no gillnet fatalities reported since then. Why? Maybe because fewer people have been fishing since the pandemic. Or maybe because fewer people are watching over the fishermen. Or maybe because there are fewer vaquitas to be caught.

But back to death by a thousand cuts. The seas, our seas, suffer under an onslaught of varied impacts. There are gillnets, but there are also long lines, some stretching more than a mile and carrying thousands of hooks. There are shrimpers whose bottom trawls bulldoze every inch of seabed they can reach. There is overfishing in general, the stripping away of the ocean’s food web for human consumption. There are microplastics, macroplastics, pesticides, and pharmaceutical hormones in the water, along with scattered patches of spilled oil and gasoline, some mixed with plumes of sewage coming from urban centers. There are dead zones resulting from fertilizer runoff. PCBs and mercury, to name just two poisons, are ubiquitous. There is climate change and ocean acidification. Introduced species, including pathogens and parasites, should not be forgotten. Nor should underwater noise from ships, sonar systems, and oil exploration.

No one thing kills off our oceans.

The surprise behind all of the insults and assaults we humans throw at the oceans is not the decline of various species of marine life, but rather that so much remains alive.

All of which makes me wonder if removal of every last gillnet from the Gulf of California would save the vaquita from extinction. While I would love to believe this to be the case, I cannot. Yes, gillnets kill vaquitas, but if it were not the gillnets it would be something else. Which is not meant to suggest that conservation organizations should halt their efforts, but rather to hint at the possibility that broader solutions are needed. People have to change their ways across the board.

Which, of course, they will not do. Certainly not before it is too late for the vaquita. And for thousands of others.

At three in the morning, the moon remains bright and high in the sky, and yet I see nothing of the thousand cuts. And that is their reality—they are, more often than not, invisible. I see only a luff in the foresail, indicating a change in the wind’s direction. In response, I alter course. I winch in both main and jenny sheets, tightening the sails as the wind swings more to the north. But even with this change the breeze

continues its comings and goings, an intermingling of dead airs, zephyrs, and gusts, but on average it moves us in our desired direction at a speed respectably more than a drift.

Shrimp boats appear. They do not shine with the indicative green and red glow of navigation lights. Shrimpers work with back decks so brightly lit that crews can wear sunglasses right through the night, but such brilliance renders their navigation lights invisible.

It has been months since our radar last worked, and in the night we have to guess where the shrimpers are headed and how close they might be. When we hear their engines, they are too close. We change course. They change course. They play with us in a game that is no doubt more fun for them than for us.

No vaquitas. Which is not at all surprising in this sea of shrimp boats.

Dawn. The moon sets and the sun rises. We raise land, as the old-time sailors would say, referencing the appearance of shore emerging from a horizon upon approach. And with the raising of land we see more boats. The shrimpers now share space with party boats and sport fishers. Tourism lives and thrives in Puerto Peñasco, our destination.

John Steinbeck and his friend Ed Ricketts wrote of a collecting expedition in the Gulf of California in 1941, calling the Gulf, as many still do, the Sea of Cortez. The two men were friends, and Ed Ricketts was the man on whom Steinbeck modelled his character Doc in the novel *Cannery Row*. None of that is terribly important. What is important is that the Gulf of California has changed since the two men passed through. Sixty-four years after they were here, a group of scientists made a follow up voyage, intentionally sampling where their predecessors had sampled. In a paper called “Remembering the Gulf: changes to the marine communities of the Sea of Cortez since the Steinbeck and Ricketts expedition of 1940,” they reported finding fewer of almost everything. And they found that the ranges of many species had shrunk.

This is sad to hear, especially since so many still see the Gulf, incorrectly, as nearly pristine. The harsh reality is simple: The Gulf of California has become a diminished place.

As disheartening as all this may be, the paper’s abstract ends on an even lower note. “The changes we observed with historical perspective,” wrote the authors, “are in agreement with documented changes in ocean and coastal ecosystems around the world.” In other words, ocean and coastal ecosystems are diminished everywhere.

The paper was published in a scientific journal, an erudite outlet that strove for at least the pretense of objectivity and the absence of emotion. As such, it is not possible to know if the authors themselves understood just how much sadness the end of their abstract conveyed.

For the last thirty hours, sleep has been almost as elusive as vaquitas. We douse our sails as we enter the protection of the breakwater in Puerto Peñasco. Shrimpers occupy most of the harbor’s slips, but we find a vacant dock near a shipyard. We sleep for several hours.

Later, wandering around town on broken sidewalks, stepping through windblown drifts of Sonoran Desert sand trapped by curbs, moving beyond the strip joints and the broken windowed buildings close to the docks, we find our way to the tourist district, to the Malecon. And there we come upon the iconic El Camaronero, the shrimper, a monument. Atop a pedestal, a towering bronze man, shirtless and ridiculously fit, rides a giant shrimp. Art often says different things to different people, but this particular piece offers a clear message: It is shrimp that make Puerto Peñasco, shrimp and the brave men who bring them back from the sea.

Later we stumble upon a second work of art. It is a mural that could be described as high-end graffiti. An artist has painted a mermaid and a vaquita on the once whitewashed cinderblock wall of an apparently abandoned building. The mermaid sports auburn hair and bare breasts. But where the face of an ordinary mermaid would display beautiful features, this face is skull-like, shriveled. She is a Day of the Dead mermaid with the kind of face seen everywhere in Mexico in early November, a Día de los Muertos face. And with her right hand she reaches out to touch the vaquita’s nose. The touch it seems to me is not one of friendship or

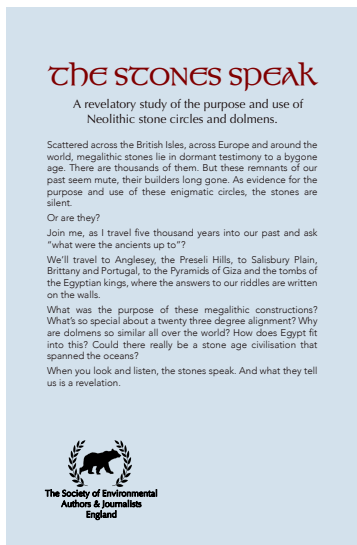
kinship, but of farewell. And not farewell in the sense of hasta luego, see you later, but rather adios, goodbye, see you never again. Or from its literal roots, a dios, meaning simply “to God.”



Wall art in Puerto Peñasco, Mexico. (Photograph by Lisanne Aerts.)

An Extract from 'The Stones Speak'

by Steve Shelley



THE STONES SPEAK
What were the ancients telling us?



by
Steven V Shelley

Steve has just uploaded his new book onto Amazon as both paperback and e-book, under the Society imprint.

These stones, enormous though they are, are everywhere, thousands of them. Five thousand years ago, something big was going on.

In terms of the physical arrangements of the circles, there is no standard shape or size. The number of stones varies from less than ten to more than fifty. The regularity of the circles varies too. Some are really circular, others elliptical or truncated, some decidedly egg shaped. Some stones have been carefully crafted, tapered at the top or smoothed on their inner faces. But many look like they're just natural boulders dragged into place. Some are tall, others short. Some have matching heights, others don't. Some have this enigmatic four-stone cove, others don't. Some are aligned with the sunrise, others with sunsets. Some are set amongst other arrangements of stone like burial cairns or processional ways. Some are part of an array of larger and smaller circles. Others are quite standalone.

There is some regional similarity, which might mean there were local teams of experts with the same basic skills who put their own twist on the generally accepted design. But, while there is no clear pattern regarding actual location, there is a clear preference for high vantage points and far horizons. They sit purposefully in their particular landscape. And for the most part they do seem to be constructed with purposeful alignments.

It doesn't make much sense to speculate about the stones without considering the people who built them and who used them, and their ways of life. As a starting point, we can observe that this was an extended period of history (3000 to 1500 BC) in which these lands were well settled, their people well fed and largely at peace with each other.

As individuals, small bands or entire communities, people were highly mobile, although their highways across the country were no more than footpaths through the woods and across the hills. To judge from the spread of cultural traits like megalith building, long distance coastal and over-seas travel was commonplace. They had food, they had shelter, they had security and they had community. We know this because they had the time – and the manpower – to pursue the intellectual and physical rigours involved in building stone circles. Following the principles of psychologist Abraham Maslow's hierarchy of human needs, their basic needs were satisfied, leaving them free to explore what he termed 'self-actualisation'.

As for the landscape, it was mostly wooded. The Romans, when they came, called it a land of oak trees amongst which the Druids wrought their magic. The Romans hated the Druids as a challenge to their own authority and eventually pursued them to a collective demise in Anglesey. But we're getting ahead of ourselves. There would have been a great deal more wildlife than we're accustomed to now: wolves and bears, but no rabbits or squirrels. They came later. Our Neolithic people did herd sheep and goats but what

there were in quantity were wild pigs and aurochs, massive big horned cattle. The remnants of these species, along with hazelnuts and – at the coast – shellfish, suggest this is the diet our Neolithic people mostly consumed, along with some ancient grains they planted. It's perhaps no coincidence that the Neolithic stone builders disappeared at pretty much the same time as aurochs became extinct, around 1300 BC. It's fair to assume a connection.

It's interesting to consider what they didn't have: electricity, transport, horses, money, gold, tin, copper, iron or metals of any kind. Nor writing nor any means of recording information. Their collective memories would have been maintained through storytelling and song. It's possible that the stones played some part in this, as do beads (for example), in some cultures, to this day.

People were much more closely connected to nature, to the heavens, and to the cycle of the seasons than we are now. They had plenty of time on their hands. Nothing much changed for hundreds of years at a time. They spoke a different language, of which we have no trace. So-called Celtic languages came along much later. But physically and cognitively, they were identical to us.

The structure of their society, we can deduce directly from the stones, must have been much the same as ours. Stone building demanded the same range of skillsets that any modern organisation would need for virtually any endeavour. You'd need a visionary leader who could persuade and motivate the masses, who was privy to valuable information, who could command respect, and negotiate access to resources. You'd need a range of scientists and technologists, with job titles like geologists, surveyors, map makers, engineers, wood cutters, tool makers and builders. You'd need a lot of labour, as well as the management structures to supervise, reward and chastise as necessary. You'd need trainers. And you'd need a consistent supply of support services such as food, drink and accommodation.

If there are close parallels in this, then perhaps there are other aspects of similarity we could look at. For example, throughout the ages, people have gathered – or have been gathered – into communal places variously described as amphitheatres, coliseums, arenas, stadiums and theatres, venues employed for the purpose of sports, trade, entertainment, rallies, celebration, weddings, funerals and religious fervour. I think it's perfectly reasonable to assume our stone circles fulfilled similar communal needs.

The later construction and use of churches and cathedrals might shed some light on our Neolithic mystery. England in particular is renowned for its square towered churches and magnificent gothic cathedrals in cities like York, Lincoln and Winchester. The churches typically date to the era of the Norman invasion after 1066. These were, as a device of the all pervading Christian religion, a means of public administration and control. But their construction entailed a great deal of devotion. Stonemasons were motivated by faith that they were building in celebration of a heavenly father as much as they were working for the bishop who might pay their wages. A promise of salvation would have helped too.

I suspect our Neolithic builders were similarly motivated by a bigger picture: "If we don't build these circles, the sun won't rise tomorrow!" It is perfectly possible that they held onto distant folk memories from a time when the sun didn't rise. Our stone circles may provide some of the earliest evidence for a kind of sun worship, reflected down the ages as Ra, Aten, Apollo, Mithras, Sol Invictus, and in images of the Christ, as well as in other cultures around the world. Indeed, it's an oxymoron that human life depends upon the sun, not too much but not too little. In this context, stone circles were in part a celebration of survival, the restoration of stability, a time of well-being.

Our mental conditioning makes it difficult to fairly assess ancient pagan, pre-Celtic constructions without using religious terminology. These circles of stone were not temples. But they played an important role in an annual cycle of seasonal festivals, celebrations, rites and rituals. The ancient Celtic calendar, attributed to Ireland, lists eight festivals at key points in the annual solar cycle: Imbolc (1st February), Ostara (21st March), Beltaine (1st May), Litha (21st June), Lughnasa (1st August), Mabon (21st September), Samhain (31st October), Yule (21st December). In the absence of a calendric dating system, there would have been a need to plot such markers of the annual cycle from the movements of the sun on the horizon.



Part of the henge and circle at Avebury.

I'm not a devotee of purported links between our circles and astronomy, not because such links don't exist but because there would have been easier ways to follow the sun and anticipate the seasons using simple observations of nature. You wouldn't need an entire circle to cast shadows at a particular angle. And for greater precision, you could use sticks for sighting alignments and aligning angles. It has been suggested that the circles could have been used to help people reset their own mental calendars, but then you'd have to be able to remember when to visit the circle!

It's also been suggested that some alignments encoded movements of the moon as well as the sun, perhaps also pointing to certain stars. Again, this may be true. At Stonehenge, for example, precise sight angles were built intentionally into both the overall layout and the spacing and orientation of marker and other outlying stones. But it's hard for us to comprehend the purpose, other than extreme showmanship. The brightest stars, such as Sirius for example, barely rate a mention. The late megalithic archaeologist Aubrey Burl considered such astral alignments as unproven and more likely opportunistic.

We might also remind ourselves that the sight lines from some of these circles could have been surrounded by trees, and, in these islands, there is always the issue of the weather. The chance of actually observing a particular sunrise or sunset in the right place and at the right time would have been hit and miss. No, the effort in transporting and erecting giant stones demands further exploration and explanation.

There seems to be little evidence that burials customarily took place within stone circles. Although some contain 'cist' tombs, this is not universal and might in any case have come from a different era. The absence of burials does not however preclude reverence for, and celebration of, the dead, the ancestors. The ubiquitous presence of crows, jackdaws and ravens inclines me towards this. In our day, we still leave flowers and mementos on our ancestors' graves. People still do too in the circles, ribbons and other mementos, in loving memory and to connect with their past. The patriarchs of the Bible raised stones as memorials to significant people or events. I'd like to think that the story of our stones includes a chapter in which families or communities, perhaps from far afield, carried or otherwise sponsored the erection of a stone, if not in the main circle, for a place in one of the ceremonial walkways, in memory of their own.

The stone circles contain thousands of years of memories, but by and large, they were a place for the living. Compacted ground found by archaeologists inside some circles suggests patterns of stamping, jumping and dancing. Mass processional 'circumperambulations' are held to this day by Muslims attending the Hajj pilgrimage around the Qaaba in Mecca. It has been suggested that such movements of people imitate the rotation of the stars in the night sky and may lead to heightened states of awareness. In the Hajj ceremony, the procession moves anti-clockwise. This direction is unlikely to have been the case in pre-pagan Britain where the preference would have been for 'deosil', or sunwise, rather than the contrary 'widdershins'.

Within the Rollrights stone circle in Oxfordshire, there is a well worn pathway around which people purposefully stride, mostly deosil, sometimes with their dogs. Perhaps they're picking up the geomantic energy which is considered to flow in or through these circles. The Rollrights is reckoned to be one of the

country's oldest circles. It is thought to lie near the intersection of two ancient trading routes, so it may well be that our circles fulfilled another function as a kind of market or exchange where people converged to trade goods and livestock, and perhaps their own services. Neolithic Britons were by and large farmers, although more migratory than settled, and as in all human societies, food supply would always have been a priority.

Lying as they do on these ancient paths and pilgrimage routes, it may also mean the circles, and their surrounding settlements, served as landmarks, and to provide hospitality for travellers, similar to the function fulfilled in later years by groups such as the Templars with hospitals and auberges along ways like the Camino de Santiago.

As the Romans before them had feared the Druids' magic, so the Christianising forces feared the magical energy of the stones. They put it about that dancing and merry making, especially on the sabbath, were the work of the devil, to be punished by petrification. But while a number of stone circles found themselves with a Norman Christian church in their midst, their fear of the energy of the stones prevented them from much actual destruction. From the Rudstone Monolith in Yorkshire to the Cove at Stanton Drew, churches were sited so as not to disturb the energy line.

Since fertility and procreation formed part of the ceremonial and ritual function of the circles, it's not too big a jump to suppose that sex was either an intentional or consequential outcome of a visit or communal celebration. This was certainly the case elsewhere. Herodotus, in 'The Histories', seemed surprised that the Egyptians had banned sexual intercourse within temple precincts while it was still commonplace in other countries. In Britain, this would have provided further excuse for later religious suppression.

Alongside the various civic and secular purposes for which stone circles were employed, we must not lose sight of their magical properties. The energy of the circles and their alignments is deeply rooted, part and parcel of the magic of the stones and their sites. They were in their time sites of magical rituals, an earthly reflection of the heavens, as above, so below. As Masons and Templars brought details of the cruciform layout of Christian churches, with their rose windows and eastward alignment, so too would our Neolithic celebrants have wished to reflect their own view of the heavens on their bit of earth.

Attempting to deduce the stones' purpose from their nature may be no more productive than comparing the building materials used at sites such as the Trafford Centre, Wembley Stadium or Windsor Castle, or comparing the alignments of cooling towers or offshore wind turbines. Stone circles were like the churches, stadiums, town halls and shopping malls of their day. They were placed everywhere where there were stones to build them. They were just 'there', like they'd always been.

Our society today mirrors that of the Neolithic era surprisingly closely. Traits within their society have reverberated down the millennia to haunt ours now. Some are a source of delight, such as our need to punctuate the year with festivals and celebrations. But there is a darker side to our inheritance. We've lost our reverence for ancestors, and we've lost our reverence for nature. We can rarely see stars from our light polluted towns and cities. And in no sense do we live in reflection of the heavens.

In two other ways, our societies, separated by five thousand years, differ greatly. This seems to have been a stable society where little changed over thousands of years. Time passed much more slowly. You could happily invest your effort into a construction project which would stand no chance of being completed in your lifetime nor even in your children's. But you'd still do it. In those days, there was no expectation of instant gratification. Then there was the issue of money. There wasn't any. I'm left wondering how you might calculate a return on investment for such grandiose projects. What would have made it worthwhile? Where would the necessary resources come from? How would people be remunerated or rewarded for their labours?

It seems certain that our Neolithic forbears bequeathed us a hierarchical society in which the elite pursue power and self-enrichment. But we know now that the unconstrained consumption of finite natural resources comes at the expense of the environment. If that proves to be unsustainable, perhaps we also now know where we can trace its roots.

Elephant Scare

A song parody by Robbie Cheadle

Elephant scare
Life plays tricks; it's so very unfair
The picture was gorgeous
No-one said you must be cautious
The bush is wild
And humans have the natural world defiled
Oh dear, elephant scare
Nothing for this outcome could you prepare

Among the trees
The elephants cower, filled with unease
The matriarch you didn't even see
Her alarm the outcome did guarantee

Elephant scare
Why weren't you warned? How were you so unaware?
She charged, the car rolled
She trampled, actions uncontrolled

Elephant scare
The carnage a scene of total despair
Elephant scare
Nothing sudden death can repair

Among the trees
The elephants cower, filled with unease
The matriarch you didn't even see
Her alarm the outcome did guarantee

Elephant scare
Why weren't you warned? How were you so unaware?
She charged, the car rolled
She trampled, actions uncontrolled

This is a parody of Enola Gay which you can listen to here:

[Orchestral Manoeuvres In The Dark - Enola Gay \(Official Music Video\) - YouTube](#)

My song parody is based on an incident earlier this year when an elephant attacked a vehicle full of tourists. Just to be clear, the guide in this case was attempting to protect the boma (building with a roof and open sides) at the look out point which was full of people. Elephants are not sweet and gentle. Elephants are powerful wild animals that must be treated with respect and caution.



Elephant feeding: this was during the winter which is why its so dry (Madikwe is a semi desert area)

Right: My painting (watercolour and acrylic) of an elephant in the puddle by Robbie Cheadle.



The difference between African and Asian elephants

by **Robbie Cheadle**

A couple of years ago, my family visited an elephant sanctuary near the Cradle of Humankind. For those of you who don't know the Cradle of Humankind, it is an area in South Africa where many fossils, tools, and other traces of early humans have been found.

We also visited the Sterkfontein Caves where the 2.3 million year old fossil of Mrs Ples is on display, but this post is about the elephants.

We participated in a guided tour of the elephant sanctuary and one of the discussions with the guide revolved around the differences between African and Asian elephants. I thought it was quite interesting.



Can you spot the differences. African elephant, left. Asian elephant, right.

They are as follows:

Size: African elephants are much bigger than Asian elephants. African savannah elephants weigh approximately 8,000 kg or 9 tons and are between 3 and 4 metres tall (10 and 13 feet) at the shoulder. Asian elephants weigh approximately 5,500 kg or 6 tons and are not taller than 3,5 metres at the shoulder.

Ears: African elephants have much bigger ears and they are shaped like the continent of Africa. Asian elephants have smaller, round ears. African elephants have larger ears because they dissipate heat through their ears and Africa is hotter than Asia.

Head shape: African elephants have rounded heads and Asian elephants have a twin-domed head.

Tusks: Both male and female African elephants can have tusks, but only Asian male elephants have them. Not all elephants grow tusks.

A lot of people have romanticised ideas about elephants and think they are cute like Dumbo. This is not true. African elephants are very territorial and highly protective of their young. They can be exceptionally dangerous.

The dig

by **Dr Robert Tansey**

For the last year or so, Steve and I have been reviewing the Roman occupation of northern Nottinghamshire with the recently formed Retford Archaeological and Metal Detecting Group. As a result we have been granted permission to field walk the site of a former Roman town at Segelocum (Littleborough), Nottinghamshire. Alongside this we have permission to run a dig in a large local garden, already we have found a Roman coin. This is an exciting local project for us, we are working with the local museum to have our finds identified correctly. Several of us working on the site have a degree of archaeological training. We will update readers on our progress.



End notes

I would like to thank Steve for re-establishing this magazine in its new format, I think it looks much more professional and impressive.

Again, I would like appeal to all our members to contribute to our pages, we would love to have some of your articles of interest, even if they are from previous publications.

We wish you all a happy Christmas and a fantastic New Year.

Robert Tansey