



The Beagle project aims to build a seagoing replica of the famous ship on which Charles Darwin made his 1831-6 circumnavigation, a voyage that Darwin said 'was by far the most important event in my life and has determined my whole career'. Beginning in 2009, the bicentenary of Darwin's birth, the replica will retrace the voyage that inspired Darwin's theory of Natural Selection and changed forever mankind's perception of our place in the natural world.

Beagle News

The office is now set up, with the help of some generous donations of equipment through the local Freecycle group and others. The office telephone number is 01646 650050; normal hours are 9:30 to 5:30 on Tuesdays to Thursdays. Email address is office@thebeagleproject.com.

We now have an official partnership with NASA including a link with the space station in 2009 to conduct joint experiments. This exciting development will help seed additional partnerships and funding.

For the nautical coves amongst you Perry, our administrator, will be at the Southampton Boat Show this year with a long list of equipment needed for The Beagle. Perry will be the one making a nuisance of himself badgering most suppliers for freebies and heavy discounts.



Beagle Funding

Work continues apace and all your contributions to date have enabled the office to be set up and a lot of progress to be made. We have also had an excellent donation from The Cothill Educational Trust.

For the Wellcome trust, The Beagle project has been accepted as part of the Darwin's Children process; we have been asked to submit further details for their October workshop and have been given a modest grant to develop ideas.

Donations can be made online via the website (www.thebeagleproject.com) or by sending a cheque, made payable to The HMS Beagle Trust Wales, to the office at the address below. Thank you for helping us to get this far!



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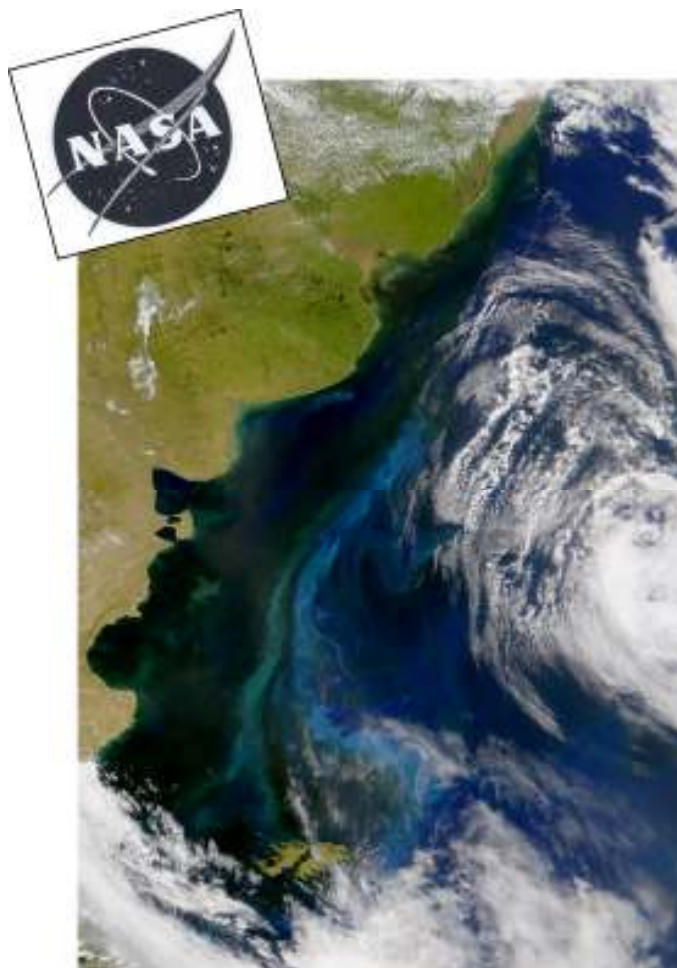
The pale blue dot... and some rather fascinating aquamarine streaks

HMS Beagle hosted not only Charles Darwin's seafaring adventures but also his intellectual adventures, the results of which have had a profound and lasting impact on science and society.

Rather than replicating 19th Century scientific methods or simply providing a maritime backdrop for Darwin200 celebrations, we intend for the Beagle to host novel scientific research projects of international scope and relevance.

In this column I will highlight one of these projects for every issue. Since all of us in Beagledom are a-twitter over our newly minted collaboration with NASA, I can't resist starting with that. To begin, permit me an homage to the late great cosmologist-communicator, Carl Sagan. At no time was Sagan more eloquent than when he waxed lyrical about the "pale blue dot", our precious earth, set, as he said, in the "great bastion and citadel of the stars".

Nothing comes close to the image of our planet from space for communicating in an instant the wonder, vulnerability and mystery of our shared home. Pictures from space can also have more direct scientific relevance, such as this NASA picture of a plankton bloom off the coast of Patagonia. Scientists can hypothesise about what's going on in the different ribbons of colour you can see there, but it takes real work on the ground to validate and calibrate those sorts of inferences. Enter the Beagle. Imagine it...



NASA Astronaut on the International Space Station: "Greetings, Beagle, you're about to enter a plankton bloom."
Beagle crew: "Thanks, we'll check the continuous plankton recorder and prepare to take a metagenomic sample."
Astronaut: "10:04am Beagle, you are moving into a new zone of the plankton bloom."
Beagle crew: "Roger that, ISS, time point marked on continuous plankton record and metagenomic sampling filters replaced."

After follow-up analyses under the microscope and DNA sequencing back in the lab, the next time NASA photograph a bloom from space, we'll know what the pretty colours mean.

Now, the observant among you will have noticed that I slyly slipped a foreign language into the exchange above. What on earth is "metagenomics"? It's a simple breakdown: "meta" = in the midst of, among, with, and "genome" = the totality of genetic material from a single individual. So, metagenomics is simply the study of the amalgam of genetic material in an environmental sample containing more than one individual organism. It is an especially powerful tool for documenting and monitoring the diversity of life in the most difficult of environments: the ocean.

In the next issue, I'll explore metagenomics in more detail, but in the meantime, let's give Professor Sagan the last word: "Somewhere, something incredible is waiting to be known."

Dr Karen James is The Beagle Project Director of Science. Her day job is to fiddle with plant DNA at the Natural History Museum in London. You can read more of Karen's writing on the Beagle Project blog (<http://thebeagleproject.blogspot.com/>) here she posts under the blog alias 'Nunatak'. If you have a Beagle science project idea, please email her at science@thebeagleproject.com



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Beagle Banter

This is the letters bit, your chance to send in any comments or observations about all things Beagle and Darwin. You can send letters to the office at the address on the front page or by email to office@thebeagleproject.com (If you make the subject 'beagle newsletter' this will help a lot).

We have had lots of encouraging comments from all over the world, many from young scientists eager to participate and join the Beagle to collect samples. So sharpen your pencils and send us your thoughts.



Beagle Facts and Artefacts

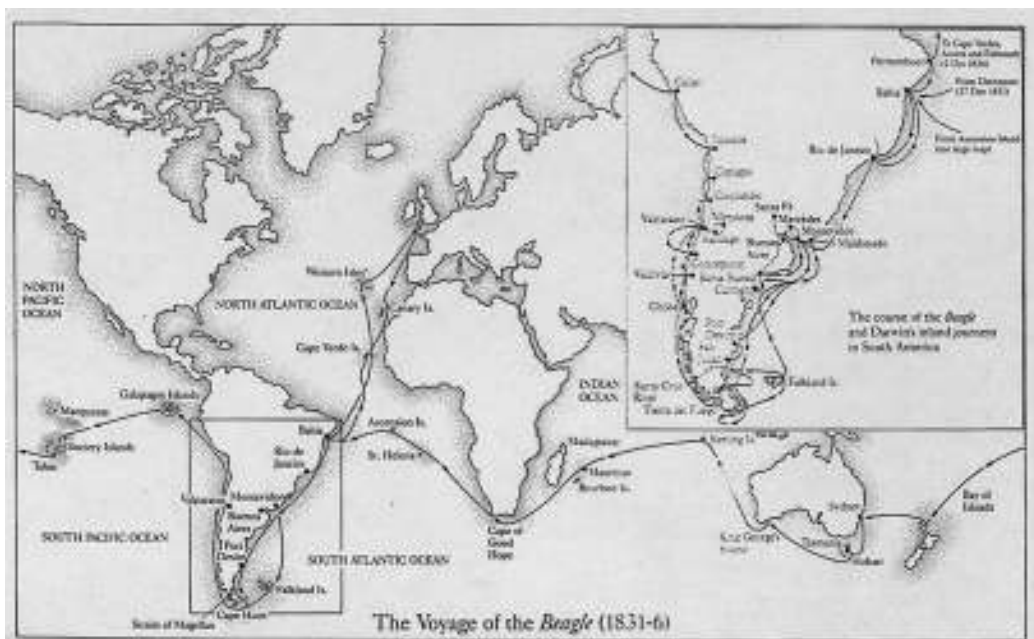
An interesting Beagle artefact has come to light, thanks to Albert Shell in Tennessee, a self confessed Beagle groupie and die hard Darwinist.

This is chart number 1307 which was surveyed during the 1831 to 1836 voyage, printed (from engraved copper plates) and published by The Hydrographic office in 1840. The chart first appeared for sale in the 1841 chart catalogue in the 'supplement' along with 63 other charts for the east coast of South America originating from Captain Fitzroy and his officers.

The area surveyed is on the coast of Chile a few miles north of Valpariso and was, in all probability, surveyed by Lieutenant B.J Sullivan. There are three areas on the chart, Maytencillo Cove, Pichidanque Bay and Ligua Road. The surveys were undertaken between April 25th and May 4th of 1835, at the time Darwin was on his last walk in the Andes and along Chile's coast, some 400+ miles.

Fitzroy's narrative, an entry on April 25th, reads; "*Pichidanque Bay an excellent cove. Port now much used for shipping copper, and formally a smuggling place; rendered more notorious by the murder of Bucher, the master of an English smuggling vessel called The Scorpion. Who was enticed ashore and was assassinated, after which the ship was seized and plundered.*"

Albert Shell has spent a lot of time researching the origins of his chart and also has a confirmation from the UK Hydrographic office that they still hold the three original surveys from which this chart was prepared. Albert's final comment in his letter containing a photograph and information about his chart is something I am sure we can all agree with -



"This has been a fascinating journey of understanding for me on just how a tremendous accomplishment the voyage of the good little ship the Beagle was. Mr Darwin, Captain Fitzroy, Officers and crew in their voyage around the world in the Beagle truly did change he world as humans knew it, and is still changing it through their efforts some one hundred and seventy one years ago. Bravo the Beagle!"



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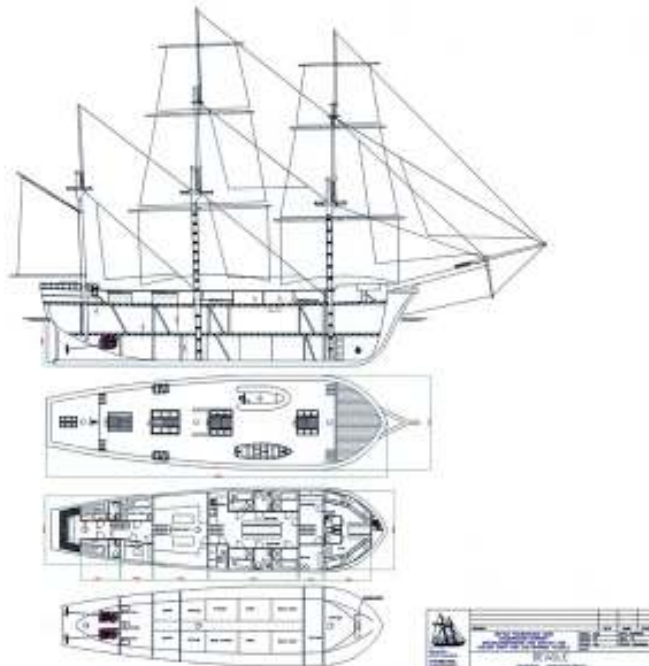
Beagle Build

And so for the question on everyone's mind—
'Has the build started yet?'

Well, no it hasn't, although the plans are drawn, shipwrights Detlev are commissioned and ready to start, and there is a Beagle-shaped working space all ready for us at Milford Haven docks, which has all the facilities for building a ship on this scale.

The missing link in the chain is the small matter of securing enough funding to let Detlev go ahead and start laying their axes into seasoned oak!

Watch this space.....



Beagle's famous passenger...

Finally, a bit about Charles Darwin—more than a beard with a famous naturalist attached!

Charles Darwin, born in Shropshire, England in 1809 was expected to follow his father into medicine, but Charles' revulsion at the gory nature of early 18th century medicine meant it was no MD for CD. Instead he went to Cambridge with the aim of becoming an Anglican priest, but beetles began to turn Darwin's mind from the infinite to the invertebrate. At the end of his degree he received an invitation to join Commander Robert Fitzroy on HMS Beagle as scientific gentleman/dining companion in residence.

Darwin, overcoming parental exasperation and the Captain's reservations at the shape of the Darwinian nose, sailed with HMS Beagle in December 1831 and said later it was the most significant event of his life. Everything that came within range of his guns, nets or rock hammer during the five year circumnavigation was collected and sent back to Britain for later examination and classification. His time on HMS Beagle gave him the raw material for his later books on coral reefs, geology, zoology and natural selection.

Returning to England in 1836 (still beardless!), he married his first cousin Emma Wedgwood and settled in Downe, Kent, to a life of writing pioneering books in many fields of science and producing ten children. His most famous book, *On The Origin Of Species By Means Of Natural Selection* was published in 1859, 27 years after Darwin first jotted down the ideas that form the core of Natural Selection. Biographies paint him as a modest, retiring man, unwilling to give offence. He felt that natural selection was 'like confessing to a murder', but his extensive collection of letters show a sharp mind very willing to stick a goad into his critics.

At some point in the 1860's Darwin grew his trademark beard. Now established as one of the most significant figures in modern science, his work was far from done and he went on to publish about orchids, insectivorous and climbing plants, the descent of man, the expression of emotions in man and the formation of vegetable mould by worms.

Darwin died in April 1882, an event recorded by his wife in her diary as 'fatal attack at 12'



Young (beardless!) Darwin



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From the Office

The office is currently in The Stableyard, Lawrenny, a nice sunny courtyard but the office itself gets no sun! With the thick welsh stone walls it is surprisingly cold in there, and even with the warmer weather Perry can be seen through the window looking like some arctic explorer wearing a warm fleecy jacket.

As soon as funds allow and the build starts, the office will move to the dockside in Milford Haven where progress can be reported on from a nice new and warm building.



Office at Lawrenny



Build site at Milford (outlined in red).

Lort Stokes, Australia and The National Maritime Museum

An interesting personal link between Beagle and Pembrokeshire exists in John Lort-Stokes son of Henry Stokes and Ann Lort-Phillips. JL-S served continuously and longer on Beagle than any other officer (midshipman in 1825 to captain in 1841-3.), retiring in 1863 and being promoted full admiral in 1876. He was buried in St David's Prendergast Haverfordwest a few yards from the font where he was baptised.

After his retirement in 1863 J.L-S could be seen busying himself around Lawrenny village where the Beagle office is housed, carrying out his legal duties managing the estate's affairs during the minority of his cousin Fred Lort-Phillips. J.L-S also established a local pack of hounds –yes beagles of course- the Scotchwell Harriers.

Perhaps his ghost sometimes peers over Perry's shoulder in the office (maybe that's why Perry feels so cold in midsummer!) to see whether the Beagle team are making a good fistful of rebuilding the little ship that was part of his life for so long.

In a modern twist to the story Australian former WW2 naval commander Marsden Hordern, now a sprightly 85, wrote up the story of the Beagle's 1837-43 survey voyages and J.L-S' sometimes madcap exploits in his book "Mariners are warned!" This won him the inaugural Australian National Maritime Museum's history prize in 1992. The prize was presented by Dr Kevin Fewster the then Director of the ANMM and he hosted a dinner for Marsden in honour of the occasion. As Hordern relates; "It was held here in Sydney in the Cutty Sark room; a splendid replica of the privileged passengers' dining room in the Cutty Sark in the days of her glory. The captain's chair was at the head of the polished table, the room was lit by gleaming brass lamps in gimbals, there was an elegant coal-burning hearth, pictures on the bulkheads, and one of the ship's masts came right up through the centre of the table!"

This same Kevin Fewster has just been appointed as the new director of the NMM at Greenwich. He is highly aware of the important work carried out by Beagle around Australia and Hordern believes he will be helpful to us. All sorts of ideas to link the Beagle build and future voyages with Greenwich are coming to the fore.

Welcome to the team

A warm welcome to some new members of your team. We now have as founding patrons Sir Robin Knox Johnston, Lord Hunt of Chesterton and Baron Livsey of Talgarth.

Julian Hunt, an FRS and one of Britain's leading climatologists, was director-general of the Met Office (founded by Captain Fitzroy) from 1992-7 and is a Professor of Climate Modelling in the Dept of Space and Climate Physics and Earth Sciences at UCL. He is Chairman of Cambridge Environmental Research Consultants limited which he helped found in 1986.

Richard Livsey comes from a seafaring family in West Wales and has worked tirelessly as an MP on issues affecting Welsh farming and its rural economy.

Sir Robin's knowledge and experience will be a credit to the Trust. During the recent Velux 5 Oceans race Robin sailed the real Beagle Channel "Solo sailing the Beagle Channel is not to be recommended, but the scenery is spectacular."

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Support your Beagle

How can you help support your Beagle?

Donations can be made by cheque made payable to 'The Beagle Trust Wales' and sent to our address at the bottom of the page. Donations can also be made through our website www.thebeagleproject.com which also contains up to date information on our progress.

Any potential volunteer fundraisers can contact Perry Crickmere, our administrator, at the office address below.

If there is anyone able to donate suitable materials / equipment / expertise this will be most helpful.

If you are a member of a UK based Yacht Club or Association, check with your club secretary if your club is co-ordinating donations. For the top five clubs that provide the greatest help to rebuild your Beagle there will be a berth available on one chosen leg of the inaugural voyage. For the next five UK based clubs (as long as you are accessible in navigable waters with suitable moorings and water depth) The Beagle will pay a goodwill visit once returned to UK waters.

Medway Yacht club is leading the way through the efforts of Mike Spurgin, they have to date donated £345 via an appeal to members. If all the clubs in the UK donated a similar amount we would have the build site fully working and the keel laid before the end of the year. Such a response would represent a huge tribute from Britain's sailing fraternity to the memory of a brilliant skipper, and his famous scientist companion. It would confirm that British sailors really do respect our maritime heroes.



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