

HELFDORD NOTES

Newsletter of the Helford Voluntary Marine Conservation Area No 50
Spring 2016

Non native oysters spreading in Helford

Last year saw a massive increase in the numbers of (non-native) Pacific Oysters inhabiting the intertidal around the Helford River. As would be expected their numbers are most dense near where the oysters are farmed in cages by the Duchy Oyster Farm. And they are doing what some have predicted: breeding freely.

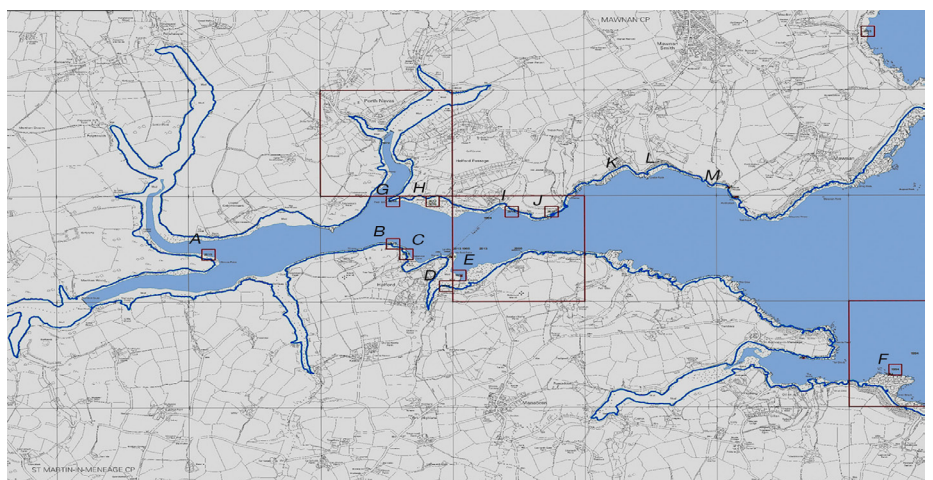
Pacific oyster sites

They have been found on both sides of the mouth of Porthnavas Creek, Calamansack Point, Pedn Billy and up towards the Ferryboat. At Helford Passage (north and south banks) Pacifics are present on the rocks and on the foreshore. They are also scattered more thinly around Durgan, Grebe and Porth Sawsan. These are the places where they are more easily seen because they are accessible, but of course there is much more of the shore that is more difficult to reach and monitor.

Invasion started in 1960s

These invaders have been farmed in the river since the 1960's in varying quantities, starting with a lets chuck them in and see what happens policy. They are now farmed under licence from the Marine Management Organisation and there are rules in place to prevent this very problem, such as only growing stock that has been chemically altered to make them (almost) infertile.

It is believed that in the past water temperatures have been too cold



Map of Helford River showing where Pacific Oysters have been found: **A** Calamansack, **B & C** South shore opposite Porth Navas Creek, **D** Helford creek, **E** Treath, **F** Men-aver Point, **G** Porth Navas Creek, **H** Pedn Billy, **I** Helford Passage, **J** Trebah, **K** Durgan, **L** Grebe, **M** Porth Saxon

for Pacifics to breed successfully but in recent years the water temperature has increased. This problem is not restricted to the Helford, other estuaries in Devon and Cornwall have seen an increase in numbers too

So why should we be concerned? We do not know how this species is going to behave in the Helford, as an alien species we do not know how it is going to fit in.

Big shore changes likely

But if weather and climate support its establishment then it is likely that we will see big changes to our shores. Once established the Pacific Oyster forms beds, layer upon layer.

The shells are extremely sharp and in other parts of the country some

shores have become a no-go area for children and dogs. Our other marine creatures will adapt and find new habitat in these reefs, but some of the iconic species of our muddy shores that are cited in the designated intertidal SSSI may be pushed out.

Sue Scott, HMCG co-ordinator

Inside

Fish laws upset everyone	2
Chairman's report	3
Bass fishing restrictions	3
Oceans role in climate change	4
Surveying plankton	5
Sue Scott's cook book	6
Curbing pollution	7
Volunteering	7
Spring and Summer Events.....	8

Pacifics v Natives

from page 1



Native Oyster



Pacific Oyster



Pacific Oysters clumping together in



Pacifics scattered on rocks

Fish laws upset everyone

Catastrophic, bizarre, extinction are words that have been used to describe the latest batch of conservation measures covering the fishing industry for 2016. Commercial fishermen are unhappy about the continuing tight quotas for cod and recreational sea bass anglers have responded with anger at what they see as preferential treatment given to commercial fishermen at EU's December Fisheries Committee meeting.

The anglers succeeded in getting a House of Commons debate on the issue last month. They believe intensive lobbying by the commercial fishing industry to fisheries minister George Eustice at the December EU Fisheries meeting resulted in the easing of restrictions for the commercial sector, but a tightening of catch and keep limits (one fish per day for the second half of 2016) for bass sea anglers (see Bass Restrictions box page opposite).

George Eustice's department, Defra, said the restrictions agreed at the December EU meeting were to "aid the recovery of sea bass stocks which have suffered from a long-term decline".

Organisations representing bass recreational anglers welcomed the Commons debate on this iconic and threatened fish. There was overwhelming support for the view that this year's restrictions on recreational sea bass fishing "are unfair and fail to address the real threat to the future viability of UK sea bass stocks".

Many MP's were critical of successive governments ignoring scientific advice.

Kerry McCarthy, shadow, Environment secretary said: "In 2014, ICES recommended an 80% cut in bass mortality across the EU for 2015, having previously recommended a 36% cut for 2014, which was not

implemented. Bass landings by UK vessels rose by 30% in 2014, from 772 tonnes to 1,004 tonnes.

"For 2016, ICES recommended a 90% cut, and some expect that its next advice, due in June this year, will be to recommend a complete moratorium lasting several years."

Kevin Foster (Conservative, Torbay) said it was bizarre that a recreational boat could be alongside a commercial rod-and-line boat which could keep the catch the anglers were having to put back into the sea.

Geoffrey Cox, (Conservative, Torridge & West Devon) defended George Eustice's action.

"Ministers know, when negotiating in Brussels with their counterparts in other countries, that if they take away bass from the inshore fishing fleet, they will have nothing left to catch.

"In the north Devon industry, which I represent, they cannot catch spurdog; there is no cod, plaice or sole; no thornback ray; no blonde ray; and now there is a ban on small-eyed ray, which represents 40% of the take for the northern Devon fishing industry. Fishermen say to me, 'What do we catch?'"

That view is echoed by Helford-based fisherman Chris Bean who believes he will have little to fish because of the bass restrictions, cod quotas and discards policy. His monthly cod quota stands at 230kg, which his boat - the 8m Lady Hamilton - can catch in two days.

"Unless immediate action is taken to support small vessels, they will absolutely disappear. Only an overhaul of fishing opportunities with the reallocation of quota will prevent the demise of a once vibrant local inshore fleet," he says.

Tony Sutton

Advisory Group Chairman's Report

Very sadly Helford fisherman Lynda Filmer died in October last year, she was active locally on both our advisory group and the Helford River association and very keen to take the time to promote sustainable fishing, taking part in TV documentary The Hungry Sailors and seen here with Matt Slater having provided an enormous edible crab to show to the children at our Crabs and Critters Event in 2014.

Difficult year for fishing

Fishing had its ups and downs in 2015, by July it looked as if commercial fishermen were not going to fulfil their quota of mackerel, having landed only about 300 tonnes. By October however, if the boats could get out between the storms the mackerel were back and reasonable catches were made. Crab fishing was good in the autumn if the pots stayed put! But by January the catch was poor, due to the turbulent weather perhaps?

Conserving bass stocks

There have been some changes in the rules for bass fishing both for commercial and recreation fishing - see Box

The minimum landing size has been raised from 37.5cm to 42 cm so the Bass have an opportunity to breed at least once before they reach the dinner table. Unfortunately it has remained optional to upgrade nets immediately to reflect the new size limits and there will be bycatch of undersized Bass by those fishermen who choose to continue to use the old nets.

River & estuary fishing ban

A new byelaw to ban fishing in all our Cornish rivers and estuaries makes good sense to preserve future fishing stocks, taking away any ambiguity and making it easier to police. Although all netting was always effectively banned in the Helford due to it being a private fishery, it is still interesting to fol-



Lynda Filmer with Matt Slater

low the streamlining of byelaws regarding netting in our Rivers and Estuaries. Full details of the draft byelaw can be found at https://secure.toolkitfiles.co.uk/clients/17099/sitedata/Byelaw_review/Draft-River-byelaw-2016.pdf

Cornwall IFCA welcomes any comments on its draft netting byelaws, with letters or emails to the Chief Officer and/or Chairman of the Cornwall IFCA committee being the preferred approach.

Bass monitoring

Derek Godwin and his volunteers continue to monitor the juvenile Bass in the Fal and Helford, if anyone would like a copy of the 2015 report we have some on CD. Derek will be 90 next year and shows no sign of slowing up in his Bass monitoring activity!

Soils workshop for farmers

Last April the Campaign for the Farmed Environment supported a Soils Workshop in Constantine aimed at improving soil retention on land and water quality in the river. Following the introduction of the new Countryside Stewardship this year, Becky Hughes,

project officer for FWAG held a very well attended meeting at the Black Swan in the autumn to gauge interest for applying for a facilitator fund to set up a farmer/landowner group to promote sustainable farming methods. We hope to hear soon if this application has been successful.

David Muirhead, HMCG
Group Chairman

Bass fishing restrictions

For commercial fisheries from 1 January to 30 June 2016 there is A prohibition on commercial vessels fishing for bass except for:

- Demersal trawls and seines which are permitted a 1% bass by-catch; and
- Hooks and lines and fixed gill nets which are permitted 1,300kg per vessel in January, April, May and June (NB: this does not include drift net fisheries). The fishery is closed in February and March.

From 1 July to 31 December 2016 monthly catch limits apply to all vessels:

- 1,300kg per vessel per month for hooks and lines and fixed gill nets (NB: this does not include drift net fisheries).
- 1,000kg per vessel per month for all other gears.

For recreational fisheries from 1 January to 30 June 2016 catch and release only permitted.

From 1 July to 31 December 2016 only one bass allowed per fisherman per day.

Full details from Cornwall In-shore Fishing and Conservation Authority website

<http://www.cornwall-ifca.gov.uk/>

Oceans role in climate warming

Plankton could be playing a vital role in climate change, but little research has been done in this field so we are largely ignorant of its impact said Philip Reid, senior research fellow at the Sir Alister Hardy Foundation for Ocean Sciences (SAHFOS) and professor of Oceanography at Plymouth University's Marine Institute.

Biggest active carbon sink

Oceans take more carbon dioxide (CO₂) from the atmosphere than all the vegetation on land. They form the largest active carbon sink on the planet. Some areas such as the north east Atlantic have huge populations of single-celled plants - phytoplankton - responsible for the removal of about half of the CO₂ produced by the burning of fossil fuels.

Reid said the research work of SAHFOS in the north east Atlantic revealed dramatic changes had occurred in plankton distribution and species which could affect the take-up of CO₂ and consequently global warming. What was happening in other parts of the world's oceans was largely unknown.

Guest speaker at our January meeting (The Oceans and Climate Change - learning through plankton) Reid argued for world-wide research into oceanic processes.

He reminded us that carbon dioxide (CO₂) levels in the atmosphere had doubled from 200ppm (pre-industrial) to 400ppm.

"Levels are going up and up and there is very little evidence that any country is doing anything about it."

He forecast a six per cent increase in the planet's temperature by the 2070s if global warming is not arrested. (Many scientists believe the point of no-return for humankind is a 2 per cent increase).



Professor Philip Reid

Reid has been closely involved with the Plymouth-based Continuous Plankton Recorder (CPR) survey of SAHFOS, which has been monitoring plankton in the north east Atlantic since 1931 and is the world's longest running marine ecological survey. He would like to see CPR's work extended globally to help us understand the processes involved in climate change.

NE Atlantic changes

Changes revealed in the north east Atlantic and North Sea CPR surveys included:

(1) A "switch-over" of one of the main species of zooplankton, the copepods. A few decades ago the ratio between the cold water species *Calanus finmarchicus* and *C. helgolanicus*, the warm water species, was 80/20. It is now completely reversed to 20/80. There had also been changes in the phytoplankton with populations of dinoflagellates decreasing and diatoms increasing.

(2) A 1,000 km northern movement for plankton and fish. Cod for example has declined in the North Sea, moving up to the Berents Sea, now home to the world's largest cod stock.

(3) One species of diatom that became extinct in the North West Atlantic 800,000 years ago had returned.

Biggest change in 1,000 years

Reid believes we have already reached a "tipping point" in global warming. He is lead author of a recently published report, *Global impacts of the 1980s regime shift*, which says the earth experienced around 1987 the largest, sudden regime change in a 1,000 years, sparked by the El Chichón volcanic eruption in Mexico five years earlier.

"We demonstrate, based on 72 long time series, that a major change took place in the world centred on 1987 that involved a step change and move to a new regime in a wide range of Earth systems," said Reid.

Tipping point reached ?

"Our work contradicts the perceived view that major volcanic eruptions just lead to a cooling of the world. In the case of the regime shift it looks as if global warming has reached a tipping point where the cooling that follows such eruptions rebounds with a rapid rise in temperature in a very short time.

"The speed of this change has had a pronounced effect on many biological, physical and chemical systems throughout the world, but is especially evident in the Northern temperate zone and Arctic."

Reid says the increase in temperature in the 1980s has been linked to diverse biological changes. He thought it was a contributing factor in the disappearance of the cod shoals on north America's Newfoundland Banks. The report lists changes on tropical mountains of the New World.

"In a Costa Rican cloud forest, declines of amphibian and reptile popu

Continued next page

CPR's work in ocean research



Deploying CPR

from previous page

lations and shifts in the altitudinal distribution of birds are associated with a decrease in mist frequency and other local climatic changes that appear to have crossed an important biological threshold in 1987."

"Extinction of harlequin frog species across Central and South America, which, along with the disappearance of the golden toad from Costa Rica, have been associated with disease outbreaks and were the first species-level extinctions in which global warming was implicated, accelerated in the mid-1980s," says the report.

Reid was asked whether the seeding of iron in the oceans would help reduce CO₂ levels in the atmosphere as some trials had suggested. He dismissed the idea as "complete lunacy" on the basis that our knowledge of ocean processes was in its infancy and we therefore had no idea of the consequences of such an action.

"Understanding the oceans was a high priority for Mankind," he said

Tony Sutton

The Continuous Plankton Recorder (CPR) is a remarkable device invented by Sir Alister Hardy. These one-metre long recorders have been towed by dozens of ocean vessels across the Atlantic and North Sea for more than 80 years. They have clocked up five million miles, producing 250,000 samples with 500 taxa counted.

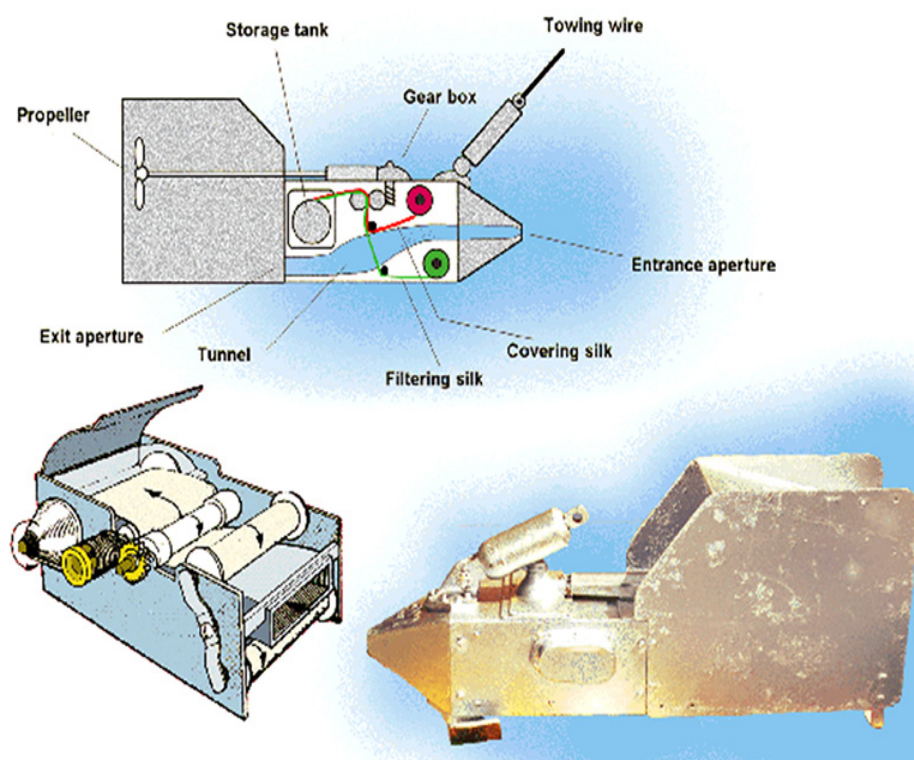
Based at Citadel Hill in Plymouth the CPR survey is operated by the Sir Alister Hardy Foundation for Ocean Science (SAHFOS).

Over the years SAHFOS has expand its operations into the southern Atlantic, Pacific and Arctic regions. The ultimate aim is to develop the CPR survey for sampling the plankton environment in all parts of the oceans providing a better understanding of global plankton biodiversity.

"The CPR works by filtering plankton from the water over long distances (up to 500 nautical miles) on a moving filter band of silk (270 micron mesh size). The filter silk band is wound through the CPR on rollers turned by gears, which are powered by an impeller," explains SAHFOS.

"The internal mechanism (see diagram) is a self-contained cartridge that is loaded with the filtering silk at the laboratory and placed inside the CPR prior to deployment. On some tows, the ships are supplied with several internal mechanisms, which they load into the CPR to increase the sampling range.

"On return to the laboratory, the silk is removed from the mechanism and divided into samples (known as blocks) representing 10 nautical miles of towing. The plankton on these samples are then analysed according to standard procedures. They are graded for "greenness" as a quick indicator of the amount of phytoplankton on the silk. All phytoplankton and zooplankton are identified to species level where possible and counted. "



Sue Scott's Cook Book

Marinated mackerel

Flapjack

When in the summer the kids get too enthusiastic and come back with more mackerel than we can eat in a sitting I preserve it for a few days in the fridge by marinating it in cider vinegar and herbs. These are good with wholemeal toast and salad for supper or with potato salad for lunch or if you a big snacker like me, a healthy choice when undertaking a sweep of the fridge.

Any recipe for soused herrings will do as well for Mackerel but my favourite recipe originated in a 1970'S book by Caroline Conran and Susan Campbell called Poor Cook – Fabulous food for next to nothing. I am sure it is out of print now but it is well worth looking around for a copy, it stands out head and shoulders over the cook books of its time and many of today too.

Ingredients

6 Mackerel (larger ones less fiddly to deal with)

3 Bay leaves

A glass of white wine or cider if you can spare it

¼- ½ pint of cider vinegar (Aspall's organic is good)

¼ - ½ pint of water

Sprigs of Marjoram (or oregano or parsley)

12 peppercorns

Sea salt

Preparation and Cooking

1. Fillet your mackerel. Cut length ways in half. Roll up from the tail end and arrange in a dish to which they will all fit quite tightly to prevent unravelling, you can make a pretty pattern with the silver and dark blue skins facing one way.
2. Tuck in the marjoram, bay leaves, peppercorns and a light sprinkle of salt. Pour over the wine and vinegar. Add enough water to cover.
3. Cook for an hour in a very low oven Gas 2, 140c. Aga 20minutes in the roasting oven then 40 in the simmering oven should do it.
4. Allow to cool and then keep covered in the fridge.

Those of you who come to Helford meetings and events will have fortified themselves on flapjack. A simple high energy snack that, given how simple the ingredients list is, can be surprisingly tricky to get right. The outcome is variable but over years of flapjack making I have a few tips that I hope you will find useful!

Ingredients

8oz/175g rolled oats

4oz/100g butter

3oz/75g Caster Sugar (I use golden)

2 tablespoons golden syrup

Preparation and Cooking

Oven temp 160 c (140 c in a fan oven) Gas 4. AGA roasting oven in rack on the bottom with cold plain shelf over and leave oven door slightly open.

1. Prepare a smallish non-stick tin either a 20cm Sandwich tin or 19cm Square grease it thoroughly.
2. Melt the butter sugar and syrup gently in a pan on a low heat. Do not let it boil away or your flapjack will set like concrete.
3. Take off the heat and stir in your oats well.
4. Press firmly into your tin and cook for about 20minutes (all ovens are different, keep a close eye on it so it does not burn.) It needs to be a nice pale to mid golden.
5. Take out and rest the tin on a cooling tray. When it is a bit cooler, after about 20mins, mark into squares or triangles depending on tin shape. When completely cold invert onto a chopping board with a sharp smack and it should come away from the tin onto the board where you can cut it through.

Send in your favourite recipes and any story that may go with them! I have shared a couple of mine in this newsletter and am very keen to combine a little local history and life in the Helford Catchment with food (the most important bit in my view!). The intention is to publish a local recipe book if we get enough. Send to Sue Scott coordinator@helfordvmca.co.uk

Curb pollution for wildlife and bills



Richard Weeks

Water pollution is a major problem for the world and not least here on our doorstep. Polluted water can make us ill and muck up our high tech systems but at least we have the choice to clean up our water and move to a clean place. Wild life doesn't have that option; it has to put up with the water it finds where it lives. That water may poison it or make it unable to breed or, when it's in the sea, just make it inedible for us.

Pollution increasing

Pollution gets into the sea in two basic ways: Either by heavy or continuous rain washing it into streams and rivers or directly from pipes carrying our waste water. A lot of work is done with farmers and developers to control the problems of run-off and with water treatment companies to control effluent. But we still have serious, and it seems increasing, problems. In the Helford and Falmouth areas this is seen most obviously in the restrictions on the shellfish industry but, of course, all the sea life is in the same water.

Doing our bit

As individuals living in the area we can all do our bit to help. Many older houses have very dodgy drainage systems and even some

modern houses have foul drains connected to surface water pipes or gutter downpipes connected to the main drains. It would be good if everyone could check their own house to make sure that their foul water is properly routed to a processing system (eg a properly maintained septic tank) or main drain to a treatment plant.

Saving money

Also, if your down pipes feed the main drain South West Water will be charging you to take it away and, worse than that, at times of

heavy rain it will help to overflow the treatment works so that untreated sewage goes straight into the river or the sea. It may be a straightforward job to reroute a downpipe into a soakaway thus saving money and helping all those creatures that live in the sea around our coast.

This article was written by Richard Weeks a regular volunteer with the Helford Marine Conservation Group helping out at events. He lives in Mylor and is regularly out and about on the water.

Volunteering in pictures : - What you can do to help



Shore Survey/Recording



Volunteer's Best Friend



Litter picking



Help Run Events

Conservation takes a step forward

This time last year we were encouraging people to support the proposal for the implementation of the second tranche of Marine Conservation Zones (MCZs). The government had launched its consultation on the subject and we as a group submitted our support in response to this and at the same time reinforcing the work being undertaken by other conservation bodies, in particular The Cornwall Wildlife Trust who do fantastic work in this area.

It is good to report that the full number of proposed new sights, 27 in all (6 around our region), were confirmed by Government and implemented on 17 January 2016. This brings the number to 50 in all around our coasts, including the 27 MCZs implemented in 2013.

Consultation for the 3rd tranche of locations will begin shortly with the view to implement in 2017.

Assuming these will get the support needed then this, together with other marine protected areas such as our own Fal and Helford SAC is the start of what could be a worthwhile network of protected areas around our coasts.

However, it has to be said at this time that it is far from clear as how much protection these areas truly offer. They are unlikely to mean that we shall see a notable regeneration of our marine habitats in

the short term. In addition, they do not seem to be fully protected from economic pressures, as we have seen from the Dean Quarry proposed expansion in the Manacles MCZ not to mention the long running controversy relating to the Falmouth dredging. The latest issue appears to threaten the native oyster fishery in the Fal with plans to farm Pacific oysters up river. This year we have seen the problem arise in The Helford with Pacific Oyster populations now breeding happily along the shoreline.

Anyway, the formation of MCZs is a good start and is welcome as a first step along the way to improving our marine ecosystems.

Events

2015 was a bit of a mixed year weather wise and we were lucky to get away with good weather for most of our events, only one was cancelled, our annual Barbeque and Snorkel in September. Our spring flower and autumn walks are always popular and last year they attracted record numbers.

This year in May we will be over in the beautiful Goongillings farm for a wildlife walk and picnic on Scott's Quay. Last year we tried out some new events most notable being Rockpool photography down on the beach at Durgan.

Our annual Conservation Cruise

took place on a beautiful day and everyone seemed to have a really good cruise up the river.

The year ended with a strong environmental theme with the talk by soils and materials engineer for CORMAC Richard Hocking, Crumbling Cornwall. He gave us an insight into the management of Cornwall's roads, slopes and footpaths and how they calculate the risks of them giving way.

2016 began with an excellent and comprehensive talk by Prof. Philip Reid on the subject of climate change and the extensive studies of the changing distribution of plankton in the world's oceans (see page 4).

This year we are going to be trying out more new events as well as some regular favourites. In June (25th) we have scheduled 'Painting the great outdoors' with Andrew Tozer, this has already attracted bookings so hurry and get a place if you want to try it. In October there is 'A weekend full of woodland fun' with the National Trust and Kestle Barton. In December we have a quiz night and we want as many as possible to come with a team to Constantine Social club for a pre-Christmas night out and fun quiz. Full details are to be found in the 2016 'What's On' leaflet.

Dave Thomson

Chairman, members section



DUCHY of CORNWALL



Aim: To safeguard the marine life of the Helford River by any appropriate means within its status as a Voluntary Marine Conservation Area (VMCA), to increase the diversity of its intertidal community and raise awareness of its marine interest and importance.

For further information relating to this VMCA please contact the HMC Group Co-ordinator :Sue Scott Tel: 07772323502. Email: coordinator@helfordvmca.co.uk

The Newsletter is produced by the Helford Marine Conservation Group
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