HELFORD
Voluntary Marine Conservation Area

Newsletter No. 39 Autumn 2009

Summer Seashore Safari

Clearly something interesting was about to happen as a group of nearly 30 people, adults and children, gathered on the beach at Helford Passage for a short introductory talk by Ruth Williams, Cornwall Wildlife Trust's Marine Officer on Sat. 25 July 2009. Then, armed with an assortment of nets, buckets and trays, we set off, clambering over limpet and barnacle-strewn rocks to the shallow pools left by the receding tide. The Seashore Safari had begun. Weather conditions were ideal – sunny and warm with a slight breeze. Intrigued holidaying families joined in and by now the numbers had swelled to 40, of whom half were children.

Sea Shore Safari Photo: P Garrard

Success was ensured as 20 young, sharp-eyed explorers scoured the area, moving the seaweed, probing crevices, carefully turning over stones (and replacing them afterwards) and bringing anything that moved to Ruth for identification. "That's a pipe fish. See its horsey face, it's related to seahorses. Feel how bony it is. In some areas puffins collect these to feed their young, because there is a shortage of sand eels, but there is not much nutrition in a pipe fish and the young birds die". "That fish is a blenny. Its top fin is continuous along the body, whereas the goby has a notch in the top fin".

There were crabs galore, mostly small green shore crabs, a few small brown edible crabs and several finds of hermit crabs. One could tell the sex of the crab by looking at the underside, the female having a broad tail to cover her eggs. Ruth gave a graphic account of how a crab withdraws its body from its outgrown shell and then expands, so that its newly forming shell will have space for further growth. Her role-play so impressed a young lad that he repeated it an hour later. Common starfish, anemones and various top shells had now been added to the collection.

Moving down to the sands of the lower shore we came across various wracks, kelp and sea lettuce and were assailed by pulses of water expelled by sea squirts. Sediment-crusted tubes of the peacock worm were in evidence. The young explorers were still bringing their finds: a couple of razor shells, the shells of oyster and scallop and a cluster of slipper limpets, an alien species that competes with the oyster. All too soon, it seemed, the afternoon drew to a close and the participants departed, but not without sincere thanks to Ruth who had made it such an enjoyable and worthwhile outing.

Dr Paul Garrard
HMCG Events Organiser

Children listening to Ruth Photo: P Garrard

Eelgrass monitoring

Anemones in Zostera
Photo: K. Hiscock

Health Assessment for Eelgrass in the Helford
The Eelgrass beds of the Helford are an important habitat within the estuary and are one of the finest examples of a healthy seagrass meadow in the south west.

In April this year, a team of willing volunteers, headed by myself, drew up plans to conduct in-depth seasonal monitoring of the Helford eelgrass bed in order to further our knowledge of how the bed changes over the seasons. The information gathered by the project, which will run for at least two years, will provide an excellent platform for further research into the ecology of eelgrass beds and how best to protect them for the future. It will also provide a training ground for any budding marine scientists to develop practical skills and learn more about this wonderful ecosystem on our doorstep.

Seagrasses are among the most important and yet endangered ecosystems on Earth and a recent report estimated that they have been disappearing globally at a rate of 110 km^2 per year since 1980. The monitoring project, which has been set up in collaboration with SeagrassNet - a US based seagrass conservation body, has received support from the HVMCA and Natural England as well as interest from the Marine Biological Association and the Crown Estate, who are currently looking into similar projects in Devon and Dorset. There appears to be a network of seagrass enthusiasts across the country, all conducting important research into seagrass conservation and this project promises to add vital information to the bank of knowledge.

The first planned survey got off to a bad start a few weeks ago due to the occurrence of red tides in the estuary. The visibility was so poor we were forced to postpone in the interests of health and safety. Not to be put off by some plankton however, the first survey will now be carried out in October 2009 and every three months thereafter. The study site is already set up and is marked out by nine small, permanent anchors in the sea bed. If you happen to see any, please leave them where they are or we may get lost.

Anyone interested in getting involved is invited to make contact and offer their support. You don't need to be a diver to help out as we need safety cover on the beach and on the water, as well help with lab work, photographs and data. For more information, please contact me at mitchneilly@hotmail.com or visit the weblog at www.zosteramarina.blogspot.com for pictures and an up to date diary of our progress so far. In the meantime, if you see any strange looking characters around Durgan with diving gear and bits of rope, it might be us!

Mitchell Neilly
GIS and data officer, DASSH, MBA, Plymouth. 07506 460029

Boats at anchor
Photo: H. Jackson

Anchoring in the Helford
Undoubtedly the Helford River must be one of the last bastions of safe "free mooring" for those that enjoy the water. Globally there is a trend towards mooring buoys, pontoon berthing and designated "parking places" for yachts and boats.

On the first hot weekend of the summer whilst out with customers on an Expedition I witnessed exactly why designated mooring areas exist. I watched from a distance whilst a motor cruiser meandered between Durgan and Porth Sawsen not 20 metres from the "no anchoring buoy " and dropped its hook. "Aaargh, not there!" I thought!

Anchor in eelgrass
Photo: P. Lockley

But that was not enough. The cruiser, 30 foot plus in length, male at the controls hollering instructions to the female on the bow then went full astern to make sure that his hook was going to get a grip. The water was calm, the sun was out and the tide was slack, but this skipper was going to make sure his family inheritance was firmly at anchor and went astern for a distance long enough to ensure that his bow started to dip. "Must ask this chap to come and dig my potatoes" I thought, dreading what the dredging effect of his actions were.

This is only one of many incidents that I have seen on the Helford River involving anchoring in the Eelgrass Beds. The reality is that the Helford River is very beautiful and has lovely safe beaches and

coves. Skippers will want to get as close to these beaches as possible. They will want to use their anchors and will want their anchors to do what they are intended to do – keep them in one place whilst they go ashore to Grebe, Durgan, Porth Sawsen (Porth Saxon) or wherever, to have a BBQ, swim and to enjoy what the river has to offer.

Is there a solution? I feel there is. Rather than introducing prohibitive restrictions I feel that this is an opportunity for commercial operators on the river to join forces with manufacturers and researchers to investigate and experiment with new buoyage and anchorage techniques. This is an opportunity for the Helford River to lead the way. Like all other yachting and sailing destinations around the UK, the Helford is being used and frequented more and more each year.

If the Falmouth Cruise terminal goes ahead then the Helford will feel an effect. This cannot be overlooked. The time to act is now rather than having to wait and then "react" to the damage done.

In the meantime however I'm thinking of having a moan about the disposable BBQ's left on every beach and cove of the river that I keep having to dispose of!

Howard Jackson
Helford River Expeditions Ltd
www.helfordriverexpeditions.co.uk

Inshore Fisheries and Conservation Authorities

In April 2011 the Sea Fisheries Committees (SFCs), many of which have been in existence since the end of the 19th Century, will be replaced by Inshore Fisheries and Conservation Authorities (IFCAs).

IFCAs will be set up under the provisions of the Marine Bill. The Association of SFCs has been pressing for updated legislation for many years. The current legislation dates back to when the first SFCs were formed. The Bill is therefore very welcome.

One of the main issues which has been under consideration is IFCA boundaries. There have been suggestions that the IFCAs should be much bigger than the existing SFCs. In particular there was a proposal that there would be one large IFCA including Devon, Cornwall and the Isles of Scilly. Fortunately the benefits of good local management has been recognised and Cornwall SFC will become an IFCA in its own right.

One fundamental change however is that the new IFCA will manage the estuaries of Cornwall which is of particular importance for the Helford VMCA. This will have great benefits for enforcement. For example, at present, lobsters caught in the estuaries are covered by the Minimum Landing Size (MLS) set down by the E.U. namely 87mm. This enables an unscrupulous fisherman to lay pots in the estuary and claim that any lobsters which he catches outside the estuary of between 87 and 90mm (the MLS prescribed by Cornwall SFC) were caught inside the estuary. It is virtually impossible for our Fisheries Officers to prove otherwise.

The Environment Agency will still have responsibility for salmonids and migratory species and other obligations including inside the estuary and also within one mile under the Water Framework Directive.

Marine Conservation Zones (MCZs) will be introduced under the Marine Bill aiming to assist in halting the decline in biodiversity and improving the health of our ecosystems by conserving our oceans' flora, fauna and habitats. Unlike other conservation sites such as Special Areas of Conservation, MCZs will be unique in their designation as proposals will take account of the socio-economic impacts of their management. MCZs are due to be designated by 2012.

IFCAs will police the MCZs within the 6 mile limit and also at the request of the Marine Management Organisation (MMO) beyond it. IFCAs will also have the power to make byelaws in their district for MCZs.

In conclusion the Marine Bill will introduce a period of great change with the creation of IFCAs. There will be new duties and responsibilities, in particular with reference to environmental issues.

David Muirhead MBE
Chairman of i) Helford Marine Conservation Group, ii) Cornwall Sea Fisheries Committee iii) Cadgwith, Helston & District Fishermen's Society Ltd

Fish Boat FY Photo: P E Tompsett

Helford Marine Conservation Group
Membership Section : Chairman's Update

Whilst risking telling you what you already know, but hopefully in order to help avoid confusion may I first remind you that the Helford Voluntary Marine Conservation Area (HVMCA) is overseen by the Helford Marine Conservation Group (HMCG), made up of closely linked Advisory and Members' Sections. The latter is responsible for organising events and enabling everyone who wishes to gain knowledge and experience of this wonderful river to do so and the former is made up of professionals and organisations with responsibilities around the Helford River who can influence the issues affecting the area. So that's as clear as the river mud itself now, I'll bet.

The AGM in March saw a major change in the HMCG committee, with six of its officers retiring. The changes were outlined by David Nightingale (Chairman) in the Spring Newsletter just prior to the AGM. The meeting was kind enough to elect me to be Chairman, taking over from David Nightingale and I am delighted to confirm the re-election of Martin Rule (Secretary) and Paul Garrard (events co-ordinator) as well as the election of new officers; Jenna Gendall (publicity), Ian Jakeways (Treasurer), Charles Richardson (funding). Leslie Collins and Pamela Tompsett continue to provide their invaluable experience to the committee as honorary (and founding) members. Rhiannon Pipkin is also active in both the Members and Advisory Committees in her co-ordination role.

On behalf of everyone in HMCG, I would like to offer heartfelt thanks to all previous committee members for both the quantity and quality of their work. This has established the organisation from nothing to develop what is now a well established membership group that involves increasing numbers of people who share a common interest in the Helford. All the retiring committee have offered their continuing support and help and this will be much appreciated going forward.

Your new committee has taken over a healthy organisation and plans to continue in the way the previous team had progressed. Hopefully we can continue to increase numbers of people getting involved in the Helford River and to widen the activities and events to help this to happen. Paul Garrard and his events subcommittee has done a superb job of organising the year round events programme and we are of course delighted that he continues to do so. Next year's programme is being finalised and should be published shortly or even by the time of going to press. There will be an exciting addition next year for those looking for activity on the river. This will be a canoe expedition, run by Helford River Expeditions on our behalf.

Funding is always crucial and membership of HMCG remains excellent value for money. At £10 (family) and £5 (individual) membership has remained unchanged since 2002. This gives free entrance to all events other than the annual river cruise and next year's canoe trip. To help fund our increasing activities Charles Richardson has joined the committee. His current priority is the recruitment of corporate members and sponsors and we are delighted to report that this is proving to be successful. We are approaching businesses that have an interest in the Helford's wellbeing and it is most encouraging to find that a high proportion of those asked have been happy to become corporate members or sponsors. This is valuable for HMCG not just for the funding but also for the interest and increased involvement in the group this brings from local businesses and their staff.

What the funds are for...

New leaflets: covering additional subjects about the Helford to add to the five we already have.

Website: we have a good website that has recently been enhanced with new design and additional content. This is an ongoing commitment to keep it updated and to make available new functions and information. We would like to make it more interactive to enable members to communicate better if they so wish.

Scientific studies: protection of the environment relies heavily on science to provide information. A tremendous amount of work has been done over the years and of course it is vital to continue this into the future to plot trends and changes; shore transects, fishes surveys, monitoring species to name a few examples.

New information display boards: the current boards, placed in popular locations around the Helford, require renewal. They are approaching the end of their useful lives and are looking tired. Their job is to inform the general public and in so doing increase the awareness and hopefully improve the care of the area. As we have a voluntary protection area, the co-operation of the public is of great value.

Schools involvement: we wish to increase involvement of local schools in educational work to increase awareness of the Helford amongst kids of all ages by providing educational materials and field trips. This is no small task and it is good to report that Cornwall Wildlife Trust is working to help in this area via an application for Lottery Funding as part of a bigger project for all Cornish VMCAs.

Volunteers: these and other activities all require people to make them happen so if you would like to participate, if you have any particular skills in any of the above, or would just like to help in any way you can, then please get in touch. Meanwhile, enjoy the River and many thanks indeed for your support, it is much appreciated.

David Thomson
Chairman Helford MCG Members' Section

Helford Annual Conservation Cruise

Sunday 21st June 2009 dawned a glorious day – the sort of weather one always hopes for, with a warm sun, hardly a cloud in the sky and negligible breeze. The boat was unfortunately late in arriving, but the 100 passengers were very patient, enjoying the sunshine, watching holidaymakers and having an occasional ice cream.

Embarkation Cruise Photo: P E Tompsett

Setting off, we motored up Porth Navas Creek to see the Duchy Oyster Farm and Childrens' Sailing Club, then across to the mouth of Frenchman's Creek, where Justin Whitehouse of the National Trust took up the commentary. The house overlooking the creek is 'Powders', built in the 1920s by Powders Thorburn, a colourful character, part author, part artist, part (alleged) gun-runner. It has been converted by the National Trust into an eco-friendly holiday cottage. On, westwards, to Tremayne Quay, said to have been built for a possible visit by Queen Victoria, and then to a boathouse, which is home to Greater Horseshoe Bats and Barn Owls, now living in relative harmony since the Trust provided them with separate 'apartments'. The woods on either side, Tremayne Woods on the south and Merthen Woods on the north, are SSSIs, fine examples of ancient sessile oak woodlands reaching down to the water's edge. A few non-native trees such as beech and sweet chestnut occur. Tremayne Woods contains six species of bat, including the rare Daubenton's bat.

Spartina Beds Photo: P E Tompsett

The boat weaved its way up the channel to Gweek, where Rhiannon pointed out the National Seal Sanctuary and the beds of *Spartina* grass, a nursery for young bass. Gweek gained importance after the growth of Loe Bar ended the days of Helston as a port. It now deals mainly with leisure craft, but Seacore, the offshore drilling company with headquarters in Falmouth, still uses its original site and quay; and it was there that the captain deftly turned the boat for the return journey. Moving up Polwheveral Creek, Andrew Tompsett at the microphone became increasingly excited as we approached the heronry-cum-egretry on the west bank. There were 6, or was it 12, or possibly 20 Little Egrets in the trees. They came to this area about 10 years ago, joined the herons and are now a breeding colony with about 7 nests. Another U-turn and we moved out of the creek, disturbing three shelduck and a pair of mallards. Pamela recalled the beginning of the HVMCA and spoke of the importance of the thick muddy sediments, home to a great variety of sea creatures. An initial worry was the level of contamination caused by TBT anti-fouling on boats, but thankfully this is no longer permitted.

Look at this! Photo: P E Tompsett

The creek opened out and we threaded our way through a host of moored boats, mostly expensive yachts, but including boats from the fishing fleet. David Muirhead gave us a lot of details – owners, where built, what type of fishing – and then went on to speak of the new Marine Bill currently being formulated. Within a few years it is expected that fisheries will be organised into Inshore Fisheries and Conservation Authorities and that there will be more Marine Protected Areas. Helford fishermen are already operating voluntary restrictions in an area from Falmouth Bay to Manacle Point. Continuing to the mouth of the estuary, Justin drew attention to the building on Nare Point, a look-out and torpedo-testing station in WWII and

now occupied by Coastwatch to monitor shipping. During the war, Ealing Studios had built a replica of Falmouth docks and railway in this area as a decoy, clearly successful as it had been bombed twice. At the entrance to Gillan Creek were two small National Trust properties, one containing ancient pottery remains.

On the return journey now, we heard about the geology. The rocks on either side of the Helford are about 380 million years old, a group of mudstones, siltstones and sandstones laid down on the sea bed and derived from the erosion of mountains in Wales. About 300 million years ago they were folded, tilted and intruded by large granites. The major rivers in Cornwall all drain south, the Tamar and Fal opening into magnificent harbours. Wave-cut platforms at different elevations, for example the top of the Lizard peninsula, about 2.5 million years old, indicate a rise in the land relative to sea level. During the Ice Age, sea level fell dramatically, to about 120m lower than today. When the ice melted, 17,000 to 7,000 years ago, sea level rose quickly, flooded the valleys and caused the rivers to drop their sediments in the valleys, producing today's muddy creeks.

Motoring past Durgan, Rhiannon pointed out the 'no anchoring' buoys, protecting important eel grass beds, and talked about the broader Fal and Helford Special Area of Conservation, with its varied range of rocky, sandy and muddy habitats. David Muirhead wound up, with thanks to the captain and crew of Enterprise Boats, Nick Bailey and his team for use of the jetty, Justin Whitehouse and National Trust helpers for live tank displays, Derek Goodwin who had brought live young bass, the speakers; and the members, who had supported a very enjoyable cruise.

Dr Paul Garrard
HMCG Members' Section, Events Team Organiser

Chairmen Advisory & Members' Sections
Photo: P E Tompsett

Basking Shark close encounter

In mid-June off Porthscatho on a flat calm afternoon we spotted a basking shark. Some way off at first, it's dorsal fin looked more like one of several black plastic crab pot floats. However, crab pot floats don't move through the water so we approached to see it more clearly.

Basking Shark Photo: D T Thomson

As there were no other boats about we followed the guidelines, (www.baskingsharks.org) stopping the boat about 100 metres away and then just watched. As luck would have it, its course brought it much closer to us and as it did so we raised our mainsail to give us some way; the faintest of breeze gave us less than 2mph on dead flat water.

The shark turned our way to come within 2 metres of our stern, following us with mouth gaping wide to feed. It left and returned to our stern twice over a 10+ minute period, providing us with amazing and unforgettable views as well as a set of great snaps. At around 12ft long this was a youngster.

We at no time followed the shark, but set up directions that allowed it to approach or not. After 15 minutes we just departed to let it continue without us. Interestingly we saw two other fins in the bay from a distance and also a pod of dolphins that we think were Common dolphins; too far away to be certain. Close by 'our' shark, the water was clearly active with shoaling mackerel.

What a privilege to share a moment with this marvellous ocean wanderer.

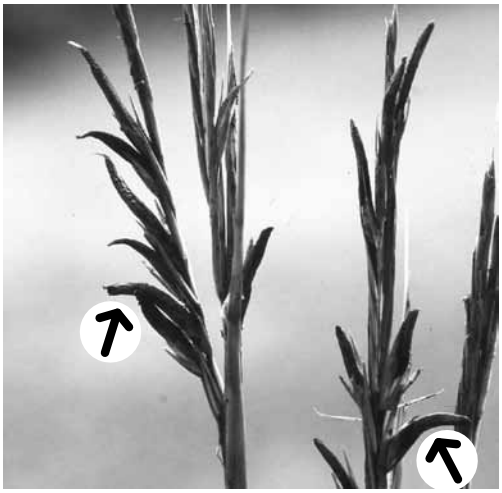
David Thomson
Chairman Helford MCG Members' Section

Helford Diary

Records of more rare, beautiful and interesting species of the HVMCA

The year 2008/9 revealed several rare and interesting species in the ancient oak woodland and marshland on the periphery of the Helford Estuary.

In September 2008, the strange fungus *Claviceps purpurea* var. *spartina* or Ergot, so-called because of its fruit/ spore body, up to an inch long and resembling the spur on a cockerel's foot (Fr. ergot = spur), was widepread, growing on the inflorescences or flower spikes of the Common Cord-grass, *Spartina anglica*. This was observed in the upper Gweek creeks, especially near the 'pottery' bridge. Normally this fungus is found growing on other members of the grass family, some of which are our most important food crops such as barley, oats, rye and wheat.



Ergot on Spartina Photo: P Gainey

Ergot is deadly poisonous and poisoning by *C. purpurea* (ergotism) as a result of eating bread using contaminated flour has been recorded since the Middle Ages and before. Outbreaks were so sudden and inexplicable that many myths and superstitions grew up around the affliction which was widely believed to be a form of divine punishment on sinners and was known as the Holy Fire!

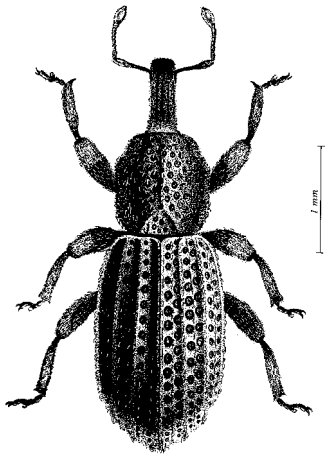
The poisoning can take two forms: a) that of a burning sensation in the limbs followed by gangrene due to excessive vasoconstriction of the blood vessels or, b) causing hallucinations, psychotic behaviour and convulsions.

Analysis of ergot extracts revealed a cocktail of chemicals, some of which are related to the mind-altering substance LSD. Another of these chemical, Ergometrin, has been used in pregnant women to enhance uterine contractions and reduce maternal bleeding by constricting uterine blood vessels after childbirth. Yet another, a caffeine and ergotamine product, was used to treat migraine headaches.

Also found in Autumn 2008, in Merthen Wood, was the so-called Scarlet Caterpillar fungus *Cordyceps militaris*. The bright red-orange, club-shaped fruit/spore body projects 2-5cm out of the ground and what is even more interesting, when carefully dug out of the ground the basal end is seen to be attached to a dead larva or pupa of a butterfly or moth species buried in the soil. The mycelium or 'feeding threads' of the fungus have fed upon and replaced the inside of the insect.

Insects

Autumn 2008 also saw the search for the extremely rare weevil (beetle) *Anchonidium unguiculare* in the leaf litter of Gweek woods. This weevil was first discovered, as new to British fauna from these woods in 1893. A small (2.2 – 3.0mm) and very inactive species, this weevil was only known in Britain from the ancient woodland in the Gweek area and from a very localised area of coastal grassland in South Devon. My searches have revealed the presence also of this red Data Book 2 species in Bonallack, Merthen, Calamansack, Tremayne and Frenchman's Creek woods, and, more recently, in Devichoys Wood near Stickenbridge, on the road to Truro.



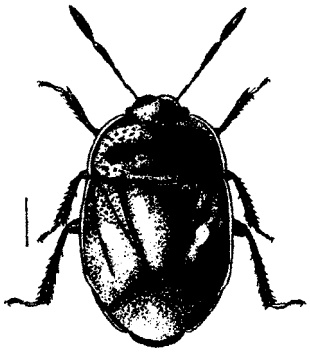
Anchonidium unguiculare drawing

June 2009 revealed a very large population of the Golden-haired or Hornet Longhorn beetle, *Leptura aurulenta* which nectars at flowers of umbellifers, brambles and broom in Merthen Wood. This impressive Nationally Scarce, Notable A species with its large size and black/ yellow-golden markings, has its main UK concentration here in Cornwall.

Finally in May 2009 whilst, once again, sieving leaf mould for the presence of the rare weevil *A. unguiculare* in Bonallack Wood, a small hemipteran shield bug *Sehirus biguttatus* with a black body characterised

Hornet Longhorn Beetle Photo: P Gainey

by two pale spots on the wing-cases was found. The identity of this insect was immediately obvious to me, after all, I had only been looking for this species in Cornwall for the previous 15-20 years! This rare Notable B bug has undergone a major and dramatic decline in Britain due to changes in woodland management. It feeds on seeds of the Common Cow-wheat *Melampyrum pratense* in warm, sunny situations in ancient oak woodlands. The adults are mostly found on the ground amongst leaf litter beneath the host plants and so are easy to overlook.



Sehirus biguttatus drawing

This species was favoured in the past by management of woodlands as coppices and now only survives in unmanaged woods such as Bonallack, where the canopy is naturally thin, good light penetration is possible and the host plant survives. The only other Cornish record is from the Victoria County History list (1906).

Dr Paul A Gainey
Naturalist, photographer & biological recorder

The Helford Fleet and their wild fisheries

Chris Bean and his family have fished the Cornish waters in their boat "Lady Hamilton" for many years and Chris' vivid description of the industry given at the last AGM is summarised here by Dr Paul Garrard.

It's difficult to imagine --- continuous mackerel from Dodman Point to beyond Lands End, with the shoal at least 10 miles wide and registering 30 fathoms thick on the echo sounder. At that time (1974) this phenomenal shoal was one of the largest on the planet. This was just one of the memorable items from Chris Bean's talk on the Helford fishing fleet. Chris was the ideal person to give such a talk.

After decades of experience and spells as an international fisheries consultant he is still an active and enthusiastic fisherman. As a young boy in Mawgan he built his own small sailing dinghy at eleven and spent his evenings and holidays camping and fishing in the river, learning about the waters and wildlife and seeing nature's cyclic changes. He recalled the abundance of cockles on the sand and mud banks from Bishops Quay to Tremayne Point, virtually annihilated by the winter freeze of 1962/63. Man's influence was also apparent. He thought that diminishing bass numbers in the Helford in the late seventies was due to uncontrolled slurry run-off in the upper tributaries.

Chris emphasised that there is nothing constant about the fishing industry. Fish stocks wax and wane through natural causes, but also there are changes in techniques and markets and the industry has to evolve and adapt. Following the collapse of the pilchard fishery in the fifties, young men left to find employment in the post-war building boom and fishing declined. Nature came to the rescue with increasing numbers of mackerel appearing in South West waters and a special type of boat, the Mevagissey Tosher, was developed to meet this demand. It is a rugged, beamy, forward-wheelhouse vessel, in which 2 or 3 men can stand and hand line mackerel all day, the fish being kept in pounds. At the peak of the boom, upwards of 200 boats would be fishing the shoal and the operators would earn 'small fortunes'. Stocks eventually declined, but there was a two-fold legacy from this rich period. First, a new generation of young fishermen had entered the industry and second, there was a fleet of suitable new boats, the toshers, which could be adapted for other fisheries.

Currently around 15 boats work from Helford, 8 of tosher type. There are 5 for monkfish netting, 4 for multi-species netting, 4 crabbers, 2 line boats for bass and grey mullet and 2 visiting hand line mackerel boats. The fleet has a gross annual turnover of around one million pounds, split roughly 2/3 fish and 1/3 shellfish (includes crabs and lobsters) and provides about 25 sea-going jobs. Three fishing methods are employed: netting and potting, both using what is termed static gear; and hand lining. A net's mesh size and type indicates its intended catch, for example 250mm tangle nets for monkfish, turbot and ray, 125-150mm gill nets for pollack and cod, 70mm netting for red mullet and mackerel. The net has a lead line which rests on the bottom and a line of floats which hold it upright. Crabs and lobsters are caught in creel parlour pots and inkwells.

The Helford fleet is very conscious of fishing sustainability, a concept which implies that a fishing action produces no noticeable change on the stock or habitat and that in ten years time a similar activity

Lady Hamilton, Chris Bean's boat
Photo: P E Thompsett

would yield a similar catch. To this end a large number of controls are in place, both regulatory and voluntary, dealing with such matters as mesh size, minimum landing size, technique, number of licences, quotas and excluded areas. The industry is administered through the Marine Fisheries Agency (MFA), a branch of DEFRA, which in turn comes under the Council of Ministers in Brussels, who are the main source of policies and quotas. Administration at a more local level comes through Cornwall Sea Fisheries. The situation is likely to change with the passage of a new Marine Bill.

Chris was particularly critical of the quota system which he regards as ill-conceived, unjust, inflexible and poorly managed. The MFA sets quotas for over ten metre vessels and under ten metre vessels, on a monthly basis, with a right to cut and stop quotas at a moment's notice. About 90% of the UK's vessels (the under tens) share only about 10% of the total quota. Management of the system could be more flexible. Boats have to discard cod after the first 42kg in January and February, when cod are abundant, but cannot reach the quota in the summer when the fish are absent. There is also a quota division by sea areas.

Helford comes under area VIIe, whereas parts of Mounts Bay plus the north Cornish coast come under VIIf, leading to the anomaly that it is only possible to catch 21kg per month of soles (one fish a day) in Falmouth Bay and yet go to a narrow strip off Mullion, in VIIf, and be allowed 3 tons.

A further contentious issue was the release of seals from the seal sanctuary. Accustomed to hand-feeding, the freed animals turn to a ready food supply, nursery stocks and the fish in fishermen's nets, causing losses of perhaps £100,000 per year.

Fish marketing has moved on from the days when all wet fish were landed at Newlyn and shellfish (crabs, lobsters) went to a single merchant. Although most wet fish still passes to Newlyn, increasing amounts go to Falfish in Falmouth and Kernowsashimi in St Martin, with hand liners selling to local hotels and restaurants.

Modern communications, mobile phones and email make it possible for a skipper to sell his catch from the boat while at sea. Shellfish outlets are numerous and some co-ordinate landings to coincide with the arrival of vivier trucks from France and Spain. Maintaining the quality of freshly caught fish is helped by having ice slush tanks on board; and two of the Helford boats have processing units for crabmeat preparation.

With 25 full time fishermen working from Helford and perhaps three times that number of related shore-based jobs, the fishing fleet not only provides year-round employment but an invaluable resource of skills and, with families, strong commitment to the local community. Chris was optimistic that, with continuing dialogue, present issues over quotas, seals and a community jetty could be resolved and that the future looked good for the Helford fleet.

I am indebted to Chris for the use of his notes in compiling this report and am conscious that it is only a shadow of his excellent talk.

Dr Paul Garrard
HMCG Members' Section, Events Team Organiser

Sterennyk fishing vessl Photo: P E Thompsett

Unwelcome summer blooms

When satellite data suggested that a conspicuous "red tide" had developed offshore along the south coast of Devon and Cornwall in August 2009 there was concern that this was a repeat of the deleterious event that had destroyed many animal species in our estuaries in August/September 2002.

More correctly this is termed an 'algal bloom' which can appear offshore due to water movements, independently of the tides, when nutrient runoff from land during periods of heavy rain, or upwellings from the ocean bed, coincide with periods of warm sunshine. The resulting excessive proliferation of floating micro-organisms, mainly the plant-like phytoplankton, forms dense patches which may drift at sea or come inshore where the harmful effects on animals in shallow waters and estuaries are immediately noticeable.

Dying Peacock Worms in their tubes 2009
Photo: P E Tompsett

Certain species of dinoflagellate within the bloom, contain photosynthetic pigments which vary from green to brown to red and one of these, *Karenia mikimotoi*, which produces a potent natural neurotoxin (brevetoxin) is implicated in the mortalities seen recently among our marine and coastal species of fish, shellfish and other organisms. Additional harmful effects result from a sudden depletion of dissolved oxygen due to the proliferating phytoplankton, their death and decay. These effects are very harmful to the worms, shellfish, sea potatoes, etc. that live in the upper sediment layers. Blooms eventually disperse naturally due to wind events, increasing mixing and agitation. However *Karenia mikimotoi* is reputed to tolerate low oxygen conditions, utilising sulphides in anoxic, oxygen-poor, sediments enabling cells to survive over winter and re-seed new blooms in the following year.

The first appearance of 'coppery-coloured' water and large numbers of dead bait worms was observed in the Gweek area of the Helford River during the first

Live Peacock Worm tubes Restronguet Weir 2009
Photo: P E Tompsett

week of August 2009. At about the same time, many marine species in St Austell Bay were found dead and dying, noticeably several fish species. Divers reported that this mortality had also spread to areas of Fal Bay and the Helford VMCA and included fish, scallops, starfish and other marine life.

I have been studying the intertidal fauna and flora in the Fal and Helford for many years, in particular the Peacock worm, *Sabella pavonina*, a fanworm or tubeworm, which lives in large numbers in muddy sediment on the lower shore. A severe algal bloom in August/September 2002 devastated three prolific worm beds at Helford Passage Bar Beach, below Tremurlon - East of Frenchman's Creek and at Loe Beach on the Fal. Many other species were also affected. Interestingly the Fal Peacock worm beds at Restronguet Weir were unaffected which may be linked to the water movements influenced by the Carnon River or natural tidal flows.

It took several years for the Peacock worms to re-establish themselves after Aug. 2002 and they had still not reached the high densities recorded from 1996 to mid 2002 when another algal bloom, in August/September 2009, wreaked havoc again. Bar Beach, Helford Passage, was littered with dead or

Dead Razor and Mussels 2009 Photo: P E Tompsett

dying worms, also razor shells, oysters, cockles, sick periwinkles and empty sea potato tests. Many of the mussels also seemed unhealthy. The Peacock worms succumbed over a few days and within a month their familiar tufts of tubes had disappeared with an estimated survival rate of about 1%. This may be enough to replenish the beds in due course given the right conditions.

Recent close inspection also revealed healthy razor shells, periwinkles, slime-tube worms, hermit crabs and shore crabs and I have the impression that the effects of this bloom on the Bar Beach sediment community were slightly less severe than in 2002. Reports of the water clearing one day and then becoming cloudy the next may mean there will be further damage.

One of the main culprits in 2002 and in 2009 was indeed *Karenia mikimotoi* which was first described from Japan in 1935, found in the Atlantic in 1957 on the east coast of the USA, and, in 1966, it bloomed off the coast of Norway and off Ireland in 1976, 1978, 1982, early 1990s and 2005, also English Channel 1970s and 2002. It is suggested that it may have spread in ballast water but is now a major cause of algal blooms throughout the world.

Algal blooms on British coasts are not a new phenomenon and it is a matter for debate as to whether a combination of surface run-off from the built environment and farms, together with less cold winters, may result in more frequent events.

Dr Pamela Tompsett
Helford MCG Scientific Adviser

Bats know best!

Over 30 friends and members of the Helford MCG gathered at Mawgan Village Hall for an evening "bat talk and walk".

Dr Carol Williams, with her characteristic enthusiasm, delivered a 30 min. crash course in bat identification, life-cycle and habits before we ventured out into the gathering gloom assembling in the woodland car park on the Trelowarren Estate.

Bat detectors swung into action immediately and to our delight we heard several pipistrelle bats as they hunted for insects overhead using their stuttering echo-location calls.

Carol had stressed the richness of the Helford River woodlands for 16 species of bat, so we set out with great expectations from the car park to the lawns and buildings adjacent to the main house. The moon rose as we toured the extensive grounds and the tawny owls hooted in the woods but bats – they were silent!

With ears fully attuned and waiting we quietly discussed the habits of bats, when are the young born? - early summer, hopefully as the weather warms and insects are on the wing. How far from the roost do bats hunt for food? – most within 1km but others, such as the robust high-flying noctules can travel much further. Do males and non- breeding females frequent the nursery roosts? – no.

Perhaps the strong evening breeze had deterred the insects? We headed back to the car park woodland and WOW!

Immediately we heard the Common pipistrelle echo-locating at 45khz and hunting overhead. Our detectors positively vibrated with the sound. At one stage there were also social calls indicating that there were male bats in the vicinity displaying and courting overhead.

This was the moment that the sensitive infra-red binoculars swung into action and some people were lucky enough to catch a glimpse of the aerial displays.

Lesser Horseshoe Bat
Photo: J Kaczanov

The sheltered car park may have been warmer that night favouring the insects or was this a chance encounter with a courting area (or 'lec') frequented by male bats strutting their stuff for the benefit of the ladies? It was an evening to remember, confirming what Carol had told us, that bats really do know best when it comes to finding the best places for a good night out.

Andrew Tompsett

Post-natal care of sea horses
Our website must be widely read! Somebody who was 'baby-sitting' his neighbours' seahorses whilst on holiday suddenly found they'd given birth! In an effort to track down some advice, he came across our website and phoned for advice. Hopefully the National Marine Aquarium or the Seahorse Trust was able to help.

Helford River Patrols

This year has seen some developments in the patrols of the river. Many readers will have noticed the new boat; some will have noticed an increased presence on the river others will have been on the receiving end of some assistance.

Patrols are based on a single byelaw which regulates the use of pleasure craft on the river, although much more has been incorporated into the role. eg Providing information to visiting craft about anchoring, mooring, the eel grass beds, co-operation with Cornwall Sea Fisheries and the bass survey, assisting Lifeguards on a cross river sponsored swim, some safety advice or providing assistance to broken down craft needing a tow!

Here it may be appropriate to remind readers that the byelaw relates not only to speed of craft 6 knot inside river boundaries, but also to their safe use. I have offered advice and reminders about safe use on many occasions this year. Power boat users have been advised that operating with passengers sat on the bow or outside of their craft are risking serious injury to the passengers – if the passengers fall into the water, they will be seriously injured by the propeller.

Many modern powerboats cause considerable wash – even at low speed - take a look astern and consider the people on the craft you are passing. The RYA has introduced a leaflet called 'Sea Sense – We're All in the Same Boat' that is well worth a read and contains plenty of good advice to sailing boat and powerboat users.

Helford Patrol Photo: P E Tompsett

- Look around & be aware
- Look before you tack
- Give sea room, watch your wash, cut your speed
- Be friendly - don`t buzz
- Use your motoring cone when motoring
- Use your anchor ball & give anchored craft a wide berth
- Boozing and boating don't mix

The leaflet can be downloaded from www.rya.org.co.uk

Nigel Knight
River Patrol Officer

Cornish Sea Salt spreads across the globe!
Despite the recession and harmful algal blooms Cornish Sea Salt has been going from strength to strength.

In August we won a nationwide listing with Waitrose Supermarkets and exports have now been made to Canada, Australia, Germany, Sweden and Hong Kong.

We have recently recruited two more local people, taking our workforce up to thirteen. Our tasty salt has also just won a gold star at the Great Taste Awards, the food Oscars. It's fun to see that we are now a destination on the Orca Safari wildlife tours!

Tony Fraser
Managing Director, Cornish Sea Salt

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