The Calf Islands
in Carbery's Hundred Isles

(issue 11)
What is the future of Ireland’s aquaculture industry?

By Matt Murphy

THE issue of farming fish in our coastal waters has been a topic for many years. The challenge is to develop new species for farming, both in the sea and on land (with re-circulation tanks). We must farm new species, both in the sea and on land, as there are so many different species that could be farmed in these waters.

The recently published “Status of Irish aquaculture 2006” reveals many interesting facts. The chief reason why farming has declined or is close to being even closer to a standstill is a matter of concern. We have been working with wonderful clean waters for producing fish and shellfish. In 1994 Sherkin Island Farm produced a supplement on aquaculture in that we had many articles which were very positive about the future for aquaculture. New species were then at the developmental stages, two of these being Atlantic salmon and sea urchins. A hatchery on Bere Island, Co. Cork, mastered the techniques but the growth-out in a number of sites around the coast have yet to produce adults in commercial quantities. There has been some hatchery success with sea urchins but again few adults for commercial sale. Turbot development took place on Cape Clear and what a success – it was against all the odds. In 1996, they had an annual production of 33 tonnes whilst the mighty Norwegians were still researching and developing the same fish. Tragedy hit in 1997 when a disease from the wild (through the sea water) occurred. Under EU regulations any fish with such a disease had to be destroyed. The Department of Marine at Abbottstown ordered all the fish to be killed – in all, 60,000 fish. Compensation was refused by the Department of the Marine (see Sherkin Comment No. 24). The great tragedy is that when the strain was identified, it was the same strain to that which affected salmon and trout, so there was no need to have killed the fish. The Cape project closed down and they were without funds to re-establish the stock.

The decline in farmed salmon is the most worrying. Only 11,174 tonnes was produced in 2006 less than the 12,368 tonnes in 1993 – over 13 years earlier. The peak year was 2001 with 23,312 tonnes. Some wrong is being done with the Irish owned section of the industry. The most successful Irish farming company in Ireland is the Norwegian owned Marine Harvest. Their main operation is at Fanad in Donegal. In recent years they have taken over a fish farm at Killyary, Co. Mayo and the latest information is they are now taking over the site of Ocean Farms in Donegal Bay. How is it that the Norwegians, the world leaders in salmon production at over 600,000 tonnes annually, want to expand in Ireland – obviously they see the potential of our clean waters. At present there are only a few sites around the coast to grow up to 40,000 tonnes of salmon. The question here is one of utilising what these sites not being utilised?

The foreign buy out of salmon sites is now coming to the oyster section. French companies have already bought out Irish-owned salmon sites and have done so with some in the bottom mussel section. Again they obviously see the potential of our coastal waters.

It is interesting to read in the 2006 report, the section on research grants to institutions – 27 projects in all. It is surprising to see these being funded to help develop the aquaculture industry. But the question that needs to be asked is, do these projects help the national interest? The aquaculture industry is to deliver the Government’s 2008–2013 National Development Plan for aquaculture we must have practical and progressive research. What good are degrees in aquaculture to young people if there are no jobs in the industry? What is the future for our coastal waters?

There is a great future for farmed fish development in Ireland. I have been convinced of this for over 30 years since those great pioneers David and Angela Tonge farmed trout, on a shoestring, in Dumfries Bay, Co. Cork. We at the Station supported them with monitoring when red tide took most of their stock and which, in the end, made the project financially unviable. We have continued this monitoring work in Roaringwater Bay ever since. For many years we have heard that the IT industry will be a substitute for the declining fishing industry in coastal villages and towns. It has not and will not. Companies are leaving Ireland for cheap labour in other countries. The future is one that suits the wonderful seas around our coast. These seas are gold and farming them, whilst continuing to care for the environment, will deliver rich pickings and jobs. We must farm new species, both in the sea and on land (with re-circulation tanks). Aquaculture, if properly led, can create long-term jobs. Can the challenge be met?

Matt Murphy, Director, Sherkin Island Marine Station, Sherkin Island, Co. Cork.
Coastal Birds in West Africa

By Oscar Merne

MY wife and I spent a month (1st November to 1st December 2007) in The Gambia and Senegal, in tropical West Africa, between about 12.30 and 16.30 degrees N. We chose this part of Africa, and this time of year, because the area is renowned for its diversity of birdlife, including Afrotropical species and migrants from Europe. It is possible to visit The Gambia on one- or two-week packages, and there are many good bird-watching locations within twenty-five kilometres of the main coastal resorts south of Banjul, the capital. However, for longer stays, and the opportunity to travel in the interior of The Gambia and in Senegal, it is best to travel independently. This is what we did, so we were able to visit many of the coastal and inland areas of The Gambia and also the Dakar region of Senegal, specifically to visit Les Isles de la Madeleine, a small national park a few kilometres out in the Atlantic Ocean from the city of Dakar. They are actually the most westerly point of the African continent, at about 17.30 degrees west of Greenwich. The Ranger post is tucked in between the reefs covered in most parts by fine, white sand, and with a few small trees and herbaceous vegetation together at low tide, are flat rocky reefs covered in most parts by fine, white sand, and with a few small trees and herbaceous vegetation above the storm tide line. We spent a couple of hours walking slowly around the islands and found 28 species of birds, mainly gulls, terns and waders. The former two groups were a mix of European migrants and tropical species. The commonest gulls were the local Grey-headed Gulls, but there were also hundreds of migrant Lesser Black-backed Gulls, and, in decreasing numbers, Yellow-legged Gulls, Kelp Gulls (very like our Great Black-backed Gulls and Slender-billed Gulls. The last can be found also in the Mediterranean area.

We saw seven species of terns, including a mixed flock of 3,000 European migrant Common and Sandwich Terns, with some Gull-billed Terns and a handful of Roseate Terns – detected mainly by their distinctive calls as they are very difficult to distinguish in their winter plumage. Common Terns and some Sandwich Terns spend the winter in this part of Africa, while the Roseate Tern move on south to the Gulf of Guinea, and many Sandwich Terns continue as far as the Cape of Good Hope, or even around the cape to Mozambique. The common local terns were the magnificent giant Caspian Terns (as large as Herring Gulls), Royal Terns and Lesser Crested Terns. I had tantalising glimpses of rings on some tern legs and wondered if some might be from the Irish colonies on Rockabill and Lady’s Island Lake.

There were also quite a few migrant waders on the shores of the Bijol Islands, notably Oystercatchers, Ringed Plovers, Grey Plovers, Knot, Sandpipers, Bar-tailed Godwits, Whimbrels, Redshanks and Turnstones, and a few Curlews and Greenshanks – all familiar on Irish coasts. The only West African wader species that we saw on the islands was the scarce White-fronted Plover, a small plover similar to the European Kentish Plover. Clearly the waters around the islands have abundant and varied fishlife, for we counted eighteen Ospreys perched at intervals on the sandbanks and rocks, making occasional short-distance forays to catch their next meals. They seemed to be successful every time!

Also on the Bijol Islands was a nice flock of 65 loafing Great White Pelicans, a separate group of five African Pink-backed Pelicans, a scattering of Grey Herons (the same as ours), and some attractive dark Western Reef Herons, which look like white-chinned, slate-grey Little Egrets, even having yellow feet.

A couple of weeks later, we travelled by road to Dakar, the capital of Senegal, specifically to visit Les Isles de la Madeleine, a small national park a few kilometres out in the Atlantic Ocean from the city of Dakar. There were also quite a few migrant waders on the shores of the Bijol Islands, notably Oystercatchers, Ringed Plovers, Grey Plovers, Knot, Sandpipers, Bar-tailed Godwits, Whimbrels, Redshanks and Turnstones, and a few Curlews and Greenshanks – all familiar on Irish coasts. The only West African wader species that we saw on the islands was the scarce White-fronted Plover, a small plover similar to the European Kentish Plover. Clearly the waters around the islands have abundant and varied fishlife, for we counted eighteen Ospreys perched at intervals on the sandbanks and rocks, making occasional short-distance forays to catch their next meals. They seemed to be successful every time!

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EU to Cut Carbon Emissions

The European Commission aims to cut 20% from Europe’s carbon emissions by 2020 compared with 1990 levels, and hopes to generate 20% of Europe’s power from renewable sources by then. As its contribution, the United Kingdom will have to obtain 15% of its energy for heat, electricity and transport from renewables like wind, wave, tidal, solar and biomass. Only 2% of the UK’s energy is renewable today, the lowest percentage of any major European country. Biofuels used in the UK must be shown to provide a real saving in emissions of at least one-third compared with fossil fuels, and must not be produced on land of high biodiversity. Nor should they be grown on forest land, wetland – including peat – or permanent grassland.

Biofuels Ineffective & Expensive

British members of Parliament say the EU should abandon its biofuels targets because they are damaging the environment. The Environmental Audit Committee said biofuels were ineffective and sometimes expensive. It also said the targets were putting up food prices and threatening food supplies for the poor. It wants the EU and the UK to concentrate on using so-called sustainable biofuels like waste vegetable oil, and to develop more efficient biofuel technologies. The RSPB said current biofuels targets were farcical.

Amazon Deforestation on the Rise

Satellite measurements have shown that Amazon deforestation is on the rise. The loss for the last five months of 2007 was 3,235 sq. kilometres, up on the previous year and surprising because the damage usually tends to drop in the wet months at the end of the year. In a world panicked by its own carbon footprint, the forests of the Amazon are the planet’s largest absorber of carbon dioxide. Figures obtained by another Brazilian government agency said the real figure was closer to 7,000 sq. km. The Environment Minister, Marina Silva, said the rise was caused mainly by higher commodity prices. Deforestation and food prices had both fallen in 2005 and 2006, and now both were on the rise.

Ireland 34th on Environmental Performance Index

Ireland came in at number 34 in the World Economic Forum’s Environmental Performance Index, after being tenth in 2006. Drinking water pollution and threats of legal action by the European Commission to enforce water standards were particular problems explaining the slip. Sweden, Norway, Finland, and Costa Rica performed well, while Mali, Mauritania, Sierra Leone, Angola, and Niger brought up the rear. The Index is based on 25 indicators across six categories: environmental health, air pollution, water resources, biodiversity and habitat, productive natural resources, and climate change.

Countries at Risk From Violent Conflict

A report by International Alert, an independent London-based peacebuilding organisation, says 46 countries with 2.7 billion people are experiencing climate change and water-related crises which create “a high risk of violent conflict”. And it says 56 more countries, with 1.7 billion people “are at high risk of violent conflict.” The UN Secretary-General, Ban Ki-moon, says the growing crisis over water should be at the top of the global agenda in 2008. Speaking at the World Economic Forum, he said shortages of water were helping to cause poverty and social hardship in Somalia, Chad, Israel, the Palestinian territories, Nigeria, Sri Lanka, Haiti, Colombia and Kazakhstan.

Planning Approved for 9th Concrete Storage Bunker

In north-west England Cumbria County Council has approved plans for a ninth concrete storage bunker at a low-level radioactive waste site. It said the bunker, at Drigg, met safety guidelines. The site has stored waste for the last half-century but had been expected to run out of capacity in the next 12 months. The 137m wide, 5.5m high vault will store waste from the nuclear plant at Sellafield, and from hospitals, the oil industry, universities and other government and military sites. The bunker will need more than 185,000 tonnes of construction materials. It will be built and operated by LLWR Repository Ltd, previously BNG Sellafield Ltd.

A New Generation of Nuclear Power Stations

The UK Government has given formal backing to the building of a new generation of nuclear power stations. It said they would give a “safe and affordable” way of securing future energy supplies while fighting climate change. The government will build no plants itself, but says it wants to encourage private operators to build them. Any plants will be built at or near existing reactors, and there are hopes the first could come on-stream by 2017. No nuclear plant has been built anywhere in the world without public money. The government has not decided yet how much new nuclear operators should pay towards the cost of building underground caverns as a permanent storage site for Britain’s nuclear waste. Until a suitable site can be found, waste will continue to be stockpiled above ground at what are described as “interim” facilities at Sellafield, in Cumbria. Existing nuclear power stations produce about 20% of the UK’s electricity and many existing nuclear and coal-fired power stations are due for closure within 20 years.

World Climate Out of Balance

The American Geophysical Union says the world’s climate is “clearly out of balance and is warming”. It said changes in temperature, sea level and rainfall were best explained by the increased concentration of greenhouse gases from human activities and urged a cut of more than half in carbon emissions by 2100. The AGU said the world faced a tough challenge: “Even the lower limit of impending climate change – an additional global mean warming of 1.0°C above the last decade – is far beyond the range of climate variability experienced during the past 1,000 years. Warming greater than 2.0°C above 19th century levels is projected to be disruptive, reducing global agricultural productivity, creating widespread loss of biodiversity, and – if sustained over centuries – melting of much of the Greenland ice sheet.” The AGU, the world’s largest society of Earth and space scientists, has 50,000 members in 137 countries.

Alaskan wilderness Opened Up to Logging, Mining & Road-building

The US Administration says it will open more than 3m acres (about 5,000 square miles) of Alaska’s wilderness, the Tongass National Forest, to logging, mining and road-building. Environmental groups say it will devastate the region. The forest is a refuge for grizzly and black bears, wolves, eagles and wild salmon. But supporters of the plan say it will revive the state’s timber industry. The forest, nearly 17m acres in extent, is the largest in the US.

Alex Kirby is a former BBC environment correspondent.

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Available on a first come first serve basis.
Clare Island Survey

By Michael Guiry

EVEN the Irish can be forgiven for confusing two of our most famous islands: Cape Clear Island (Oileán Chléire), Co. Cork and Clare Island, Co. Mayo. Both are well known to Irish biologists and to naturalists all over the world. Oileán Chléire for its Bird Observa-
tory, the source of many unique sightings of rare migrato-
tory and storm-blown birds, and Clare Island for the Clare
Island Survey, an amazing last hurrah of the Victorian natu-
ralists’ taste for surveys, forays and species lists. Why did an innocent little island at the mouth of Clew Bay become a byword amongst archaeologists, natu-
ralists, geologists and anthropologists? Schoolchild-
ren are well acquainted with Clare Island as the island
fortress of Ireland’s pirate queen, Granuile Ui Mhaíle
(Grace O’Malley also known as Gráinne Mhaol and a huge
number of variants, c. 1530–1603), who is reputed to
have been the seaborne scourge of much of the west
and south coast of Ireland in the 16th century. She is said
to have visited the first Queen Elizabeth’s court and was
accorded the courtesy of one formidable woman to another, even though she was far too near or too far from the
mainland, and because it had the physical height and the
range of habitats thought to be desirable to produce an
extended and comprehensive list of animals and plants.

That there was easy access from Roonagh Quay south-
east of the island and a protected harbour on the
island, that there was an hotel on the island, and that the
natives spoke English were other major considerations.
Propelled by Praeger, and enthusiastically supported by
the Royal Irish Academy, hordes of eager geologists, anthropologists, archaeolo-
gists, botanist, zoologists, and virtually every manner of sci-
entist, some 100 in all, and many from outside Ireland,
scoured the island from 1909–1911, collecting and
examining every natural pro-
duction and artifact of Clare
Island and the “adjoining dis-
trict” stretching from Achill in
the north to Conmara in the
south. The results were
published by the Royal Irish
Academy in several volumes
from 1910–1912. The biologi-
cal results of that first Survey
were quite extraordinary:
nearly 9,000 organisms were
recorded (3219 plants and
5629 animals) of which nearly
2000 had not been previously
known to occur in Ireland, and
11 plants and 199 animals were
completely unknown any-
where in the world. By
contrast, the taxonomic might of
the Natural History Museum
in London was only able to
muster 5,280 organism for the
much larger, but similar, island
of Mull of the west coast of
Scotland in the 1970s. This lat-
ter survey, it was claimed by
the Museum, was the most
comprehensive such investiga-
tion in the British Isles.

The New Survey of Clare
Island was initiated by the
Academy in 1991. To date, 6
of an expected 10 volumes have been published. This
time, the survey is being car-
rried out at a more leisurely
pace and with less focus on
lists of species and artifacts
and more emphasis on the
context, the environment and
climate change. Nevertheless,
differences have emerged from the first Survey. For
example, the archaeology of the island has turned out to
be much richer than previously appreciated, partly
because time was available for a sys-
tematic and comprehensive
assessment, and a number of
species new to science and
ewn to Britain and Ireland
have been discovered. How-
ever, most of all, the baseline
that was the original Survey has been augmented so that
we will be able to assess the
effects of climate change. Indeed, the authors of Vol-
ume 6, just published, consider that the island’s freshwater algal flora may
have changed substantially since the first survey, perhaps
due to the island becoming
drier, perhaps as a result of
climate change.

Other very tangible and wel-
come developments have taken
take place: the Cistercian Abbey
on the island, which contained
some of the best-preserved
medieval wall-paintings in Ire-
land, has been cleaned
laboriously (green algae were a
major problem on the painted
surface), re-roofed and renova-
ted in a very sympathetic
manner and with the greatest
care by the Office of Public
Works, and is now open to the
public.

The people of Clare Island
have been most encouraging and
supportive of the New Survey and
the workers on the Survey have been made
very welcome by all. On the
island, one still feels that we
are following the way that
Praeger went.

The Royal Irish Academy
Acadamh Rioga na hÉireann),
chartered in 1785, is Ireland’s premier learned academy
(http://www.ria.ie) for sciences and humanities, and is
the Irish equivalent of France’s Académie Française and
Britain’s Royal Society. Membership, currently about 385,
is by election, and about 20 persons, mainly from Ireland,
are elected each year by the existing members. Those elected
are permitted to use the letters M.R.I.A. after their names. This
Academy has been prominent in promoting many scholarly
projects since its foundation and maintains a important
library in its premises on Dawson Street in Dublin. Many
of the prized artifacts currently in the National Museum came
from the Academy’s collections.

Robert Lloyd Praeger (1865–1953) was born in Belfast of
Dutch extraction but spent most of his working life in Dublin.
A graduate in engineering from Queen’s University Belfast,
Liberian in the National Library, and President of the Royal
Irish Academy, he dabbled in archaeology initially but went
on to become Ireland’s foremost botanist, mostly in his spare
time. The author of several remarkable books, the one for
which he is best remembered, and which is still in print, is
The Way that I Went, an elegant view of a naturalist’s Ireland.

Michael Guiry, Director,
Martín Ryan Institute, NUI
Galway
The UK’s National Trust

By Tony Burton

The National Trust is a registered charity founded in 1895 to look after places of historic interest and natural beauty permanently for the benefit of everyone across England, Wales and Northern Ireland. It is over a hundred years since an Act of Parliament set out the National Trust’s mission to ‘preserve and protect the beauty of our countryside and cultural heritage for the benefit of the nation’. This was in response to concerns about the impact of industrialisation and uncontrolled development. The National Trust was set up to act as a guardian to protect threatened coastline, countryside and buildings. Our remit is to look after forests, woodlands, heaths, moorland, islands, archaeological remains, castles, nature reserves and villages. We’re committed to maintaining the highest standards possible in the care and conservation of our properties and their assets, and to enable people to be inspired by and enjoy them. Our conservation staff and volunteers care for an astonishing range of structures and contents, everything from 26 sets of samurai armour, and 19 magnificent paintings by Turner, to the Oscar awarded to George Bernard Shaw, the national collection of lawn-mowers, 57 meat graters and a photograph album the size of a postage stamp. And it doesn’t stop there! But in today’s consumer culture, do history and the natural environment still matter? I would argue that they are even more important today as we face new challenges in a rapidly changing world. The scale and power of the response we received in 2006 History Matters – Pass It On campaign with other heritage organisations left us confident that a large portion of the public agrees. We set out to ask visitors to our properties and the wider general public why history matters to them. In response 10,000 postcards were sent in, 20,000 people made declarations of support and 46,000 people wrote ‘One Day in History’ diaries online. More than a million people visited heritage sites in England, Wales and Northern Ireland during the campaign’s open weekend.

What makes it possible...

- We rely on the membership fees, legacies, donations and the custom of millions of generous people, and thousands of volunteers who give up their time for free.
- A vital income source is our membership – at more than £100 million this is almost one third of our total income.
- Our volunteers contribute 2.96 million hours per year which equates to a national value of more than £21.3 million.
- The cost of maintaining historic buildings is rising at four times the rate of inflation; £6 million just to repair the roof and make the building watertight at Castle Drogo in Devon. Across the country we face urgent repairs worth £162 million.
- We look after forests, woods, fens, beaches, farmland, downs, moorland, islands, archaeological remains, castles, nature reserves and villages.
- The National Trust is independent of the Government and receives no direct state grant or subsidy for our general work.
- The UK’s largest landowner after the Ministry of Defence and the Forestry Commission.
- Responsible for saving and caring for thousands of historic buildings in England, Wales and Northern Ireland dating from the middle ages to modern times; ancient monuments, nature reserves, gardens, landscape parks, woodland and farmland leased to over 1,000 tenants.
- A champion of volunteering with 49,000 volunteers.
- A major employer with 5,000 staff and training schemes for young people wishing to learn professional skills and embark on careers in horticulture and conservation.

At a glance...

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Astonishing range of structures and contents, everything from 26 sets of samurai armour, and 19 magnificent paintings by Turner, to the Oscar awarded to George Bernard Shaw, the national collection of lawn-mowers, 57 meat graters and a photograph album the size of a postage stamp. And it doesn’t stop there...
ENVision brings maps to EPA website

By Fiona Lawlor

As part of a complete revamp of their website (www.epa.ie) the Environmental Protection Agency have launched ENVision, an interactive map viewer (similar to sites like Google Earth) that places environmental maps at your fingertips.

ENVision was officially launched at the EPA Environment Ireland conference on the 3rd of September 2007 by Mr John Gormley T.D., Minister for the Environment, Heritage and Local Government, who was very impressed by the speed and user friendliness of the site in a demonstration given by Dr Mary Kelly (Director General, EPA) and Larry Stapleton (Director, EPA Office of Environmental Assessment).

The EPA has an important role as a data provider and the delivery of the ENVision system is just one part of an overall strategy towards making data easily accessible to those that require it, in a format that makes it easy to understand. We are all stakeholders in environmental protection but access to current information about the environment is vital in helping us understand the environment around us. ENVision places environmental data where it belongs: on a local setting, and so acts as a window to the environment. Anyone with an Internet connection can access ENVision from the EPA home page www.epa.ie.

Currently there are forty-one different layers on ENVision. They include water quality data from the regular EPA Water Quality in Ireland and Water Quality Indicators reports presented against the backdrop of very detailed river, lake and catchment boundary maps. ENVision expands on the previous water quality mapping tool available from the EPA by showing the water quality for lakes, estuaries and groundwater, as well as river biological quality results for the last reporting periods (Figure 1). Technological advances in river biological surveying equipment mean that ENVision will soon be showing biological river water quality data the day after it is collected in the field.

ENVision shows all the EPA active IPPC and Waste licenses, each location linked to the full license information for that facility via the EPA Website Licence Search Facility. ENVision is the new home for the Air Access Maps, with the site locations visible against very detailed orthophotography (provided by the OSI). Each air site links to the live air quality data for the location, or to a full Air Quality Assessment report in the case of sites where the assessment cycle has been completed.

ENVision is home to some more technical “specialist” data such as soil and subsoils maps completed by Teagasc and the European Environment Agency landcover data for Ireland (figure 2). This will have particular relevance to environmental engineers and environmental researchers, making it quicker and easier for them to access the data they need.

ENVision has received more than 5,000 visits since it was launched in September 2007, with Ireland and the UK being the heaviest consumers. The value of ENVision as an environmental data tool has become apparent by the number of references to ENVision as an information source that are appearing on a number of other websites: Local Authorities and Universities in particular refer to it as a key information source for environmental data.

The data on ENVision will be constantly updated and improved, and it will act as a complementary source of information to major EPA reports, particularly the upcoming 2008 State of the Environment Report (expected later this year). Other developments will include access to the data for GIS users via web services.

ENVision is instantly accessible on www.epa.ie from the EPA Maps link (located in the top right hand corner of the screen).

The GIS Unit in the EPA is responsible for the maintenance and updating of ENVision and welcome your comments and feedback, which should be addressed to the GIS Unit in EPA HQ (053 9166600) or via email to flawlor@epa.ie

Fiona Lawlor, Office of Environmental Assessment, Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Wexford.

ENVision Technical details:

ENVision should be viewed at a screen resolution of 1024x768 or higher. ENVision is supported in Internet Explorer and Firefox, there is no requirement to download software and no user name or password are required. While performance is better on broadband connections, it is possible to access ENVision with a dial-up connection (speed will be somewhat slower and performance can be improved by limiting your view or data queries to a small local area).
Long-finned Bream or Bigscale Pomfret (Tarachichthys longipinnus)

The Long-finned Bream is primarily an oceanic pelagic species found in sub-tropical and warm-temperate waters of the N & S Atlantic Ocean but absent from the Mediterranean. Although it is a highly migratory species, it appears to be nowhere common and there are only 4 known records from Northern European waters: the first, from Valentina Island, Co Kerry (May, 1914); the second from Sandvloe, Shetland (October 1961); the third from SW Biscay (March, 1969) and the fourth from NW Biscay (June, 1977). Very little is known about its biology.

Silver Pomfret or Atlantic Fanfish (Pterygopodium brasum)

The Silver Pomfret is an oceanic pelagic species of Bramid which appears to be confined to both sides of the N Atlantic Ocean but absent from the Mediterranean. In the NE Atlantic, the species extends from N Norway southwards to the Gulf of Guinea, while in the W Atlantic it extends from Newfoundland southwards to the Caribbean and Gulf of Mexico.

Spawning apparently takes place year round near the edge of the continental shelf off E Florida, but young are most abundant in the Gulf Stream during February. Although juveniles have also been found off the coast of Guinea (NE Atlantic), all of the specimens found in Northern European waters have been immature adults. France, 2; UK, 1; Ireland, 10; Norway, 1; Denmark, 2; Faroe Islands, 1; Iceland, 1; Scandinavia, 3.

In the NE Atlantic, the species has been found, albeit rarely, from Madeira (both young and adults) northwards (adults only) to N Norway. A total of 27 specimens have been recorded from Northern European waters to date: France, 6; Ireland, 7 (all from western offshore waters); Faroe Islands, 1; Norway, 10 and Iceland, 3. In Iberian waters, the species is caught occasionally on lines set for Ray’s Bream at depths of about 80m, whereas in Northern European waters, specimens have been taken from both inshore (<200m depth) and offshore waters, from near the surface (5m) down to meso-pelagic and bathypelagic depths of 500–600m. Some recent Irish specimens were taken as a by-catch in mid-water pelagic trawls targeting Blue Whiting (Micromesistius poutassou) in offshore waters. However, very little is known about its biology.

Conclusions

Until recently, relatively little was known about the biology, distribution and abundance of Bramids in Irish waters. However, in recent years there has been a significant increase in the quantity of Ray’s Bream landed by mainly Spanish long-liners. Furthermore, due to increasing quota restrictions on Mackerel during the same period, many large Irish pelagic trawlers have started to specifically target Blue Whiting for human consumption rather than the traditional production of fish meal. This scenario has provided scientists with a valuable opportunity to examine the by-catch associated with this meso-pelagic fish, including Bramids (and other species) previously considered to be rare in Irish waters.

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Food for Thought

A recent survey by WRAP (Waste and Resources Action Programme), in the UK, found that overall around 6.7 million tonnes of food is waste by householders each year.

Each year in the UK, the vast majority of food waste ends up in landfills. As food rots in landfill it can produce methane, one of the most potent greenhouse gases and a significant contributor to climate change. When food is thrown away people waste all the carbon generated as it was produced, processed, transported and stored. This is particularly important given that the whole food supply chain accounts for around 20% of the UK’s greenhouse gas emissions. The carbon savings would be equivalent to taking an estimated 1 in every 5 cars off the road if we avoided throwing away all the food that we could have eaten. The public is much more sensitive to packaging waste than food waste, with almost three-quarters agreeing that ‘discarded food packaging is a waste of money’. Research has found evidence of a lack of awareness and understanding of the environmental implications of food waste. The public does not appear to have made the connection between the food thrown away and the environment.

Why Do We Waste Food?

The simple answer is we buy more than we need and we throw away food that is still perfectly edible. The underlying reasons are diverse: from a change of mind to a change of plan; from an unwillingness to eat leftovers to a lack of knowledge of how to use them; from too little storage space to confusion over whether products can be frozen. This is a complex issue, with a major survey by Brook Lyndhurst sought to address. The study identified more than 30 reasons for food waste in the home including:

- Buying too much – particularly being tempted by special offers e.g. ‘buy one, get one free’;
- Buying more perishable food – often as the result of trying to eat more healthily;
- Poor storage management – not eating food in date order (choosing food on impulse, often driven by ‘spontaneous’ and ‘top up’ shopping);
- Ad hoc, rather than methodical, ‘spring cleaning’ of stored products;
- High sensitivity to food hygiene – in 5 say they won’t take a chance with food close to its ‘best before’ date, even if it looks fine;
- Preparing too much food in general;
- Not liking the food prepared – 22% of families with children stated that not liking a meal was a cause of food waste; and
- Lifestyle factors – not having the time to plan meals, or having fluid work and social patterns – particularly true of young professionals.

The survey identified more than 30 reasons for food waste in the home. For further information and excellent tips on reducing food waste visit: www.lovefoodhatewaste.com

www.naturesweb.ie

Download an exciting newsletter for children, featuring interesting and informative news on nature and the environment.
A Beginner’s Guide to Ireland’s Wild Flowers

WILD FLOWERS are everywhere. They brighten and add colour to waysides, fields, woods and sometimes even towns. They give particular pleasure when we know their names and can find out something about each one. For every wild flower has a story.

The success of our book “A Beginner’s Guide to Ireland’s Seashore”, has prompted us at Sherkin Island Marine Station to produce another guide for beginners. This has given us the opportunity to promote the wild flowers of Ireland, which we feel deserve more recognition.

In “A Beginner’s Guide to Ireland’s Wild Flowers” we have included only a selection of the 830 or so Irish wild flowers. These are plants you are likely to see around your home or workplace, on a walk or on holiday. We hope this book will help you find and identify some of Ireland’s more widespread or common wild flowers – and even some of the scarcer ones!

THE GUIDE INCLUDES:
• colour photographs of 162 wild flowers
• their common, scientific and Irish names
• clear and simple descriptions, including colour, size and habitat
• an introduction to each wild flower family, highlighting important features
• information on the different types of plant habitats

Available for €7.50 plus €1.00 p&p from:
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Email: sherkinmarine@eircom.net Website: www.sherkinmarine.ie

Written by John Akeroyd
Photography by Robbie Murphy
Published by Sherkin Island
Marine Station
Size: 103mm wide x 140mm high
Clockwise from far left: Meadow Vetchling; Greater Stitchwort; Common Poppy; White Water Lily; Bluebells in woodland.

Photos: © Robbie Murphy

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JOHN AKEROYD

considers a remote cluster of islands in Roaringwater Bay

THAT well-worn phrase 'Carbery’s Hundred Isles' welcomes tourists to West Cork. And for the visitor, especially the naturalist, the indented coasts, rocky islands and white strands are indeed a paradise. Some islands are easy enough to get to, such as Sherkin, Cape Clear and, in recent years, Heir or Inis Í Oí Drisceoil. Others, such as the smaller Carthys and Calfs (or Na Laonna) at the entrance to Roaringwater Bay, are more remote, unpopulated and seldom visited, with few of us lucky enough to see them. The greatest thrill of the work on the flora of the islands was the chance to land on deserted rocky or sandy strands that other botanists might never have explored.

The Calf Islands

The Calf Islands

Geologically the Calfs are formed from Devonian rocks of the Castlehaven Formation, purplish mudstones and yellowish sandstones that also outcrop on Heir and Turk Head to the north-east. The soil, derived from eroding rocks and glacial drift, is fertile enough for good cultivation. Politically and ecclesiastically, West and Middle Calf are part of Schull parish: East Calf belongs to Anghadam parish, which includes Heir and the adjacent mainland. East Calf also had different ownership, being for many years the property of the wealthy Townsend family of nearby Whitehall, which includes Heir and the adjacent mainland. East Calf also had different ownership, being for many years the property of the wealthy Townsend family of nearby Whitehall, who for a time cleared the islanders to make way for a summer cottage. In 1876 the O’Ragan family purchased East Calf. West and Middle Calf were sold to tenants in 1900.

Life was hard – in winter, Atlantic gales could maroon islanders for weeks – if relatively healthy and self-sufficient. Stone walls provided shelter, as the islands are treeless. The land yielded hay and tillage for potatoes, cereals, roots and cabbage, the sea provided seaweed and beach sand to fertilize potato ridges. Other food came from the eggs of a few hens, milk from a cow or two, and bacon from the pig, with shellfish and carrageen seaweed among seashore rocks for extra protein and minerals. But, as if high winds, salt-spray, poverty, isolation and recurring potato blight were not enough, grasping landlords forever demanded their dues. In 1886, after some islanders had failed to pay rents, a coastguard gunboat landed police to help bailiffs enforce evictions on West and Middle Calf.

The people are all gone but the islands remain an inspiration to botanists. Each of the Calfs has some blown sand, always good for plants, and there are shingle strand on East and Middle Calf – where the nationally rare Sea Kale (Crambe maritima) grows. Heathland on higher ground of East Calf, somewhat sheltered to the south-west by the other islands, is home to Spotted Rock-rose (Tubularia guttata), known here since the 1930s but not rediscovered until 1992 by Karen Clarke, an American botanist from the Marine Station. This tiny yellow-flowered annual of bare rocky ground, growing in thin, winter-wet peaty soil, occurs in a few places in Roaringwater Bay and, like Sea Kale, is included in the Irish Red Data Book of threatened species. Another rarity is Bird’s-foot Clover (Trifolium ornithopodioides), found here only in 2002. A small lough on East Calf has both a reed-bed and water plants that are scarce in the islands, including three pondweeds and three water-crowfoots.

Dr John Akeroyd, who has visited Roaringwater Bay since 1986, edited The Wild Plants of Sherkin, Cape Clear and adjacent islands of West Cork (1996). For further information on the Calfs and some other islands, he recommends Heir Island. Its history and people, by Eugene Daly (Heron Press, 2004).
A True Pioneer

Looking at the life of Prof. Enrique Balech

By Matt Murphy

GOING through history, I have always been impressed and influenced by people with humility, kindness and understanding. I have been fortunate in meeting many who fit into that mould. However, there are few that I can say have always been the ultimate master in the field they work. One such person was Professor Enrique Balech from Argentina – the world authority on certain phytoplankton.

In 1987, we organised a workshop at the Marine Station "The Problems of Toxic Dinoflagellate Blooms in Aquaculture" on the island. I invited 12 scientists from around the world who were involved in red tide research. Most were experts in their field. Among those was a 79-year-old Argentinean Professor who I was told by Prof. Barrie Dale of Oslo University, who helped organise the workshop, that he was a world authority on dinoflagellates (an important group of plankton causing many red tides). Because of his age, I insisted he stay in my home. Oh, what a wonderful decision on my part as he, like me, was an early riser. We had breakfast together around 6am each morning and he talked to me of his long life as a scientist. As a student he had decided to study bats but he became enthusiastic about the microscope and this began his life-long love for phytoplankton. This was away back in 1934 in the Museum of National Science in Buenos Aires. Argentina. Freshwater phytoplankton was his first research but he soon moved on to marine research.

At the same time he taught in a high school for a livelihood. In 1941 he began studying marine phytoplankton, especially tintinnids and dinoflagellates.

He returned to teaching in a high school from 1947 to 1961 to earn a salary. All this time he continued with his phytoplankton work. In 1961 he was appointed to the Mar Del Plata Institute which was created for marine researchers by three universities. In 1962 he resigned and was immediately appointed by the President to the National Council of Science as an investigator with full independence and a salary. He retired in 1981 as a principal investigator as he found himself becoming too much of a bureaucrat. As he said, he became an amateur scientist again! Listening to him talk I wondered was he ever bored? I asked him had he a modicum of arrogance. Smiling, he said: "I still use the same one for over 50 years, but I do need a good typewriter; the one I have is not very good."

He left Sherkin with a new electric one, with the compliments of some of us at the workshop. He said that when looking at phytoplankton he drew much as drawings gave him time to look at detail; with the photographs one misses a lot. He made his own camera lucida (an optical device used to make accurate drawings from images seen in the microscope) from string, a mirror, a can and pieces of timber. As he spoke I started to think of the other scientists at the workshop who were from major institutes world-wide, and who worked on microscopes costing thousands of pounds. Yet despite their sophisticated equipment, when we all sat around the table for dinner in the evenings and discussed marine matters, all present let the final word to the man they recognised as the true master.

In our hours of talking this great man never once bemoaned the fact that he had so little of the material things in life. One thing is sure, he had an abundance of contentment and happiness. As he talked I mentally compared him with some of those scientists in his field world-wide who were so convinced of their own greatness and so full of arrogance. Enrique being the humble man that he was did not tell me fully of his achievements as a scientist. I found out later that he worked on plankton from many areas of the world. In his Antarctic work based on samples from 12 cruises he discovered 60% of the species accepted today from that region. His studies from the Gulf of Maine and the Caribbean increased the records from 76 to 262 species. From the south-western Atlantic he produced the most important monographic work for the Southern Hemisphere and one of the greatest for any oceanic region, in which 375 species are described, must not mentioned before in the region.

More of Enrique’s studies were on plankton from the Mediterranean, the Arctic, Baltic, North Java and Philip- pine Seas. In 1980 he was the first to recognise that two men in Argentina who had eaten shellfish had died from the paralyzing shellfish poison (PSP), produced by dinoflagellates and transmitted by mussels. He guided the investigations and from then on he devoted his work to the study of the dinoflagellates which produced the toxins, included in the genus Alexandrium. He gathered material from around the world, such as Thailand, Borneo, Sumatra, Kamchatka, New Zealand, Tasmania, Turkey and many other places. Of course as he was the world authority on this work, numerous specialists from South America, Mexico, USA, Canada, Europe and Australia were guided by him.

Another side to Enrique’s studies was oceanography. In 1957, he had undertaken oceanographic work on the California coast whilst at the famous Scripps Institute and Hopkins Marine Station. In 1964 he spent time at the Department of Oceanography of Texas University on further oceanographic work.

In his oceanic studies of the seas off Argentina he was able to show that those seas were poor for fish production – much less than the seas off Peru and Africa. He felt that Argentina was at risk of overfishing and that this called for attention. He was a prophet before his time. The above is but the tip of the iceberg of the oceanic studies Enrique carried out.

In his career of Prof. Enrique Balech (second from left), a world authority on dinoflagellates, spanned nearly 70 years.

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In his career of Prof. Enrique Balech (second from left), a world authority on dinoflagellates, spanned nearly 70 years.
WASTE MATCHERS.COM

A free online service allowing you to pass on unwanted goods to others

WASTE MATCHERS is an online re-use website which can be used by householders, the general public and businesses in Cork City and County.

This free exchange website is a joint venture between Cork County Council’s Environmental Awareness and Research Unit, Cork City Council, South Cork Enterprise Board & Macroom e.

This online free service allows you to pass on unwanted goods to others. By using this website, you are helping to protect your local environment and you can save money by getting useful goods.

It is similar to the Free Trade website initiated by Dublinwaste.ie which has received a great deal of positive publicity.

The aim is to keep waste materials in use so that items can be diverted from landfill. This initiative is in support of the Local Authority Waste Management Strategy – Waste Management Plan 2004 – 2009. Re-use is a step up the waste hierarchy from recycling and will help in decreasing the amount of waste going to landfill.

The initiative works on the premise that many items go to landfill that could, in fact, be re-used. The website provides an online database for members of the public and businesses to post their unwanted materials so that others, can search for items they could use.

The website allows browsers to search for ‘unwanted items available’ and to add a listing of items that they would like to give to another user. The website is free and household items are offered free of charge to others.

Browse the online database for items or set up an account and start listing your unwanted goods today.

Web site: http://www.wastematchers.com

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Visit www.wastematchers.com today
"Rural Settlement in Medieval Ireland"

Although Ireland is one of the smallest countries in Europe, examples of medieval archaeology are widely spread throughout the country, from crannogs (which were first constructed in the Neolithic period), to the great defensive castles of the Normans, founded in the late twelfth and thirteenth centuries. Throughout Ireland, people lived side-by-side by these archaeological gems, which have survived in various states of repair. How often do you climb a mound not realising that this was once a great motte castle; or play among the ruins of what was a thriving religious community; underground passages are great for exploring but once provided space not only for storage space, but somewhere for people to hide when under attack. It is important for us to preserve our heritage – it is the heritage of an area that makes it unique and gives it a character all of its own. The first step in protecting our heritage is raising our awareness, understanding and appreciation. This can be achieved by arranging talks or producing leaflets to promote our local heritage. Farmers and those who own land on which there is a protected site or monument should be aware of the level of protection these sites and structures have under national legislation. Schools and third-level institutions could develop local heritage websites and establish links with local authorities to identify these protected structures. This leaflet is part of a series of documents and structures, many of which can be found in YOUR area. They are part of our heritage and thus, part of us, and should be both admired and protected by US.

Ring-Forts

The ring-fort is a general term applied to circular enclosures, surrounded by one, two or even three banks or earth, with or without ditches. The ditches were up to two metres deep and the banks were made from the earth taken from the ditches – ring-forts had a strong defensive capacity. These enclosures contained houses, of different types, possible outbuildings and even sometimes an underground refuge or souterrain, which we will look at in more detail below. Ring-forts vary in size from around 15m in diameter to as large as 80m and their function varied. Although in the main they functioned as defended farmsteads, or one family grouping, archaeological evidence has shown they were also centres of industrial activity, such as iron working as well as spinning and weaving. Smaller examples serving as pens to protect cattle in pre-Norman Irish society. Ring-forts are numerous throughout Ireland, with 1,300 in County Down alone. There are several examples of ring-forts still being occupied through-out the middle ages and beyond – in more eastern locations, some ring-forts were utilised by the incoming Anglo-Normans, for example in Rathmullen in County Down, which was continuously occupied from the 8th to the 12th century, which was converted into a motte.

Cranngós

Another form of rural settlement was the crannóg: this was an artificial island constructed by a natural shoal, by timber piling and laying down of brush wood, often with the addition of clay and frequently with plan-flooring – sometimes the name is applied by extension to lakeside occupation sites. Its origin is one to be found in the Neolithic period; some of the most important excavated examples originate in the later Bronze Age and occupation of this type of settlement continued until at least the 17th century, where they seem to have been used as defended strongholds in the wars of that period – however, most archeological evidence tends to indicate that few crannogs were used in the Anglo-Norman period.

Hill-Forts

Unlike some of the smaller ring-forts, hillforts were principally built as defensive sites and generally functioned as tribal, rather than family centres – they were a focus for settlement. There are only about 60 probable hillforts in Ireland and excavations have shown that most of them were long abandoned before the start of the eleventh century – because they were so few, it is obvious that they were not an important form of settlement in the immediate pre-Norman period.

Souterrains

Another feature associated with the pre-Norman rural landscape were the souterrain and the horizontal mill. The Souterrain refers to an ‘artificially built cave’ and it is basically an underground passage often found in association with ringforts or promontory forts. There function was two-fold: firstly for storage and secondly as safe havens for the inhabitants of the nearby settlement. Excavations have produced evidence of traps or some form of obstruction to confine the intruder and examples of this can be found at Tyrella in Co Down and Donaghmore in Co Louth.

Souterrains

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Promontory Forts

Promontory forts (the name refers to the point of land that juts into the sea) – were another form of settlement – their most recognisable feature was their earth or stone banks and their fosse that cut off access to both the coast and inland.

Ecclesiastical Settlement

In essence, many of the monasteries were identical with larger ring-forts, with buildings and huts of wattle and daub (which is a mixture of manure, straw and mud) were crowded into an irregular walled or earth and stone fortification. However, not all of ecclesiastical settlements comprised small communities in isolated areas where they could easily commune with God. One of the most successful of them was Glendalough, where a large monastery existed. The principal monastic remains consist of a round tower, the ruined cathedral and several stone churches. These ecclesiastical settlements took on urban functions as the centuries progressed and large number of people, both lay and ordained, were attracted both to their thriving religious centres and to the increasing economic activities surrounding them.

Everyday Life within these Structures

For everyone in the early period of medieval Ireland, be they kings, monks or the rest of farmers, their homes were comparatively cheerless – smoke from the fire on a central hearth could only escape through the roof or through the door – this would have led not only to horrible eye problems, like conjunctivitis but also meant that fire was an ever-present threat for both secular and religious settlements. Once a fire started it spread rapidly – Glendalough was destroyed by fire nine times between 775 and 1071. Within all dwellings in this period, bones and kitchen refuse were not removed but covered over with successive layers of clay – at night, the only light came from rush candles – houses were small and in these conditions, even well-do-to families slept in dormitory fashion on beds of straw and hides: privacy was limited and people lived in constant contact with the rest of the family and with retainers. This was the scene in medieval Ireland in the pre-Norman period – it comprises an image of indigenous settlement, dominated by the dispersed farmed agricultural settlements, and the ringfort, but also comprising various other features including souterrains, monasteries and crannogs. The rural landscape would soon change under the colonists and the first examples we will examine comes the heading of earth and timber castles.

Features on the Landscape after the arrival of the Normans Castles

The great majority of Norman castles built in the first few decades after the invasion were of earth and timber. These were favoured materials because of the speed with which castles could be erected; early castles were of two principal types: motes and ringworks.

Ring-Work Castles

In 1963 de Bollaard defined a ringwork as a ‘class of small circular embanked enclosures of apparently medieval date’. Ringwork castles are a real enigma in Ireland – the surface morphology of ringworks is virtually indistinguishable from that of the indigenous ring-forts – there are about forty-five examples that we know of. We can’t compare this problem in Britain as ring-forts are an Irish phenomenon – What we can say is that there are far less ringwork castles in Ireland in comparison with Britain.

Motte and Bailey Castles

A feature that we know much more about is the motte and bailey castle of the Anglo-Normans. A motte can be best described as a mound of earth, usually artificially constructed, with a fosse (ditch) around its base. The top of the motte was sometimes covered with wattle and sod, with a platform on the inner side: inside this was a wooden tower, used as a watchtower, storage of weapons, a lookout or a residence. At the base of the motte the fosse was surrounded by a wet or dry ditch, which served both for defensive purposes and as a quarry provided material for the motte. Beyond the ditch was a lower courtyard, the bailey, which was often roughly oval or kidney shaped and was defended by a ditch and an internal bank supporting a timber palisade.
The Antarctic peninsula, south of the southern summer is relatively good for cruising. Tour operators visiting Antarctica are governed by the rules of the International Association of Antarctic Tour Operators (IAATO). Part of these rules state that no ship carrying over 500 passengers can carry out landings on Antarctica and any ship carrying out landings can only have a maximum of 100 passengers ashore at any one time. As our ship was at the upper limit of these rules it meant that landing operations had to be run with military precision to ensure everyone got ashore safely and that we adhered to the rules.

I met with the rest of the team at Buenos Aires. The team comprised our expedition leader Allan Morgan who coordinated all the Antarctic activities on the ship and liaised with the other ships visiting Antarctica to ensure there is no trouble with our landing schedule. Allan was assisted by our assistant expedition leader Rich Kirschner. Both have vast experience in the Antarctic. Dick Taylor, with 25 years experience on Ice Breakers coordinated the landing of passengers on Antarctica. Other members of the team included the Zodiac driver team leader and a group of experts who spent the season giving lectures to the passengers on Antarctica, assisting in the landing operations and interpreting all aspects of the ecology of Antarctica for the passengers. Our team included a geologist, marine biologist, historian, artist, ornithologist, marine mammalogist, a Japanese translator and an Antarctic management expert.

The ship was booked out for the season, so once on board our first cruise took us down the coast of Argentina where we encountered our first albatrosses and paid a visit to the Valdes Peninsula where Charles Darwin spent some time while working on his theory of evolution. The peninsula is the location of the famous scenes of Killer Whales beaching themselves to grab seal pups. It was the moulting season so there were no Killer Whales but there was over a hundred female Elephant Seals hauled out to moult looking like a long row of giant sausages on a pan.

After that memorable, but all too brief stop we cruised south to the Falkland Islands and spent another day in and around Port Stanley. I saw Magellanic Penguins, amazing Long-tailed Meadowlarks and Falkland Streamer Ducks, a species found nowhere else on earth. Then it was on to Westpoint Island on the west side of the Falkland Islands, home to a breeding colony of over 14,000 Black-browed Albatrosses and 5,000 Rockhopper Penguins. Watching the small Rockhopper Penguins climb over 100 meters and walking over half a mile from the sea to their chicks in the colony was fascinating.

We then headed for the Antarctic Peninsula. On the way we crossed the Antarctic Convergence, a border between the relatively warm waters of the temperate South Atlantic Ocean and the much colder water of the Antarctic Ocean. Our arrival in Antarctic waters was always greeted by the appearance of Cape Petrels that would follow the ship and circle it, offering exciting photo opportunities for the passengers. Our first close view of land in the Antarctic Peninsula was at Deception Island, so called because it looked like a circular island until it was discovered to be a caldera, a sunken volcano big enough for our ship to enter. It is in the Bransfield Strait, named after a Cork man who was a very famous 19th century Antarctic explorer, almost unknown to people in Ireland. Passengers here got their first real look at Antarctic penguins. There are nearly 100,000 Chinstrap Penguins nesting on the island. We then cruised south on the Gerlache Strait, along the Antarctic Peninsula surrounded by jaw dropping scenery. Mountains rising over 1000 meters almost vertically from the sea, massive glaciers slipping slowly into the sea dropping icebergs on the way. One of the hardest things for me to take in was the scale of the place, with only the occasional ship to remind me just how vast the place really is. This area provided us with a memorable show of icebergs of all shapes and sizes and as many as 60 Humpback Whales in a day, some passing within meters of the ship. We then spent the next few days land- ing at a number of penguin colonies where everyone got close views of the nesting penguins and the ever present Leopard Seals.

Following our last landing at Half Moon Island in the South Shetland Islands group we headed out into Drake Passage passing an armada of giant icebergs, some of which were bigger than the ship and one which we conservatively estimated was over a kilometre long. On the Drake Passage we had amazing views of albatrosses, especially the Wandering Albatross with its outsized wings longer than any other flying bird. They would follow the ship and occasionally glide over the deck like small aeroplanes watching by stunned and amazed passengers.

Ushuaia in Tierra del Fuego is the nearest port to Antarctica and the base for most cruise ships going there. It is a rapidly expanding town set on the shore of the beautiful Beagle Channel under magnificent mountains. I was lucky enough to visit the national park outside the town and could not believe my lucky in capturing on film the ridiculously beautiful Magellanic Woodpecker digging out grubs from the many dead trees in the vast forest. Following a day in Ushuaia it was back to the ship, a new batch of passengers and the beginning of another four unbelievable cruises to the Antarctic Peninsula.

Antarctica is a unique place and the last unsullied continent on earth. It is very vulnerable and while tourism is and will have an increasing impact on it its impact will be nothing compared to the eventual exploitation of its resources. As I write bigger and “better” ships are being designed and launched to explore the white continent for oil, gas and minerals. The continents remoteness and hostile climate has deterred us from invading it but as we squander the resources we have at present it is only a matter of time before our way of life will provide us with reason to go there. Whether the amazing wildlife that lives there can co-exist with our need to exploit Antarctica resources remains to be seen. I can only hope it will.
Cruising Antarctica

Photography by Jim Wilson
www.irishwildlife.net
A Slow Approach

MATT MURPHY first met Brian McK Bary (now retired) in the early 1980s when Brian was Professor of Oceanography at University College Galway. It was to be the beginning of a wonderful friendship. Brian encouraged Matt to continue the plankton monitoring work being carried out by Sherkin Island Marine Station, work which is now in its 31st year. Matt recently spoke with Brian about his life’s work.

BRIAN BARY first developed a close interest in matters marine in New Zealand (N.Z.). As a boy, he holidayed often in the Sounds – sea-filled, old river valleys – at northern South Island. Small boats, fishing, sea birds – and sea water – became ingrained in his make-up! However, it took a war, the Korean conflict, to provide the opportunity to promote this early relationship into a full-grown career.

That war encouraged the N.Z. authorities to establish the “Defence Scientific Corps” into which “promising” university science students were competitively recruited. A new recruit underwent a familiarising course in the force to which he was suited, followed by research in topics relevant to the force’s perceived interests or requirements. Bary was accepted into the Corps and his marine interests ensured his assignment to the Royal N.Z. Navy.

After a period at shore-side establishments, he went to sea for 12 months in the hydrographic surveying Frigate, H.M.N.Z.S. “Lachlan” Lachlan’s cruises covered mainly east coast areas, primarily of South Island and Stewart Island. During these he sampled, as regularly as feasible, for sea water (temperature, salinity, phosphate), net-plankton, bottom sediments and observed sea birds, whales, dolphins and weather. Plankton samples were sorted, specimens identified and counted, and water samples analysed, ashore. Data obtained were “worked up” and provided material for a Ph.D. (University of N.Z.).

At this juncture (1952) he was seconded to the N.Z. Oceanographic Institute and proceeded to revise and add further data to those of his Ph.D. thesis. Several papers on zooplankton systematics, distribution and ecology resulted.

On completing his naval Commission, an opportunity arose to work with the Hardy Plankton recorder team at the Leith (Edinburgh) lab. Of the Scottish Marine Biological Association; this was accepted. However, the long-established procedures were personally restrictive and when an offer to “head up” a unit of “biological oceanography” at the Institute of Oceanography, Univ. of British Columbia, arose, he was accepted. It seemed to provide an opportunity in which his experience to date could be used to advantage. And so it proved.

Eleven years that followed included supervising student research, training and teaching. Additionally, he was able to pursue his own research which included underwater scattering of echo-sounder pulses (at 11–200 KHz) by zooplanktonic organisms and/or fish; occurrences of organisms relative to “water bodies” (defined by T and S properties), for eastern North Atlantic waters (Recorder data) and Canadian (fords), design and evaluation of a high-speed plankton sampler and its electronic sensors and control (along with other, orthodox samplers); a world survey of the cographed genus Calanus. Obtaining funding, in addition to support from the Institute, was demanding, often successful, and usually generous.

The biological oceanographic unit was by now well established and Brian (now a Prof.) believed a change of scene was desirable. It was timely, therefore, that the opportunity to inaugurate the Dept. of Oceanography, at Univ. College, Galway, was proposed. Some marine-oriented studies were already being followed at the College and their presence suggested a sympathetic background to the new department. Here was a situation with potential – something to dream about!

Basically there appeared to be two lines of approach for the new department. First could have been a more traditional one wherein individuals followed their own perceived ideas in research and teaching. Or second, it could embrace a
programme of research and teaching (and training) in which the "traditional" was interleaved with a broader field, with the aim to attack marine problems and matters setting Ireland – in effect a more "applied" approach.

The second attack became departmental philosophy. The department would formulate a comprehensive "theme" and engender research topics appropriate to the theme in the belief that this had the potential to lay early foundations for solving problems, not only of scientific merit, but that had practical applications. Integrating observational data from physics, chemistry and biology of the sea was intended to recognise interrelationships amongst the three. For example, would a change in either or both physical or chemical properties affect planktonic species' distributions and abundance or population structure? Such methodology and information would also have immediate application to fish and fisheries.

To adequately process the thematic approach required staff in physical and chemical oceanography and eventually two appointments were made, both in physical aspects. Unfortunately, personal research efforts largely precluded sustained input to the "thematic", although the second appointee confirmed a cyclical circulation about Ireland – information relevant to plankton distributions. Thus, the broadly integrated approach could not be progressed, sufficient to properly attack that wide range of problems evident in Irish ocean affairs.

Even so, among student research projects, occurrences of species of each of charognan and sea-anemone were examined. Preparations of copepods were related to effects of oceanic intrusions going activities would have halted without the dedicated input by technical staff (particularly Tom Furey, John Coyne and Miriam Pybus). Other, temporary assistants were hired as stretched finances permitted in attempts to reduce mechanical, technical and analytical backlogs. Much later, a dedicated analysis unit, funded by the College, greatly reduced chemical analyses in the Department.

The advent of the R.V. "Lough Beltra" was a milestone for marine sciences in Ireland, and especially the Department of Oceanography. Acquisition of this Dutch-built, 70-ft trawler was strongly advocated by the then Director of the Geological Survey, the Department of Oceanography and promoted by the Council for Scientific and Industrial Research. During its re-fit, the Department specified suitable deck equipment and its layout, and the design of labs. and accommodation. The conversion cost was met by Government, through C.S.I.R., a welcome advance in attitude towards marine science. The ship only a small proportion of this assessed potential was realised. Universities and technical colleges absorbed a fraction more. Commendable as these efforts are, why did upwards of 30 years have to elapse before a major attack on marine problems was developed? Thad had to await the advent of the government-funded Marine Institute and in ships. These years were largely wasted whilst data from oceanic and terrestrial investigations struggled, with little support extended to them; provision of a pick-up for transporting equipment; and a most necessary person – a caretaker.

Additional financial support was obtained via periodic consultative projects, e.g., two topographic surveys (Fenit harbour and inner Galway Bay); several site studies for prospective fish farms; an electronic wave recording buoy in Bantry Bay; a direction-finding system for current studies, and others. Such projects were a drain on the limited manpower and were time consuming. Conversely, they enabled the department to develop essential equipment and gave scope for additional training at sea for all personnel.

Initially, a sum of IR£50,000 was envisaged to found the Department and develop research facilities (labs. and equipment for sea- and shore-activities, ship-time), but this did not even mature. In fact, the first grant was for IR£5,000 pounds – plus a committee to advise on its disbursement! Contrast that with the £50m spent initially on the Marine Institute! An annual one-tenth of one percent of that outlay, i.e., £500,000/annum, would have provided the basis to make worthwhile inroads into what in Ireland, was an almost totally neglected and unknown area of marine understanding.

Where-with the potential of the original dream?
BECAUSE of its richness and diversity of plant life, Madeira has been described as a garden floating in the Atlantic. Its islands, together with those of the Azores, the Canaries and Cape Verde are known collectively as Macaronesia, the Fortunate Isles. According to Greek mythology, it was here that the gods brought the heroes when their adventurous lives were over. Despite their relative proximity to Europe and Africa, these archipelagos have never been part of the continental mainland. They were formed by volcanic activity during the Tertiary geological period, which began around 65 million years ago, when the tectonic plates moved the thin oceanic crust over hot plumes of the Earth’s mantle. The resulting basaltic islands stand as largely submerged mountains, with only their summits rising above the surrounding deep ocean. The Earth’s climate began to cool some 25 million years ago, leading into the Quaternary period of the last two million years, characterised by a series of Ice Ages, during which much of the northern hemisphere lay gripped by glaciers. The Macaronesian archipelagos were sufficiently isolated to escape the major effects of glaciation, so that they retained the Tertiary forests that vanished from the rest of Europe. Portuguese sailors first settled the ‘Ilha da Madeira’, or Isle of Timber, in the fifteenth century. They immediately began to clear the forests, for fuel, building materials and agriculture. However, unlike elsewhere in Macaronesia, Madeira still retains large areas covered by the primeval forest. The Laurissilva, or laurel forest of Madeira comprises some 15 000 hectares, or one-fifth of the land area, mainly in the northern part of the island. This is well over half of the world’s remaining total, 90% of which is confined to Macaronesia. So rich and valuable is the ecology of the Madeiran Laurissilva that it was declared a UNESCO World Heritage Site in 1999. This unique habitat is home to more than 700 plant species, the most prominent of which are several members of the evergreen laurel family. These include Tiltree, Vinhatico, Pau Branco, Barbacano and Madeira Mahogany. They are accompanied by two kinds of holly and numerous shrubs, such as Faia, Sanguinho and Folhado. Some plants, such as Bilberry, the heather, Erica arborea and Lily of the Valley have responded to competition from the laurels by evolving into variants that grow as tall as trees. The result is that the steep valleys and mountain-tops of much of Madeira are clothed in a largely impenetrable jungle. The Laurissilva attracts the moisture of Atlantic winds, so that the northern parts of the island are often misty and damp, while the south basks in sunshine. The climate can change over a period of an hour, or from one valley to the next. This moisture is released into a sodden soil, giving life to an almost unbroken carpet of hundreds of varieties of mosses, lichens, liverworts, ferns, fungi and flowering plants, many of which are found only on Madeira. And crawling through this richness are more than 500 species of insects, spiders and molluscs. The water absorbed by the forest is harvested and transported by a system of channels, known as levadas, of such low gradient that the water flows as an almost silent trickle rather than a rush. The Levada dos Caldeirão Verde, for example, falls only ninety metres over a distance of 6.5 kilometres. Many levadas follow tunnels or cross precipitous faces, with the maintenance pathways providing often the only means by which walkers can enter the forest. The total length of the levadas exceeds 2000 kilometres, and is more than double the distance covered by all of Madeira’s roads. The Laurissilva forest is only part of the Madeira Natural Park, which occupies two-thirds of the island, including virtually all land above the 300-metre contour. Within the park are several...
Lichens on a laurel tree. 

Heather trees – Erica arborea.

Lichen – Lobaria pulmonaria.

Crossing a cliff on the Levada dos Caldeirao Verdes. 

Lichens on a tree.

Zebra spider

The most distinctive of Madeira’s native birds is the Trocão pigeon, a large, blue-grey bird, which lives in the lower reaches of the laurel forest. Though its numbers are in the thousands, it breeds only on Madeira and is classed as vulnerable. It feeds on the fruits of the laurels, so its spreading of seeds is crucial to the forest ecology. Unfortunately, its presence near agricultural land can be deletive, and it has often been illegally shot or poisoned. The Madeiran government allows limited culling, under strict control, a difficult balancing act, as the Trocão pigeon has a high level of protection under EU regulations.

Some sea birds, such as Bulwer’s petrel, Cory’s shearwater and Manx shearwater are thriving, if not specifically on Madeira, then elsewhere in Europe. The exclusively Madeiran Zino’s petrel, however, is among the rarest seabirds in the world. In fact, until the late 1960s, it was thought to be extinct. As few as 60-75 breeding pairs have been recorded. Despite being a bird of the sea, this petrel breeds on some of the least accessible crags of the central mountains. It is vulnerable to predation by rats and feral cats and to degradation of its habitat by grazing animals. A programme of eradication of predators and removal of sheep and goats from the higher mountains has brought about a small recovery in numbers of this very rare bird.

Madeira is a tiny island, only marginally bigger than the Isle of Man. It has, nevertheless, significant areas of genuine wilderness into which a person can disappear. As we are now becoming aware of the concept of wilderness, and its indispensability both for our own well-being and the good of the planet, the preservation of this wild garden of the Atlantic must grow even more important.

Useful information

Berlitz Holiday Map: Madeira. Excellent touring map, but with practical data and much additional information about places of interest. Useful in conjunction with... 

Berlitz Pocket Guide: Madeira. Concise, well illustrated and easy to use and slip into the pocket. Madeira in a nutshell.

Madeira: Glosterreter Island Guide by Terry Marsh (New Holland). More detailed guide to all the places to see and visit on Madeira.


Birdwatching. For half-day and full-day trips: www.madeirawildbirds.com

M.A. Toole, 65, Cheshwick Drive, Gosforth, Newcastle

Madeira in a nutshell.
A Nature Trip with a Difference

By Ian Boler

I WORK as a Biology/Chemistry Teacher at Kolej Yayasan UEM in Peninsula Malaysia. The college is a Malaysian ‘science’ college teaching the Cambridge A-level syllabus to Malaysians with sponsorships to then study subjects such as Medicine, Pharmacy, Biotechnology and Physical Engineering at top UK (mainly), USA and Australian Universities.

The college is situated in a small village about 60 km north of Kuala Lumpur. It is surrounded by hills covered in Rubber trees, Acacia trees and Oil Palms as well as areas of Virgin Jungle. A short distance away are the central mountains rising to over 2,000 metres which are mostly covered in Virgin Jungle. Peninsula Malaysia has retained much of its Mountain Rainforest and some very large tracts of Lowland Rainforest (e.g. the Taman Negara) which is reputed to be over 300 million years old (the oldest surviving in the world). Much of lowland Malaysia is developed or agricultural (Oil Palm, Rubber trees, rice paddies, fruit trees, etc), but many rivers traverse the lowlands and much Mangrove and Swamp forest remains in places. The wildlife in these remaining areas is very rich, with elephants, tigers, rhinoceros, tapirs, monkeys and very many species of birds (over 700) and insects (over 1,000 butterflies alone!).

But, in the jungle, wildlife is very hard to see (too many trees!), thus many Malaysian citizens have seen little of their own wildlife, or even know little about Natural History. For these reasons I started a Natural History Club at the college to seek out and learn about Malaysia’s wonderful Natural History for our Malaysian students. We meet once a week, with fortieth outings to see wildlife around the college and bi-monthly trips to other parts of Malaysia to visit special sites for wildlife. The following is a review of one of our trips to a very special site for Fireflies in Malaysia.

Twelve hardy adventurers departed Kuala Lumpur at 1:30pm, taking the newly opened road to Batang Burjuntai and on to Kuala Selangor Nature Park. We were greeted by our knowledgeable and enthusiastic Guide, Mr Raz, who gave us a brief introduction to the park. The whole area was once mangrove forest, but a mound was built to stop the sea flooding. This left a thinner area of coastal mangrove and, behind the ditch, brackish lakes and secondary forest.

Our guide then took us through the secondary forest, where we saw Silvered Leaf Monkeys and numerous butterflies, to a tower overlooking the lakes. Here we gained fantastic views of the lakes and forest, watching a pair of majestic Brahminy Kites flying by and Grey Herons and Great Egrets in view. The captive breeding of Milky Storks had been stopped due to raids by Long-tailed Macaques and the large enclosure empty, but four of the birds were still present on the reserve.

Our tour then moved round the lakes to the Mangrove walk, with our guide describing many of the plants ecology and uses on the way. Here we saw two types of Mud Skippers, tiny blue Fiddler Crabs and Water Monitors. Wandering back through the forest to the centre brought us into contact with the Macaques who were quarrelling bitterly as usual and some were trying to get into the van! At the centre we were given a detailed briefing about the fireflies natural history. At the park were non-synchronous species only, Pteroptyx valida, but along the rivers is the synchronous species Pteroptyx tener, which flashes 3 times a second in unison. They have a lifespan of 9 months but the adult beetles only live for 10 to 20 days.

Dinner at 6:30pm was at a marvellously sited seafood restaurant on the bank of the Selangor River watching the sun set. Then it was on to the highlight, the Fireflies themselves. Arriving, in the dark, around 8:00pm, we boarded three separate boats, each propelled by an oarsman. We were each taken along the bank where many of the bushes were blet by dazzling arrays of simultaneously flashing lights – the fireflies. Each firefly has a light-producing segment (males two, females one) on their abdomen. It was so dark, however, that the fireflies themselves couldn’t be seen, only their lights.

It was a fantastically, spectacular and peaceful experience!

Ian Boler works as a biology/chemistry teacher in Kolej Yayasan UEM in M alayia and was a former volunteer at Sherkin Island Marine Station.

Sherkin Island Marine Station.

Lakes and mangroves in Kuala Selangor Park.

Much mangrove and swamp forest remains in places on the lowlands of Malaysia.

A mudskipper seen on the Mangrove walk.

A long-tailed Macaque monkey on van!

Members of the Natural History Club relaxing after a day’s outing.
A Real Insight into CFB Research

By Matt Murphy

SO often annual scientific reports from institutions and semi-state bodies are just a public relations exercise with little or no information for the reader. So many researchers get caught up in their work and forget the broader picture of educating the public on the necessity for such projects.

Recently the Central Fisheries Board (CFB) published its Research Projects summary, 2007. It was a breath of fresh air as the 53 projects in its programme are treated individually, with questions and answers on each. This report or, more correctly, this compilation of reports on individual and diverse freshwater projects is for the ordinary man in the street, the angler, the fishery owner, the commercial salmon fisherman, civil servants and other scientists. The reports are easily readable, interesting – even fascinating and short. One immediately has information on:

- The remit of the project
- Why is the project being undertaken
- Sponsors/people in charge of project
- When is the planned completion date of the project
- Who will benefit from the project
- What are the findings of interest and to whom
- What are the next steps?

When will an interim/final report be available to the Board
- What was the cost of the project and source of funding
- To whom will findings be made available
- What progress has been made to date
- What are the findings of interest and to whom
- What are the next steps?

It is understood the cost of the research for these 53 projects was €3 million. The broad-based research programme shows very important issues are being addressed, such as:

- Atlas of Freshwater Fish in Irish lakes
- Lake trout stock surveys
- Dynamics of fish populations in Irish waters – studies of fish stocks in large Irish lakes
- Fisheries development on navigable waterways
- An environmental assessment of the ponds within Phoenix Park, Dublin
- National assessment of attainment of river specific salmon conservation limits (CLs)
- A fish stock survey of River Suir catchment
- Water Framework Directive (WFD) surveillance monitoring – lakes
- Water quality monitoring and pollution abatement programme for inland navigable waterways.

Importantly, the CFB believes it must provide for the long-term environmental sustainability and biodiversity of Ireland’s ecosystems and that they must identify sustainable fishing opportunities. Ireland’s inland waterways are so important for all its citizens. Most of our drinking water comes from these sources. The CFB and the Regional Fisheries Boards are very much overseers of that heritage.

This report needs a broad circulation, especially to the national and local authorities’ elected representatives and to angling clubs. Action is needed to help preserve Ireland’s waterways, as many are under severe pressure from pollution and the lack of proper management. Anglers especially can help in influencing government to invest more in the work of Fisheries Boards. This report is available on line at www.cfb.ie.

Matt Murphy, Director, Sherkin Island Marine Station, Sherkin Island, Co. Cork.

AN EXAMPLE OF A PROJECT SUMMARY

PROJECT TITLE: To investigate the impact of a refurbished weir on the River Nore in Kilkenny city on the standing crop of juvenile salmon in several sub-catchments upstream.

Remit of the project
The remit of this project is to compare the standing crops of juvenile salmon at selected sites upstream and downstream of Kilkenny city and review available historical data in this area.

Why is the project being undertaken?
The Office of Public Works (OPW) requested the Central Fisheries Board (CFB) to carry out this study to establish if the flood relief scheme on the R. Nore main channel in Kilkenny had a negative impact on salmon production further upstream in the catchment by temporarily impeding the upstream movement of adult salmon.

Sponsor/person in charge of the project?
The main sponsors of this project are the Engineering Services Section of the OPW/Dr M. O’Grady, CFB.

When is the project planned to be complete?
Field work was completed by the CFB, with the assistance of Southern Regional Fisheries Board (SRFB) staff, in 2007. A final report will be prepared in the first quarter of 2008.

Who will benefit from the project?
The main beneficiaries will be the OPW, the SRFB and the CFB.

When will interim and/or final reports be available to the Board?
A final report will be available in the first quarter of 2008.

What was the cost of the project and source of funding?
All costs were met by the OPW.

Who will the findings be made available to?
The findings will be made available to the OPW - the agency funding the project. They are also likely to be made available to the Fisheries Boards and angling clubs in the Nore catchment.

What progress has been made to date?
The field work element has been completed. Data processing and report writing will be completed in Q1 2008.

What are the findings of interest and to whom?
Findings of interest to all of the parties named above. There was a ‘public perception’ that this drainage scheme, at the works stage (2005), seriously impeded the upstream movement of adult salmon.

What are the Next Steps?
To inform all concerned parties of the results of this study.
The Hook Peninsula, County Waterford

By Billy Colfer
Cork University Press
www.corkuniversitypress.com


The Hook Peninsula is located in Co. Wexford. It forms the eastern boundary of Waterford Bay, which is fed by the three sister rivers, the Barrow, Nore and Suir. The author Billy Colfer was born in London but was a newly born boy when he went to live in his father's native Hook. Growing up in this peninsula and his love affair with this isolated area began then and there. From an early age he was fascinated with local history. The chapters begin with the landscape and environment, followed by pre-historic and early Christian, medieval and modern landscapes. The research that the author undertook brings the peninsula alive and it makes one wonder has any other coastal area been so well documented. This book is no doubt a labour of love by the author and should be on the shelves of secondary school libraries especially so that the present generations can understand and appreciate the past. The book beautifully produce with 450 illustrations, 50 maps, historical sketches and drawings as well as marvellous aerial photos.

How to Identify Edible Mushrooms

Patrick Harding, Tony Lyons, Gill Ovenden
Collins Publishers Ltd
www.collins.co.uk
ISBN: 978-0-00-719969-3 (pb)

This book has been a true labour of love – seventeen years of research, which as the author states, lead to more蘑菇 blossoms. It was a mammoth task, which has lead to the author tracing the history of ornithology from the earliest times. The first chapter “Up to the Sixteenth Century” tells of Annistris of (844 BC – 322 BC) and Pliny AD 23-79 being among the first scholars to write about birds. This chapter has beautiful colour illustrations from the Sherborne Missal, produced by the Benedictine Abbey, Doreste c. 1400 – especially the heron, my favourite bird. Chapter two “The First Bird Book” is a short and succinct history of the principal birds noticed by Pliny and Aristotele. William Turner, who has been called the Father of British Ornithology, wrote this first book. The seventeenth century pro duce two outstanding ornithologists, Willughby and Ray, and the author gives us a very concise story of their achievements. I found the chapters on Alfred Newton and the foundation of the British Ornithologists’ Union (BOU) most fasci-nating. He was Professor of Zoology at Cambridge University – what an individual. He has been described by James Fisk the forefather of ornithology as “one of the last great figu res at the end of the age of great figures. There is not one story Newton is omitted today.” His great legacy was the 1000 page Dictionary of Birds. In all there are 20 chapters in this won-derful book, which is a must for anyone interested in ornithology.

How to be a birdwatcher

Simon Barnes
Short Books
www.shortbooks.co.uk
2004 * Price: £7.99 (hb)

So many of us believe we know how to identify birds – Simon Barnes disagrees. “You can’t identify birds through your teeth. It is impossible to know nothing about birds, me, you can identify several different kinds of birds. As someone who would not call himself a birdwatcher, I was surprised that when I read down the list be give. I knew there was a whole world even more surprising at how many more I could add myself.”

The book “A present from my father” is a beautiful piece and tells of how the great naturalist Sir Peter Scott was en-couraged by his father the explorer, Scott of the Antarctic. It was the last message that Captain Scott left his wife “Make the boy interested in natural history.” It worked and his son became Britain’s most famous naturalist of his time. The author talks of how his father encouraged it. It began with the practice of being a Book of Birds, which was then a small and affordable book. In the many other chapters, the author tells how bird- watchers can so enjoy nature’s free gift. In this day of so called fiction, let us get back to nature. We all need it, but more particularly us children and grandchildren. This book will lead you. Enjoy it.

Making Peace with the Earth - What for the Human Species and the Planet?

Edited by Jérôme Birindí
www.unesco.org/pub/303-1095-978-0-950503-09-6

When I received this book and saw the first chapter, here we go again, another lecture of doom and gloom on how to save the planet. I was surprised I got. I found people who are positive about the future if we change our approach of being a gatherer economy. We are living on credit and our measure of the world’s wealth is the amount of land and our ecological debt, in the form of cost of non-renewable material, is getting to the point of extinction as we are far beyond the level of the life of their few years at a minimum if not exhausted. This is the amount that would make the contribution that would make to the environment worldwide. Another ex- ample is that it takes ten years of non-renewable natural materials to manufacture a personal computer. The author continues “We are living beyond our means by currently consuming 122 per cent of the planet’s re-sources.” We must change our ways and get away from satisfying artifi-cially inflated human needs and the competition culture, putting everyone against everyone else.

In the chapter “Our Values, World of Water”, A. K. Biswas believes that from research carried out at his Third World Centre for Water Management in Mexico, the indications the world is facing a water crisis. “The most ominous aspect of this scarcity of water is erroneous. The water crisis is due more to the widespread misuse of it. The following chapters are authors are excellent and make one stand back to look at issues before jumping into conclusions. I highly rec-ommend this book.

Environmental Ethics and International Policy

Edited by Hanh A. M. J., Jen Have
www.unesco.org/publication
ISBN: 978-92-3-10439-9
Price: £22.00/2006

The purpose of this book is to raise aware-ness among policymakers and the general public about the moral dimensions of environ-mental issues. It explores how this relatively new discipline can assist. Eight leading scholars in environmental ethics were asked to present their ideas and recommendations regarding the role in the main issues in this field of applied ethics. They include:

- Environment, ethics and policy
- Ethics and global sustainability
- Must we give environmental up
- Putting environmental ethics to work

As a key policy document, it is inundated by the many important issues raised by the author. It is a must for policymakers will take the time to read and absorb the issues, which are vital for the future planet’s survival. What would be most helpful would be if UNESCO published a summary book of some pages.

Flight Identification of European Seabirds

By Anders Blomdahl, Bertil Briefe & Niklas Holmstrom
Christopher Helm
www.actblack.com
ISBN: 978-0-7136-8556-6

Newly available in paperback, this is a book which should list what it says on the cover. Following an introduction dealing with the art of sea- watching and seabird identification, the bulk of the book deals with 136 species family by family. The text is enhanced by a series of photographs augmented by geogre, gulls and wildfowl. Each species is given it’s own spread with an average of 6 photos of the bird in flight, at sea and at rest, and a comprehensive key. As well as being a reference guide to the brain - dead text and introduction, identification, the bird in flight, at sea and at rest, and a comprehensive key. As well as being a reference guide to the bird's shape, flight pattern and habitat, it includes the following sections. The book is very much a technical book. The birds are excellently illustrated with beautiful line drawings, making it a rich source of information for those who are positive about the future and its development. What this book does is discuss the technical issues. These make very interesting reading as they are the issues that arise when wind power de- velopment is proposed. These issues are:

- What happens when the wind does not blow?
- The reliability of dispersed offshore wind power systems
- Cost estimates
- Total extra costs of wind energy
- Where are the humps and bumps?

The eleven chapters discuss the many is-sues associated with renewable energy. They include:

- Variable Renewables and the Grid: An Overview
- A Renewable Electricity system for the UK
- Planning for Variability in the Long Term
- Anyone interested in Renewable Elec-tricity will find this book an important ref-erence. It answers many of the question so far raised at the photovoltaic debates. It is very much a technical book.

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For 28 years The Birdwatcher’s Yearbook has provided the essential facts and figures relat-ing to the birdwatching scene. The features section has the or-thological news of the year, an item on British Birds – the monthly magazine which is now 100 years old, as well as details of English language bird magazines. The diary section has a day by day diary plus blank sheets for recording, as well as events guide for 2008 and these looking for lectures on birds. The book directory section includes list of book publishers, bird garden sup-ples, equipment and optical manufactur-ers and a County directory. Finally I would like to quote a comment made by the editor in the Preface. “I’m constantly frustrated by the time it takes to sift the wheat from the chaff! Properly edited books and journals perform that filter-ing service so that time-pressure readers don’t have to! At a rough estimate, I reckon that Hilary and I spend five months a year in assembling and checking the in-formation within the pages of each edition of the Yearbook.” This book is a must for any birdwatcher.
From Botany Bay to Glasnevin

By Daphne Pochin Mould

Fuchsias are now available in many varieties and are widely grown. I have seen them flourishing in the sun in Reykjavik’s botanic garden in Iceland, though they need to be indoors in winter. Orange and lemon trees, bearing fruit are now available at garden centres. Interesting and very ornamental, but you will probably get your main supply from the shops.

“Botany Bay”. For 19th century England the name was the usual shorthand for the Australian penal settlements. Convicts and flowers? – no connection, but with Glasnevin and the Botanic Garden, a great deal. For Glasnevin holds a great archive of dried and pressed plants, and drawings and descriptions written with quill pens on heaving sailing ships on the other side of the world. From the mid 18th century on saw the world being mapped, though it would take a couple of years, and all that world, though it would take a

It was a time when there were many people with money and land, and labour was cheap, so those great estates could be laid out and planted, with lakes and deer parks (there are still white fallow deer at Mallow). The industrial revolution had made it possible to make big sheets of clear glass, to be set in strong frame works of wrought iron; the big glass houses rose up and were heated, so hot climates could be mimicked. Orangeries produced a crop: planted against a sunny wall and fronted with glass. Some still survive today – Fota’s has been restored, as have some of the great glass houses, such as at Glasnevin. Pineries and vineyards were important for the Big House folk – like their hot house grapes and their pineapples – which were grown on a very hot compost of tan yard residues. A learned Dr. Sickler wrote a book in 1815 listing over 70 species of citrus, but those grown by the Big Houses was far shorter and familiar – the ordinary orange, lemon, citron, lime and shaddock. “Shaddock”? A native of China and Japan, from where one Captain Shaddock brought it to the West Indies. From there it got to England and was first cultivated there in 1789. Its thick skin meant it would stay fresh longer aboard a sailing ship but its taste was too bitter for contemporary palates. Today we enjoy it and call it “grapefruit”.

The National Botanic Gardens in Glasnevin holds wonderful records of plants and plant descriptions, many brought back long ago on sailing ships from the other side of the world.

Melons need heat-loving fruits such as oranges and lemons. The Big Houses could afford to build hot houses in which to grow tasteless breadfruit. “Five plants were brought to England from Othote by the unfortuniate Captain Biih in 1788”. Equally exotic was the banana, “the fruit is eaten raw, or roasted, in fritters, preserved and marmalades, the fermented juice makes an excellent wine”.

The old sailing ships brought treasures of colour, shape, and new tastes – trees, shrubs and flowers, brought in as seeds and rooted saplings. Irish gardeners took them greedily. Palms flapped their leaves in seagale gales, monkey-puzzles rose in suburban gardens (at least one Big House planted an avenue of them). The last remnant of a now vanished garden or estate may be a solitary, non-native, great tree. Some needed much care to do well, but others became invaders, ready to take over the country. One was the rhododendron from North America and Asia. For the great gardens, its strong growth and enormous, brightly coloured flowers, was a dream come true. Today we are fighting to control it and halt its destruction of our native woods. For rhododendron allows no opposition and forms a dense thicket almost impossible to force a way through.

And then there was a pretty shrub from South America, named for a certain Dr Fuchs. Fuchsia, “from Chile...thrive in light rich soil...cuttings rooted freely under a hand glass, admitting air occasionally to prevent damping off”. The Knight of Kerry, establishing his great garden on Valentia Island in Kerry, was soon writing to the London “Times” of the virtues of the fuchsia as a shelter belt to protect other more delicate plants. The invasion of Ireland by the fuchsia had begun. Irish people named it “Deora De” (“the tears of God” in Irish). Roadside verges turned deep red from the dropped petals of the fuchsia hedges. The Knight had one enormous bush which he just let alone, and every year, the entire household gathered round it to measure its ever-enlarging circumference. And, unlike other immigrant species, the fuchsia has become a symbol of Ireland – almost a rival to the shamrock. Not bad for a little bush that survived a long sea voyage to get to these parts, barely two hundred years ago.

Quotations are from J.C. Loudon, “Encyclopaedia of Gardening” 2nd Edition, 1824.
The Wonderful World of Worms...

The worms you find under rocks on the shoreline or when digging in the sand are most likely to come from the animal group Polychaeta (pronounced “Polly-keeta”), which means “many hairs”.

Worms have no bone and no skeleton, which makes them very flexible, and rely on pumping water through their bodies to make them rigid.

Scientists classify the Polychaeta into two main sub-groups: the “errant” polychaetes—that actively swim about looking for food (just as the “Knights Errant” of old used to ride around looking for adventure—and the “sedentary” polychaetes, which prefer to stay at home and let the food come to them.

Errant polychaete worms, such as the Common Ragworm (Nereis diversicolor), shown above have well developed heads with eyes and jaws. They also have paddles—called “parapodia”—on either side of each segment to allow them to move swiftly through the sand or even to swim in open water (although they prefer to keep under cover to avoid other predators). Ragworms can grow to around six inches long and prefer to live in burrows. Here they spin this web with mucus from their mouths, which they use like old-fashioned fly paper to catch tiny floating animals—sucking the mucus, web, animals and all. Be careful if you find them when you are digging in the sand however, because the jaws can give you a nasty bite!

The Common Lugworm (Arenicola marina) shown above, is a sedentary polychaete. It lives in a U-shaped burrow and can be detected on sandy shores by the little cone-shaped burrow at the head end where water is sucked in, and the squiggle of sand it pushes out at the other end, once it has sucked all the tiny animals and other food out of it. Lugworms push out sand every 40-45 minutes. If you stand still on the beach and watch, you may even see it!

Check out these websites for worms:
http://www.earthlife.net/inverts/polychaeta.html
and great worm pix on:
http://www.storfish.ch/collection/annelida.html

Other sedentary polychaetes, like the Peacock Worm Sabella pavonina have complex and beautiful gills which they use not only to breathe underwater, but also to catch food. To protect themselves, they are very sensitive to movement and can zip down into their tubes at the slightest hint of danger.
Reedbed Singers

By Declan Murphy

During the Spring and early summer our reedbeds are home to a number of birds, including some migrant warblers, which fly from Africa to spend the summer months here in Ireland.

Sedge Warbler

Arriving in mid-April, Sedge Warblers can be found throughout Ireland wherever there is an abundance of reeds, water and damp willow scrub. They are an extremely vocal species and their presence is made known by their loud song, a mixture of varied fast chattering phrases which often includes mimicry of other species and varies in pitch.

Sedge Warblers are rich brown colour with black streaks on their back and wings and pale underparts. However their most striking feature is a prominent white stripe over the eye contrasting with a darker crown. Except when singing they can be quite skulking, clambering around the reed stems and foraging in the scrub. The nest is built by the female and is cup shaped, made of grass and located close to the ground. Up to 5 eggs are laid which hatch after about two weeks and the young fly after a further two weeks. Their diet consists almost entirely of insects although they will eat berries in late autumn to help build up far reserves for their long migration. Sedge Warblers are long distance migrants and fly up to 3,900 km from Ireland to Southern Africa, many returning to the same breeding site each year.

Grasshopper Warbler

Also arriving in mid-April, Grasshopper Warblers are another secretive brown warbler which also frequents the same type of habitat as Sedge Warblers, although they usually prefer a slightly drier part of the reedbed.

As with Sedge Warbler these are best located by their song as they are very skulking and very hard to see. The song is a remarkable insect like trill which can be sustained for several minutes without a break. Its uniform tone and pitch have been likened to the mechanical sound made by an angler’s reel. The sound appears to change in direction and volume as the bird turns its head from side to side.

When seen they are usually flushed from low down in the scrub or seen moving furtively through the vegetation almost at ground level. They are olive brown in colour, slightly paler below, with dark streaking on the upperparts. The nest and location are the same as the Sedge Warbler and the incubation time for the eggs is also the same. Their diet also consists mostly of insects and occasionally berries.

Reed Warbler (see main picture)

This is our rarest reedbed warbler with only a handful of pairs breeding each year in Ireland and confined to the largest areas of reedbeds such as those in Wicklow, Wexford and Cork. They are larger than either of the previous species and are plain olive brown in colour. Their song is a series of slow chattering notes on an even pitch and is usually quite low in volume.

Learn about birds with BirdWatch Ireland

Feeding Wild Birds Leaflet

Download this leaflet from the Learn about Birds section on BirdWatch Ireland’s website at www.birdwatchireland.ie

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Animals on the sandy shore

We all know that sandy beaches are a great place for building sand castles but what about the creatures that live there? At first glance, the beach might seem like a barren place, but that's because most of the animals are hiding! Where would you hide from predators if you were a creature living on the sandy shore? Under the sand of course! It's nice and soft and easy to dig a burrow. Another good hiding place is under the dead seaweed and debris that are found up on the beach's high tide mark or strand line. Some animals also use camouflage to avoid their enemies. This means that they can blend into their background, making it difficult for predators to see them. The animals that you see walking around on the sand surface are usually the top predators, like seabirds and humans!

Sandy Shore Quiz

Have a look at the seven seashore animals below. See if you can match the animal names with the correct picture. You can use the clues beside each picture to help you. All these animals live in and around the sandy shore.

1. Cockle
2. Oystercatcher
3. Razor Shell
4. Lugworm
5. Flatfish
6. Shrimp

This animal likes to eat cockles and mussels.

You have to look very carefully to see these animals in a sand pool because they are masters of camouflage.

Go paddling on a sandy beach and you might feel one of these wriggling under your toes.

Molly Malone used to sell these animals in Dublin's Fair City.

Imagine somebody trying to shave with a shell!

This animal lives under the sand in a U-shaped burrow.

Plants on the sandy shore

It is difficult for plants to live on the sandy shore for all sorts of reasons. Seaweeds that we might see on the rocky shore can't live on the sand because there is nothing for them to attach on to. Land plants also find it hard to live on the sandy beach because the sand doesn't hold enough freshwater and nutrients for them to grow. There are only a few plants, like marram grass, that can live in these conditions. Marram grass is one of the most important plants on the sandy shore because its long roots bind the sand together to form sand dunes. The dunes habitat provides a special place for all sorts of wildlife, including rabbits, mice, foxes, snails, moths and butterflies, birds, insects and flowering plants.

Skeletons on the inside and Skeletons on the outside

Many of the animals living under the sand also have shells to protect themselves. In fact, shells are actually a kind of skeleton! We have our skeletons on the inside to support all our organs. If we didn't, we would just be a blob on the floor. But most of the animals on our planet actually have their skeletons on the outside in the form of a shell. Some marine animals, like jellyfish, don't need any bones because the seawater supports their body and tentacles. These jelly animals collapse when they are out of the water.
MANY of us will be out in boats and other watersports equipment over the summer months and will be wearing our lifejackets. Lifejackets and buoyancy aids come in all shapes and sizes and sometimes it can be quite confusing to know what level of support they give. Irish Water Safety have produced a very helpful guide to Personal Floatation Devices (PFDs) Lifejackets & Buoyancy Aids.

What is a Personal Floatation Device?

This is a generic term used to describe lifejackets and buoyancy aids. The main difference between lifejackets and buoyancy aids is that a lifejacket is designed to turn an unconscious person face up on entering the water. A buoyancy aid is not guaranteed to do this and is as the name describes, an aid to keeping you afloat.

Wearing Personal Floatation Devices

It is vital to wear a buoyancy aid or a lifejacket when afloat or if your activity takes you near the water. You must ensure that it is the correct size, properly fastened and that you understand how to operate it. In sports like jet skiing, water skiing, dinghy sailing, windsurfing and canoeing, wearing the right personal flotation device (PFD) will give you the confidence to enjoy your activity even when your in the water. For other activities wearing an appropriate PFD can give you extra time for the search and rescue services to find and rescue you.

Caring for you Personal Floatation Device

Your PFD could save your life, so it is important to look after it. You should have it serviced in accordance with the manufacturer’s recommendations. On a regular basis, you should visually check the PFD for wear and tear especially at the folds, straps and fastenings. On inflatable lifejackets, check to see if the gas bottle is full, fitted correctly and has no signs of corrosion. If used in salt water, you should regularly wash out your PFD with fresh water and allow it to dry fully before repacking. Ensure you disarm any automatic inflation mechanism before washing your PFD to avoid accidental inflation. Don’t use your PFD as a cushion as this may compress, and thus reduce the effectiveness of the buoyancy. Like most things, they do not last forever. If you PFD is looking tatty it may not work so get a new one.

The right Personal Floatation Device?

Personal flotation devices are available with foam-only buoyancy, air foam buoyancy or air-only buoyancy. The most suitable type for you will depend on the type of activity and the distance you are likely to be from the shore.

Foam only personal flotation devices provide buoyancy at all times. They may be bulky, but in addition to providing buoyancy, they often provide additional protection against wind and cold. Air-only lifejackets are likely to be the most compact and comfortable and may be automatically activated on entering the water or inflated manually or orally. Spare gas cylinders and automatic inflation mechanisms should be carried.

The effectiveness of a lifejacket will be affected by the type and amount of clothing worn. If air becomes trapped in clothing, or if a flotation suit is worn in addition to a lifejacket, it may reduce the ability of a lifejacket to roll you face up in the water. Choosing a PFD with more buoyancy may counteract this.

It is recommended that all personal flotation devices are fitted with a whistle. Light and retro-reflective strips and should have crotch straps.

For some sports such as jet skiing, water skiing, dinghy sailing, windsurfing and canoeing, specialised personal flotation devices are available which are specifically designed to suit these sports.

Understanding Personal Floatation Devices

Buoyancy is measured in Newton – 10 Newton equals 1 kilogramme of flotation. There are 4 European standards for personal flotation devices, which must all carry the CE mark.

The 50 Newton Personal Flotation Device is commonly called a Buoyancy aid.

It is intended for use by those who are competent swimmers and who are near to the bank or shore, or who have help and means of rescue close at hand. These PFDs have minimum bulk, but they are of limited use in disturbed water, and cannot be expected to keep the user safe for a long period of time. They do not have sufficient buoyancy to protect people who are unable to help themselves. They require active participation by the user. Recommended for Dinghy sailors, windsurfers, water-skiers & Personal Water craft where the user might reasonably expect to end up in the water.

The 100 Newton lifejacket is intended for those who may have to wait for rescue but are likely to do so in sheltered and calm water. Whilst these lifejackets are less bulky than those with more buoyancy, they are only intended for use in relatively sheltered waters. They may not have sufficient buoyancy to protect people who are unable to help themselves and may not roll an unconscious person onto their back particularly if they are wearing heavy clothing.

The 150 Newton lifejacket is intended for general offshore and extreme conditions and for those wearing heavy protective clothing that may adversely affect the self-righting capacity of the lifejacket. This lifejacket is designed to ensure that the wearer is floating in the correct position with their mouth and nose clear of the surface of the water. Recommended for offshore cruising, fishing and commercial users.

Look for a Lifejacket that is IWO/SOLAS approved. These are mainly carried on certain commercial vessels like passenger boats. They are usually intended only for use when abandoning ship as they tend to be bulky and difficult to use when working.

Cara Partners wish continued success to Matt and his team at Sherkin Island Marine Station

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Phone: 081 564400 Lo-Call: 1890-420 202 Fax: 091 564700 E-mail: info@iws.ie
By Majella Killeen

DURING the launch of Gaisce – The President’s Award, back in 1985 Dr. Patrick Hillery, stated that his “admiration for and faith in the young people of Ireland are unlimited.” Now twenty three years on as I reflect on the passing of President Hillery, I still admire his vision to encompass the zest for life of young people with a personal challenge from him to achieve recognition through personal development. As one of the first participants of Gaisce - The President’s Award, I am now in the enviable position of reflecting on my involvement in this wonderful organisation that continues the personal challenge, through our Patron Mary McAleese the President of Ireland, to all young people between 15 and 25 years of age.

My involvement with Gaisce goes back to 1985, when John T. Murphy and the Gaisce road show arrived in Galway to promote the award. His mission was to get us to earn a bronze, silver or gold award by committing "just one hour per week," working on four different sections, personal skill, community involvement physical recreation and a venture activity, this was the challenge then and continues today.

I was representing the Order of Malta at that meeting and so I decided to promote the award through the Order of Malta programme. The consequence of this decision was that the young people concerned challenged me to complete the programme myself. I guess it was a case of "actions speak louder than words.” The young people were prepared to participate at bronze award level, if I would participate at gold award level. I completed my gold award in 1987 and it was with great pride that I received my gold medal from the President of Ireland, Dr. Patrick Hillery, on the 10th April 1989. There is lies the vision of Dr. Hillery.

As the first group of 19 people received our Gaisce gold awards, Dr Hillery took the time to meet and speak with us, he congratulated us on our achievement, but he continued with a request – and that request was to stay involved with Gaisce by becoming a P.A.L. (President’s Award Leader). His personal commitment during these early years saw the President attend the inaugural bronze and silver award ceremonies in Monaghan, Kilkenny, Cork, Galway and Dublin.

Starting the journey, by setting goals in each section, allowed me to visualise my dream. Yes, it was attainable, because I was challenging myself. There was no race to the finish, there was no first prize; just a commitment of one hour per week in each section of the award. This was and continues to be the beauty of the Gaisce challenge. Now as a Presidents Award Leader (P.A.L.), I have continued my involvement with Gaisce. I have witnessed at first hand the amazing transformation of the young award participants who are lead through Bronze, guided through Silver and then lead us, the Gold award participants, through the award.

By selecting a new skill within the award a young person can then go on to use the activity throughout their adult life. It can sometimes lead to a fantastic career. A gold award participant of mine – who had already completed his bronze and silver award took on first aid as his skill and he has recently qualified as a medical doctor.

Giving time to community is never easy, especially if you're young; we rarely hear or see the work that our young people do in their community. The community involvement section allows the young person to give back to the community and to learn from that experience. In a recent article on the possibilities of Gaisce, Clare Walsh a student of St. Dominic’s Cabrca described her visit to the elderly in her area, as a highlight for both the elderly and the young people, because it has led to the fostering of friendships and the building of strong community relationships.

The physical recreation section focuses the young person on their own physical fitness, a must in these days of academic pressure and the sedentary lifestyle of some of our young people. Finally, the adventure section allows the young person to plan and go on a venture, a hike or a cycle on a budget. The Aim and Ethics of the Adventure Section is to encourage a spirit of adventure and discovery whilst undertaking a journey in a group. To provide participants with a challenging and memorable achievement. The journey should be undertaken in a group in an unfamiliar environment, requiring determination and perseverance, thus providing a sense of independence, self-sufficiency and discovery. The highlights live long in the memories of the participants.

President Dr. Patrick Hillery instilled in me a vision to stay involved in Gaisce, the aims of which are to get young people working, striving, achieving, quietly, under the radar, bringing the true self of the person in themselves building up the essential qualities of human decency, human endeavour that make for healthy individuals and communities.

At a recent Gold award in Dublin the current Patron of Gaisce President Mary McAleese made the following remark, “In a world where there is, on the one hand, a culture of instant celebrity that requires little personal effort and, on the other, so much worry about the way that drugs and alcohol can distract our young from achieving their true potential, here we see Ireland at its absolute best. Here are young people working, striving, achieving quietly, under the radar, bringing out the very best in themselves and building up the essential qualities of human decency, human endeavour that make for healthy individuals and communities”.

The Blue Flag Openwater is an Irish urge the public to help protect Ireland’s beaches by doing some simple things when you use the beach:

- Keep your flags up. Look at the safety signage and follow the advice.
- Respect the fragile beach habitat, particularly the sand dunes. Sand dunes are a very important natural environment and coastal defense system. Please do not tear the dunes – use footpaths and designated pathways.
- Drive, mod rotate, tom and from the sand dunes. Please try and present these activities.
- Respect the beach code of conduct.
- Use litter bins if provided or better still bring your litter home with you.
- Avoid driving on the beach.
- Respect other beach users.
- Follow the council’s advice.
- Report any litter or litter collection difficulties.
- Keep clean on a beach and clean up after your dog.
- Respect other beach users. The Blue Flag award has benefits to the local community where beaches are respected and the natural environment is enhanced and a shared responsibility for the beach and the local environment is promoted. These awards also have a positive knock on effect for tourism in the County. The local authority requires you to the following advice to promote maintaining and progressing the Blue Flag scheme along with our beautiful coastline.
WHAT IS THE WATER FRAMEWORK?
The Water Framework Directive (WFD) is a European Directive introduced in December 2000 establishing a new framework for the protection and management of water resources throughout the European Union. There is a statutory obligation on each country to monitor fish at selected sites in rivers, lakes and estuaries.

WHO WILL DELIVER THE FISH ELEMENT OF THE WFD?
The Central and Regional Fisheries Boards are delivering the fish element of the WFD and they will compile information about the fish species occurring at certain specified locations, their abundance and age patterns. In addition they will be working closely with all stakeholders including Fishery Owners, Angling Associations, Fisheries Representative Bodies and other Government Agencies to ensure successful delivery of this programme.

WHAT PROGRESS HAS BEEN MADE ON THE WFD IN 2008?
In early 2008 the Fisheries Boards successfully completed a comprehensive recruitment and training programme and now have the team of research scientists in place ready to roll out the fish sampling programme. In addition a significant number of meetings have been held with relevant stakeholders to finalise elements of the sampling schedule.

The spring has also been a very busy time, the research scientists have been processing the fish samples collected during the field sampling programme in 2007, compiling the WFD fishery database and also putting the information into GIS format.

WHEN WILL THE SAMPLING TAKE PLACE?
The monitoring of river, lake and canal sites must take place between July and September when all species of fish are available for sampling. The estuarine sampling programme can continue until October. Some preliminary sampling has already commenced, however the main bulk of the sampling effort will not begin until July.

WHERE CAN I FIND OUT MORE INFORMATION ON THE FISHERIES ELEMENT OF THE WFD?
The preliminary report on the sampling programme undertaken in 2007 can be accessed on the Central Fisheries Board website (www.cfb.ie). Dr Fiona Kelly is the project manager for the WFD. Dr Kelly will be happy to deal with more detailed queries in relation to the fisheries elements of the WFD going forward.

All enquiries to:
Dr Fiona Kelly
Water Framework Directive Project Manager
The Central Fisheries Board
Swords Business Campus
Swords Co. Dublin
Tel: 01 8842600
Email: info@cfb.ie
Web: www.cfb.ie

The female lobster keeps the eggs underneath her tail for about 9 months. They then hatch into the water and become part of the plankton. Once these larvae get larger, they fall to the bottom and it is thought that they burrow down into the sand or stones to hide until they are big enough to come out. The lobster grows by moulting i.e. it sheds its shell and replaces it with a new, larger one.
Is Biodiversity a Good Assessment Tool?

By Mike Ludwig

BIODIVERSITY is an important component of sustained life on the earth. Having a good diversity of species means that there is an increased likelihood of adaptation to change. But, in some arenas biodiversity or biological diversity has gone from a measure of species variety and adaptability to a measure of environmental health. This shift has left some wondering if the change is wise. The term, biodiversity, is typically defined to mean the variety of life in all its forms, levels and combinations and includes ecosystem, species, and genetic diversity. Our present day biodiversity is the result of several hundred million years of continued species adaptation to the ever changing environment and ecosystem of the earth. The new role for biodiversity as a measure of a locale’s well-being should be carefully considered. Because, along the redefinition pathway, there has been a corresponding decline in the appreciation that ecosystems, species and genetic makeup all contain limitations on an organism’s ability to survive. Without that appreciation, there can be an expectation that systems are stable.

Without getting into who is causing global climate change, it is generally agreed that the earth is in a state of constant change. As a result of the changes, some species are being displaced by environmental conditions and/or the influx of better adapted species. There are other possible reasons for change but the end result is that change is occurring. And, biodiversity is being influenced by the change.

But, biodiversity is driven by chance. What are the chances that all the elements of survival are present at any place or that the elements will remain stable long enough for an organism to adapt to the local conditions? How many coconuts drifted past Hawaii before one floated ashore and how many of those that washed ashore didn’t grow and survive? It might take only one, relatively minor, modification of a habitat or species characteristic to preclude or enhance a survival/presence. That modification then triggers a difference in the community structure and an accompanying variation in biodiversity. For instance, most shellfish spawn in the summer because spawning in the winter isn’t successful. But, have most shellfish always spawned in summer or did environmental conditions select those with a summer birth date to dominate the population? Without an in-depth assessment of the habitat and species characteristics, the cause(s) of presence or absence might not be recognized. These days, these steps are sometimes skipped and an alarm goes out that there is a biodiversity level change.

All too often the lack of a species can be related to its lifestyle, the habitat, or predator/prey relationships. Take human agricultural practices for instance, who can afford a biologically diverse corn, wheat or potato field? No farmer wants a field full of biodiversity. But biodiversity is driven by the chance that representatives of a diverse assortment of species can co-exist in a location. And, it is unlikely that the chances will be always positive in their outcome. It is more likely that there are more negative or failed colonisation attempts than there are positive ones. This is reflected by successful colonisers taking advantage of their success and dominating the community.

Habitat functions and values can be influenced by unnatural as well as natural conditions. But without knowing what the influence is, the use of biodiversity to measure ecological health is restricted. Some of the most commonly overlooked examples of this is seen in species restoration/re-introduction efforts. How often have we seen a wetland mitigation site planted with suitable species only to watch them fail or be displaced by other species? Similarly, I once tagged 6,000 Bay scallops, placed them in what we considered to be ideal habitat, only to discover that they didn’t agree and swim away. Both cases had failed to appreciate the limits of the species adaptability. They could not be restored to the area even though it may have been well known for the species. The question is: “what are the chances that this location includes this species in its community today or has it become more suitable for other species?” A simple check is to ask: “does Mother Nature allow it to use the area?” If the answer is “yes” she’ll provide some clues. We need to find them. Biodiversity is constrained by local conditions and unlikely to be uniform at different sites. Comparing the biodiversity at two or more sites will cause you disappointment and it may mean nothing more that the two sites are different in ways we can’t determine. Claiming that a difference or decline in species diversity indicates environmental damage without understanding what is changing the situation, may be premature.

Biodiversity does not lend itself easily to the challenge of contrasting two locations. Using biodiversity as a tool to assess the ecological health of an area is not likely to help advance our understanding or the importance of the diversity.