

Making Waves

**The Fair Isle Marine Environment and
Tourism Initiative**

NEWSLETTER 4: AUGUST 2005

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South Harbour, Fair Isle. Photographer Elizabeth Riddiford. ©1999



For centuries Fair Islanders have looked after their resources - not for any altruistic reason, but because they had no other option. Greater mobility and changes in marine legislation in the 20th century meant that others now had access to a resource which had previously been largely for local use. The new user groups were free from the constraints of safeguarding stock for future use, because for them Fair Isle waters were only part of a wider resource. The islanders could no longer compete and the 20th century saw a wholesale and difficult shift from a subsistence economy with fishing at its heart, to a more mixed economy. What has not changed, however, is that the new economy still relies strongly on our ties with the sea. From traditional Shetland *yoal* boat-building to the tourist trade, the key element for those earning a living on the isle remains a healthy marine environment and maintenance of the marine resource.

The Fair Isle community is very concerned that we are effectively excluded from having a say in the control and management of our marine resource – a resource which has sustained us for centuries and which remains at the heart of our economic and social life. The Fair Isle community recognises the imperative need to safeguard our resources, terrestrial and marine, for future generations. Our concerns are social and economic as much as environmental. A healthy, pristine environment is an essential ingredient for our future well-being.

Photograph on front cover

Fair Isle coastline from Tail of Uran to Kirki Geo - illustrating cultural & historical importance of the area - including old fish-drying beach, former fish store, oily kettles, boat noosts, South Harbour pier & South Lighthouse.

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Some Good News

For the last three years, Fair Isle Marine Environment and Tourism Initiative (FIMETI) has been without funding. The isle's fight to protect its maritime heritage and see proper, sustainable management of our marine resource has only been maintained by islanders and supporting partners working in their spare time and meeting a range of costs and expenses from their own pocket. In an island as busy as ours, this has inevitably placed restrictions on the amount and intensity of FIMETI activities and efforts.

This shortfall has now been alleviated thanks to a three-year concordat between the National Trust for Scotland and Scottish Natural Heritage. This will bring approximately £6,000 per annum to FIMETI to pursue a range of activities including:

- keeping the isle, partners and all other interested parties fully informed;
- liaising with organisations involved in maritime planning;
- maintaining contact with and responding to joint initiatives by the Scottish Coastal Forum, of which FIMETI is a member;
- responding to the ever increasing requests for information from other coastal community groups;
- attending meetings and conferences;
- ensuring our inclusion in the Scottish Sustainable Marine Environment

Initiative and similar Integrated Coastal Zone Management developments.

The funding will allow us to devote considerably more time to pushing forward the isle's aspirations. It will also make money available to send island representatives to crucial meetings, making us more "visible" to the decision-makers than documents and written representation can ever do. This new impetus comes at a key moment for FIMETI because:

1. the goal set by FIMETI has not yet been achieved;
2. the aspirations and expectations of the island community have not wavered;
3. recent pronouncements at EU level on the need for Integrated Coastal Zone Management, followed by the Scottish Executive launch of the Sustainable Scotland Marine Environment Initiative - for which Shetland is a pilot area - have re-focused attention on Fair Isle and its marine environment;
4. major changes are occurring in the Fair Isle marine environment, from plankton community, fish populations and salinity levels to wholesale failure of breeding seabirds;
5. there are huge concerns on the isle over the current situation and its impact on tourism and other socio-economic aspects of the isle.

A short history of FIMETI

Not all readers will know about FIMETI and what it has done. So here is a summary:

Seventeen years ago, at a meeting of the Fair Isle Committee attended by representatives of all the island families, concern was expressed at erosion of the quality of the marine resource. The islanders had been concerned for some time about accelerating damage to our marine resource, and the meeting was the stimulus for making representations about the resource and the need to safeguard it. For several years, Islanders' concerns were raised in letters, comments and reports to the National Trust for Scotland, owners of the isle, and to other interested organisations. Eventually, in 1996, the islanders' efforts were formalised through the formation of the Fair Isle Marine Environment and Tourism Initiative (FIMETI), a partnership of the community, Fair Isle Bird Observatory and the National Trust for Scotland, with the community taking the lead. FIMETI received funding from the Scottish Office Rural Challenge (1997-1998) which allowed the publication of *Managing The Sea for Birds* (Riddiford & Thompson 1998), published with support from the RSPB, and *Safeguarding Our Heritage* (Riddiford 1999). The sub-title of the second report is *The Fair Isle marine resource: a community proposal for its sustainable management* and is considered by the island as the blueprint for our aspirations for future wise use of our seas. From late 1999 to 2001, FIMETI took the lead in a trans-national project through the EU/Norwegian Government Northern Periphery Programme. The title of the project was *Safeguarding Our Heritage* and the theme was community development through sustainable resource management in peripheral areas. To do this FIMETI linked up with "peripheral" communities in north Norway and Swedish Lapland. The group called itself the SafeinHerit Network. A range of "demonstration" activities and actions were taken during this phase, terrestrial as well as maritime. FIMETI activities included: a pilot study of Fair Isle lobster stocks,

leading to recommendations for sustainable use measures to safeguard the stock; activity holidays engaging members of the island community to interpret aspects of the cultural as well as natural environment of Fair Isle; and a series of booklets about the marine resource. Four of these booklets, *Exploring the Coasts and Shores of Fair Isle* by Elizabeth Riddiford, *Fair Isle: its Maritime Resource during the 20th Century* by Emma Perring, *Handwork* edited by Anne Sinclair and *A Taste of the North* edited by Emma Perring have been published. All are directly or partially linked to the sea, the last two being joint endeavours (on traditional skills and traditional foods) with our Scandinavian partners.

FIMETI, and the Fair Isle community generally, has done much more. We have engaged in dialogue with local and regional planning organisations and user groups; and made representations and proposals for a pilot study as a precursor to an eventual sustainable management programme, perhaps linked to Marine National Park status, for the Fair Isle marine area. Our efforts have led to many complimentary comments about the community's efforts and commitment to the protection and wise management of the environmentbut no action!

The Fair Isle community is very concerned that fifteen years down the line we are still effectively excluded from having any say in the control and management of our marine resource – a resource which has sustained us for centuries and which remains at the heart of our economic and social life. The Fair Isle community recognises the imperative need to safeguard our resources, terrestrial and marine, for future generations. Our concerns are social and economic as much as environmental. Let's hope things are about to change.

Are things about to change? The SSMEI

The Scottish Executive has recently chosen Shetland as one of five pilot areas for the Scottish Sustainable Marine Environment Initiative (SSMEI). The SSMEI is “aimed at developing and testing the effectiveness of new approaches to deliver sustainable development of Scotland’s coastal and marine environment” (*SSMEI Shetland Pilot Proposal – Final Report*. Scottish Executive, Wildlife and Habitats Unit; June 2005 Final Report). The Shetland pilot is being managed by the Shetland Islands Council Coastal Zone Management Officer, Martin Holmes, based at the North Atlantic Fisheries College in Scalloway. The objectives of this exercise include drawing together the various plans and regulations into an over-arching marine spatial plan, aiding decision-making by the Council and collecting the information necessary for the development of these issues. Two objectives are particularly pertinent to our situation. They are:

- to ensure that communities understand and participate more effectively in marine planning and decision-making;
- to accommodate the views and knowledge of other stakeholders and the wider community at the earliest possible stage of any development proposal

resulting in reduced conflict and enhanced siting, design and management.

Ironically, Fair Isle has demonstrated over many years an understanding of the need to manage our seas sustainably yet up till now, despite all our efforts, we have not been part of any participation process. The pilot calls for stakeholder and community participation. We are both: stakeholders, and a community fully equipped and ready to participate.

In addition to a marine spatial plan for Shetland, the June 2005 final report proposes a set of three or more detailed local area plans. Fair Isle certainly has the credentials to be one of these sites. It is an area with discrete coastal boundaries, it has a community fully committed to sustainable management of its resources and it has already produced a blueprint for its marine area (*The Fair Isle marine resource: a community proposal for its sustainable management*). It should not be forgotten, either, that Fair Isle has several international designations recognising the importance of its maritime as well as terrestrial importance.

Fair Isle has made it clear for years that it wants to be involved. It would be remiss if Fair Isle was overlooked in this first step towards bringing sensible and sustainable management to Scottish marine waters.

International designations

The population sizes of a number of Fair Isle’s seabird species are large enough to be designated as “internationally important”. Others are listed as “nationally important”. In recognition of this, Fair Isle’s cliffs and hill are designated as a Special Protection Area for Birds (SPA). The EU Directive which drives this designation insists that conservation objectives should be identified and for the SPA to meet these objectives. The major conservation objective for Fair Isle seabirds is to maintain and enhance their breeding populations. The land area, where they breed, is well protected yet it is the lack of food for young which is leading to recent very poor breeding performances – and that food comes from the sea. FIMETI has every right to ask why the current SPA does not meet this conservation objective. Why does it not extend into the marine area around the isle where the birds feed?

Fair Isle has held the prestigious Council of Europe Diploma since 1985. This Diploma recognises communities living in harmony with their environment. Fair Isle meets this well as any site in Europe... but only for the terrestrial area. The Diploma has just been renewed for the fourth time. Following a report by an independent expert, the Council of Europe Committee of Ministers attached six recommendations to the renewal. Four of them related to the marine area. The recommendations are:

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| <p>1. A marine protected area within the European Union Birds Directive and Habitats Directive in waters adjacent to the Fair Isle should be created in consultation with the Fair Isle's community representatives;</p> <p>2. The complete ban on sand eel <i>Ammodytes marinus</i> fishing should be maintained as long as the current disastrous situation of sand eels does not greatly improve;</p> | <p>3. A legal mechanism prohibiting ships carrying polluting cargoes within at least 16 kilometres of the Fair Isle should be set up;</p> <p>4. The traditions and culture of the island population should be taken into consideration when issuing regulations, which, although they may be applicable nationally, are inappropriate if applied to Fair Isle waters.</p> |
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The UK is a member of the Council of Europe, and the isle has reasonable expectations that these recommendations will be accepted. The SSMEI project gives the ideal vehicle for ensuring that they do.

REPORTS FROM THE ISLE

Monitoring the fish - June to August 2005, by Stewart Thomson

The fishing was slow to start this year, due to predominant northerly winds but coal-fish *Pollachius virens* were always available. It was encouraging to see that, to begin with, stomach contents were mostly sand-eels *Ammodytes*, but there were a few oddities in that department: one pollack *Pollachius pollachius* contained the remains of at least five snake pipe-fish *Entelurus aequoreus* and one of the few early cod *Gadus morhua* contained what I'm pretty sure was a Norway lobster *Nephrops norvegicus*.

The meter has shown wide concentrations of food, but fishing on these has produced very little, except the odd greater sand-eel *Hyperoplus*, and there have been more jellyfish around of greater variety. Also seen have been large numbers of small fish, about 2 cm in length, which I think are young mackerel *Scomber scombrus*. These I have

not seen before and I am certain they are not herring *Clupea harengus* fry, which are fairly common in July-August.

I have tried all the inshore white-fish grounds, and there are no haddock *Melanogrammus aeglefinus* to be found, although we have caught a few small cod and whiting *Merlangius merlangus*, most of which are under sized, and also a few flounders *Platichthys flesus*. It does appear that although there may be plenty of small whitefish, the inshore stock has been seriously affected for the long term.

As far as the shellfish are concerned, it would appear that in spite of a concerted effort by a commercial boat, the stock is showing signs of recovery. I hope this will continue and that the stocks can be managed sustainably for the future.

Fair Isle's Seabirds in 2005, by Deryk Shaw (Fair Isle Bird Observatory)

Overview: A better season than last year (when Arctic Skuas *Stercorarius parasiticus*, Kittiwakes *Rissa tridactyla*, Arctic Terns *Sterna paradisaea*, Guillemots *Uria aalge* and Razorbills *Alca torda* all completely failed to fledge any young and Great Skuas *Stercorarius skua* fledged just one) but on the whole it was still a very poor breeding season. Birds were very late to nest but numbers were greatly improved compared to 2004 (except Shag *Phalacrocorax aristotelis* and Great Skua) and most species did manage to fledge some chicks. Overall productivity for most was still well below average – the second worst on record for many species. As usual it appears to be a shortage of Lesser Sandeels *Ammodytes marinus* which is the immediate problem.

Whole island **Gannet** *Sula bassana* numbers continue to very slowly rise and breeding success looks set to be typically high. Gannets are not restricted to feeding on Sandeels and also have much larger foraging ranges than most species and can therefore still thrive when others are suffering.

Breeding **Fulmar** *Fulmarus glacialis* numbers were greatly improved (+66%) compared to 2004 and productivity (0.49) was the best since 1995. As with gannets, fulmars have huge foraging ranges and are not reliant on Sandeels for food – preferring to eat squid and discards from fishing boats. Overall numbers are still much reduced compared to 20 years ago though, mainly due to changes in the fishing industry with fewer discards and an overall smaller fleet.

Shags had another poor season. Numbers of Apparently Occupied Nests (AON) on the plots were 20% less than in 2004 but they had a similarly very poor breeding success – less than half the long-term mean. **Great Skuas** increased by 50% compared to 2004, to 144 Apparently Occupied Territories

(AOT), but only 56% laid eggs. As last year, most failed at the egg or very small chick stage and just one chick was raised to fledging. Its smaller cousin, the **Arctic Skua**, however, more than doubled in number to 71 AOT (an increase of 115%). The vast majority (91.5%) of these laid eggs, but only managed to fledge five chicks – doubling the number of the previous two seasons. **Kittiwakes** are probably the species most in trouble with plummeting numbers and poor breeding success for the past four years (none fledged in the past two years), so it was encouraging to see that breeding numbers had increased by 42% compared to last year. Productivity was also much improved but still only 50% of the long-term mean. The Fair Isle **Arctic Tern** population has fluctuated greatly over the years, in response to the preceding year's breeding success with a peak of 2836 Apparently Incubating Adults (AIA) as recently as 2001. However, just four chicks fledged that year and the population plummeted to 115 AIA in 2002 but with no chicks fledged, the population had dropped to 11 AIA in 2004. A total of 40 pairs nested this year but again nothing even came close to fledging – for the fifth consecutive year! Following last year's abysmal numbers and complete failure to fledge any chicks, **Common Guillemots** (eventually) increased this year, by 35.7% to similar numbers noted in 2003. Attendance at the plots was, however, very poor right up to the last week of May. The first egg was not laid on the study plots until 16th May – three weeks later than normal!! A productivity figure of 0.28, whilst an improvement, is a long way short of the long-term mean (0.74). **Razorbill** numbers were particularly high and the largest number of eggs on record was laid at the study plot but overall fledging success, although better than the previous two seasons, was poor – a productivity figure of 0.44 is 30% below the average.

Finally, **Puffins** *Fratercula arctica* had a relatively successful year compared to most species and a productivity of 0.67 is equal to the long-term mean and slightly improved on the previous year (0.63)! Perhaps a slower growth rate and later fledging compared to other auks may benefit Puffin chicks. Analysis of food samples and

feeding watches suggested that what Sandeels were available were very small and small Sprats *Clupea sprattus* appeared to be the most abundant food item. Several Snake Pipefish were observed being brought in and many were found discarded in the colonies, as chicks find them hard to swallow – a sure sign that preferred food is scarce.



Puffin with Sandeels.

Photographer Elizabeth Riddiford. ©2000.

What is happening to our seas?

The following two notes draw on recent studies which suggest that physical factors are driving some of the changes we have been observing in our marine ecosystem.

Changes in the Plankton community

There is a long run of data for the plankton of Fair Isle waters thanks to the UK Continuous Plankton Recorder survey, which has been operated in the North Sea since 1931. These data demonstrate considerable changes in the diversity and composition of plankton in recent years, linked to sea temperature changes and their effect on currents and plankton populating those currents. Lindley & Batten (2002), studying CPR results for the period 1958-1995, reported that in the final decade of that period (1986-95) there was an inflow of species associated with warm oceanic waters

into the North Sea which modelling showed was via the Fair Isle passage. This inflow was much greater than in previous years, and included an abundance of three warmer water species, two of which had not been recorded prior to 1986. The study pointed out that these biological indications of change were supported by hydrological data such as high salinity anomalies and higher temperatures.

By contrast, resident and colder water holoplanktonic species had declined in abundance. The authors questioned whether

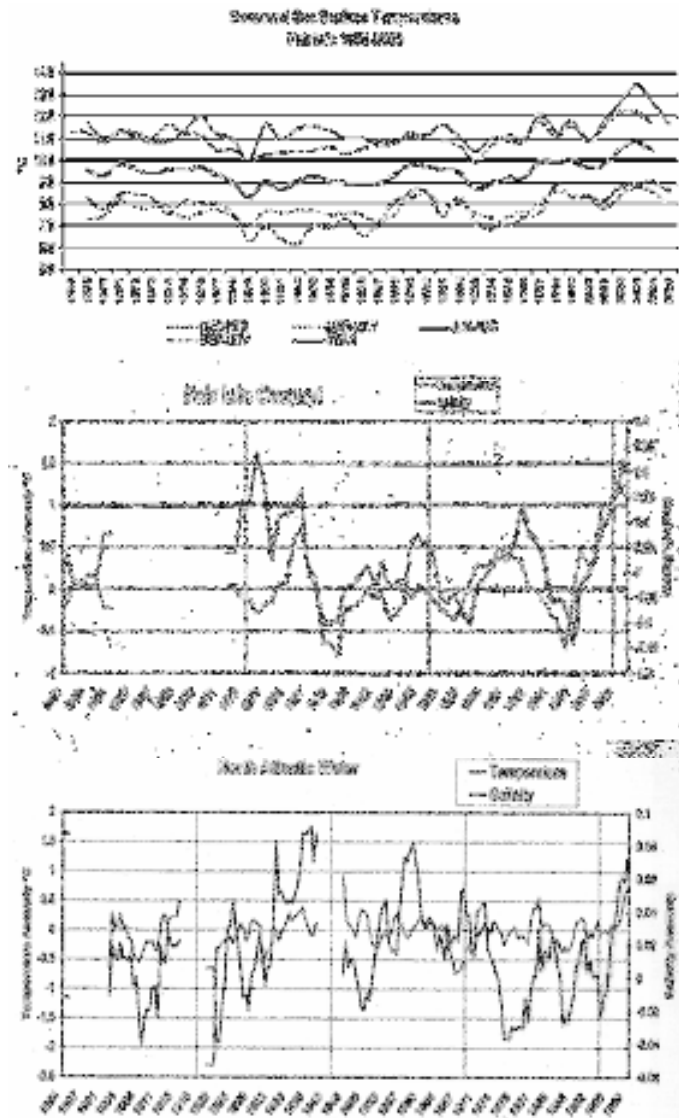
the increased species richness of the addition of these more southerly or Atlantic species can be accepted as a positive biodiversity stability (food chain) of the regional ecosystem. It is known that the population dynamics of such key species as sandeels are affected by environmental conditions as well as fishing impacts, and the current worrying decline in Fair Isle seabird breeding success may, in part at least, reflect wider climate change impacts on the marine ecosystem.

Climate change

Fair Isle is strategically placed to monitor changes in climate, and their associated effect on Scottish coastal waters. It was not surprising therefore, that Fair Isle featured strongly in the *Scottish Ocean Climate Status Report 2000-2001* (published by the Scottish Executive Fisheries Research Services in May 2003). The value of the long run of data collected by Dave Wheeler of the Fair Isle Meteorological Station was demonstrated by the use of Fair Isle sea-surface temperature data in the report, alongside similar runs of data from Peterhead on the Scottish east coast and Millport in the west. These demonstrated that from the mid 1990s, mean monthly temperatures were consistently above the long-term monthly averages at Fair Isle and Millport, an upward trend which was less obvious from Peterhead data.

The Fisheries Research Services also selected the Fair Isle Current as an indicator of the changes in the exchange of water between the Atlantic and the North Sea. This showed year to year periods of temperature and salinity increase and decrease over the period 1970-2001, superimposed on longer-term trends. However, the Fair Isle Current data showed consistently above long-term mean temperatures since 1996 whereas the long-term trend for salinity is downwards, with surface salinity decreasing during 2000 and 2001 to the lowest values since

measure as the newcomers were largely temporary constituents of the community and therefore of less “value” to the trophic measurements began (1970). The report indicated that Fair Isle lay in a band whose surface water temperature had risen by 0.2-04°C per decade during the period 1981-2000. The same report showed a map of temperature trend derived from a climate model which predicted further increases of similar value per decade in the period 2001-2020.



Graphic courtesy of Dave Wheeler.

RECENT NEWS



Radio Exposure

Radio 4 broadcast a 30 minute feature on the potential impact of changes in the marine environment on the Fair Isle community on the evening of 22nd August 2005. It was entitled "Fair Isle on the Edge". Further interviews on a similar theme were conducted on 26th August for the Radio 4 *Today* programme, scheduled for broadcast on 1st September.

European Small Islands Network inter-island exchange project

Stewart Thomson (Quoy) visited The Archipelago Sea Biosphere Reserve on behalf of FIMETI on 6th to 8th April 2005. The visit was part of the European Small Islands Network Inter-Islands Exchange Project (ESIN IIEP) funded by the EU's Interreg IIIC funding programme. Stewart's visit was arranged through the Scottish Islands Network. The ESIN IIEP has been set up to promote sustainable development of Europe's small islands. Biosphere Reserve status is awarded through UNESCO's Man and the Biosphere programme and reflect zones with important natural and cultural values where the principles of sustainable development are

put into practice. Stewart found that there were many similarities between The Archipelago Sea Biosphere Reserve and the problems and challenges facing Fair Isle. These issues were being addressed through the Biosphere Reserve programme, and encompass all the factors that we on Fair Isle are trying to achieve – particular sustainable use of resources. Stewart brought to the visit the experiences of Fair Isle, which undoubtedly added to the overall value of the event. It was also another step in our continuing efforts to raise the profile of our isle and our quest for sustainable management of our environmental and cultural resources.

Royal Maritime Reception

Nick Riddiford attended a maritime reception, hosted by the HRH Princess Royal, at Holyrood Palace on July 2005. This was one of a series of royal receptions and events that day celebrating the UK's rich maritime heritage. The invitation demonstrated that the voice of the isle on maritime issues is now reaching ears in Edinburgh, where most of the key decisions will be made. None of these decision-makers were at the reception so no opportunity was had to converse with them. However, some interesting contacts were met, including senior representatives of the Scottish Environmental Protection Agency, the Chairman of the Scottish "Tourism and the Environment" initiative and, on the cultural side, Jon Addison, the curator of the Scottish Maritime Museum at Irvine. Princess Anne was sympathetic to our cause and displayed a significant knowledge of the isle and its lighthouse history – now sadly just that.

Booklet Review

FIMETI published four booklets in 2004, two of which were directly related to the sea and the other two with a strong maritime theme. The following review of these booklets was taken from *The Shetland Times*, page 25, Friday 30th July 2004. The reviewer was Drew Ratter.

***Fishing Traditions of Fair Isle* by Emma Perring, *Exploring the Coasts & Shores of Fair Isle* by Elizabeth Riddiford, *A Taste of the North* and *Handwork* edited by Anne Sinclair. All published by Northern Periphery at £5.80 each.**

Over the past couple of years Fair Isle has been working on an EU project under the aegis of the Northern Periphery programme, along with regions of Norway and Sweden. The project was on preserving heritage, and these four booklets, to be followed by another three, are the fruits of their labours.

The aim of it all is essentially twofold: to develop the community using an understanding of its own heritage; and to provide information for visitors which will enrich their experience when they are in Fair Isle, or within other partner regions.

The first booklet is a concise history of fishing in the island, which history is one of abundance curtailed by over exploitation by fishermen not from Fair Isle, but from Scotland, Orkney and Mainland Shetland.

The ambition of the Fair Isle, stated three or four years ago, and which has so far failed to gain support from Shetland Islands Council, is to separate the immediate coastal waters of the island from commercial fishermen to allow the stocks to recover and grow back to their former size (its a long time since a 14 stone halibut was caught near Shetland) and for those stocks to become a sustainable resource for the isle once again.

Exploring the Coast & Shores of Fair Isle is very much what it says on the cover. It will be an invaluable guide to anybody visiting the island who wants to wander around and take in more of the detail of what they are looking at.

There is probably a stronger craft tradition in Fair Isle than anywhere else in Shetland and *Handwork* cover that, while *A Taste of the North* is a cookery book. Both of these are trilingual and cover similar traditions in the partner regions taking part in the project.

These booklets are an impressive output from the project and certainly well worth obtaining and taking with you, should you be heading for Fair Isle. From a Shetland point of view they are heartening, insofar as they indicate the health and vigour of such a small and geographically isolated community; still looking outwards.



The Oysterplant *Mertensia maritima* colony

Ever since the first plant was found nearly twenty years ago, islanders and Fair Isle Bird Observatory have striven to protect this increasingly rare plant of northern beaches. FIBO staff, in conjunction with the Fair Isle Ranger Service, improved protection of the site enormously from 2004. For the first time, a permanent system has been put in place, comprising a large enclosure occupying over two-thirds of the beach. The result has been spectacular. There are now dozens of plants, too numerous to count (but over 500!). Several larger clumps are flowering profusely, while tiny plantlets are scattered across the entire enclosure. Nine plants are growing outside the enclosure, where they run the gauntlet of being eaten by sheep. Their survival is not a great issue because the enclosure looks likely to fill up with an almost continuous mass of oysterplants in a few years' time. In 2004, the enclosure also supported three plants of sea rocket *Cakile maritima*. This plant colonises occasionally but gets eaten by sheep before it can establish itself. The three plants in 2004 appear to be the first on record to flower on the isle. Also in 2004 two oysterplants were found in Peerie Uri Geo, a small geo immediately to the east of the traditional site, the first time the species has been found away from the main site. There were none there in 2005, nor any sea rockets in the enclosure. Both species are potential shoreline colonists, because their seed is adapted to dispersion by sea. But both are palatable to sheep and thus in need of the protection that fencing brings.



Oysterplant *Mertensia maritima* at Muckle Uri Geo, Fair Isle.
Photographer Elizabeth Riddiford. ©2000.

Jellyfish

Fair Isle is participating in the Marine Conservation Society's national Jellyfish Survey. The survey is being led by FIMETI in collaboration with the Fair Isle Ranger Service. The Marine Conservation Society explains the reasons for the survey on its field data forms:

“Little is known about jellyfish in UK waters, but we do know that they are the staple diet of the critically endangered leatherback turtle. These spectacular reptiles are seasonal visitors to UK seas and are thought to migrate from their tropical nesting beaches to feed on our jellyfish. Analyses of stomach contents of dead leatherbacks stranded on UK shores have revealed that they feed on several species of British jellyfish. By comparing the distribution of jellyfish with environmental factors such as sea temperature, plankton production and current flow, we hope to understand what influences the seasonal distribution of jellyfish and leatherbacks in UK waters.”

The survey could also be useful for FIMETI. Subjective observations suggest that in recent years there has been a shift in abundance and species composition in Fair Isle waters. Jellyfish species and numbers may prove to be ready indicators of changes in our marine ecosystem.

Marine Protected Areas: let the big fish go

A couple of interesting articles in the *New Scientist* this summer reported on research which demonstrated that nature was selecting for smaller individuals in species heavily targeted by man. Whether it was fish or bighorn sheep, targeting the largest individuals of a population led to a genetic advantage for smaller individuals and a subsequent strong tendency towards smaller individuals in the adult population. Thus, for instance the average horn size of bighorns in the Rocky Mountains of Canada has declined by about 25 per cent over the past 30 years. As larger horned rams tend to have the best genes, removal of this group leads to poorer quality stock. This problem is compounded further in fish because the largest individuals produce much greater quantities of eggs, thus the knock-on effect on fish productivity is great. Both articles draw the conclusion (for fish) that the best solution would be the establishment of no-fishing zones or marine protected areas. These would provide refuge for at least part of the important genetic quality that large fish represent. Part of the Fair Isle community's strategy for the marine environment is the establishment of a marine protected area around the isle. Critics of MPAs in Britain argue that fish are migratory and therefore such a move would not work. However, evidence from other areas, including Lundy island in the Bristol Channel, suggest that this form of management is beginning to get results, though a network of refuge zones may be required to make it fully effective. The *New Scientist* articles appeared in the 25 June 2005 edition, page 11, and the 9 July 2005 edition, pages 28-30.

Future Events

Marine Environmental Research

Nick Riddiford will be representing FIMETI at a seminar entitled “Priorities for Marine Environmental Research in Shetland” at North Atlantic Fisheries College on 7th September 2005.

The topics for discussion include:

- ◆ Is there a role for the College in local marine environmental research?
- ◆ What are the priorities for such research?
- ◆ What opportunities exist for collaboration with other organisations?
- ◆ How might work of this nature be funded?

This would be an extension beyond the current remit of NAFC but seems particularly appropriate at this time, with the current initiatives for marine and coastal zone management and movements towards a University of the Highlands and Islands - of which NAFC is expected to be a part. There is great potential for Shetland to become of major importance in this field, with NAFC taking a lead role. It is a topic which is likely to get ever increasing attention, as planners and decision-makers seek better information. A good scientific baseline is essential if sustainable management programmes are to be properly planned, backed up by effective monitoring if they are to achieve their goals.

Fair Isle Bird Observatory will also be represented at the seminar.

News dissemination – the Fair Isle web site

With the SSMEI, European Union resolutions on Integrated Coastal Zone Management, a proposed UK Marine Bill (UK government), a proposal for Maritime National Parks (Scottish Executive) and calls for a comprehensive network of Marine Protected Areas (World Summit on Sustainable Development, Johannesburg, 2002), there is a window of opportunity for real progress towards protecting our marine resource. FIMETI will do its best to make its voice heard and to be involved as much as possible in these developments. One outlet which we shall use is the internet. Fair Isle has an excellent web site www.fairisle.org.uk, managed by Dave Wheeler. News of our activities, events and any progress will appear there.

Acknowledgements

FIMETI gratefully acknowledges the support, including financial, derived from the Scottish Natural Heritage-National Trust for Scotland concordat. Our MSP Tavish Scott has been actively representing our views to decision-makers and the Green MSP Eleonor Scott has also been championing our cause - Many thanks to them. Thanks, too, to the contributors to this newsletter and to the various friends for their time, energy and support over the last few years.