Lough Allen

Farming and Wildlife

project

(North end of Lough Allen from Sliabh an Iarann)



This is a Conservation Proposal for the whole Lough Allen Basin drawn up by an independent group of local people from a conservation and farming background. We seek to protect the plants and animals of the lake and surrounds, promote farming methods that are equally productive but help the wildlife and maintain (or improve) farm income in a marginal landscape.

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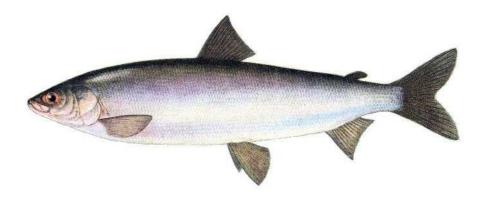
1. Introduction and AIMS.

The Lough Allen Farming and Wildlife project consists of a number of local individuals who share an appreciation of the countryside and the surprising richness of the Lough Allen landscape and wildlife. Our aims are:

- A) To conserve, and fund conservation, for specific areas rich in rare and significant wildlife.
- B) To link, support, and monitor such individual areas with a view to conserving all the Lough Allen Basin, funding this through a major regional conservation initiative (LIFE), and provide employment and community support in the process.
- C) To limit the loss of lake shore grazing due to high water levels and to seek to have the lake level controlled at a lower level than recent years so as to allow greater access to onshore grazing. This benefits both farmers and wildlife.

We would all like to see Lough Allen conserved and protected from any damage or deterioration be it man-made or natural _ i.e. increasing water levels. Many of the leaders of conservation in the area are farmers or land-owners who have an abiding interest in keeping the Lake and its surrounding countryside in a pristine, healthy, and productive state. Some of these people have done outstanding work to date in piloting the idea of farming and nature protection as enterprises that can work hand in hand; indeed one endeavour will always support the other, if properly managed.

Pollan (Coregonus autumnalis)



2. List of rare and endangered Plants and Animals.

We are continually amazed when we tot up the list below. Some people may not appreciate how important Lough Allen is and how necessary it is to keep it as the highest and cleanest of the large Shannon lakes. All the species listed below are found in Lough Allen and few other places in Ireland or Britain. Some are not found elsewhere in Europe or Asia but may exist in America! Such 'relict' species may have been cut off from their natural hinterland 20,000 or so years ago during our Ice Ages. To think of such species surviving in small populations in or around a smallish lake for thousands of years, is truly amazing! Some of these species have only been identified and recorded recently.

These are the species that we feel mark out Lough Allen as a special place and which motivate us to come together (from diverse backgrounds) and work to ensure their survival in harmony with modern farming methods.

Irish Lady's Tresses (Spiranthes romanzoffiana)

This is an extremely rare orchid which flowers abundantly some years and then may disappear for another vear. It's a mysterious plant which is widespread in Lough Allen and also occurs in other western Irish Lakes, and in Scotland, but nowhere else in Europe or Asia. The same species is found across North America however the Irish specimens are significantly genetically different to establish that the population we have here is a native population and has been isolated from North American populations probably since the time of the last glaciation... if not earlier.



Pollan (Coregonus autumnalis) (Illustrated on previous page.)

Another unique and rare relict from the past! Pollan is a freshwater species of the Salmon family, found as a resident population in no other European country but Ireland. It is a fish unique in Western Europe, being a landlocked glacial relict from the last ice age. Its stronghold is in Lough Neagh, and also occurs in Lower Lough Erne, and in Lough Ree and Lough Derg (forming only 1% of total fish biomass). Recently Pollan have been confirmed from Lough Allen by researchers from NUI Galway and work done by Central Fisheries Board, Dublin and Agri-food and Biosciences Institute, Fisheries and Aquatic Ecosystems Branch, Belfast (2007). Numbers are believed to be low. Pollan were also reported to have occurred in other small lakes in the North West area, but not in recent times. It occurs in the Arctic around Alaska, N.

Canada and Siberia. A landlocked population similar to that in Lough Neagh and Lough Allen occurs in Lake Baikal.

Mysis relicta is a shrimp recently identified from Lough Allen. It lives in deep areas of the Lake (also favoured by Pollan) and migrates to the surface at night time. This is presumably the food stock for the Pollan (and also the Red-breasted Merganser?) and

shows how an ecosystem is so dependent on tenuous links which are unique to one particular place, have persisted only in that area, and are so easily jeopardised by changing environment or usage of natural resources. Several new species of plants and animals are getting introduced into the Lake and one wonders how these may affect the ancient native relict species. Will Zebra Mussels, for example, impact on either the Pollan or Mysis relicta?

Apart from the above truly unique gems, the following species can be listed as significant rarities or uncommon species with a stronghold in the area.



Blue-eyed grass. (Left)

An Image taken from Project Gutenberg's The Botanical Magazine, Vol. 3, by William Curtis (www.gutenberg.org)

Mudwort (Top right)

Mudwort recently flowering at Lough Allen (during a moment of low water level)

Marsh Fritillary. (Right)

This Butterfly is diminishing throughout Europe but found in good pockets in north west Ireland. They have a complicated life cycle and to breed need a complex variety of conditions such as provided at Mountallen. (See Appendix C)





Many other plants and animals that have occurred here in the past and need special conditions to prosper, are now becoming scarce and badly need a determined policy of protection and environmental management. Here, too, we could also cite the Corncrake as a species which has long gone but for which farmland is now being managed with a view to actively encouraging their return. There are many other bird species typical of Lough Allen that need best conservation practice to ensure their continued presence

Some significant Birds in the Lough Allen area:

Red-breasted Merganser

Lapwing/Curlew

Common Gull/Common Tern

Common Sandpiper

Garden Warbler

Cuckoo and Kingfisher

Owls, Buzzards, and other birds of prey



Blackcap...Common. Its rarer cousin the Garden Warbler may also occur?

The above bird species (and, also, the Corncrake) if successfully 'provided for' could return great richness and diversity to the Lough Allen Basin and make it a haven for both nature and the increasing number of people who crave these sort of outlets for both recreation and vacation. This human population probably exceeds in number the possible audience for many other forms of tourism promoted in the area. People love to watch, study, photograph nature, and many will happily get involved in many forms of monitoring and conservation activity. Such a contribution, albeit on a voluntary basis, may be an indicator of how conservation activity can also help other pressing needs of the area, such as farm income development and general employment creation. It is also possible that farm income may be directly enhanced by conservation activities aimed directly at rare and important species of wildlife.

3. Habitat Conservation and Maintenance of Grazing.



Merganser. Still common but may be suffering breeding difficulties.

A fundamental aspect to this project is that all farmers and landowners around the Lough Allen catchment area can benefit from maintaining their environment. Keeping lake shore grazing is an important issue for many farmers. Scientific research indicates that it is generally beneficial to the environment. Rare plants are often associated with such areas of grazing.

Unfortunately, it is nature (high rainfall) that has worked against the interests of both farming and the interests of our rare plants and animals. **The Lough Allen Farming and Wildlife project** is committed to trying to see that larger areas of lake shore (below the high water mark) are returned to being available for both grazing and the benefit of rare species. The two tasks go hand in hand. By keeping water levels lower we provide more shoreline for grazing and a hugely expanded base for Lough Allen's special plants and birds to live and breed.

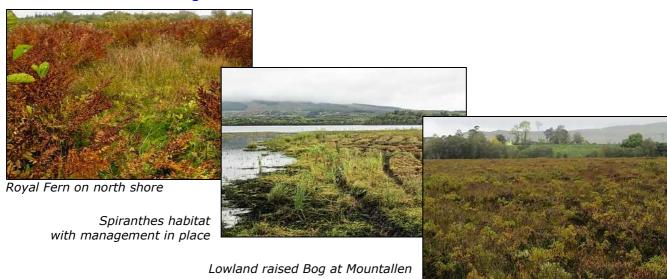
Many traditional farmers still lament the loss of the Corncrake. Other species may still be kept, and new ones encouraged to come into our environment to maintain or even enhance Lough Allen's character and biodiversity, if we now try and manage changes both in lake levels and shore management. In the interests of rare plants certain very small specific sites may need to be excluded from grazing for a short period during the Summer. Such tasks will require labour and we feel that this is work eligible for grant assistance or subvention. Farmers and landowners should be allowed to do, and be rewarded for, any work done on the shoreline in consultation with the ESB and in the interest of environmental conservation. This would also cover access to the shore by the public and by research or conservation workers studying the species involved.

An example of a Habitat conservation. Lowland Bog/Royal Fern

Whereas species conservation is a very specific and important task in terms of preserving biodiversity, which is ultimately what gives a habitat and a landscape richness, it is also possible to approach the conservation of an area such as Lough Allen in terms of managing a particular habitat or place.

There are many such candidate habitats on the shore of Lough Allen and many more in the hinterland in terms of unexplored montane regions and upland moorland containing Grouse populations. Around the lake shore are the typical Lough Allen Alder Carr, some significant habitats containing Royal Fern, and lower shores popular with wading birds and rare plant species. The most important habitats may be the specific type of setting (in several parts of the Lake) where Irish Lady's Tresses occur in good numbers (only one of which is presently protected), and the large area of undisturbed lowland raised bog at Mountallen in Co. Roscommon. This latter area is best described in a document produced by Tommy Earley and Bridget Keehan in connection with a recent Farm Nature Walk of the area. (Reproduced in part in Appendix D)

Three Habitats from Lough Allen:



There is little difference in practice between the 2 approaches. If we aim to conserve a single species the result is often the conservation of an area. If there are threats to the species (which has happily been surviving there for 1,000's of years) then these threats probably come from changed land use, invading non-native species, or other environmental changes. Controlling these changes conserves both the landscape (as it was) and allows the endangered species to survive. Similarly if we decide we want to keep a bog or a shoreline 'intact' and we take steps to manage it accordingly, then we will be simply continuing the conditions and situation in which the diverse plants and animals in that habitat have survived for millennia. Taking steps to protect and encourage the rare plant, Irish Lady's Tresses, simply requires that we regulate vegetation height and control on-shore grazing during the flowering season in areas around the Lake. Conversely, if we protect a bog because it is part of our landscape and heritage, we will simply be continuing the ideal habitat for Marsh Fritillaries to survive and make our place that more diverse, natural, and interesting for all of us.



4. What are the goals for Farming and Conservation in this area?

Whilst this group has a farming and conservation background, anyone living in this area must also be aware of the need for further employment opportunities and further recreational and academic outlets for people in their leisure time. **The Lough Allen Farming and Wildlife project** would be very sympathetic to these needs.

But, firstly, maybe we should define what is meant by Conservation in a technical sense, and what it does not mean. Conservation is not a blank exclusion and protectionist approach to areas of the countryside, rather it is a very positive and constructive approach to maintaining our land in its best possible condition. Conservation can be thought of as farming for the future of wildlife and our natural heritage. Like all farming it requires regular maintenance and endeavour by either the landowner or agents of the landowner. Whereas these traditionally would have been contractors (e.g. to cut silage), in conservation terms landowners may seek help in research, grant application, and targeting and recognition of areas of land (with particular species of plants and animals) that are best suited to conservation rather than commercial farming.

Furthermore, while set aside is a possibility, a large amount of conservation ideas suggested in this document will go hand in hand with farming activity and will (ideally) both develop farm income as well as contributing to delivering a land full of diversity and plant and animal richness. Such a landscape may in itself become a powerful economic tool in generating tourism, retirement activity, and other bases for new employment. As to how conservation activity may contribute to on-farm income, please refer to Section V below.

The broad aim of this initiative can be boiled down to 3 main goals:

- Protect Rare species by developing 'best practice guidelines' for each individual species and by providing the ideal habitat for their continued survival. (Discussed below.)
- 2. **Reward farmers and landowners for work** undertaken to protect nominated species. (Discussed in Section V)
- 3. To source and develop Funding Possibilities to cover costs and non-profitable work involved in the Project. Also, in the long term, to provide other employment in conservation, administration of local projects on behalf of farmers, monitoring of good conservation practice (different for each species), and promoting school and community education and awareness of wildlife and habitat issues. (Also discussed in Section V)

Sample of a trawl through Funding Sources >>

Grant Aid

Wildlife Habitat Management and Development, Sources of Information and Funding

> A. <u>EU, Government. & NGO</u> <u>Funding Initiatives.</u>

Listed below are some of the prime sources of Information and Funding, via EU Schemes, National Government Funding and from non-Governmental Organisations.

EU Life Programmes:

Website

www.europa.eu.int/comm./environment/life/funding/index..htm

Financed by the E.U. Commission and administered by the **Dept. of the Environment**, <u>www.environ.gov.ie</u>

This way conservation will not simply be a duty but will benefit us all both socially and economically. To maintain a viable social and working landscape, Leitrim, Roscommon and Cavan all need a vibrant population and a prosperous and well dispersed farming and housing infrastructure. We can not afford to let parts of this basin and hinterland become unoccupied and neglected. Conservation and agriculture are the two main activities which will see that land and living go hand in hand.

Protecting Rare species... How?

The first of the 3 goals is the simplest one. It is a clear concept; there are several rare plants and animals around Lough Allen. We want to protect them; how can this be best done? Fortunately we have a prime example of how to do this and also the backing of scientific and farming experts in the methodology and practical implementation.

Expanding Orchid conservation around Lough Allen.

The conservation of the orchid, Spiranthes romanzoffiana, at Tommy Earley's farm at Mountallen is widely known and recognised not only by the local community but also by botanical experts internationally. An important easy early initiative would be to replicate this work in three or more other areas around the lake where such a policy could ensure that other establishing populations of this rare species could be protected at vulnerable times of the year.

Help and advice.

The precedent set in Mountallen is an example in both conservation and fiscal terms. Funding sources are available. If a farmer or landowner in a particular area does not have the time or the resources to process an application we see no reason why a centralised grant system might not be implemented. A farmer could put forward his site with an identified and specified rarity on it and The Lough Allen Farming and Wildlife project could undertake (either through its own staff or through affiliated projects) to design, specify, monitor and account for that local initiative. This way both the conservation goal would be achieved and also any public funds allocated would be monitored independently, and the farmer in question could concentrate on his conservation management activities leaving the administration of the scheme to the Group.

Similarly, on a technical level, an expert from the Botanic Gardens has already indicated his willingness to advise and support any initiative taken around Lough Allen aimed at conserving the Irish Lady's Tresses in further local sites. Advice has also been obtained from the National Parks and Wildlife Service in drawing up this proposal. With this support, and increasing local knowledge, it is becoming easier to both conserve valuable parts of our natural heritage at the same time as supporting farm income. By working together and developing a lake-wide plan valuable experience can be shared and sufficient work may be generated to justify some employment in ancillary activities either as job schemes or permanent employment.

Providing the Ideal Environment for Species.

Specific ways of protecting a species are summarised above and outlined in Appendix B. It is not known how long Spiranthes has occurred widely around the lake. It could be 10 years or 1000's! It can spread vegetatively but must also disperse by seed. Its seeds seem designed to float on water but may also be carried by wind. We simply don't know. However, it does occur on the lake and it does seem to be spreading easily. This suggests the intriguing notion that we might 'anticipate' its arrival in other locations, provide the right conditions, and it may come and it may flourish.

Similarly there is much experience both in Ireland and internationally of providing the right environment for birds that pass over the



Silver-washed Fritillary, also found around Lough Allen

area, and they will stop. The classic work of the **RSPB** in Britain in providing 'scrapes' with the right amount of water and suitable feeding quickly resulted in return of breeding Waders. There are many wading birds passing through Lough Allen but there are not many stopping and, unfortunately there seems to be a big decline in numbers breeding. A protected area with controlled water level might contribute to rectifying this? This is one way of providing the ideal environment for birds, plants and other animals, to survive and to increase the biodiversity of the area.



Summer flood at a critical time

for Plants and Animals

Two goals can be offered for habitat management:

- 1. To conserve and enable to survive and prosper, species which are already in the area but which seem under threat.
- 2. To attract back birds and other species which no longer occur here but 'should' be! The Corncrake is an obvious example here.

To provide ideal habitats for species we need 3 resources:

- 1. Knowledge of their needs. This is readily available both through local knowledge, professional people with the skills and willingness to help, and through international experience and literature.
- 2. We need the land on which to do it. This may also be readily available. We say 'may' because even though there would be a willingness among many landowners to participate there is a justifiable concern over such work hindering either their main agricultural work or the income they generate from the land. If these are addressed through rewarding appropriate conservation activity, conservation may well prove the most viable farming practice on certain areas of marginal land?
- 3. We need funding to pay for the work required. This will be additional funding on top of the benefit to farmers for the use of land. But the cost can be very small, or it may be large. It may simply be the cost of mowing an area of wet shoreline once a year or it may be as large as the cost of creating a new 'lagoon and graded shoreline' in an area above the level of normal flooding on Lough Allen. This could be a major cost, but we want major expenditures to justify the application for EU LIFE funding! Other projects can be either taken under such a regional endeavour or may indeed by funded through individual grant applications or a modernised resurrected REPS.

Example of new Micro Habitat creation:

As well as maintained and rescued habitats (Orchid meadows and stable shores for bird nesting) it is valuable to provide new habitats to attract diverse species. In fact these may not be entirely new but may represent a return to old farming practices now long gone. LINNET is an agricultural/conservation initiative that promotes the planting of small areas of crops such as Oats in areas like Lough Allen where the growing of arable crops has largely died out. When the use of horses for farm work died out in the 50's the growing of localised patches of Oats all around the area also ended. This meant a loss of a rich source of food for birds and small mammals which, in turn, are an important food source for predatory birds and, especially, the Barn Owl.



LINNET (Land Invested in Nature - National Eco-Tillage) seeks to reverse these changes and to fund the cost of implementing this work. It encourages the planting of fields with traditional crops but with the aim of providing feed diversity for birds in areas where grain such as Oats is no longer grown. These crops can be grown on poor land and the grain produced is not harvested but left on the site to feed birds, mammals, and the predatory species that are dependent on them.

This is a farming and conservation approach ideal for the Lough Allen area which has seen a total loss of such arable farming. Larger plots are more beneficial but any field over 1 Hectare can be used. Linseed and Oats provide a good combination of feeding for wildlife and, of course, no fertilisers or weed control is required.

Major conservation concerns in this area...

1. Water Level

It has become apparent this year that we may need to consider water level in Lough Allen as a major conservation issue. Water level in Lough Allen has been maintained high in recent years possibly to facilitate boating, also as a reserve for hydroelectric generation at Ardnacrusha, and also to reduce flooding in Midland areas. All important considerations. However Cruiser traffic in the Lake is now minimal and does not need such high water levels. We also believe that hydro generation on the Shannon is not such a significant part of our power production strategy and may also not be greatly reduced by maintaining the water level in the Lake somewhat level. Renewable energy is also being produced in ever increasing amounts from wind sources around Lough Allen... so the area can be said to be paying its environmental dues in that way!

Last year around Lough Allen there were 100's of flowering tresses (Spiranthes romanzoffiana) in widely different locations. This year, 1 or 2 specimens have made it into flowering. The rest were underwater. Spiranthes is a cyclical species anyway. It comes and goes. It also seems to benefit from some disturbance and from periodic flooding. It is also now considered an endemic species (i.e. native) and is known to propagate and spread over a wide area though it is only in recent years that seeds have been detected. Last year the plants were flowering prolifically with some very long flowering spikes which one could have expected to seed. Interestingly all around the lake the colonies of Tresses exist at a very narrow height band along the shore. These seems to imply that seed leading to new plants travels across the water and settles and grows where it lands in suitable mud or gravel. At the height of the flowering season in 2008 all the flowering plants were deeply submerged by the lake level that rose over 60cm in a matter of days. Such flooding would have destroyed any prospect of seed setting and of the dispersion of such seed afterwards.

Whether a different policy of water level control (by the sluices at Ballintra) could be effective in controlling such catastrophic flooding is debatable but it seems that a policy of lower water levels might well be an important factor in conserving many species in Lough Allen. It may be worth considering whether a small local turbine generation set at Ballintra should be considered to exploit the greater volume but low-head water being allowed to leave the lake. This could generate income from the area which could be a valuable aid to the costs of conservation efforts in the area. However it would be important that such a design did not significantly impede water flow from the lake as it is evident that a maximum flow rate will be required if the lower lake level is to be maintained at times of high rain fall. It is accepted (or suspected) that in certain times of extreme rain it will be likely that water levels will rise but for shorter periods. Global warming seems to be a likely suspect in this equation too!

High and fluctuating water levels are also responsible for loss of other species. Just because these are not as rare or as unique to Lough Allen as the Irish Lady's Tresses, is not good grounds for allowing them to become extinct in our area. Just as the Corncrake died out here many years ago, so too are other wading birds under threat from exceedingly and unusually high water levels in the lake. This can affect both their breeding and feeding behaviour. Such species as Curlew and Lapwing and Common Sandpiper are under threat here. Both the former species seem to be declining and sightings of Lapwing with young around the lake are now very rare. The Common Sandpiper is a typical and attractive bird of Lough Allen. It still seems to be present in good numbers but what its breeding success may be is very hard to tell.

Similarly, reproductive success in Red-breasted Mergansers (and other species of ducks) seems to be being affected by early flooding and destruction of nests and young ducklings. It is rare to see Red Breasted Mergansers with a full brood of mature offspring. Controlling water levels would seem to be a major beneficial factor in promoting conservation of all these species which are dependent on the lake itself for survival. Steps should be taken to initiate talks with the ESB and other interested parties. A constant water level through Spring, Summer and early Autumn would benefit many valuable species enormously. The inevitable flooding in winter is very much a natural event, may do no harm, and is probably beneficial to the Spiranthes as they seem to thrive on banks which are periodically flooded; but not all the time... please!



2. Competing Lake use.

Not really a major concern at present. Heavy use of the lake by Power Boats might be harmful to the environment and may present a disturbance to the peace and calm of the area. However usage is not high at present and all users seem very conscientious of proceeding in accordance with regulations and the peaceful tranquil setting they are entering. With due respect to the leisure boating fraternity we are grateful that plans to expand the navigation up to Dowra have been cancelled. Like all people with a hobby, we do respect their enthusiasm but the work entailed in setting up this project would have been very disruptive to both the habitat and wildlife, particularly the Pollan and their food species, *Mysis relicta*.

People-powered-boating (sailing, canoeing, rowing) and fishing boats are totally to be welcomed and is very much in line with nature and environmental tourism that we feel is the future for Lough Allen. (See Funding Possibilities, Commercial income, at the end of this report.) Similarly, fishing is an important

economic draw for the area and can be done without any negative impact on the area as long as people are careful when they bring vehicles onto the shore (if this is permitted). Many areas have quite vulnerable shorelines not capable of withstanding regular traffic of this nature.

3. Invasive Species.

Now these are more of a problem. The most well known one is the Zebra Mussel (Right) but there are several others of varying importance:

Zebra Mussel. (Dreissena polymorpha)



Recorded from Lough Allen since 1998 but present in Ireland since the early 1990's. Believed to have been introduced on the hulls of imported boats from the UK and Netherlands, it has spread through virtually all navigable systems, and other lakes and rivers as well, possibly via angling activities. In Lough Allen, Zebra mussels appear to be restricted to the south end of the lake, at present, and are not a problem. However, elsewhere they can cause irreversible changes to the ecology of an area. Zebra mussels can filter as much as 1 litre of water per day through their gills. They remove phytoplankton, small zooplankton and bacteria amongst other things. As a result of this activity, the food web of their new habitat is changed. Studies have shown that this leads to reductions in different populations of fish. Zebra mussels attach onto the shells of swan mussels (Anodonta sp.), preventing them from feeding, resulting in death of the swan mussels. Its presence may also affect spawning of native fish, and affect the phytoplankton balance.

Himalayan Balsam (Impatiens glandulifera)

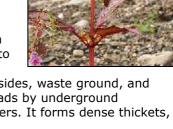
Shown on the right.... this is an attractive flower but rapidly spreading around the lake, where it will only compete with native species, possibly including Irish Lady's Tresses! It has probably been present for over a hundred years. It

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crowds out native species of plant, and when the Himalayan Balsam dies off in winter, it can leave bare soil, which is vulnerable to erosion. This plant is common along the rocky shoreline of Lough Allen, particularly the eastern shore.

Japanese Knotweed (Fallopia japonica).

Introduced to Britain and Ireland by gardeners in the 19th century, it has since spread in the wild to virtually all parts of Ireland. In the Lough Allen



area, it it found on the west side, along the roadsides, waste ground, and often, where roadworks are taking place. It spreads by underground rhizomes, and is extremely resistant to weed-killers. It forms dense thickets, and can displace native (or rare) plants.

5 How to Recognise/Reward landowners' commitments to conservation.

We believe that farmers and landowners should receive recognition for implementing such work along defined guidelines, and would advocate that a new funding method (or a renewed REPS scheme) would be aimed at advising on such work, monitoring its proper completion, and then rewarding the landowner in question for time, effort, and inconvenience. Successful conservation has to be a partnership, benefit to the environment matched by benefit to the person implementing the work.

Recompense for Conservation activity.

- 1. A **new REPS** specifically rewarding work which protects an endangered Species or Habitat.
- 2. **Small Grants to individual landowners** from interest groups such as the Heritage Council, Birdwatch Ireland, etc.
- 3. An area wide **EU LIFE supported conservation plan** along the lines of Burren Life in Clare. (Such an idea is already proposed on www.loughallenbasin.com) This could be a overseeing body for individual local projects and would need to be large enough as to require major funding and create some employment from the start.

These approaches are discussed individually below. Whereas a LIFE proposal is very attractive and would immediately unify the Lough Allen Basin as a conservation area, it will take a couple of years to implement and will require community and business backing. Information on a new REPS scheme is only hearsay at this stage but it may be possible to firm up on this. A REPS scheme aimed at specific conservation goals rather than dispersed (perhaps wastefully) as before, immediately makes the goal of conservation much more attractive to specific locations with natural richness to protect. There are many around the Lake and in its hinterland.

Small grants are presently being obtained in regard to the Orchid conservation programme on the west side of the Lake but not for other areas of the lake where similar conservation work will undoubtedly meet with success. Part of the work of **The Lough Allen Farming and Wildlife project** should be to transfer and migrate proven conservation techniques to other areas of the Lough Allen Basin. Hopefully, then, financial supports will follow.



Days like this! There is much talk of water levels in this report but we do have hot sunny days too when it is a joy to work or relax around the Lake. This photo is from the north shore showing Drummans Island. A good area for nesting Merganser and Sandpiper.

Benefits for other people and the Community?

We feel all the community should be involved, both because it's their lake too, they are the conservators of the future, and there is a growing need for the sort of fresh air/exercise therapy that wilderness areas provide. Great work is already being done at Mountallen in both community and school tours. The recent Farm Nature walk was outstandingly successful. (Part of the prospectus is reproduced in Appendix D.)

We feel that all habitats should be kept open (within the reasonable considerations required to preserve the plants or animals in question) and artists, photographers, birdwatchers, etc., should be welcomed and facilitated. Part of the terms for funding landowners for conservation work is that it should be open for education and community enjoyment. We hope that in an area like Lough Allen such an open policy would be appreciated and respected by the public. It may be necessary to restrict vehicular access but there should be no problem with pathways and indeed appropriate facilities for the disabled.

There could be many opportunities for voluntary work in both habitat management and dealing with the public. Such a commitment does appeal to many people, probably especially retired folk who are more concerned with staying fit and playing a part than in deriving an income. Indeed, if funding were available it might be a good goal to provide community facilities in a particular area for both conservation activity and social or artistic activity.... a wilderness study centre!



Creeping Jenny

.... another characteristic flower of the Lake found often on stony shores and a good indicator that there could be Irish Lady's Tresses in the area!

Other follow-on Employment.

(It is the particular concern of www.loughallenbasin.com that conservation should proceed in line with some community development. Be it training, part time work or full time work. They would also have an

ambition to attract some major High Tech (but totally environmentally friendly) employment to the area. An influx of new blood can only be good for the area and boost its economy as well as the impetus for conservation. However this is another day's work?)

How can we create 'new' employment from conservation of the type discussed above. The first goal would seem to be to make secure marginal farming activities by injecting new funding into struggling farms. This is analysed below. Secondly, if sufficient support can be generated it may be possible to directly employ a small number of staff. Ideally grant funding for conservation should be under strict guidelines and these guidelines need to be monitored. Whilst there is a clear case to be made for independent monitoring, there is no reason why such independent agents could not be employed locally but be individuals who are technically qualified but not linked to participating landowners or families.



Autumn: Fly Agaric, a poisonous Toadstool.

Other off-farm support staff could work in helping process applications poisonous Toadstool through design to implementation to drawing down funding. Considerable work might also develop in terms of surveying, providing appropriate surveying equipment, and in supporting farmers in meeting the terms of the conservation agreement. This may sometimes be hard to

achieve in areas of unseasonal flooding and special techniques may need to be pioneered and trialled. Apart from on-farm funding and the established pathway for funding (i.e. The Heritage Council) the other follow-on employment benefits of a regional conservation initiative may have to wait until an overall scheme, such as a Lough Allen LIFE Scheme, can be implemented.

Analysis of Funding Possibilities.

REPS

At the time of writing REPS is under review. Reportedly there are concerns about an overly broad spread of funding and maybe activity which may have had little benefit to the environment. However the basic concept of REPS does fit in very well with the idea of landowners as part of their stewardship taking responsibility for keeping the environment in a good and healthy state. Of course anyone should be rewarded for work and the use of their resources. In our research around the lake, particularly into plotting the distribution of the orchid, *Spiranthes romanzoffiana*, we have always appreciated the welcome and help of landowners. The openness of many people to conservation and to new ideas is heart-warming. Also, the difficulty of farming and maintaining a landscape becomes very apparent the more you walk in it and the more it rains. We must all appreciate the commitment of any farmer who makes land available for conservation.

Is it possible that a new REPS could be devised where something like a conservation dividend be put in place. i.e. a specific environmental goal be established and any landowner meeting that target can automatically draw down funding to match the commitment they have shown. This would mean activity would vary from location to location but each activity would have a specific goal in protecting a species or conserving a habitat. One farmer might protect a bog, another a shoreline area where Spiranthes and other rare species can occur, someone else even a fish population or an area of Royal Fern. However, in all fairness, some other appropriate environmental support seems fully justified for other committed landowners who may own land that may not be so striking from an environmental point of view. How to do this and yet focus new-REPS effectively, is not clear?

GRANTS

Heritage Council granting has been used to support conservation at Mountallen Organic Farm to implement a very broad ranging programme protecting many species and diverse habitat types. It appears likely that this might be replicated for similar work in other areas but such funding is being affected by budgetary restraints. Also not all landowners would be in a position to put forward such an application and centralised submission might be the way to spread this sort of work to other important conservation areas around the lake. Both REPS and Grants are applied for annually. It would be better both for farming and conservation if a funding and a management plan were made over an extended period of up to 10 years.

LIFE

We have some experience in submission of such a scheme, albeit many years ago. Many organic farmers will be familiar with the work of Burren Life in Co. Clare, which is a LIFE supported scheme. The bureaucracy surrounding LIFE is considerable and schemes develop and alter from one release to another. The details for current proposals are outlined on the www.loughallenbasin.com website and partly reproduced here as Appendix E. Basically LIFE is the EU Instrument for Financial support for the Environment. It is available throughout the Union and Ireland at present is under-represented. If we can meet the necessary criteria we should consider submitting an application over the next couple of years. The main criteria is that it should seek to support and protect an area containing a unique species or a unique habitat. This we can do in terms of both species and habitat, with the rare species found here probably being the stronger case. We have an outpost in NW Europe of species not found elsewhere in Europe (apart from Scotland in the case of Spiranthes). These species are little appreciated but must be regarded as extraordinarily rare. See www.loughallenbasin.com again for distribution, photographs, and biology of these species.

Further criteria for LIFE are that it be a sizeable financial package, have community backing, and have local funding to the extent of 25 - 50% (depending on the nature of the application). We need to get support of local enterprises, industry, public bodies, and service providers such as ESB and other major Employers. Considering the ESB's connections with the area and their concern and existing support for the environment, it would seem that they might be a fitting target for an approach if we, as a community, can put together a viable submission.

Commercial INCOME

It seems possible that some earned income could be derived from what is essentially a social and environmental project.

- a) Electricity Generation.
- b) Scientific/Conservation Tourism.
- c) Wilderness and Wildlife Tourism.
- d) Environmental Infrastructure for Tourism.



Crossbill. Found on conifers around Lough Allen.

Further appropriate development of **sustainable energy** (wind or water) with some of the profit going to participating landowners is an intriguing possibility, especially if good ecological management required that larger amounts of water had to be released over longer periods from the sluice gates at the lower end of the lake. Consultancy or advisory work in the area of farm management for wildlife purposes might also be a spin off application assuming both farming and Ireland recover economically.

If specific facilities existed we believe that tourists, artists, research workers could be attracted to the area and benefit the economy through accommodation, etc. **Conservation Tourism**, where the participants actively engage in land management activities, is popular elsewhere in the country and people are actually willing to pay for their stay. Many participants would be from outside Ireland. It would be a good target to aim to provide functional accommodation for such visitors but it seems reasonable to keep charges low and only seek to re-coup actual costs. This would be income generating but not profit generating.

Wilderness and Wildlife Tourism would be for enthusiasts, hobbyists, young or retired, but would be for pure relaxation _ we would not expect them to undertake conservation work. Consequently this type of tourism could aim to make a profit. We should aim to provide the best of facilities for people who like to relax through their study or their art. This would include photo and art studios, changing rooms and store rooms, cafés and toilets. Some of this ideally could be provided (in years to come) at a shoreline facility belonging to the **The Lough Allen Farming and Wildlife project**, or it could be delegated to Hotels and Guesthouses, with the Project acting simply as a promotional agency attracting such tourism to the area. We know, for a fact, that many keen botanists would be very happy to travel from Britain, and further afield, to study and appreciate our Orchids when they are at their best... which isn't every year! Similarly, bird watchers, if there were significant species in the area.

Some **sensitive infrastructural improvements** could be discussed to improve access (including wheelchair access) to the 26 Mile lake shore and to protect tourists trying to walk around the lake. People often talk about a path around Lough Allen. However the existing roads are not safe enough in many areas for walking or cycling and such activities would be best advocated along the Lake shore. This would provide an income to the landowner in return for granting access through land and for maintaining that pathway and associated stiles etc. More elaborate plans would envisage installation of pedestrian bridges across rivers, or board walks in wet or environmentally sensitive areas, or cabin type accommodation in select areas.

Walkers would have to be advised of protected areas and there is a possibility of damage being done. In conservation there is always a fine balance between exclusion and education. We take the view that it is best to get people on your side by trusting them and involving them. However, a close watch would need to be kept on any such development to see whether it improved or harmed the populations of our several truly unique plants and animals. If damage were to occur it may prove straightforward just to route tourists away from a particular location. The work involved in this plan would be considerable and would need considerable funding up front. Also, there is no clear means of returning an income from such an infrastructure apart from increasing overnight stays in local Hotels and Guesthouses.

If Lough Allen is promoted and protected we would be confident of a significant level of this gentle, relaxed, environmental tourism over the years, especially among retirees who look for interesting destinations and comfortable and reasonable accommodation... at any time of the year. The first three approaches to providing a commercial income should yield an early return if we can, in fact, initiate such a project for the Lough Allen Basin.

6. CONCLUSION:

We, of course, accept that these ideas are idealistic! But there has been much research done already and some outstanding examples of practical conservation (at Mountallen) which both show the way forward.

How to go forward? To advance these concepts we believe there are four steps:

- 1. Apply research and established procedures around the Lake with the aim of conserving and finding out more about known rarities and at-risk species.
- 2. Replicate successful conservation work and funding procedures to other locations around Lough Allen.
- 3. Start planning and development for an EU supported LIFE project for the whole Lough Allen Basin. Research goals and directions for this work, define work and material targets, seek local financial backing, and start to prepare an application for 2010
- 4. Apply for Interim Funding for further Research and Development pending a successful LIFE application.

This programme has been formally named as **The Lough Allen** Farming and Wildlife project at a meeting held in Drumshanbo on Wednesday 11^{th} November, 2009

Present were (in alphabetical order):

John Brennan, Leitrim Organic Farmers Cooperative Society Tommy Earley, Farmer and Naturalist David Farrell, LoughAllenBasin.com Bridget Keehan, Botanist Sean McGloin, Western Organic Network

The Lough Allen Farming and Wildlife project can be contacted via Tommy Earley (086 2536672), David Farrell (086 3900731 or rhymindave@yahoo.ie) or through the offices of *Leitrim Organic Farmers Cooperative Society* in Drumshanbo

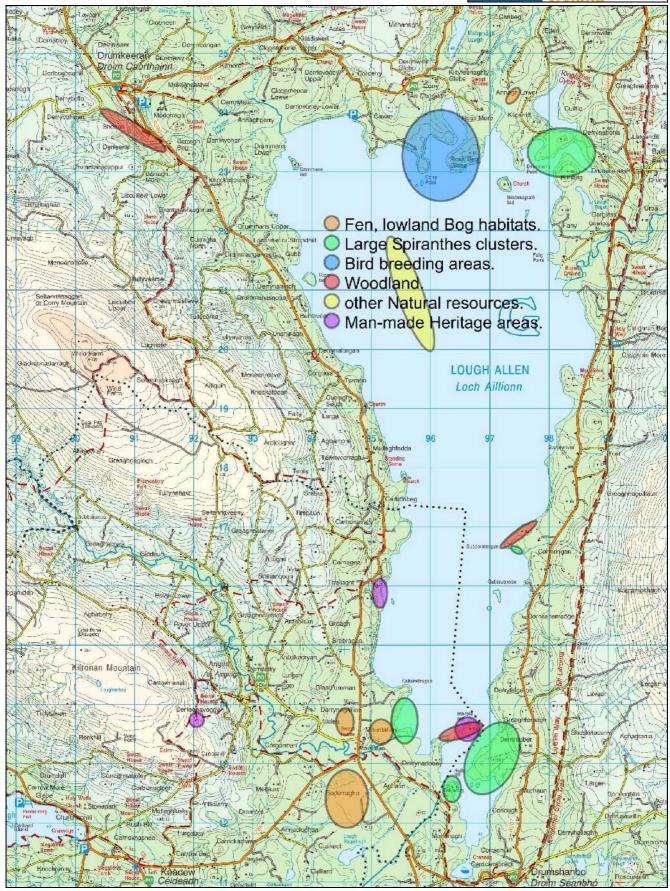
A classic flowering spike, best of 100's on Lough Allen, 2008



Appendix A: Sites of Environmental Interest at Lough Allen.

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Appendix B: Best practice conservation for Spiranthes romanzoffiana (Orchid)

This Appendix lists what we know, and what is known, as regards the conservation of Irish Lady's Tresses in Ireland as well as in Scotland and North America. It is a summary of points gleaned from reading the literature, consulting experts in Ireland, Canada and elsewhere, plus the experience gained from studying and working with the species. It is not an exhaustive biography but just some tips and guidelines we have picked up from observation and simply asking questions.

- This seems to be a native species. i.e. one that has been in the country indefinitely. The same species is found in Scotland and North America (Canada and the US). The possibility of it being a recently introduced species has recently been discounted by genetic fingerprinting work. It is nice to know it is not an invasive species!
- As a native species long present it is surprising that its presence in Lough Allen has only been noted in the past decade. However, it may be found that it has been known locally for a much longer period. (Any information would be very much appreciated.)
- This is a species protected by the Flora Protection Act so it is illegal to harm or interfere with these plants. It is not allowed to remove or try and cultivate these Orchids.
- If you look at Appendix A you can see that this species seems to have spread around the Lake quickly from the first place it was found (in modern times) _ the south Roscommon shore. Such dispersal indicates seeding, although it is only recently that any viable seed have been seen on these plants. (They very rarely set seed in this climate.)
- To grow from seed Irish Lady's Tresses need... seed (obviously), a suitable substrate to grow in, mycorrhizal fungal associate in the soil to nourish the developing seedling, and suitable weather for all this to happen in.
- Around Lough Allen these plants flourish in varied habitats. They may occur among short growing plants on a flat lakeside meadow that may be quite dry but does periodically flood. They also occur on the east shore of the Lake (and in isolated offshore skerries with little other vegetation), in very stony ground with gravel and sand but little soil and are often associated here with Creeping Jenny. And their third favoured habitat, especially in the north east section of the lake, is wet grass in among small Alders starting to colonise the lower shore. Typically these areas are often disturbed by cattle or horses grazing on the shore. Though this grazing will damage the flowering plants there is a very strong correlation of cattle getting onto muddy shores and the presence of Spiranthes.
- 7 Irish Lady's Tresses grow from enlarged stems and may not appear every year. Vegetative reproduction seems to occur but these swollen roots are not tubers and growth only occurs from the tip.
- The vast majority of these Orchids found around the lake occur very much at a standard height relative to water level. During the height of the dry period in the 2008 flowering season this height varied from c. 15cm to 45 cm. with only 1 specimen found at c. 60 cm. above the then water level. (All these sites were subsequently flooded while the orchids were still flowering!) Accurate position records for these specimens were revisited in 2009 and the sites were under a typical depth of 30 45cm. of water!
- 9 Irish Lady's Tresses come and go. 2008 was a great year with a couple of hundred specimens. This year only 1 or 2 individuals have been found. Reasons for failure to flower may be i) flooding while in full flower the previous year, ii) flooding in current growing year, and iii) exhaustion following a successful flowering year. Expert opinion is 'not to worry' they will be back BUT it is well worth preparing for the next good season.

- 10 To protect this species the current advice is to monitor their number and positions. If high vegetation is present it should be mowed or cropped in the late Autumn. Site disturbance during the year is no harm but should be controlled during the flowering season (July October) by removing livestock or by fencing off known areas of good populations. No steps can be taken to alleviate changing water levels; they may stop flowering but the plants should come back in subsequent years.
- Ideas of providing pontoons or graded shorelines have not been deemed advantageous. Successful seeding (in Lough Allen) will only take place in years with long dry Summers as the plants flower in late July and it takes a couple of months for the seed to form. Therefore, in these years, the water levels will be low and the seed may transfer quickly across the Lake. It looks as if much seed may be water borne as the seed seem adapted to floating and many of the specimens on the eastern shore are facing the colony on the western shore and waves and water flow would naturally cause them to wash up exactly where they occur. Also they often occur almost inch perfect along what may well have been an old water level mark!



This photo shows a bee busily 'fertilising' a flower of Spiranthes romanzofiana. Unfortunately set seeds of this species have only rarely been recorded from Ireland. The specimen in the photograph, indeed, was completely submerged after this photograph was taken by flood waters which lasted for many months. So it is improbable that any seeds were formed in that year (2008).

Appendix C: Best practice conservation for Marsh Fritillary

- The Marsh Fritillary is a protected species which has become extinct in many European countries. In Ireland, it has become rare or uncommon, as many bog and marshy pasture habitats have been lost. But there are many suitable (or potentially suitable) habitats on farms in Ireland particularly marshy grassland areas or lowland raised Bogs. It mainly occurs in western counties from Clare to Donegal but may be rare and variable from year to year. Ireland is a major European stronghold for this species.
- The species occurs elsewhere in diverse habitats from sand dunes to burrens to wet pastures but, here, we are concentrating on the specific niche it occupies at Lough Allen. The lowland bog at Mountallen may prove to be the singular most important conservation area for the species in the region.
- The life cycle of this species is very well described and illustrated at the Irish Peatland Conservation Councils website, www.ipcc.ie/infomarshfritillary.html
- The risks and conservation measures are well described in the Northern Ireland Environment and Heritage Service Report, www.ni-environment.gov.uk/wild008.pdf The following extracts are taken from that document.

Threats to the Marsh Fritillary:

- Agricultural improvement of marshy and chalk/ limestone grasslands.
- Increased fragmentation and isolation of habitats.
- Inappropriate management of sites including changes in grazing stock and practice.
- Afforestation and development on habitats

Conservation Aims:

The Marsh Fritillary butterfly appears to rely on networks of habitat patches within which there are periodic extinctions and re-colonisations. However, if habitats become too small or fragmented, or if major source populations are destroyed or significantly reduced in size, the system can break down and result in regional extinction. Moreover, the butterfly is prone to large fluctuations in abundance caused by variations in the rate of parasitic wasps *Cotesia bignelli* and *Cotesia melitaearum*, which lay their eggs within the caterpillar's body. The population dynamics of this species means that, although the conservation of large populations in optimal habitats is important, the conservation aim should be to maintain large areas of land with networks of colonies and potentially suitable but unoccupied habitat in between.

Conservation Aims suggested for the Marsh Fritillary include promoting favourable land management, identifying key large population areas, managing these areas, and discouraging afforestation of occupied sites or sites within dispersal distance.

- Around Lough Allen the typical habitat for this species is undisturbed lowland raised bog, such as at Mountallen. These areas need some management on a yearly basis to provide the ideal habitat for Marsh Fritillaries. Only 2 such areas have been marked on the Environmental Areas Map (Appendix A) but there could be other examples either near the lake or further inland. A wet Royal Fern fen habitat is marked at the top of the Lake but it is not sure if this is a suitable habitat for Marsh Fritillaries?
- These bog areas contain a typical association of plant species, Sphagnum, Heathers, Scabious, Purple Moor-grass, Rushes and Sedges, Bog Myrtle and the insectivorous Sundew.
- 7 The Devil's Bit Scabious is the food plant for the Marsh Fritillary, and the caterpillars spin a communal web in the lower leaves where they live throughout the summer. In winter they

make a smaller web, close to the ground, in tussocks of Purple moor-grass, where they hibernate until Spring, usually mid-March.

- In order to keep, or to entice back, the Marsh Fritillary to these areas they need to be managed. Leaving these areas unmanaged is not the answer as vegetation may become too high and Devil's Bit Scabious will be shaded out. The Marsh Fritillary, which is so dependent on this plant, will be lost. This is not to say the entire raised bog at Mountallen needs to be managed BUT small dispersed patches within the bog need to be kept at a lower level to provide the very specific conditions in which the Marsh Fritillary may breed. The particular breeding pattern and biology of this species means that large areas of land should be conserved but not with continuous colonies of Marsh Fritillaries as this may expose the whole population to parasitism and extinction. Networks of small colonies with suitable but unoccupied habitat in between seems a better approach.
- Onsequently, at Mountallen, good results are being achieved through strimming very small pockets of vegetation in widely separated areas of the bog. For the Marsh Fritillary, its requirements are a sward height of between 8 and 25 cm. Advice for wet pastures is early grazing followed by hand cutting. It is not known, at this stage, what is the best way to maintain vegetation in the areas of the bog not hand cut as breeding pods.



The Marsh Fritillary likes a sheltered micro-habitat, often described as a 'warm pocket'. This may be an area in the lee of a hill or a row of trees open to sunshine but protecting the butterflies and caterpillars from a cold wind. Trees can be planted to the west of a suitable habitat to provide this necessary degree of shelter.



Appendix D: Example of Conservation and Education in action.

[Here we show 4 pages taken from a 10 page document produced by Bridget Keehan for a Farm Nature Walk at Mountallen Organic Farm. This is a prime example of the best in conser-vation and environmental education. Many thanks to Bridget Keehan for her permission to use this.]

Stop 2: Bog

This area of lowland raised bog has been developing for **10 000 years** - since the end of the last Ice Age. Unlike the majority of Irish bogs, very little of this bog has been cut for turf, so it is an extremely valuable wildlife resource and supports a wide range of flora and fauna.





 Bog and fens are examples of peatland habitats, northern temperate areas with high rainfall. found mainly in

- Peatlands develop in poorly drained areas, where waterlogged, anaerobic, acidic conditions prevent the normal microbial decomposition of plant material (mostly mosses like Sphagnum which thrive in wet acidic situations). As a result, layers of plant material accumulate over time, as peat (turf).
- Lowland raised bogs, like the one at Mountallen, develop in former lake basins.
- Irish peatlands typically contain plants like heather, cottongrass, Sphagnum moss, purple moor-grass, sedges, rushes, bog myrtle and the insectivorous sundew.
- When cut and dried, peat becomes a sort of fossil fuel the layers of preserved vegetation effectively contain the sun's energy, trapped by photosynthesis over thousands of years. Like other fossil fuels, its use is not sustainable.
- Globally, places where peatlands occur have also often experienced rapid economic growth – in particular northwest Europe. So a vast proportion of peatlands have been destroyed.
- Peatlands cannot easily be regenerated once damaged or destroyed their development takes thousands of years.
- Ireland's geography, climate and geology mean that bog habitats are widespread here.
 Ireland is now a European stronghold for peatland habitats, with nearly 200,000ha of actively growing bogs and fens.
- Even here in Ireland, an estimated 80-90% of our peatland habitats have been lost.



It is vital to us, and the myriad flora and fauna that depend on peatlands for their survival, that we act to preserve and maintain this hugely valuable wildlife resource

Butterflies of the Bog

The Marsh Fritillary butterfly

The Marsh Fritillary butterfly (*Eurodryas aurinia*) is a **protected species** which has become extinct from many European countries and is becoming increasingly rare in Ireland as bog habitats are lost.





Devil's-bit scabious (*Succisa pratensis*) is a common plant in Irish marshes, uplands and bogs.

It has long been prized for its medicinal qualities but at this site it is of special significance - as the **food plant** of the Marsh Fritillary butterfly.

The life cycle of the marsh fritillary

Late May/June: Adult butterflies lay eggs in large batches on the underside of devil's-bit scabious leaves.

Early June onwards: Black, hairy caterpillars hatch and immediately spin a communal web on the basal leaves of devil's-bit scabious, where they live and feed gregariously through the summer.

Early October: Caterpillars construct a smaller web close to the ground, in tussocks of purple moor-grass, where they hibernate through the winter.

Early spring (usually mid-March): Caterpillars emerge from hibernation - their dark colour absorbs the sun's heat so they become active early in the year.

By the end of April they have moved away from the larval group, ready to pupate individually. This takes several weeks



Late May/June: Adults emerge to begin the cycle again. They have only a few days in which to mate and lay eggs before they die.

Large Heath Butterfly

The lowland raised bog at Mountallen is also an important site for Large Heath butterfly (*Coenonympha tullia*). In Europe this species has suffered a serious decline in numbers as a result of habitat loss.

The adult butterfly feeds mainly on nectar from cross-leaved heath (*Erica tetralix*), illustrated here »







Large Heath caterpillars feed on hare's-tail cottongrass (*Eriophorum* vaginatum), shown here – this is the cottongrass with only one white tuft, not a cluster – like a hare's tail!

Large Heath butterflies are unusual in that they always rest with their wings closed, and they fly even in fairly dull weather, as long as the temperature is above 14°C.

Some Plants of the Bog



Bell heather (Erica cinerea)



Heather (Calluna vulgaris)

Heather is pollinated by bees and makes excellent honey. Heather flowers can be made into a honey-scented tea (2 tsp. dried flowers to ½ pint of boiling water). In the past it was used for thatching, making brooms and

as bedding for both livestock and humans (remember The Famous Five!)



« Bog environments are low in nutrients, so **Round-leaved Sundew** (*Drosera rotundifolia*) traps insects and digests them to obtain nitrogen.

Bog myrtle (*Myrica gale*) is a fragrant shrub that can be used as an insect repellent, or added to stews and casseroles as a herb, similar to rosemary. In the past it was used to flavour "gale beer" and to make a yellow dye.

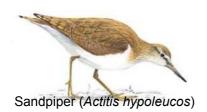




Sphagnum moss has amazing water holding properties – up to 97% of its weight can be water. It was widely used in the Second World War as a dressing for wounds – it is 3-4 times more absorbent than its cotton equivalent and has proven wound healing and antiseptic properties. Much *Sphagnum* was exported from Ireland for this purpose.

Stop 3: Lakeshore

- Lakeshore margins are unusual in that they are subject to periodic flooding. They
 support plant species that enjoy, or can at least tolerate, "getting their feet wet"
 periodically.
- Even at a distance, it can be seen that this lakeshore grassland is quite different in character than the adjacent area to the north, which is much more marshy, composed of sedges, horsetails and water plants.
- This is because the vegetation here has developed in association with gravel deposited by the Arigna river, and a bank of shale, so the ground is relatively freedraining.
 - [Like coal, shale is a sedimentary rock formed in the Carboniferous period, but from compacted clay instead of vegetation. It is mineral-rich with a high carbon content.]
- This area is great value to birds, particularly sandpiper, lapwing, curlew and other waders, and wintering waterfowl. It is also one of only a few sites for a rare orchid, Irish Lady's Tresses (Spiranthes romanzoffiana).







Bent grass (*Agrostis stolonifera*), or Fiorin, dominates this grassland.

The name *Agrostis* comes from the Greek word for "grass" – bent grass is found throughout the world.

In the 19th century, the cleric William Richardson encouraged Irish farmers to grow bent to improve their meadows, but despite being nutrient-rich with good keeping qualities, it fell out of favour with agriculturalists and now is often regarded as a weed.

This area of lakeshore grassland is **cut for hay** in autumn, in order to:

- maintain nutrient-poor conditions, so that the orchids can succesfully compete with more vigorous species
- maintain the open conditions favoured by breeding waders



Much of this area is under water at present, because of the recent exceptionally high rainfall. However, the lake level does not fluctuate as much as it used to, since water levels are controlled by the ESB for the Ardnacrusha Hydroelectric power station.

FAQs of LIFE! 20 Questions answered!



LIFE is the European Union's way of funding community and publicly sponsored Conservation and Environmental projects of significant value in the 27 countries of the Union.

€1.7 billion for environment projects!

Frequently Asked Question:

LIFE: its full name? The European Union's LIF	program has gone
--	------------------

through several iterations, from LIFE to LIFE III to LIFE+, the current form of the scheme.

What does LIFE stand

for?

LIFE is the EU 'instrument' for promoting Environmental Development and Protection within Europe. The acronym stands for l'instrument financier pour l'environnement

What is LIFE+ 2009

LIFE+ 2009 is the recently opened invitation for people to submit applications for LIFE+ funding for various schemes. LIFE + covers the period from 2007 to 2013 and will provide some €1.7 billion for nature conservation.

Background to LIFE projects.

LIFE has been supporting environmental and conservation projects for the past 20 years throughout the increasing number of countries within the European Union. It has traditionally supported both global environmental issues and Habitat and Species protection.

Types of LIFE+ projects.

In the current version, LIFE+ supports 3 main types of environmental initiative, LIFE+ Nature

and Biodiversity, LIFE+ Environment Policy and Governance, and LIFE+ Information and Communication.

What Funding is available?

LIFE traditionally has supported major financial applications, one of the features we like best about the scheme. Matching funding (of varying levels) is required from organisations (or individuals) applying for LIFE support.

Who runs LIFE?

LIFE is run by Directorate-General for the Environment, of the European Commission.

Who runs LIFE in Ireland?

In Ireland LIFE is promoted and supported by the Dept of the Environment. You will find their page that deals with LIFE at... www.envviron.ie/en/Environment/SustainableDevelopment/

Who can apply for Funding?

Basically anyone can apply for LIFE funding, but the requirement for matching funds often means that successful applications need an established community group with support from local Interests and Enterprises.

Examples of past Projects...

The following are just a few examples of Projects from the Nature and Biodiversity section of LIFE both from Ireland and the rest of Europe. If you are reading a printed version of this proposal, active Links to these projects can be found on... www.loughallenbasin.com

<u>BurrenLIFE: Farming for Conservation in The Burren</u>

Conservation of the Roseate Tern in Brittany
Award Winning Finnish Nature LIFE programme
Restoring Scottish Bog of International
Importance

Max/Min Funding?

Last time we had experience of LIFE a minimum (rather large) budget was stipulated. It's not known what such a figure is at present but Ireland's share of LIFE+ funding for 2009 will be approximately €3.9 million.

Why is Lough Allen suited for LIFE support?

Under the Nature and Biodiversity component, LIFE+ supports the EU Commission's goal of halting Biodiversity Loss by 2010 and particularly focuses on rare and endangered species. Lough Allen has 2 of these that are not just locally rare but almost unique in Europe. These provide the basis of a viable conservation

project and a LIFE+ scheme. As well as Species protection Lough Allen also has a rich and varied Habitat which has many unique qualites, is in a semi-pristine state, but certainly can benefit enormously from conservation action such as a LIFE+ campaign.

Is Lough Allen uniquely qualified?

YES. The presence of Irish Lady's Tresses (in good numbers) and Pollan (in a very unsure state) uniquely qualifies Lough Allen for projects that have been similarly planned and executed in other parts of the EU.

What sort of Projects can we submit?

We would recommend that a LIFE+ project for Lough Allen be submitted under the Nature and Biodiversity section proposing action to safeguard the 2 precious species listed above but also to undertake Habitat management to increase the success of breeding of Birds, particularly Ducks and Waders, and other animal and plant species, affected by fluctuating water levels in the Lake.

What do we need to apply?

The main requirement to apply is a viable natural asset and a plan to protect it; this we have! Whilst a project can be run by singular entities we believe the best way to run a LIFE+ project in this area is through a small local, skilled, and committed community group, aided and abetted by Local and National environmental agencies.

Can you help in launching a LIFE project for 2009 or 2010?

We particularly need people with strong commitment to conservation and protection of Species and Habitat, with some relevant experience, and living in the area and available to give some of their time freely. Environmental experts, be they professional or voluntary, will also be very useful, as will some planning and engineering expertise. Anyone interested please contact us, but we are focussed on this work and do not wish to take positions on any other environmental agenda.

What matching community funding is needed.

We believe, because of the nature of the work envisaged, we may be able to get away with 25% matching funding. (Other parts of the LIFE+ scheme require 50% local funding.) This will leave a large sum of, say, €240,000 to be found on a project of €1m. but will also mean a very large EU injection of funding into the area and much conservation progress, should we be able to pull it off!

Where can local sponsorship be obtained?

Sponsorship can be raised on a voluntary basis, by support and grants from Irish environmental agencies, from Business or Enterprises with a significant presence in the area or maybe a pre-existing involvement with the environment and conservation. With a good project and a strong commitment, such funding may not be impossible to obtain, especially if we can link the main goal of bettering our environment with the creation of some high skill employment.

Can LIFE support employment?

The main goal of LIFE is to support the environment but the investment it finances is in places, people, and material. So, Yes, LIFE can be a very useful creator of employment, though that is not its primary goal.

What other benefits will a LIFE project bring to the area.

We have a lovely and unique place. It has been kept that way for generations past. With a developing economy and leisure industry, there is ever more and more pressure on beautiful but sensitive areas such as Lough Allen. A LIFE+ scheme can start to put structures in place to protect and enhance the Wildlife and Habitats of the area for future generations. The benefit of this to the people of this area now and in the future is inestimable.