

Mission Statement

“To preserve a valuable part of our natural heritage for the enjoyment of current and future generations, through the conservation, enhancement and development of our freshwater habitats and the fisheries they support.”

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Ayrshire Rivers Trust

Chairman's Introduction

The year ending in January 2005 was one of considerable change. Firstly, we achieved a milestone in May by appointing a second Biologist in Peter Minting. Peter has settled in well and is doing an excellent job, with particular responsibility for the Salmon in the Classroom, the website and media relations. Then, in December, we lost our founding Biologist – Alastair Duguid. Alastair left for personal reasons and to pursue interests in Asia. We owe a great debt to Alastair who was the Trusts first employee and really got the Trust going. He left with our enormous gratitude and good wishes.

We were very fortunate to have found an excellent replacement for Alastair in the form of Brian Shaw who joined us in January from Stornoway, leaving fish farming, to develop a lifelong interest in the freshwater environment.

We were all very saddened by the death of Jamie Hunter Blair in December. Jamie was a founding Trustee and in spite of his wide range of other commitments was a tireless worker for the Trust, at an age when most of us would be happily retired. In his inimitable style, he set about raising large sums for the Trust by founding and running our Annual Auction Dinners. He organised his “Fishy Dinners”, as he called them, with a team of hardworking “girls”. We owe him a great debt and he is sadly missed.

Although financially it was a more difficult year which was not surprising given the extra staff costs which included two part time biologists working in the summer. We enjoyed having Adam and Karen working with us.

The Trust's work continued at a fast rate including habitat surveys, which are the basic surveys required to prioritise areas which required assistance. Our four main rivers now have habitat surveys virtually completed and we have initiated surveys on the Irvine and Garnock.

We also published and launched our Strategic Plan in November. This sets out our priorities for the following five years and will be the blueprint for the main thrust of our work.

We remain in debt to our helpers and funders. They are vital to our continuance and progress. We raised almost £15,000 at our Annual Dinner Auction held at Blairquhan in June, £3818 at our Country Fair at Barskimming and £578 at our Fisherman's Supper in October. None of this would have been possible without all our helpers who ran these events and our supporters who provided lots for Auction and bid for them too! We are indeed very lucky to have so many to help and support us and we are most grateful to all of them.

We continue to receive annual fees from the Fishery Boards of the rivers Ayr, Doon, Girvan and Stinchar for which our biologists give advice, attend meetings, and carry out annual surveys.

The Trust is supported by a hard working team of Trustees as well as our tireless administrator, George Steel. This report has been written by our Biologists and its quality emphasises their ability not only to write quality reports, but also to carry out their varied work in the field and to obtain project funding. To them we owe our continued existence.

In the current year our workload continues apace and we look forward to continued support.

PETER N B KENNEDY
Chairman

Biologists Summary

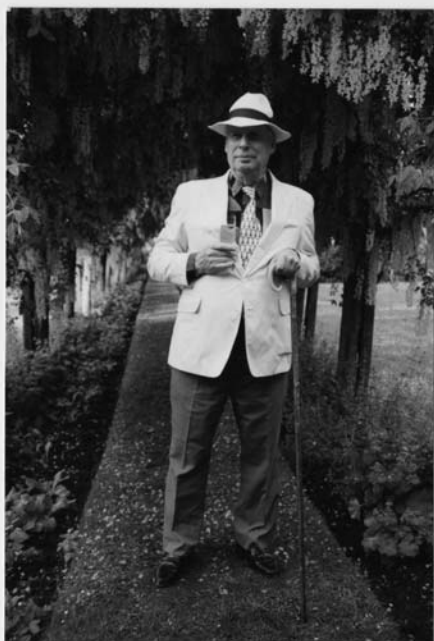
2004 was another busy year for the Trust; it was also a year of change. The completion of the River Ayr habitat survey and the start of the Upper Doon habitat survey allowed the Trust to make good progress towards achieving its target of evaluating the riparian and instream habitats for all of Ayrshire's Rivers. Despite the wet conditions and consequent high water levels that prevailed during the summer, good progress was made in developing the Trust's network of electrofishing sites, providing a greater understanding of the complex fish populations within the area.

The Trust was able to recruit a second full-time biologist, which was an important step forward considering the extent of the Trust's area and the level of pressure that exists on the freshwater environment. That appointment also provided a level of continuity to cover the departure of the Trust's original biologist and the appointment of his successor.

In 2005 the Trust will continue to work towards progressing the targets outlined in the Strategic Plan. Projects already started or planned for 2005 include:

- Expansion and development of the Salmon in the Classroom educational project
- Complete habitat survey of the River Garnock and all its tributaries.
- Sea trout post-smolt sea lice sampling
- Study of invertebrate populations at each electrofishing site to investigate the link between fish populations, habitat, water quality and invertebrate abundance.

Parts of the Water Framework Directive such as the Controlled Activities Regulations have now been transposed into law by the Scottish Executive. These regulations will have far reaching implications for the management of the freshwater resource. The new emphasis on the ecological management of the freshwater environment is welcomed by the Trust, as a positive move towards a sustainable future for this most vital resource.



Jamie Hunter-Blair, who died in December 2004. He was a founding Trustee who contributed enormously to the Trust, particularly in running the Annual Dinner Auction.

Electrofishing Data 2004

During 2004 ART continued to develop its network of electrofishing sites with focus on the four rivers that provide core funding for the Trust.

The Trust is a full member of the Scottish Fisheries Coordination Centre (SFCC), which is an association of District Salmon Fishery Boards, Fisheries Trusts, FRS Freshwater Laboratory and the Scottish Executive. It was established in 1997 and provides training, and operates a nationwide electrofishing database. All ART electrofishing data is collected to the highest standards defined by the SFCC. Whilst the electrofishing technique used by the Trust is mainly designed to monitor juvenile salmonid fish populations, it is also effective for sampling other freshwater fish species.



In 2004 ART carried out electrofishing surveys on smaller tributary sites, using the standard area delineated survey to define fish densities, and main stem sites, where timed surveys were used to assess fry abundance.

The exceptionally wet conditions experienced during the summer of 2004 provided difficult conditions for electrofishing as it can only be done effectively, and

safely, during low water and dry weather. Despite that a total of 74 sites were surveyed in 2004, including 31 main stem fry survey sites.

Main Stem surveys

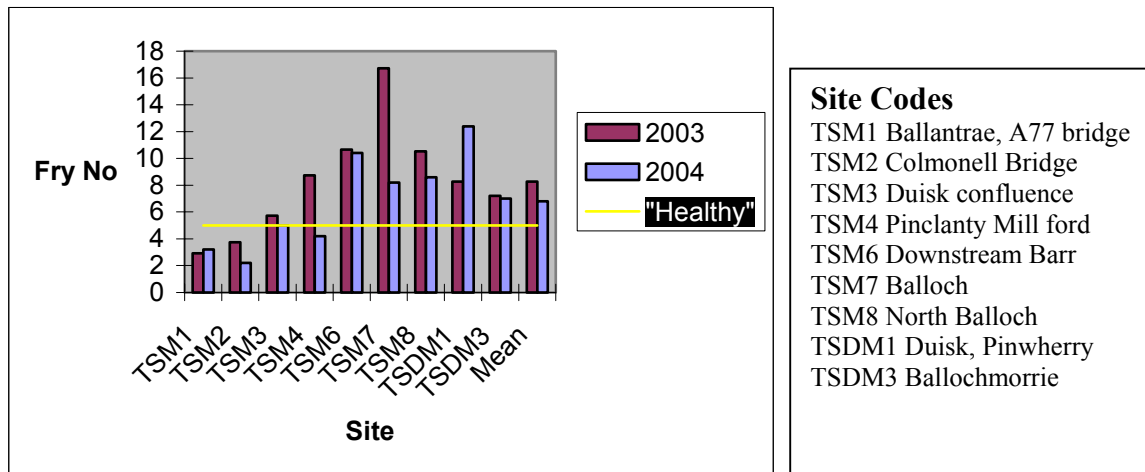
In 2003 ART established a number of main stem routine monitoring sites on the rivers Doon, Girvan and Stinchar. Those sites were selected to cover a range of suitable fry habitat across the main stem of each river. Surveying the main stem of the rivers in southern Ayrshire is particularly important as the catchments are relatively narrow and a high proportion of the wetted area of the river is found in the main stem e.g. on the Doon approximately 80% of the wetted area of the catchment is in the main stem, and it is likely that the majority of salmonid production occurs there.

It was not possible to repeat all the survey sites from 2003 due to the high water that persisted all summer. This was a particularly important factor on the Doon, which has an artificially high compensation flow, making survey work on the main river difficult in wet years.

Collecting information from the same sites on an annual basis is very important to establish trends in population dynamics. On the rivers Girvan and Stinchar the 2003 sites were surveyed again in 2004. We have only two years data for these rivers however some trends are becoming apparent

- Fry numbers were generally lower in 2004 than in 2003. This may be a reflection of the dry summer in 2003, with its poor runs of fish
- The upper parts of the Girvan and the Stinchar hold high salmon fry densities, highlighting the importance of these areas as salmon spawning and nursery areas.

- A figure of five salmon fry/minute is generally considered to indicate a healthy salmon fry population.
- The survey results from the Ayr found good salmon fry densities in the Greenock Water and Glenmuir Water, with variable and lower fry densities in the upper Ayr and low densities in the Lugar Water.



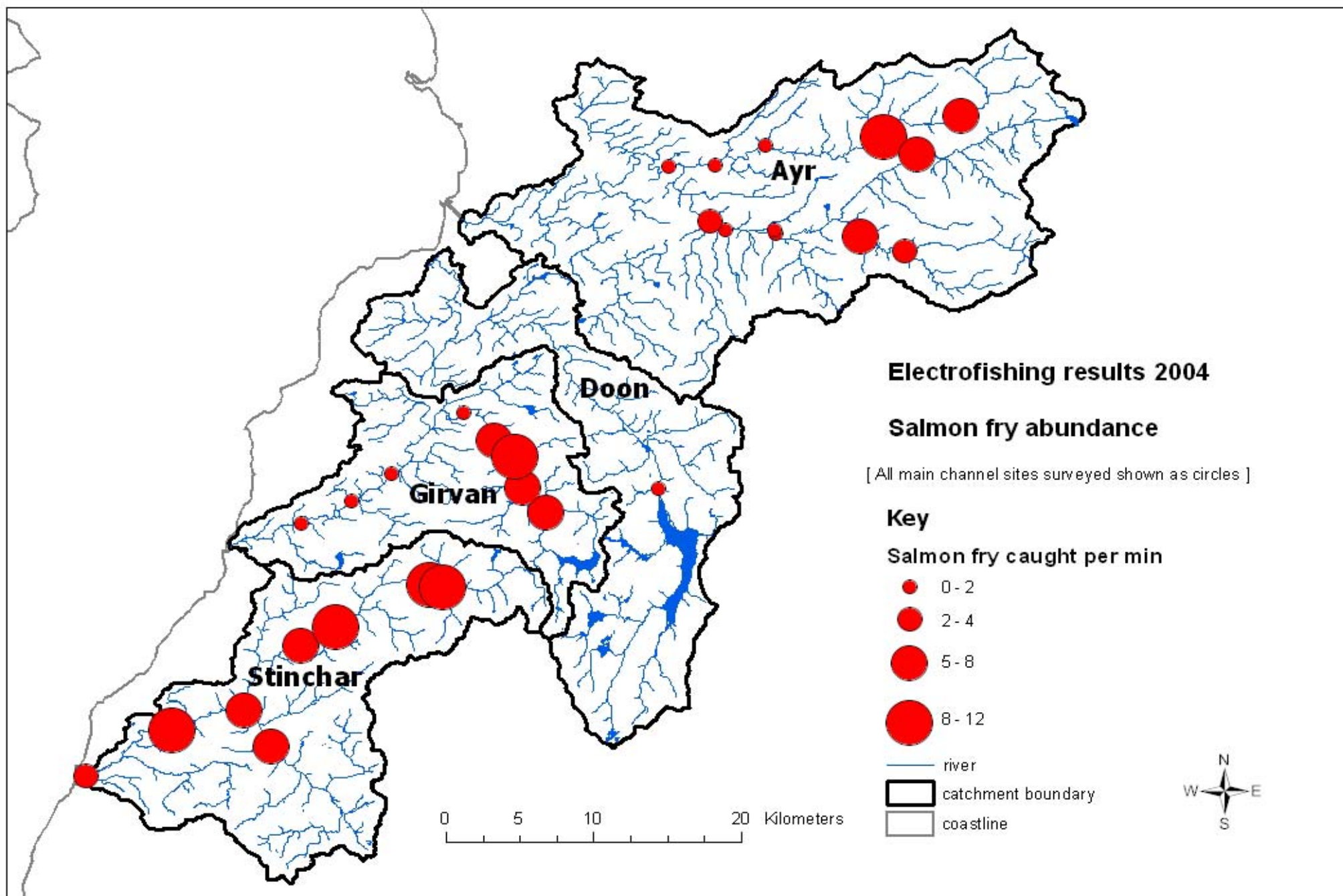
Salmon fry (no/caught/min) in 2003 and 2004, River Stinchar main channel sites.

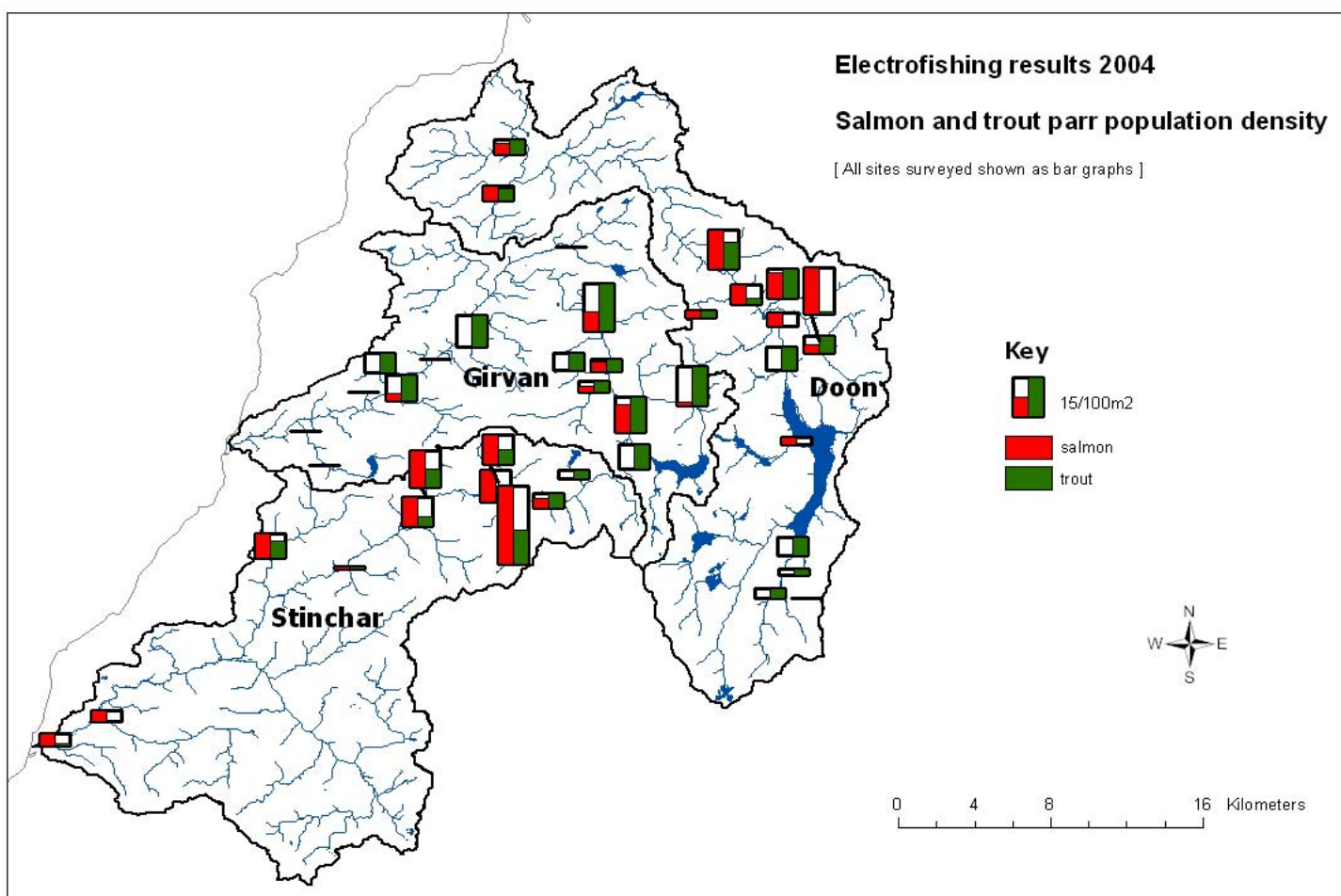
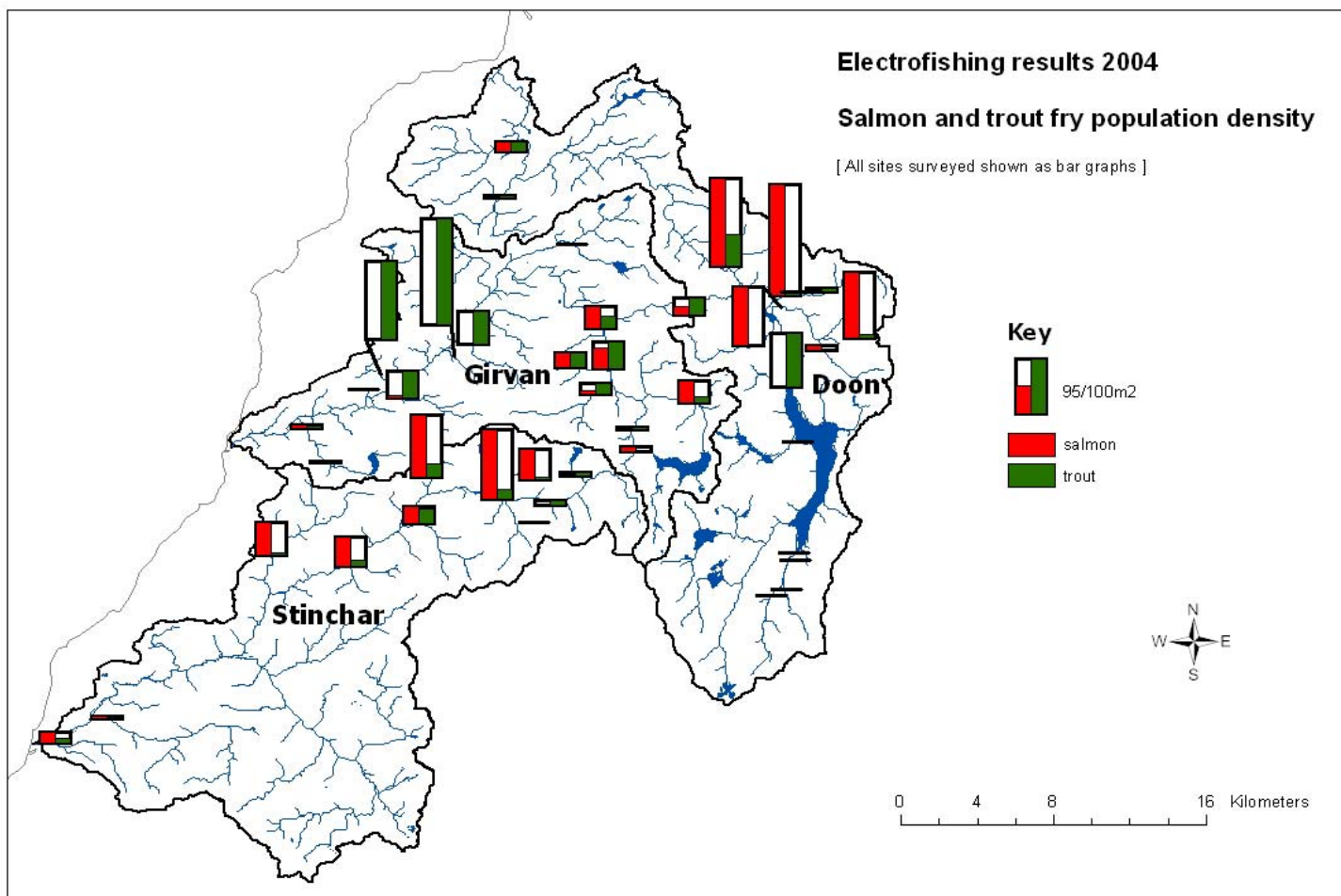
The salmon fry results for the timed sites on the River Stinchar in 2003 and 2004 are shown above. It can be seen that the mean number was slightly lower in 2004 and that the middle and upper reaches of both the main river and the Duisck support healthy salmon fry levels. Even in the lower sites there are still reasonable numbers of salmon fry present. ART hopes to continue to monitor these sites on a long term basis and establish similar sites on all major Ayrshire rivers.

Tributary sites.

The results of the electrofishing in each catchment in 2004 are summarised below and shown on the maps overleaf.

- The results from the Stinchar were variable but wherever a site with good habitat was surveyed (with the exception of the Water of Tig) good salmonid densities were found. The Water of Tig has been surveyed five times in the last six years and a decline in total parr densities is evident. The catchment will be the focus of a thorough investigation by ART in 2005. The results from the Stinchar continue to be amongst the best in Ayrshire.
- The Girvan results highlighted the strength of the trout population in the river as there was a higher density of trout fry than salmon fry in 11 of the 16 sites surveyed. Salmon fry stocked into sites above waterfalls continued to fare very well with all of the stocked sites falling into the average to excellent category. The results from the Penwhapple Burn were very concerning as no trout or salmon parr were found in either of the two sample sites and there was only a very low density of fry present.
- The results from the Doon were mixed with the Muck Water continuing to provide excellent results. The results from the lower tributaries such as the Culroy and Chapleton Burns highlighted that they were holding lower fish densities than may be expected. The survey sites above Loch Doon found that trout densities were low and very low for salmon.





Habitat Surveying

A catchment wide habitat provides a comprehensive overview of the impacts affecting each watercourse and an understanding of the relative importance of each impact in specific areas. As well as identifying problems such as pollution points or obstacles, the positive features of each catchment, such as good fish habitat, key spawning sites and potential habitat improvement sites can be recorded.

During 2004 ART carried out habitat surveys on the Upper River Doon and the river Ayr.

Upper Doon Habitat Survey

The River Doon downstream of the Loch Doon Dam had been surveyed previously in 2000 but the many tributaries flowing into the loch had never been formally surveyed. In 2004 a funding package with support from the River Doon District Salmon Fishery Board and the Forestry Commission was put together to facilitate a full survey of the Upper Doon tributaries. The Upper Doon comprises almost a third of the total catchment area of the Doon catchment. The geology of the upper Doon is quite different to the lower part of the catchment as the river crosses the southern upland fault at Ness Glen. The bedrock of the upper Doon is predominantly coarse grained granite, which provides very little buffering effect against acid rain. This geology combined with extensive conifer planting in the Galloway Forest Park has resulted in an acidified catchment. Conifers are known to promote acidification by collecting sulphate particles found in acid rain on their needles. Following heavy rain or particularly snow melt, acid flushes of the system can occur. Acidification can damage fish populations through reduced egg hatching success, juvenile survival and sub-optimal conditions for other organisms upon which fish feed. On a positive note the incidence of acid rain is thought to be declining and improvements in fish survival have been noted in Galloway.



Top: Steep section of Gala Lane just above Gala Lane falls.

Right: Low gradient section more suited to trout than salmon



Access is a major issue with the two major tributaries, the Carrick Lane and Gala Lane, both having large natural waterfalls just above the loch, which are likely to act as barriers to migrating fish unless the loch level is very high. This has been confirmed by electrofishing surveys, which have found very low numbers of salmon and then usually only in areas that have been stocked.

The gradient was found to be a limiting factor in many of the tributaries with the eastern Loch Doon tributaries found to be too steep to provide any significant juvenile production. Other streams have a very low gradient, with long deep pools and glides suited to trout rather than salmon (e.g. most of Gala Lane).

Most of the conifer planting in the area was carried out prior to the introduction of the Forests and Water Guidelines, with the result that many areas are overshadowed by conifers planted too close to the stream edge. The quality of the instream habitat and the productivity of the streams could be improved by removing conifers back to the latest recommended planting distances. In one or two places blockages have occurred where whole rows of conifers have been blown over into the burn forming an impenetrable tangle of tree trunks and branches.

Small numbers of deciduous trees have been planted along the riparian corridor but survival and establishment success has been patchy. Further planting of native deciduous trees and shrubs within the riparian corridor would assist the instream productivity by providing a more diverse source of leaf litter capable of providing sustenance for invertebrates throughout the year.

River Ayr Habitat Survey

A funding package was put together with contributions from the East Ayrshire Outdoor Access, the River Ayr District Salmon Fishery Board, the Wild Trout Trust, the Grayling Society and Ayrshire Rivers Trust to enable a habitat survey of the River Ayr to be undertaken in 2004. The report highlighted a number of major impacts on the river, including water quality, intensive agriculture and siltation.

An interpretation of SEPA's water quality sampling results for the River Ayr found that much of the lower river had reduced water quality with the lower Lugar Water, the Water of Coyle and most of the River Ayr downstream of the confluence with the Lugar being classified as "B class" which is referred to in SEPA's website as "Fish may be present, impacted ecosystem". From a fishery perspective that is less than satisfactory. Other areas of the catchment, such as the Water of Fail and the Lugar Water, downstream of Cumnock are classified as "C class" which is defined as "Fish sporadically present, poor ecosystem". Whilst it is apparent that there has been a big improvement in water quality across the catchment in recent years there is still much work to be done to bring the entire system up to an acceptable standard.

Intensive agriculture is the most significant land use within the Ayr catchment with improved grassland and rough grassland totalling almost 60% of the total land use. The impact of intensive agriculture on the river is often manifest as diffuse pollution from slurry and fertiliser application, or bankside erosion resulting from overgrazing or physical destruction of the bank by trampling.

Livestock access on the steep riverbank has resulted in lack of vegetation cover, exposed soil, erosion and subsequent bank collapse. The net impact on the fish population is severe, through lack of bankside cover, over widening of the stream bed, high summer temperatures due to lack of tree cover, and a massive silt input, which will impact on invertebrate populations and fish spawning success.

High levels of streambed siltation were recorded in many areas across the catchment. Whilst the nature of the soft red soil found throughout the catchment means that the

river has always carried a high sediment load during flood conditions there is anecdotal evidence that the degree of siltation has become much worse in recent years. As mentioned above high levels of silt is very detrimental to invertebrate and salmonid fish populations and is undoubtedly a major factor in the reduction in



Pictured above is a typical example of overgrazing and subsequent soil erosion.

salmonid populations across the UK. Research by the Environment Agency has shown that both bankside erosion and surface runoff from agricultural land are important sources of silt. The impact of sedimentation can be reduced by the erection of bankside fencing and the establishment of a well-vegetated mixed riparian buffer zone to minimise the impact of diffuse pollution and silt input.

The survey also identified a number of obstacles to fish migration, such as the weirs at Sorn and the Burnock Mill, and instream modifications to the Ponesk Burn.

Despite the problems mentioned above the River Ayr has great potential as a salmonid fishery. It has many tributaries originating in upland areas which provide excellent habitat and the diverse geological base and rich agricultural soils combine to form a productive freshwater environment.

Lamprey Surveys

ART was contracted by Ecological Research Associates (ERA) to carry out surveys of lamprey populations in 2003 and 2004, as part of a national survey commissioned by Scottish Natural Heritage (SNH).

In the course of the 2004 survey an exciting discovery was made, confirming previous reports by anglers:

Rare sea lamprey breeds in River Ayr

Sea lampreys have been found in the River Ayr during surveys by Ayrshire Rivers Trust. [Former] Ayrshire Rivers Trust biologist Dr Alistair Duguid said: "I was very excited to find evidence of this endangered fish breeding so close to the middle of Ayr." The sea lamprey is an unusual species of fish, which like Atlantic salmon, migrates to sea as a juvenile. It matures in the sea and feeds by attaching itself to other fish using its sucker-shaped mouth. At breeding time, mature sea lampreys migrate into rivers where, like Atlantic salmon, they eventually spawn and die. Anglers have reported adult lampreys in Ayrshire rivers in the past but this is the first confirmed record of sea lamprey juveniles.

So far, five UK sites that support sea lampreys have been designated as candidate Special Areas of Conservation (SACs). The Trust hopes to secure more funding for research and highlight the importance of Ayrshire rivers as breeding habitat for a number of species including lampreys. Sea lampreys are listed in Appendix III of the Bern Convention and Annex II of the EC Habitats Directive.



Sea lamprey (*Petromyzon marinus*) head (left) and mouth (right). Photo Brian Morland.

River and brook lampreys have been found in all the major Ayrshire rivers surveyed. In 2003 healthy populations of river and brook lampreys were found in the rivers Irvine, Doon and Girvan. River, brook and sea lampreys were found in the River Ayr in 2004. River and brook lampreys appear to be far more common.

All three species live in muddy river beds during their juvenile stage, which lasts for approximately six years. Adult river lampreys reach an average length of about 30cm, while sea lampreys grow to a larger size of up to 1 metre long. River and sea lampreys migrate to sea to feed on larger fish, but brook lampreys do not migrate and survive in freshwater until spawning on reserves stored up during the juvenile stage.

Several lamprey sightings have been reported to the Trust by anglers, but if you think you may have seen lampreys in your local river, please let us know.



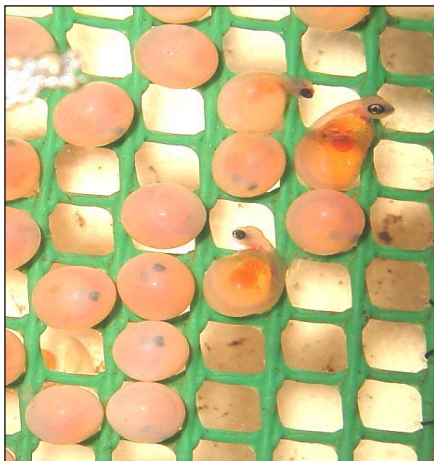
River lampreys (*Lampetra fluviatilis*) from the Lugar Water.

Salmon in the Classroom

The Salmon in the Classroom project is designed to teach children about their local river wildlife and the importance of protecting the environment. Each class is given a general lesson on river ecology followed by a slide show specific to their local river system. At the end of the lesson the class is given an aquarium containing salmon eggs, which are cared for by the pupils until they have hatched and the young fish are ready to be released. The eggs were donated to the project by hatcheries approved by the local District Salmon Fishery Boards. Only eggs from wild salmon native to the local river are used in line with the Trust's policy on stocking.



Pictured above is a poster produced by Dalmellington Primary School during their Salmon in the Classroom Project.



Young salmon hatching (left) and showing their yolk sac (food supply).

In 2004-5 the Salmon in the Classroom project has been developed further with several new schools participating. Cooling systems were also purchased which have improved the success rate of the project dramatically. At Dalmellington Primary School, 118 of the 120 eggs supplied hatched and were released 6 weeks later.



Pictured above are Straiton Primary Pupils releasing their fish on the River Girvan.

The Trust will also be offering schools a chance to see an electrofishing survey later in 2005 as a follow-up to the classroom project. In this way the children will get an opportunity to see several fish species and other river wildlife in the natural environment. Interest in the project has been encouraged by the improved hatchery system and presentations designed specifically for each school. The children were asked to keep a diary on the progress of the salmon hatchery in order to demonstrate their observation skills in science. Children have also created posters and taken digital photographs of the eggs and young fish at various stages in development.

The project contributes towards the children's learning of the Scottish Primary School curriculum, with specific relevance to modules on physical geography, environmental science and natural resources.

Trust biologist Peter Minting has been running the project this year at several Ayrshire primary schools with the aid of funding by Nestlé (Girvan), BAe Systems (Prestwick) and equipment supplied by Fizz Soft Drinks. This year's schools include Dalmellington, Straiton, Kingcase (Prestwick), Greenmills (Cumnock) and Dailly.

Despite the generous contributions made by the donors above, the project made an overall financial loss in 2004-5. Nevertheless the Trust considers this project a key component of its work and is determined to continue with the project in 2006. Any donations towards the project would be appreciated and given full acknowledgment wherever possible. If you would be interested in making a donation or would like your school to take part in 2006, please contact Peter Minting on 01292 525142.

Adult Stock information

In 2003 ART started an investigation in the structure of the salmonid populations in the Ayrshire rivers by establishing a scale collection program. Information on the age and growth of each individual fish can be determined by reading the pattern of rings. Unlike a tree, which has a single annual growth ring, salmonids lay down a series of rings, the spacing of which is determined by the rate of growth. During the high growth period in the summer the spaces between the rings are wider than in the winter, with the result that the winter appears as a dark band of closely spaced rings. The number of winter bands allow the age of the fish to be determined along with an estimation of its size at any stage of its life.

Scale packets were distributed to angling groups throughout the county but due to the poor fishing conditions in 2003 very few scale samples were collected. In 2004 the catches were much better and more scale samples were donated. However, we require bigger samples of scales in order to derive any significant information. In 2005 ART intend to improve our scale reading service by supplying an individual fish history report to the person submitting a scale sample. That report will detail the age of the fish at smolting, the number of years at sea i.e. whether it was a grilse or a salmon, and the presence of previous spawning marks.

The results from the 2004 scale samples are shown in the table below:

	Doon	Ayr	Garnock	Girvan	Total
Number of grilse	8	21	7	4	40
Number of salmon	4	7	3	1	15
Grilse range	5-8lb	3-10lb	4-8lb	4-7lb	
Salmon range	10-17lb	5-11lb	5-12lb	5-12lb	
Proportion of one year old smolts		3.5%	10%		2
Proportion of two year old smolts	100%	93%	90%	100%	52
Proportion of three year old smolts		3.5%			1

The vast majority were two-year-old smolts with a couple of one year old and a single three-year-old smolt. Of the adult fish the majority were grilse, with 37% being two sea winter fish. As this was such a small, and unrepresentative, sample it is important not to try and draw too many conclusions. Anglers often tend to take scale samples from larger fish, which will skew the percentage of multi sea winter fish.

In 1981 and 1982 the Freshwater Fisheries Lab produced a report on scale samples collected from the Rivers Ayr, Doon, Girvan and the Stinchar. They managed to collect 152 and 64 set of readable scales in 1981 and 1982 respectively. Those reports provide a very good reference to compare with today's results. For example in 2004 the mean smolt age was 1.98, compared to 2.04 and 2.05 in 1981 and 1982 respectively. That indicates that the fish sampled are smolting at a younger age, maybe in response to better growth, which could be due to higher water temperatures, or increased productivity, or due to improved freshwater growth as a result of reduced fish densities and consequent competitive pressures. However, it must be stressed that the data sets are too small to allow any statistical analysis; that would require larger

samples collected over a longer time period, but it is mentioned to show the type of information that could be derived if good data sets were collected each year.

Scale packets, instructions and further information are available from the Trust biologists.

Loch Doon fish counter

In October ART were contracted by Scottish Power to download the fish counter at Loch Doon and report on fish movements. Due to budgetary constraints and the limitations of the site a number of issues concerning the counter have been highlighted. The installation of the counter is sub optimal, and it has never been validated to assess the accuracy of any counts produced. The trust is working with Scottish Power to try and resolve these problems whilst downloading the counter on a monthly basis.

Atlantic Salmon Arc Project (ASAP)

Ayrshire Rivers Trust has been helping coordinate a new project to study the genetics of Atlantic salmon across Europe. The Atlantic Salmon Arc Project (ASAP), which is funded by the European Union, includes research partners from England, Ireland, Wales, Scotland and Spain. By collecting and analysing genetic samples from wild salmon in these countries the project partners hope to find out more about genetic variation between different stocks. These differences may become apparent on a regional, national and international scale. Ayrshire Rivers Trust is currently collecting samples from all the west coast fisheries trusts in Scotland. In 2004 a total of 614 samples were collected from west coast rivers, with over 1000 due to be collected in 2005. A non-lethal technique is used with small fin-clips taken from each salmon parr or smolt caught and then released during electrofishing surveys.

The genetic analysis will be carried out by scientists at Exeter University, with Westcountry Rivers Trust spearheading the overall project, due to be completed by the end of 2006. The idea is to find genetic markers showing clear differences between sub-populations which have arisen on a timescale of a few thousand years. Glaciation in northern Europe may have had an effect on the genetic composition of salmon stocks which re-colonised rivers after glacial events, most recently about 10,000 years ago. If distinct sub-stocks are identified, this will have important implications for conservation efforts. At present there is little information on the migratory routes taken by salmon on the way to their oceanic feeding grounds. Combined with genetic data, improvements in tracking and tagging technology may provide some useful information. For instance, wild Ayrshire salmon might be shown to be a distinct genetic population with a tendency to migrate past Northern Ireland en route to feeding grounds in the north Atlantic. This could lend more validity to the idea of limiting drift net fisheries on the Irish coast. Alternatively, there may be several different sub-stocks within Ayrshire with no single migratory pattern.

It is not yet known whether the results will reveal the success or failure of stocking projects involving the movement of salmon between catchments, although this is an interesting possibility.

The ASAP project should, in summary, result in a marked improvement in the understanding of the genetic composition of wild salmon stocks in Scotland.

Strategic Plan

In November 2004 the Trust launched its “Strategic Plan 2005 – 2009”. The Strategic Plan was produced after wide consultation with local and national agencies and partners and was designed to provide direction and focus for the Trust over the next five years. The work of the Trust has been split into three phases, data collection, prescription and management. The Trust has completed habitat surveys of nearly all the major rivers in Ayrshire including the Rivers Stinchar, Girvan, Doon and Ayr. In this respect data collection is almost complete, allowing the Trust to focus on designing habitat restoration projects, subject to funding. It is essential that this kind of work is carried out in order to make an impact with regard to improving river quality for fisheries, wildlife and the community.

In other respects the Trust needs to complete more data collection, for instance on the causes of the decline in sea trout stocks. Electrofishing surveys carried out annually by the Trust are also a useful source of information for District Salmon Fishery Boards with regard to planning stocking activities and assessing the results. Without data it is impossible to make sound judgments of cause and effect.

Included within the document are the Trusts strategic aims, operational objectives and operating principles. For example, the Trusts role as the only organisation with its primary interest in the collective welfare of all river catchments in Ayrshire is highlighted. In common with all members of the Rivers and Fisheries Trusts, Scotland (RAFTS), ART has a commitment to the conservation and protection of all naturally occurring fish species.

Copies of the Strategic Plan are available from the biologists or see the Trust website www.ayrshireriverstrust.org.

Training

Habitat surveys and electrofishing

During 2004 Peter Minting, Karen Couper and Adam Lewins all attended the Scottish Fisheries Coordination Centre (SFCC) Habitat Surveying course held in Newton Stewart. Following completion of the SFCC Habitat Surveying course, Karen and Adam spent the rest of the summer surveying the River Ayr, Whilst Peter started on the Upper Doon habitat survey.

Peter Minting also completed the SFCC Introductory Electrofishing Course held at Barony College near Dumfries. The course included Emergency First Aid training. With a total of four staff from June to November the Trust was able to complete a large volume of fieldwork in 2004.



Disease testing

Biologists Peter Minting and Alistair Duguid also received training on tissue sampling techniques for fish disease testing, with the help of Fisheries Research Services (FRS) fish health inspector Danny Pendrey. Danny Pendrey demonstrated how to take samples from dead fish and preserve them for analysis by the government's FRS laboratory. This could help in

the event of a large fish kill caused by pollution or disease, as it is necessary to preserve samples very quickly. It is not usually possible to get meaningful results from samples that have been frozen. The salmon being dissected by Danny Pendrey in the photo was found dead of an unknown cause on the River Girvan and was being used for training.

On a second visit Danny Pendrey took samples from 30 salmon parr collected from the River Girvan, as part of a national programme of disease testing by FRS. The results gave the fish a clean bill of health. No diseases were found although an external parasite *Gyrodactylus derjavini* was present, a harmless relative of *Gyrodactylus salaris* which could cause serious damage to Scottish salmon stocks.

Redd counts

On the 6th-7th December Peter Minting attended a training workshop organised by Galloway Fisheries Trust (GFT) on how to complete redd (salmon or trout nest) counts. Sites were assessed on the Rivers Minnoch and Cree with the help of Atlantic Salmon Trust (AST) biologist John Webb.

Following the workshop, John Webb and Peter Minting visited an area used extensively by spawning salmon on the Glenmuir Water on the River Ayr on 9th December to complete some redd counts. Four sites were assessed and useful data was collected which was added to the Ayr Habitat Survey.

Events

ART was present at several public events last year, including Ayr Agricultural Show, Rozelle Environment Fair and the River Ayr Pathway Access Project launch.

Although the Show was hampered by poor weather, there were many visitors to the ART stand at the Agricultural Show. Farmers attending the show were helped with advice on protecting watercourses and where appropriate, referred to the Farming and Wildlife Advisory Group (FWAG). FWAG can help farmers secure funds for protecting water margins as part of a Rural Stewardship Scheme (RSS).

The Trust would like to thank Donalds Surveyors for their generous sponsorship of the ART stand in 2004.

The Rozelle Environment Fair near Alloway was attended by many environmental and wildlife conservation-related organisations. It was an excellent opportunity to meet people working with similar objectives and promote the work of the Trust to a wider audience. Several new members were gained including MSP Cathy Jamieson.

The River Ayr Pathway Access Project launch was held at Catrine on 21st July. Once complete the River Ayr Pathway will run from Glenbuck Loch near Muirkirk all the way to the sea at Ayr harbour. The Pathway should help boost the amenity value of the River Ayr and encourage local people to take an interest in the protection of the river. It was a good opportunity for Trust staff to gather information on the River Ayr in the same year as the River Ayr Habitat Survey.

ART also held three major fundraising events, the Barskimming Country Fair (May 30th), the Auction dinner (18th June) and Fisherman's Supper (22nd October).

Barskimming was a record success in 2004 with around 2,200 people attending and sunny weather in the afternoon. In addition to the ART stand, popular attractions included a skilful falconry display by Alan Rothery, a demonstration hive complete with bees from the Ayr & District Beekeepers Association and flycasting demonstrations by world champion Jim Tomlinson. Visitors were also able to appreciate the beautiful scenery of the River Ayr by walking round the grounds above the Barskimming gorge.



Barskimming 2004, ART staff and visitors (From the left, Peter Minting, Alistair Duguid, Bobby Bryce, Mrs Richard Vernon, Jamie Hunter Blair, Mr Richard Vernon with Mr and Mrs Robert Dalrymple in the background)

The Auction Dinner at Blairquhan Castle was kindly hosted by the late Mr James Hunter Blair, whose charisma and generosity helped to make the event memorable for all those who attended. The event raised a very significant contribution towards the Trust's core funds in 2004. Thanks also to everyone who donated and purchased lots, ranging from oil paintings to a new set of dentures! The staff and committee at Blairquhan were instrumental in making the event a success.

The Fisherman's Supper was held at a new venue in 2004, the Cariston Hotel in Ayr. TV angling personality Paul Young again entertained guests with the event chaired by Eddie Telford. Biologist Dr Alistair Duguid gave a farewell speech before his departure from the Trust in December 2004. Although not the biggest fundraiser of the Trust calendar, the Fisherman's Supper is a good opportunity for Trust members to meet and socialise at the end of the angling season. Thanks must go to manager Grant Steel and his staff, for providing a top quality meal and bar service.

Meetings from January 2004 - January 2005

Gordon Brown visit

On 17 May 2004 the Trust was visited by Gordon Brown, head of SEERAD's Department of Freshwater Fisheries and Aquaculture. The Trust gave Mr Brown a tour of several key sites in Ayrshire with regards to fisheries issues.

District Salmon Fisheries Boards (DSFB's)

A key function of the Trust is to collect data on fish populations, habitat quality, etc. and to provide scientific advice to the four DSFB's within Ayrshire. The Trust biologists produce reports, attend board meetings and provide advice on an ad hoc basis to the river boards.

Water Framework Directive

Both Trust biologists attended a meeting at Perth on 16th June, where SEPA gave a description of work in progress with regard to the implementation of the EU Water Framework Directive (WFD). Representatives from Trusts, Fishery Boards and other interested parties from across Scotland were present. The implications of the WFD will be far reaching with regard to river management in Scotland. Many of the activities traditionally carried out by farmers, landowners and angling clubs will be licensed under the Controlled Activities Regulations. SEPA will be the competent authority responsible for authorising controlled activities such as gravel extraction, the creation of croys and bankside tree removal. The long-term aim is to create more natural watercourses and protect wildlife habitat for priority species such as Atlantic salmon. The Trust also contributed to several consultations on the implementation of the WFD.

Girvan minewater pollution

MSP Cathy Jamieson, representatives from the Coal Authority, SEPA, the River Girvan Salmon Fisheries Board, Ayrshire Rivers Trust, river bailiffs and local angling clubs all met on 6th July at a former mine site near Dailly. The meeting was arranged to deal with concerns about the impact of the ferruginous mine water discharge on the water quality in the Quarrelhill Burn and the main river beyond. Following the serious pollution incident arising from the mine water in the late 70's there have been several attempts to reduce the risk of a similar incident, culminating in the current reed bed system. Nevertheless the mine water inputs have an ongoing effect, with the bed of the Quarrelhill Burn stained orange and few fish species present down as far as the main river. The main riverbed is usually stained downstream of the confluence with the Quarrelhill Burn. The current system uses a sensor on the bridge over the main river to synchronise discharge periods with high flow in the main river.

The meeting was very useful in that it provided a forum for all those present to express their concerns regarding the importance of the health of the river to the community as a whole as well as providing a greater understanding of the difficulties the Coal Board have in managing the discharge.

Farm walk, Darvel

The Trust biologists attended a 'Farm Walk' organised by the Farming and Wildlife Advisory Group (FWAG) at Newlands Farm, Darvel on the 3rd August. Members of the public, farmers and landowners were invited to a series of walks organised by FWAG to promote awareness of the Rural Stewardship Scheme (RSS). Many of the

land management practices prescribed in the RSS will have a positive effect on river ecology if the scheme is maintained in the long-term.

The Trust demonstrated electrofishing survey techniques to around 40 people attending the walk near Darvel. The variety of fish, including juvenile salmon, found within a small area surprised many of those in attendance. FWAG will also be organising Farm Walks in 2006, if interested contact tel: 01292 525206 or email: ayrshire@fwag.org.uk

Scottish Wildlife Trust

On the 19th October the Trust gave an evening lecture to the Scottish Wildlife Trust on the work of the Trust and a summary about the status and diversity of wild fish populations in Ayrshire. The Trust is able to give talks to other organisations with an interest in river conservation, for details please contact tel: 01292 525142.

Threat of invasion

A conference on the threat of *Gyrodactylus salaris* was hosted by the Tweed Foundation on 2nd November at Kelso. The Trust attended and has since produced a guidance note on best practice by anglers, with regard to reducing the risk of *G.salaris* introduction to Britain. Copies are available to any organisation in Ayrshire with an interest in freshwater fisheries. Ideally these should be given to anglers and displayed in areas visited by people planning to visit local rivers. *G.salaris* is a salmon parasite native to Baltic rivers, with the potential to eradicate salmon stocks in Britain and other countries where wild salmon have no resistance to the parasite. Once the parasite is found in a river it is too late and poisoning the entire river to remove infected host fish is the only way to eradicate the problem. Restoration of fisheries after such drastic action would take years and a full recovery may not occur. It is vital therefore, that anglers returning from trips abroad disinfect their fishing tackle using one of the methods described in the guidance note.

Ayrshire Rivers Trust AGM

The Trust held its AGM at Ayr Rugby Club on the 9th November. The meeting was well-attended and Trust biologists gave talks on the recent work of the Trust, following an introduction by Chairman Peter Kennedy. Topics covered included electrofishing results, update on habitat surveying and ongoing Trust projects

Rivers and Fisheries Trusts of Scotland

Several meetings of the Association of West Coast Fisheries Trusts (AWCFT) were attended by the Trust throughout the year. The last meeting of the AWCFT was held at the Fisheries Research Services laboratory in Faskally, Pitlochry on 30th November. The organisation then became the Rivers and Fisheries Trusts Scotland (RAFTS) following the successful incorporation of East Coast fisheries conservation organisations such as the Tweed Foundation and Spey Research Trust.

Sharing data

The AWCFT/RAFTS meeting was followed by the Scottish Fisheries Coordination Centre (SFCC) AGM on 1-2nd December at the same venue. The Trust is a member of the SFCC which maintains a central database of data collected by Scottish fisheries trusts. The AGM included lectures by SFCC staff on patterns discovered in the data which have local significance for SFCC members.

Media

The Trust website www.ayrshirerivertrust.org has recently been revamped and updated, by Charles Ellis, a local independent website designer. The website now includes a photo gallery section with photos illustrating the varied nature of the Trusts work. In future we hope to continually update the news page with relevant items of interest and to include more information on specific projects. The Trusts “Strategic plan 2005-2009” is also available on the website as a download. Trust members and supporters should monitor the website for news and features of interest.

The Trusts work also featured in a number of publications including a feature on the ASAP Project, which appeared in the Trout and Salmon (Feb 2005) as well as local and national newspapers. The Ayrshire Post covered the discovery of juvenile sea lampreys in the River Ayr and the Ayrshire Post, Cumnock Chronicle and Carrick Gazette covered the Salmon in the Classroom project

Account for year to 31st January 2005

The account for the end of January 2005 shows a deficit of over £19,000. This was partly caused by rising employment costs with a second biologist and part time staff on the payroll, but also by a fall in revenue from grants. Part of this was caused by the River Ayr Habitat Survey, which was not fully funded externally, and by some grants arriving at the end of the year. It is gratifying to see the income from our fund raising increasing by £2,400 to £20,800 and a doubling of our donations to £5,700. In spite of this year's deficit the Balance sheet remains healthy with the Net Assets of £51,101 having fallen from £71,322.

Income and Expenditure

For the period 1 February 2004 to 31st January 2005

	2005		2004	
<u>Income</u>	£	£	£	£
Fundraising				
Dinner Auction	14,699		11,951	
Garden Fair	3,818		2,990	
Fisherman's Supper	578		1,188	
Raffle	<u>1,768</u>		<u>2,271</u>	
	20,863		18,400	
Membership				
Ordinary	1,720		1,905	
Corporate	500		450	
Life	200		400	
Donations	5,725		2,467	
River Board Subscriptions	6,500		5,700	
Other income from River Board	2,200			
Grants Received (Net)	14,318		44,608	
Tax Reclaimed	356		-	
Interest Received	<u>1,743</u>		<u>1,253</u>	
	<u>33,262</u>		<u>56,783</u>	
	54,125		75,183	
Expenses				
Employment Costs	47,137		31,167	
Recruitment Costs	699		-	
Administrators Honorarium	1,200		1,200	
Printing, Stationary and Postage	3,773		2,789	
Professional Fees	2,063		1,134	
Training Fees	1,472		352	
Telephone	687		667	
Motor Expenses	5,148		4,066	
Subsistence	884		75	
Subscriptions	1,965		2,858	
Insurance	1,619		882	
Office rent	1200		600	
Loan interest	258		382	
General expenses	592		595	
Depreciation	3,875		4,791	
Biologists equipment	<u>774</u>		<u>650</u>	
	73,346		52,207	
SURPLUS		<u><u>-19,221</u></u>		<u><u>22,975</u></u>

Balance Sheet

As at 31 January 2005

	2005		2004
	£	£	£
Fixed Assets			
Motor Vehicle	6,643		8,857
Equipment	<u>4,984</u>		<u>5,515</u>
		11,627	14,372
Current Assets			
Bank current a/c's	205		2,587
High interest bank a/c's	43,880		43,545
Debtors	900		17,200
Tax recoverable	<u>853</u>		<u>497</u>
		45,838	63,829
Current Liabilities			
Bank term loan for vehicle	2,339		5,000
Accrued charges	<u>3,025</u>		<u>1,879</u>
		5,364	6,879
		<u>52,101</u>	<u>71,322</u>
<u>Represented by:</u>			
Accumulated funds b/fwd	63,322		40,747
(Deficit)/Surplus for year	-19,421		22,575
Life membership Fund			
B/fwd	8,000		7,600
Movement in year	<u>200</u>		<u>400</u>
C/fwd	<u>8,200</u>		<u>8,000</u>
	<u>52,101</u>		<u>71,322</u>