INLAND FISHERIES SERVICE NEWSLETTER

On the Rise

Inland Fisheries SERVICE

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'Raising' the Shannon

Professor Nigel Forteath, Chairperson of the Fisheries Habitat Improvement Fund Inc – a non-profit, public organisation established to help improve the State's freshwater environment – recently announced the Fund's first project: The Rehabilitation of Shannon Lagoon.

"The project aims to restore the ecological values of the Shannon Lagoon, particularly water quality, so that it will once again be a worthwhile fishery and significant wetland," Professor Forteath said.

The restoration of Shannon Lagoon has been talked about for many years. In the past the Shannon was a significant recreational trout fishery, home to the legendary Shannon Rise. The fishery was lost when the Great Lake was raised and water diverted from the Shannon River to the Poatina Power Station and into Brumby's Creek. Since that time, the lagoon has gradually degraded, with low summer water levels, high turbidity and soft sediment making it virtually unfishable.

"The unique history of this water and its central location combine to make it an ideal first project for the Fund," Professor Forteath said.

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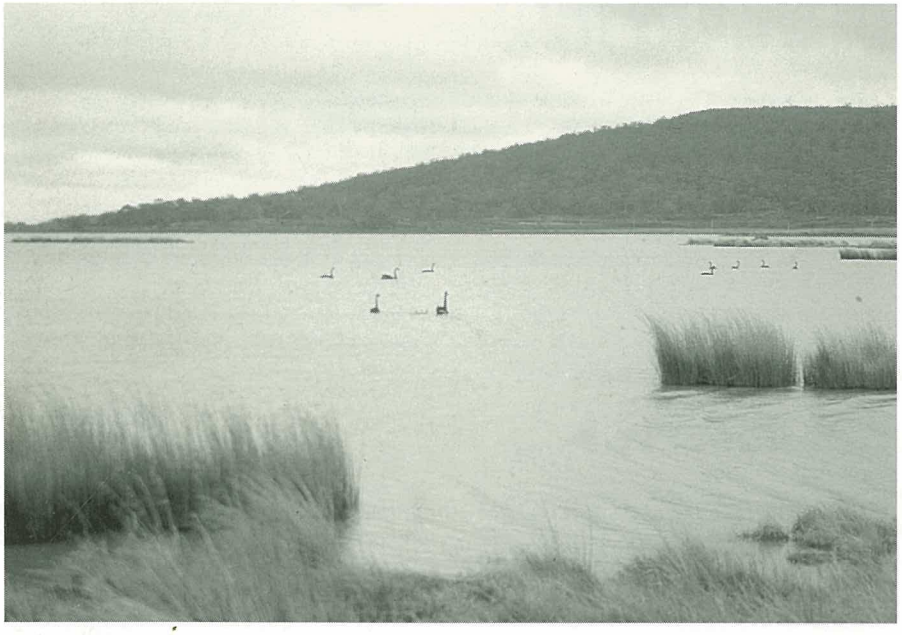
Shannon Lagoon – the first project of the Fisheries Habitat Improvement Fund



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Come to the Liawenee Open Weekend

The Inland Fisheries Service will host its annual public event – the Trout Spawning Open Weekend at Liawenee, Great Lake – again this year on 19-20 May. The weekend is traditional for many anglers and their families, who visit the IFS field station at Liawenee and assist in the harvest of eggs from wild brown trout spawning in the Zig zag Canal.

Last year, an estimated 4000 attended the weekend event, which was down on the previous year. As with earlier years, however, visitors braved the winter conditions to watch hundreds of trout spawning in the canal. In addition they enjoyed live fish displays (galaxids, trout, carp, lobster, eel), information about fisheries management, fly-tying, casting, trout fishing history, and a variety of trade exhibits targeting 'the angler'. There were activities for kids too, besides the opportunity to handle a trout during the stripping process, including face painting and fishing in the Fish for the Future fishing pool.

Businesses keen to market their products and services to the Tasmanian angling community, are invited to make the most of this opportunity and exhibit at this unique event. Contact the Inland Fisheries for more information.

This year, the public can again enjoy a hands-on experience of live wild trout and the egg stripping process, observe

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'Raising' the Shannon

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"Initial partners in the project are the Inland Fisheries Service (IFS) for technical support, fisheries management and project supervision, and Hydro Tasmania for construction work and water level management.

"In addition, the Department of Infrastructure, Energy and Resources has agreed to seal the road adjacent to the lagoon to address the critical problem of sediment input.

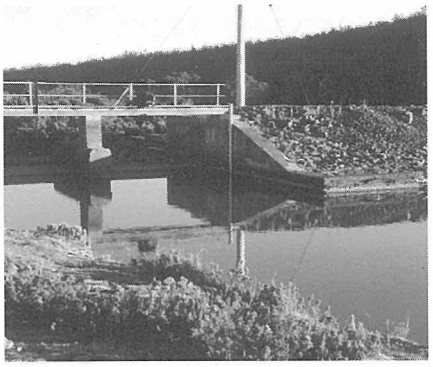
"The capital works part of the project should be completed within one year, provided the Fund is successful in raising an estimated $110,000 for the project.

"To date the Fund has received some $20,000 in grants and donations, which includes money received from anglers over the past year and a donation of $15,000 from Hydro Tasmania with a commitment for a further $15,000 in the 2001/2002 period.

"The Trustees of the Fund are now actively seeking corporate sponsors and donations to raise the further capital for the Project.

Based on the feasibility work already done by the IFS, the Fund has endorsed the following strategies for achieving the rehabilitation of the Shannon:

- Continue the turbidity monitoring program to better understand the dynamics of sediment resuspension in the Shannon and other shallow lagoons.
- Seal approximately 4 km of road to reduce sediment input.
- Raise the Shannon outlet weir and water level by 30cm.
- Revise water level management protocols to reduce draw-downs and allow for annual sediment flushing.
- Introduce appropriate trout management strategies to restore and maintain Shannon as a valuable still water trout fishery.



Weir at Shannon Lagoon

"I urge angling clubs and individuals, keen to see the Shannon Lagoon restored, to help by raising awareness about the project, making donations and encouraging others to do the same," said Professor Forteath.

A word from the FHIF Trustees

From Dr Robert Sloane

Having worked as a trout biologist at Great Lake for five years and then served as Commissioner of Inland Fisheries for a further six years ending in 1990, I fully understand the budget constraints placed on the Inland Fisheries Service and, at the same time, the frustration of anglers lamenting bygone days when fish seemed more plentiful and easier to catch.

The real issues affecting the quality of angling in Tasmania, as elsewhere, are largely unrelated to stocking policy, fishing regulations or numbers of anglers. Water quality, flows, levels and general habitat health are far more important considerations.

Inadequate government contributions towards inland fisheries can only be offset by seeking external funding assistance. In the case of native flora and fauna and commercial fisheries there are a number of funding alternatives, but when it comes to recreational fisheries, and trout fishing in particular, no funds are available other than those already raised through the sale of angling licences.

The Fisheries Habitat Improvement Fund was formed with these issues in mind – its aim is to establish an environmental fighting fund to assist government and the angling community to address critical fisheries habitat concerns. Now formally registered as a Charitable Organisation approved by the Australian Taxation Office, the non-profit Fund delivers the added incentive of tax deductibility to encourage donations, large and small, from private individuals, clubs, associations, community organisations, businesses and corporations.

The Trustees of the Fund, which is independently administered by the Tasmanian Community Foundation, have a vast collective experience in all aspects of fisheries participation, management, promotion and administration and can draw on a strong technical support team from the private and public sectors, ensuring that funds are well managed and well spent.

It is easy to sit back and complain about perceived declines in the quality of fishing, but these days paying a licence fee and relying solely on government to tackle all the problems is simply not enough. Collectively we must be prepared to raise money and contribute time and labour energetically and productively. After all, isn't that how our great trout fishery was established in the first place?

Please support the Fund by increasing public awareness, making a generous donation and encouraging others to donate.

From Mike Stevens

Many, or in fact most anglers do not consider the future – and in particular the fishery of the future. Often you will find anglers talking of the 'good old days' and certainly there were some good old days. Water resources were less pressured by farmers, energy and for town supply. Fishing waters had far less angler pressure and in general one could say the fishing in many ways was better. We also had 'The Hydro' building many new storages and these produced some extraordinary fishing. Just look at Lake Pedder where trout averaged over 10 pounds for several years.

But, many fisheries have been in a state of decline for years and if we continue to neglect our fabulous resource eventually we will lose more of them.

We must work on having a better fishery, both for our children and, of course, for ourselves when we get old. We don't own these resources – we are just custodians.

The Fishery Habitat Improvement Fund has chosen the Shannon Lagoon as its first project. It is a fishery that has been virtually neglected since the mid 1960s. This is when Poatina power station came on line and the water previously used through the Shannon River to power the Wadamanna power station was turned off. For the past thiry five years or so the amount of flushing water has been limited and with a lowering of water levels it has turned it into a turbid, dirty lagoon.

The lagoon, or more correctly the Shannon River was famous for the 'Shannon Rise' an event which started in the 1920s and concluded in the 1960s. The 'Rise' generally occurred between November and December when the Shannon Moth hatched in their millions from the bed of the Shannon River between Great Lake and the Shannon Lagoon. With an abundance of insect life also came thousands of trout to feast on the concentrated food supply. The days of the Shannon Rise will never return, but what we can bring back is a still water fishery with clearer water and improved habitat.

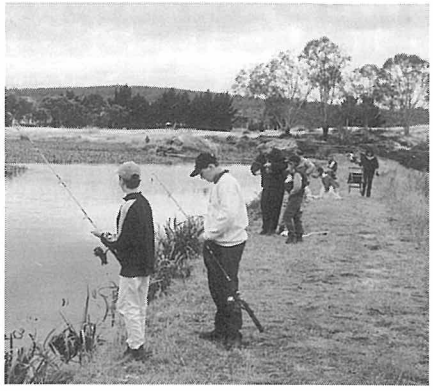
We will raise the money and we need all anglers to help. Don't think of this as a project someone else is doing. Think of all the pleasure you have had from fishing and then dig deep and do something for the future of fishing.

Inland Fisheries 'Free Fishing Day' 2001

The Inland Fisheries Free Fishing Day, which was held on Australia Day, Friday 26 January, was a great success again this year – despite less than ideal weather – attracting an estimated 1600 people to the seven organised events around the State.

Support of angling clubs in organising events for the public at accessible locations is critical to the success of the day. Frombergs Dam proved the most popular spot again this year with 1200 people recorded at the gate and hundreds of fish caught.

As with last year, there were the Ulverstone and Launceston Angling Clubs in the North who hosted successful events at Frombergs Dam and Lake Waverley, while in the South, the Kingborough and Clarence Anglers turned out at at Coffee Creek and Pawleena Dam. Unfortunately, the Huon Anglers Association had to cancel their well-planned day at Griggs Dam, Lucaston – a week prior – due to lack of water.



Young anglers at Lake Dulverton

The two additional events held this year were at Lake Dulverton hosted by the Oatlands District High School in conjunction with the Southern Midlands Council and Waratah Town Lakes, Waratah by the Wynyard Angling Club. Both of these were fruitful events, particularly for those who caught fish.

Thanks to all these Clubs (and the hard working members behind the scenes) for getting behind the event and making the Day "work" for themselves and the fishery. Thanks also to the support of fishing tackle shops and advertising sponsors, WIN TV and the Fishing Connection, who helped broadcast the event.

Their help meant that an estimated 100 people – adults and juniors who had never fished for trout before – were attracted along to the club events to meet knowledgable and friendly anglers. This is the aim of the IFS in instigating the Day, which is shared by Clubs, tackle shops and the recreational fishing industry – to attract more people into the sport of angling.

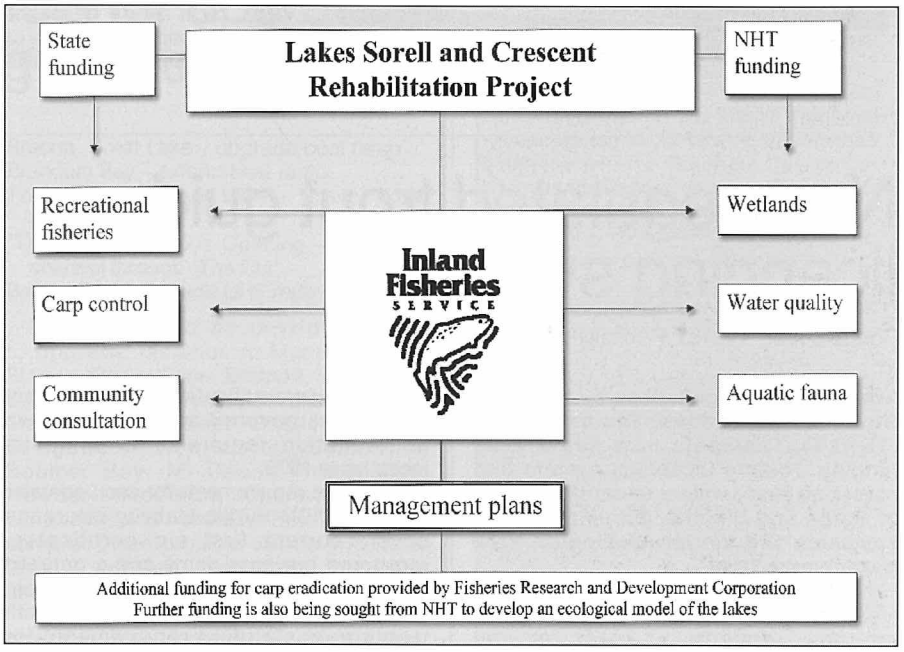
The role of the IFS in developing water management plans

Jenny Deakin, a Project Planning Officer, has been employed by the IFS through State Government funds to coordinate the preparation of Water Management Plans for Lakes Sorell and Crescent and the Clyde River.

Jenny is currently gathering information from stakeholders about their interests and concerns regarding future water management in these lakes and river. Some of the questions she has been asked recently in the community, relate to why the IFS appears to be directing the process and whether this means a potential bias in the planning toward fishery needs. To set the record straight, Jenny has provided the following points to explain the role of the IFS, the regulated planning process, and how everyone can have an input to make their concerns heard.

1. The water management plans are being developed as part of a large umbrella project to rehabilitate lakes Sorell and Crescent. This large project – the Lakes Sorell and Crescent Rehabilitation Project – has six primary sub-projects addressing the various issues relevant to the rehabilitation, half of which are funded by The Natural Heritage Trust, the other half being the State Government's responsibility (see figure). The studies on the wetlands, water quality and aquatic fauna are the NHT component while the State Government is funding the investigations into the recreational fishery, the control of carp and the development of the management plans.
2. All the work being carried out will provide information that will feed into the management plans. For this reason it was considered important to have the planning officer working alongside the other project officers to facilitate easy transfer of information as the projects progressed.
3. The plans are being developed under the *Water Management Act (1999)* which clearly describes what can and cannot be included in the plans, and the processes which must be followed in the development stages.
4. The plans must be consistent with the Act. The first and fourth objectives of the Act are "to promote the sustainable use and facilitate economic development of water resources", and "to provide for the fair, orderly and efficient allocation of water resources to meet the community's needs". These objectives highlight the need for the plans to consider and balance the needs of all water users.
5. The draft plans must be signed off by the Minister for Primary Industries Water and the Environment who has responsibility to ensure that the plans further the objectives of the Act.
6. The Manager and Water Assessment staff of the Land and Water Management Branch of DPIWE are inputting to, and overseeing the development of the plans to ensure that they are consistent with other State water management plans.
7. An intensive community consultation process is being carried out to find out the needs and interests of all user groups. The plans will consider all the various needs and propose a compromise or balance, if necessary, between conflicting interests. The draft plans must be released for public comment before being sent to the Minister and any written submissions must be considered.

The consultation process is in its early stages and will continue for the duration of the project (until mid to end 2002). All water users in the catchment are strongly encouraged to contribute to the process by raising their concerns now. Please contact Jenny Deakin at Inland Fisheries, PO Box 288, Moonah 7009; Telephone 6233 3960; Facsimile 6233 4141; or email Jenny.Deakin@ifs.tas.gov.au. Further information is also available on the IFS website www.ifs.tas.gov.au.

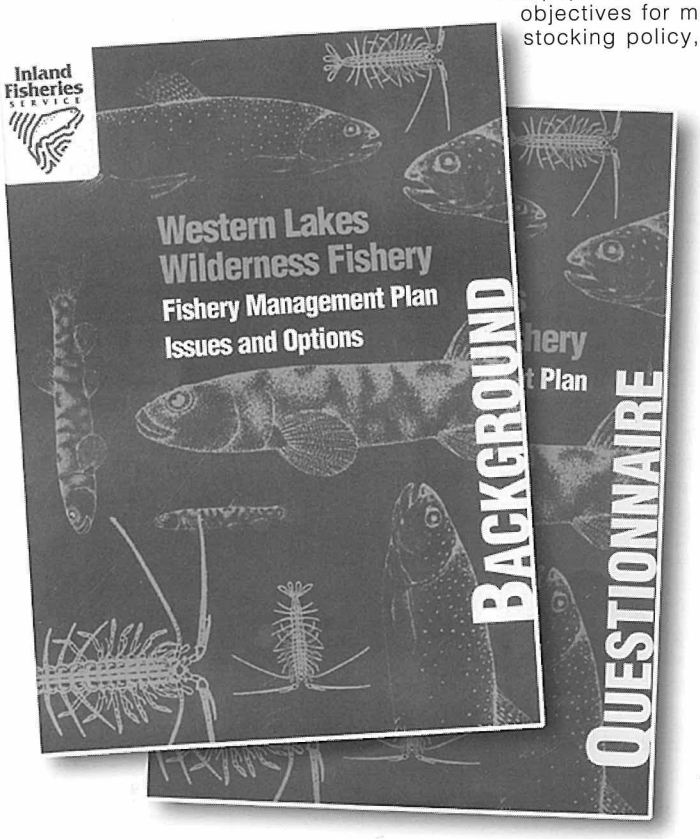


Western Lakes Wilderness Fishery – issues and options for future management

Issues and Options release

The second stage in the consultation process for the Western Lakes Fishery Management Plan is now in progress with the release of an Issues and Options paper for public comment.

The two part paper consists of a background booklet providing information about the current management of the fishery, and a comprehensive questionnaire booklet seeking feedback from the public on how the fishery is to be managed for the long-term future. The paper focuses mainly on issues related to the recreational trout fishery, with conservation and other relevant issues to be considered in the next phase of planning, the draft management plan.



Issues and Options development

Development of the Issues and Options paper began last October, with a two-day stakeholder reference group workshop (refer Newsletter Vol. 29 No.3). During the workshop, participants developed a vision for the future management of the Western Lakes, identified relevant issues and discussed a range of management options that fit the vision. Information gathered from the reference group workshop, together with discussions with the Inland Fisheries Advisory Council and various individuals, formed the basis of the Issues and Options paper.

About the paper

The paper covers many topics such as; objectives for managing the fishery, stocking policy, bag limits, and the impacts of wading and boating etc. In the questionnaire, you will be able to express your views by either agreeing or disagreeing with the range of options offered, as well as provide detailed comments on each question. The public comment period for the Issues and Options paper will run for six weeks beginning the 7th May and closing on the 15th June.

Draft Plan

After considering submissions, the Service will begin writing the Draft Fishery Management Plan. It's expected that many different views will be submitted by a range of stakeholders. The task of the Service will be to balance these views against the wider responsibilities required of the Service under the *Inland Fisheries Act (1995)* and relevant Government policies.

Once the draft fishery management plan has been completed, the public will have a second chance to have in-put during the draft plan public consultation process. This may be done by making a written submission regarding the content of the draft plan, and/or by attending one of three public meetings to be held around the State. The dates of these meetings will be advertised later in the year.

Final Plan

After considering submissions on the draft fishery management plan, a final management plan will be completed and released in late 2001.

How to obtain a copy

You may obtain a copy of the Issues and Options paper from:

- Inland Fisheries Service Offices, Hobart or Ulverstone, or telephone 62 334140 to have a copy posted out.
- Download or print a copy from the Inland Fisheries Service website, www.ifs.tas.gov.au
- Major fishing tackle outlets in Burnie, Ulverstone, Devonport, Launceston and Hobart (see the IFS web site for locations).
- Service Tasmania shops at Burnie, Ulverstone, Devonport, Scottsdale, Launceston and Hobart, or at other regional Service Tasmania shops by making an advanced request.

It is up to you as an individual to show your support for the process by make a thoughtful submission on how you think this very important fishery should be managed for the long-term future.

Contacts for further information

If you require any further information, please contact Rob Freeman, Inland Fisheries Service on 62 33 3348 or e-mail: robf@ifs.tas.gov.au. Updates on the process will be available on the IFS web site at: www.ifs.tas.gov.au or in future editions of "On the Rise."

New regulated trout guide licencing system

Roger Butler, TGALT Publicity officer

After years of negotiations by the Trout Guides and Lodges Tasmania Inc. (TGALT), Tasmania now has a wide ranging Guiding Licencing system that covers all land / waters under the control of Parks and Wildlife, Forestry, Hydro Tasmania and the Mt. Wellington Park Management Trust.

All commercial operators working in these areas, whether members of TGALT or not, are now required to meet minimal accreditation/certification standards that TGALT has covered as part of its own accreditation requirements since its inception in 1979.

The basic requirements for each operator include, $10M Public Liability insurance cover, current first aid certificates, registered business name and a detailed submission covering areas of operation, experience and route maps together with meeting all statutory requirements for vehicles and equipment used.

TGALT president Richard Dax welcomed the move saying that, although on the surface this may appear as more 'red tape', an enforcable whole of Government approach to accrediting all guiding services is well overdue and would help ensure minimum standards of operating services and consumer security.

"The measures are part of the wider raft of operator certification and experience standards that our members have been required to meet since 1979," said Mr Dax.

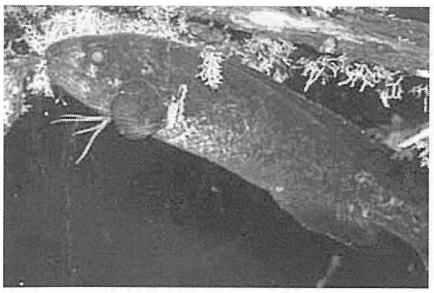
"It helps justify the expense and commitment they have put in over the years to meet these legal and obligatory demands," he said.

Restoring native fish habitat and the importance of woody debris

The Inland Fisheries Service received funding from the Natural Heritage Trust at the end of 2000 to develop methods of reintroducing large woody debris (LWD) back into rivers to enhance fish habitat. The project has now established a demonstration site, on Quamby Brook, that highlights the benefits of reintroducing LWD as erosion control and to restore native fish habitat – in this case for the River Blackfish.

Fisheries officers have now established the Quamby Brook site at the Westbury Town Common as a restored habitat site using LWD. Woody debris has been reintroduced into the watercourse and each piece of debris has been specifically placed and securely anchored. Fastening techniques included burying one end into the stream bank and cabling or strapping each piece to hardwood poles driven into the substrate. Placement was selected based on optimum positioning to provide habitat for instream fauna and to aid in protecting banks from erosion. River blackfish is a species that will benefit from introduced habitat in this stream, due to its dependence on hollow logs as spawning habitat.

Restoring woody habitat in Quamby Brook



River Blackfish thrive in the snags

This establishment of the site has received strong support from the Cluan/Westbury Landcare group, Meander Valley Council, the local community and landholders. The NHT funded Rivercare team has provided technical advice for the project through the rivercare engineer and geomorphologist. In conjunction with the introduction of large woody debris an artificial riffle has been created at the top of the site to help control a rapidly eroding headcut. This work has been generously supported by the Meander Valley Council, through its NRM project. The Council has also supported the development of a correctly constructed stock access site.

The Cluan/Westbury Landcare group has stated that it will assist in revegetating the riparian zone adjacent to the demonstration site. Work at this site, associated with a bankside revegetation program, will attempt to restore a section of the river to its natural state after willow removal occurred several years ago.

This demonstration site will serve as a reference for Rivercare groups to observe the correct placement and appropriate methods to secure large woody debris, so these can be incorporated into their own projects.

The IFS would particularly like to thank the local landholders for assisting in the entire process.

MAST's 2001 projects for upgrading recreational boating facilities

The MAST Board has approved 30 projects to upgrade and improve recreational boating facilities around the State as part of the Recreational Boating Fund 2001.

Each year, MAST calls for submissions from boat owners to advise the facilities they would like to see upgraded in the next calendar year. This year MAST received 95 submissions for 75 projects. The selection of 2001 projects followed a series of public meetings around the State with boat users and other interested parties. Inland water projects were discussed at all public meetings.

MAST will be providing funding to upgrade facilities on inland waters as follows:

Lake King William – construct several gravel launching sites north of Derwent Bridge.
Lake Burbury – upgrade the eastern boat ramp.
Penstock Lagoon – upgrade launching facilities into the canal.
Breona, Great Lake – upgrade boat ramp.
Brandum Bay – extend boat ramp.
Tods Corner, Great Lake – gravel a car parking area.
"The Cut" Camerons Opening – provide a channel through "The Cut".
Barren Tier – upgrade UHF repeater.

MAST will also be providing funds to upgrade facilities at Montagu Park, Stanley, Rocky Cape, Bridport, Inglis River, Squeaking Point, Kelso, Stieglitz, Bicheno, Maria Island, East Shelley Beach, Bridgewater, New Norfolk, South Arm, Boomer Bay, Mt Raoul, Pirates Bay, Howden, Middleton, Charlottes Cove, Lunawanna and Adventure Bay. Funding for some of these projects will be subject to facility owners providing promised assistance from their 2001-2002 Budget.

For further information on recreational boating facilities, contact MAST on 6233 8801.

Obituary

Sadly, Douglas Leslie Bridges passed away on April 5. He was an Associate Commissioner of the Inland Fisheries Commission for 13 years until 1984 and represented the Southern Tasmanian Licensed Anglers' Association district on the Commission with distinction.

As a well known and expert sportsman in a number of fields other than fishing, he was able to bring a well balanced view to the Commission of the recreational and economic values of angling to Tasmania. In this he was a leader.

Douglas reacted well with people of diverse backgrounds and, as the proprietor of Bridges Brothers, he had the opportunity of direct contact with many sportsmen.

Douglas was a man of integrity who could bring forward his views, not only with logic but with expertise.

Sportsmen in general and anglers in particular will remember Douglas Bridges with gratitude and affection.

Update on the Lake Sorell trout fishery

Prepared by Tim Farrell, Fisheries Biologist and Sean Tracey, Technical Officer, Recreational Fisheries Section

Lake Sorell was for many years the "bread and butter" of Tasmanian trout fishing, providing both lure and fly anglers with reliable catches of well conditioned trout. Six seasons ago, anglers noticed a dramatic decline in the condition of trout caught at Lake Sorell with catch rates also declining. In the last few years, drought has contributed to the loss of extensive marshes and there has been a dramatic increase in the turbidity of the water to the point where very few anglers would regard Lake Sorell as a viable trout fishery. In addition, the presence of carp has done little to boost the reputation of this once fine fishery.

The National Heritage Trust (NHT) funded 'Sorell and Crescent Rehabilitation Project' was initiated early last year. The primary function of the Project was to examine the lake's ecology and look at ways to restore the natural balance of the system whilst representing the interests of stakeholders. These include farmers, downstream water users, shack owners and recreational groups (anglers, campers and shooters). Prior to this Project commencing, the IFS examined problems with the Lake Sorell trout fishery as well as water quality issues. The Recreational Fisheries section of the Service now works alongside the Project and, with an integrated approach, views the restoration of the fishery as a high priority issue.

Chart 1 – Average condition factor of Mountain Creek spawners since 1979

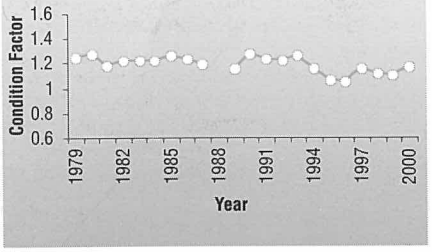


Chart 2 – Average condition factor of trout from 1995-2000

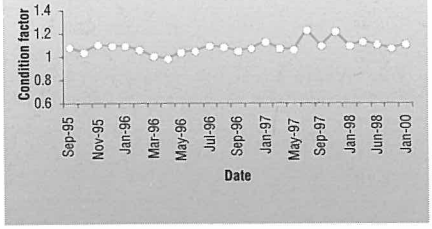
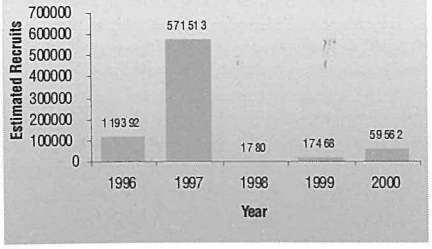


Chart 3 – Total estimated brown trout recruits to Lake Sorell from Mountain Creek



What has the IFS been doing about the trout fishery?

- Electrofishing surveys to determine the condition of trout at Lake Sorell commenced in 1995. They have been undertaken at monthly intervals to 1997 and annually since then. The surveys have allowed the IFS to determine changes in condition of the trout whilst monitoring physical characteristics of the lake which may ultimately affect their condition.
- In 1996 a program commenced to trap fry emerging from the spawning beds at Mountain Creek, determining annual recruitment of trout to the lake. Four years of trout recruitment to Lake Sorell has now been measured.
- During the spawning run of 1997, 10,500 fish were marked by fin-clipping. Later that year, a netting survey was undertaken to determine the proportion of clipped to unclipped fish in the lake in order to estimate the size of the trout population.
- During the spawning run of last year, 1,500 trout were tagged, released and recaptured for another population survey. Whilst there was some indication that the population had decreased in size, the results of the survey were such that a firm estimate of numbers could not be made with confidence.
- Annual samples of 100 brown trout have been taken to determine what they are eating and how this may have changed with the decline in the water quality.
- Otoliths (ear-stones) collected from trout during 1996 and 1997 were sent away to be aged. From the results, more is now known of the growth rates and age structure of the Lake Sorell trout population. This study, together with future ageing studies will enable the IFS to determine which environmental changes influence growth rates and population structure.
- In March 2000, a major revamp of the spawning facilities at Mountain Creek occured. A diversion off the main creek with trapping facilities has now been included to allow us to weigh measure and tag all fish in the spawning run. The creek bed has also been reinforced and now has overflow channels to prevent major flooding in high flows.

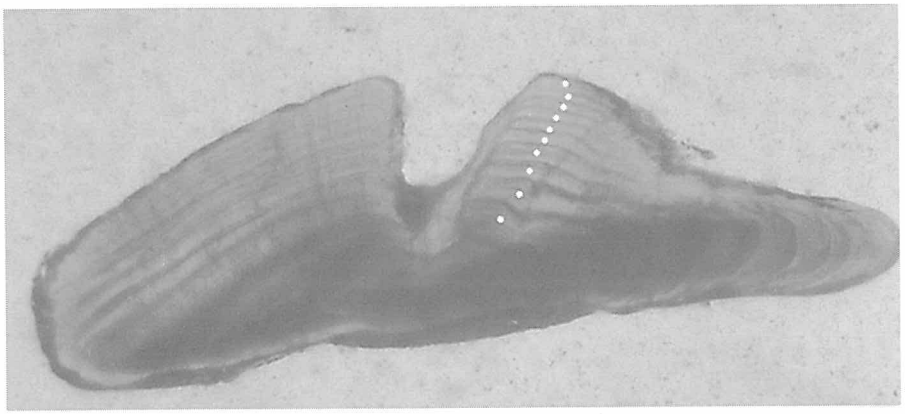
Results so far...

Diet & Condition

Since 1994, there has been a marked decline in the condition of spawning trout which has persisted with only a slight improvement in last years' run. The condition of spawning trout from Lake Sorell since the 70's is shown in Chart 1.

In Chart 2, an indication of the seasonal variation in trout condition is given from September 1995 to January 2000 from monthly electrofishing samples. No clear pattern is evident over this period.

The diet of brown trout sampled in 1997 and late 2000 is compared in Chart 4. A significant difference in the diet is the presence of the zooplankton Daphnia sp., commonly known as 'water fleas'. Zooplankton has bloomed at Lake Sorell over the past summer to the point where they are readily available to the brown trout with little effort having to be expended. Aquatic invertebrates, which previously dominated the trout's diet, may now be very difficult for the trout to locate due to the dramatic increase in turbidity of the lake since 1998.



Otolith removed from a brown trout aged 10 years. Dots indicate annual growth rings.

Mountain Creek Recruitment

Since 1996, Mountain Creek has been netted from September to December to estimate migrating fry numbers. This gives an estimate of the number of fish recruited to the fishery each year. It has not been possible to constantly net the entire water flow but with regular readings of stream flows, it has been possible to estimate the number of fry that have been escaping the nets. This is a low impact study as the nets are checked regularly and the fry are counted prior to being released to the lake.

Looking at the estimated recruits for each year shown in Chart 3, the most obvious feature is the large spike in 1997. However, since then numbers have been considerably lower. In 1998 there was a very low water flow which would have contributed to the low number of fry. Since 1998 it appears that recruitment numbers are slowly increasing again. Water flow has been the main factor determining recruitment of trout to the lake: sufficient water flow is needed for spawning adults and sustained water flow is required to host the fry before they return to the lake.

Ageing

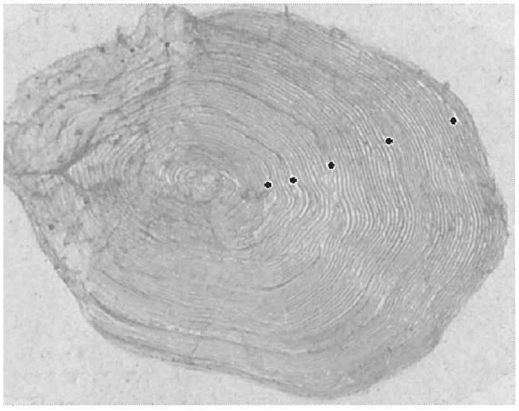
The IFS is changing its method of ageing

fish. In the past scales have been used to give estimates of age. It is now believed that this may not be the case as the scales are prone to a range of effects that inhibit the ability to make age estimates. Otoliths or "ear stones" will now be used in preference to scales for age estimation as they provide far more accurate estimations. The disadvantage of this method is that the fish has to be killed. This method requires far less samples than the traditional scale method and produces a much more accurate estimate of age. Growth rates can be determined from age as can the age structure of the trout population.

Being able to predict the age of fish from a given length is an example of the usefulness of ageing assesments. This is illustrated in Chart 5 for Lake Sorell fish. From this chart it is possible to assess the growth rates of individuals as well as assess at what age fish become sexually mature and enter the spawning run. Using this information, the IFS can assess how growth rates are changing from year to year at Lake Sorell and monitor further changes in fish condition.

Work in progress.....

- This year, trout in the spawning run will again be tagged and released in an effort to get an accurate population estimate. Recaptures of tagged fish also lead to a better understanding of growth rates and how they have been effected by environmental conditions.
- The NHT project is working towards compiling a computer generated ecological model of the Sorell/Crescent system. The change in trout population dynamics at Lake Sorell will be incorporated into the model.
- Otoliths collected from trout samples from 1998-2000 will be aged so that the growth rates of trout at Lake Sorell can be established for these years. This work will also give an indication of changes in the population structure during this time. Changes in growth rates of trout gives an indication of the status and relative health of the ecosystem.
- This year an honours project examining dietary changes in Lake Sorell trout and how changes in turbidity may affect this is being undertaken by a student from the University of Tasmania.
- The interactions of trout and the endemic Golden galaxias are being studied to determine competition overlap and predator-prey relationships between the species.



Scale taken from a brown trout aged six years. Dots indicate annual growth rings.

Chart 4a – Diet survey of brown trout in Lake Sorell 1997

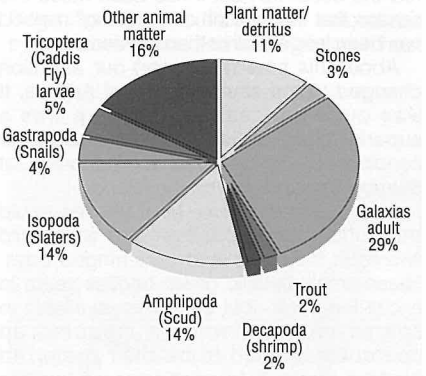


Chart 4b – Diet survey of brown trout in Lake Sorell 2000

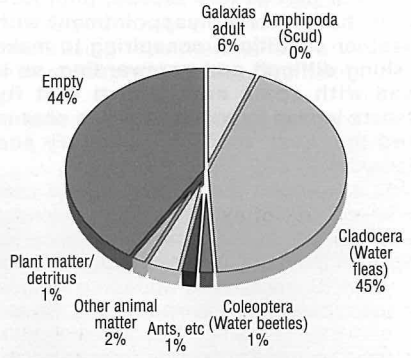
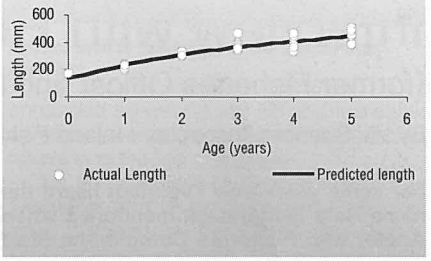


Chart 5 – Predicted length at age of brown trout in Lake Sorell (1997)



Carp Update April 2001

The prolonged dry conditions in the Southern Midlands have resulted in another summer of low lake levels and contention over water use. Whilst Lake Crescent was reduced to record low levels over summer, Lake Sorell did not approach the unprecedented lows of the previous season.

In an attempt to maintain sufficient levels in this lake, a relatively small volume of water was released for downstream use. Much anticipated rains in March have helped restore water levels following an almost total absence of rain in January and February. However, levels in both lakes are still very low and successive seasons of above average rainfall are probably required to re-inundate the marshes.

The continuous fish-down effort in both lakes has continued to erode the carp population. It is conservatively estimated that only about 500 adult carp remain in Lake Crescent, including 185 tagged males that are used for an ongoing population study. Whilst regular fishing efforts consistently yield modest numbers of carp (considering the small number remaining) highest numbers are generally caught in spawning or pre-spawning aggregations which attract large numbers of fish.

In November, spawning aggregations in the Interlaken Canal and the Clyde Marsh on Lake Crescent were discovered. From these aggregations, 189 fish were removed over two days. The aggregations coincided with rising water temperatures and levels, which have consistently been identified as environmental cues for spawning activity.

Under similar environmental conditions, pre-spawning aggregations were detected at Kermodes Bay and Robertson's Marsh in Lake Sorell. These aggregations, which were located by radiotracking, resulted in the capture of very few non-transmitter fish. This suggests that the population of adult carp in this lake is extremely small.

Unfortunately, a population of yearling carp in Lake Sorell has been discovered. These fish most likely resulted from a spawning event in spring 1999. Presently, the extent of their distribution within the lake is being assessed and preferred habitats are being determined. So far, 605 juveniles have been removed, most of which have been caught in Duck Bay and Muddy Bay.

The unwanted spawning highlights the difficulties faced when attempting to control natural variables over such an extensive area, despite a vigilant approach and previous successes in averting carp spawning behaviour. Whilst inopportune, the presence of a new generation of carp is by no means catastrophic. It is possible that a significant portion of the population has already been removed over the past two months, by identifying the areas of highest carp density and fishing these areas intensively. Since then, it appears that the remaining carp have dispersed to other areas of the lake. From past experience with juvenile carp, it is possible that it will take a couple of years for these fish to socialise with transmitter implant fish and therefore be locatable through radiotracking. At that stage, the carp from this population will have grown enough to be caught again in significant numbers using current fishing techniques.

The annual carp surveys of the Derwent catchment have recently been completed. Again, they failed to identify evidence of carp outside the two lakes, illustrating the success of the containment strategy of the carp program.

A Fly Fisher's Season

Jim Ferrier, Northern Tasmania Fishing Association

The first part of this season, until New Year, had been a disappointment with weather conditions conspiring to make fishing difficult and unrewarding, so it was with some enthusiasm that fly fishers looked forward to the dun season and the 'best' months – January and February.

As in previous years, dun fishing is considered the height of the fishing calendar and our eagerness for the appearance for highland duns was undiminished. In the hot days of summer, duns appeared in their thousands in the Cowpaddock, Seven Pound Bay and Duck Bay but with little interest in the floating fly from the fish. Consistency in daily hatches, too were missing and disappointingly, this trend seems to be the norm rather than the exception in recent seasons.

An emerger and a floating nymph were successful as the fish seemed to be homing in on the ascending nymph and hatching dun to the exclusion of all else.

In such conditions, a weighted, beaded nymph fished on a dead slow drift can usually fool the better fish but it has been noted this season that the "nymph on the hang" method has been less effective than previously.

About this time (February) our attention changed to the southern end of Arthurs. It was quite noticeable that there was a superior class of fish – bigger and better conditioned – to be found at the Morass, at Stumpy Bay and around the Island.

Around this time too, gum beetles could be found drifting out from the windward shores in the slicks and gum-fringed bays. These small metallic green beetles seem to excite the trout – but only when available in sparse numbers when a mopping up operation seemed to be their preferred feeding method. In conditions of "wall to wall" beetles, hardly a rise was to be seen but in such conditions, a weighted gum beetle designed just to sink slowly or a weighted brown nymph can be deadly.

Great Lake received some attention during February. Gum beetles were on the menu and, as before, sparse numbers resulted in good fishing. In the very hot days, small grey grasshoppers were very much to the trouts' liking and with a hot north wind, a large red tag fished in the waves and foam on the weather shore produced some exciting fishing.

The quality of the fish taken from Great Lake this season has been excellent – larger than normal, better conditioned and red as a salmon.

The disappointment of the season has been the fishing at Little Pine. Smaller and inferior in condition in comparison with previous years, the Pine fish and subsequent fishing has been avoided by anglers – as evidenced by the few boats and shore based anglers even in the top times.

This report would not be complete without some reference to Penstock Lagoon. This was very popular water with top class fish being taken from the first day of the season.

In summary, this season has probably been my least memorable in recent years mainly due, I feel, to the weather conditions at suitable fishing times, poorer than usual fly hatches and the less than effective personal methods of nymph fishing.

As for next season – I just can't wait for the opening in August!!

Interview with Roly McCormack

(former Fisheries Officer and Policeman)

By Viv Spencer, Inspector – Inland Fisheries Service

For some years now I've often heard the name Roly McCormack mentioned when Angler and Fisheries Compliance Staff meet and discuss the 'good old days'. Well, recently I had the pleasure of meeting Roly and discussing his involvement with the Inland Fisheries or as it was known then "The Salmon & Freshwater Fishery". Roly only worked for the Fisheries for a bit over 4 years but he was a well known and respected identity.

Roly said, "I was seconded from the Police Force to Fisheries and Fauna in 1952, those departments were then known as The Animal and Bird Protection Board and Salmon and Freshwater Fisheries, I worked from the North West Coast and lived at Devonport. Doug MacIntyre worked from the North and Arthur Flemming from the South, George Hanlon also worked from the South when Arthur left for a couple of years to go farming, we were all seconded from the Tasmanian Police Force. We used to work in together and also with other Police because we knew them all.

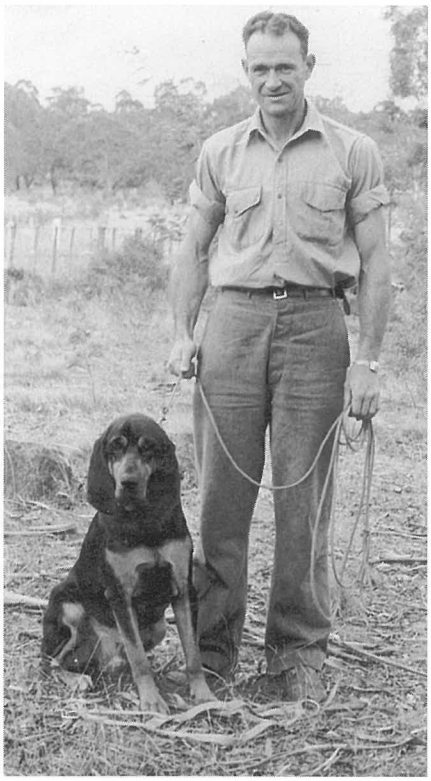
"I remember one of those operations, George Hanlon had information that some netting was going on down below Huonville, we left our vehicle down Geeveston side of the Huon River. We had a push bike each so we rode them down and found two set nets about half a mile apart. I sat on one and George the other, we spent the night waiting and just after daylight a boat came put put putting down the river, he pulled in where George was waiting so I hopped on my bike to go and help, when I got there it was obvious George had been immersed in the river. Apparently when George made his move to grab the boat the poacher saw him and started heading off so George grabbed the side of the boat and went in. Anyway, we finished up with a boat and a net we also confiscated the other net.

"In Winter it was very cold working in the highlands, I had an old Landrover, no heater, we used to do a lot of foot patrols those days. We walked from the moras at Arthurs Lakes one night to Guns Lake and caught some poachers. We had to carry the poaching gear all the way back to our camp at the moras. We had no flash waterproofs or gear those days. I had an oil skin jacket and my Police issue gear.

"On the North West Coast Commercial Whitebait Fishermen were operating then. At Bells Parade there was a landing and there used to be a dozen or so Commercial Fishermen netting kerosene cans full (4 gallon tins) of Whitebait. They used to catch tons those days, but the only reason we were there was because they used to catch Trout in their nets and if we weren't there some wouldn't put them back. That's hard to believe isn't it!

My parents had a farm at Western Creek half way between Meander and Mole Creek. As kids we used to walk up Higgs Track to Nameless, Lucy Long. We also used to walk into Julians and Pillans before there was any road past the Liawenee H.E.C. Caretakers house. I remember there used to be a cart track from Stone House up the Western side of the Ouse River, past Double Bar over the James River up to Little Splitrock. Old Dudley Allison used to drive a horse and cart into a tin hut at Little Splitrock. Allison's used to run sheep up there over the summer, moving them up in November and taking them back to the lowlands in March the following year. Most of the fences up there were carted in with bullocks and dray."

Roly joined the Tasmania Police Force in June 1947 after about 9 months he was supplied with the first Solo Traffic Motor Cycle (an ex Army 7? hp W.L.A. Harley Davidson) then in 1950 their section got the first model Holden for Traffic Patrols, when the Traffic Section first started.



Roly and friend – 1962

Roly spent: Seven years in Launceston with Licensing, Gaming and CIB, four years in Longford Uniform, four and a half years New Norfolk CIB, two years back at Longford Uniform, seventeen years at Scottsdale Uniform Inspector, and four and a half years with the Fisheries from 1952 – 1956.

Roly retired at Scottsdale in September 1986 and moved to Bridport where he and his wife live a very active retirement.

I would like to thank Roly and his wife for this story and their hospitality. I am sure it will be of interest to many Anglers who knew or have heard the name, Roly McCormack – Fisheries Officer and Policeman.

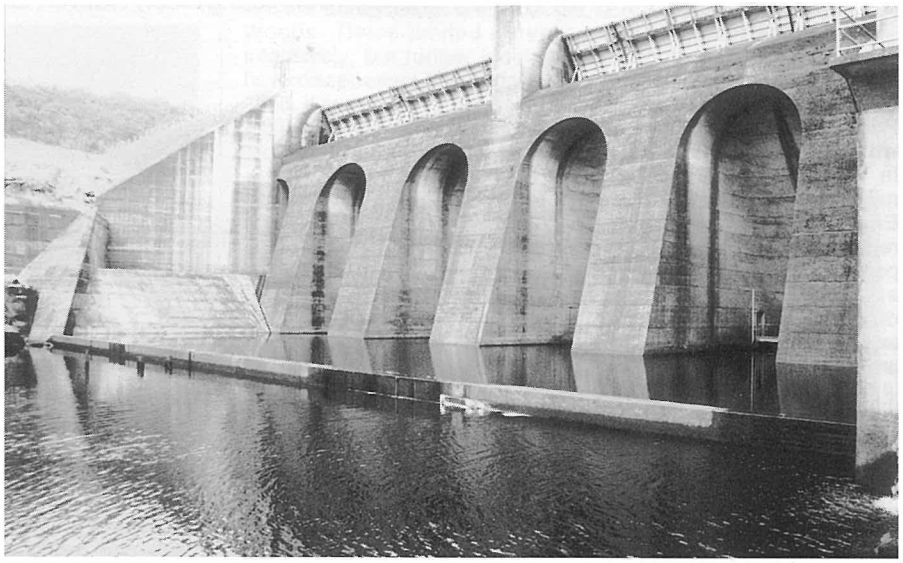
Eels and Hydro Dams

During 2000 the Inland Fisheries Service (IFS) together with Hydro Tasmania secured funding from the Fisheries Research Development Corporation (FRDC) to assess the impacts of hydro-electric dams on eel stocks in Tasmania and undertake an assessment of mitigation strategies. Hydro Tasmania is committing significant resources to the project and will ensure collaboration at all levels of management.

The objectives of this project are to:

- assess the impacts of hydro-electric dams on eel migrations and eel population structure in Tasmania's lakes and rivers, and to assess the effectiveness of past elver restocking practices in hydro-impounded catchments for maintaining eel populations within those catchments.
- assess the direct impacts of hydroelectric dams and associated operations (turbine intakes and water management practices) on adult "silver" eel survival rates during their downstream spawning migrations.
- evaluate various management tools (ladders/bypasses and passage; netting/trapping and translocation) to mitigate impacts and provide recommendations for implementation.
- review the management of barriers to eel migration, including overseas experience.

Regulation and modification of natural river systems has obstructed eel migration in many catchments in Tasmania. It is possible to restore stocks, however, with the implementation of appropriate management tools such as fish passes/ladders, and translocation through trapping/netting programs. These strategies have proven successful in increasing commercial fishery yields internationally, and may also contribute to enhanced spawning stocks and increased silver eel escapements (adults successfully returning to the sea to spawn).



Barriers such as this are thought to impede fish migration

The sustainability of the eel resource in Tasmania and of existing (and potentially new) commercial eel fisheries in hydro-impounded catchments, ultimately depends on the implementation of appropriate and effective mitigation strategies (passage and/or translocation) specific to both upstream and downstream migrations.

The results of this study will advance our understanding of the impacts of hydro dams on eel migration and recruitment, on eel distribution and population structure, and of the effectiveness of elver (juvenile eel) restocking practices.

The outcomes of the project will enable informed decisions about these impacts and facilitate the development of an integrated management strategy for eel fisheries in hydro-impacted catchments. Such a management strategy would ultimately:

- facilitate fair and equitable resource allocations while maximising resource use efficiencies.
- enhance the profitability, efficiency, viability and competitiveness of the commercial eel fishing sector and provide further commercial opportunities, whilst minimising the cost or loss of flexibility to hydro-electric operations.
- maintain biodiversity and promote sustainable development of the fishery.
- derive sustainable and cost effective strategies for developing and managing eel resources.

Four Inland Fisheries Service staff are currently employed on the project with sampling commencing during November 2000. The waters sampled so far include the Derwent River, Lake Meadowbank, Pine Tier lagoon, Ouse and Plenty river. All eels caught will be processed and aged during the winter months when sampling is discontinued due to the inactivity of eels during the colder months.

Lake Meadowbank – daily sampling over the summer months is needed for accurate results.

Inland Fisheries Trout Spawning Open Weekend at Liawenee

...continued from front page

spawning behaviour in the Canal, the fish trap and capture, and egg storage and incubation. The IFS is also displaying its boat fleet, with access for children aboard the Mighty Carp Crusader, complete with electro-fishing and radio-tracking equipment.

Take-away food and drink will be supplied by volunteers from several angling clubs. This year a refreshment tent will be provided for dining, socialising and meeting various IFS staff. It will be available for meetings, informal talks and discussion of anything and everything about the Fisheries.

Angling clubs will also host a range of events such as raffles, casting competitions, fly-tying demonstrations, and provide novice fishers with fishing advice and casting tuition.

So don't miss the IFS Open Weekend at Liawenee in May. Come and enjoy wholesome highland tucker as you browse the live fish displays, watch wild trout spawning, observe the careful capture and stripping of fish, chat to exhibitors, and take part in competitions and events for the whole family.

Fisheries Management – UK Style

by Rodney Walker, Technical Officer, Native Fish Conservation

Prior to commencing my current position with the Inland Fisheries Service here in Tasmania, I worked for about seven months as a fisheries assistant for the Environment Agency, in the Yorkshire region of England. While working in this position I used several survey techniques and handled many fish species very different from those here in Tasmania, and these are the focus of the following article.

My role was to assist in the annual fish surveys conducted in the rivers and streams throughout the greater Yorkshire region. These annual surveys have been conducted since 1994 in response to water abstraction licenses being granted to landowners. As part of the annual fees paid by farmers to abstract river or stream water, money is dedicated for assessment of its impacts. These assessments take the form of rigorous invertebrate and fish surveys, upstream and downstream of major abstraction points.

The fish surveys use several methods depending on the characteristics of each site. Electrofishing with both hand held and boat electro-shockers is the most common method employed, however seine netting, gill netting, electro netting and sonar methods are also regularly practised.

The methods that stand out as vastly different to those used here in Tasmania are the use of electric nets and sonar equipment. The electro-shocking equipment is also steering in a different direction to Tasmania's Inland Fisheries Service. The Environment Agency does not use back-pack electro-shockers, as they are thought to be ineffective in the high conductivities found in the English waterways (due predominantly to the higher pollution levels in the water compared to Tasmania). Instead they use generator based electro-shocking equipment, fed into a control box containing dead mans switches and emergency stop mechanisms. This allows up to four anodes to be operated from the one generator, therefore allowing a team of people to work fish very efficiently toward either a stop net or an electric net.

Electric nets are seine nets with anode and cathode copper strips sewn vertically through the fabric, spaced approximately 50 centimetres apart. The net is simply stretched across a body of water and activated periodically from a shore-based generator. This electric current both stuns fish and prevents fish from passing upstream by jumping over the net floats. These electric nets are used as an alternative to stop nets, usually only where larger fish are likely to be encountered (ie Atlantic salmon, pike and large sea trout) as these large specimens are extremely difficult to manage in hand held nets. Often this method is also used to collect brood stock fish for restocking programs.

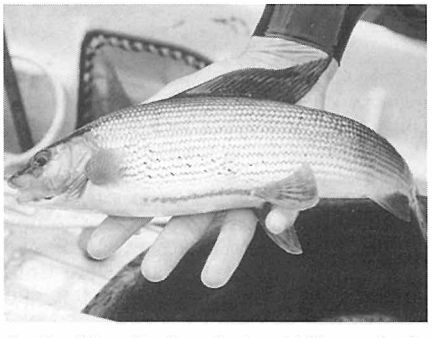
Sonar equipment is used to give an overall picture of fish biomass in a large stretch of river. This data can then be compared to previous years sonar and survey results, to help determine natural variations in fish stocks. Using a sonar equipped boat, both shores of a river are surveyed. The sonar differentiates fish from other debris in the water as well as determining approximate size of each specimen. The sonar recordings are stored onto a laptop computer and later the data are analysed to determine fish biomass.

Large female Northern Pike (*Esox lucius*).

All fish collected during the annual surveys are measured, identified and scale samples taken. From this data, age-growth relationships can be determined as well as the overall condition of the fish populations. In addition to this, fry surveys are conducted to assess the condition, number and species composition of the annual recruitment. The fry surveys give an indication of future fish stocks as well as early indications of invasions into waterways by introduced species. This allows strategies to be put in place to deal with these issues at an early stage.

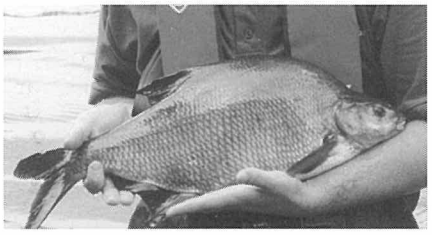
Apart from using some interesting techniques to survey the fish, the numbers of species encountered were amazingly diverse. On any given day a survey would produce between 10-24 species. These ranged from small benthic stoneloach (*Cobitis sp.*) through to very large predatory northern pike (*Esox lucius*).

A vast range of species in between these two extremes were also regularly encountered, such as; trout (*Salmo trutta*), Bullheads (*Cottus gobio*), 3-spined sticklebacks (*Gasterosteus aculeatus*), 9-spined sticklebacks (*Pungitius pungitius*), common roach (*Rutilus rutilus*), common rudd (*Scardinius erythrophalmus*), chub (*Leuciscus cephalus*), Dace (*Leuciscus leuciscus*) , grayling (*Thymallus thymallus*), Orfe (*Leuciscus idus*), carp (*Cyprinus carpio*), bream (*Abramis sp.*), perch (*Perca fluviatilis*), bleak (*Alburnus albernus*), minnows (*Phoxinus phoxinus*), barbel (*Barbus barbus*) and ruff (*Gymnocephalus cernuus*).

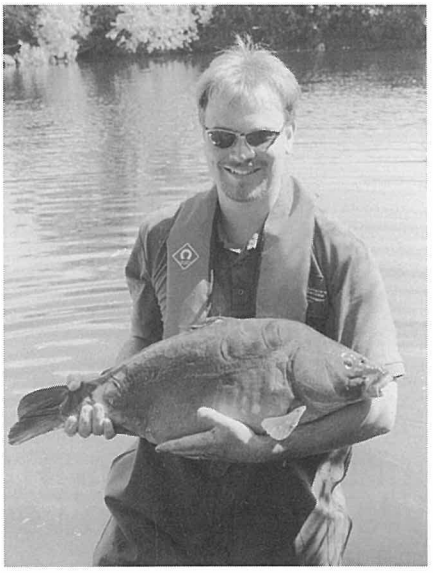


Grayling (*Thymallus thymallus*) are highly sort after by anglers.

The time spent working for the Environment Agency in the Yorkshire region taught me many techniques that could be applied here in Australia. The problems encountered during the surveys as well as the major threats to the waterways are different to those currently faced here in Tasmania, but the methodology used to assess these pressures could be similarly applied. In addition to this employment being a great learning curve, it was also a lovely part of the world and a terrific experience.



Common bream (*Abramis abramis*) are typically caught in deep slow flow areas.



Mirror Carp (*Cyprinus carpio*) are a common catch in rivers after flooding.

NATIVE FISH NEWS

By Dr Jean Jackson, Native Fish Biologist

Surveying Lake Oberon for Pedder galaxias

Pedder galaxias on the Move!

Just a few years ago, Australia's most endangered freshwater fish, the Pedder galaxias (*Galaxias pedderensis*), was in danger of becoming the first Australian freshwater fish species to become extinct. It was threatened by loss of habitat as well as predation and competition from the introduced brown trout and native climbing galaxias. In 1991-92, to save the species, 31 fish were moved to Lake Oberon, a fish-free lake in the Western Arthur Range. Evidence to date suggests that Pedder galaxias no longer occur in what remains of their natural habitat (tributaries of Lake Pedder).

This January, population surveys by the Inland Fisheries Service and University of Tasmania found that there are at least 500 adult Pedder galaxias present in Lake Oberon, with a large number of pelagic juveniles also seen.

To further improve the species' survival chances, 52 adults were transferred from Lake Oberon to a fish-free dam near Strathgordon on 21 March 2001. The dam had been specifically modified by Hydro Tasmania, with advice from the IFS, to provide a suitable habitat for Pedder galaxias. Additional moves to other sites will be considered if this one is successful. Since 1998, this work and other threatened species conservation has received funding from the Natural Heritage Trust.

Measuring saddled galaxias at Woods Lake

What's happened to Arthurs paragalaxias at Woods Lake?

The small Arthurs paragalaxias (*Paragalaxias mesotes*) is one of two native fish species that occur only in Arthurs Lake and Woods Lake on the Central Plateau. The other is the saddled galaxias (*Galaxias tanycephalus*). Both species are threatened due to their very limited distribution and threats from trout predation and habitat changes in these hydro-managed lakes.

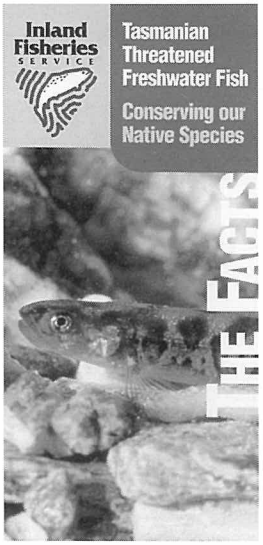
The IFS has real concern for Arthurs paragalaxias which has not been seen in Woods Lake during several years of shore electrofishing surveys. It has been listed, therefore, as Endangered. To determine whether the species was present, but not seen by electrofishing because of the high turbidity in Woods Lake, IFS officers used fine-mesh fyke nets designed for catching galaxias. These were set for one night in Woods and Arthurs Lake. Several Arthurs paragalaxias were caught in Arthurs Lake, but none in Woods. These limited surveys need to be repeated more intensively, but further indicate that Arthurs paragalaxias may have disappeared from Woods Lake sometime between 1988 and 1998. If any galaxiids are found in trout guts from Woods Lake, the IFS would appreciate receiving them for identification (they can be preserved in methylated spirits).

Upper Swan River in February

Swan galaxias tough it out

During its regular February survey of all the Swan galaxias populations, the Native Fish team observed extremely dry conditions in parts of eastern Tasmania. Some streams were so dry that the survival of fish populations was in extreme doubt without rainfall soon. The upper Swan River was reduced to pools dark with tannin from gum leaves, and crammed with Swan galaxias. For weeks only drizzle fell, then finally the rain came with a vengeance! These extremes, especially drought, place an enormous pressure on the remaining Swan galaxias populations, which are all now restricted by the downstream occurrence of trout. They have nowhere to go: the fish can no longer retreat downstream when conditions are extreme, and then move back upstream to recolonise when conditions improve. Their survival during these times depends on just how tough they can be.

New 'Tasmanian Threatened Freshwater Fish' brochure



A colour brochure has been printed to provide information on Tasmania's threatened freshwater fish species, why they are threatened, what conservation measures are in place and what you can do yourself. Brochures are available at head office reception and IFS Open Weekend.

New native fish staff

Rodney Walker is now working as a native fish Technical Officer. Rodney completed Honours on barriers to in-stream fish movement in 1999 and recently returned from a year working with UK fisheries. His experiences there are described on the previous page.

Any comments, suggestions, contributions or ideas for articles would be most welcome and should be addressed to:

Sarah Burton
Inland Fisheries Service
6B Lampton Ave, Derwent Park
Hobart, Tasmania, 7009

Ph (03) 6233 8930, Fax (03) 6233 3811 or on the Internet at www.ifs.tas.gov.au

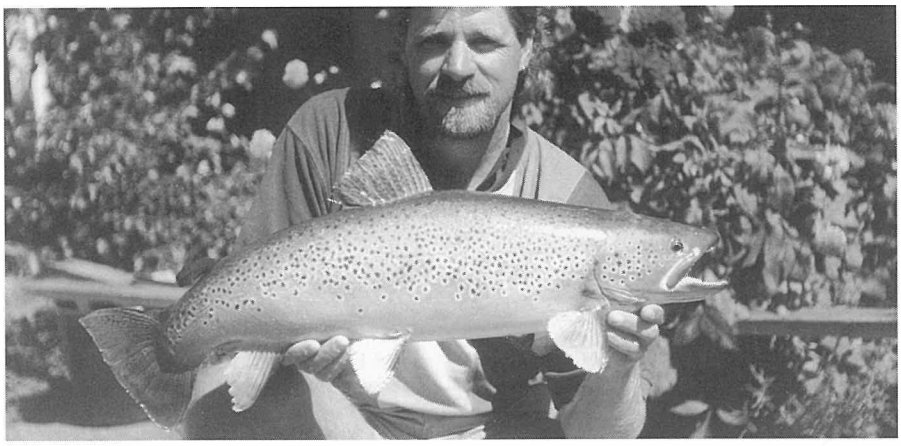
The one that didn't get away.

By Viv R Spencer, Senior Inspector

It was just breaking daylight on a still misty highland morning mid January, 2001 when Evandale angler Wayne Gilbert was stalking what appeared to be reasonable fish in a back water of Carters Lagoons in the Western lakes.

He cast a small wet fly then waited in anticipation. The fish appeared interested, then with a slight retrieve all hell broke loose and the fight was on. Up and down the lagoon like a locomotive, out of the water rolling and twisting onto its back for the first, second, third and then fourth time - half an hour passed before this magnificent 10lb brown trout finally surrendered to the net.

I'm sure Wayne will remember this trip for many years to come, he has since had the fish mounted by a local taxidermist and is at present building a glass display case.



Prosecutions

Infringement notices

Offence	Number
Fish without a licence	3
Unattended set rod	2
Possession of assembled rod & line	
Use excess rods	1
Take more than 1 kg of whitebait	1
Possess and use net other than a landing net	2
Possess natural bait at artificial water	1
Use strike indicator	1
Take whitebait when unlicensed	1

Court proceedings

Offences that were proceeded with by summons are listed below.

Offender	Location	Offences Summary	Total fine + costs ($)
Ian JOHNSON, King Island	(Grassy, King Island)	Operate fish farm withouta fish farm licence	1 035-60
Dean Justin GREY, Smithton	(Duck River)	Take whitebait without a licence	535-65
Quinton, Andrew GREY, Smithton	(Duck River)	Possess net, take whitebait without a licence	1 285-65
Peter Warren George LAMBERT, Forest	(Duck River)	Take whitebait without a licence, possess net	1 200-00
Peter Warren George LAMBERT, Forest	(Duck River)	Take whitebait without a licence, possess net	1 500-00
Bradley Phillip PAUL	(Huon River)	Geeveston	85-65
Rodney Clifford STURZAKER, Chudleigh	(Lake Augusta)	Take fish other than rod and line, more than two rods, Unattended set rod	735-65

The Fisheries Habitat Improvement Fund Inc is incorporated as a public, non-profit Trust to generate money for practical studies and works aimed at improving and restoring habitat for fish and other aquatic life.

Although the focus of the Fund is on improving freshwater habitats, a key outcome is improved fishing for the angler. Ultimately, the Fund aims to assist in the restoration and rehabilitation of many inland waterways, helping to ensure their sustainable management and striving to protect Tasmania's world class trout fishery. The independent Board of Trustees comprises Emeritus Professor Nigel Forteath, Mr John Cleary, Mr Michael Stevens, Dr Rob Sloane and Mr Ashley Artis.

The Fund is now actively seeking corporate sponsors and donations to raise the necessary capital for its inaugural Project, the rehabilitation of the Shannon Lagoon.

The Fund wishes to thank those individuals and organisations who have already donated to the Fund and requests that you donate generously to help make this the first of many projects sponsored by the Fund. Remember, all donations are fully tax deductible.

For further information please contact Julie Avery on 6233 8755 or email julie.avery@ifs.tas.gov.au. Donations should be forwarded to The Public Officer, The Fisheries Habitat Improvement Fund Inc, PO Box 480, Moonah 7009.

Please donate generously to the Fisheries Habitat Improvement Fund

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