

INLAND FISHERIES COMMISSION NEWSLETTER

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PRIVATE PROPERTY, ANGLERS AND LITTER

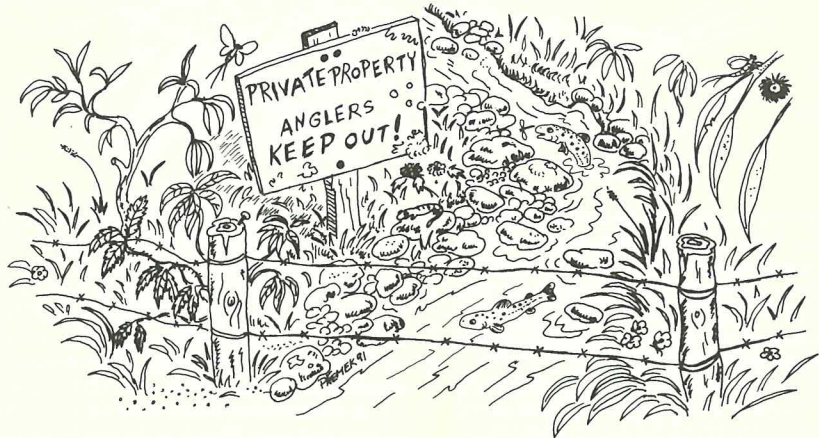
Increasingly the Commission is being contacted by property owners wishing to know whether they have to allow anglers entry to their properties to fish for trout in waters on, or adjacent to, their land. Enquiries to the same effect are also being received from anglers who have been denied access to a certain favourite stretch of water.

To state the facts, the general rule is that most property titles provide for ownership to the bank or the middle of a river. Only in a few rare cases are there specific streamside reserves. The popularly held belief that any person may walk along a river bank or that they may wade upstream provided they don't get out onto the bank, is simply not the case.

Consequently, any property owner may deny access across their land and no right of way across private property to a stream, can be demanded. Following on from this, an angling licence does not entitle any person to entry to private property without the permission of the landowner. However, a landowner may not charge a fee for fishing any water on or adjacent to his property as they do not own the water or the fish; these are the property of the State.

The reasons for the increase in enquiries regarding these matters are simple; some anglers are not doing the right thing by the property owners. There are many problem areas but a couple of common problem areas come to mind.

Gates and Fences: leaving a gate open or damaging a fence can be devastating for



a farmer. The resultant wandering stock can damage crops or disrupt breeding programs that could easily result in a serious loss of income. Less serious cases, such as damage to fences, still take time and money to repair.

Disturbance: no property owner can be expected to tolerate persons wandering around their backyard or property at all hours of the day and night, especially when they often don't even know who it is.

Littering: this problem is all too apparent and is simply unnecessary. The objects left behind had to be transported to the spot – why can't they be taken out again?

The problem of litter is not restricted to private property but is also a major worry around public waters in the highlands. The problem is certainly not as bad as it was 15-20 years ago, but then people will not now

accept littering to the same extent as they did then and neither they should.

The solution is primarily one of education and everyone can play a part in this. One group or another can continue to organise clean-ups of various areas but this simply shifts the onus from those causing the problems. Commission staff frequently participate in these clean-ups but they are justifiably unhappy about doing so.

If anglers are to maintain the privilege of access to private property around the State, then they must ensure that they do not contribute to the litter problem and that they also assist in educating others. They must also accept that access to private property is a privilege and not a right. If this respect can be appreciated by all, hopefully the sign above will be a thing of the past rather than a common feature of the landscape.

CONTENTS

Private Property, Anglers & Litter

In Brief

Atlantic Salmon in Great Lake

Creel Surveys

Other Than Trout –
The Life Cycle of the Mayfly

The Value of Angling to Tasmania

1991 World Fly Fishing
Championship – New Zealand

Prosecutions

ARTICLE

Local Storage Fisheries

DR PETER DAVIES AND BILL THOMPSON

IN BRIEF

■ Salmon in Waterhouse

Between August and October 1990 some 51 428 Atlantic salmon fingerlings were released in Big Waterhouse Lagoon.

This water had received large numbers of brown trout in the past but it was considered that the small size of the trout at release may have contributed to the lack of success of these stockings.

A netting survey of Big Waterhouse in July 1991 showed that these fish had grown extremely well. Although only a few fish were netted, some had grown to 1.5kg in weight. It is hoped that these may provide some good sport this season!

■ Angling Licence Fees

The Commission is pleased to be able to maintain its licence fees at about the same level as last year. In fact, the pensioner fee

has been reduced from \$20 to \$15. A three day licence at \$12 has been reintroduced by popular demand.

Anglers should be aware that all of your licence fees are paid to the Commission and that these fees are the only source of funding for the Commission's trout fisheries management operations.

■ Tasmanian Trout Fishing Championships

Organisation of the annual competition which is normally held on the northern long weekend is well underway despite the change in date to accommodate the racing industry. The competition will be held on 9-10 November 1991.

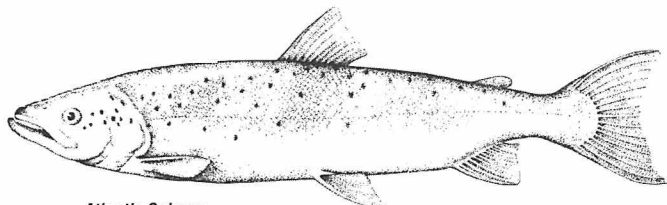
At least \$10 000 in prizes has been secured with the major prize being a return trip to New Zealand including the cost of a trout fishing guide.

The competition is open to any licensed angler who puts in an entry form. People may fish any water and the major prize is drawn from those entering fish of any size.

ATLANTIC SALMON IN GREAT LAKE

The Atlantic salmon, scientifically known as *Salmo salar*, is a close relative of the brown trout and comes from the same native range in Europe and North America. This normally sea-going salmonid has been held in a land-locked situation at Gaden in New South Wales since its introduction into Australia. This population was the source of stock for

requirements which have been offered, free of charge, to the Inland Fisheries Commission. Accordingly, in 1988, it was decided to try stocking this species in Great Lake in order to provide an addition to the angling attractions of this water. As a consequence between mid 1988 and mid 1990, a total of 500 adults, 11 000 yearlings and 143000 fingerlings were released into the lake.



Atlantic Salmon

Tasmania's domestic sea-cage salmon industry. Fish were brought into the State via a quarantine facility at the Tarooma laboratories of the Department of Sea Fisheries. There was at that time no plan for deliberate liberations of this species into public waters in the State.

The salmon industry requires around one million smolt a year from the commercial hatchery at Wayatinah on the Derwent River. For the past few years, the hatchery has produced some small salmon excess to

How have they fared? At the end of the 1989-90 fishing season, of 356 anglers surveyed who had fished Great Lake, 185 had caught Atlantic salmon and a further 19 thought they had done so but weren't sure of the identification of the species.

From the data collected, it appears that some 4 200 anglers of the total of 7 500 who fish at Great Lake, caught a total of 17 000 salmon that year. This is compared to a total catch of 35 000 brown and 17 000 rainbow trout for the season. Around 1 100 children

also caught salmon during that season, accounting for an additional 4 200 fish (as well as 12 000 brown and 6 000 rainbow trout). This is a most satisfying return on the stocking 'investment' and most people agreed that the salmon provided an extra interest at Great Lake, particularly for children. In fact, of 216 replies to the question "would you like to see the Atlantic salmon fishery at Great Lake maintained?", 89% said yes.

The salmon are not expected to achieve a size any larger than the trout already in the lake. Typical sizes range around 500g to 1kg. Atlantic salmon have been seen in the spawning run at Liawenee but are not expected to make a significant contribution to the fish population; it will have to be maintained by stocking.

They have a different appearance to the trout, having a longer, sleeker body shape in freshwater than trout and their sea-going brethren. Some people think they are not in good condition because of this shape, however, the condition of the flesh will soon tell you otherwise. They are also good fighters and you certainly know when you've got one on the line!

How did people catch them? Most people surveyed (60%) had caught them by trolling or spinning, while bait was used by 21% of anglers who caught salmon.

As the stocking generally met with public approval, it is possible that there will be further releases in Great Lake in the future if there is surplus stock available.

CREEL SURVEYS

The 1990-91 Fishing Season

This season, the Commission introduced a new creel survey of our fisheries so that up to date information on catch rates could be gathered each year. This survey involved both enforcement and research staff in an effort that was made particularly successful by the cooperation of those anglers who were willing enough to be disturbed on the water. Many thanks to all those who were interviewed during the season.

The Commission carried out the interview surveys on a number of lakes over five long or holiday weekends during the fishing season. In total, 770 anglers were asked questions about their fishing on the day of the survey and about their past catches at that water during the season. Of those interviewed, 351 were trolling, 210 bait fishing, 111 spinning and 98 fly fishing.

For results from the main waters see Table One. This survey gives us, and you, the first up to date information on how a fishing season went in terms of catch rates. We hope to be able to repeat this every year.

How did this season compare with the last few seasons? Other things being equal, the best method of comparing the success of a season is to compare the average catch per day at a water from one year to the next. If the catch per day figure is down, then either angler interest is waning or the fishing is getting more difficult (less fish or harder to catch).

The information we have to date for comparing seasons is that gained from the postal questionnaire surveys we perform each year. Does this interview survey match up against the postal questionnaires? In the following table are the catch per day estimates from previous fishing seasons gained

from the postal questionnaire matched against those from the interview survey for several waters (we don't have the 1990/91 questionnaire information to hand yet). They compare reasonably well.

If we take the postal questionnaires as being a good basis to compare fishing seasons, it seems that last season's catch rates in these waters were similar to those of the previous four seasons.

The only water of those listed on Table Two that has gone through some big changes over the past few years is Lake Crescent where stocking has certainly influenced catch success.

Of course, the other thing that indicates a good season is how many anglers fished each water. This may be strongly dependent on such things as weather conditions. We have this information from the questionnaires but cannot get it from a simple interview program like this – it would be just too intensive in terms of Commission manpower to count all, or even a reasonable

| WATER | NO. INTERVIEWED | AV. HOURS PER FISH | | AV. CATCH PER DAY | |
|---------------|-----------------|--------------------|---------|-------------------|---------|
| | | BROWN | RAINBOW | BROWN | RAINBOW |
| Arthurs Lake | 192 | 3.4 | - | 2.1 | - |
| Lake Sorell | 112 | 4.6 | * | 1.7 | 0.1 |
| Lake Rowallan | 101 | 6.7 | * | 2.5 | 0.5 |
| Lake Crescent | 102 | # | # | 0.8 | 0.6 |
| Lake Pedder | 54 | 4.1 | - | - | - |
| Dee Lagoon | 47 | 9.4 | * | 0.7 | 0.2 |
| Bronte Lagoon | 41 | 6.7 | * | 1.1 | 0.1 |
| Bradys Lake | 39 | 10.2 | * | - | - |

TABLE ONE

- indicates insufficient information was available. * indicates more than 24 hours effort needed per fish! # indicates more than 24 hours per fish due to the inclusion of information from long-line bait fishermen.

portion of the anglers fishing our waters – just imagine it at Arthurs, where our current estimate is around 8 – 10 000 anglers!

We feel that, provided we keep a check on the catch rates, the spawning runs, the condition of fish and the successes of our stocking programs then we are doing our job properly – as long as the numbers all add up!

In order for us to get the information on catch success it means interviewing you, the angler, at the lakeside. Thanks again to the 770 obliging participants in our survey and who knows – we may see you on the water this season!

TABLE TWO: AVERAGE CATCH PER DAY FOR BROWN TROUT

| | INTERVIEW SURVEY | | QUESTIONNAIRE SURVEYS | | | | |
|---------------|------------------|-------|-----------------------|-------|-------|-------|-------|
| | 90/91 | 90/91 | 89/90 | 88/89 | 87/88 | 86/87 | 85/86 |
| Arthurs Lake | 2.1 | 2.6 | 2.3 | 2.0 | 2.5 | 2.6 | 2.5 |
| Lake Sorell | 1.7 | 1.5 | 1.5 | 1.6 | 1.1 | 1.5 | 1.6 |
| Lake Crescent | 0.8 | 0.6 | 0.9 | 0.8 | 0.5 | 0.9 | 0.5 |
| Bronte Lagoon | 1.1 | 1.2 | 1.3 | 1.5 | 1.2 | 1.4 | 1.3 |

OTHER THAN TROUT

A regular article on animals of interest to the angler

THE LIFE CYCLE OF THE MAYFLY

by Stuart Chilcott, Scientific Officer, Inland Fisheries Commission

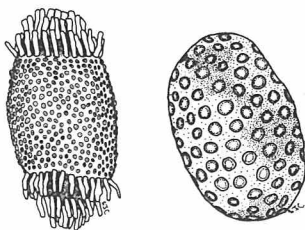
The scientific name for the mayfly, *Ephemeroptera* (Greek, *ephemerus*, lasting for a day; *pteron*, wing), literally refers to a winged adult insect that only lives for a single day. Although this may be true to many species of mayfly, some can survive for several days or longer, depending on the prevailing weather conditions.

This article will describe the life cycle of the mayfly which exhibits the following stages; egg – nymph – dun (subimago) – spinner (imago) .

Egg stage

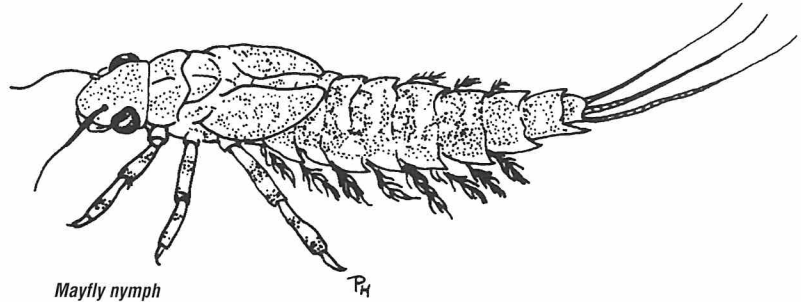
The eggs are generally oval shaped, ranging in lengths between 0.15 and 0.33mm. They differ considerably between species, having many types of external surface structures that aid the egg in becoming attached to submerged rocks or vegetation. The number of eggs held within a female mayfly vary between species. Some can possess up to 6000 – 8000 eggs per female. The female of each species has a particular behaviour pattern for egg laying. These patterns are briefly summarised as follows:

- the spinner flies low over the water and releases the eggs in a single mass on the water surface;
- others fly over the water surface and intermittently dip the abdomen, releasing eggs in batches;
- some females will submerge themselves and deposit the eggs on substrate under the water surface;
- in a few species, the female falls exhausted on the water which causes immediate hatching of eggs inside the abdomen;
- or finally, the female rests on an object above the water and releases the eggs on submerged objects.



Two different mayfly eggs

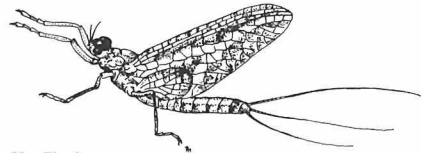
As an example, the eggs of the red spinner are deposited in batches as the female flies over clear water dipping her abdomen on the water surface. The eggs of these batches disperse explosively once contact is made with water, after which the eggs drift slowly to the bottom of the stream. Generally, the eggs take three weeks to hatch although egg development time is affected by water temperature. The hatchlings are extremely small, 0.1mm long, and delicate.



Mayfly nymph

Nymph stage

The nymph stage is the longest stage in the mayfly life cycle, lasting from six months up to two years, depending on the species. During this stage the nymphs forage for organic material and small algae growing on submerged leaves and woody debris. Nymphal development continues through the year, but is more pronounced in the warmer spring and summer months because of the favourable effects of temperature and increased food resources.



MayFly dun

The nymphs occupy a variety of habitats from fast flowing streams to lakes. Some species have particular habitat requirements such as woody debris or sand and detritus, whilst other species can survive over a broad range of habitat types.

When the nymph is full developed (easily recognised by the darkened wing pads) it floats, swims or crawls towards the water surface or on to rocks and vegetation to begin the transformation into the dun. The exuviae (cast off skin) is slowly shed as the dun emerges via a split along the back of the nymph. This process can take from several seconds to a few hours. Sometimes the process is unsuccessful and the dun will die. The wings are extremely delicate at this stage and are easily damaged.

The dun (subimago)

The dun is normally distinguished from the spinner by the opaque or mottled patterns on the wings and the dull body colours. Depending on the species, this stage lasts between a few minutes and two days, after which the dun transforms into the spinner.

The spinner (imago)

The spinner extricates itself from the exuviae via a rupture running along the back and between the wings. Once free, it flexes its

wings and positions them to allow drying and hardening.

Generally the spinner is characterised by transparent wings, although some species may have some colouration or patterning on the wings. Also, the body colouration is more intense and contrasting, often with a metallic sheen.

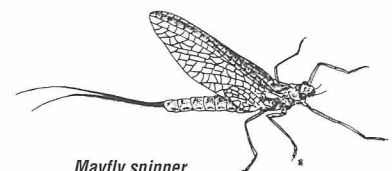
The dun and spinner are non-feeding stages which only undertake behaviour associated with reproduction (swarming, mating, migrations and egg laying). These activities are compressed into a short timespan because the spinner only survives for a brief period.

Habits

Swarming usually occurs with groups of males flying with a rhythmic, pendulous motion over water or near the waters edge. Females flying near or through the swarm attract the attention of males which make attempts to couple and mate. Upon mating, the female lays her eggs and collapses exhausted on the water, generally only to cease her life in the middle of an ever expanding rise.

The mayfly is preyed upon during each stage of the life cycle but particularly during the aerial stages. Most anglers are familiar with the habits of trout feeding upon mayflies but there are many other hidden dangers which reduce the chances of successful mating and continuation of the life cycle. Swallows and fantails can be frequently observed feeding upon flying spinners or floating duns, whilst spiders ambush duns sheltering in tussocks from adverse weather.

Trout frequently react fervently to mayfly emergence, although sometimes with a selective preference that provides for tormenting and frustrating angling. However, of all aquatic insects, mayflies are most revered by anglers and will always remain a subject of immense fascination.



Mayfly spinner

THE VALUE OF ANGLING TO TASMANIA

Commencing in the 1990-91 financial year the State Government decided not to provide any financial assistance to the Inland Fisheries Commission for its trout fishery management functions. This prompted the Commission to undertake surveys to find out just how much the sport of angling contributes to the economy of the State.

Two surveys were undertaken; the first involved visitors to the State, whilst the second involved local anglers. The results of the visitor survey are reported below whilst the local angler survey will be reported in the next newsletter.

Trout Fishing and Tourism – what is it worth to the State?

At the end of the 1989-90 fishing season, the Commission carried out a postal survey of our visiting anglers in order to answer this very question and a few others.

How many visitors fish?

4 060 people from interstate or overseas bought licenses during the 1989-90 fishing season, compared to around 25 000 locals. Questionnaires were sent to 500 of our visitors in order to gauge the economic value of the tourist aspect of our fishery and to assess the angling success of visiting anglers. 168 replies were received and some very interesting figures were revealed in them. Of the 168 replies, 93 (55%) had actually come on a fishing holiday. This represents some 2 200 visitors coming here specifically for the fishing and 1 900 people who came to the State for other reasons but fished while they were here. 64% of the visitors stated that their visit to Tasmania was influenced by the availability of trout fishing here, representing 2 600 people. Each fishing visitor bought an average of 2.7 people with them to the State, of whom roughly half also fished. This represents another 5 700 people who were brought to the State indirectly by fishing but did not fish, for example, family members and friends.

How much did they spend while fishing here?

The average visitor spent \$86 on petrol, \$130 on accommodation, \$56 on transport and \$112 on meals whilst fishing as well as additional money on these items when not fishing during their visit. They also spent an average of \$29 on tackle, \$9 on rods and reels and \$10 on camping gear. It should be noted that the visitor who came here specifically for the fishing spent pro-



portionally a lot more on some of these items – \$40 on tackle and \$16 on camping gear. Despite the majority of visitors stating that they had bought their own tackle to the State, 2600 spent money on tackle while here and 410, 100 and 390 spent money on rods and reels, waders and camping gear respectively. This represents a total expenditure of \$118 000 on tackle, \$37 000 on rods and reels, \$5 000 on waders and \$4 200 on camping gear.

Nearly a third (31%) used highland paid accommodation during their fishing, while over half used some other form of accommodation (cabins, shacks or tents). Campervans were used by only 11% of visitors fishing while 10% used caravan accommodation. In all, it appears that around 4 700 nights accommodation were used in paid facilities in the highlands by interstate anglers while fishing, with another 6 000 nights spent in hotels or motels off the highlands. An extra 18 000 nights accommodation were also used by visitors during their stay, with the overall total coming to around 36 000 nights accommodation, most of which was paid for.

On adding up the figures it appears that visitors who came here to fish spent a total of \$4.4 million in the State during their fishing holiday. The 1 900 visitors who fished while they were here for other reasons (work, visiting, general tourism etc.) spent around \$270 000 while fishing. This represents a total financial income of some \$4.7 million to the State from our visiting anglers per season. This does not include any extra expenditure made by people who accompanied visiting anglers but who did not fish. It also does not include the cost of fares to or from the State as most of this would

have been paid for at their initial point of departure.

Do they catch all our fish?

This is a question many locals ask, but in fact visitors only catch about 4% of the total number of fish caught by all local anglers each year. They probably need some help as they represent about 12% of licensed anglers.

Where do the visitors fish?

It seems that the most popular waters are generally our most famous – Little Pine Lagoon was fished by 33% of visitors on a fishing holiday while Lake Pedder was also fished by 33%. Many visitors fished waters that were easily accessible by car while on a tour of the State – Lake St Clair, west coast rivers, Dove Lake and many others. On average, the visitors fished three waters on their visit to the State.

It is expected that a difference in destination would be found between the casual and the dedicated angling visitor.

Where do the visitors come from?

Most visiting anglers (45%) come from Victoria while 30% come from New South Wales. Only 16% come from Queensland and South Australia, while the rest of the country accounts for 8% with 2% coming from overseas (mostly USA).

In conclusion, it appears that fishing by visitors **does** add a significant amount to our economy, particularly through accommodation and other on-costs. These figures are obviously derived from a relatively small group but we are confident it is a representative group. The figures should be taken as a guide to the magnitude of our tourist fishery, rather than an exact statement.

LOCAL STORAGE FISHERIES

by Dr Peter Davies, Senior Scientific Officer and Bill Thompson, Technical Officer, Inland Fisheries Commission

With the ever increasing cost of travel, accommodation and fishing generally, the Commission has turned its attention to the better management of our valuable local fisheries. These fisheries are generally close to urban centres and often in artificial storages – there being a limited number of lowland lakes in the State. They range from large irrigation storages such as Craigbourne Dam to water supplies such as the Pet Dam and small recreational waters like Lake Kara. These storages have the potential to provide quality fishing to a wide range of anglers within half to one hour's travelling from major population centres.



Netting in the Guide Dam

Consistent with the policy of providing fishing for as broad a cross-section of the community as possible, the Commission is reviewing stocking policies for these waters. In order to do this, more information was needed on the existing trout stocks in these waters as well as the relative growth rates of fish in each. Accordingly, a netting survey was commenced towards the end of last season.

The waters surveyed are listed below along with estimates of the number of anglers fishing them, the average catch rates and the total harvest of trout during the 1990/91 season. Not all waters in this category could be looked at in the first year but others will be surveyed progressively.

| WATER | NO. FULL SEASON ANGLERS | AVERAGE CATCH PER DAY | TOTAL HARVEST |
|-----------------------|-------------------------|-----------------------|---------------|
| Craigbourne Dam | 1 500 | 0.5 | 2 350 |
| Curries River Dam | 740 | 0.3 | 1 350 |
| Big Waterhouse Lagoon | <40 | - | <40 |
| Brushy Lagoon | 1 700 | 1.9 | 15 550 |
| Pet Dam | 400 | 0.6 | 2 250 |
| Guide River Dam | 250 | 1.5 | 2 600 |
| Lake Kara | 140 | 1.7 | 500 |
| Bischoff Dam | <40 | - | <40 |
| Lake Waratah | 35 | 2.0 | 300 |

CLOSE TO HOBART

Craigbourne Dam

The Craigbourne Dam was constructed in 1986 to provide irrigation water for the rural districts of Campania and Richmond. The storage is appealing to many southern anglers as it is located only 40 minutes drive from Hobart. Due to irrigation requirements the water level drops considerably during the summer months. However, early season fishing can be quite productive.

The dam is situated on the Coal River which provides adequate spawning conditions and natural recruitment. This dam has also been regularly stocked with brown and rainbow trout since its construction.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|---------|---------|-------------|
| 1986 | 100 000 | Brown | Fry |
| 1986 | 10 000 | Rainbow | Fingerlings |
| 1987 | 50 000 | Brown | Fry |
| 1988 | 20 000 | Brown | Fry |
| 1989 | 6 000 | Rainbow | Fingerlings |
| 1989 | 30 000 | Brown | Fry |
| 1989 | 700 | Rainbow | Adults |
| 1990 | 2 200 | Rainbow | Fingerlings |
| 1991 | 20 000 | Rainbow | Fingerlings |

Craigbourne Dam was test netted on 19 and 26 March with a total of 59 brown trout, 8 rainbow trout and 35 redfin perch being sampled.

CLOSE TO GEORGE TOWN

Curries River Dam

The Curries River Dam was constructed by the Rivers and Water Supply Commission in the mid 1980's as a water supply for the George Town area. The dam has only been opened to recreational fishing since the beginning of the 1990/91 angling season and so far angling interest and catch rates have been very encouraging. Anglers should take note that boating and camping are not permitted in the area.

The dam is situated on Curries River and spawning areas are available. To increase the fish population some stocking has been undertaken.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|--------|---------|-------------|
| 1989 | 15 000 | Brown | Fry |
| 1990 | 50 000 | Brown | Fry |
| 1990 | 16 000 | Rainbow | Fingerlings |
| 1990 | 5 000 | Rainbow | Fry |
| 1990 | 1 150 | Rainbow | Yearlings |

The dam was test netted on the 17-19 April with brown trout and rainbow trout sampled ranging from 190 to 4 450 g. A number of the rainbows were of a size that indicated that illegal stocking had taken place in the past using domestic rainbow stock.

1991 WORLD FLY FISHING CHAMPIONSHIP – NEW ZEALAND

The 11th World Fly Fishing Championship will be held in the Southern Hemisphere for the second time following the success of the 8th Championship in Tasmania in 1988.

This year it will be held in the Rotorua area of the North Island from 19-21 November with the Commonwealth Championship to follow from 24-25 November.

The venues will be Lake Anewhenua, Rangaitiki River and Whaeo Canal. The teams to represent Australia were selected by Fly Fish Australia and are as follows.

World Championship

Ray Clarke, Vic (Captain)
Jason Garrett, Tas
John Sautelle, NSW
Kaj Busch, NSW
Owen Nuttridge, WA
Malcolm Crosse, Tas

The Commission and all anglers wish team members all the best for the competition and look forward to good news of their efforts.

Further information may be obtained from:

Mr Ray Clarke, Secretary
Fly Fish Australia 19
Fort King Road
Paynesville Victoria 3880
Phone: 051 566083

Subsequent championships will be held in Italy in 1992 and Canada in 1993.

Commonwealth Championship

Laurie Matcham, Tas
Ken Orr, Tas
John Knowles, Tas
Ross Levis, NSW

CLOSE TO SCOTTSDALE

Big Waterhouse Lagoon

Along with the already established fishery in Blackmans Lagoon, this water has great potential to supplement the still water fishing in the north east. This lagoon, previously fished very little, was stocked during August to October 1990 with 51 000 Atlantic salmon fingerlings as a trial of this species in a low-land storage. The lagoon is situated in the north east, 25km from Bridport. Test netting on 25-26 July resulted in five salmon being caught with weights ranging from 990-1 540 g, indicating an excellent growth rate but a low population.

CLOSE TO LAUNCESTON & DEVONPORT

Brushy Lagoon

This new water looks to be a most promising fishery. Constructed in 1986-87 by the local branch of the Forestry Commission, primarily as a water storage for fire fighting, it was first stocked in 1987. The lagoon is situated about 15km north west of Westbury.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|--------|---------|-------------|
| 1987 | 45 000 | Brown | Fry |
| 1988 | 20 000 | Brown | Fry |
| 1988 | 550 | Brown | Adults |
| 1989 | 75 000 | Brown | Fry |
| 1990 | 20 000 | Brown | Fry |
| 1990 | 16 000 | Rainbow | Fingerlings |
| 1991 | 2 400 | Rainbow | Fingerlings |
| 1991 | 6 000 | Rainbow | Fingerlings |

The lagoon was test netted on 22 July and 122 rainbow trout and 67 brown trout were sampled ranging from 150 – 2 375 g. The sample of brown trout indicated that to date there had been no natural recruitment and the majority of mature fish had not spawned.

CLOSE TO GEORGE TOWN

Pet River Reservoir

The reservoir was constructed in the early 1950's by the Burnie Council and is the main water storage for the Burnie area. Boating and camping is restricted, however the shoreline is open and grassy and quite accessible to anglers.

The reservoir is situated on the Pet River, however spawning is often limited due to low flows and therefore occasional stocking of the reservoir has been necessary to maintain the population.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|--------|---------|-------------|
| 1980 | 10 000 | Brown | Fry |
| 1981 | 10 000 | Brown | Fry |
| 1982 | 5 000 | Brown | Fry |
| 1984 | 15 000 | Brown | Fry |
| 1985 | 19 000 | Brown | Fry |
| 1986 | 19 000 | Brown | Fry |
| 1986 | 10 000 | Brown | Fingerlings |
| 1987 | 15 000 | Brown | Fingerlings |
| 1987 | 10 000 | Brown | Fry |
| 1988 | 7 900 | Brown | Fingerlings |
| 1988 | 15 000 | Brown | Fry |
| 1989 | 7 900 | Brown | Fry |
| 1990 | 20 000 | Brown | Fry |
| 1991 | 700 | Tiger | Fingerlings |

The reservoir was test netted on 15 May and 88 brown trout were sampled ranging from 190 to 1 350 g.

Guide River Reservoir

This reservoir was constructed in the early 1980's as an extension to the Burnie water supply. All fishing methods are allowed here, however camping and lighting of fires is not permitted.

The reservoir is situated on the upper reaches of the Guide River and due to excellent spawning facilities it has only been stocked at irregular intervals.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|--------|---------|-------------|
| 1984 | 10 000 | Brown | Fry |
| 1985 | 10 000 | Brown | Fry |
| 1986 | 10 000 | Brown | Fry |
| 1986 | 6 700 | Brown | Fingerlings |
| 1990 | 5 000 | Brown | Fry |

The reservoir was test netted on 14 May with a total of 92 brown trout being sampled, ranging from 200 to 800 g.

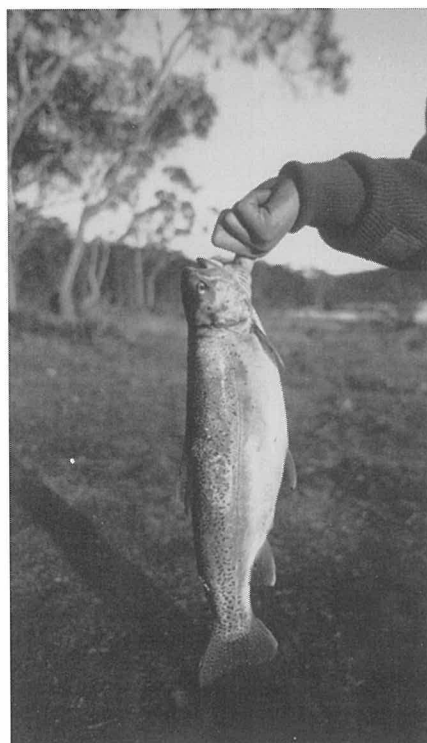
Lake Kara

Lake Kara was constructed by the North Western Fisheries Association in 1968. Originally it was managed as a rainbow trout fishery, however, poor water quality and limited spawning success resulted in its decline. In recent years attempts to improve water quality and the introduction of brown trout have helped to improve the fishery.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|--------|---------|--------|
| 1980 | 10 000 | Brown | Fry |
| 1981 | 10 000 | Brown | Fry |
| 1982 | 10 000 | Brown | Fry |
| 1982 | 20 000 | Rainbow | Fry |
| 1983 | 10 000 | Brown | Fry |
| 1988 | 400 | Brown | Adults |
| 1989 | 300 | Brown | Adults |
| 1989 | 30 000 | Brown | Fry |
| 1991 | 200 | Brown | Adults |

The lake was netted on 10 and 25 April with a total of 33 brown trout being sampled. It seems that the younger fish caught in the survey may be recruits from spawning in the lake.

A rainbow from Brushy Lagoon



IN THE NORTH WEST

Bischoff Reservoir

This storage was constructed in the early 1900's as part of the Bischoff Mine water supply. It is situated amongst wet forest and scrub and the storage is full of drowned trees which limits angler access. Spawning areas are available and the reservoir contains a good population of self supporting brown trout and some rainbow trout which are the offspring of past liberations.

| YEAR STOCKED | NUMBER | SPECIES | TYPE |
|--------------|--------|---------|------|
| 1980 | 10 000 | Rainbow | Fry |
| 1981 | 10 000 | Rainbow | Fry |
| 1982 | 10 000 | Rainbow | Fry |

The reservoir was test netted on the 21-23 May with 50 brown trout and 4 rainbow trout being caught ranging from 150 to 830 g.

Lake Waratah

Lake Waratah is situated in the township of Waratah and was established by the Waratah Council in 1981 as a beautification project for the area. The lake consists of two small storages separated by a small water-fall and surrounded by parkland. The area is a credit to the township, but has rather poor fishing.

Excellent spawning areas along with low angler patronage has resulted in both waters containing a large population of small brown trout. As a result, stocking has not been required in the past.

It was test netted on 22 – 23 May with a total of 15 brown trout being caught, ranging from 125 – 270 g. Many more fish were observed but were too small to be caught in nets.

Growth Rates

All the fish sampled in these surveys were measured, weighed and scales were taken in order to age the fish. The following graphs show the growth rates in terms of uncleaned weight of trout from these storages. The first graph is for the storage brown trout compared with the growth rates of brown trout from one of our popular eastern lakes, Lake Leake, in which trout have what can be described as 'average' growth.

The graph shows the storages with brown trout growth close to or better than the average; Brushy Lagoon, Pet Dam, Craigbourne Dam and Lake Kara. The graph also shows those waters with lower than average growth; the Bischoff, Guide and Waratah storages. The second graph shows the growth rates for rainbow trout in Curries River and Brushy Lagoon which are well above average compared to Lake Leake rainbows. In Brushy Lagoon the rainbow trout are growing substantially better than the brown trout.

From this it can be seen that those waters with very good spawning areas give rise to a large population of small fish which don't really interest the average angler much. Fish size can only be improved in these waters by limiting the spawning potential of the inflowing streams. Indications are that fish at Big Waterhouse, Brushy Lagoon and Curries River storages are all doing very well indeed in terms of growth and condition and these storages bode well for the angler who wants to fish a 'local lake'. Craigbourne Dam, Pet Dam and Lake Kara are also performing reasonably well. The recent rainbow trout stockings of Craigbourne Dam should



Big Waterhouse Lagoon

boost the catch rate for this species to a high level again in one to two years.

The following table gives the catch rates from the netting survey. The net catch rates varied widely from two to 190 trout per 300m of net per night. The figures are for all trout caught in a standard set of 150m graball and 150m mullet net per night. The waters with the highest density of trout were Brushy Lagoon and the Guide and Pet reservoirs, with the high growth rates in Brushy Lagoon indicating that this a very productive spot probably helped by very high mudeye numbers.

| WATER | TROUT CATCH |
|---|-------------|
| Craigbourne Dam | 18 |
| Curries River Dam | 16 |
| Big Waterhouse Lagoon | 2 |
| Brushy Lagoon | 190 |
| Pet Reservoir | 88 |
| Guide River Reservoir | 86 |
| Lake Kara | 16 |
| Bischoff Dam | 18 |
| Lake Waratah (many small fish uncaught) | 11 |

Some of these waters have had their share of problems – Lake Kara has the problem of acidic water coupled with low dissolved oxygen levels and high temperatures. Great efforts have been made by anglers of the Burnie Branch of the NWFPA to enhance this water by improving the shoreline and liming the lake. It seems these efforts may be paying off. The Burnie Branch has also maintained an active interest in the Pet Dam fishery with most recent brown trout stockings being carried out from the local rearing unit. A release of tiger trout into this storage is the first release in the State of this type of fish – a brook x brown cross – and it will be of interest to hear how these fish fare.

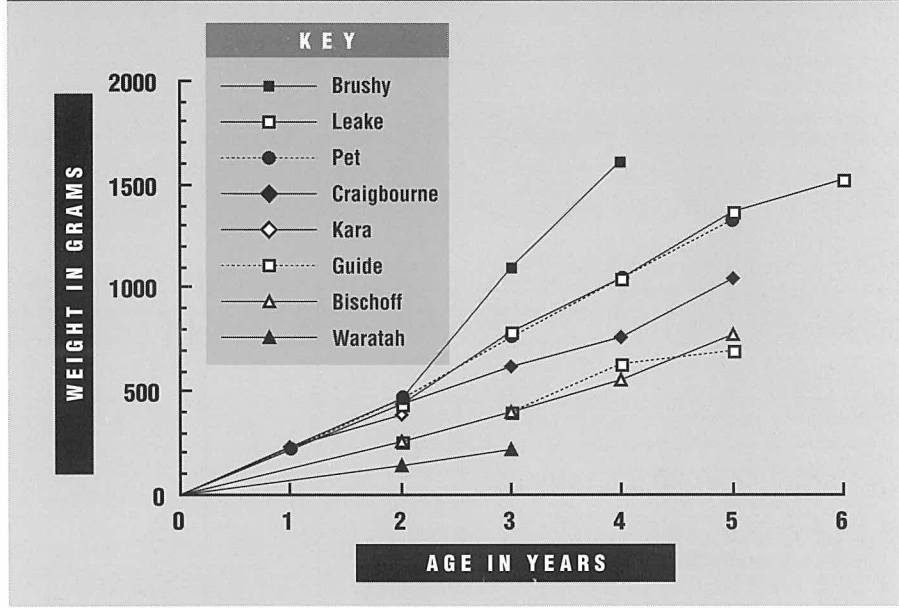
Great local interest is also shown in the Curries River and Brushy Lagoon storages and future stocking programs and works will only be undertaken after careful consideration for the maintenance of these fisheries. In order for Brushy Lagoon to support a trout population by natural spawning, modifications to the inflowing stream are necessary. The local branch of Forestry is willing to do this with advice from the Commission during the coming summer. The increase in anglers at this water has been remarkable,

illustrating the value and the need for such a lowland storage fishery in this area. For those anglers fishing this water and indeed for all local fisheries, please keep the litter to a minimum. These waters are often managed as water supplies and any build up in litter or enhanced water pollution from angler's thoughtlessness can only cause us to lose access to them.

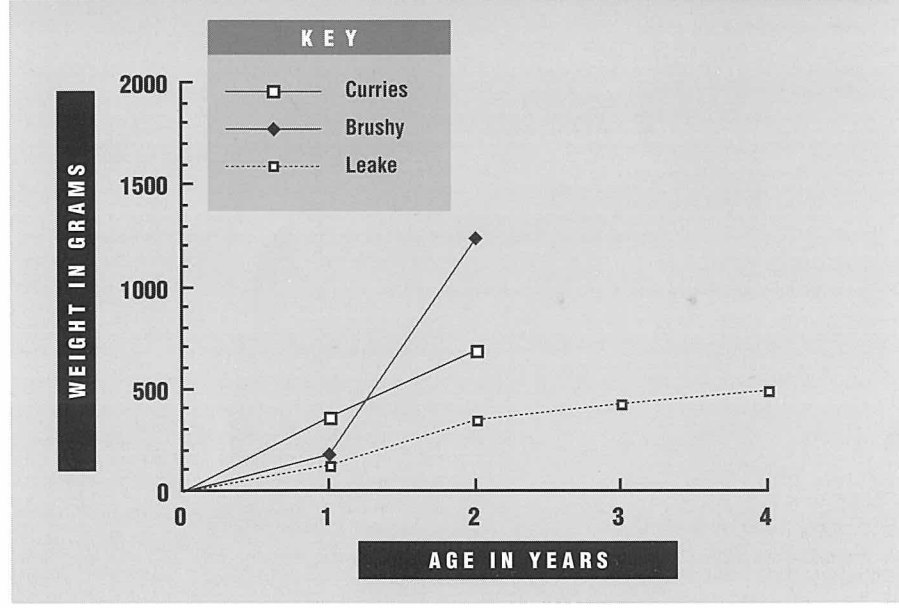
The greater catchability of rainbow trout, coupled with their better growth rates in warmer waters, makes them the species of choice for the stocking of these local fisheries. The Commission's stocking policies for these fisheries will be centred on domestic rainbow trout with provision for brown trout, or other species, where they are perceived as being of local interest.

In summary, the Commission is using the information gathered on this survey to review its stocking policy for these waters in order to maximise the potential of these local fisheries with an eye to both the average angler as well as the younger angler who may want to catch a fish close to home.

• Figure 1: Growth of brown trout in local storages •



• Figure 2: Growth of rainbow trout in local storages •



PROSECUTIONS

The following is a list of offences finalised in the period 1 January to 30 June 1991.

Court Procedures

Offences that were proceeded with by summons are listed below.

Infringement Notices

'On the spot' fines were issued as follows:

| OFFENCE | NUMBER |
|---|--------|
| Fishing without licence | 7 |
| Use more than one rod and line | 13 |
| Use bottle or can as strike indicator | 24 |
| Unattended set rod | 29 |
| Possession of assembled rod when unlicensed | 1 |

| Offender | Offences Summary | Total fine + costs (\$) |
|---------------------------------------|---|--------------------------|
| Anthony John CAWTHORN, Oatlands | Liberate fish without permit | 181-00 |
| Grant Jeffrey ASHDOWN, Deloraine | Unattended set rod/Use strike indicator | 131-00 |
| David Garth DUNSTAN, Moonah | Unattended set rod/Use strike indicator | 231-00 |
| Ricky Dennis BRITTEN, Chigwell | Unattended set rod/Use strike indicator | 231-00 |
| Michael Charles KERSHAW, Chigwell | Unattended set rod/Use strike indicator | 231-00 |
| Graeme Russell JOLLY, Victoria | Unlicensed | 138-00 |
| Shane Leigh WESSING, New Norfolk | More than one rod and line/Use strike indicator | 231-00 |
| David William ANDERSON, Newstead | Unattended set rod | 131-00 |
| Steven John MCCANN, Evandale | Unattended set rod | 131-00 |
| Roger James LAMBERT, Smithton | Tamper with IFC motor vehicle | 131-00 |
| Andrew Mark STANLEY, Scottsdale | Unlicensed/Falsely represent to be licensed/False name and address | 321-00 |
| Scott Cameron BISHOP, Ulverstone | Assembled rod and line | 131-00 |
| Christopher Ross JACKSON, Lachlan | Use strike indicator | 106-00 |
| Shaun Patrick BROWN, New Norfolk | Use strike indicator | 231-00 |
| Lyndon John SCOTT, Smithton | Take whitebait/Possess whitebait | 531-00 |
| Craig Geoffrey KENNEDY, Claremont | More than one rod and line/Use strike indicator | 231-00 |
| Robert Geoffrey SMITH, East Devonport | Take whitebait/Possess net | 456-00 |
| Patrick Edward GARLAND, Wynyard | Take whitebait/Possess whitebait | 1 231-00 |
| Neal Stewart EDWARDS, Rocherlea | Unlicensed/Falsely represent to be licensed/False name and address | 321-00 |
| Stewart John DIXON, Wynyard | Possess net | 231-00 |
| Rodney Neil GREY, Smithton | Take whitebait/Possess net | 431-00 |
| Darren Clifford GLEESON, Smithton | Take whitebait/Possess net | 431-00 |
| Peter Warren LAMBERT, Smithton | Take whitebait/Possess net | 1 061-00 |
| Paul Andrew CAPEL, Ulverstone | Other than rod and line | 131-00 |
| Jason Andrew LUNSON, Penguin | Other than rod and line | 131-00 |
| Kim RICHARDSON, Penguin | Other than rod and line | 131-00 |
| Gregory Keith GUARD, Penguin | Other than rod and line | 131-00 |
| Ian Wayne MCCULLOCH, Devonport | Unlicensed/More than one rod and line | 231-00 |
| Brett Anthony SWEENEY, Invermay | Unlicensed/Falsely represent to be licensed/Assembled rod and line | 331-00 |
| Eddie Stan NELSON, Forth | Other than rod and line/Possess natural bait/Use natural bait | 431-00 |
| Peter Wayne CLARKE, Ulverstone | Take whitebait/Possess and use net | 431-00 |
| Adrian James BERWICK, Devonport | Unattended set rod | 131-00 |
| Andrew PINNER, Devonport | Other than rod and line/Possess natural bait/Use natural bait | 331-00 |
| Malcolm Shane GRICE, Heybridge | Refuse to allow search/Refuse name and address | 171-00 |
| Nathan John SMITH, Devonport | Take whitebait/Possess net | 56 hrs community service |
| John Gregory BELBIN, East Devonport | Take whitebait/Possess net | 1 000-00 |
| Nathan John SMITH, Devonport | Take whitebait/Possess net | 56 hrs community service |
| Brian John BARKER, Devonport | Take whitebait/Possess and use net | 431-00 |
| Andrew Ronald HANKEY, Deloraine | Use natural bait | 131-00 |
| Phillip Brendon WALSH, Maydena | Use natural bait | 131-00 |
| John Charles CONNOR, Franklin | Unlicensed | 131-00 |
| Timothy Andrew BEETON, Beaconsfield | Unlicensed/Use strike indicator | 231-00 |
| Brenton Ronald BRETT, Longford | Use strike indicator | 131-00 |
| Ricky James MADDEN, Deloraine | Use natural bait | 131-00 |
| Heath Andrew FOLEY, East Devonport | Take whitebait/Use and possess net/Possess whitebait | 431-00 |
| Grant Anthony MOORE, Acton | Assembled rod and line | 161-00 |
| Terry Roy ZEUCHNER, Burnie | Assembled rod and line | 161-00 |
| Gregory Allan DIXON, Wynyard | Take whitebait/possess net | 661-00 |
| Dale Anthony LAPHAM, Wynyard | Take whitebait/possess net | 661-00 |
| Garry Laurence HILL, Hadspen | Take fish closed waters/Other than rod and line/Disturb spawning fish | 331-00 |
| Rodger Campbell LAWRENCE, Longford | Take fish closed waters/Other than rod and line/Disturb spawning fish | 331-00 |
| Peter Maxwell BROUGH, Hillwood | Unlicensed/Assembled rod and line/Falsely represent to be licensed/False name and address | 581-00 |
| Richard James FRANKS, Devonport | More than one rod and line | 131-00 |
| Paul Darren ENRIGHT, Quoiba | Use natural bait | 131-00 |
| Scott Andrew SMITH, Devonport | Take whitebait/Possess and use net | 531-00 |
| Simon Paul SMITH, East Devonport | Take whitebait/Possess whitebait | 431-00 |