

# INLAND FISHERIES COMMISSION

## NEWSLETTER

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### RAINBOW TROUT SEASON UNCHANGED

Following discussions with the three angling associations and other interested parties, the Inland Fisheries Commission decided that the current opening and closing dates for waters managed as rainbow trout fisheries, would be retained. The season opens on 31 October 1981 and closes on 30 May 1982.

### TEMPORARY CLOSURE AT THE OUTLET FROM GREAT LAKE TO POATINA TUNNEL

The Hydro-Electric Commission has advised that it has moved equipment on site for work associated with the raising of the level of Great Lake. Accordingly, it will be necessary to close off the road to the northern most launching sites on Great Lake, i.e. near where water leaves the lake to enter the pipe to Poatina, from the 21 September 1981 until the end of June 1982.

### RAISING WATER LEVEL AT GREAT LAKE

The effect of enlarging the Great Lake storage on the trout fishery may be of interest to anglers. The elevated level of Great Lake will ultimately result in larger fluctuations in water level. However, even though the storage capacity is increased, the pattern of draw down will be much the same with less draw down in winter and more in summer. A side effect would be that more summer riparian needs at Cressy would be supplied from Great Lake so that less water from Woods Lake would be needed for this purpose. However, some riparian water from Woods Lake would be needed to supply the area as far down as the Lake River confluence with Macquarie River, i.e. near "Connorville". As there would be less summer draw down in Woods Lake, it would become a more "natural" lake and the lesser fluctuations would benefit the trout fishery.

The elevated water level in Great Lake would not be expected to have any effect on Shannon and Penstock Lagoons.

### FALLS CREEK

Falls Creek has been selected as a test stream for evaluating stocking with hatchery raised brown trout. Already 10 000 brown trout fry have been liberated at sites on this creek and a further 10 000 are scheduled for liberation in late September or early October.

#### ONE ROD ONLY PLEASE

Anglers are reminded that in inland waters they may use one rod only at a time and the angler must attend the rod while fishing. An unattended rod may be equated to a dead line.

#### CLARENCE LAGOON

Anglers fishing at Clarence Lagoon at the opening recovered a live detonator. The Commission would welcome any information from any persons concerning the use of detonators in or near inland waters.

The Commission proposes to liberate brook trout yearlings and fry in Clarence Lagoon in the spring of 1981.

#### MERSEY RIVER

The Mersey River has fished well since the opening of the season. On opening day, bags of up to eight brown trout were taken and in several holes, anglers have already taken 100 fish this season. Heavy rains have kept the level of the Mersey River high so far this season. A wet spring is a welcome change.

#### DERWENT RIVER

The Derwent River has fished reasonably well, especially in the section above New Norfolk. In the lower sections, anglers have caught some escapees from a hatchery. When vandals interfered with an outlet at the display pond at Salmon Ponds in January, 100 brook trout escaped into the Plenty River. One angler reported catching a rainbow trout at Seven Mile Beach.

The Commission has been concerned about reports of brown trout being taken at Seven Mile Beach in nets and has sought the co-operation of the Tasmanian Fisheries Development Authority in preventing this practice.

#### FISHERIES LANE, CRESSY

Due to flooding in September, it was necessary to temporarily close Fisheries Lane. It is proposed to do some repairs if mole spoil is available in the coming summer so that interference with anglers access to Brumby Creek will be kept to a minimum.

## THE PHYSICAL ENVIRONMENT AND TROUT

This article appeared in the Sport Fisheries Newsletter published by the Ministry for Conservation, Fisheries and Wildlife Division, Victoria. Allan Baxter is the Officer-in-Charge of the Trout Management Group in that state. It is reprinted here because of its interest to Tasmanian anglers.

"Trout are able to live and do well in both running water (streams) and still water (lakes). These two habitats differ widely in their physical characteristics of temperature and dissolved oxygen; and also in gradient, width, depth and substratum (bottom type). As most complaints received about the trout fishery deal with flowing waters, this article will look at the stream situation.

Stream studies have shown that trout are:-

- (a) the dominant species of fish where the gradient is steepest with rapidly flowing water;
- (b) to be present where the gradient is easier and the water flow less rapid;
- (c) to be less abundant where the gradient becomes less steep and the river widens;
- (d) to be rare where the gradient is negligible, be the river narrow or wide.

Unfortunately for the trout fisherman, the majority of readily accessible Victorian streams fall into the last two categories. With a decrease in gradient, other fish species become more dominant. Many of these species are classed as "coarse fish" and are not sought after by anglers for food or sport. The majority of coarse fish in Victorian streams are Cyprinids, viz carp, goldfish, tench and roach, and few, if any, native fish, with the possible exception of eels, would be classed as coarse.

Why is the trout rarer in those parts of a river where coarse fish predominate?

These streams are usually found in lowlands and are characterised by their slow flow; they are less well aerated, have higher summer water temperatures and more silt than waters where trout are the principal fish. Trout in these rivers may not obtain enough oxygen, may encounter lethal temperatures, and cannot spawn efficiently.

That trout do occur in waters where such conditions prevail indicates that they can tolerate the situation but their rarity suggests that they are near the margin of their tolerance. On the other hand the physical environment is favourable to coarse fish and they are numerous.

The physical characteristics of the environment - oxygen supply, temperature, type of substrate, may solely account for the

relative scarcity of trout in the lower reaches of rivers where coarse fish predominate, but biological factors (competition, predation) must also be considered. The distribution of trout in a river is primarily related to the obvious topographical factors of gradient and width, and particularly to the nature of the river bed.

The nature of the river bed can be either "eroding" ie. of rocks, stones or gravel or "depositing" ie. of silt or mud. Trout are usually associated with an eroding stream bed. Eroding and depositing substrate are distributed through a trout river in different "types" of water, such as cascades, riffles, runs, flats and pools; in the first three the bottom is primarily eroding, and in the last two mainly depositing.

The different types of water tend to have certain trout populations although the trout, being a mobile animal, may move from one type to another according to the season or the time of day. In general, however, trout are few in the cascade section which, with its turbulent water and steep gradient, offers few lies for the fish. Riffles, with their rapid flow of broken, shallow water and fairly stable stony bottom, often have fair numbers of smaller trout, with bigger fish coming in at dusk. As there can be little shelter from the current it is probable that riffles attract fish because the stony bottom produces a fair food supply.

Runs have greater depth and a smooth gliding flow, there is less current to contend with, and the eroding substrate presents suitable spawning ground and also good feeding area; thus there are good lies and trout are numerous.

Flats have deeper water with slight to moderate current giving a smooth flow so that silt settles, to varying extent, and any stony substrate is usually stable. With few loose gravelly areas, spawning facilities are limited and a silted bottom produces poorer feeding than a stony one. Silt however does encourage weeds to hold trout food organisms and provide shelter for the fish: so that flats can offer suitable lies and fair numbers of trout may occur there.

Pools, because they are deep and sometimes weedy, give shelter to trout, but the substrate being silty there is no spawning ground and the supply of available food animals is poor. Moreover, pools provide suitable conditions for coarse fish, so that the trout shares this "water type" with predators and competitors. The trout population in pools is therefore small and probably confined to bigger fish.

Altered proportions of eroding and depositing substrate can thus alter the number and species of coarse fish present and hence affect the number of trout in a trout stream. The percentage of the stream bed that is eroding is gradually decreasing while that depositing is increasing proportionally. This can be a slow process but, as usual, man is his own worst enemy.

Before the "industrial revolution" very few demands were made of streams and their fish populations. The gradual reduction of trout habitat would have been slow and the decrease in carrying capacity and trout numbers would not have been noticeable. Expanding population and technology has in many streams degraded the trout habitat and decreased the capacity of the stream to support trout. Common examples are instream dams, removal of streamside and catchment vegetation, "river improvements" (eg. channelization), drainage of wetlands, grazing of cattle on stream banks, pollution, removal of water to meet industrial, domestic and agricultural demands and urban development. The combined effect of these has been catastrophic as far as trout are concerned.

Man himself is to blame in most cases for the marked reduction in the carrying capacity of the streams and the resultant decrease in the number of trout.

Next time you go fishing and catch a few, if any, trout, do not telephone the Division and blame it for the lack of trout with comments thrown in such as "it ain't like what it used to be" or "even the women could catch ten a day (some years ago)" - (a quote from a recent survey trip to Bendoc).

Look around and see what has happened to the habitat in the last ten or even twenty years. As a child twenty years ago, I played in an old sand pit in Heidelberg. I wrote this article in the same "sand pit", not for reasons of nostalgia but because the Arthur Rylah Institute was built on it. Times have changed.

There will come a time, and in many instances it is already here, when your favourite fishing water will no longer sustain large numbers of trout and it will not be practical or economical to stock these waters with hatchery produced fish. No matter how many trout the Division was to liberate, the trout fishing could not be restored to what it used to be unless the habitat can be restored to what it was ten or twenty years ago. This would be no easy task and would require the building of fish ladders at each impoundment, replanting streamside vegetation and fencing off buffer zones adjacent to the streams, stabilising stream banks with groynes, and so on.

Only then would it be worthwhile stocking these streams again with trout.

Remember also that trout are exotics (introduced to Australia) and are a cold water species. Many of our streams are definitely not cold waters, particularly during the summers like the one we have just experienced."

#### CO-OPERATION WITH TASMANIA POLICE

The Commission is grateful for assistance given to field staff by police officers and members of Steppes Wildlife Trust in handling spawning fish at Mary Creek. On two occasions it was necessary to handle fish at short notice to prevent stranding or poaching. Further, the Commission is grateful to the efforts of police in intercepting two men

on 20 July with sixteen live brown trout in a 44 gallon drum. The fish came from Mountain Creek. Proceedings will be taken against the two men for taking spawning fish.

#### RAINBOW TROUT SPAWNING RUN - MARY CREEK, LAGOON OF ISLANDS

Two good runs of rainbow trout have occurred at Mary Creek which flowed at a high level in September. On the first occasion, field staff handled 150 rainbow trout spawners. The largest fish in the run was 5 kg and the average weight was 2.7 kg. A further stripping on the 11 September involved 350 fish. In all, over 400 000 eggs were collected and taken to the hatchery at Planty. In the latter run, there were more males than females. A noticeable feature of the run was that many fish originated from a donation from Sevrup Fisheries several years ago. In both runs it was necessary to carry fish back to the lake as they had proceeded past the bridge on the Steppes Road. The assistance from the two parties in carrying the fish back to the lagoon was greatly appreciated. Further salvage operations are likely to be necessary as the flow drops in Mary Creek.

#### MEN FINED FOR TROUT OFFENCES

One man was seen tickling spawning trout and another man was beating them over the head with a log of wood, the Hobart Court was told on 7 September 1981.

John Stafford Winzil of Main Road, Austins Ferry pleaded guilty to charges of disturbing spawning trout, taking them without rod and line, and taking them from closed waters at Clear Water Creek, Lake Pedder.

The Magistrate, Mr. Matterson, fined him a total of \$260.

Senior-Constable R. Burton, prosecuting, told the Magistrate that a fisheries inspector had seen Winzil tickling trout at Clear Water Creek during the spawning run. Another man was clubbing trout and had escaped, but Winzil stayed. Senior-Constable Burton said Winzil had seven trout. Winzil told the Court that he now had a fishing licence, and so far had caught 15 trout in a legitimate manner.

Kerry Amos Brown of Montagu Bay Road, Montagu Bay, was fined a total of \$188 when he pleaded guilty to disturbing spawning trout at Lake Sorell, taking them in closed waters, and taking them with a gaff.

Senior-Constable Burton said a fisheries inspector found 29 trout in Brown's vehicle and most had gaff holes. Brown told the inspector that he and a mate had gone to get a few trout to eat. Brown told the Magistrate he felt he was "unlucky to get caught", but was prepared to pay the penalty. He said he had been out of work, and he and a mate had gone to get some fish for their families to eat.

The Magistrate: "These could be the most expensive fish and chips you ever had". He told Brown he could have fined him \$870 in special penalties (\$30 a fish) but would fine him only \$58 in special penalties because of his limited income.

#### \$215 FINE FOR ILLEGAL TROUT SALE

The Commissioner of Inland Fisheries, Mr. D.D. Lynch, was offered brown trout at an Eastlands retail outlet, the Hobart Court was told on 7 September 1981.

Christopher Pitney of Talune Street, Lindisfarne, did not appear to answer charges of selling two brown trout and offering for sale nine brown trout.

He was fined a total of \$215.

The Court was told that Commissioner Lynch went to the shop after receiving a complaint and was offered brown trout when he asked if they were for sale. He said Pitney told the Commissioner that the brown trout had been bought from a man who said he had caught them at Lake Sorell.

Senior-Constable Burton said the trout had been speared.

The Magistrate, Mr. Matterson, said Pitney had written a letter to the Court pleading guilty, and claiming he did not know it was illegal to sell brown trout, or trout other than rainbow trout from a fish farm.

The Magistrate said people in business should make proper inquiries and not make assumptions before selling. He said the offence was serious because the Commissioner had pointed out that trout were being poached in spawning runs. A general deterrent was called for as a reminder to anybody considering selling trout illegally. He said while people were willing to buy poached fish, poaching in the State would accelerate.

Outside the Court Mr. Lynch confirmed he had made the investigation into the illegal sale himself. He said the Commission was short of staff at the time, and a number of cases had been lost when police, through lack of experience, were unable to give expert evidence as to the difference between brown and rainbow trout. Only rainbow trout from fish farms could be sold in shops, he said. He said it was unlikely that the sale of brown trout would ever be legalised because of the potential increase in poaching.

#### LITTLE PINE SPAWNING CREEK

Prompt action over the logging at Little Pine Lagoon appears to have saved the brown trout spawning stock at the lagoon.

On Thursday 23 July 1961, the spawning creek in the south-west corner of Little Pine Lagoon was inspected in order to assess egg mortality as a result of siltation.

At the time of inspection the creek was flooding over its banks and was much deeper and flowing much faster than on previous inspections (15 and 23 June 1961). Six brown trout adults were seen between the lagoon shore and the road crossing. The screen placed across the creek on the 23 June was found to be undermined and appeared to be serving no purpose and so was removed.

An attempt was made to collect egg samples from one redd in each of the three areas; area 1 - the bottom site - approximately 100 m from the lagoon shore; area 2 - the middle site - approximately 50 m below the road crossing; area 3 - the top site - approximately 30 m above the road crossing. Unfortunately the depth and speed of the water made quantitative sampling impossible and only a small number of eggs were collected. The square foot bottom sampler used, was not effective in the fast water and most of the dislodged eggs drifted past the sampler. Some observations and results are summarised below:-

#### Area 1

The water was fast, deep and clear and the gravel was loose and clean. Most of the eggs dislodged appeared to be alive. Eggs collected - 14 live and 1 dead.

#### Area 2

The water was fast, deep and clear. The gravel appeared to be clean on the surface, but clouds of fine silt passed downstream when the gravel was raked. Most of the eggs dislodged appeared to be alive. Eggs collected - 6 live and 3 dead.

#### Area 3

The water was fast, deep and clear and the gravel was clean. The majority of eggs dislodged were alive. Eggs collected - 6 live and 2 dead.

It seems that since the closure of logging operations in the area, the heavy flow of water from rain and snow has flushed most of the silt out of the creek.

In general, the gravel in the creek bed appears to be loose and clean and there have been no substantial silt smothering of redds. The only area where heavy siltation has occurred is where the first vehicular crossing was made; here the margins of the creek are unwadeable due to soft silt and mud. However, the obstruction has been cleared and the creek has cut a new course through this area and was not discoloured at the time of the inspection. If no further vehicles pass through the creek at this point, the area should eventually stabilise when vegetation begins to grow back.

An inspection of the road revealed that access has not been blocked, therefore, when the lagoon stops spilling there is nothing to prevent vehicles from using the track and causing further damage. As all the machinery has now been removed from the area, the track should be closed off to prevent further use.

A stone barrier has proved ineffective in preventing unauthorised access to vehicles and it is proposed to strengthen it.




## PROSECUTIONS

A summary of recent court cases is set out below. Further cases are listed for hearing.

<u>Court Date</u>	<u>Offender and Address</u>	<u>Nature of Offence</u>	<u>Fine</u>	<u>Costs</u>
26.8.81	Geoffrey William Reid 19 Mornington Drive Ravenswood	Fishing without licence. Possession of assembled rod.	20-00	12-10
7.9.81	Christopher Pitney 1 Talune Street Lindisfarne	Offering 9 brown trout for sale. Selling 2 brown trout.	215-00	15-10
7.9.81	Kerry Amos Brown 76 Montagu Bay Road Montagu Bay	Disturbing spawning fish. Take fish from closed waters. Take fish other than rod and line.	188-00	15-10
7.9.81	John Stafford Winzill 285 Main Road Austins Ferry	Disturbing spawning fish. Take fish from closed waters. Take fish other than rod and line.	260-00	15-10
15.9.81	Shane David Tapp 14 Talbot Road Launceston	Disturbing spawning fish. Take fish from closed waters. Take fish other than rod and line.	60-00	15-10

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