

# INLAND FISHERIES COMMISSION NEWSLETTER

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## NEW MINISTER FOR INLAND FISHERIES

Following the recent State elections a new Member of the House of Assembly, the Hon. Peter Hodgman MHA, has been appointed Minister for Inland Fisheries.

Peter Hodgman had been Member for Huon in the Legislative Council since 1974 and held the position of Deputy Leader for the Government in the Upper House. He successfully contested the recent House of Assembly election for the Seat of Franklin.

The new Minister offered these comments. . .

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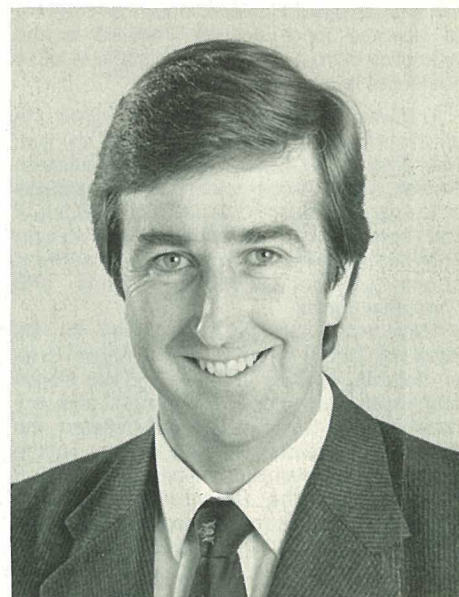
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*I was highly delighted to be appointed Minister for Inland Fisheries by the Premier, Robin Gray.*

*As many of you would be aware, my father has been a long-time angler and I have been brought up on the importance of this recreation/industry to Tasmania.*

*I don't have any preconceived ideas about the future and it is, therefore, with eager anticipation that I await the House of Assembly Select Committee Report under the Chairmanship of Mr Neil Robson, MHA which, I understand, is to be tabled in Parliament shortly.*

*As Deputy Leader for the Government in the Legislative Council over the last four years, I have been briefed by Dr Rob Sloane on various legislative matters. As a result, I have developed a great admiration for his expertise in this field and I certainly hold him in high regard.*



*The new Minister for Inland Fisheries, Mr Peter Hodgman MHA.*

*In conclusion, can I say that my door will always be open if you wish to contact me.*

**Peter Hodgman**  
MINISTER FOR INLAND FISHERIES

## FRESHWATER FISHERMEN'S ASSEMBLY

The Twenty-first Assembly of Australian Freshwater Fishermen was held at the Compleat Angler Hotel, Great Lake, on the weekend of 8 and 9 March. The meeting was attended by freshwater fishermen from Western Australia, South Australia, Victoria, New South Wales, the Australian Capital Territory and Tasmania. The presence of the Minister for Inland Fisheries, Mr Peter Hodgman MHA, was welcomed by those who attended.

On Friday evening participants gathered for an informal social evening and viewed some videos of trout fishing and trout management activities in Tasmania. The Assembly meeting was held on Saturday morning and during the afternoon papers were presented by five guest speakers as summarised below.

### The First Twenty-five Years, by Mr D.D. Lynch

Dan Lynch, longest serving former Commissioner of Inland Fisheries in Tasmania, presented an informative address on the first twenty-five years of the Inland Fisheries Commission, 1959 to 1986. He described the Commission's major achievements and the difficulties faced, and outlined the major changes in funding, staffing, facilities, equipment, research and policy over the 25 year period.

He also outlined the pros and cons of the Commission's structure, the value of its independence and the significance of a separate inland fisheries authority. As Commissioner of

Inland Fisheries for twenty years Dan Lynch was well qualified to speak as an authority on the subject, and he drew on his extensive knowledge of the Commission, the role of other Tasmanian Government agencies and the fortunes of interstate fisheries authorities.

### Management of Wild Trout Populations in Tasmanian Lakes, by Dr R.D. Sloane

Rob Sloane, the current Commissioner of Inland Fisheries, gave an illustrated talk on the significance of natural recruitment to the management of Tasmanian lake fisheries. He outlined the findings of a three year investigation of rainbow trout spawning in the Zig-Zag Spawning Channel at Liawenee, Great Lake.

He also described the recent activities of the Commission in the construction of new spawning channels and the improvement and reconstruction of wild spawning streams. Rob stressed that the cheapest and most efficient method of maintaining trout populations is through natural recruitment and funds should be invested in the assessment, improvement and maintenance of spawning and nursery areas.

### River Surveys in Tasmania, by Dr P.E. Davies

Peter Davies, a Scientific Officer with the Inland Fisheries Commission, described the findings of an extensive two year survey of

Tasmanian riverine trout populations. He outlined the current survey and the previous surveys conducted by Dr A.G. Nicholls in the 1950's and by the Commission in the late 1970's.

He explained that the current survey had indicated increased trout abundance in Tasmanian streams and had confirmed Dr Nicholls' conclusion that natural recruitment would be sufficient to replenish trout stocks without the need for supplementary hatchery stocking. Peter also outlined the detailed assessment of stream types, habitat parameters, stream hydrology and water analyses which were aimed at classifying Tasmanian trout streams in order to assess the status of trout stocks.

### Whitebait Investigations, by Mr W. Fulton

Wayne Fulton, a Scientific Officer with the Inland Fisheries Commission, discussed the results of the first year of a comprehensive study on the status of Tasmanian whitebait stocks. Formerly a lucrative commercial fishery, the whitebait season was closed in the mid-1970's. He pointed out that whitebait also form an important forage fish for sea-run trout and may dictate the spring movement of sea-run trout into estuaries.

Wayne gave details of the life-histories of the various species which comprise the whitebait runs and illustrated the complexity of management of the fishery. He also discussed the New Zealand whitebait fishery and outlined his observations on a recent visit to that country.



## The Value of Trout in Australia in the 80's, by Mr A. Fink

Andrew Fink, the President of the Western Australian Trout and Freshwater Angling Association, alerted the Assembly to the current problems facing the trout fisheries in States other than Tasmania. He highlighted the economic importance of trout fishing throughout Australia but pointed out the reluctance of many authorities to appreciate the value of trout as a sport fish.

Andrew explained the need for stocking in other States in order to maintain trout populations in marginal waters. He encouraged the Assembly to become more actively involved in the promotion of trout and trout fishing and to lobby authorities to maintain trout waters.

Following the presentation of papers the speakers formed a panel and Dr John Harris of New South Wales Fisheries chaired a discussion session. Topics raised included specific aspects of the papers presented as well as the origins of the sea-run brown trout strain, stream improvement, willow control, the applicability of spawning improvement to streams, and cormorant control.

Participants and guests gathered for the Assembly Dinner at the Compleat Angler Hotel on Saturday evening and new and old friends exchanged many grossly exaggerated and very fishy stories. Commission staff resisted the temptations of alcohol and had an early night to prepare for the events of the next day.

On Sunday the Commission hosted a barbecue at Liareezinwenee and research staff conducted tours of the Field Station.

## BROWN TROUT REARING PROJECTS

The Ulverstone Branch of the North Western Fisheries Association has provided details of its activities at the North Motton hatchery for the current year. Club President Gavin Thompson reports as follows.

On the 17 September 1985, 154,500 brown trout fry were received from the Inland Fisheries Commission and admitted to Ulverstone hatchery; by the 5 October 1985 some 29,000 had been removed, some for liberation in the Burnie area, some for on-growing at Devonport and 1,000 to on-grow at Preston Ponds. Details of these movements have been reported previously. 124,500 were retained in the hatchery for growing to advanced fry prior to later liberation.

Over the weekend 23 and 24 November the following liberations were undertaken (these were in accordance with the original I.F.C. list dated July 1985).

Name of owner	Locality	No. of fingerlings
B.A. McKenna	Spalford	250
L.R. Campbell	Wilmot	250
S.P. Elphinstone	Stowport	350
G.P. Chamberlain	Preston	250
K. Mason	West Pine Road	300
M.W. Hill	Spalford	300
J.A. Allen	Kindred	100
C.L. Main	Sprent	300
B. & D. Jordan	North Motton	350
R. Sharman & P. Langmaid	Kindred	300
<b>TOTAL</b>		<b>2750</b>

On Saturday 30 November further liberations were made in accordance with the July I.F.C. stocking list for Penguin dams and also, as a result of discussion between the Commission and the North West Stocking Committee, further waters were approved for the release of surplus advanced fry reared by the hatchery. These were as follows:

Name of owner	Locality	No. of fingerlings
M. Cragie	West Pine	400
J. Walker	Riana	200
M. Hawes	Pine Road	400
G. Owens	Penguin	200
D. Cameron	Penguin	400
J. Gofton	Sulphur Creek	400
T. Smith	South Riana	800
G. Munday	Penguin	400
Gieves	Penguin	200
Golf Club	Penguin	100
Clarkes	Penguin	400
Davey	Penguin	400
Sprent School Dam		200
Sheffield Area School		500
Devonport Juvenile		400
<b>TOTAL</b>		<b>5400</b>
Public Waters	Locality	No. of fingerlings
Leven River	Below Purton's Flats-Lobster Creek area	8000
Mersey River	Above estuarine waters at Latrobe to Caroline Creek	8000
Lake Barrington		14000
Pet Dam		4000
Lake No Where Else		500
<b>TOTAL</b>		<b>34500</b>

## THE POLITICS OF WILD TROUT

At the recent Freshwater Fishermen's Assembly, Andrew Fink, the President of the Western Australian Trout and Freshwater Angling Association, drew attention to a recent article by Del Graff which appeared in Trout Unlimited's magazine *Trout* in the Winter 1986 edition. The editorial and letters to the editor in the same issue should be read in conjunction with the article.

Del Graff is Pennsylvania's Chief of Fisheries and a keen fly-fisher. His article describes the bitter controversy created by changing stocking policy and regulations in an effort to better manage wild trout.

In 1976 the Pennsylvania Fish Commission embarked on a five year survey of trout waters in an attempt to develop a statewide system of resource categories upon which to base management decisions. In 1982 the survey was completed, the data analysed, and management programs were developed with a view to protecting and encouraging wild trout stocks.

'Wild trout' were defined as streambred, naturally reproduced trout. 'Wild trout waters' were selected as Pennsylvania's best waters in terms of wild trout populations, defined by brown trout and mixed brook/brown trout waters supporting at least 40 kg per hectare of naturally reproducing trout. (In the Tasmanian context this would include virtually all streams sampled by the Commission.) Other factors such as stream width and access were taken into account and streams selected as 'wild trout waters' constituted only 5% of the areas surveyed throughout Pennsylvania.

Management changes included the cessation of traditional stocking programs in wild trout waters, which met with bitter opposition (surprise, surprise). But even more controversial was a change from traditional 'fish-for-fun' waters to a 'catch-and-release' category. The fish-for-fun system was a hatchery supported, socially oriented, flies-only approach which permitted one trout exceeding twenty inches to be retained each day; whereas catch-and-release was a biologically directed program permitting barbless flies and artificial lures, based on wild

trout, and permitting no fish to be killed.

Del Graff expected enthusiastic support from 'quality anglers' for the catch-and-release proposal, but as he soon discovered, he was idealistic and naive.

"The intensity of opposition to replacing fish-for-fun with catch-and-release was astounding - otherwise intelligent people completely lost sight of (or never cared about) the importance of wild trout in the scramble to exclude artificial lures and those who used them (spin-fishers); to retain the traditional stocking approach; and, in some cases, to be permitted to kill a twenty-inch fish."

"The issues brought forth in opposition to catch-and-release management made dealing with groups who simply wanted to continue to have hatchery trout stocked in their favourite stream seem like a waltz in the park in comparison."

The real conflict which emerged was that a vocal group of Pennsylvania fly fishers was only interested in a high catch rate stocked fishery, with specially regulated waters reserved for fly-fishing only. This attitude was not based on a care for the resource, but motivated by selfishness and an attitude that fly fishers are better than spin fishers.

The stocking issue was far easier to understand as it was simply a matter of freshly stocked trout being easier to catch than wild trout.

The 'trophy trout' (brown trout in excess of twenty inches!) program adopted by the Pennsylvania Fish Commission is also of interest. This category is restricted to certain waters where tackle is limited to flies and artificial lures and harvest is restricted to two trout per day, with a minimum size of fourteen inches. Similarly, on these waters the combination of no stocking and lure restrictions was not well received.

Certainly a fascinating article for the fishery manager and the angler, and well worth reading in full even though far removed from the Tasmanian context. Again, it should make Tasmanian anglers realise just how lucky they are!

A small quantity, some 1800 rainbow trout fry, were reared concurrently and subsequently liberated in Lake Isandula (Gawler Dam).

The hatchery operation was somewhat less efficient during 1985 than in previous years, the retention rate being 35%. It appears that early protozoan and fungal infections were more severe than appreciated at the time, as no major loss occurred at later stages of rearing. During this year much higher rearing-tank stocking densities were employed. Although minor water supply oxygen deficiencies were experienced due to anaerobic algal growth in the supply dam these were corrected by cascading water in the vicinity of the intake with a small submersible electric pump.

Although attempted, size grading the developing fish was abandoned as it was judged to be rough and distressing. Despite the lack of size grading no cannibalism was suspected. Shutters were installed on hatchery windows and it is felt that the resulting subdued light conditions were an improvement, at least the damage to eyes and tails that was prevalent in 1984 did not occur. There were no water supply shortages.

A circular tank was used to assist with stocking densities as the fish became larger, but this was judged not to be a great success due to cleaning difficulties. The tank design should either be upgraded for easier cleaning or abandoned.

It would appear that the Hatchery capacity with the present practices and method of operation (rostered Branch members) is not more than 100,000 and is in fact more manageable at 80,000.

It is recommended that the brown trout fry rearing operations of the North Western Fisheries Association be shared substantially with Devonport Branch in order that both rearing units operate at manageable tank stocking densities.

# WHITEBAITING IN NEW ZEALAND

In this article Commission Scientific Officer, Wayne Fulton reports on a visit to New Zealand to study the South Island whitebait fishery.

The Tasmanian whitebait fishery has been closed since 1974, consequently few of the present Inland Fisheries Commission Staff are acquainted with its operation on a commercial scale. With the recent commencement of a study on the present status of whitebait in Tasmania, it was considered of value to examine the operation of similar fisheries elsewhere. The only significant whitebait fishery occurs in New Zealand, hence, funding for a visit was sought from the Commonwealth-backed Fishing Industry Research Trust Account. Arrangements were made at short notice in order to catch the 1985 season, and visit the major whitebait producing rivers of the South Island of New Zealand.

The fishery for whitebait in New Zealand, with whitebait canneries in operation as early as 1887, far precedes that of Tasmania. In fact whitebaiting could be regarded as a national recreation with the participation of people from all walks of life. However, it is little wonder that most New Zealanders who enjoy whitebait fritters attempt to catch their own as the retail price in Christchurch shops in October 1985 was around \$45/kg.

Whitebait are pursued in most streams around New Zealand with the major catches and the centre of the commercial fisheries being on the West Coast of the South Island. A variety of fishing methods are used and the fishing pressure is very intense. Special regulations are in force for the West Coast fishery and most details below refer to fishing in that area.

No licence is required to fish for whitebait in New Zealand and people can sell their catch if they wish. The best catches are generally taken from fixed structures or stands consisting of a series of fine mesh screens at right angles to the river bank. Two nets or traps may be placed along the stand with one of them having to be on the end farthest from the bank. The design of the actual traps varies from one area to another. Some are large mesh boxes with funnel traps, whilst others use 'sock' nets similar to eel fyke nets. A combination of the two was also quite common. Open traps without funnels were also used in some areas. The maximum size for nets was 4.5m circumference or perimeter around the mouth and up to 3.5m in overall length.

The stands themselves are registered under the Harbours Act and their position is set for the season. Generally a section towards the mouth of each river is reserved for this purpose, fished by persons using short screens and a single net. Further down towards the mouth, most fishing is done using scoop nets, either catching the fish as they move past or moving along the shore with the net and scooping blind, in some cases out into the surf. (Most New Zealand rivers do not have the extensive estuary systems which characterise Tasmanian streams.)

The scoop net fishery was especially prominent on the large rivers further north, around the tidal barrages at Greymouth and Westport. There are large wharves at these towns which also had numerous stands built under them from which scoop nets were used to catch the fish as they passed. Extensive systems of white painted 'spotter boards' were employed to aid in seeing the migrating fish.

The whitebait caught by the larger stands on the West Coast are generally sold to buyers who paid from \$20-27/kg to the fisherman. The biggest catches were generally taken in the southern West Coast rivers around Jackson Bay and in the Cascade River further south. Access to the latter river can only be made by water or air. It is fished by a company that employs people to man their 30 large stands. The whitebait are flown out by light plane every two days or so, such is the profitability of the catch.



Commercial whitebait stand on the Arawata River, South Island, New Zealand.

There are a number of areas on the West Coast where whitebait fishing is prohibited but the pressure on other areas was such that non-registered fishermen were catching fewer than 10 kg for the whole of the 2 1/2 month season.

Some other areas of New Zealand also have reasonable whitebait fisheries but the catches are generally lower than on the West Coast. Some rivers in Southland, particularly the Mataura River, which is also a very fine trout stream, are under very intensive fishing pressure with several hundred stands in the tidal area.

The responsible authorities in New Zealand do not undertake any monitoring of the amount of

whitebait caught or sold and my impression from the visit was that the New Zealand Fisheries Department had no apparent policy or overall objectives for management of the fishery.

It was certainly valuable to experience first hand the variety of methods in use in New Zealand but I feel sure that an estuarine spawning species such as Tasmania's *Lovettia* could not possibly withstand similar fishing intensity. On the other hand there is some comfort in the way that the jollytail, (*Galaxias maculatus*), which forms the basis of the New Zealand fishery and is also common in Tasmania, is able to survive such heavy fishing pressure.



Amateur Whitebaiting at the mouth of the Arawata River, South Island, New Zealand.

## RAINBOW TROUT PURCHASED

The Inland Fisheries Commission recently purchased 50,000 domestic (fish-farm) rainbow trout fingerlings from the Russel Falls Trout Farm. The fish have been on-grown for a short period at Salmon Ponds prior to liberation.

The purchase was made in order to protect the Commission's wild rainbow trout management program, whilst recognizing the

success and popularity of domestic rainbow trout in selected waters. Stocking details are listed below.

The remaining rainbow trout fingerlings are intended for Lake Mackintosh and the purchase of a further 25,000 rainbow trout for Lake Barrington has been approved.

WATER	SPECIES	ORIGIN	NUMBER	SIZE
Blackmans Lagoon	Rainbow	Domestic	5 000	5.0 g
Little Waterhouse Lake	Rainbow	Domestic	5 000	5.0 g
Lake Dulverton	Rainbow	Domestic	5 000	5.0 g
Pawleena Dam	Rainbow	Domestic	5 000	5.0 g
Meadowbank Lake	Rainbow	Domestic	10 000	9.5 g
Lake Crescent	Brown	Wild	25 000	3.1 g
Lake Leake	Brown	Wild	25 000	3.1 g
Lake Dulverton	Brown	Wild	7 000	3.1 g
Penstock Lagoon	Brown	Wild	7 000	3.1 g
Lagoon of Islands	Brown	Wild	9 500	3.3 g



# THE THREAT OF FISH DISEASE

An article on recent developments in the field of fish disease,  
compiled by Dr Robert Sloane, Commissioner of Inland Fisheries.

Tasmania enjoys a fortunate position in that its island status affords protection against the potential threat of exotic plant, animal and fish diseases. In particular, Tasmania's freshwater fauna enjoys a 'disease free' status in that many of the serious fish and crayfish diseases known from other parts of the world are not known to occur in the Tasmanian environment.

However, the threat of introducing a serious disease into our freshwater fauna is ever present and this is highlighted by some of the recent research reported in this article.

## The Status of Salmonids

In general Australian salmonid populations are free of many of the serious diseases which afflict salmonids in other countries.

The serious northern hemisphere viral diseases, Infectious Pancreatic Necrosis (IPN), Infectious Haematopoietic Necrosis (IHN) and Viral Haemorrhagic Septicaemia (VHS) have not established in Australia. Similarly, the serious bacterial diseases, Furunculosis and Bacterial Kidney Disease (BKD); the significant parasitic diseases, Whirling Disease and Proliferative Kidney Disease (PKD); and the poorly understood Ulcerative Dermal Necrosis (UDN), have not been recorded in Australian Salmonids.

Recently two leading researchers in this field, Dr J. Humphrey and Dr J. Langdon of the Australian Fish Health Reference Laboratory, have collated available information on the fish disease status of Australia and have listed the significant diseases which have not been recorded in Australia. (Ref. Langdon J.S. and Humphrey J.D. 1986; *Diseases of Australian Fish and Shellfish*, Australian Fish Health Reference Laboratory, Benalla).

Since 1983 there has been a ban on the importation of salmonids into Tasmania from interstate. This ban was imposed specifically to prevent the spread of Bacterial Kidney Disease and Enteric Redmouth Disease from interstate hatcheries and also as a general safeguard against unwanted and/or unknown disease risks.

Maintenance of the essentially disease free status gives Tasmanian salmonids an advantage in the commercial export market-place and also ensures a relatively 'healthy' trout and salmon farming industry and wild sport fishery.

However, the disease free status of Tasmanian salmonids could be destroyed by direct importation of live or fresh salmonid products. An elaborate disease testing protocol, including ova disinfection and subsequent quarantine in a water-recirculating facility, has been employed to permit the recent importation of Atlantic salmon from New South Wales to Tasmania. This protocol was supervised by fish pathologists from the Tasmanian Department of Agriculture and the Australian Fish Health Reference Laboratory in Victoria.

Such stringent controls could be jeopardized by illegal, direct importation into Tasmania. Although it is also illegal to import fresh or live salmon/trout products into Australia from overseas, there are occasional reports of fresh salmonid products reaching the Australian market. Such reports are referred to Commonwealth Customs and Quarantine.

## Redfin Perch Virus

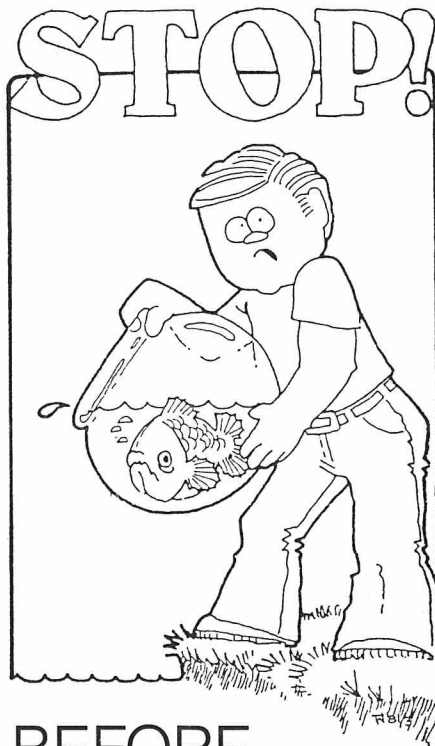
Last year fish pathologists at the Australian Fish Health Reference Laboratory investigated the death of thousands of juvenile redfin perch in Lake Nillahcootie and Lake Mokoan near Benalla, and isolated the first virus reported from freshwater fish in Australia. Further investigations have resulted in the isolation of this virus from

redfin perch in several north-eastern Victorian waters.

According to the experts at Benalla, the redfin virus appears to be a member of the Iridovirus family which includes the virus causing African swine fever (a serious exotic disease of pigs) and lymphocystis virus which affects fish.

Challenge tests have been conducted on a number of other freshwater fish, but at this stage it seems that the virus is unlikely to be pathogenic to other fish species in the wild. The virus is not known from redfin perch or from other species of fish elsewhere in the world.

The origin of the virus in Australia is not clear, but it is suspected that it may have caused mortalities in redfin perch as far back as the 1970's. There is a distinct possibility that it has been introduced with imported aquarium fish, fish products or fishing tackle.



STOP!  
BEFORE  
YOU  
RELEASE  
THAT FISH...

T. Woolcott, ACT Parks & Conservation Service

It is illegal to import redfin perch into Tasmania, and within the State it is an offence to liberate or transfer live perch, or to use live or dead perch as a bait for fishing. Tasmanian authorities have acted quickly to declare redfin perch virus as a notifiable disease for the purposes of the Stock Act. This provides special powers to impose quarantine and to allow treatment or destruction of diseased stock if the virus is detected in Tasmania.

## Goldfish Ulcer Disease

The bacterium *Aeromonas salmonicida* causes the condition known as Furunculosis in fish. It is a communicable disease which may

take the form of sudden mortality without external signs, or the development of degenerative muscle ulcers accompanied by lesser mortality.

Furunculosis is a significant problem in northern hemisphere salmonids and particularly in Atlantic salmon farming, but this disease has not been reported in Australian salmonids. However, Furunculosis is widespread in goldfish and is commonly known as goldfish ulcer disease. The occurrence of this disease in Australian goldfish has in the past led to calls for greater controls on goldfish movement and importation, but the aquarium trade has successfully argued that the *A. salmonicida* strain common among goldfish is not the same as the strain associated with mortalities in salmonids.

However, recent trials conducted by fish pathologists at the Department of Agriculture's Mt Pleasant Laboratories in Tasmania, have shed new light on this situation. In challenge experiments Atlantic salmon were inoculated with a strain of *A. salmonicida* isolated from goldfish, and doses as low as 100 cells were sufficient to induce sudden mortality. Similarly, recent experiments conducted by the National Fish Health Research Laboratory of the U.S. Fish and Wildlife Service have demonstrated that injection with *A. salmonicida* from goldfish will cause mortality in rainbow trout, brook trout and Atlantic salmon.

In another recent study goldfish have been identified as carriers of *Yersinia ruckeri*, the bacterium which causes Enteric Redmouth Disease in salmonids. This disease has not been reported in Tasmania although it is known from Government hatcheries in New South Wales and Victoria. Tasmania's Chief Veterinary Pathologist, Mr B. Munday, is also concerned that Proliferative Kidney Disease which is now considered one of the most significant salmonid diseases in Europe and the U.S.A., may be caused by a protozoan which could be carried by goldfish.

This recent evidence suggests that the unrestricted importation of goldfish without certification against these diseases, may pose a significant risk to the disease free status of Tasmanian salmonids and other freshwater fauna. Goldfish are of particular concern because they are capable of establishing feral populations in Tasmania and they are extensively traded and widespread in aquaria, garden ponds and small dams.

A recent survey conducted by Commission staff identified 15 major goldfish outlets in Tasmania with an estimated turnover of 120,000 fish per annum. Virtually all these goldfish are imported from outside Tasmania and the majority of these are imported into Australia via South-East Asia.

Although aquarium fish imported into Australia now undergo a two week quarantine period on arrival, fish can carry an infectious disease without showing clinical symptoms. A further problem is that goldfish are freely traded between the States, even though certain mainland goldfish farms are known to have a history of goldfish ulcer disease.

It should be noted that, as with redfin perch, it is illegal to liberate or transfer live goldfish from one water to another, and it is an offence to use live or dead goldfish as a bait for fishing in Tasmania.

## Crayfish Plague

A recent article entitled "The Lethal Harvest of Crayfish Plague" by Peter Marren, which appeared in *New Scientist* (30 Jan 1986) should encourage Tasmanians to be vigilant against the

illegal importation of live crayfish into the State. The article traces the origin and spread of the killer fungus which has devastated Europe's freshwater crayfish and has now found its way to Britain.

The mystery of the crayfish plague was resolved in the mid 1930's when the fungus *Aphanomyces astaci* was identified. The fungus is endemic to North America where the native crayfish are more resistant to infection. Evidence suggests that the crayfish plague was introduced with American crayfish brought to Europe as a food species in the 19th Century.

In Europe the crayfish plague originated in northern Italy in the 1860's and rampaged through France and Germany, reaching Finland and the Russian Steppes by the turn of the century; in 1908 the plague spread to Sweden. The effect was devastating, with rotting crayfish littering the banks. Waters which formerly supported a lucrative crayfish fishery collapsed almost overnight.

Until recently there were no proven cases of crayfish plague in Britain, although the native crayfish had been restricted by pollution and habitat alteration. But, in 1983, crayfish plague outbreaks were confirmed and many mass mortalities have since occurred. The recent outbreaks in Britain followed the establishment of commercial crayfish farms throughout the country, and the importation of exotic American crayfish to establish commercial stocks. These introduced crayfish are believed to have carried the plague which is now decimating native crayfish stocks.

In Tasmania, there is a total ban on the importation of live crayfish from interstate or overseas. The mainland yabbie *Cherax destructor* has been declared 'noxious' and isolated populations of this crayfish in Tasmania were detected and eradicated in 1979.

Tasmania's giant freshwater crayfish *Astacopsis gouldi* is the largest freshwater crayfish in the world and supports a significant recreational fishery. In addition Tasmania boasts a distinctive freshwater crayfish fauna which includes two free-living species and some five burrowing species.

Our crayfish are certainly worthy of protection.

## How Can You Help?

It is important to recognize the potential threat posed by exotic disease and the establishment of feral populations. Restrictions on importations, translocations and liberations of exotic fish and crayfish are imposed for good reason.

You can help by :

- reporting fish kills in the wild, or unusual mortalities of aquarium or pond fish
- reporting the presence of any unusual fish, or of feral fish populations
- reporting any unauthorised fish or crayfish importations or releases
- destroying unwanted aquarium or pond fish - never release such fish into waterways, ditches or drains.

Please remember that it is illegal to release live fish or crayfish into any waterway, pond, dam or drain without authorisation from the Inland Fisheries Commission. It is also illegal to transfer live fish or crayfish of any kind from a water to any other water, and the use of live or dead goldfish or perch as bait is strictly prohibited in Tasmania.

## LISTING OF ANGLING CLUBS

As a result of the article on the benefits of joining an angling club which appeared in the last Newsletter, there have been a number of requests for further information. The list below summarises the Commission's records in relation to freshwater angling clubs in Southern Tasmania.

If it is assumed that 20 senior members belong

to clubs which have not provided membership details, then Southern Tasmania has 12 recognised clubs with a senior membership of 730, North Western Tasmania has 12 clubs with 700 senior members and Northern Tasmania 11 clubs with 565 members. This indicates a total of 35 recognised clubs with a total senior membership of approximately 2,000.

CLUB TITLE	SECRETARY/ Address	PRESIDENT/ Address	MEMBERSHIP
<b>SOUTHERN TASMANIA</b>			
Southern Tasmanian Licensed Anglers' Association	Mrs Janet Verrell G.P.O. Box 159B Hobart, Tas. 7001 (002) 49 3828	Mr Charles Bourke 91 York Street Sandy Bay, Tas. 7005 (002) 23 1917	*
Maydena	Mrs J. Stephens Maydena, Tas. 7140	Mr J. Murtagh	21 senior
Bothwell	Mr D. Branch 'Fenton Forest' Glenora, Tas. 7454	Mr Trevor Davey	134 senior 38 junior
Huon Anglers Association	Ms Christine Woolley 6 John Street Geeveston, Tas. 7116	Ms Stacey Wooley Agnes Street Ranelagh, Tas. 7108 (002) 64 1115	70 senior 33 junior
Bridgewater Anglers Association	Mr Peter Wood 42 Stanley Street Bellerive, Tas. 7018 (002) 30 3337	Mr Bernard Creed Main Road Bridgewater, Tas. 7030 (002) 68 6272	54 senior 10 junior
Tarraleah Anglers Club	Mrs Jean Hayes 94 Bradys Lake C/- P.O. Tarraleah, Tas. 7140 (002) 89 1158	Mr Laurie Peters	43 senior 11 junior
New Norfolk Anglers Club	Mr Doug King 370 Back Water Road New Norfolk, Tas 7140 (002) 61 1383	Mr Peter Hodge Hayes New Norfolk, Tas. 7140 (002) 61 1619	201 senior 51 junior
Glenorchy R.S.L. and Citizen's Licensed Anglers Club	Mr Grant Kleeman	Mr Dick Roberts 2 Milton Crescent West Moonah, Tas. 7009 (002) 72 9881	49 senior 29 junior
Kingborough Anglers Club	Mr Brent Newton 5 Wakeford Avenue Kingston, Tas. 7150 (002) 29 5996	Mr Barry Peterson 30 Hierns Road Blackmans Bay, Tas. 7152 (002) 29 5769	42 senior
West Hobart Angling and Naturalists Club	Mr B. McCullagh 5 Bennett Street Bridgewater, Tas. 7030 (002) 63 6421	Mr Kerry Walker 4 Eumatala Street Lauderdale, Tas. 7021 (002) 43 7349	
Claremont Anglers Club	Mr Cliff Martin 39 Spring Street Claremont, Tas. 7011 (002) 49 4715	Mr Cliff Smith	25 senior 17 junior
Clarence Anglers Club	Mr Ray Tillar 32 Elinga Street Howrah, Tas. 7018 (002) 47 7919	Mr Ian Stokes 4 Bunawarra Road Geilston Bay, Tas. 7015 (002) 43 6670	30 senior
Tasmanian Fly Tyers Club	Mr Spencer Logue 31 Banjorrah Street Howrah, Tas. 7018 (002) 44 3054	Mr David O'Brien 27 Ash Street Lutana, Tas. 7009 (002) 28 3949	42 senior

## MERSEY HEADWATER LAKES EXPLORED

The Inland Fisheries Commission recently joined the Zoology Department of the University of Tasmania in a biological survey of a remote group of lakes in the headwaters of the Mersey River.

Lakes Meston, Myrtle, Bill, Charles, Adelaide and Louisa are all natural highland lakes to the west of the Walls of Jerusalem National Park. Lake Meston was stocked with rainbow trout by air in the 1960's and is fished by those anglers who like to combine their fishing with some bushwalking. Since the tracks to Meston pass by the other lakes, the Commission has received several requests that they should also be stocked. The aim of the survey was to investigate the fish and invertebrate fauna of the lakes and assess the likely impact of stocking them with trout.

Because of the remote location a helicopter was used to ferry the party and gear from the IFC field station at Liawenee on Great Lake to the

camp at the NE end of Lake Meston. From there small groups travelled on foot to the other lakes, collecting native fish, shore and deep-water invertebrates, and sampling the trout stocks with gill nets.

In the four days of the survey the main lakes and a large number of unnamed creeks, tarns and lakes, were sampled. Trout were only found in Lake Meston, but native fish were abundant in all the waters surveyed. Superficially, at least, there was no substantial difference between the fauna of Lake Meston and the other large lakes, but the material still needs to be examined in detail. When that information is available the Commission will recommend whether or not the other lakes should be stocked.

Despite the fierce fire which devastated the shores of Lake Myrtle and Mt. Rogoona a few years ago, much of the area is a fine wilderness, in the centre of a vast area which has been little explored zoologically.

## ITEMS IN BRIEF

## PROSECUTIONS

Successful prosecutions since the last Newsletter are listed below.

### Lake Kara Drained

Lake Kara, a 60 hectare impoundment at Natone, was formed in 1968 by the North Western Fisheries Association on land vested in the Commission as a fishing reserve. The lake was drained recently after surveys had indicated poor trout stocks and low dissolved oxygen levels. The lake did not prove well suited to trout because vegetation was not cleared prior to the initial flooding, and a static lake level and lack of bottom flushing created anoxic conditions. Local fishing club members are now clearing dead timber from the lake bed and Commission staff are investigating methods of improving the lake's future productivity.

### Open Day

The Inland Fisheries Commission will conduct an Open Day at the Liawenee Field Station on Sunday 4 May commencing at 12 noon. Visitors will be able to view the brown trout spawning run in Liawenee Canal and tour the Commission's Laboratory facilities. Enforcement staff and research staff will be available for informal discussions, and hatchery staff will be stripping brown trout eggs on the day. Barbecue facilities will be made available if the weather permits (and it usually doesn't). All are welcome.

### Anglers Survey

The Commission is preparing a postal survey of licensed anglers in conjunction with the Economics Department of the University of Tasmania. A random sample of licensed anglers will receive the survey. Anglers are asked to complete all the details requested, and promptly return the questionnaire to the Commission in the prepaid envelope provided. The survey is aimed at assessing the value of trout fishing in Tasmania and determining the value and popularity of various waters. This information is vital to the future management and development of Tasmanian trout waters so please make a special effort to complete and return the questionnaire.

### Lake Crescent Survey

A survey of the brown trout population was undertaken on 13 February as part of an overall study on the effects of water level changes at Lake Crescent. Sampling was centred around Lewis Island which borders the marshes off the Interlaken shore. The purpose of the study was to obtain information on trout growth and diet, and to assess the effect of recent brown trout fingerling releases. 35 trout were sampled and ranged in weight from 240 to 5 650 g; average 2 214 g. Further details will be reported in a future Newsletter.

### An Appeal for Tags

It is now nearly the end of the fishing season. Of the 300 rainbow trout tagged in the Liawenee Canal spawning run at Great Lake, 53 tags have already been returned to the Commission by anglers. You will probably agree that this is a remarkable rate of return from a lake as large as Great Lake. The Commission is offering a \$1 reward and the N.W.F.A. a \$5 reward for any tags returned. In order to make the initial results of this study representative, the Commission needs catches of tagged fish to be reported. So, if you have caught any yellow-tagged rainbows from Great Lake this season, **please let us know**. Ideally we would like the tag number, date and place of capture, and fish length or weight, but if you don't have all of that information still contact us. Send any details to the IFC head office (127 Davey St, Hobart), Liawenee field station, or any Inland Fisheries officer, giving your name and address. We would appreciate any help you can give us. **Please send in tags, or let us know if you have caught a tagged trout this season.**

Court Date	Offender and Address	Nature of Offence	Fine	Costs	Penalty
8.10.85	Paul John HARDING East Orierton Road, Pawleena	Fishing without licence.	40.00	15.10	-
11.10.85	Donald Charles ROBERTS 6 Ramsey St., E. Devonport	Take fish from closed waters. Other than artificial bait. Threaten Public Officer. Threaten Public Officer.	75.00 25.00 25.00	15.10 15.10	- - -
15.10.85	Roderick Aaron WILLIAMS Owen St., Gormanston	Other than rod and line. Possession during closed season.	40.00 40.00	15.10	- -
17.10.85	Maurice John LOVELL 13 McCulloch St., Ulverstone	Disturb spawning fish. Take fish from closed waters. Other than rod and line.	60.00	15.10	-
24.10.85	Raymond John WILLIAMS 21 Marlborough St., Longford	Take fish from closed waters. Other than rod and line. Possession of unclean fish.	20.00 20.00 20.00	15.10	- - -
24.10.85	Christopher Lee WATKINS 24 Upton St., Launceston	Take fish from closed waters. Assembled rod.	20.00 20.00	15.10	- -
6.11.85	Colin Lloyd BURR 20 Rekuna Rd., Penguin	More than 1 rod and line. Improper language.	50.00 25.00	15.10 15.00	- -
6.11.85	Gerald David SMITH 3 Eden Rd., Penguin	More than 1 rod and line.	50.00	30.10	-
7.11.85	Gary Keith WRIGLEY 26 Victoria St., Swansea	Take fish from closed waters. Other than rod and line. Discharge a firearm.	60.00 40.00	15.10	20.00 -
12.11.85	Marcus Kingsley BROWN Frederick St., Ringarooma	Take fish from closed waters. Other than rod and line.	50.00 20.00	15.10	47.00 -
12.11.85	Leonard James YOUNG Ringarooma	Take fish from closed waters. Other than rod and line.	50.00 20.00	15.10	47.00 -
12.11.85	Robert Keith BENNETT 68 Gleadow St., Ivermay, Lton	Take fish from closed waters. Other than rod and line.	50.00 20.00	15.10	47.00 -
12.11.85	Peter William BENNETT Frederick St., Ringarooma	Take fish from closed waters. Other than rod and line.	50.00 20.00	15.10	47.00 -
12.11.85	Robert Keith WIDOWSON Branxholm Lane, Legerwood	Take fish from closed waters. Other than rod and line	50.00 20.00	15.10	47.00 -
9.12.85	Brian William ALLISON 16 Innaloo St., Waverly, Lton	Fishing without licence. Assembled rod.	100.00 20.00	15.10	- -
9.12.85	Jamie PEACOCK 33 Trethewie St, Ravenswood, Lton	Fishing without licence. Assembled rod.	100.00 20.00	15.10	- -
18.12.85	David John TRIPP C/P.O. Bass Hwy., Prospect Vale	Disturb spawning fish.	50.00	23.10	-
16.1.86	Terrence John FLOWERS Post Office, Mole Creek	Fishing without licence.	100.00	15.10	-
20.1.86	Alois KEPPLINGER Post Office, Ridgley	More than 1 rod and line.	25.00	15.10	-
20.1.86	John Edward CLARK 26 Haywoods Lane, Somerset	Other than artificial bait. Possession of live bait.	40.00	15.10	Conviction recorded. -
23.1.86	Mark Leslie MILBOURNE 123 Mary St, East Devonport	Take whitebait. Possession of whitebait.	50.00 50.00	15.10	- -
23.1.86	Michael David FINLAYSON 18 Lyons Ave., Devonport	Fishing without licence.	100.00	15.10	-
23.1.86	Brian Geoffrey EVANS 19 Laphthorn Pl., Don	Take whitebait. Possession of whitebait. Possession & use of whitebait net.	50.00 50.00 20.00	15.10	- - -
23.1.86	Christopher Leslie HALL George St., Forth	Unattended set rod.	20.00	15.10	-
23.1.86	Glen Edward KENZIE Walker St., Forth	More than 1 rod and line. Unattended set rod.	20.00 20.00	15.10	- -
23.1.86	Sharon Anne BRAMICH 11 Wanindra St., Devonport	Fishing without licence.	100.00	15.10	-
29.1.86	Dean Morris APPLEYARD 11 Abbott St., Bellerive	Fishing without licence.	30.00	15.10	-
29.1.86	Scott Raymond FENTON 38 Deak St., Gage Brook	More than 1 rod and line. Unattended set rod.	30.00 30.00	15.10	- -
4.2.86	Richard William Thomas FERRAR Sally Peak, Buckland	Fishing without licence. Take fish from closed waters. More than 1 rod and line.	30.00 30.00 30.00	15.10	- - -
6.2.86	James Edward JOHNSTONE 21 Clyde St., Invermay	More than 1 rod and line.	40.00	15.10	-
6.2.86	Brett Anthony LOONE 65 Mayfield St., Launceston	More than 1 rod and line.	40.00	15.10	-
6.2.86	Brett Andrew STOWARD 16 Essendon St., Summerhill, Lton	More than 1 rod and line.	40.00	15.10	-
10.2.86	Colin Barry LORD 3 Sterling St., Tullah	Take whitebait. Possession of whitebait. Possession & use of whitebait net.	50.00 50.00	15.10	- Adjourned Sine Die -
10.2.86	Rodney Kenneth FLIGHT 11 Gum Drive, Roseberry	Fishing without licence.	100.00	15.10	-
12.2.86	Gilbert Julian MARSHALL 8 Poimena St., Tarraleah	Possession of Whitebait.	20.00	15.10	-