

FEEDING NATIVES

Cyclops

Cyclops are a copepod belonging to the crustacea family. Other members of this family of interest to aquarists are daphnia, diaptomus, bosmina and cypris.

The most common form is cyclops fuscus, which reaches a length of 2-3 mm. Life spans are 4-6 months for smaller species and 10-14 months for the larger forms.

Adult cyclops are overall white in colour and roughly spadelike in shape. The broad forward portion bearing antennae, mouthparts and six pairs of swimming legs. The rear tapering portion ends in a fork formed by two projections covered in hair-like bristles.

Females can be identified by two egg sacs attached to the rear portion of the body. The young hatch as nauplii larvae and pass through six naupliar and six copepodid stages to reach adulthood.

Cyclops may be either herbivorous or carnivorous, eating tiny plants or animals. They feed by grasping the food rather than filtering it out of the water. For tub or pond culture we can feed them infusoria, algae or suspensions of yeast or manure.

Cyclops can withstand low oxygen levels and a wide range of temperature. Due to this they usually survive in a home culture long after daphnia and others have died out due to overcrowding etc.

A starter culture can easily be collected by using a fine mesh net or rapidly submerging a wide mouth jar on the edge of a lake, pond or drainage ditch of clear, slow flowing shallow water.

By holding the collecting jar up to the light cyclops are recognised by their shape, colour and swimming motion of moving rapidly in straight lines by a series of jumps. You don't need large quantities to start a culture. As few

as ten of mixed sex will suit. Don't use too deep a culture container. 300 mm is good enough.

Keep it out of the sunlight but in strong indirect light. Change water regularly using old tank water.

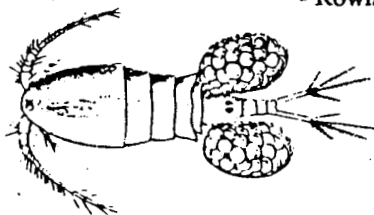
Adults are easy to capture after dark as they congregate on the surface and can be easily scooped up with the aid of a net and torch. Adult rainbows love mature cyclops and will actively chase them around a tank. They are valuable as a dietary supplement although large quantities would be required to provide a square meal.

It is the nauplii that produce the most value. For rainbow fry they are an excellent first food. Throughout their nauplii stage, cyclops are about the same size as the point of a pin. They have a habit of accumulating in the corners of a culture tub on the surface and can be easily caught by syphoning. They are black and easy to spot. When put in rearing containers they still congregate at the surface where they are eagerly taken by the fry.

Overfeeding isn't a problem as they don't die in fresh water like brineshrimp nauplii. As a matter of fact, the more the merrier. Rainbow fry won't get a better start in life if you feed them infusorians and cyclops nauplii for the first few weeks. If you feed correctly, fry can eat continuously during daylight, and vital early growth will be uniform and at a maximum.

One word of caution. Keep adult cyclops out of fry tanks, as their feeding habits could present a danger to fry in their first few days of life.

- Rowland Ford



JANUARY 1987.

NEWSLETTER

AUSTRALIA NEW GUINEA FISHES ASSOCIATION

North West Tasmania Regional Group.

Promoting the keeping and propagation of the native fish species of Australia and New Guinea



CLUB NEWS

WELCOME MEMBERS :- To our first News-letter.

We are off and running and I might add with the best wishes of our Queensland friends.

Who at no little cost to themselves have arranged an assorted shipment of fish to be Air freight down to us (we have to pay the Air freight).

As far as your two fingered typist knows at this stage there will be no less than 14 different types to start us off with a variety of breeding stock,

More on this as news comes to hand.

Now I think most of us would like to express our thanks to our Executive Officer :-

"Kathy Buttler"

for the extensive work and time she has devoted to putting together all the Data and details necessary to get us up and running, WELL DONE "KATHY"

Alan McColl.

(alias two finger Mac)

LAST MEETING

Points raised at the last meeting and were accepted.

1. Initial cost to club members will be 1st year \$10 henceforth \$5 per year.

2. Meetings will be held on 2nd Tuesday every second I.E. First meeting 1987 10th February. MONTH

3. On alternate months, newsletter will be sent out to each financial member containing news of meetings etc.

4. Due to complication of Permit "ANGFA" club essential for "ANGFA CARDS" 100% necessity as they will be our licence to take fish.

5. Card will be issued to financial members, specimen signature of holder and club Executive Officer will be required on card for collecting.

6. Copies of rules for collecting will be issued to all members. As an incentive to club members - Alan McColl has offered \$10 to the first member to breed and raise a Tasmanian species of Galaxia to pass the fry stage.

Members added their names to a list, to be sent away as registration on the permit this list also includes members of immediate family as listed.

The Aims of this club are to Keeping, Propagating, Surveying and Educating. These are objectives well worth trying hard at keeping in mind when you are looking around our State and always tell others with pride that we are trying to make a better place for

Now for a few words on the fishes we are keeping or about to, because of the greatness of land we live in, so isolated from other countries for 10,000 years that we now have a unique fish fauna, also plants and other freshwater life, which is quite a legacy we must try for the preservation of and also learn about our own land. When keeping "native fishes", you will notice how easy they are to manage. Due to their peaceful nature, they are therefore, a quiet fish that will not upset their living quarters by uprooting plants as they have knowledge inherited, not to disturb the balance of their environment. I have learned a considerable amount about our country and native fishes within, by reading literature, and the seeking of answers to questions, from peoples who have established their native fish aquariums at a previous time to my venture into this field of aquaria. I have always been fascinated by other things native to Australia, such as plants, birds and animals. The last "Aquarium Life" had a article on feral fish in Australia, people have just discarded their unwanted fishes into creeks, dams, lakes, rivers and sewage systems, where they are able to survive and reproducing populations. We already have Carp in Tasmania, now we must make sure no other species are allowed to get loose as more escapes will endanger our native fishes.

-Kathy Butler.

NEXT MEETING

When: Tuesday 10th Febuary
1987 7.30 for 8 pm.

Where: Kathy Butlers
64 Tasman st.
Devonport.

What: Discussion on coming year activities and native fish already in our aquarium's.

"ALL VISITORS WELCOME"

Executive Officer:- Kathy Butler
64 Tasman st D/port
Phone 246670.

Editor:- Alan McColl, P O Box 111
Phone 252085.

Our "Survey of Native Fishes" permit was issued by the "Inland Fisheries Commission" and is valid from 1st January to 30th June 1987.

"IMPORTANT"

It is vitally important that all members understand and comply with the rules and regulations under which our permit has been granted.

1. A maximum number of 10 specimens of each species may be collected by each member each trip.
2. This permit does not include the collection of the "Australian Grayling" (*Prototroctes maraena*). The above fish is a protected species.
3. The local area inspector must be given advance notice of all collecting trips.
4. Any fish collected under this permit shall not be sold or offered for sale.
5. The habitat survey form must be completed including No of fish and species taken and returned to the executive officer after each trip.
6. The membership card of the "ANGFA North-West Tasmania Regional Group". is to be carried whilst collecting freshwater fish and must be produced, upon request, to an officer of the Inland Fisheries Commission.
7. All fish other than those for which the permit applies, are to be returned to the water unharmed.
8. The method of our permit is by hand net only and our permit at this stage covers "Forth River" (and tributary streams) above the Forth weir only.

MEMBERS

To make a success of our newsletter, your participation in this effort is needed, each newsletter will include; last meeting, club news and next meeting information. Some of the ideas to be contained in the newsletter, such as collector's corner, breeding natives, keeping and caring natives, feeding natives, book review, fish wanted, that's a good idea and auction night, in other words it will have all our club news. So how about a bit of help. All will be appreciated.

-your harrised editor.

Includes :-

- 1 Certificate of membership.
- 4 Record sheets.
- 2 Maps of Tasmania
- 1 Native freshwater fishes of Tasmania.
- 1 Set of Fish Identification Cards of Tasmania.
- 1 Native freshwater fishes of South-East Qld.
- 1 Set of fish Identification cards of S.E.Qld.
- 3 Habitat Survey Forms.
- 1 Care, Feeding and Breeding Table.
- 1 ANGFA Badge (if available)

"INFORMATION RE PLANTS"

As supplied by Mr R Hart of the Department of Agriculture.

Plants that may be suitable for aquarium culture are as follow's

- 1 Ribbon weeds along rivers in Midlands,
- 2 Potamogeton spp Lake Dobson,
- 3 Azolla spp Asbestos Range,
- 4 Isoetes spp Pine lake,
- 5 Callitriche spp on farm dams,
- 6 Lemna spp
- 7 Meopaxia, 8 Austrolasica
- 9 Ranunculus spp..
- 10 Marsilea drummondii.

As very little research has been done in the area of growing Tas Native Plants for supporting native fish life, relatively few species may be suitable as our members are of low fertility and species that do grow are mostly large and net submerged.

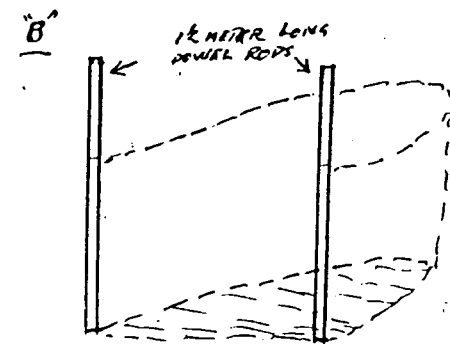
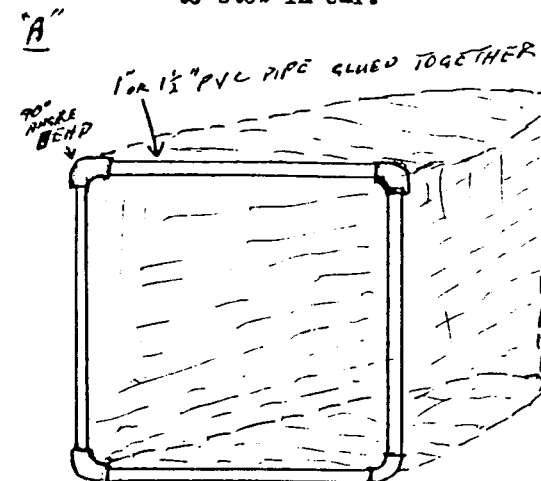
So I guess it will be a case of trial and error members,

So good luck Alan McColl.

two types of net commonly used for collecting are illustrated below
"A" Square P.C.V. frame all glued is the most commonly used, it has the advantage that when fish are caught, it can be released and it will float whilst bucket is fetched for transfer.

"B" Seine type net.

Two doweling poles approx 1½ meters long net suspended in between. Used like a vacuum cleaner. Advantages it can be adjusted to fit narrow areas, and is easy to stow in car.



NETTING USED FLY WIRE, SHAD CLOTH, OR CURTAIN MATERIAL.

Courtesy Glen Leiper S.E.Q. ANGFA