



**SOCIETY
PROGRAMME AIDS**

BOOK 18

FEDERATION OF BRITISH AQUATIC SOCIETIES
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FOREWORD

FBAS publications cover many aspects of fishkeeping, in the main directly connected with fishes themselves, be it sizes, names or Show Classes.

The initial break with this 'tradition' came with **Booklet No. 7 - Society Programme Aids** (now the **YEARBOOK**) followed by **Booklet No.14 - Organisation of an Open Show**, and **Booklet No.8 - Forming a Society**.

Whilst FBAS Aquatalks and Videos are ideal substitutes for having a speaker in person, these have to be booked in advance - no use at all if the speaker fails to appear 'on the night.' Armed with this Booklet (and the second companion Volume, **Booklet No.25 - Quizbook 2**), Societies can instantly fill any gap that may suddenly appear in their programmes.

This Booklet is in two parts: the first contains basic material arranged in sections, each a different aquatic subject, so it is easy to have a quiz on a specific, or on general subjects as the need arises. The second part provides other ideas for Societies when making up Quiz Evenings.

We are indebted to those Societies who have allowed us to draw upon their own quiz materials, notably **The Tyne/Tees Area Association**, **The Association of Essex & East of London Aquatic Societies**, a very welcome contribution from **Oldham A.S (F.N.A.S.)**, but especially to **Stan Forrest** of **St Edmundsbury A.S.** who not only provided a large proportion of the questions but also put forward the idea of producing this collection in the first place.

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HELPING HINTS

There is a slight difference between a Quiz evening for your own meetings and one which involves visiting Societies. The first is quite likely to stagger on from round to round with allowances being made for inadequate scoring and the occasional (?) help. In an Inter-Society Quiz things have to be that much more controlled - if the friendly rivalry is to be continued into future encounters!

WHO ANSWERS ?

The 'first-on-the-buzzer wins the right to answer the question' system has some disadvantages, especially where a team depends on its 'know-all' member to answer everything (correctly, of course!) which rather nullifies the point of having a team at all. A fairer is to have questions put to individuals for a set number of 'rounds' then let the buzzer decide (and inject drama and excitement) into the final round.
(See buzzer-indicator lamp design circuit later in this booklet)

SCORING

'Tactical buzzing' can also be a problem, depriving opponents of the right to answer and getting maybe maximum points. Three points for a correct first answer, two points for a correct answer from the opposing team and one point for any 'team conference' answers are starting suggestions for scoring systems. Keep the audience interested, give scores periodically and arrange that refreshments come before the Semi-final or Final.

FAIR PLAY?

It is diplomatic (especially in any Inter-Society Quiz) to have someone unconnected with any of the participating teams to be Quizmaster and general arbitrator.

Some final advice - keep things ticking over steadily: don't argue over technicalities in the answers. Twenty minutes per round should be the target time to aim for and, in the interests of conserving time, it may be to your advantage to declare any team as winners once they've passed the point where they cannot be caught.

HAPPY QUIZZING !

Tropical Subjects

QUIZ QUESTIONS : Cyprinids

1. Where are the teeth in members of the Cyprinid fishes ?
In their throats
2. Why are Barbs so named ?
From the Latin 'Barbus' which means beard - a reference to their whiskers or barbels
3. Where do Harlequin Fish lay their eggs ?
Under a broad leaf
4. How many barbels might Barbs have ?
One or two pairs, or even none
5. The Scissortail belongs to which genus ?
Rasbora
6. Where does the Clipper Barb come from ?
Africa
7. Red nose, black stripes, red-edged black fins; what is it ?
Male Tiger Barb
8. What's a Red Wonder Fish or a Venus Fish ?
A variety of White Cloud Mountain Minnow ; sometimes classed as a separate species, *Aphyocypris pooni*
9. How do most Cyprinids spawn ?
By egg-scattering
10. Name perhaps the most widely-kept Cyprinid.
The Goldfish
11. Describe an obvious difference between *Rasbora cephalotaenia* and *Barbus viviparus*.
***Barbus viviparus* has a more distinct 'double line' section to the black band along its side**
12. Why is *Barbus viviparus* incorrectly named ?
It's not a livebearing fish;the young fish found inside it when first discovered was a recent meal not its own baby fish
13. Apart from Barbs and Rasboras what is another fairly large group of Cyprinids ?
Danios
14. What does *Brachydanio* mean ?
Short Danio

QUIZ QUESTIONS : Cyprinids

15. Where does the Flying Fox come from ?
Sumatra, Borneo, Thailand
16. What does *Tanichthys* mean ?
Tan's fish (after the discoverer, a Chinese Scout called Tan)
17. The eggs of the Tiger barb are:
a) Green b) Yellow c) Dark brown
b) Yellow
18. What is the difference between *Barbus pentazona* and *B. tetrazona* ?
***B.pentazona* has 5 bars, *B.tetrazona* has 4**
19. What colour is the dorsal fin of *Barbus nigrofasciatus* ?
Black
20. Where does the Rosy Barb come from ?
India
21. Name a group of surface swimming cyprinids.
Danios
22. What is a general sign that some male coldwater cyprinids display at breeding time?
They develop white tubercles on the gill covers, head and pectoral fins

QUIZ QUESTIONS : Characins

1. Describe the physical difference between *Hyphessobrycon* and *Hemigrammus* ?
***Hemigrammus* has scales on the base of the caudal fin**
2. When has a Three-lined Pencilfish two upright dark bars ?
First thing in the morning - it's its night-time colours
3. What type of fish is the Belgian Flagfish ?
A Tetra, *Hyphessobrycon heterorhabdus*
4. The male Swordtail Characin has something peculiar about his gill-covers, what is it and what is its function ?
Long extension filaments ending in a spoon-shape, which he waves at the female to induce her to spawn
5. Detail the Swordtail Characin's spawning method ?
The male fires packets of sperm into the female, using his long anal fin to direct it, and the female is thus impregnated; later on, she lays internally-fertilised eggs under a plant leaf without any further need for the male. Impregnation is often for life
6. What is a characteristic of African Characins ?
Large scales
7. What spawning medium does the Splashing Tetra need ?
An overhanging leaf, or at least a cover-glass; it lays its eggs out of water
8. Diamond Tetra, Congo Tetra and Bleeding-heart Tetra males all have these ?
Enlarged dorsal fins
9. The Emperor Tetra, Sparkling Gourami and the *Priapella* livebearer all have these ?
Blue eyes
10. What do the initials C.S.S. stand for ?
The Characin Study Society
11. What unfortunate characteristic do fishes such as *Leporinus*, *Metynnix*, *Mylossoma* and *Colossoma* share ?
They all love aquarium plants

QUIZ QUESTIONS : Characins

12. What is the difference in the teeth action between Characins and Cyprinids ?
Characins have sharp teeth in the mouth for slashing and biting, Barbs have pharyngeal teeth in the throat for grinding up food
13. What is the usual natural food of the Pacu ?
Fruit
14. Why was the Neon Tetra banned from Shows shortly after its introduction to the hobby ?
Because it was felt that no other fish was capable of beating it
15. The Tigerfishes, *Hydrocynus* spp., come from where ?
African Lakes and rivers
16. One is black, the other red; both are from the genus *Megalamphodus*. What are they ?
Phantom Tetras
17. What is the purpose of the so-called 'characin hooks' on the male fish's anal fin ?
To help hold the female more tightly against him # during spawning
18. What is the main physical difference between the two principal genera of Hatchetfishes, *Carnegiella* and *Gasteropelecus* ?
***Carnegiella* has no adipose fin, *Gasteropelecus* has**
19. Apart from Characins, name two other Families of fish that have adipose fins.
Catfishes, Salmon/Trout
20. Name three continents, or large land masses, where Characins are not found.
Europe, Asia and North America

QUIZ QUESTIONS : Characins

21. Explain the reason for the name *Leporinus*.
The fish looks as though it has a hare-lip; *Leporinus* is Latin for little Hare
22. *Ephippicharax orbicularis*, the Salmon Discus, is now known as ?
Poptella orbicularis
23. Two popular Characins have been named after Dr. Herbert Axelrod, can you name them ?
***Cheirodon axelrodi* - Cardinal Tetra;
Hyphessobrycon herbertaxelrodi - Black Neon**
24. This Blackamoor is not a variety of Fancy Goldfish ; what is it ?
The Black Widow Tetra, *Gymnocorymbus ternetzi*
25. Why is *Copeina arnoldi* called the Splashing Tetra ?
Because it lays eggs out of water and has to splash them with water to prevent them drying out
26. Two Characins swim obliquely, in different directions ?
Spotted Headstander and the Penguinfish - one downwards, one upwards
27. Name two species of *Leporinus*.
***L.affinis* ; *L.fasciatus* ; *L.frederici* ;
L.megalepis ; *L.melanopleura* ; *L.striatus*.**
28. What have *Aphyocharax* and *Prionobrama* in common ?
They are both types of Bloodfin
29. Give the common names of two popular *Moenkhausia* species.
**Red-eyed or Glass Tetra (*M.oligolepis* ,
M.sanctofilomenae) ;
Diamond Tetra (*M.pittieri*)**
30. Supply the missing word in the common names of these Tetras: - Wedge, - Neon, and - Widow.
Black
31. Which large South American country is the home of many Characins ?
Brazil

QUIZ QUESTIONS : Characins

32. The Marbled Headstander, *Abramites hypselonotus*, comes from: a) South America b) Africa c) India
a) South America
33. From which city does *Hemigrammus caudovittatus* get its common name ?
Buenos Aires (Tetra)
34. What colour are the fins of *Aphyocharax anisitsi* ?
Red (Bloodfin)
35. What are the basic food requirements for *Metynnus* ?
Vegetable matter
36. Which of the following is unsuitable for a community tank:
a) *Hyphessobrycon rosaceus* b) *Paracheirodon innesi*
c) *Exodon paradoxus* d) *Pristella maxillaris (riddlei)*
c) *Exodon paradoxus* - 6" long and very belligerent
37. How can you tell the sex of Congo Tetras ?
Male has extensions to dorsal and caudal fins
38. What is odd about *Astyanax mexicanus* ?
It has no eyes. Blind Cave Fish
39. Name a characin named after a month.
***Hemigrammus hyanuary* (January)**

QUIZ QUESTIONS : Cichlids

1. How many species of cichlid are native to Asia ?

2. *Etroplus maculatus* and *E.suratensis*

2. What do Germans describe as a Butterfly Cichlid ?

The Ram

3. What might be called the 'Lone Star' fish ?

The Texas Cichlid

4. Name the genus of fish that is featured in Egyptian paintings and mosaics.

Tilapia

5. What fishes have to go without food whilst they're spawning ?

Female mouthbrooding cichlids

6. What is the principle food of the Mbuna ?

Algae

7. To what native freshwater fishes are the Cichlids related ?

The Perches

8. What is the name of the tube through which the female cichlid fish lays eggs ?

The ovipositor

9. Name three methods of Cichlid breeding.

1) Egg-depositing on open sites.

2) Egg-depositing in secret sites, such as flowerpots or caves.

3) Mouthbrooding

10. Name a fish whose fry feed from the parents' skin.

Discus; *Uaru*

11. Name a fish with similar pelvic fins to the Festive Cichlid.

The Angelfish

12. Name a group of fishes whose males carry egg-spots on the anal fin.

Rift Valley Cichlids

13. How do the majority of the larger Rift Valley Cichlids breed ?

By mouthbrooding

QUIZ QUESTIONS : Cichlids

14. What do Central American Cichlids and Rift Valley Cichlids have in common ?
They both like hard water conditions
15. This fish ought to have been a boxer.
Jack Dempsey
16. Name a genus of fish often exported to other countries as a food fish.
Tilapia
17. *borelli*, *agassizi* and *cacuotuoides* are all species of what ?
Apistogramma
18. What does B.C.A. stand for?
British Cichlid Association
19. What genus includes the Green terror?
Aequidens (rivulatus)
20. This fish should have been a butler.
Keyhole Cichlid
21. Does this Cichlid get time off for good behaviour?
Convict Cichlid
22. This fish would have lost its head in the French Revolution.
Pompadour Fish (Discus)
23. Has this fish got a sore throat?
Firemouth Cichlid
24. The breeding colour of this Cichlid is bright red.
Jewel Cichlid
25. What is a feature of most mouthbrooding males ?
They have imitation egg-spots on their anal fins
26. Why do male mouthbrooders have anal fin egg-spots ?
To attract the female's attention, when she is picking up eggs, to get her mouth near to the male's vent so that the eggs she's picked up already are fertilised properly

QUIZ QUESTIONS : Cichlids

27. In place of egg-spots, what else can a male fish have to serve the same purpose ?

A spawning tassel

28. Which is the odd one out, and why ?

a) *Julidochromis ornatus*

b) *Haplochromis wingati*

c) *Lamprologus tredocephalus*

b) ; the others are only found in Lake Tanganyika

29. Where does *Herotilapia multispinosa* come from ?

Costa Rica, Nicaragua

30. Where does *Lamprologus leleupi* come from ?

Lake Tanganyika

31. What colour is *Lamprologus leleupi* ?

Bright yellow

32. Why is *Haplochromis compressiceps* not a good community fish?

Because it attacks the eyes of other fishes

33. Describe the natural waters of *Nannochromis nudiceps*.

Swift-moving, shallow water

34. What is the basic colour of *Apistogramma reitzigi* ?

Yellow

35. Where do 'Kribensis' come from ?

West Africa

36. Are *Crenicichla* and *Crenicara* shown in the same Class ?

No; *Crenicichla* goes in Class Dz,

***Crenicara* in Class Db**

37. Who wrote 'Cichlids of the World' ?

Robert Goldstein

38. From its scientific name, what does *Geophagus* eat ?

Earth

39. Into what pattern are the body colours of *Crenicara maculata* arranged ?

Alternate black and light gold squares, like a checker-board

QUIZ QUESTIONS : Cichlids

40. How can you prevent digging Cichlids from toppling rocks?
Sit any large rocks directly on the tank floor before adding any gravel
41. What country provides excellent cichlid inmates for a hard water, rock-decorated aquarium ?
Africa; any of the Rift Valley fishes will just love it!
42. Is there such a thing as a Pink Kribensis ?
Yes: it's a colour variation of the normal Krib
43. Many male African cichlids develop a 'frontal gibbosity' what is it ?
A lump on the top of the head
44. Many *Cichlasoma* have the ability to change their what ?
Colours
45. Are Cichlids carnivores, herbivores or omnivores ?
They may be all three, depending on species

QUIZ QUESTIONS : Anabantids

1. Name a food fish belonging to the Labyrinth fish group.
Osphronemus goramy
2. What part of Africa do most *Ctenopoma* come from ?
Western and central areas, especially the Zaire area
3. Of the following, which is the odd one out and why:
Chocolate Gourami, Dwarf Gourami, Fighter, Leeri ?
Chocolate Gourami - it's a mouthbrooder
4. Of the following which is the odd one out and why:
Dwarf Gourami, Fighter, Leeri Gourami, Sparkling Gourami ?
Sparkling Gourami builds its bubble nest under a leaf
5. Describe how the labyrinth organ works.
Atmospheric air gulped at the surface is stored in the labyrinth organ, a series of moist folded membranes situated behind the gills. Oxygen is then absorbed into the bloodstream through thin membranes
6. What enables labyrinth fishes to twist their bodies so much, especially during spawning ?
All of their internal organs are situated near the front end of their bodies, the rest is just muscle and backbone making for a very flexible body
7. What happens if some species of labyrinth fish are prevented from reaching the water surface ?
They will die through not getting enough oxygen
8. What labyrinth fish can survive long periods out of water ?
The Climbing Perch
9. Can you name an Asian species of fish which, like the Siamese Fighting Fish, is kept to fight battles for wagers ?
The Wrestling Halfbeak - *Dermogenys pusillus*
10. How would you describe the behavioural characteristic of the *Ctenopoma* group ?
Predatory
11. How can you sex the young Sparkling Gourami ?
The male has a red line along the body at the base of the anal fin

QUIZ QUESTIONS : Anabantids

12. This Gourami ought to be a good source of handbag material.

Snakeskin Gourami

13. This male Gourami turns a dark colour when breeding.

Thicklip Gourami

14. What does the '*microlepis*' part of the Moonlight Gourami's scientific name mean ?

Small-scaled

15. Name a Gourami that uses plant material in the construction of its bubble nest.

The Dwarf Gourami

16. What should you provide for the female Gourami during spawning ?

Plenty of plants to act as a refuge for her from the male, who often turns very aggressive

17. Why is the Combtail so named ?

Because of the extended rays in the caudal fin which give it the appearance of teeth of a comb

18. *cupanus dayi*, *chinensis* and *opercularis* are all species of what ?

Macropodus; Paradisefishes

19. Do all species of *Betta* spawn the same way ?

No; some are mouthbrooders

20. How can you sex the Paradisefish?

The male is larger, has pointed fins and is more brightly coloured

21. What is the largest member of the *Trichogaster* genus ?

Trichogaster pectoralis, the Snakeskin Gourami

22. This labyrinth fish may go for walks.

Climbing Perch

23. Where do Paradisefish come from ?

China, Korea, Taiwan, Vietnam

24. How many spots are there on each side of the Three-spot Gourami ?

Two; the third 'spot' is the eye

QUIZ QUESTIONS : Killifish

1. What does the Killi part of Killifish mean ?
Ditch
2. Name a fish with Florida in its scientific name.
***Jordanella floridae*, the American Flagfish**
3. What colour is the male Argentine Pearlfish when breeding ?
Black
4. What is meant by 'switch-spawning ?'
Where a fish may change between spawning in peat on the aquarium floor and spawning in plants or mops
5. Where are the two main natural habitats of Killifishes ?
West Africa and South America
6. What do the initials B.K.A. stand for ?
British Killifish Association
7. A material often used for covering the killifish tank base.
Peat-fibre
8. What's another group name for Killifishes ?
Top-minnows
9. What is the general swimming area favoured by Killifishes ?
The upper layers of the water
10. Give two reasons why Killifish should be given tanks to themselves.
They prefer cooler water conditions to most community fishes, and they are also fairly predatory
11. What floating plant makes a good spawning medium (and safe refuge for the young fish) for Killifish ?
Riccia
12. Name a genus of Killifishes found in some Mediterranean countries.
***Aphanius* ; found in Spain, N. Africa, Italy, Asia Minor, Cyprus**
13. Name two species of a single genus which have many colour variants and possibly sub-species.
Aphyosemion bivittatum* and *Aphyosemion gardneri

QUIZ QUESTIONS : Killifish

14. How can a good book help you spawn Killifish ?
You wind the wool to make a spawning mop around it !
15. Apart from colouring it, what other effects does peat have on aquarium water ?
It gives it an acid reaction, may make it a little softer and helps keep the bacteria count low
16. What's the difference between a 'Peat-diver' and a 'Peat-plougher' ?
A peat-diver buries eggs deep into the peat covering on the tank floor, but a peat-plougher just makes a shallow furrow in which to deposit eggs
17. Which Killifish has scales that stand out from its body ?
Pachypanchax playfairi
18. What is the main breeding difference between the 'annual' and 'non-annual' Killifishes ?
The 'annuals' lay their eggs in the substrate, whilst non-annuals usually lay their eggs in plants
19. What's the difference between *Aphyosemion bivittatum hollyi* and *Aphyosemion bivittatum bivittatum* ?
One's the Blue Lyretail the other is the Red Lyretail
20. *milesi*, *harti*, *agilae* and *strigata* are all species of what ?
Rivulus
21. What is the incubation period of the eggs of *Pachypanchax playfairi* ?
Two weeks
22. *iberus*, *mento* and *fasciatus* are species of what ?
Aphanius

QUIZ QUESTIONS : Catfish

1. What has *Brochis* got on its snout that *Corydoras* hasn't ?
A bony plate
2. How many barbels has a *Corydoras* ?
4, in two pairs
3. How many barbels has a *Synodontis* ?
6, in three pairs
4. What are the juvenile colours of *Synodontis angelicus* ?
Violet with white spots
5. What does the Callichthyidae group of Catfishes have in place of scales ?
Bony plates called scutes
6. Why are some species called the Naked Catfishes ?
Because they have neither scales nor scutes, just skin
7. Which Catfish should be able to get a place in a pop group ?
The Banjo catfish
8. What do the initials C.A.G.B. stand for ?
Catfish Association of Great Britain
9. Name the two Dutch ichthyologists responsible for much of the modern classification of Catfish information.
Nijssen and Isbrucker
10. Name the English author of a series of Catfish books.
David Sands
11. Name a group of Catfish that usually spawn more readily after the addition of cooler water to their aquarium.
Corydoras
12. Fishes usually have a light coloured belly, can you name a Catfish with a dark-coloured belly and give a reason for it ?
Upside-down Catfish - to camouflage it when seen from above as it swims inverted
13. Describe how some Catfish can breathe atmospheric air.
By extracting oxygen from air gulped at the surface in their hindgut
14. Catfishes have superior, inferior or terminal mouths ?
Inferior, meaning underslung mouths

QUIZ QUESTIONS : Catfish

15. What is the difference between maxillary and mandibular barbels ?

Maxillary - top lip; mandibular - lower lip

16. Name a Catfish genus having a large fatty adipose fin.

Synodontis

17. Why do some Catfish lock fins in the upright position ?

To avoid capture, or being eaten by larger fishes

18. Describe the reproduction method of *Corydoras* .

They lay eggs on flat surfaces, the eggs being carried there by the female between her pelvic fins

19. Why should the Glass Catfish not be kept on its own ?

Because it is a gregarious fish, liking the company of its own species, and will not thrive if kept in isolation

20. Name a marine Catfish.

Plotosus anguillaris

21. Name a very large freshwater, coldwater Catfish.

Silurus glanis

22. What is the main feature of *Dianema urostriata* ?

The black and white striped caudal fin

23. To what genus does the Bristlenose Catfish belong?

Ancistrus

24. Name a Family of Catfishes which includes *Ancistrus*, *Farlowella*, *Hypostomus*, *Otocinclus*, *Stenopoma* and the genus which gives the Family its name.

Loricariidae - *Loricaria*

25. Where does *Leiocassis simamensis* come from ?

Thailand (Siam)

26. How many rays has the dorsal fin of the Glass Catfish ?

1

27. The Catfish *Pimelodus pictus* comes from:

a) Colombia b) Eastern Brazil c) Mexico

a) Colombia

QUIZ QUESTIONS : Catfish

28. Do members of the *Clarias* genus have large or small scales ?
Neither, they have no scales
29. Name a large coldwater catfish.
Ictalurus sp.
30. Name Families of large catfishes from either side of the Atlantic.
Pimelodidae (S.America) ; Mochokidae (Africa)
31. Name a large eel-like Catfish native to Africa and Asia.
Clarias
32. What is peculiar to the eyes of Loricariidae ?
There is an expandable flap of skin over the iris which controls the amount of light reaching the eye
33. Although related to the *Corydoras*, how does *Callichthys* differ in spawning ?
It builds a bubble nest
34. Name a catfish that looks like a smaller version of the Sucking Loach.
Otocinclus

QUIZ QUESTIONS : Loaches

1. Name the odd one out in these species - Coolie Loach, Clown Loach, Sucking Loach, Horse-faced Loach, Weather Loach ?
Sucking Loach - it isn't a Loach
2. What have Botias and Surgeonfish in common ?
Erectile spines
3. This small Loach has a dark stripe running from snout to caudal peduncle over the top of the body.
***Botia morleti* (formerly *B.horae*)**
4. What Loach might also be called the Barometer Fish ?
The Weather Loach
5. Which small Loach swims in midwater as well as near the bottom ?
Botia sidthimunki
6. How many barbels have Botias ?
Three to four pairs, depending on species
7. Botias are said to be rather intolerant of what ?
Aquarium medications
8. *Botia sidthimunki* is commonly known as what ?
Golden Chain Loach
9. To which Family do Loaches belong ?
The Cobitidae
10. *Botia modesta* has yellow fins, but what colour body ?
Blue-grey
11. Give the popular name for *Botia macracantha*
Clown Loach
12. *Acanthopsis choirorhynchus* is better known as ?
The Horse-faced Loach
13. Where does the Clown Loach come from:
a) Indonesia b) South-east Asia c) India
a) Indonesia
14. How many species of Loach can be found in the Americas:
0, 5, 8, 10 ?
None
15. Name a behavioural characteristic of most Loaches.
They are nocturnal by nature
16. Are Botias and other Loaches gregarious or solitary species by nature ?
Gregarious

QUIZ QUESTIONS : Livebearers

1. Give the common name for the male livebearer's anal fin ?
Gonopodium
2. Why have Guppies and Gambusias been exported to other tropical countries ?
To eat mosquito larvae thus controlling the spread of malaria-carrying mosquitoes
3. How many broods can female members of the Goodeidae family have from one mating ?
One
4. What's so special about *Poecilia formosa* ?
They are always females and depend on males from other species to stimulate development of their eggs
5. Describe the difference between the anal fins of a male Swordtail and a male *Xenotoca eiseni*.
The *Xenotoca* has only a few first rays of the anal fin branched to form a very primitive gonopodium instead of a fully developed gonopodium like the Swordtail
6. What fishes might wear Tuxedos ?
Swordtails and Platys - it's a recognised colour strain
7. What are Pin, Cofer, Scarf and Delta examples of ?
Guppy tails
8. What can Four-Eyes do that other fishes can't ?
See above and below the water at the same time
9. In which family of Livebearers are the young fish connected to the female by means of a primitive umbilical cord before birth ?
The Goodeidae
10. Name a genus of Livebearer that contains two species, one very much larger than the other.
***Heterandria* ; female *H.bimaculatus* grows to 100mm ; female *H.formosa* (Mosquitofish) only manages 35mm**
11. Which grows larger, the *velifera* or *latipinna* Molly ?
The *velifera*
12. What forms an essential part of all livebearer dietary needs ?
Green foods

QUIZ QUESTIONS : Livebearers

13. How have Mollies become tolerant of salt in their water ?
In nature, they inhabit waters that receive periodic additions of seawater
14. What is the usual recommended amount of salt to be added to the livebearers' aquarium water ?
About 1 teaspoonsful per gallon (5 litres)
15. What is the word most fishkeepers use to describe a pregnant livebearer female ?
Gravid
16. What livebearer must feed at the surface ?
The Halfbeak
17. What is so peculiar about the genus *Jenynsia* ?
They are known as the One-sided Livebearer because the male can only swing his gonopodium in one direction and has to find a female who can only accept a male from that corresponding side
18. What livebearer is known as the 'Bishop Fish' ?
Brachyrhaphis episcopi
19. What is the meaning of *velifera* ?
Bearing a sail
20. Swordtails originate from where ?
Mexico and Guatemala
21. To which of the following group do the Guppy and Molly belong: a) *Molliensia* b) *Poecilia* c) *Lebistes* d) *Limia*.
b) *Poecilia*
22. Why is *Alfaro* known as the Knife-livebearer ?
Because the bottom of the body is shaped like the blade of a knife.
23. The name Molly is an abbreviation for *Molliensia* ; what is *Molliensia* derived from ?
Mollien, a French ichthyologist
24. Plants might be at risk in two ways in a Molly tank; one is by being nibbled at by the fish, what is the other ?
From the salt that you put in the water for the benefit of the fish

QUIZ QUESTIONS : Marines

1. What does the Gurnard use its pectoral fins for apart from swimming ?
Walking about on the sea bed and feeling or tasting for food
2. Where is the Starfish's stomach ?
Underneath in the centre
3. How can you distinguish between the true Cleanerfish and the False Cleaner ?
The true Cleanerfish fish has its mouth right on the tip of the snout, the False Cleaner's mouth is underslung
4. Juvenile Wrasses and marine Angelfish have a common characteristic, what is it ?
They are all differently coloured to the adult fish
5. What are the marks on the side of the John Dory supposed to signify ?
Where the fish was held by St Peter
6. How do marine Angelfishes differ from Butterflyfishes ?
They have a spine at the rear of the gill-cover
7. Why are Triggerfishes so named?
Because they have a front dorsal fin that can be locked in position by means of a trigger-like mechanism
8. Where do Surgeonfishes keep their scalpels ?
On their caudal peduncle
9. What is so dangerous about Lionfishes ?
They have venomous spines
10. Name the type of locality that most marine fishes come from.
Coral reefs
11. What are described as Strawberry, Plumose, Beadlet, or Snakelocks ?
Native Sea-anemones
12. How can you tell Blennies and Gobies apart ?
Gobies have the pelvic fins fused together to form a suction cup, Blennies have separated pelvic fins
13. What fish will eat snails ?
Pufferfish
14. How many barbels has a Cod ?
One
15. How many dorsal fins has a Cod ?
Three

QUIZ QUESTIONS : Marines

16. How many dorsal fins has a Triggerfish ?

Two, the first one is usually held flat in a groove

17. What marine fish's growth occurs mainly in the caudal peduncle area ?

A Cowfish

18. What is the collective name for Cowfishes, Hovercraft Fish etc?

Boxfishes

19. What is the Portugese Man of War and what colour is it ?

A jellyfish, and it's purple

20. What fish lays eggs in a neat oblong case with tendrils at each end corner ?

The Dogfish

21. What cloth is made from Shark-skin ?

Shagreen

22. Are Sharks egglayers or livebearers ?

Both

23. How often does a Shark renew its teeth ?

Continuously

24. What happens to luminous fish when they are brought up to the surface ?

They usually burst, due to being brought up too quickly without allowing time for decompression

25. Name three Flatfishes.

Plaice, Dab, Flounder, Sole, Brill, Halibut, Turbot

26. What's the largest Flatfish generally caught for food ?

The Halibut

27. What side are most Flatfishes' eyes on ?

The right

28. How does an Anglerfish catch its prey ?

It has a growth over the top of its mouth that lures other fishes near enough to it to be grabbed

29. What threat do Crown of Thorns Starfish pose to the coral reef ?

They eat it

30. Which fish eats the Crown of Thorns Starfish ?

The Triggerfish

31. What fins are sometimes missing or only rudimentary stubs on some marine fishes?

The pelvic, or ventral fins

QUIZ QUESTIONS : Any Other Species

1. Knife-fishes and Elephant-noses have what in common ?
They generate electricity which is used in navigation
2. What is another physical feature of the Knifefishes ?
They have no dorsal fins
3. Name two land 'neighbours' of the Sleeper Goby,
Mogurnda mogurnda.
Koala bear, Kangaroo, Emu, Kookaburra .
4. This 'Looks like a Cichlid' member of the Nandidae has been recently moved to a family of its own according to some authorities; it can change its colour pattern very easily too.
***Badis badis*; now a member of the Badidae Family**
5. The male of another egg-depositing member of the Nandid Family changes into a dark colour when spawning. Name the species.
***Polycentrus* - the Leaf Fish**
6. Give another common name for the Bala Shark.
The Silver Shark
Balantiocheilus melanopterus
7. How many species are recognised in the genus *Bedotia* ?
**One. *Bedotia geayi*,
the Madagascar Rainbow Fish**
8. What is the difference between *Electrophorus electricus* and *Malapterurus electricus* ?
***Electrophorus* is an Electric Eel,
Malapterurus an Electric Catfish**
9. The Chinese Algae eater not only doesn't come from China, but it also isn't what else ?
A Loach. *Gyrinocheilus aymonieri* from Thailand is more closely related to the Cyprinid Family
10. Which Family of fishes hide most of themselves in the gravel by day ?
Spiny Eels
11. Rainbowfishes belong to which Family ?
The Atherinidae, the Silversides
12. What is unusual about the spawning of the Ricefish?
The fertilised eggs are carried around in a bunch by the female for some time and are eventually brushed off amongst plants to hatch

QUIZ QUESTIONS : Any Other Species

13. Where does the Ricefish's name, *Oryzias*, come from ?
***Oryzia*, the botanical name for Rice.**
14. The favourite natural food of Monos and Scats is what ?
Mud, decomposing material, excrement and anything else they can find in polluted estuarine waters
15. What is the main physical feature of the Butterfly Fish ?
Its large pectoral fins, with which it glides across the water surface, like South American Hatchetfishes
16. What is unusual about the Mudskipper's eyes?
They have to be kept moist - either by periodically rotating them in their sockets or by dipping the head into water
17. What are Lungfishes noted for?
They bury themselves in deep mud to escape drought conditions
18. What's the largest 'bony' fish?
The Sturgeon, *Acipenser huso*
19. What's the largest totally freshwater fish?
***Pangasianodon gigas*, a giant Catfish from Thailand**
20. What is another more famous species of a very large freshwater fish?
The Arapaima; it grows to around 2 metres (6 ft+)
21. Can you describe the teeth of a Pufferfish?
They are fused together to form more of a beak
22. What do Archerfish eat, and how do they catch them?
Perching insects ; it shoots them down with squirts of saliva 'fired' from its mouth.
23. What's the smallest marine fish?
Marshall Islands Goby, *Eviota zonura*, 12-16mm; another pygmy is *Schindleria praematurus* from Samoa, also around 12mm-19mm.
24. What's the smallest freshwater fish?
The Pandaka, Dwarf Pygmy Goby 7.5-10mm.
25. What's the most poisonous fish?
The marine Stonefish
26. What is the voltage-generating ability of the Electric Eel ?
400 volts average, but up to 650 volts.

QUIZ QUESTIONS : Any Other Species

27. What's the smallest known Shark?
The Long-faced Dwarf Shark, *Squaliolus laticaudus*, 110mm.
28. What kind of fish is the Electric Eel most closely related to: a) A Tetra b) An Eel c) An Elephant-Nose ?
a) A Tetra.
29. How many fish can generate electricity ?
a) 50 b) 100 c) more than 100 ?
c) more than 100.
30. How are the Americas and Africa and Asia often described in fish books ?
New World (Americas), and Old World (Africa and Asia).
31. Which two fishes appear on the two different Size Sheets?
***Monodactylus*, *Scatophagus*: Class M (freshwater) and Class Y (marine)**
32. What is characteristic of the Australian Rainbowfishes ?
They have two dorsal fins.
33. Is the Tiger Fish, *Datnioides microlepis*, vegetarian or carnivorous ?
Carnivorous.
34. To what Family does the Glassfish belong ?
The Ambassidae.
35. The Toxotidae Family is better known as what ?
Archerfishes.
36. Describe the colour pattern of *Brachygobius xanthozona*.
Vertical black and yellow bands. (Bumblebee Goby)
37. Australians call them Gudgeon, we call them what ?
Gobies.
38. The Scat is a lover of what type of water?
Brackish.
39. This fish can breathe without taking water in through its mouth.
Sucking Loach, *Gyrinocheilus aymonieri*.
40. This fish, with two dorsal fins, is native to an island.
Celebes Rainbow - *Telmatherina ladiges*
41. Another fish, another island, still has two dorsal fins.
Australian Rainbowfish, *Melanotaenia*, or *Nematocentris* species

***Coldwater
Subjects***

QUIZ QUESTIONS : Coldwater

1. Where did the Goldfish originate ?
China
2. Name four varieties of Singletail goldfish
Common, Comet, London Shubunkin, Bristol Shubunkin, Sarasa (Comet)
3. What is the principle difference between a Lionhead and an Oranda ?
The Oranda has a dorsal fin
4. What freshwater fish is known as the Doctor Fish ?
The Tench
5. Name three types of scale-groups in Goldfish
Metallic, Nacreous, Matt
6. What grows over the head of a Lionhead and Oranda Fancy Goldfish ?
A raspberry-like growth called the wen
7. Name two Fancy varieties of Goldfish whose eyes look upward.
Celestial, Bubble-Eye, Star-gazer
8. Bristol and London Shubunkins differ how ?
Bristol Shubunkin has much larger caudal fin
9. Blindfolded, how could you tell the difference between a Koi and a Goldfish ?
Feel around its mouth for barbels - goldfish don't have any
10. How are Koi judged as compared to those fish shown in tanks at Open Shows ?
They are judged from above
11. How deep should a Koi pond be for safe overwintering ?
In excess of 1.5 metres
12. Which fishes appear to have ear-flaps ?
Sunfishes
13. With coldwater aquarium and pond fishes what should you do in thundery weather ?
Increase aeration in the aquarium, turn on pond fountains
14. How much water should there be in a Goldfish bowl ?
No deeper than the widest part of the bowl
15. Name a freshwater fish with two dorsal fins
The Perch
16. Name two long-lived migratory fish that live in both salt and freshwater
Eels and Salmon

QUIZ QUESTIONS : Coldwater

17. How much did Clarissa, the record-breaking Carp, weigh when presented to London Zoo ?
44lbs - approx 20 kilogrammes
18. Name a freshwater relative of the Cod
The Burbot
19. What's another name for the Pike-Perch ?
The Zander
20. What comes from the Sturgeon ?
Caviar
21. Traditionally what should you do if you catch a Sturgeon ?
Offer it to the Queen
22. What is the young of an Eel called ?
Elver
23. What is the first stage young of the Salmon, or Trout, called ?
Smolt
24. Name the second stage young of the Salmon, or Trout.
Parr
25. Name a locality in England once famous for commercial Salmon fishing.
Northumberland coast
26. What did King Henry 1 die of ?
Surfeit of Lampreys
27. What is a Lamprey ?
A primitive fish, much like a scaleless, jawless eel
28. Name a freshwater relative of the Lobster.
Crayfish
29. What do Gin, Kin and Rin mean ?
**Silver-metallic ; gold-metallic; scale;
All Koi descriptive terms**
30. What's so special about Moors ?
They are always jet black

QUIZ QUESTIONS : Coldwater

31. What's a Tanago ?

Type of Bitterling

32. Name a once suspected ancestor of the goldfish.

Crucian Carp

33. Sunfish come from which Countries ?

North America and Canada

34. The Osaka Ranchu differs from the Lionhead in what respect ?

It has no hood on the head

35. What does Shiro mean ?

White

36. Name the geographical range (north and south extremes) of the Pumpkinseed.

Quebec (Canada) to Ohio and Iowa (USA)

37. Which group of Goldfish are usually brought indoors during winter ?

Twintails

38. Name a nestbuilding fish from each side of the Atlantic.

Stickleback ; Sunfish

39. What is the lowest temperature at which Goldfish feed ?

45°F

40. Why won't tropical flake food suit Goldfish ?

It lacks sufficient carbohydrates

General Subjects

QUIZ QUESTIONS : Breeding

1. Why do some fishkeepers shade the tank when breeding some egg layers ?
Because some eggs are sensitive to light
2. Of what use is Methylene Blue in the hatching tank ?
As a bactericide and it also cuts down the amount of light
3. Why is Infusoria so named ?
Because the tiny animals used as food for young fishes are generally made by making an infusion of vegetable material in boiling water
4. Name two groups of fishes (from opposite sides of the Atlantic) that excavate or construct nests in the sand.
African Cichlids and North American Sunfishes
5. What is the period of time called whilst two fishes are separated and well-fed prior to reunited for spawning ?
Conditioning period
6. Why is it sometimes suggested that more than one female is used per male in spawning ?
Because the male may be a too-hectic driver and by having two females they won't be harrassed too much
7. Apart from an enforced absence, what other factors might ensure a good spawning ?
A slight increase (or decrease) in water temperature, a partial water change and plenty of good live foods
8. How can you prevent any unwanted spawnings spoiling the strain in a livebearer collection ?
Put all unsexed, or doubtful, young fish in with the males, where they won't cause any unwanted pregnancies or where, if they do turn out to be females, it won't matter as much as if a rogue male got in with all the females
9. How do Porcupine Fish spawn ?
Very carefully!
10. The marine Clownfish is very similar to which group of freshwater fishes when spawning ?
The Cichlids; it is an egg-depositor

QUIZ QUESTIONS : Breeding

11. Give three ways to prevent egg-eating when spawning egg-scatterers.
 - 1) **Layer of marbles on the tank floor**
 - 2) **Shallow water level to cut down the time the eggs are falling and so at risk**
 - 3) **Drape netting in the tank and place the spawning fish in the water on top of it**
 - 4) **Use dense bunches of plants to catch and hide the eggs**
12. What are the signs of an imminent spawning in Cichlids ?
 - 1) **Cleaning a site.**
 - 2) **Spontaneous pairing-up.**
 - 3) **Territory defending.**
 - 4) **The protrusion of ovipositors or breeding tubes**
13. Name five methods of reproduction in aquarium fishes.
 - 1) **Egg-scattering**
 - 2) **Egg-depositing**
 - 3) **Bubble-nest building**
 - 4) **Mouthbrooding**
 - 5) **Livebearing**
14. What must you keep out of the aquarium when raising young Gourami fry?
Draughts of cold air
15. What are two good standby foods for very tiny fry ?
Green water, and hard-boiled egg yolk (crushed up in a cloth and squeezed out in the water)
16. Why are sponge filters preferred for fry tanks ?
Because the fry cannot be drawn into them and also the sponge develops microscopic live food on it for the fish to feed on
17. How can you turn dried food into live food ?
Feed to livebearing fishes and wait for their young !
18. Changing the water quality often has what effect on fry ?
It may change the proportion of males/females in the next brood

QUIZ QUESTIONS : Breeding

19. How can you slow down the hatching of Goldfish eggs ?
Put them in the refrigerator
20. What is 'hand-stripping ?'
The manual 'milking' of eggs and milt from mature Goldfish ; this can be done at separate times and the two products mixed together in a bowl to ensure fertilisation of the eggs occurs. Each 'parent' can be chosen for its best characteristics, and the two fish need not ever actually meet. Shame !
21. Name two methods of breeding in Killifishes.
**1) Egg-hanging in plants or mops
2) Egg-burying in peat**
22. Describe a particular feature peculiar to Discus breeding.
The fry eat from the slime on the parents' bodies when first newly-hatched
23. How do *Corydoras* spawn ?
They are egg-depositors
24. How do Harlequin Fish spawn ?
They are egg-depositors
25. How many broods can a female Guppy, Molly, Platy or Swordtail have from one mating ?
Several
26. Name a Family or group of Livebearers that can only have one brood from each mating.
The Goodeidae
27. How is the anal fin of the male Goodeid different from that of the majority of Livebearer males ?
Only the first few rays form the primitive gonopodium, not the whole fin
28. How does the Chocolate Gourami spawn ?
It's a mouthbrooder
29. How does *Lamprologus brichardi* spawn?
It's a cave-spawner, laying eggs on the ceiling
30. What is the difference between 'Oviparous' and 'Viviparous' ?
**Oviparous means egg-laying,
Viviparous means livebearing.**

QUIZ QUESTIONS : Breeding

31. Which of the following is the odd one out ?
a) *Betta brederi*
b) *Betta imbellis*
c) *Betta macrostoma*
c) *Betta macrostoma* builds a bubble nest, the others are mouthbrooders.
32. How many eggs might be expected from a spawning of *Tropheus moorii* ?
Between 6 and 12
34. Name the odd one out from these: Lyretail, Fighting Fish, Pearl Gourami, Paradisefish, Armoured Catfish.
Lyretail - it is an egg-hanger, all the rest build bubble nests
35. What's an early precaution to take when spawning bubble nesters ?
Remove the female immediately after spawning
36. How can you increase your chances of getting a true pair of cichlids ?
Buy several youngsters and let them select mates for themselves
37. What extra do you need when spawning Bitterlings ?
Freshwater Mussels, in which the fish can lay its eggs
38. What FBAS Class Letter denotes the Breeders' Class ?
X ; it may be further sub-divided into X (b-m) for egg layers and X (o-t) for livebearers
39. One of these fish is not an egg-scatterer, which is it : Bloodfin, Goldfish, Clown Barb, Harlequin, Scissortail, Rosy Tetra ?
Harlequin is an egg-depositor
40. This male egg-laying toothcarp looks after its young.
American Flag Fish, *Jordanella floridae*
41. Which common plant makes an excellent spawn receptor for both tropical and coldwater fishes ?
Hornwort, *Ceratophyllum demersum*

QUIZ QUESTIONS : Breeding

42. Name three species of *Betta* which do not build bubble-nests.
Betta brederi, B.pugnax, B.unimaculatus
43. Why are Mendelian Laws important to the fishkeeper breeding cultivated strains of fish ?
Because the Mendelian Laws deal with hereditary factors which affect the next generation of fishes to be spawned
44. Name two natural waterborne foods excellent for bringing fish into breeding condition.
Daphnia and Mosquito (Gnat) Larvae
45. What is an alevin?
Newly-hatched young, usually of the Salmon, or Trout
46. What is meant by a strain in fishbreeding ?
A variety of a species that has been developed by selective breeding and one which breeds true without any recession to its former ancestors.
47. What do the Dwarf Gourami, Stickleback, Sunfish and *Callichthys* Catfish have in common ?
They all build nests of one description or another

QUIZ QUESTIONS : Diseases

1. Name the factor most responsible for encouraging fish ailments.
Stress
2. Name the disease whose symptom is the swelling up of the fish's body, with severe protruberance of the scales.
Dropsy
3. How many stages does the Disease 'White Spot' have ?
Three - 1) on the fish, 2) as cysts in the aquarium and 3) a free-swimming stage
4. When is the best time to treat, or eradicate, White Spot ?
During the free-swimming stage
5. Apart from medication, what other 'extra' should be added to the hospital aquarium ?
Extra aeration, as many medications use up dissolved oxygen in the water
6. Name the period of isolation during which all new fish are, or should be, checked for disease.
Quarantine
7. Once any successful cure is finished, what should you do to the fish before returning ot to the main aquarium
Acclimatise it back to fresh water again by means of regular, partial water changes
8. What is the usual cause of Finrot ?
Bad aquarium conditions which aggravate a wound or a fin already split
9. What is the more common name for Exophthalmus ?
Pop-eye
10. What are the signs of Gill-flukes ?
The fish pants at the surface, the breathing rate is increased and the gills are held open and appear inflamed
11. What are the signs of Skin-flukes ?
The fish repeatedly scratches itself against plants or rocks
12. What is the commonest cause of 'shimmying' ?
A chilling of the fish
13. Name a disease that Discus-keepers fear most.
'Hole-in-the-Head' disease; for their fish, that is!

QUIZ QUESTIONS : Diseases

14. What are most marine fish cures based on ?
Copper
15. Fish Louse and Anchor Worm are examples of what ?
Fish parasites, usually attacking pond fish
16. What is a common method of preventing eggs from fungussing ?
Adding some Methylene Blue to the water
17. What three external features on the body of a freshwater fish gives good clues as to the fish's state of health ?
 - 1) **The fins - they should be erect most of the time.**
 - 2) **Colours should be dense and not patchy or faded.**
 - 3) **No excess of mucus on the body**
18. Would you treat diseased fish in a well-planted tank with Methylene Blue ?
No; the cure could damage soft-leaved plants
19. Would you treat Exophthalmus with Olive Oil?
No; although Exophthalmus means Pop-eye, it's a disease not a cartoon character!
20. How can a fish easily be given medication in liquid form ?
Soak some flake food in the medication, and make sure the fish eats it!
21. Name two ways in which young gourami fry are at risk.
From cold draughts of air across the water surface, or from any oily film on the water surface itself
22. What's the more common name for *Hexamita* ?
Hole-in-the-head disease
23. Why should disease or an increase in snail population occur after adding new plants ?
Because the plants were not inspected for snails' eggs or disinfected before use

QUIZ QUESTIONS : Diseases

24. What is the main cause of death in beginners' tanks ?
Overfeeding - leads to nitrite poisoning
25. What causes fish to 'hang' at the surface ?
Oxygen deficiency, overcrowding or polluted water
26. The main symptom of 'velvet' is what ?
The fish has a 'dusty' look
27. What causes Gill Flukes ?
A flatworm, *Dactylogyrus*, that hooks itself into the fish's gills
28. What should be your first step to prevent diseases occurring in the aquarium ?
Quarantine all new additions
29. What causes Neon Tetra disease?
A small internal protozoan parasite, *Pleistophora*

QUIZ QUESTIONS : Plants

1. Why is the Madagascar Lace Plant so named ?

Because it has no tissue between the leaf veins

2. What genus of plants benefit from a rest period at cooler temperatures each year ?

Aponogeton

3. What do you call the root part of *Aponogeton* plants ?

Rhizomes

4. Name three plants that anchor themselves to rocks or logs.

Java Fern (*Microsorium*), Java Moss (*Vesicularia*), Willow-moss (*Fontinalis*)

5. Describe a peculiarity of the Water-Soldier plant.

It rises and falls in the water according to the time of year

6. What is the missing word in - Chestnut, - Hyacinth and - Lettuce ?

Water

7. What is the only reliable way to identify *Cryptocoryne* ?

By observing the structure of the flower

8. What is the difference between the flowers of African and Indian species of *Aponogeton* ?

Those from India have only one flower spike; African and Madagascar varieties usually have a double-headed flower spike or even more

9. What type of water plant, up to 6ft across can support weight up to 50 kg ?

Queen Victoria Water Lily

10. What is the collective name for primitive red, brown, yellow or green plants ?

Algae

11. Fishes breathe out carbon dioxide, when do plants do the same ?

At night time

12. What do you use to disinfect plants ?

Potassium permanganate

13. What are 'night-bloomers' ?

Varieties of Water Lilies which flower at night

14. Where are marginal plants grown ?

Around the pond on shallow shelves in the water

QUIZ QUESTIONS : Plants

15. What is the green substance that allows plants to build food in their cells during daytime ?

Chlorophyll

16. What is this process called ?

Photosynthesis

17. What did the Frenchman Marliac do which benefitted water gardeners from then on ?

He developed hardy hybrids of the Water Lily

18. What plant stems when crushed are supposed to be poisonous to fish ?

Limnophila (Ambulia)

19. What do plants need, which the fishkeeper has always been taught to get rid of from the tank ?

Carbon dioxide

20. What is the name of the coldwater plant that often catches live food for itself ?

Bladderwort - *Utricularia* species

21. Why should *Marsilea* be a lucky plant ?

Because it's called the Four-leaved Clover

22. The Family Lemnaceae contains a plant which most fishkeepers can't wait to get rid of; what is it ?

Duckweed

23. What name do members of the *Ceratopteris* genus usually bear somewhere in their common name ?

Fern

24. What do floating plants like Duckweed, Water Lettuce, Water Hyacinth and *Salvinia* have in common ?

Roots hanging down in the water providing refuge for young fishes

25. The genus *Echinodorus* is commonly known as ?

Amazon Swordplants

26. Do the leaves of *Ludwigia* occur in pairs or singly on the stem ?

Singly

27. Which is the odd one out: a) *Ludwigia natans*

b) *Hygrophila polysperma* c) *Nitella gracilis*

c) Does not root - simply forms a mass in mid-water

QUIZ QUESTIONS : Plants

28. Which is the odd one out: a) *Echinodorus tenellus*
b) *Aponogeton undulatus* c) **Sagittaria subulata**
b) The other two have root systems, not a rhizome
29. What have a) Pistia b) Azolla c) Lemna in common ?
They are all floating plants
30. What common coldwater plants make an excellent spawning medium ?
**Hornwort - *Ceratophyllum demersum* ;
Willowmoss - *Fontinalis antipyretica***
31. How does the Amazon Swordplant reproduce ?
By runners
32. Most plants have fine, broad or long leaves; which has *Cabomba* ?
Fine leaves
33. To offset the possibility of green water in a pond, how much of the water surface should you aim to cover with plant life ?
Two-thirds
34. Name the terms used to indicate a) plants growing out of water and b) plants growing completely under water.
a) Emerse b) Submerse
35. Name three services that plants provide in the aquarium.
Reduce the carbon dioxide present during tank-lit hours ; inhibit algal growth; provide shade; provide spawning sites; provide refuges for young fish; provide food for vegetarian fishes

QUIZ QUESTIONS : Water

1. What does S.G. stand for ?
Specific gravity
2. pH is a measure of what ?
Acidity or alkalinity of water
3. Can you give three ways of softening water ?
Dilution with softer water; boiling; ion exchange resins
4. What is the Specific Gravity of pure water?
1.00
5. Place these seas in ascending order of saltiness
Caribbean, Indian Ocean, Pacific, Red Sea.
Indian, Pacific, Caribbean, Red Sea
6. Why shouldn't you use carbon in hospital tanks ?
It will adsorb the medication
7. The pH number of pure water is ?
pH 7
8. Evaporation losses in the marine aquarium should be replaced with a) fresh water b) salt water ?
Fresh water - the salt content of the water isn't lost in the evaporation process
9. Name three forms of filtration.
Chemical, mechanical and biological
10. How do you stop water back-siphoning into an air-pump ?
Site the pump above the tank, fit a check-valve in the airline or loop the airline a few inches above the tank to form an 'anti-siphon' loop
11. Name two types of biological filtration.
Down-flow and reverse-flow
12. What piece of equipment produces oxygen with 3 atoms instead of the more normal two ?
An ozoniser
13. What piece of equipment (usually associated with marine aquariums) removes proteins from the water by vigorous aeration ?
A protein skimmer
14. Apart from using ozone, how else can you use to sterilise the aquarium water ?
With an Ultra-violet lamp
15. Is the Specific Gravity of salt-water greater or smaller than that of fresh-water ?
Greater - around 1.020 compared to 1.00

QUIZ QUESTIONS : Water

16. What chemical makes up the largest proportion of dissolved substances in sea-water ?
Salt, Sodium Chloride (Na Cl), about 35 parts per thousand
17. In general, is the pH of the marine aquarium higher or lower than the freshwater aquarium ?
Higher: above pH 8.3, compared with around pH 7.5 for freshwater
18. What can you use in the saltwater aquarium to help maintain a necessary high pH ?
Calcium carbonate, or any calcium-rich materials such as corals
19. Why should you use all the bag of synthetic salt-mix when making up water for the marine tank ?
To ensure that the correct amount of trace-elements are present and not left behind in the bag
20. Which holds more dissolved oxygen, saltwater or freshwater ?
Freshwater
21. How can you effectively increase the water surface area of the aquarium ?
By using aeration to agitate the surface
22. What gets rid of toxic substances such as ammonia and nitrite in the aquarium ?
Bacteria
23. What happens to water below 4°C ?
It gets lighter - that's why ponds freeze at the top
24. How can you test a sample of aquarium gravel for lime content ?
Pour some vinegar over it; if it fizzes then lime is present
25. The salt content of the oceans are as follows:
20-37 ppt - Atlantic
37-40 ppt - Mediterranean
46 pp - Red Sea
What is it in the Dead Sea?
a) 195 ppt b) 210 ppt c) 240 ppt d) 300 ppt
c) 240 ppt (parts per thousand)

QUIZ QUESTIONS : Water

26. Water is composed of two gases, what are they ?

Hydrogen and Oxygen

27. Apart from aerating and distributing water across the tank what else does a spray-bar do ?

Reduces the water pressure returning from the power filter

28. To avoid tank pollution what precautions should you take when using wood as a decoration ?

Use only long-dead wood, boil it, soak it well in changes of clean water until all traces of colour staining the water stops. You can also seal it with polyurethane varnish, although may contain chemicals to deter barnacles

29. Can you use water straight from the tap ?

Most people use a dechlorinator or stand the water, with aeration, for a day or so before use

30. Is there any general guidance to be had about local water conditions ?

If the fish look alright in your local dealer's tanks they should survive at home. For more specialist advice contact your Water Authority (or local Society) who will be only too pleased to help

31. What dissolved chemicals cause hardness ?

Calcium and magnesium salts

32. What is the chemical symbol for water ?

H₂O

33. What kind of rock is useful to help maintain hard water in freshwater tanks or a high pH in marine tanks ?

Limestone; it is rich in calcium carbonate

34. What is a Tunze system?

A modern filtration system

35. Killifish owners put this substance in their aquarium water for two reasons. Name the substance and the reasons.

Peat - to acidify the water; and to provide a spawning medium for egg-burying fishes

QUIZ QUESTIONS : Common Names

1. What is the common name of *Gymnopus carapo* ?
Banded Knife-fish
2. What is the common name of *Hyphessobrycon erythrostigma* ?
Bleeding Heart Tetra
3. What is the common name of *Aponogeton fenestralis* ?
Madagascar Lace Plant
4. What is the common name of *Planorbis corneus* ?
Red Ramshorn Snail
5. What is the common name of *Macropodus opercularis* ?
Paradise Fish
6. What is the common name of *Mystus micracanthus* ?
Two Spot Catfish
7. What is the common name of *Geophagus jurupari* ?
Earth-eater
8. What is the common name of *Colisa labiosa* ?
Thick-lipped Gourami
9. What is the common name of *Ceratopteris thalictroides* ?
Indian Fern
10. What is the common name of *Melania tuberculata* ?
Malayan Snail
11. What is the common name of *Enchytraeus buccholtzi* ?
Grindal worms
12. What is the common name of *Echinodorus tenellus* ?
Pygmy Chain Sword Plant
13. What is another common name of *Echinodorus tenellus* ?
Micro-Sagittaria
14. What is the common name of *Barbus everetti* ?
Clown Barb
15. What is the common name of *Brachydanio frankei* ?
Leopard Danio

QUIZ QUESTIONS : Common Names

16. What is the common name of *Crenuchus spilurus* ?
Sailfin Characin
17. What is the common name of *Stevardia (Corynopoma, Pseudocorynopoma) riisei* ?
Swordtail Characin
18. What is the common name of *Pantodon buccholzii* ?
Butterfly Fish
19. What is the common name of *Nannostomus digrammus* ?
Two-striped Pencilfish
20. What is the common name of the genus *Aplocheilichthys* ?
Lamp-eyes
21. What is the common name of the genus *Crenicichla* ?
Pike Cichlids
22. Give the common name of *Hemigrammus erythrozonus* .
Glowlight Tetra
23. What is the common name of *Hemigrammus nanus* ?
Silver-tipped Tetra
24. What is the common name of *Hasemania marginata* ?
Silver-tipped Tetra
25. What is the common name of *Barbus lateristriga* ?
Spanner Barb
26. What is the common name of *Rineloricaria parva* ?
Whiptail Catfish
27. What is the common name of *Ancistrus dolichoptera* ?
Bristle-nose Catfish
28. What is the common name of *Austrofundulus dolichopterus* ?
Sicklefin ; Sabrefin
29. What is the common name of *Gasterosteus aculeatus* ?
Three-spined Stickleback
30. What is the common name of *Esox lucius* ?
Pike
31. What is the common name of *Luciosoma setigerum* ?
Apollo Shark

QUIZ QUESTIONS : Common Names

32. What is the common name of *Poecilia vittata* ?
Cuban Limia
33. What is the common name of *Jenynsia lineata* ?
One-sided Livebearer
34. What is the common name of *Sphaerichthys osphromenoides* ?
Chocolate Gourami
35. What is the common name of *Synnema triflorum* ?
Water Wisteria
36. What is the common name of *Barbus chola* ?
Swamp Barb
37. What is the common name of *Barbus daruphani* ?
Lemon-finned Barb
38. What is the common name of *Anabas testudineus* ?
Climbing Perch
39. What is the common name of *Vesicularia dubyana* ?
Java Moss
40. What is the common name of *Utricularia* ?
Bladderwort
41. What is the common name for the Lumbricidae family?
Earthworms
42. What is the common name for *Aequidens pulcher* ?
Blue Acara
43. What is the common name for the Nymphaea family?
Water-lilies
44. What is the common name of *Carassius carassius* ?
Crucian Carp
45. Give two common names for *Astronotus ocellaris*.
Oscar, Marbled Cichlid, Peacock Cichlid, Velvet Cichlid
46. Give another Common name for the 'T' Barb.
Spanner Barb
47. Give another common name for the Island Barb.
Checker Barb

QUIZ QUESTIONS : Common Names

48. What's another common name for the Tiger Barb ?

Four-banded Barb

49. Give the popular name for *Aphyosemion cognatum*.

Spotted Lyretail

50. Give the popular name for *Aphyosemion shoutendeni*.

Golden Lyretail

51. Why is the Moorish Idol so named?

Because certain Moslem people venerate them

52. Why is the Koran Angel so-named?

Because the patterning on its sides is said to resemble characters from the Koran, the Islamic Holy Book

QUIZ QUESTIONS : Scientific Names

1. What is the scientific name of the Silver Rasbora ?
Rasbora argyrotaenia
2. What is the scientific name of the Greater Scissortail ?
Rasboras caudimaculata
3. What is the scientific name of the Moonlight Gourami ?
Trichogaster microlepis &
4. What is the scientific name of the Blue (Gold) Gourami ?
Trichogaster trichopterus
5. What is the scientific name of Java Moss ?
Vesicularia dubyana
6. What is the scientific name of the Water Rose ?
Alternanthera versicolor
7. What is the scientific name of the two Sailfin Mollies ?
Poecilia latipinna* and *P. velifera
8. What is the scientific name of the Marbled Headstander ?
Abramites microcephalus (hypselonotus)
9. What is the scientific name of the Bloodfin ?
Aphyocharax anisitsi
10. What is the scientific name of the Golden Ear ?
Fundulus chrysotus
11. What is the scientific name of the Firemouth Panchax ?
Epiplatys chaperi
12. What is the scientific name of the Black-lined Tetra ?
Hyphessobrycon scholzei
13. What is the scientific name of the Black Phantom Tetra ?
Megalamphodus megalopterus
14. What is the scientific name of Baby Tears ?
Bacopa monnieri
15. What is the scientific name of Parrot Feathers ?
Myriophyllum spicatum
16. What is the scientific name of the Black Widow Tetra ?
Gymnocorymbus ternetzi

QUIZ QUESTIONS : Scientific Names

17. What is the scientific name of Velvet Disease ?
Oodinium
18. What is the scientific name of the Madagascar Lace Plant ?
Aponogeton fenestralis
19. What is the scientific name of the Glass Catfish ?
Kryptopterus bicirrhis
20. What is the scientific name of the Siamese Tiger Fish ?
Datnioides microlepis
21. What is the scientific name of the Pearl or Fire Rasbora ?
Rasbora vaterifloris
22. What is the scientific name of the Red-tailed Goodea ?
Xenotoca eiseni
24. What is the scientific name of the Red-finned Shark ?
Labeo erythrurus
25. What is the scientific name of the Argentine Pearlfish ?
Cynolebias bellotti
26. What is the scientific name of the Clown Barb ?
Barbus everetti
27. What is the scientific name of the Archerfish Family ?
Toxotidae
28. Give the scientific name of the American Flagfish.
Jordanella floridae
29. What is the scientific name for the most popular Molly ?
Poecilia sphenops (mexicana)
30. What does the 'semicinctus' part of *Acanthopthalmus semicinctus* mean ?
Half-banded

QUIZ QUESTIONS : General Knowledge

1. How many fish have most fish ?
7
2. What is the average water temperature of a tropical community aquarium ?
75°F - 24°C
3. How do human nostrils differ from those of fish ?
We use ours to breathe with as well as to smell; fishes only use theirs to smell with
4. What are airstones usually made of ?
Sintered glass
5. A Gold Brooch needs how many 1st Place Cards ?
75
6. A freshwater loses, or gains water through its skin ?
Gains
7. Why does a marine fish need to drink so much ?
To replace water lost through its skin
8. Not counting Supplements, how many FBAS Booklets are there to date ?
25
9. Name the current President of the FBAS.
Bill Rundle (Plymouth A.S.)
10. How many free FBAS Booklets do new Societies get ?
4 - Numbers 5, 6, 7 and 18
11. What happens to a Shark if it stops swimming, and why ?
It sinks because it has no swim bladder
12. Is a Hydrometer and a *Hydrometra* the same thing ?
A Hydrometer measures the density of a liquid, the other is the Water-measurer, a pond insect
13. How many litres in a gallon ?
4.545
14. Apple-Snails, Splashing Tetras have what in common ?
They both lay their eggs out of water
15. The Carp is a symbol of manliness in which country ?
Japan

QUIZ QUESTIONS : General Knowledge

16. What colours are the feathers of a Bombay Duck ?
It's not a duck, but a dried fish-dish in India
17. What else is the swim-bladder used for other than to maintain the fish's bouyancy ?
As an amplifier for sound-making
18. Which fish (sex and type) incubates its eggs in a pouch ?
The male Seahorse
19. Name the supposedly prehistoric fish caught alive off the coast of Africa in the 1950s.
The Coelacanth
20. Where do Eels spawn ?
Sargasso Sea
21. Which fishes eat *Hydra* ?
Blue Gouramies
22. Who developed Aquarian fish-food ?
Dr David Ford
23. Where is the British Aquarists' Festival held ?
Bowlers', Manchester
24. Apart from its aquarium, what other water-connected livestock is Edinburgh Zoo particularly proud of, particularly as an important export to other Zoos ?
Penguins
25. Where did London Zoo traditionally obtain its sea-water from for its marine aquariums ?
Bay of Biscay
26. Fishes names ending in 'trewavasae' are named after Dr E.Trewavas. What does the 'E' stand for ?
Ethelwynne
27. What should you exhibit in Class A ?
Furnished Aquaria and Aquascapes
28. The headquarters of Tetra is where ?
Melle, West Germany
29. What is the minimum size of show container ?
100mm x 100mm x 100mm or 4 x 4 x 4 inches

QUIZ QUESTIONS : General Knowledge

30. Who founded TFH magazines and publications?
Dr Herbert Axelrod
31. What illegal poison is used to collect marine fish ?
Potassium cyanide
32. The number of Rasboras detailed in FBAS Booklet No.16 is: a) 58 b) 61 c) 64 or d) 68 ?
64
33. Name four monthly aquarium magazines.
Aquarist & Pondkeeper, Practical Fishkeeping, Practical Fishkeeping Answers, Tropical Fish Hobbyist, Freshwater and Marine Aquarium
34. In addition to providing protection, what other purpose do scales serve ?
Streamlining
35. Name the row of pierced scales along most fishes' flanks.
The lateral line
36. Name the organs which extract oxygen from the water.
The gills
37. Name two ways how some fishes breathe atmospheric air.
By means of the labyrinth organ (which traps gulped air) and also by using swallowed air in the hindgut
38. Describe superior, inferior and terminal mouths.
Turned up, underslung and right on the point of the snout, respectively
40. How long is a 900mm tank in inches ?
36
41. How heavy is an Imperial gallon of water ?
10 lbs
42. How heavy is an American gallon of water ?
8.3 lbs
43. How many gallons in a cubic foot ?
6.25 approximately
44. What does 'ppm' mean ?
Parts per million

QUIZ QUESTIONS : General Knowledge

45. Name three types of snail.

Ramshorn, Malayan, Ampullaria or 'Apple' Snails

46. Probably the first 'tropical' fish imported into England ?

The Paradisefish

47. Describe how we focus our eyes and how fishes do it.

We alter the shape (curvature) of the eye lens but fish just alter its position relative to the retina

48. Name three types of worms cultured for food.

Whiteworm, Grindal-worm, Micro-worm, Earthworm

49. What is *Artemia salina* ?

Brine Shrimp

50. Where shouldn't you 'park' magnetic algae scrapers ?

Near to any thermostat which use bi-metallic strips - they might interfere with its action

51. What makes colours in a fish apart from pigmentation ?

Layers of Guanin below the skin, reflecting colours up through the scales

52. When was the first London Zoo aquarium opened ?

1853

53. Name the Chicago aquarium which once held the record for the number of young in a single brood of Swordtails.

Shedd Aquarium, and the number was around 270

54. Can you name a famous aquarium in northern France ?

Nancy

55. Name the aquarium in Florida famous for its dolphins ?

Marineland

56. What secret group used the shape, or sign, of the fish ?

The early Christians

57. Is it possible for fishes to change sex ?

Yes, but they may only show visual external sexual differences rather than become fully functional opposite sexes. Although where a dominant male (with a harem of females) dies, a female will change sex to replace him

QUIZ QUESTIONS : General Knowledge

58. What is the usual material used for airline tubing ?
Neoprene
59. Why wouldn't you use rubber tubing when ozone is used ?
It rots rubber quickly - including pump diaphragms
60. Where is an airpump's air filter, and what is it made of ?
In the baseplate of the pump and made of felt
61. Why not put a airpump in a felt-lined box to silence it ?
Because it might overheat through lack of ventilation
62. What does endemic mean ?
Ocurring nowhere else
63. What have Swordtails, Emperor Tetras and Congo Tetras in common ?
Males carry extension rays to the caudal fin
64. What is MS222?
An anaesthetic
65. How do you use MS222 ?
Dissolve in water ; to wake the fish put in fresh water
66. What does a fish detect through its Lateral Line System ?
Vibrations in the surrounding water
67. What fishes make special use of Lateral Line Systems ?
Blind Cave Fish and any other fishes that live in darkness or muddy waters
68. What fish looks above the water from below, and for what particular reason ?
The Archer Fish - to spot perching insects
69. What particular problem does this fish have to cope with ?
The refraction, or bending, of light at the water surface which makes the fish's target appear elsewhere to where it actually is
70. What fish looks above and below the water - at the same time ?
Four-eyes : Anableps sp.
71. Where are the Rift Valley Lakes ?
Africa

QUIZ QUESTIONS : General Knowledge

72. Name the three largest Rift Valley Lakes.
Lakes Malawi (Nyasa), Victoria, Tanganyika
73. What are *Anguilla silusae* ?
Micro-worms
74. What is the function of the 'eye-spot' found on, or near, the tail of some fish ?
To confuse predators by presenting an alternative attractive (and apparently vulnerable) target
75. What freshwater fish is first in any fish dictionary ?
The Bream, *Abramis* sp.
76. Why should gravel be sloped down from back to front ?
To collect dirt at the front for easy removal
77. Should heaters be placed vertical or horizontally?
Providing they are clear of the gravel (to allow water circulation around them) it doesn't really matter. Combined heater/stat units may be positioned at an angle if too tall for the water depth
78. Describe 'routine maintenance.'
Cleaning the inside front glass, removing dead vegetation, changing filter wool and removing mulm from the bottom
79. What green food stops fish eating aquarium plants ?
Tinned peas, Brussel Sprouts, cabbage, lettuce and spinach leaves softened with boiling water
80. What is the 'beefsteak' of the fish world ?
The Earthworm
81. In what three ways do male fishes differ from females ?
Brighter colours, slimmer, pointed or elongated fins
82. Name two important basic steps to take when buying and installing a tank.
Buy the largest you can afford (to maintain stable water conditions); site the tank on a very firm, level foundation (so that stresses aren't set up which might crack the glass)

QUIZ QUESTIONS : General Knowledge

83. What are described as:

a) Ctenoid b) Ganoid c) Maxillary d) Pharyngeal ?

a, b) Scales c) barbels d) teeth in the throat

84. What are melanophores ?

Black pigment cells

85. What is the 'epidermis' of a fish ?

Its skin

86. What two things indicate a surface-feeder ?

An upturned mouth and a flat back

87. How can you maintain temperature in a tank during a prolonged power cut ?

Lag tank in polystyrene, blankets or old newspapers ; stand bottles of hot water (warmed by alternative means) in the tank, but watch out for overflows !

88. What primary precaution should you take when making a complete water change and stripping down a tank ?

Switch off the power first; let heater cool down

87. An airpump has reduced output - what should you check ?

That the output valves and the air filter pad aren't clogged or diaphragm damaged

89. Roughly how much gravel do you need for a normal tank ?

About a bucketful per square foot of tank base area

90. Some fish do not have a swim-bladder. Can you name a salt water fish and a freshwater fish which either have no swim-bladder at all or at least only a primitive one ?

The Shark and the Blockhead Cichlid, *Steatocranus* sp.

91. What is carotin used for in fish foods ?

To promote or intensify colour

92. What are the four Classes of FBAS Judges ?

A, B, C and Table Show

QUIZ QUESTIONS : General Knowledge

93. Why should newly-acquired fish be floated in the tank for a few minutes before release ? Is it
- a) To familiarise the new fish with their surroundings ?
 - b) To familiarise the existing stock to the new fish ?
 - c) To equalise the water temperatures ?
- c)**
94. What are the three important factors aquarium lighting ?
Intensity, colour spectrum and duration of illumination
95. How much tank capacity is taken up by for rocks, gravel and plants etc ?
About 10%
96. Which part of the fish's anatomy can be compared to the ballast tanks of a submarine ?
The swim-bladder
97. What feature, more than any other, determines the feeding habits of a fish ?
The position of the mouth
98. What is meant by a 'species tank' ?
An aquarium housing one species (or maybe a group of species from a single genus) such as, say, a Barb tank. Also taken to mean setting up a tank for fishes requiring special conditions that would not suit all other fishes
99. What are the 'Five Twenties' awarded for in single fish Classes ?
Size, Body, Colour, Fins and Condition & Department
100. How do you clean a neglected all-glass tank for re-use ?
Fill with strong salt water and leave to soak for a few hours, then wash out thoroughly with fresh water
101. What is the main use for barbels ?
As taste-sensors for finding food on the bottom or in murky waters
102. How do you convert Fahrenheit to Centigrade (Celsius) ?
Subtract 32, multiply by 5, divide by 9

QUIZ QUESTIONS : True or False ?

1. The Halfbeaks of the genus *Dermogenys* are livebearers.
True
2. The Blue Acara, *Aequidens pulcher* can produce broods of more than 1,000 young.
True
3. No species of *Synodontis* has ever been bred in captivity.
False
4. The Silver Hatchetfish, *Gasterpelecus sternicla*, can travel about 10 feet through the air.
True
5. The largest Barb, *Barbus tor*, has been reported to grow to 9 feet in length.
True
6. The Giant Danio, *Danio aequipinnatus*, is NOT the largest of Danios.
False
7. *Helostoma temminckii*, grows to only 6 inches.
False. The Kissing Gourami can reach 12"
8. The male Swordtail grows larger than the female.
False
9. The Siamese Flying Fox is more colourful than the ordinary Flying Fox.
False - it lacks the bright yellow stripe
10. All Gouramies and related fishes are bubble-nest builders.
False; some are mouthbrooders
11. The Sardine's scientific name is *Sardina pilchardus*.
True
12. The Pilchard's scientific name is *Sardina pilchardus*.
True. The fish is a Sardine when small, a Pilchard when adult
13. Some catfish are able to identify individual fish by smell.
True
14. Oviparous fishes give birth to live young.
False
15. The Sea Horse is a true fish.
True

QUIZ QUESTIONS : True or False ?

16. The scales on a Coelacanth differ to those on other fishes.
True
17. The Hatchetfish, *Argyropelecus hemigymnus*, is a marine fish.
True
18. All Mormyrids or Elephant-nosed fishes have a long snout.
False
19. The Butterflyfish, *Pantodon bucchholzi* has been bred in the aquarium.
True
20. Lungfishes can be found in South-East Asia.
False
21. There are over 100 species of Barbs in South America.
False; there are no Barbs in South America
22. *Tilapia* are found in Sri Lanka.
True ; but they are there having been deliberately introduced, they are not native fishes
23. *Badis badis* is a small cichlid.
False; it's a member of the Nandidae (Badidae) Family
24. The largest fish in the world is the Whale Shark.
True, but it's not the largest marine animal being smaller than some of the true whales (which are mammals)
25. Most fish prefer soft/acid water.
True

QUIZ QUESTIONS : Brainteasers

1. Which native fish could be the most religious ?
Pope (Ruffe)
2. I'm small but easily seen.
Glowlight
3. Use my nose to clear things away.
Shovelnose Catfish
4. A circus performer with a hook
Clown (Barb)
5. I'm usually in a state in America all day
Texas Cichlid
6. I'm in heaven when I'm in water
Angelfish
7. I surround Chickens and Turkeys at Christmas
Tinfoil Barb
8. I'm a precious non-predator
Silver Shark
9. I've got a heavenly body
Sunfish
10. We swarm about the tank
Bumble-bee Fish
11. I was needed in the Garden of Eden
Leaf-fish
12. You can see through me
Glassfish
13. I'm happy without a man
Merry Widow
14. Columbine and me
Harlequin
15. There's two of me in every bird
Halfbeak
16. Use me in embroidery work
Needlefish
17. Oriental pugilist
Siamese Fighting Fish
18. Adam and Eve enjoyed me
Paradise (fish)

QUIZ QUESTIONS : Brainteasers

19. I'm usually up the pole
Flagfish
20. You can call me Medusa
Snakehead
21. A wily animal that takes to the air
Flying Fox
22. A tramp's shoe might need me
Sole
23. Chopper
Hatchet
24. I follow night
Dawn (Tetra)
25. I can't shoot arrows - it makes me spit
Archerfish
26. I'm sweet stuff
Honey (Gourami)
27. My relatives eat meat but I prefer fruit
Pacu
28. Too old fashioned for stereo
Mono
29. Get out of it!
Scat
30. Gabriel was one
Angel
31. I've broken the law
Convict
32. I'm often peered through
Keyhole (Cichlid)
33. They keep me in the dark
Blind Cave fish
34. Meet me up the Beanstalk
Giant (Gourami or Danio)
35. Me and Quasimodo have the same problem
Humpback (Limia)

QUIZ QUESTIONS : Brainteasers

36. I've a metal heart in a wooden body
Pencilfish
37. Two fish that make cutting remarks
Scissortail and Knife-fish
38. I'm in the Pope's team
Cardinal Tetra ; Bishop Fish
39. Warned of the Spanish Armada
Beacon
40. Dressed for dinner
Penguin
41. Red body fluid attracts me
Piranha
42. Hardly the right way up
Headstander
43. Mechanics use me
Spanner (Barb)
44. Not always found in the oyster shell
Pearl (Danio)
45. Concorde goes over and through me
White Cloud (Mountain Minnow)
46. The sharper the better
Knife Fish
47. Some hold pints, others only halves
Glass (Fish)
48. A stinging menace when mature
Mosquito
49. You are often told to get this out
Finger(fish)
50. Autumn sees their downfall
Leaf-fish
51. All the stars aim for this
Oscar
52. Opening of the furnace
Firemouth

QUIZ QUESTIONS : Brainteasers

53. Goes with a long throw
Discus
54. Found in water and musical instruments
Reed (Fish)
55. Eventual destination for caterpillars
Butterflyfish
56. Swimming around in abbattoirs
Blood(fin)
57. They make white or black smoke
Cardinal Fish
58. Unrequited love cause this
Bleeding Heart (Tetra)
59. Olympic Games await my arrival
Flame (Tetra)
60. Schoolboy taunt for spectacle-wearers
Four-Eyes
62. Talking books suit me fine
Blind Cave Fish
63. Economical with the truth or a musical instrument
Lyre(tail)
64. I took part at Agincourt
Archer(fish)
65. I may be real or synthetic
Pearl (Danio)
66. Small people's favourite fish
Pigmy Barb
67. Long-handled weapon
Pike
68. I could refresh your garden in hot weather
Spraying Characin
69. Plant one for an American pie
Pumpkinseed
70. Malone's daughter
Molly

QUIZ QUESTIONS : Brainteasers

71. Easily seen through
X-Ray Fish
72. Going down the subway or Underground
Tube-mouth Pencilfish
73. Gets in you hair but it's supposed to
Combtail
74. Love fish and a saucer of milk
Cat(fish)
75. I've got a rush of blood to the brain
Headstander
76. Both the Bitterling and strong men need them
Muscles (Mussels)
77. I like classical music
Schuberti Barb
78. We like the circus
Clown Barb ; Clown Killi ; Clown Loach
79. We fly over 15-spined Sticklebacks
Seagulls
80. Umpires in cricket, referees in football, what in bowls ?
Goldfish
81. What fish always gets top marks for size ?
Any fish reaching the maximum size
82. If you throw a blue stone into the Red Sea what does it get ?
Wet
83. I'm happy to lose my mate
Merry Widow
83. I've obtained a commission in the services
***Botia hymenophysa* (I'm an Officer!)**
84. This marine Family are great discussionists
The Drums

QUIZ QUESTIONS : Brainteasers

85. This jet propelled fish's bones are liked by cagebirds

Cuttlefish

86. The Lone Star fish

Texas Cichlid

87. I get time off for good behaviour

Convict (Cichlid)

88. I lost my head in the French Revolution

Pompadour (Discus)

89. I've got a sore throat

Firemouth

QUIZ QUESTIONS : Fish Name Anagrams

1. Was it lord.
2. Flog dish.
3. Wind caused top.
4. Alder piano.
5. Ton are ten.
6. She fin clip.
7. Arab bent film.
8. Here miss eat fig.
9. Gong silk rump aria.
10. I as sir clots.
11. Gin belch crimp
12. A club area.
13. Now cod tail it when mum union.
14. Of silly milan.
15. Lag she fin.
16. Tiler guy apply.
17. Dash fair pies.
18. Bib garter.
19. Rap hole fat disc.
20. Whole heat arc.
21. Danes red hat.
22. Yap law lit tag.
23. Tall white trogg.
24. Heal Dino.
25. Aisle babel or run.

ANSWERS

1. Swordtail
2. Goldfish
3. Upside-down Cat
4. Pearl Danio
5. Neon Tetra
6. Pencilfish
7. Filament Barb
8. Siamese Fighter
9. Sparkling Gourami
10. Scissortail
11. Climbing Perch
12. Blue Acara
13. White Cloud Mountain Minnow.
14. 14.Sailfin Molly
15. Angelfish
16. Lyretail Guppy
17. Paradisefish
18. Tiger Barb
19. Leopard Catfish
20. Weather Loach
21. Headstander
22. Wagtail Platy
23. Glowlight Tetra
24. Lionhead
25. Blue-line Rasbora

***D-I-Y
Quiz
Suggestions***

D-I-Y QUIZ SUGGESTIONS

1. Visual Audience Quiz

If your Society has access to an Episcoper or a similar overhead projection system, you can devise a visual quiz quite simply.

Taking any of the Federation's Technical Information Booklets or any other source of aquatic subject matter, project any picture (taking care to obscure the fish's name and information!) on to the screen and ask any, or all, of the following questions:

- | | |
|--|--|
| a) Common Name) see Booklets | h) suitability for community aquarium ? |
| b) Scientific Name) Nos. 9-12 | i) Food required (Meat, Vegetable, Dried, Live) |
| c) Family group name (Barb, Characin, Cichlid etc) | j) Sexual differences |
| d) Country of origin | k) Colouration details |
| e) Show Size (see Booklet No.6) | l) Temperature |
| f) Show Class (see Booklet No.6) | m) Freshwater or marine |
| g) Method of breeding | |

Answers can be given in turn (collectively or individually) either verbally or in writing.

A different twist can be added by projecting just a silhouette, or even just parts of the the subject: many fishes and plants (even pieces of equipment) are quite recognisable from a single physical feature.

2. Build up a Fish

Build up the identity of a fish from descriptive statements perhaps based on answers above. Maximum points given for the earliest correct identification; points reduce as more 'clues' are given.

Start off with broad statements - South American origin, Characin, Egglayer etc. This quiz can be extended to include plants but the 'clues' may take longer to prepare.

3. AQUABUSTERS

Based on a straightforward question and answer format (and on the popular tv Blockbuster series), this allows each team to pick their way across (or up or down) a board of initials.

Each initial represents part of the answer, eg, **'Which 'D' is an exotic Cichlid ?' (Discus)**. Make up a 5 x 5 board of initials: we leave you to guess which initial to leave out, it may take some working out in advance - Hint: there aren't many aquarium subjects beginning with 'Q' !

Another idea: give each box a letter (or combination) corresponding to the FBAS Class Lettering System (Ba, Cz, Dc etc) which immediately opens up the possibilities enormously, as you're not stuck with a specific letter in the actual answer and questions can be based on the whole Class.

For easy staging, make up a blackboard with **Answer Letters** on one side, **Class/Subject Letters** on the other.

ANSWER LETTERS

=====
+ A + B + C + D + E +
=====
+ F + G + H + I + J +
=====
+ K + L + M + N + O +
=====
+ P + Q + R + S + T +
=====
+ U + V + W + X + Y +
=====

CLASS / SUBJECT LETTERS

=====
+ Ag + Ba + Bz + Ca + Cb +
=====
+ Cz + Da + Db + Dc + Dz +
=====
+ E + F + G + H + J +
=====
+ K + L + M + N + O-S +
=====
+ T + U-V + W + Y + Z +
=====

LAMP ANSWERING SYSTEM

The purpose of the system is to identify who presses their button first. The circuit lights a lamp associated with the first-pressed button and renders the remaining buttons inoperable. The lamp remains lit as an indication to the Quizmaster, who must switch the unit off and on again, to cancel the lamp and 'enable' the next lamp-select sequence.

The device is battery-operated but a low-voltage rectified power supply (via a suitable transformer) may be substituted by the more electronically-practical fishkeeper. The device is easily made (making the master unit box is probably the hardest physical part) but requires some basic electrical skill. Do not attempt to build this if at all unsure of your own capabilities - **ALWAYS SEEK QUALIFIED GUIDANCE.**

MATERIALS NEEDED Bell-wire, Insulating tape, Nuts and bolts,
 Battery connectors, Switch, Metal box,
Dry Battery (Lantern Size) to suit the voltage of the relays and lamps used,
Bell-pushes, Relays, Lampholders, Lamps (according to number of teams).

ASSEMBLY (Refer to circuit opposite)

Assembly is straightforward, the relays, indicator lamps and on/off switch being housed in the Quizmaster's control box.

Long pairs of wires (one pair for each team or contestant) led out from the master unit box to the bell-pushes.

When in use, the buttons to each team member should be taped down to prevent the Quizmaster's main unit being pulled off his table in the excitement!

NOTE: When not in use the battery should be disconnected.

