



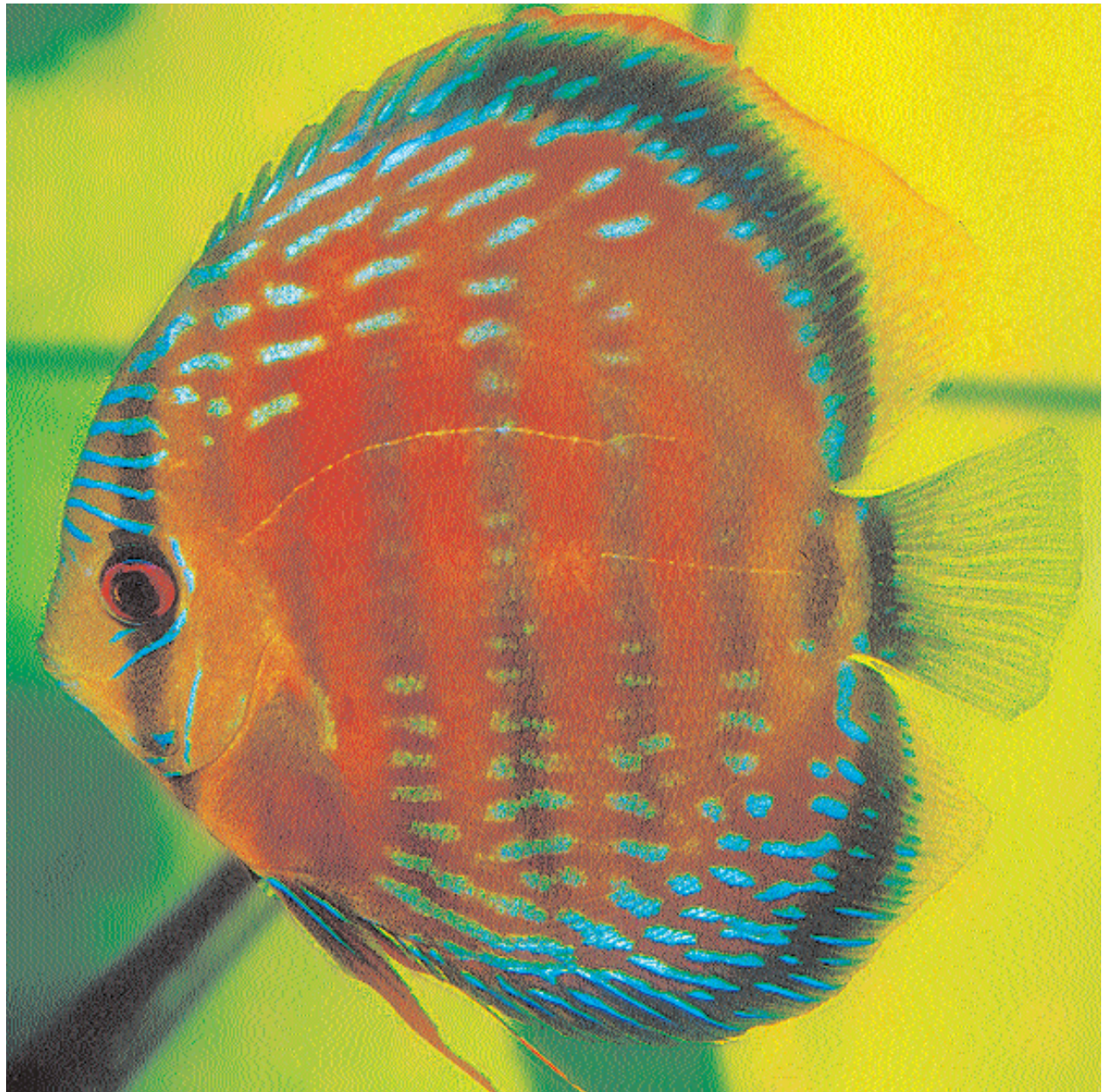
EVENTS

Who is the king of aquarium fishes?

by Christian Homrighausen

This question was unequivocally answered from the 3rd to the 6th of October 2002, at the Kraftzentralenhalle in the Duisburg-Nord country park. The 4th International Discus Championships in Duisburg offered 402 discus from 24 nations a platform on which the finest discus in the world could be chosen. Over a 2-day period, eight internationally experienced judges chose the victors from the 12 categories of fish exhibited, with the two top prizes going to Singapore. Winnie Nio/Conrad Chia won the cup for the "best wild form" with a discus of category "Green", and Chai Koon Seng took the prize for the "best bred form". As at the previous exhibition two years ago, this "King of the kings of aquarium fishes" was a top quality Red Spotted Leopard Snake.

Attracted by these World Championships for aquarium fishes, 20,462 visitors streamed into the Kraftzentralenhalle to enjoy not only the fishes in the competition, but also more than 80 trade stands, offering discus of all colour varieties and practically every product imaginable related to discus. An outstanding experience, underlining the continuing stardom of the discus despite the world economic crisis and the Flower Horn hysteria in Asia. The traders were also full of enthusiasm, and many of them were practically sold out by the second day and had to fetch "extras" that night. As at every discus championships, there was a veritable "Babel" of different languages: the visitors had come from Asia, all of Europe, and overseas, many of them visiting this, the epitome of aquarium exhibitions, on all four days. On each day the championships were online and the staff on the Discus Page Holland (www.dph.nl) stand logged more than 200,000 visitors to the "online exhibition".



This discus took first prize in the "Brown" category. See page 3 for more on the championships.

photo: Ch. Homrighausen

REPORT

Sensational: a cleaner shrimp in fresh water!

by Frank Schäfer

Cleaning symbiosis is well known from the sea, where, for example, small wrasses of the genus *Labroides* maintain regular cleaning stations, and numerous shrimp species also act as "health police", carrying out their cleaning activities unharmed, even between the needle-sharp teeth of large piscivorous fishes. On the other hand, this type of behaviour is to date little known in fresh water. One of the rare exceptions is the bitterling (*Rhodeus amarus*), noteworthy in many other respects as well, which is occasionally seen to clean the perch (*Perca fluviatilis*).



The shrimp in close-up.

photo: F. Schäfer

The cleaning activities of a freshwater shrimp, only recently first observed and documented, are thus exceptionally noteworthy. As so often happens, chance played a decisive part

in the discovery of the facts of the matter. I had just placed a charming "glass shrimp" (perhaps a member of the genus *Macrobrachium*), which had arrived as a by-catch with *Parotocinclus* sp. "Negros"



The glass shrimp from Paraguay cleaning a *Corydoras* sp. The "cleaning area" has been highlighted in the photo for clarity.

photo: F. Schäfer

from Paraguay, in the photographic tank, when it became necessary to photograph a newly-imported long-snout mailed catfish (see News 48) at short notice. Long-snouts are generally regarded as a little delicate and so I wanted to avoid stress as much as possible. "So, I thought, 'I won't disturb the little shrimp, I'll just pop the catfish into the photographic tank right away.'" Unfortunately the fishes were still rather debilitated from the long journey, and so they had to spend several days in the photographic tank, instead of the intended few hours. Eventually the day

came when they were ready to be immortalised on celluloid. I switched on the light above the aquarium, camera at the ready, and began.

To my annoyance the shrimp kept creeping into the photo. At first I chased it away with a bit of stick, but the creature was remarkably persistent.

Eventually I gave up.

And then I saw the shrimp head straight for a mailed catfish and start to pick loose bits of skin from its snout! The mailed catfish remained completely immobile and clearly enjoyed the attention!

TIP



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PLANTS

New advances in breeding stone corals

by Frédéric Amblard

For some years now the love of reef aquarium-keeping has been increasing apace, and the demand for corals and other colourful marine invertebrates has risen sharply. At the same time, during this period we have become increasingly conscious that marine environments are worth conserving.

Numerous organisations have sprung into life, becoming increasingly more powerful and with considerable means at their disposal. These organisations can have a considerable and permanent influence, and the fish and invertebrate industry has been singled out for special attention.

Stone corals are protected and are listed under appendix 2 of the Washington Convention on Species Conservation : The trade in these corals is thus increasingly subject to continually more stringent restrictions. Every consignment of corals requires the application for and granting of export and import licenses from the relevant government departments in the exporting and importing countries, assuming that both countries have ratified the Washington Convention.

For some years Indonesia has been the most important country worldwide for the export of live corals for the aquarium. For this reason it is hardly surprising that this country has been constrained to impose a quota system.

This means that each coral species can be exported only within the framework of the fixed quantities set

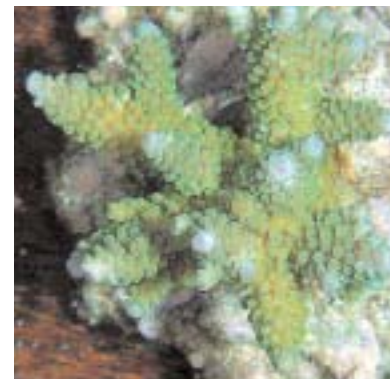
Indonesian "coral farm" – today the largest of its kind in the world. Hence, since the end of 1988 AMBLARD S.A., in collaboration with the company biologist, Vincent Chalias, has been developing coral-



breeding techniques to make it possible to raise "cuttings" for commercial distribution under the trademark "Lombok Frags®". This completely new form of aquaculture is practised in only a few places in the entire world. Hence it was necessary to develop a large number of the requisite techniques and procedures "in-house", and to work to continually improve them.

left without any livelihood for a period of time. This method relies heavily on the people cultivating the crop. The AMBLARD company has devised

methods enabling these people to manage their own local production areas. The construction of "tables" and artificial rocks, and the tending and supervision of production sites, allow increasing numbers of local people to participate in the coral breeding and



thus earn a living. It was also necessary to adapt this method to suit the people involved. The technique used is extremely simple. It involves submerging metal "tables" with "holders" for attaching the coral cuttings.

This technique was first used at the Fidschi Islands and adopted by AMBLARD S.A. for further development and adaptation to local conditions in Indonesia.

The "tables"

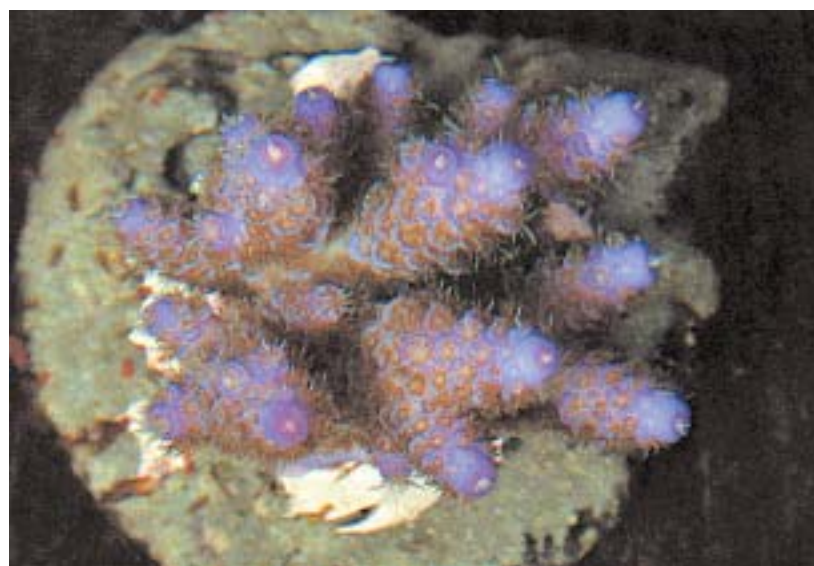
Each "table" consists of a welded framework of iron bars, which forms the base for a superimposed galvanised support grid.

The most commonly used size is 2m x 1m x 0.5 m, but this depends on the site (available space, the presence of certain algae, etc), on the nature of the bottom at the site (sand, rocks, etc), on the current (which might wash away the table, and with it the young corals), the depth (the table needs to be submerged!), the species to be propagated (some species need more space than others, etc), and the presence of coral predators (some fishes, such as *Chaetodon* spp,

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Arothron spp, *Ballistoides* spp., eat corals). The size must be precisely calculated such that the construction, as well as the handling and maintenance, of the table are as easy as possible and the actual work can take place under optimal conditions.



annually by an Indonesian committee. Quota-based concessions are issued to only a limited number of exporters, who need to be in possession of all the necessary permits to trade in corals.

It is worth noting that the quota for each species is revised downwards each year according to past research by a scientific committee.

Moreover since 1999 the EWG has banned the importation of certain species, notably *Catalaphyllia jardinei*, *Cynarina lacrymalis*, *Nemanzophyllia turbida*, *Trachyphyllia radiata*, in order to avoid over-exploitation.

In view of the ever-increasing demand and the ever-decreasing and arbitrary quotas, AMBLARD S.A. decided to bring into being its

Techniques applied. Initially one of a number of basic techniques must be chosen:
- Electrolysis: a very promising method, but extremely expensive;
- Container-breeding: a very expensive method;
- Culture in the sea: an expensive, but natural, method.
For reasons of environmental conservation AMBLARD S.A. decided in favour of marine culture, which also, by contrast with the other techniques considered, has a special attraction: the social aspect.
If the harvesting of wild corals were one day to be banned, then the people involved in the work would be

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REPORT

A life without legs - Snakes in motion

by Peter Hoffmann

Reptiles – “those that creep” - if this name applies to any member of this group of animals, then it must be the snake, that dreaded “non-animal”, which slithers with equal elegance and agility whether through underbrush or across the hot desert sand, and which is for many people the symbol of unpredictability and danger.....

Why so many people should be so afraid of the legless reptiles can only be speculated:

“And the Lord God said unto the serpent, Because thou hast done this, thou art cursed above all cattle, and above every beast of the field; upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life.”

Genesis 3,14

However, this divine curse appears to have had little effect on the speed of the snake.

At any rate, the black mamba (*Dendroaspis polylepis*), so-to-speak the “record holder” in the field of the legless creatures, can supposedly manage 30 kilometers per hour if its prey tries to flee or an enemy attacks.

Sea snakes too are far from sluggish as they glide away through the waves.

Some species – such as the Lancehead snakes (Bothrops) – are even said to leap (!) to the attack when cornered. This is probably the reason for the term “jumping adder” occasionally found in traveller’s tales and expedition reports.

By contrast, without doubt the second part of the divine curse, detailed in the next verse of the Bible (Genesis 3,15) has been fulfilled a thousandfold: “And I will put enmity between thee and the woman, and between thy seed and her seed; it shall bruise thy



head, and thou shalt bruise his heel.”

And it is indeed true that snakes, whenever possible, avoid us humans. As a rule they attack only if we corner them, accidentally tread on a dozing snake, or otherwise provoke these reptiles.

In all probability it is simply their deviation from the “norm” – the lack of any limbs – that sets us humans against the snakes. Their “deficiency” is of no account to the snakes themselves: even without legs they can move elegantly and at high speed.

At the same time, terms like “crawl” and “snaking”, ie catchwords that we use to describe the (supposed) movement of snakes, prove to be less than accurate and exhaustive on closer examination.

Snaking, ie the mode of propulsion by



which the snake glides sinuously across the ground, functions only when the ground offers enough “fixed points” – for example, stones or uneven patches – to provide the snake’s body with purchase and enable the reptile to so-to-speak “push off”

If a snake is put on a pane of glass in the laboratory, it will move off only slowly and insecurely – skidding like a car whose tyres can find no grip on an icy road

In general, the snake adapts the winding of its body to the topology of the terrain.

Of course, long slender snakes are better able to wind their bodies and utilise more fixed points than can a viper, which suffers under the burden of a stubby body.

There are, of course, also species that live in tree trunks, among rocks, and in other rather tube-like homes: these move in only slight curves, finding purchase on the walls of their hiding-places. The leading part of the snake’s body “lets go” and straightens, moving forward a little to create a new “support point”, and the back part then glides after, bit by bit.....



This “concertina motion” is rather reminiscent of a mountaineer laboriously working his way up a “chimney” in the direction of the summit!

By contrast, “side-winding” is used by desert snakes to glide across the fine hot sands, which offer it only minimal purchase. The snake moves sideways, almost at right-angles to its body axis; the body contacts the ground at only two points, producing the parallel “skid mark” tracks which we know from film footage.




Some researchers have speculated as to whether this distribution of the body weight, and the fact that the reptile contacts the red-hot desert sand with only part of its belly, should

be regarded as an adaptation to the hostile environment. On the other hand, as well as the most famous “side-winder”, the horned viper (*Cerastes cerastes*), there are other species that likewise utilise this technique. Even amphibious snakes, including, for example, our European grass snake (*Natrix natrix*), will cross a smooth, sandy area by side-winding.....

In contrast to the side-winders, which belong to the “sinuous” snakes, we also find that there are plenty of snakes that aspire to be completely “unwound” in their motion. In particular the giant snakes, but also the stoutly-built vipers, are past masters of this “caterpillar” mode of locomotion. Areas of the belly and lateral scales are raised in succession, pushed forward, and then “grip” any unevenness of the ground. The snake thus finds purchase as it gradually works its way forward, bit by bit. In effect, the scales act like innumerable tiny “feet” that slowly – but evenly – carry the snake forwards!

Snakes that have mastered this method of locomotion can, of course, also use it to make their way into narrow “tubes” where they can instead utilise the “concertina” method.

TIP



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It is possible that all species can swim:

Snaking like an eel, they swim through the waves. A specialised type of adaptation to the damp element is seen in the sea-snakes, in which a flattened posterior body and tail (“rudder”) create a regular paddle, perfect for swimming but no longer suited to life on land!

On the other hand, there is likewise an art to living in a totally dry environment, such as sand: snakes which bury themselves usually have a compact, powerful, wedge-shaped head, with which they burrow into the “underworld”. Then again, there are species, for example, the Flying snakes (*Chrysopelea ornata*), which can flatten their bodies so that they act like a paraglider and reduce the snake’s rate of descent to such an extent that it can launch itself in “flight” from a tree and sail through the air for a distance of 10, 20, or even 30 metres!

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REPORT

Less Fast Food for Fishes

Fishes have a basic right to healthy eating too

Astonishing but true: according to information from leading fish research laboratories in Germany the number 1 cause of death in fishes in home aquaria is massive fatty degeneration of the liver – and the reason for this, as well as too rich food too often, is frequently the wrong sort of food. Because aquatic life forms have completely different requirements as regards food composition to, for example, land-living mammals..

In the first place, it is a matter of environment. As we all know, the fish lives in water, and – unlike land-living life forms - it uses hardly any muscular energy to maintain its upright position in the water because of its buoyancy and the function of its swim-bladder, and hence it needs only a very small amount of energy from the food it eats.

Moreover, the fish is a so-called **Mehr Freude am Aquarium. www.amtra.de**

poikilotherm organism – that is to say, its body temperature is a function of its environment.

Thus the fish - unlike, for example, us humans - does not need to use any energy in order to maintain a constant body temperature. But, as not only sportsmen know, energy derives largely from the carbohydrates in food. Hence a fish meal should, ideally, contain only a little carbohydrate and a comparatively large amount of protein (Fig. 1).

Manufactured flake foods for fishes contain a high carbohydrate component. The main ingredients are, as a rule, fish- and soya-meal.

Additional materials are necessary for technical reasons: chiefly binding agents, but also flow aids, stabilisers, and thickeners, which are almost always carbohydrate themselves and hence, from a physiological viewpoint, are an undesirable element in fish food.

Fats are an additional problem. The

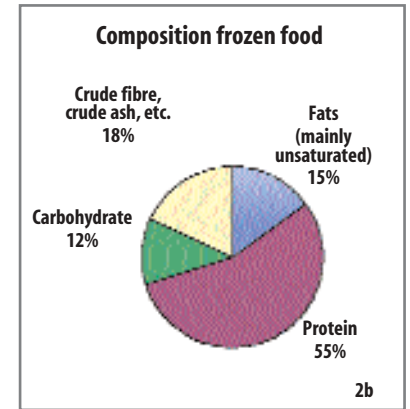
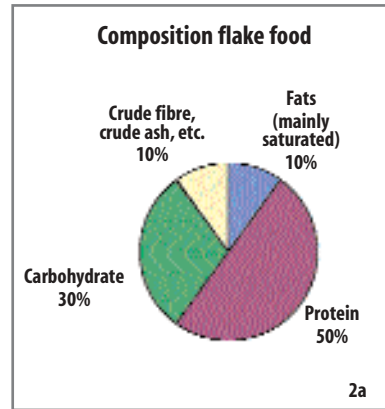
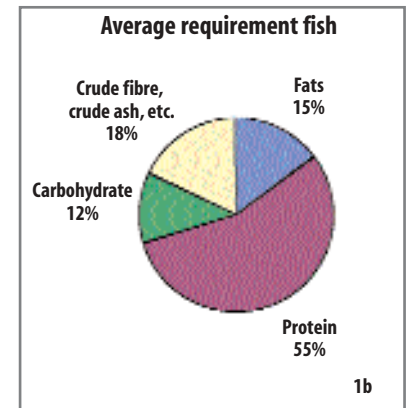
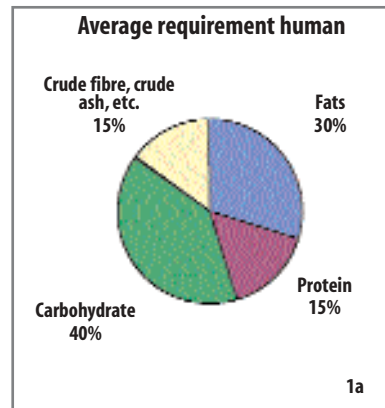
fish requires above all healthy, unsaturated fatty acids such as occur copiously in the natural food organisms. However, because unsaturated fatty acids always have an oily consistency and hence are fluid, their inclusion in flake food is very limited for allied reasons.

The composition of "classic" flake food

requirements (Fig. 2) and hence should be supplemented by as many natural foods as possible.

In addition fishes have another special feature: their digestive processes are quite different, specifically, less intensive.

Compared to other life forms fishes have a comparatively weak digestive



Depending on the manufacturer, the carbohydrate component is higher in flake food than in frozen food. The total fat component is little different, but the fat component of frozen foods is largely valuable unsaturated fatty acids.



Frozen food should be on the menu for your fishes at least twice per week - here amtra premium, a particularly high quality frozen food. Prior to flash freezing, the food organisms (bloodworm) are fed a special vitamin-rich diet which thus goes straight into the fishes.

(herein termed "fish fast food") corresponds only to a very limited extent to natural nutritional re-

quirements. Many fish species do not have a fully-fledged stomach or have only a very short intestine.

Normally this would cause them problems and they would undoubtedly not have survived had they not discovered a trick in the course of their evolution: specifically, fishes use the digestive enzymes of the organisms that they eat (eg water fleas, mosquito larvae, river shrimps, etc). For this reason it is particularly important that the menu of aquarium fishes regularly features these food organisms.

This is just as important for these water-dwellers as a regular intake of fruit and vegetables is for us humans: it provides us with all the essential vitamins, minerals, and trace elements and helps us to remain healthy.

Granted, most of us have neither the time nor the expertise to collect food organisms from the wild ourselves. But, luckily, this is completely unnecessary!

Nowadays natural foods are available in a large variety in the better pet stores, as frozen foods from the deep freeze. There is a choice of either individual types (bloodworm, glassworm, mosquito larvae, water fleas, river shrimps, etc) or high quality

mixtures of various food organisms. Contrary to popular opinion, feeding is also very easy: the food is often packed in portions. A portion can be effortlessly broken off and added to the water while still frozen. In particular, small species, such as guppies, neons and other tetras will suck individual pieces from the portion.

You can also press a portion against the inside of the front glass and watch the fish nibbling off their share. Only larger fishes, for example some African cichlids, can swallow a whole portion at one go and should therefore have

TIP

Aquarienfische gesund ernähren (Healthy Feeding of Aquarium Fishes) / Bremer, Heinz (Available only in German.) Nowadays many aquarists rely on standard dried foods. For this reason, this book details various organisms that can be used as live food and suggests recipes for frozen and artificial foods.

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their frozen food pre-thawed. But even with fishes that can swallow entire portions of frozen food at one go, there is to date no evidence from research to demonstrate that this causes any harm to the gastrointestinal tract.

However, because the swallowing of completely frozen food is not a normal trophic habit in tropical fishes, partial defrosting at room temperature is recommended.

The food should be fed immediately after thawing. As mentioned above, fishes are poikilotherm organisms, and thus have no problem with cold food.

Wachsen die Pflanzen, wächst das Vergnügen.
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One more tip in conclusion: make one day per week a fast day for your fishes. This will not harm them – far from it. It will encourage vitality in your fishes and in general parallels their feeding behaviour in the wild.

As a general rule of thumb, supplement the menu at least twice a week with live or deep frozen natural food - for healthy and disease-resistant fishes.

Geben Sie Ihren Pflanzen einen guten Grund zum Wachsen.

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REPORT

The Zambian Tiger Barb

by G.R.Melhuish B.Sc; M.I.Biol; C.Biol

Barbus fasciolatus Günther, 1868 was originally collected by Dr. WELWITSCH in the Cunene River in Angola. Another comparable species, namely *B. bariloides* BOULENGER, 1914 was described from the Solwezi River Kafue River system. Both species were originally thought to be two distinct species on a basis of lateral scale counts, but further examination of material revealed that a modal scale count of 26 was recorded for both species by Dr. JUBB (1963) so that the latter species can now be considered a synonym of *B. fasciolatus*.



Description

Fin/Ray Counts
Dorsal iii/8 with the third simple ray largest but flexible. Anal iii/5. Scales are radiately striated with 24-28 along the lateral line and 12 around the caudal peduncle. The two pairs of barbels are well developed, the anterior one usually as long as the eye, and the posterior one about 1.5 times the eye diameter. It is usually a characteristic feature of Zambian barbs and indeed African barbs in general, for the species to possess two pairs of barbels although exceptions do occur e.g. *Barbus hulstaerti* - the butterfly of Zaire.

Barbus fasciolatus is one of the prettiest little Zambian barbs and the only species from tributary streams and "dambos" to possess a series of vertical bars. There is a fusion of the third and fourth bars which are diamond shape in outline.

The basic body colour is olive to bright

red—more intense on the dorsal surface and fading through from silvery to red mid-body, to a pink or white belly. The brightness of the colouration was found to be mainly associated with age and breeding condition. The narrow black vertical bars vary in numbers and shape from 10—16. The last bar generally ends as a spot on the caudal peduncle. The colour of the distal part of the fins is brighter than the proximal part and varies from bright red to pink to white.

Habitat

It is a species of well aerated tributary streams and flooded low lying areas called Dambos but is certainly absent from lakes and major rivers. It is not weed loving and found only where there is a sandy or rocky substrate. It is a migratory species during the rainy season where collections made during January to April proved to be difficult in known localities.

Migrations to upper reaches of tributary streams and then into catchment areas or flooded plains occurs. It is in these quiet backwater locations that spawning takes place where adequate weed cover affords protection to fry from predation.

Distribution

Upper Zambezi, Kafue, and Zambian /Zaire river systems. It is fairly evenly distributed but no where common or abundant.

Personal observations

The writer first first encountered this species in April 1970 in a flooded low lying area { dambo} which was being utilised for rice experiments and very

adjacent to a tributary stream feeding the Kafue river.

In the above location it was found associated with *B. lineomaculatus* with equal abundance. Other associated barb species of minor importance were *B. eutaenia* and *B. multilineatus*—the latter in more weedy locations towards the embankments. Non barb species were *Aplocheilichthys katangae*, *Ctenopoma multispinis*, *Pseudocrenilabrus philander* and one unidentified Tilapia species.

All earlier literature states that the species fares badly during transport. This has been borne out by the fact that transport in oxygenated bags to my home within easy walking distance often resulted in 50% casualties on arrival.

Water conditions in which the species is found are very soft, with 44ppm CaCO₃ and a PH range of 6.8 to 7.4.



Zambian Tiger Barb, male

photo: Frank Schäfer

This species is, however, easily acclimatised to much harder water conditions which occasionally characterise some of our soils, particularly in south eastern areas of the Copperbelt Province. To maintain this species successfully in aquaria, top water



Zambian Tiger Barb, female

photo: Frank Schäfer

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conditions and quality must be maintained for apart from soft and neutral, the water must be crystal clear for cloudy conditions will result in the demise of this species where it is the first of the Zambian barbs to succumb. The most common disease symptoms

inclusion of mosquito larvae into their diet. In the absence of this source of livefood, other forms may be used eg. daphnia, cyclops, etc. It is a species which can tolerate low water temperatures of less than 50 F which occur during the Zambian winter months from June to September.

Conclusion

With the exception of the Malayan Tiger Barb, *B. hexazona*, the Zambian Tiger Barb is, in the opinion of the writer fully justifies its name because of its markings and colouration. So put a Tiger in your tank!

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TIP

Barben und Bärblinge (Barbs and Rasboras) / Stallknecht, Helmut (Available only in German.)

146 pages, numerous colour photos, hardback
This book provides numerous practical hints on maintenance and breeding for the novice. In addition, numerous species are presented in text and photos.

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REPORT

Success with planted Discus aquaria - part 1

by George und Karla Booth

Why is it that discus seem so magical?

Perhaps it is because they have the reputation as being difficult fish to keep and are only worthy of the most experienced aquarists, or maybe it is their regal demeanour.

After all, they are often described as "King of the Aquarium".

Anyone who has seen a magnificent breeding pair will have to agree it is a sight to behold.

If you have ever had the chance to browse some of the discus books on the market, you will realize that few fish can create an impression like discus, and a school of them in a large tank is simply awesome.

As aquatic plant enthusiasts, we naturally gravitate towards spectacular aquariums.

A large, carefully aquascaped display can hold us spellbound for hours.

The works of Takashi Amano depicted in his "Nature Aquarium World" books have redefined the art of aquascaping. Many aquatic gardeners have wondered about combining discus and live plants. Would the combination be as remarkable as the pairing of peanut butter and chocolate?

Mr. Amano certainly seems to think so - some of the most impressive photos in his books are of planted discus tanks. Followers of the recent Aquatic Gardeners Association Aquascaping contest noted that quite a few of the entries featured discus in an aquatic garden.

But is a planted discus tank as simple as dropping a Hershey bar into a jar of Skippy peanut butter?

If you are guessing "not exactly", you are right; but it is not as difficult as you might imagine. We have successfully maintained planted discus tanks for 15 years.

This article is based on our experiences, and we hope it will give you the knowledge and confidence needed to create your own spectacular discus habitat.

Pluses and minuses there are several

advantages to keeping discus in a planted aquarium.

The most obvious advantage is the sheer beauty of this combination. Discus tend to be graceful, slow-moving fish and look perfectly at home amid plants swaying slowly in the current.

Their coloration, especially the metallic turquoise variants, is a perfect match to the natural greens and reds of live plants.

And, especially important to us aging aquatic gardeners, discus are big fish and are easier to see from the sofa than the tetras more typically found in our displays!

On a more serious note, plants are known to act as chemical filters to help remove toxic substances from the water.

This is a very important attribute for a discus tank.

Discus are sensitive to water quality and thus place more of a demand on the aquarist to maintain high standards. A good collection of healthy plants will lead to a healthy overall environment and help stave off common diseases like "hole-in-the-head".

Plants also provide natural hiding places for discus.

Discus tend to be shy fish and are sometimes bothered by activity outside the tank.

Plants are preferred to other tank decorations, since a large discus can easily hurt itself on a piece of driftwood or large rock.

Providing a stress-free environment will also promote good health in your discus.

Broad-leafed plants make nice spawning sites for a breeding pair of discus.

While most breeders prefer a breeding cone or piece of slate, our discus have often spawned on *Anubias* or *Echinodorus* leaves.

Plant leaves make good spawning sites in a community tank, since the other leaves on the plants help shield

Tips for your list for Santa Claus!

It's that time of year again: Christmas is slowly but surely approaching. Maybe you are going to wait till the last minute as usual? But if you are already wondering how to surprise your nearest and dearest, the AQUALOG Santa has a few ideas for you. Gifts for aquarium and terrarium enthusiasts and those who aspire to these hobbies!

Dear Reader!
The Aqualog Team wishes you an enjoyable festive season and a safe transition into the new year!

Mergus Aquarienatlas Band 6, Mergus Aquarienatlas Volume 6, hardback / Baensch, Hans A.& Evers, Hans-Georg (Available only in German.) 1232 pages, illustrated in colour throughout. This 6th volume of the highly successful aquarium atlas contains some 800 additional species of freshwater fishes and about 20 plant species, all of which have entered the aquarium hobby in recent years.



AQUALOG Advisory: Decorative Aquaria: The Beginner's Tank
This advisory gives detailed information on about how to furnish the perfect beginner's tank. All the tips you need to avoid typical mistakes made by most hobbyists who own their first tank. What size of tank to choose, the first fishes and plans for the first aquarium. Detailed and easy to understand. Including a great fold-up poster with colour photos!
48 pages, many photos. (ISBN-Nr.: 3-931702-39-1)





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AQUALOG Lexicon Freshwater Rays
This unique lexicon covers all known species of freshwater stingrays in their entire variety. For the first time in the history of the aquarium literature, you now have a complete reference work in which the South American river stingrays (Potamotrygonidae), as well as the Asian, African, Australian, and North American freshwater species are presented. The sawfishes are included completely. The species from all over the world, visiting brackish water, are introduced in addition.
192 pages, about 400 colour photos. (ISBN 3-931702-93-6)



Fantastische Süßwasseraquarien (Fantastic Freshwater Aquaria) /Drescher, Manfred & Greger, Bernd (Available only in German)
184 pages, more than 300 colour photos (panoramic shots) 50 different aquaria are presented, with detailed descriptions. Fish populations, plants, water parameters, water maintenance regimes, and equipment are all detailed. Important aquarium topics – such as decor, filtration, lighting, substrate, creation and maintenance of water parameters, and many more – are discussed.
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the spawning pair from other inhabitants (as well as nosy aquarists).

There are some disadvantages you should consider before you take the plunge with discus.

They are warm-water fish and typically are kept in water over 80 degrees Fahrenheit (27 °C). For example, we have always kept ours at 82°F (28 °C). The higher temperature limits the species of plants that will do well (see below).

All discus books recommend feeding discus very well, to maximize their growth and to get them in top condition for breeding.

Some breeders offer four or five feedings per day of high protein food such as beef heart mixtures.

The fish have a period of time to eat the food, then any remainder is vacuumed from the tank to avoid water quality problems.

Partial water changes are done frequently to keep nitrates very low. Anyone who has maintained a plant

tank realizes that trying to clean up uneaten food and doing lots of water changes is difficult.

With a planted discus tank, a compromise must be achieved. We feed high quality food once per day and do large water changes every other week.

This keeps nitrates fairly low (less than 15 mg/l), but does not allow the fish to get as big as they might.

Our fish tend to grow to seven or eight inches in diameter, instead of the ten to twelve inches we have seen in some breeders' tanks.

The smaller size seems to scale better to the 100-gallon tanks we use, so we do not see this as a problem.

Also, even though we are not trying to breed them, they do spawn regularly, so the reduced rations do not seem to crimp their sex drive.

to be continued !

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In collaboration with the publisher Edition Chimaira we can now present the first title in the TERRALOG series: „Turtles of the World“, Volume 1, Africa, Europe and western Asia.

This new series will follow exactly the same format as the world-renowned AQUALOG pictorial catalogues: a hard-back book in A4 Format, 96 pages, with Text in English and German by Holger Vetter, covering systematic features and with an explanation of the symbols specially evolved for TERRALOG. In addition there is a pictorial catalogue with more than 250 colour photos. Photographic editor: Dr. Gerold Schipper. This first TERRALOG book will appear at the beginning of December. ISBN 3-936027-34-X

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TOP TEN

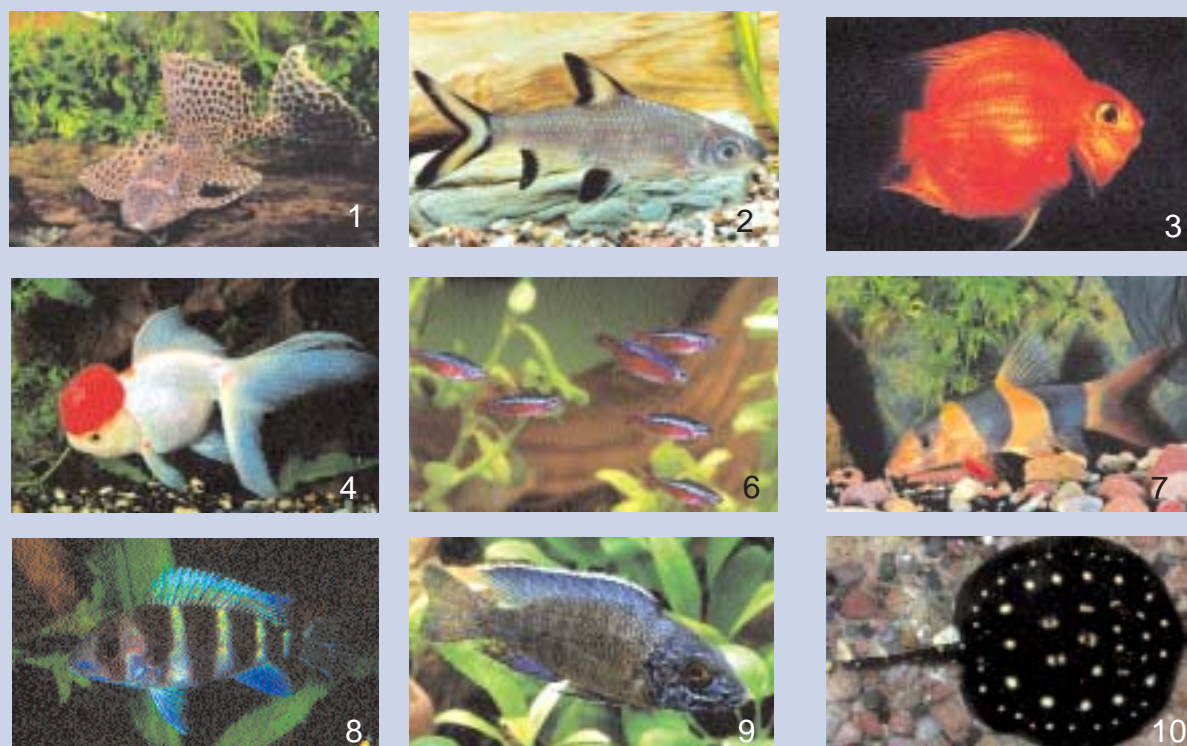
Top-Ten: Russia

This time we present a Top Ten of the most popular aquarium fishes from Russia. A few years ago the main interests of Russian aquarists were stingrays and cichlids. Since then the aquarium hobby has become one of the most popular spare-time activities there, and the spectrum of popular fishes ranges from tetras to discus. A large part of the demand is supplied by skilled breeders within the country. In addition dealers import from Asia, Europe, and South America. Mr Dobrovolsky of the company Argonaut Gamma in Moscow has put together this up-to-date hit parade for us.

With the gibbiceps plec (*Glyptoperichthys gibbiceps*), Russian aquarists have chosen one of the most attractive and hardy loricatoriids for first place. This

plants will then remain unscathed. Despite its dangerous-sounding name, the silver or Bala shark

striking nuchal hump. These fishes need heavy feeding, so that a powerful filter and regular water changes are required to keep them healthy.



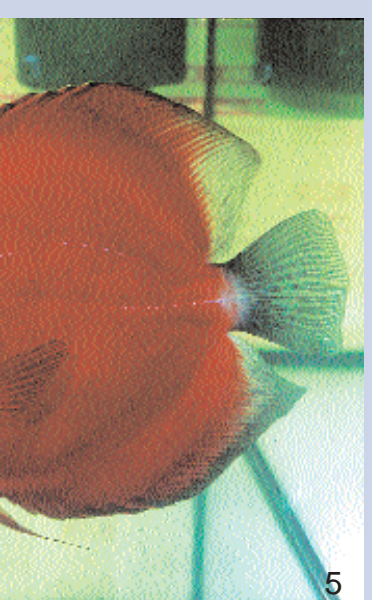
catfish is diurnally active and an enthusiastic algae-eater, which should be regularly offered a slice of cucumber, weighted down with a stone, as a treat. Even fine-leaved

(*Balantiocheilus melanopterus*) in 2nd place is a peaceful schooling fish, particularly attractively coloured when young. Unfortunately these fishes grow rather large – 30 cm – so that an adequately sized aquarium must be provided right from the start. Suitable tank-mates include other cypriniforms, among them *Botia* species such as the clown loach (*Botia macracanthus*) in 7th place.

The Blood Red Parrot in 3rd place is a bizarre fish – it is a hybrid, deliberately created. This fish is very popular in Asia. However, the ethics of keeping it are the subject of controversy in western Europe, as it is a sterile, man-made form with a deformed body structure.

Places 4 to 7 are occupied by true “classics”, with bright red cultivated forms at present particularly “in”.

In place 8 we find one of the “big bruisers”, the impressive *Cyphotilapia frontosa* from Lake Tanganyika. This species is very popular and highly prized because of its elegant stripes and the



Aulonocara stuartgranti (place 9) is one of the “peacocks” from neighbouring Lake Malawi; males have a metallic blue body with attractive yellow stripes.

The breeding behaviour of this species is especially interesting, as it develops eggspots that function as intraspecific lures.

The black freshwater stingray, *Potamotrygon leopoldi*, in 10th place is only for experienced aquarists. This fish from the Rio Xingú requires a tank with a very large bottom area and the owner must be prepared to feed it live fish.

Excellent tips on maintenance can be found in the two Aqualog books on stingrays.

FLASHLIGHTS



TETRA JUNIOR

This tetra from the *Hyphessobrycon* assemblage cannot be assigned to any scientifically described species. The fish was collected together with *Apistogramma panduro* in the Tamishiyacu River in Peru. The exporter, Jorge Panduro, writes: “The fish is unattractive when first captured. Only after five days in the aquarium does it begin to exhibit the red and white coloration in the tail.” The species grows to about 4 cm long.

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 Password: 49news

TOP TEN

- 1 *Glyptoperichthys gibbiceps*
Gibbiceps plec
- 2 *Balantiocheilus melanopterus*
Silver shark, Bala shark
- 3 Blood Red Parrot
- 4 *Carassius auratus*
Red Lionhead Oranda (goldfish)
- 5 *Symphysodon aequifasciatus*
Discus (red cultivated forms)
- 6 *Paracheirodon axelrodi*
Cardinal tetra
- 7 *Botia macracanthus*
Clown loach
- 8 *Cyphotilapia frontosa*
Frontosa
- 9 *Aulonocara stuartgranti*
- 10 *Potamotrygon leopoldi*
Black freshwater stingray

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