

**A handsome Moor, perfectly matt black - even the fins look soft as velvet**



**In the 40's, David discovered that fish keeping was not as simple as it seemed**

## Animals and me

### Wild about fish

In the first of a new series, we look at how the early love of an animal can direct humans into important roles to care for and protect them. Here Dr David Ford, of the Aquarian Advisory Service, who is one of Britain's foremost authorities on fish and fish-keeping, tells his story.



**The Moor, a Globe Eye goldfish, was the first fish to entrance the youngster**

**W**ho would have thought that the death of a Goldfish would determine my whole life? Chaotic theory predicts that a Butterfly taking wing in Asia can create a hurricane in America, perhaps the same principle applies.

It all began when I was a child in the 1940's. Brought up in wartime austerity I had never seen a petshop and pet fish were creatures of mythology seen in children's books. But, by the late 40's, Nottingham (where I was born) began to develop again, with new shops opening everywhere. Among them was the first petshop I had ever seen. When cycling past I would stop to look in wonder at puppies and kittens and all the accessories such pets

seem to need. Then, one day, an aquarium appeared in the window. It was glass set in putty in an angle iron frame, decorated with small stones and paper plants (no plastic in those days).

Swimming in that 90 litre aquarium was a large Black Moor Goldfish, velvety black with long flowing fins, spherical body and bulbous eyes. I thought it was the most beautiful creature I had ever seen, and immediately wanted to own it. But at £5 (an adult's weekly wage!) it was way beyond my shilling pocket money.

So I took a job after school, delivering groceries on a bicycle with a carrier built over the front wheel. Each evening, when delivering groceries, I would cycle past the pet shop to check that 'Blacky'

was still there and for sale.

It would take a month to raise the money, but the Black Moor remained for sale - in those days who would pay £5 for a fish you could not eat?

I will always remember paying the petshop owner the hard-earned cash and asking if I could also buy the aquarium. No. It was his one and only stock tank. So I asked him to keep my fish until I could make my own aquarium.

I built a concrete one, using a wooden frame and glazed the front with glass and window putty. Scrubbed and decorated with local stones, the tank was filled with rainwater and then I cycled to the petshop to collect my first ever aquarium fish.

After bringing him home in a

waxed paper bag, on my grocery shop bicycle, he swam around his concrete tank and I proudly showed him off to family and friends - announcing that I was now an 'aquarist'.

Next day - Blacky was dead.

The uncured concrete released alkali, raising the pH of the soft rainwater beyond the tolerance level of the fancy Goldfish. I did not know this at the time, but through my grief at losing Blacky I vowed to learn the needs of pet fish so that my next one would survive. I studied the husbandry of captive fish; I learned about pH, buffering capacity, nitrogen cycles, specific gravity, oxygen levels and so on. In fact, as the years passed, I became a Chemist, obtaining a National Certificate,



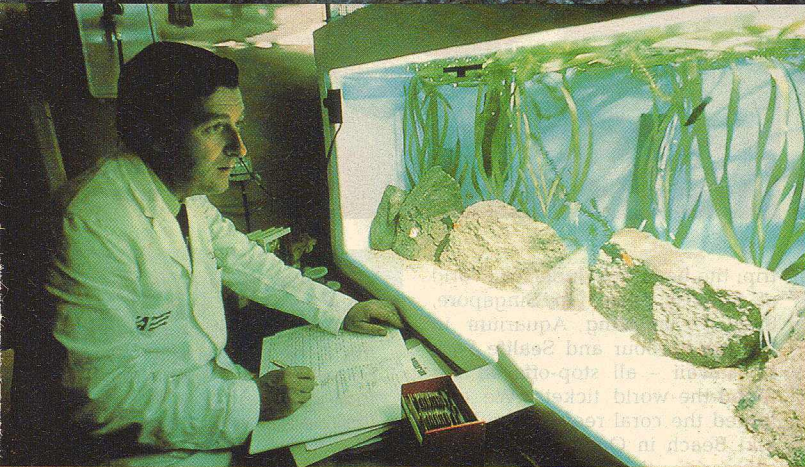


**Marine fish became available in the 70's, and David studied their needs in his Aqualab to develop appropriate fish foods for the Mars Group**

sickness pills? A 25 knot South-easterly was whipping up three-metre waves, so precautions were advisable.

For nigh on fifty years I'd dreamed of this trip so damned if I was giving up. Swallowing the pills Dot and I sat holding hands to await our fate. The catamaran crashed into waves with a thud and judder, rose up, fell down, wallowed left, then right, but ploughed on for 5,400 seconds, I counted them all.

At last the engines slowed, the boat stopped rocking, and the tannoy announced we were docking. Dinner would be served. I opened one eye. Just a gentle sway, an



**During his trip, he watched divers patting a giant grouper as though it were a pet dog**

then a degree and finally a Doctorate in the physical chemistry of aqueous systems.

Now, almost 50 years later, I am still an aquarist, in fact an acknowledged international expert in fishkeeping. I run the Aquarian Advisory Service helping aquarists world-wide, with mail exceeding 10,000 letters a year. I developed the Aquarian range of fish foods and remedies for the Mars group and have visited public aquaria in some 18 countries.

Through the 50's I kept and bred fancy Goldfish, then changed to tropical fish in the 60's when the world market in these animals developed. In the 70's marine fish became available and I started keeping clowns, angels, tangs, parrotfishes and all the exotic invertebrates of the coral reefs.

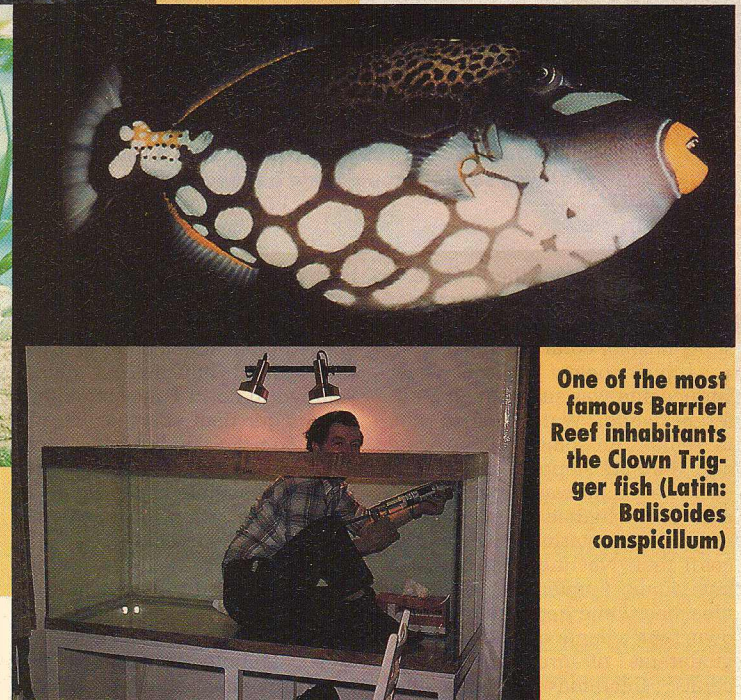
Over the years I have visited pet fish farms from Florida to Hong Kong, not to mention private breeders all over the UK, USA, Canada and Europe. These account for 95% of all freshwater ornamentals sold; few such fish are now wild caught. However, marine fish have not yet been commercially bred in captivity (just a few Tomato Clowns and Angels, so far) so practically 100% of salt-

water fish are wild-caught. Hence, a lifetime's ambition was to visit a coral reef and see these gorgeous creatures in their natural habitat.

My dream was not to go to any old reef, but to see the ultimate one, the Great Barrier Reef in Queensland, Australia. However, living in Yorkshire, I could only marvel at the incredible statistics - 1,200 miles of living reef built by 300 different species of coral hosting untold millions of exotic fishes. Then, this year, Aquarian sent me to Aquarama '93, in Singapore. As this was more than half way to Australia, my wife (Dot) joined me and we booked a week in Cairns, Australia - an ideal base for visiting the Reef.

The town is in rainforest country and June is mid- winter in what is - to me - a topsy-turvy world. In our hotel room I pulled the plug in my washbasin and ... yes, the water flowed away anticlockwise, like the books said. (Dot says: 'As long as it still goes down'.)

Cairns is blessed with colonial architecture. Surrounded by palm and mango trees, older suburban houses are on stilts - called Queensland stumps - allowing cooling air to circulate under living rooms. (Dot says: 'It's to avoid the creepy crawlies.') Huge-



**One of the most famous Barrier Reef inhabitants the Clown Trigger fish (Latin: *Balisoides conspicillum*)**

leaved plants grow in profusion. I was amazed by the feel of them. Used to tough, leathery foliage I found the rainforest plants' leaves as soft and flimsy as tissue paper. However, the Buffalo grass was tough, broad-leaved, and looked just like the Cryptocoryns I plant in my freshwater aquariums.

To a mariner (a seawater aquarist) Cairns is heaven on earth. There are sea aquariums everywhere, in shops, hotels, and restaurants. Pictures and paintings of coral fishes decorate the walls in every room, and even appear on street signs and the sides of buses. All the stores and tourist shops sell coral-fish ornaments, coralfish books, coralfish decorations and everything from bottle openers to nightdress bags are embellished with colourful anemone fishes, angels and tangs.

On the day of our Great Barrier Reef trip we boarded the courtesy bus, with coralfishes painted down the sides, then embarked on a catamaran at Port Douglas, for a ninety minute journey to the Reef. Brochures boasted tranquil, blue waters with paddling tourists. Why were we being offered sea-

oasis of calm in the tropical sea - the Great Barrier Reef!

My adrenaline flowed. The catamaran was tethered to a floating dock with a diving platform and underwater viewing room. Ignoring the sumptuous meal, I rushed to the diving gear laid out on the platform - goggles, snorkel and flippers - as Dot recorded, for posterity on our camera and camcorder, my waddling entry to my dream reef.

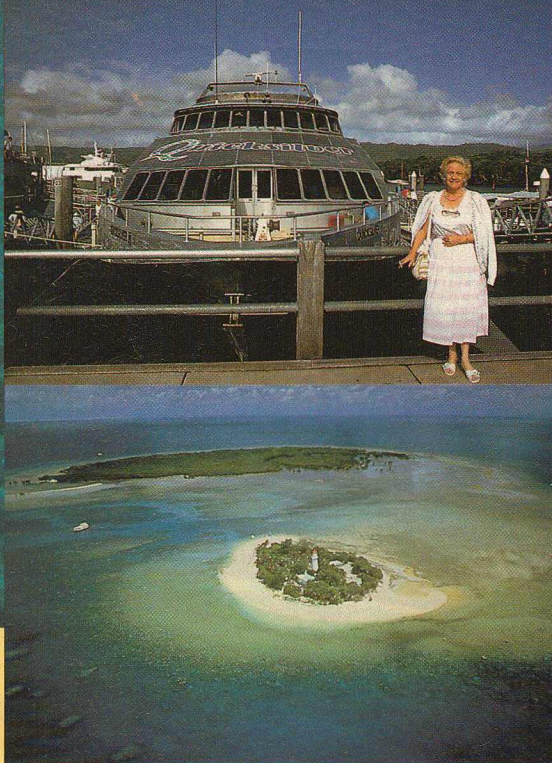
I was in for a shock. The sea was cold! How could this be? For years I have maintained my tropical seawater tanks at 28 degrees Celsius, even 30 degrees, for the well-being of my coralfish. I spent years developing electronic thermostats to maintain such temperatures at plus or minus half a degree. I knew that cool or, horror of horrors, cold seawater meant outbreaks of Oodinium or Lymphocystis, even death. The sea must have been 15 degrees or less; there could not be any corals or coralfish here.

On the horizon I saw the white foam of the open sea crashing over the outer rim of the Reef, per-





**Awed by the species of fish and coral that were new to him, David was also surprised to come across a Giant clam that was so big it could have crushed his house**



**Dot Ford, standing before the catamaran, Quicksilver, which took them on the ninety minute journey to the Reef**

**There are thousands of islands on the Reef. A lighthouse on this one warns ships away from the immediate area**

haps it was warmer there. Here, a gentle swell of blue-grey water was rippled by the breeze. No sign of fish or coral outcrops.

I dipped below the cool water surface and was suddenly in a different world. Water rushed into my ears. The sounds of the wind and the surf stopped; the meniscus, like a time-warp between two universes, climbed up my goggles – and I was staring down onto a coral reef! Not the mini scene of my home aquarium not the bleached white decorative corals I own, but a land of giants. Huge mountains of grey-brown-green corals. Enormous growths that made me feel tiny and insignificant. In my home aquariums I stand over these coral scenes, I dominate them, own them. Here, they dominated me and I felt an interloper, a stranger in a strange land, which I thought I knew – until I arrived.

Swimming slowly, and peering down into the murky depths of coral mountains, I began to sight familiar coral fish, angels, tangs, puffers, damsels. Fish I have known so well all my life as beautiful, but captive, animals. Bought and sold like slaves for the aquarist's pleasure.

For hours I paddled around gazing down, discovering new things all the while, corals I have never seen before, fish species that were unknown to me, clams so big they would not fit in my house, let alone my aquarium.

Meanwhile, Dot viewed the coral world through the windows of the undersea room. (Dot says: 'You don't swallow seawater.') Later, I joined her in a submarine trip, as a guide explained the wonders around us.

While glued to the window, I watched skuba divers from our

boat moving as a group along the sandy bottom, with a guide swimming around them like a sheep dog. Approaching a giant grouper, they patted him like a dog. I yearned to do it! Fancy stroking a fish bigger than yourself. He was the marlinist... you his pet! I raced to the skuba diver's section, just as the hooter sounded – the signal for everyone to return to the catamaran. Oh, well, next time...

Another pill and eyes tightly closed, I started to count the seconds. The sea was rougher. Thuds, sloshing, crash (what was that?), laughter (hysterical). My world remained sightless, till Dot said 'You can open them now.' We had survived.

The Great Barrier Reef is in good hands. Now a national park, all tourists must pay \$1 (about 50p) via the boat companies. (Non-payment carries a fine of \$10,000!) The Park should receive \$1 million this year, to spend on reef research, particularly the effects of tourism on the ecosystem.

The best time to go is late Spring (October or November). Summer (December and January) can be very hot, the air temperature reaching 30 degrees C and torrential rains can occur. Winters are cooler and drier but the sea temperature is lower, as I found.

Apparently coralfish are skittish and swim jerkily in cool waters, making netting difficult. There are licenced collectors for the trade, but they go north to the New Guinea coast, where waters are warmer and fish more indolent and easier to catch. The cooler waters of Queensland's Reefs give slower growth of corals, making them longer lived, so they form huge dimensions.

There is also much more for aquarists than the Reef on such a

trip: the beautiful Undersea World of Sentosa Island in Singapore, Sydney's amazing Aquarium in Darling harbour and Sealife Park in Hawaii – all stop-offs on our round-the-world tickets. We also toured the coral reefs of the Wai-kiki Beach in Oahu, Hawaii in a submarine that descended over 100 feet (your teeth glow red and lips turn green) but the corals there do not compare with the Great Barrier Reef.

My abiding memory will always be the moment I dipped beneath the surface. That sudden entry into the universe of the fish. A place where they reign supreme, unknowing and uncaring about me – unaware that they had affected me so much, that they had determined my whole life.

One day I must return...

The Great Barrier Reef is over 2,000 kilometres long and with an area of 21 million hectares, this is the only living structure on earth visible from the moon. Built up over millions of years, the reef supports a vast range of marine life, from tiny Cowries to Giant clams. Oysters with pearls, numerous exotic coralfish and seabirds of all kinds. It is also the home of the famous Green turtle (*Chelonia mydas*) and over 1,400 species of coralfish live there. Researchers have reported over 500 different species occupying just a single Reef. Many are decorative fish, available as exotic marines for aquarists. Some are edible, such as the gourmet's Red Emperor (*Lutjanus sebae*).



**Dr. David Ford spending a happy day off - sorting out one of his three fishponds at home. As a child, with aquarist aspirations shattered, he never imagined these**