

Issue 32 July 2012

News of the BISN company, its ships and staff, its history and *histoires*, of ships and sealing wax, nautical natters, maritime miscellanies and swinging of lanterns

FROM THE EDITOR...

It is some time since your Editor last put pen to paper. A combination of myriad miscellaneous minor domestic disasters and cataclysmic computer crashes have served to frustrate him. (Actually it wasn't as bad as all that, but we couldn't resist the alliteration!). We hope that this extensive issue will assuage your impatience somewhat. Varied fare awaits the reader and we trust that somewhere within you will find something to tickle your palate. We thank Rachael MacBean for trying literally to do that. Various regulars are with us, David Hammond's little Black Book and some telling photographs from the recent Manchester mini-reunion. All contributors are warmly thanked.

Our trials and tribulation may have occasionally driven us hairless, but help was at hand. When clearing out an old bookcase, we came across Mrs C S Peel's Cook-book of Still Room Cookery, published in 1905. We are now looking for testers...! Enjoy!

required, strain a little through a muslessaucer and rub on the head with a spong piece of flannel.

Hair Tonic for Weak and Falling Hair.

Hydrochlorate of ammonia, 2 drams.

Spirit of juniper, 20 drops.

Tincture of cantharides, 1 oz.

Rectified spirits of wine, 2 oz.

Camphor water, 3 pint.

To be applied once a day.

Hair Lotion for use after Illness. Spirit of ammonia, $1\frac{1}{2}$ oz. Glycerine, $1\frac{1}{2}$ oz. Oil of rosemary, $\frac{1}{2}$ oz.

FROM THE ARCHIVES....

Your editor has been in recent conversation with an ex-Clan Line officer, Andrew McGregor, who last sailed with Calmac Ferries in Scotland. He says he owns a British India Captain's Plath sextant, with an endless worm and silver arc. A plaque on the box indicates that it was owned by a C P Allison. It has a number 18 on it, so he presumes it was made in 1918. He bought it in 1963 from an ex-BI cadet Clive Fairweather, who went on to be a second mate with Clan Line. Andrew also remembers sailing with another ex-BI cadet, who ended up with Ellerman & City Line. He believes this was a Captain Owen who originated from the Dorking area and who knew the said Capt Allison, remembering him as a right old tartar.

Can any of our BI historians throw further light on this involved story?

FROM THE MEMORY....

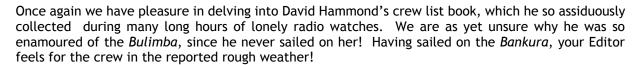
Readers may recall the photo of the somewhat dishevelled uniform jacket that was recently sold on Ebay. We revealed that it belonged to a 'G Pegla'. True to form, we unearthed a little memory of him from Peter Glass, who wrote in:

"Regarding the BI jacket, I think that I can help on that one. It was in 1953 I think, (sadly my discharge book went walkabouts some years ago) I was Cadet 3/0 on the ss *Urlana* (1946-62).Geoffrey Pegla was Second Officer and we were on the India/Japan run punctuated by in between trips with coal and rice ex Calcutta and Rangoon. Geoff was a very good officer of medium stature and very pukka. I do not think that he was a BI Cadet but not sure where he sailed previously. The only slight problem with him was that he was reluctant to leave his bunk at midnight to take over the middle watch but eventually either the sukunni or I would awaken him. After I left the *Urlana*, I never saw or heard of him again and suspect that, like a number



of officers in BI at that time, he left the company after one spell on the coast for pastures new."

FROM THE LITTLE BLACK BOOK....





BULLINGA GINKS OHS & N.B. Ret shed at 12 left Durban 0030 bind 1245 our time. 2301 Colombo

Capt Stokes

Oliver of Mrs

Hatcher

Cotts Wielow, Losworth

Shinor

Plo Bowen

Ye Neal

We Richardson

Govan

Se Monks

He Kota lawela

Se Drand, Symonols

Price

Loca ath por Mandle

FROM THE AUCTION ROOM....

One of the more esoteric items to go under the auctioneer's hammer recently (not literally of course!) was this old BI egg cup. Described as being made in real China Ironstone by the Ashworth Bros factory at Hanley in north Staffordshire, UK., it was dated to the early 1900's. It measures 2 1/4 inches tall by 2 inches diameter. Not being a porcelain buff, your editor dropped out of the bidding at an early stage. Just as well, really. The item eventually went for £65.15 and nobody in the "... Calling BI" office barely knows how to boil an egg!





FROM THE ENGINE ROOM...

Being a 'Deckie', your Editor is chary of things mechanical and he is sure that no engineers of his acquaintance ever used tools quite like this list of definitions. But there <u>is</u> just a hint of 'learnt by experience' about it all;



HAMMER: Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate expensive parts not far from the object we are trying to hit.

MECHANIC'S KNIFE: Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on boxes containing seats and motorcycle jackets.

ELECTRIC HAND DRILL: Normally used for spinning steel Pop rivets in their holes until you die of old age, but it also works great for drilling mounting holes in fenders just above the brake line that goes to the rear wheel.

PLIERS: Used to round off bolt heads.

HACKSAW: One of a family of cutting tools built on the Ouija board principle. It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

VICE- GRIPS: Used to round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

OXYACETYLENE TORCH: Used almost entirely for lighting various flammable objects in your garage on fire. Also handy for igniting the grease inside a brake drum you're trying to get the bearing grease out of.

WHITWORTH SOCKETS: Once used for working on older British cars and motorcycles, they are now used mainly for impersonating that 9/16" or 1/2" socket you've been searching for, the last 15 minutes.

DRILL PRESS: A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, splattering it against that freshly painted part you were drying.

WIRE WHEEL: Cleans rust off old bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprint whorls and hard-earned guitar callouses in about the time it takes you to say, "Ouch...."

HYDRAULIC FLOOR JACK: Used for lowering a motorcar to the ground after you have installed your new front disk brake set-up, trapping the jack handle firmly under the front fender.

EIGHT-FOOT LONG DOUGLAS FIR 2x4: Used for levering a motorcar upward off a hydraulic jack.

TWEEZERS: A tool for removing wood splinters.

PHONE: Tool for calling your neighbour to see if he has another hydraulic floor jack.

SNAP-ON GASKET SCRAPER: Theoretically useful as a sandwich tool for spreading mayonnaise; used mainly for getting dog-doo off your boot.

E-Z OUT BOLT AND STUD EXTRACTOR: A tool that snaps off in bolt holes and is ten times harder than any known drill hit

TIMING LIGHT: A stroboscopic instrument for illuminating grease build up.

TWO-TON HYDRAULIC ENGINE HOIST: A handy tool for testing the tensile strength of ground straps and brake lines you may have forgotten to disconnect.

CRAFTSMAN $1/2 \times 16$ -INCH SCREWDRIVER: A large motor mount prying tool that inexplicably has an accurately machined screwdriver tip on the end without the handle.

BATTERY ELECTROLYTE TESTER: A handy tool for transferring sulphuric acid from a car battery to the inside of your tool box after determining that your battery is dead as a door nail, just as you thought.

METAL SNIPS: See hacksaw.

TROUBLE LIGHT: The mechanic's own tanning booth. Sometimes called a drop light, it is a good source of vitamin D, "the sunshine vitamin," which is not otherwise found under motorcycles at night. Health benefits aside, its main purpose is to consume 40-watt light bulbs at about the same rate that 105-mm howitzer shells might be used during, say, the first few hours of the Battle of the Bulge. More often dark than light, its name is somewhat misleading.

PHILLIPS SCREWDRIVER: Normally used to stab the lids of old-style paper-and-tin oil cans and splash oil on your shirt; can also be used, as the name implies, to round off Phillips screw heads and can double as oil filter removal wrench by stabbing through stubborn oil filters.

AIR COMPRESSOR: A machine that takes energy produced in a coal-burning power plant 200 miles away and transforms it into compressed air that travels by hose to a Chicago Pneumatic impact wrench that grips rusty bolts last tightened 60 years ago by someone in Springfield, and rounds them off.

PRYBAR: A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50 cent part.

HOSE CUTTER: A tool used to cut hoses 1/2 inch too short.



FROM THE GALLEY...

That good lady, Rachael MacBean, has been in touch again. She writes: "Thank you for the latest issue of BI. I noted the "Nepali curry", which reminds me that my late husband Elgin (Medical Orderly on *Rajula*) had a recipe that was most popular with all his pals, including the captain during that time. He would buy the chickens in Penang and once one of the chickens flew overboard! He had built a special "fire proof" stove on which he would cook his special curries, both crab and chicken.



The chicken curry was my favourite (which I named "Macky's Special" when he came ashore) and here it is for what it's worth. Great to be eaten with Coconut Rice Palau! He loved cooking and I learnt a lot from him".

MACKY'S SPECIAL:

1 kg boneless chicken cut into medium size cubes

200 gms mustard oil (if not available any vegetable oil)

600 gms medium size potatoes split into four pieces

4 large red onions

50 gms fresh garlic paste

50 gms fresh ginger paste

Dried chillie paste (as per preference depending how hot you can risk it! We used about 10-15 hot chillies and 10 coloured chillies!)

4 teaspoons ground coriander seeds

1 teaspoon ground cumin seeds

1 teaspoon turmeric

Salt to taste

METHOD:

Deep fry potatoes till golden brown and remove from oil, drain and keep aside.

Finely slice onions and keep aside on drainer.

Puree all the other spices together with two of the onions and the garlic paste, but don't add salt yet.

Keep aside 1 dessertspoon of the ground paste.

Marinate the chicken pieces in the puree for an hour.

Heat remaining oil, add the chicken pieces and remaining onions. Stir fry until the spices are well cooked but not burnt, add salt and simmer on slow fire till chicken is tender.

Before serving, add the reserved dessertspoon of raw ground paste and heat for 10 further minutes. Next, mix in the fried potatoes. Serve hot, garnishing with the fried onions.

Bon appetit! Warm regards, Rachael MacBean".

Considering the amount of chillies that Rachael has included in the recipe, your Editor reckons her regards are very warm indeed! But deliciously received.

FROM THE ADVERTISING DEPT...



Tony Bernthal passed a copy of PLA Monthly (dated November 1927) to Simon Morgan recently, who kindly arranged for it to be put on the BI ship website. Simon remarks "I found several items of interest, as well as the BI advert and can recommend to everyone a quick read. In particular the BI/P&O/NZS advert is very interesting. The motto "Quis separabit" (who will separate us?) is rather bizarre, I thought. [Your editor notes that it is also the motto of the Royal Dragoon Guards, the Order of St Patrick, the Royal Ulster Rifles, the London Irish Rifles, the Irish Guards and the North Irish Horse. The phrase also appears on the seal of South Carolina! Bizarre indeed! Not exactly extolling our BI Scottish ancestry!] The advert's header features the P & O BI names quite prominently, while you have to search for a cunningly concealed "NZ". Around the perimeter of the advert there are a number of small sketches illustrating the extensive nature of the Group's reach".

The whole document is here, http://tinyurl.com/c3b2s6x (30Mb), whilst if you only want the BI advert, get it here http://tinyurl.com/d2sr37e (665K). Thanks to Simon and Tony for this bit of BI miscellany.



FROM THE CARTOON PAGES...

Although entitled "Bangalore rickshaw", this wonderful cartoon http://vimeo.com/43397805 also brings back many memories of old Bombay and Calcutta. Your editor is booked to





visit Kerala and Delhi in January and this has put him quite in the mood. Thanks to Sam Ignarski's magnificent BowWave e-zine for this. Contact Sam via this link to subscribe.

FROM THE POETRY BOOK...

One of the delights of receiving Sam's e-zine is reading his choice of 'Poem of the Week'. Your Editor particularly enjoyed this one:

Sea Fever--The Convalescence

I must go down to the sea again, to see what it's all about.

As an innocent boy, 'twas an absolute joy; and a sailor I'd be, without doubt;

And I dreamed much and I schemed much as to how it all would be;

In my satchel bag I would carry a flag: For I was going to sea.

I must go down to the sea again, for there I began to learn

The Rule of the Road and the Semaphore Code, transverse thrust and the Williamson turn.

To my ears and eyes there was frequent surprise. Not much had I learned as a scholar.

But I joined the men and I saw it then as a method of earning a dollar.

I must go down to the sea again, for here was a new education;

Neither Latin nor Greek any day of the week; but a service in need of the nation,

In many a ship and aboard any ship, the privilege then was to serve:

To do your best and to puff out your chest; and to hold a straight face and your nerve.

I must go down to the sea again, for those were the days of my youth.

They confirmed a rule that I'd learned at school; to hold for your life to the truth.

For the tide flows and the wind blows; and these things no man can deny:

And the man who forgets will accrue many debts; and will leave himself wondering, Why?

I must go down to the sea again, for this is the place of my birth,

Or somewhere near, in that long-ago year. It gave me much pleasure and mirth.

'Twas a life rarely bad for a strapping young lad; though, some might assume, not a high lot.

Regrets? I have none. I'm a mariner's son. And much did I learn as a pilot.

I must go down to the sea again, to make sure that it's all still there.

To hear once again the old talk of the men, with sometimes a kindness to share.

For the bluff life and the gruff life had honesty running right through it.

'Twas a tough life, an enough life. May God bless the men who still do it.

Barry Youde -- 27th April 2012

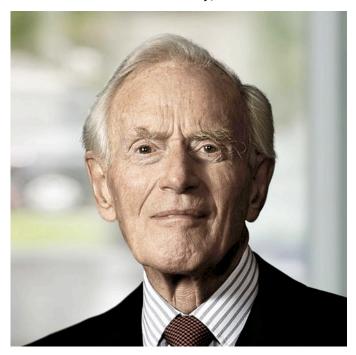
(With apologies to both Masefield and W S Gilbert)



FROM THE OBITS COLUMNS...

Shortly after our last issue went to press, the marine world was stunned to hear of the death of one of its undoubted characters, Maersk McKinney Moller. Although obviously late, we felt that we had to review here his life and contributions to the marine industry, from various contributors:





Maersk McKinney Moller, the Danish shipowner, was the world's greatest shipping magnate, greater than the founders of the world liner trades in the 19th century or the colourful tramp owners of that vintage, surpassing in tanker ownership and management the Greeks, Onassis and Niarchos, outlasting and outperforming even that outstanding entrepreneur of the Far East, YK Pao.

The Maersk-controlled fleet of container ships, VLCCs, product tankers, rigs, car carriers, Ro-Ros and offshore supply vessels is the biggest company fleet in the world - and, what really concerned Maersk, the best. He did not believe that size mattered, but quality. The only form of shipping he would not touch - apart from a few berths on his Norfolk Line - was passenger shipping. "Passengers ", he would say, "are difficult."

Maersk always had a soft spot for England and Scotland - partly from his mother, partly from his early training in England; his father first opened a small shipping agency in St Mary Axe in 1951. In 1978 Maersk decided to develop London and gradually increased the number of his ships under the UK flag. In 1987 he established the Maersk Co (Isle of Man), and the following year took over a Southampton haulage and distribution company, which has expanded all over the UK.

In 1992 Maersk Co moved to Canary Wharf and then in 2006, after the take-over of P&O Nedlloyd and Safmarine UK, completely reconditioned the old Overseas Containers offices, Beagle House, renamed Maersk House, at Aldgate. There are now 80 Maersk ships registered in the UK and London has joined Singapore and New York as one of the three centres of ship management and ship excellence outside Copenhagen. Maersk now employs some 26,000 British personnel at sea and on shore.

Moller had his own shipyard at Lindo on the island of Funen, which survived the shipbuilding traumas of the 1970s and 1980s and is recognised today as one of the most efficient of all yards worldwide.

Together with Shell and Gulf (later Chevron and Texaco) he developed DUC (Danish Underground Consortium), extracting oil and gas from the Danish sector of the North Sea. This led to further production in the UK sector, in Qatar, Algeria and Kazakhstan, as well as exploration all over the world. And to service the Maersk Line came Maersk Data, which has developed software enabling the company to tell where any screw in any package in any container in any ship in any part of the world is at any time.

This vast, publicity-shy empire was basically controlled by Moller himself, with some companies publicly quoted but the majority shareholding controlled by three charitable foundations of which Moller was chairman. The main operating company, AP Moller-Maersk, had Maersk as chairman from the death of his father, Arnold Peter Moller, in 1965, until December 2003. Thereafter he remained available, in his office or on the telephone, day or night. Asked for his advice he would emphasise that he was no longer chairman but would say, "If I were you, I would do so and so". Woe betide any young man foolish enough not to take advice stemming from 75 years in the shipping industry. Maersk McKinney Moller was born in Copenhagen in 1913, the grandson of Captain Peter Maersk Moller, who with his son Arnold had started a small tramp company with one ship. AP Moller was a towering figure who

transformed it into a global trading and shipping company. In later years when confronted by a hideous problem, Maersk would first ask himself, "What would father have done?" His formal education was at the Oregaard Gymnasium in Copenhagen. His father did not believe in university education - nor indeed did Maersk for his own recruits. But his education in shipping, shipbuilding, shipbroking, ports and cargo handling began, "at his father's knee".



FROM THE OBITS COLUMNS (contd)...

He formally joined the company in 1931 and was sent round the world to further his shipping education, including spells in London, Newcastle and Glasgow with Hogarth's, then owning 50 tramps but long since defunct. A further spell of six months in 1933 with Lazard's in London gave him a good grounding in international finance.



His real blooding as an independent ship-owner came during the war years. When Germany invaded Denmark in 1940, AP Moller saw the ghastly days ahead and arranged a passage for his son and new wife - Maersk had just married his childhood sweetheart, Emma Rasmussen - to America. After a hazardous journey through Germany, Switzerland and Italy they secured steerage berths in the ss *Manhattan* bound from Genoa to New York.

There, things were not easy. AP Moller was in partnership in America with his cousin Hans Isbrandtsen, a colourful and dominant character who did not take kindly to this whippersnapper coming from Europe to take control of his inheritance. Years of bitter controversy followed but Isbrandtsen had not recognised Moller's judgement, determination and steel will.

Gradually Maersk took control of the Moller fleet in neutral and Allied ports and co-operated with the American and British authorities in the requisitioning of ships. The losses were grave - and by no means properly compensated by war insurance or by the post-war Inter-Allied Reparations Agency in Brussels. Nevertheless it was a triumphant return for Maersk and Emma, now with two daughters and another on the way, to the family and the family business in Copenhagen in 1947. There he lived, with constant visits to his companies, heads of governments, fellow ship-owners and friends throughout the world, until his death.

His motto - and the reason why he prospered while other shipowners fell - was "with constant care". No detail was too small; he was hands-on. Some of his executives found this a bit much and left. But Moller, who had developed an advanced recruitment and training policy, was always able to find bright, young, hard-working men. What is now called "human resources" he regarded as the most difficult part of his job. "What," he would say, "do you think the man you appointed at 40 is going to be like at 50?"

Moller put vast sums into the Moller Foundation, the charitable trust founded by his father. The beautiful harbourside garden, Amaliehaven, near the new Maersk office in Copenhagen, was his gift to the city. He acknowledged that but for Churchill and Britain's stand Denmark and Europe would not be what they are today, and funded a £10m Centre for Continuing Education at Churchill College, Cambridge. In 2004-5 came his most remarkable legacy - the arresting £250m Opera House in Copenhagen harbour, which has given a new dimension to the cultural life of southern Scandinavia.

Moller himself was an extraordinarily impressive and powerful personality. He was highly intelligent, had a remarkable "nose" for business, a naughty sense of humour, was a prodigious worker, a great reader (of catholic taste in five languages), a percipient collector of pictures, houses and art, an experienced yachtsman and a devoted family man

He maintained a voluminous correspondence with the great and the not-so-great all over the world. How many have been cheered by the arrival through the letterbox of that distinctive blue envelope or card - the blue with which his ships were painted. Like all tycoons he could be ruthless, but there were many unrecorded acts of kindness and generosity. He had a passion for punctuality. He had no time to waste and didn't want to waste others'. Telephone conversations were short and to the point.

Moller kept himself fanatically fit. Up to the age of 90 he would swim 40 lengths before breakfast - "terribly boring," he would say - then his chauffeur would put him down a mile before his office, where he would climb the five floors. He ate sparingly, drank little, though he was a connoisseur of French wines and of champagne. He appeared thin as a rake but he was tough. Even in 2007 he was doing 12 lengths before breakfast.

In 2003 he gave up the chairmanship of his companies, though not of the foundations. He remained on the Board of Maersk Oil & Gas and attempted not to interfere. But it was hard for him and for those around him.

His annus horribilis was 2005. He tripped on his walk into the office and ended up in hospital with a pacemaker. In October the main steamship company posted its first loss and in November Emma died. "Work through sorrow" was Maersk's answer, and he bounced back remarkably. Sitting in the evening sun in his South Zealand farmhouse, his Provence manoir or his Copenhagen bungalow, he would be inconspicuously directing affairs. And in August 2006 he felt well enough to take the helm of his yacht and sail again the waters of the Hebrides and the Pentland Firth, which he had not done for 20 years. Later that year he went on an exhausting business visit to China and was greeted by the top members of the government. He liked China. At least the old get some respect there, he noted.

In 2007 he linked up with Countess Bente Bernstorff-Gyldensteen, a friend from childhood. He introduced her to sailing and was full of admiration for the way she took to it and took the helm of his yacht on a further voyage round the Hebrides.

He received many honours; he was made an Honorary KBE in recognition of his services to British shipping, but what pleased him most was his appointment as a Knight Commander of the Danish Order of the Elephant, the only Danish civilian in recent times to be so honoured apart from Niels Bohr.

Maersk McKinney Moller, shipping magnate: born Copenhagen 13th July 1913; married 1940 Emma Rasmussen (died 2005; three daughters); died Copenhagen 16th April 2012.



FROM THE SOCIAL CALENDAR...

Those wonderful northern Englishmen have been thronging the streets of Manchester again. They told tall stories at the bar of Waxy O'Connors on 28th June. Here are some of them at play! We're not quite sure what John Quinn has done to deserve such an admonition; at least he doesn't seem to be too upset - see bottom photograph! Apologies to Chris Wright, David Mitchell, Kumar (Gooney) Goonatilaka, Robert Vaughan and Ken Beadle, all of whom were probably ordering more beers at the bar (or otherwise engaged) when the photographer was prowling! Cheers!





John D Quinn

FROM THE SOCIAL CALENDAR (contd)...

Not long to go now before Andrew Fisher opens his large yacht to all BI visitors in the south-west of England. Andrew writes:

Boat's name: Somerset Trader Date: Friday July 20th 2012

Location: Bristol Floating Harbour

Berth: Hanover Quay (Habourside - near Amphitheatre). The boat will not be at the marina berths due to size, but about 400 yards west of them, "on the wall" at Hanover Quay near the HSBC Bank building.

This is during the Bristol Harbour Festival, so traffic could be busy in the centre of Bristol. By car it is best to use park and ride, the bus stop to use being on Anchor Road which is only a short walk to the quay. The other option is train to Bristol Temple Meads, and then get the water bus to the Amphitheatre, and a short walk to the west along Hanover Quay. If you arrive early enough and don't fancy the Park & Ride, there is a multistory car park at Harbourside off Anchor Road which might still have space!!

Please advise if you are interested in a visit on Friday 20th for a BI get together or a boat trip on the Thursday or Monday, between Bristol and Portishead. We will be leaving Portishead marina on the afternoon tide of 19th July, for the passage up the river Avon, passing under Brunel's Clifton Suspension Bridge, and entering the Bristol floating harbour via the Cumberland Basin in the early evening. We will pass the ss Great Britain on the way to our berth. The return trip will be on the morning tide of Monday 23rd July.

Look forward to seeing all who can make it.

Andrew Fisher <u>AMFisher@aol.com</u>

Your editor can attest that Andrew is the most genial host, and will provide a most comfortable setting from which to view the beautiful Bristol harbour side. Presumably, the rain that is currently sweeping this fair land of Albion will desist in time for this summer festival.

And coming up over the horizon is the big UK BI reunion in Southampton from 12th - 14th October 2012, the last to be organised by Sue Spence. Details on the <u>BIship website</u> or from <u>Sue</u> herself. A little bird tells your Editor that the film show being organised for the Friday night has some amazing footage. Apparently also included in this listing is the iconic "A Career at Sea", probably the defining material that convinced him to join BI in the first place! Reserve me a seat in the front row, Sue!

FROM THE FUNNY (FISH) FARM...

Robotic fish developed by European scientists that detect and identify pollution in ports and harbours have been tested in the northern Spanish port of Gijon. SHOAL, the researchers behind the pan-European ICT project, hope that the new technology will enable port authorities to detect and analyse water pollutants in seconds rather than weeks.

The developers also anticipate that the innovative technology could one day aid in the clean-up of oil and chemical spills, underwater security, diver monitoring and search and rescue operations.

The 1.5 metre fish, costing £2,000 each, swim and manoeuvre like real fish working autonomously to detect water contamination with specially fitted sensors. The information collected, including where the samples were taken from and their chemical composition is then sent back to shore. "Chemical sensors fitted to the fish permit real-time in-situ analysis, rather than the current method of sample collection and dispatch to a shore based laboratory," said Luke Speller, Project Leader of SHOAL and Research Scientist at BMT "Furthermore, the artificial intelligence which has been introduced means that the fish can identify the source of pollution enabling prompt and more effective remedial action," he added.

lan Dukes from the University of Essex, another partner in the project's consortium, says that the

design of the fish gives it a distinct advantage over other autonomous underwater vehicles (AUVs). Traditional robots use propellers or thrusters for propulsion. What we're trying to do is use the fin of a fish to propel ourselves through the water," said Dukes. "The fin does lend itself as a really useful tool in shallow waters especially where there is a lot of debris. We can work in environments that are very weedy, and would usually snag up propellers". In addition, the fish have also been designed to blend into the natural marine environment so that marine life is not impacted or affected by their presence in the water.

At that price, your Editor hopes that it won't be a case of "the one that got away".

